

USER MANUAL

ES 3080

- ES 3080 MIXER-AMPLIFIER
WITH MP3 PLAYER



TABLE OF CONTENTS INDICE



ENGLISH	
SAFETY AND OPERATING PRECAUTIONS	4
DESCRIPTION	6
FRONT PANEL	6
REAR PANEL	8
MP3 PLAYER	11
AMPLIFIER OPERATION	13
SPEAKER CONNECTION	14
POWER SUPPLY VOLTAGE CHANGE	15
SPECIFICATIONS	16
EXAMPLE OF CONNECTIONS	17

**IMPORTANT:**

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.

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

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

- a) The mains voltage is sufficiently high to involve a risk of electrocution: never install or connect this product when its power cord is plugged in.
- b) 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.
- c) The metallic parts of the unit are earthed by means of the power cord.
An apparatus with CLASS I construction shall be connected to a mains socket outlet with a protective earthing connection.
- d) Protect the power cord from damage.
Make sure it cannot be stepped on or crushed by objects.
- e) To prevent the risk of electric shock, never open the product: there are no parts inside that the user needs to access.
Appliance coupler is used to disconnect device from MAIN power. This device shall remain readily accessible after the installation.

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) nor naked fire 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 supply 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 its power cord.

IMPORTANT**WARNING**

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

7. The terminals marked with the symbol  are HAZARDOUS LIVE and their connection is to be made by an INSTRUCTED PERSON or the use of ready-made cables is required.

8. 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.

9. 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.

10. Supports and trolleys

The equipment should be only used on trolleys or supports, where necessary, that are recommended by the manufacturer. The equipment / support / trolley assembly must be moved with extreme caution. Sudden stops, excessive pushing force and uneven floors may cause the assembly to overturn.

11. Mechanical and electrical factors need 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.).

12. 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 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 technical specifications in speaker user manuals to know their maximum sound pressure levels.

13. Do not obstruct the ventilation grilles of the unit. Place this product far from any heat sources and always ensure adequate air circulation around the ventilation grilles.

14. Do not overload this product. Ensure the amplifier output is not short-circuited.

15. Never force the control elements (keys, knobs, etc.).

16. Do not use solvents, alcohol, benzene or other volatile substances for cleaning the external parts of this product.

Use a dry cloth.

NOTES ABOUT AUDIO SIGNAL CABLES

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

- Equipment that produces high-intensity electromagnetic fields.
- Mains cables.
- Speaker lines.

RCF S.P.A. THANKS YOU FOR PURCHASING THIS PRODUCT, WHICH HAS BEEN DESIGNED TO GUARANTEE RELIABILITY AND HIGH PERFORMANCES.

DESCRIPTION



ES 3080 is a 80 W mixer-amplifier, with 2 mic-line audio inputs on removable connectors (the first input also has an XLR socket), an MP3 player with 'Bluetooth' and an aux input for a music source (e.g. CD players, tuners, etc.).

The input 2 also has an RJ 45 port for quick connection of an RCF BM 3001 paging microphone (through CAT5 cable).

The amplifier output is available either for low impedance speakers (min. 4 Ω) or 100 – 70 V constant voltage line (for speakers having 100 – 70 V transformers).

The input 1 has a signal detection circuit ('VOX') for automatic priority.

The inputs 1 and 2 can access the priority through an external command (connected to either the removable connector or the RJ 45 port).

The MUSIC ON HOLD output directly sends the internal MP3 player signal to additional amplifiers, mixers, phone systems ('music on hold' function), etc. .

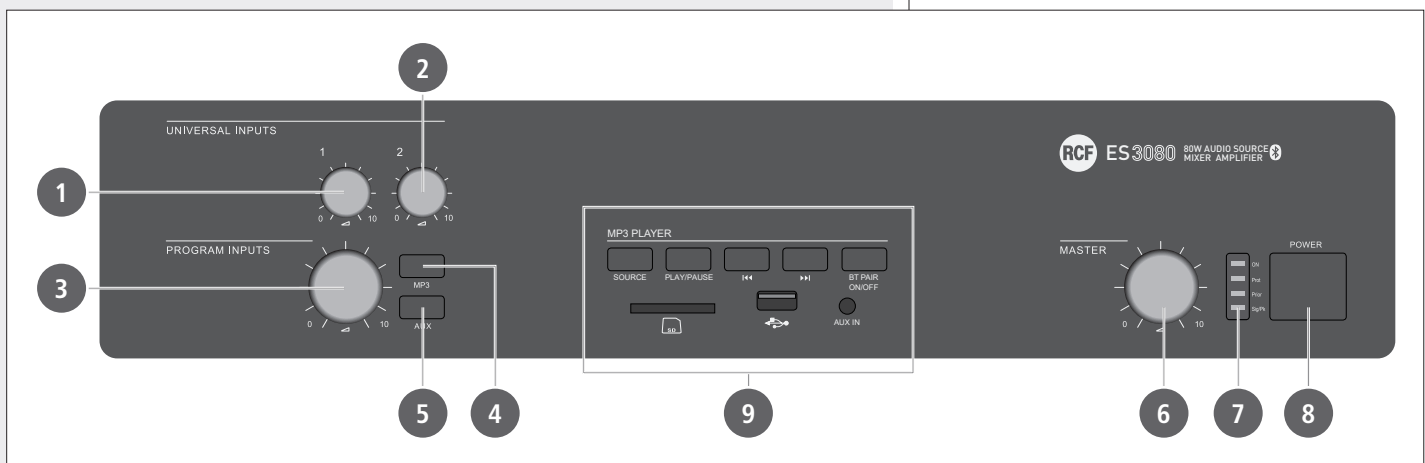
The PRE OUT output sends the signal (the same routed to the internal amplifier) to additional amplifiers.

The 2 mic-line inputs have a high-pass filter (with a common on/off dip-switch) that are useful to improve speech intelligibility.

The internal MP3 player and the AUX INPUT have tone controls (common for both).

Front panel LEDs indicate the device state (ON, PROT), priority circuit enabled (PRIOR) and the signal level / peak (SIG/PK).

FRONT PANEL



- 1 Input 1 volume control.
- 2 Input 2 volume control.
- 3 MP3 player 9 and AUX INPUT 17 volume control.

4 **MP3** button (with LED)

Press to turn on (the LED is lit) the MP3 player, which signal is sent to the internal amplifier (and also MUSIC ON HOLD 20 and PRE OUT 19 outputs).
 If activated, the AUX INPUT 17 on the rear panel will be muted (the AUX button LED will turn off).

THE MP3 PLAYER SIGNAL IS ALWAYS SENT TO THE MUSIC ON HOLD 20 OUTPUT (THAT IS NOT AFFECTED BY THE VOLUME CONTROL AND MP3 / AUX BUTTONS).



5 **AUX** button (with LED)

Press to turn on (the LED is lit) the AUX INPUT 17 (on the rear panel), which signal is sent to the internal amplifier (and also PRE OUT 19).
 If activated, the internal MP3 player will be muted (the MP3 button LED will turn off).

6 Internal amplifier MASTER volume control

NOTE: THE AUDIO OUTPUTS HAVING RCA CONNECTORS (MUSIC ON HOLD 20 AND PRE OUT 19) ARE NOT AFFECTED BY THE MASTER VOLUME CONTROL.



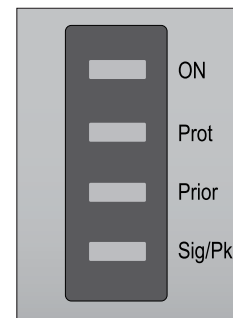
7 LEDs

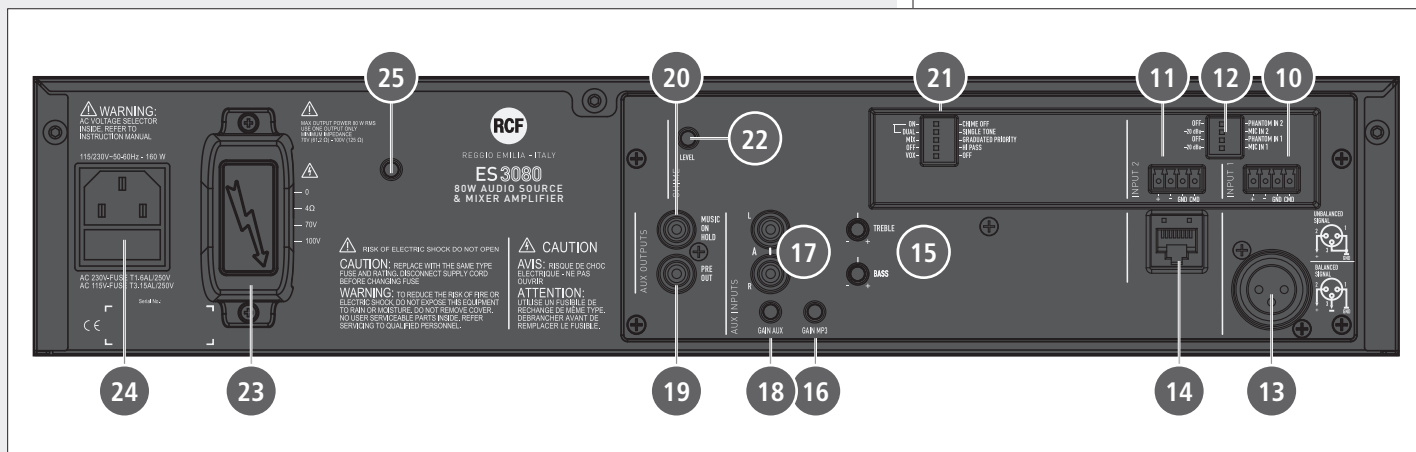
- ON** green: the device is switched on
- PROT** red: overload protection
orange: thermal protection
- PRIOR** yellow: the input 1 and 2 priority function is enabled through the dip-switch 3 21
NOTE: IT DOES NOT INDICATE THE PRIORITY ACTIVATION IN PROGRESS.
- SIG/PK** green: the signal level is higher than - 15 dB
green + red: the signal level is in the 0 ÷ +2 dB range
red (peak): the signal level is equal or higher than +3 dB

0 dB = SIGNAL LEVEL THAT ALLOWS TO GET THE AMPLIFIER MAXIMUM POWER.

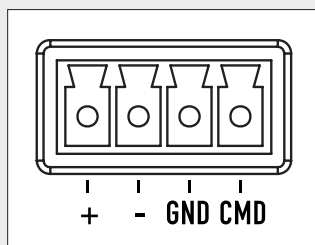
THE INTERNAL 'LIMITER' CIRCUIT HELPS TO AVOID THE AMPLIFIER OVERLOADING, YET IT IS ADVISABLE TO REDUCE THE MASTER VOLUME (OR A SINGLE INPUT VOLUME WHERE A TOO HIGH SIGNAL IS PRESENT) WHEN THE SIG/PK LED IS CONTINUOUSLY INDICATING RED.

- 8 Main **POWER** switch (0 = off; I = on)
- 9 MP3 player with 'Bluetooth' (read the respective manual section).





10 Balanced audio input 1 (removable connector).



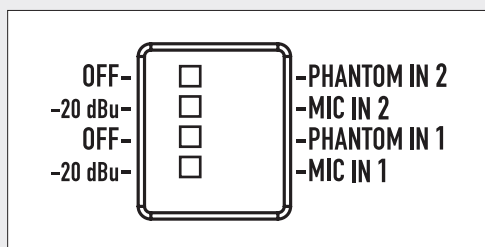
1	+	Hot audio input
2	-	Cold audio input
3	GND	ground
4	CMD	command: input on / priority access when connected to ground

IMPORTANT: IT IS NECESSARY TO EITHER LINK THE **CMD** PIN TO GROUND OF THE RESPECTIVE REMOVABLE CONNECTOR OR USE THE **VOX** FUNCTION TO OPEN THE AUDIO INPUT 1 (EVEN WHEN USING THE **XLR** PLUG FOR THE AUDIO SIGNAL).

11 Balanced audio input 2 (removable connector).
See the 'Balanced audio input 1' 10.

IMPORTANT: IT IS NECESSARY TO EITHER LINK THE **CMD** PIN TO GROUND OF THE RESPECTIVE REMOVABLE CONNECTOR OR USE THE **RJ 45** PORT PRIORITY COMMAND TO OPEN THE AUDIO INPUT 2.

12 MIC-LINE input setting (inputs 1 and 2) through 4 dip-switches:



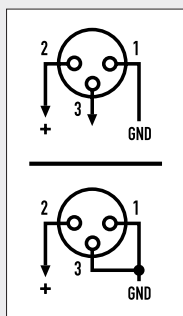
1	OFF – PHANTOM (IN 2)	OFF: input 2 phantom power is off.	PHANTOM 2: input 2 phantom power is on.
2	-20 dBu – MIC (IN 2)	-20 dBu: input 2 sensitivity set to LINE (-20 dBu).	MIC 2: input 2 sensitivity set to MIC.
3	OFF – PHANTOM (IN 1)	OFF: input 1 phantom power is off.	PHANTOM 1: input 1 phantom power is on.
4	-20 dBu – MIC (IN 1)	-20 dBu: input 1 sensitivity set to LINE (-20 dBu).	MIC 1: input 1 sensitivity set to MIC.



Examples of dip-switch settings:

DIP 1/3	DIP 2/4	MODE	USE (EXAMPLES)
OFF	- 20 dBu	LINE	Audio source having a - 20 dBu output
OFF	MIC	MIC	Dynamic microphones
PHANTOM	- 20 dBu	LINE with PHANTOM	BM 3001 paging microphone
PHANTOM	MIC	MIC with PHANTOM	Electret microphones

13 Balanced audio input 1 (XLR socket)



Balanced connection + hot
- cold
GND ground

Unbalanced connection

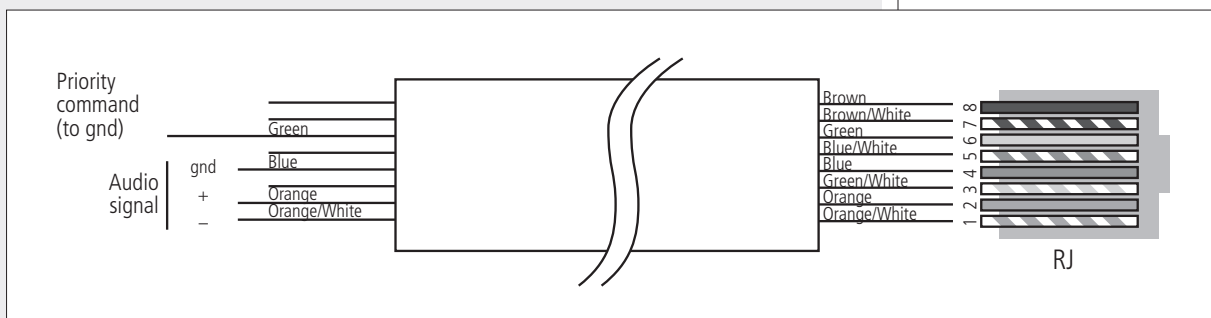
IMPORTANT: IT IS NECESSARY TO EITHER LINK THE CMD PIN TO GROUND OF THE RESPECTIVE REMOVABLE CONNECTOR OR USE THE VOX FUNCTION TO OPEN THE AUDIO INPUT 1.

Do NOT USE AN UNBALANCED CONNECTION WHEN THE 'PHANTOM' POWER SUPPLY IS SWITCHED ON.

14 Balanced audio input 2 (RJ 45 port)
(for a BM 3001 paging microphone).

NOTE: WHEN A BM 3001 PAGING MICROPHONE IS CONNECTED, IT IS NECESSARY TO SET THE DIP-SWITCHES 1 AND 2 **12** TO THE 'LINE WITH PHANTOM' MODE .
THE BM 3001 PAGING MICROPHONE SHALL BE SET TO 'LOCAL'.

Cable with RJ 45 plug:



IMPORTANT: IT IS NECESSARY TO USE THE RJ 45 PORT PRIORITY COMMAND TO OPEN THE AUDIO INPUT 2. (FOR INSTANCE, THROUGH THE BM 3001 PAGING MICROPHONE PUSH-BUTTON).

ALTHOUGH EACH MIC-LINE INPUT HAS 2 DIFFERENT CONNECTORS, THESE CANNOT BE USED TO MIX DIFFERENT SIGNALS; ONLY ONE AUDIO SOURCE CAN BE CONNECTED.



- 15 **TREBLE** and **BASS** controls for both the internal MP3 player and the AUX INPUT.
- 16 **GAIN MP3**: MP3 player gain control.
- 17 **AUX INPUT** with dual RCA connector.

THE TWO CHANNELS OF THE STEREO SOURCE CONNECTED TO THE AUX INPUT ARE SUMMED INTERNALLY (TO GET A MONO SIGNAL).



- 18 **GAIN AUX**: AUX INPUT gain control.

19 **PRE OUT** audio output (with RCA connector) that sends the same signal routed to the internal amplifier (signal that can be either a single source with priority or the mix of all the inputs 1, 2, the internal MP3 player and the AUX INPUT).

USE PRE OUT TO CONNECT ADDITIONAL EXTERNAL AMPLIFIERS.

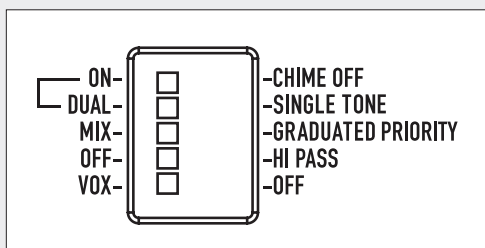


- 20 **MUSIC ON HOLD** audio output (with RCA connector) that sends the internal MP3 audio signal (mono).

THE MUSIC ON HOLD OUTPUT IS NOT AFFECTED BY ANY VOLUME CONTROL NOR SELECTOR AND CAN BE LINKED TO A TELEPHONE SYSTEM (IN ORDER TO GET THE 'MUSIC ON HOLD' FUNCTION).



- 21 5 dip-switches for settings:



1	ON – CHIME OFF	ON: the chime is enabled and played once immediately after a priority command activation.	CHIME OFF: the chime is disabled.
2	DUAL – SINGLE TONE	DUAL: two-tone chime.	SINGLE TONE: single tone chime.
3	MIX – GR. PRIORITY	MIX: the priority function is disabled. All inputs are mixed and sent to the amplifier (even if a priority command is in progress).	GRADUATED PRIORITY: graduated priority mode (read the 'Operation' manual section).
4	OFF – HI PASS	OFF: the audio high pass filters of the inputs 1 and 2 are not inserted (flat frequency response).	HI PASS: the audio high pass filters of the inputs 1 and 2 are inserted.
5	VOX – OFF	VOX: the input 1 VOX function is on (the input 1 is automatically open when a signal is detected on its input).	OFF: the input 1 VOX function is off.

22 **CHIME LEVEL** (a trimmer adjustable by using a small screwdriver).

23 Amplifier output (max. 80 W) to speakers, available as:

- 100 / 70 V constant voltage line
- Low impedance (min. 4 Ω).

Use 1 output only (read the section 'Speaker connection').

24 Mains connector with fuse

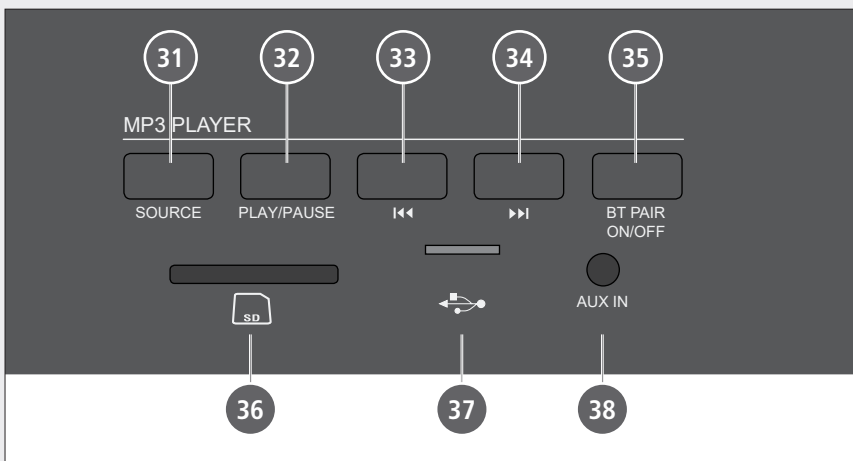
Before connecting the power cord, verify that the apparatus voltage (230 or 115 V ac) corresponds to the available mains supply.

NOTE: THE FUSE TYPE IS MARKED ON THE REAR PANEL (BELOW THE MAINS CONNECTOR).

25 Antenna input ('Bluetooth').



MP3 PLAYER



31 **SOURCE**: button: push to loop among different MP3 sources (SD CARD, USB and AUX IN).

32 **PLAY / PAUSE**: button: push to start the playback (if stopped) or toggle play / pause the current MP3file

33 **⏮** button

While playing:

- If pushed once (only) for a while, the MP3 file begins again.
- Push twice or more times quickly to select previous MP3 files.
- Push and hold for fast backward of the current MP3 file.

34 **⏭** button

While playing:

- Push once or more times quickly to select next MP3 files.
- Push and hold for fast forward of the current MP3 file.

35 BT PAIR ON/OFF button with bicolour LED

- Push once (for an instant) to make it detectable (for about a minute) to the external Bluetooth device.
- Push and hold (at least 3 seconds) to disable Bluetooth (the LED lights off); push and hold (at least 2 second) to enable Bluetooth again.

LED INDICATION	
OFF	Bluetooth is disabled.
BLUE (2 seconds) / OFF (1 second) loop	Bluetooth is enabled, but the player is in stand-by, waiting for pairing to the external device.
BLUE blinking every 2 seconds	The player is connected to an external Bluetooth (A2DP) device.
BLUE steady lit	The player is connected to an external Bluetooth (A2DP) device and is currently receiving streaming audio.
BLUE / RED alternate and continuous flashing	The player is currently detectable (for about a minute) by the external Bluetooth device.

36 'Secure Digital' (SD) card port (max. 4 GB).

Do NOT insert an SD CARD if a USB flash-drive is already inserted into its respective port **37**.

37 Port for a USB flash drive (max. 4 GB).

The insertion of a USB flash drive is automatically detected.

Do NOT insert a USB flash drive if an SD CARD is already inserted into its respective port **36**.

NOTES ABOUT USB FLASH DRIVES:

- FORMAT: FAT 12 / FAT 16 / FAT 32.
- FILE NAME: 32 BYTE / DIR. NAME: 32 BYTE / TAG NAME: 32 BYTE.
- USB 1.1 SUPPORT AND ALSO 2.0 (BUT AT THE SAME SPEED OF USB 1.1).
- A FEW USB FLASH DRIVE TYPES MAY NOT BE COMPATIBLE.

**38 AUX IN** (1/8" TRS jack): MP3 player aux input to connect (via cable) the audio output of an external device.

To enable this input, it is necessary to remove the USB flash drive / SD CARD (if inserted) and / or disconnect the external Bluetooth device.

NOTE: DO NOT CONFUSE THIS INPUT WITH THE OTHER **AUX INPUT 17** ON THE REAR PANEL.

**INPUT / MEMORY SELECTION**

The MP3 player automatically selects inputs / memories with different priority levels as follows:

1. (highest priority) Bluetooth external device, if connected and sending streaming audio.
2. When Bluetooth external device is playing and then disconnected, audio source won't do any switch automatically, and it will be needed to select the MP3 source with SOURCE button.
3. When a MP3 source is playing and a Bluetooth device is connected, music will be switched to BT.

NOTES ABOUT MP3 FILES

- MP3: means MPEG Audio Layer 3 and refers to an audio compression type.
- This player reads MP3 files on USB flash drives and SD cards.
- The file extension must be .mp3.
- The max. directory (/ folder) level is 8, including the 'root'.
- It is advisable to use MP3 files having a sampling frequency of 44.1 kHz and a fixed bit-rate of at least 128 kbps (if higher, for instance 192 kbps, the sound quality will be better).
- The player may not play MP3 files in the order as written on the USB flash drive / SD CARD.

'BLUETOOTH' DEVICES

'Bluetooth' is a wireless technology standard for exchanging data over short distances from fixed and mobile devices (e.g. cellular phones).

The MP3 player includes a Bluetooth interface to receive audio signals from compatible external devices, which must have A2DP technology ('Advanced Audio Distribution Profile').

To connect your Bluetooth external device to the MP3 player:

1. Check if the antenna **25** on the rear panel is properly connected and oriented.
2. Enable 'Bluetooth' on the external device.
3. Push the MP3 player **BT PAIR ON/OFF** button **35** (its LED now flashes blue / red).
4. Within a minute, on the external device, start searching other devices with active Bluetooth; ES3080 should be displayed.
5. Pair the external device and ES 3080.
6. Start the audio playback on the external device (which should be now included in the available sources of the internal MP3 player).

When turning ES 3080 on, the MP3 player automatically tries to connect (via 'Bluetooth') to the last paired external device (if available).

AMPLIFIER OPERATION



'VOX' IS AN INTERNAL CIRCUIT THAT AUTOMATICALLY OPENS THE INPUT 1 AND TAKES PRIORITY (IF ENABLED THROUGH THE DIP-SWITCH 3 **21**) WHEN A SIGNAL IS DETECTED ON ITS INPUT.



- 'MIX' mode

The priority function is disabled.

All signals (inputs 1-2, if open, and the MP3 player / AUX INPUT) are always present, mixed together and sent to the internal amplifier.

THE INTERNAL MP3 PLAYER / AUX INPUT VOLUME DEPENDS ON THE FRONT PANEL PROGRAM INPUTS **3** CONTROL AND ALSO THE RESPECTIVE GAIN CONTROL SETTINGS (ON THE REAR PANEL): GAIN MP3 **16**, GAIN AUX **18**.



- 'GRADUATED PRIORITY' mode

Audio inputs are managed according to graduated priority levels:

1. (highest) Input 1
2. Input 2
3. Either MP3 player or AUX INPUT.

If a priority command is present (or VOX), only the signal of the input with the highest priority level is sent to the internal amplifier (and PRE OUT), while the other inputs (with lower priority level) are momentary muted (until the priority command is removed).

- RCF BM 3001 paging microphone (not included)

The input 2 has an RJ 45 port, to which a BM 3001 paging microphone can be connected

(note: it is necessary to set the dip-switches 1 and 2 **12** to the 'LINE with PHANTOM' mode).

The BM 3001 paging microphone shall be set to 'LOCAL'.

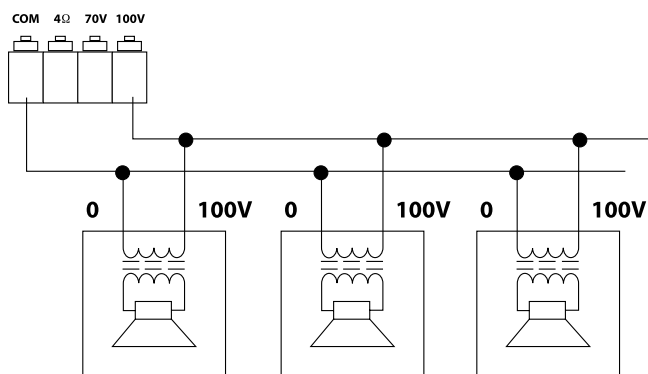


Use 1 output only, DO NOT MIX 100 / 70 V and 4 Ω CONNECTIONS !

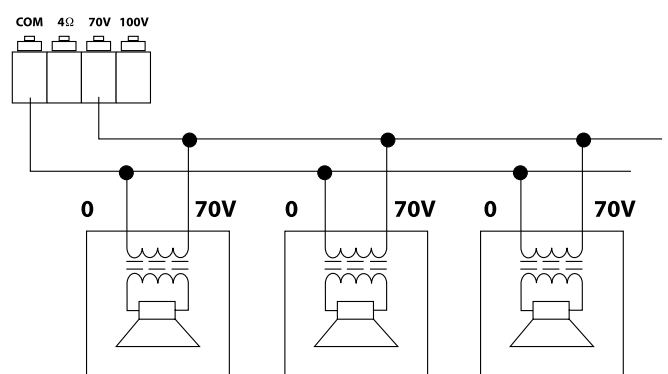
100 / 70 V CONSTANT VOLTAGE OUTPUTS

- Each speaker shall have a line transformer with the input voltage equal to the line voltage (100 / 70 V).
- The speaker total power shall not be higher than the amplifier maximum power.

100 V

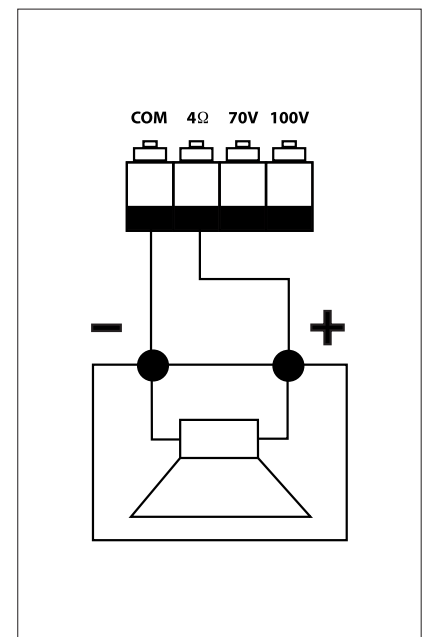


70 V



LOW IMPEDANCE OUTPUT (4 Ω)

- The speaker total impedance shall not be lower than 4 Ω .
NOTE: A TOTAL IMPEDANCE EQUAL TO 4 Ω ALLOWS THE AMPLIFIER MAXIMUM POWER DELIVERY. A HIGHER IMPEDANCE LEADS TO A REDUCTION OF THE POWER DELIVERED BY THE AMPLIFIER (E.G. 8 Ω : APPROX. $\frac{1}{2}$ POWER, 16 Ω : APPROX. $\frac{1}{4}$ POWER). AN IMPEDANCE LOWER THAN 4 Ω OVERLOADS THE AMPLIFIER.
- Speaker models shall be chosen by considering the max. power (80 W) that the amplifier can deliver.
- Speaker line should be as short as possible; long cables may need large wire cross-sections.
- Do not use, at the same time, both the low impedance output (4 Ω) and the constant voltage output (100V or 70V), as this overloads the amplifier.





IMPORTANT: This manual section concerns qualified personnel only.
The following instructions are to be ignored by users.

Make sure the device is not connected to the mains (unplug the power cord).

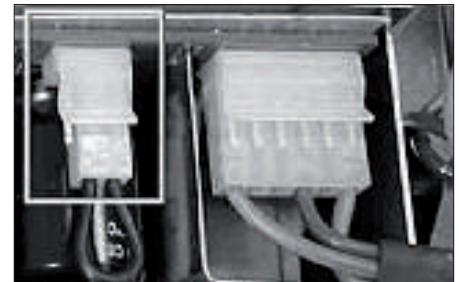
Remove the lid.

Find the 230 / 115 V voltage change connector (in the picture, it is highlighted by a square).

According to the PCB indication, if the mains voltage is **230 V**, set the connector to the 230 V position, if the mains voltage is **115 V**, set the connector to the 115 V position.

Refit the device lid.

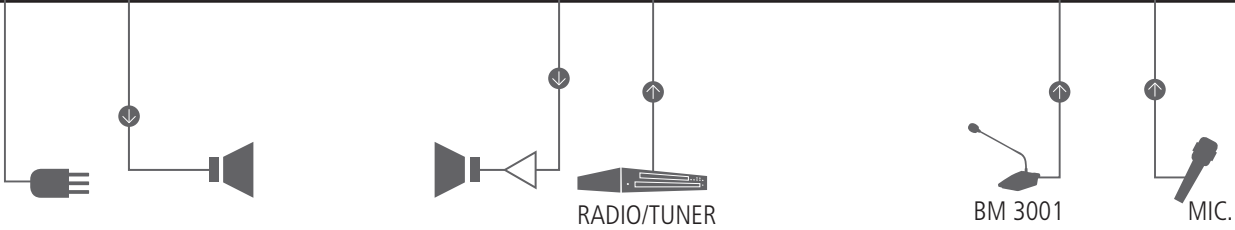
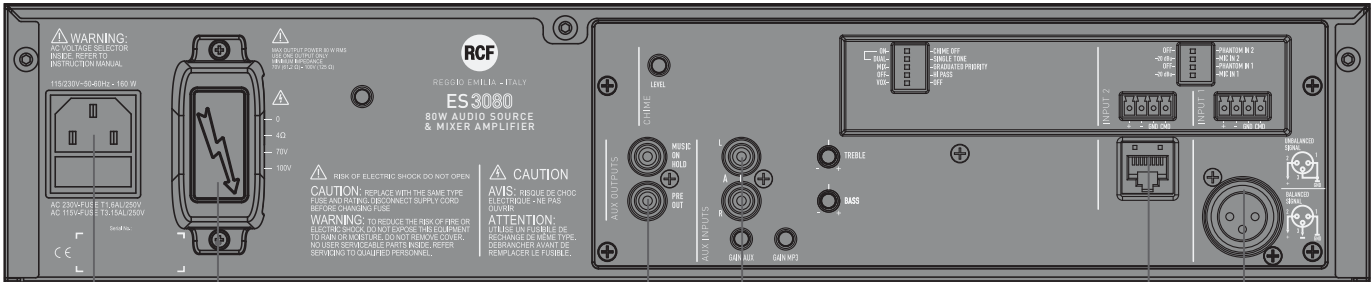
Before connecting the device to the mains, make sure that the fuse (inside the IEC power supply connector of the rear panel) is the correct current rating for the mains voltages (read the fuse indication below the connector).





AMPLIFIER	
Output (RMS) power	80 W
Frequency response	50 Hz ÷ 16 kHz
Signal / noise ratio - Inputs 1, 2 - AUX INPUT (rear panel)	60 dB 80 dB
Distortion (at 1 kHz, nominal power)	< 0.3 %
MP3 / AUX INPUT tone controls - Bass - Treble	- 9 ÷ + 6 dB @ 100 Hz - 14 ÷ + 8 dB @ 10 kHz
High-pass filter (inputs 1, 2)	150 Hz
Input sensitivity / impedance - Inputs 1–2, MIC - Inputs 1–2, LINE - AUX INPUT (rear panel)	Balanced, - 62 dBu (max. - 25 dBu) / 10 kΩ Balanced, - 29 dBu (max. 0 dBu) / 10 kΩ Adjustable - 18 ÷ + 20 dBu / 20 kΩ
'Phantom power' voltage / current	30 V / 18 mA
Speaker outputs Low impedance Constant voltage	4 Ω 70 V (63 Ω) / 100 V (125 Ω)
PROTECTIONS	
Amplifier	Overload, short circuit, thermal
Power supply	fuses
GENERIC	
Operating voltage	115-230V / 50-60 Hz
Power (consumption)	160 W
Dimensions (w, h, d)	442 mm, 88 mm, 230 mm (2U 19" rack)
Net weight	3.9 kg

EXAMPLE OF CONNECTIONS



Except possible errors and omissions.
RCF S.p.A. reserves the right to make modifications without prior notice.

Salvo eventuali errori ed omissioni.
RCF S.p.A. si riserva il diritto di apportare modifiche senza preavviso.

HEADQUARTERS:

RCF S.p.A. Italy
tel. +39 0522 274 411
e-mail: info@rcf.it

RCF UK
tel. 0844 745 1234
Int. +44 870 626 3142
e-mail: info@rcfaudio.co.uk

RCF France
tel. +33 1 49 01 02 31
e-mail: france@rcf.it

RCF Germany
tel. +49 2203 925370
e-mail: germany@rcf.it

RCF Spain
tel. +34 91 817 42 66
e-mail: info@rcfaudio.es

RCF Belgium
tel. +32 (0) 3 - 3268104
e-mail: belgium@rcf.it

RCF USA Inc.
tel. +1 (603) 926-4604
e-mail: info@rcf-usa.com



www.rcfaudio.com