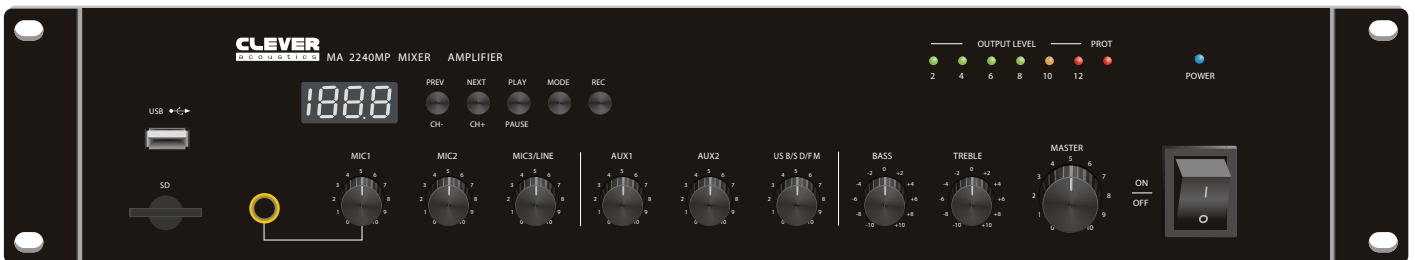
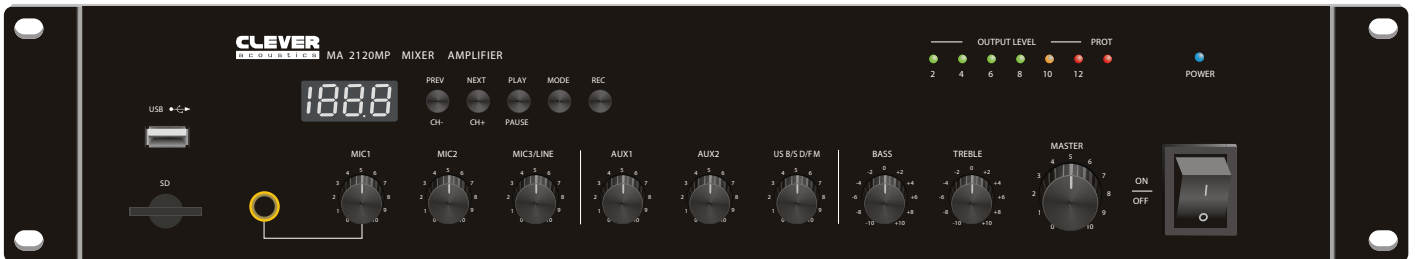
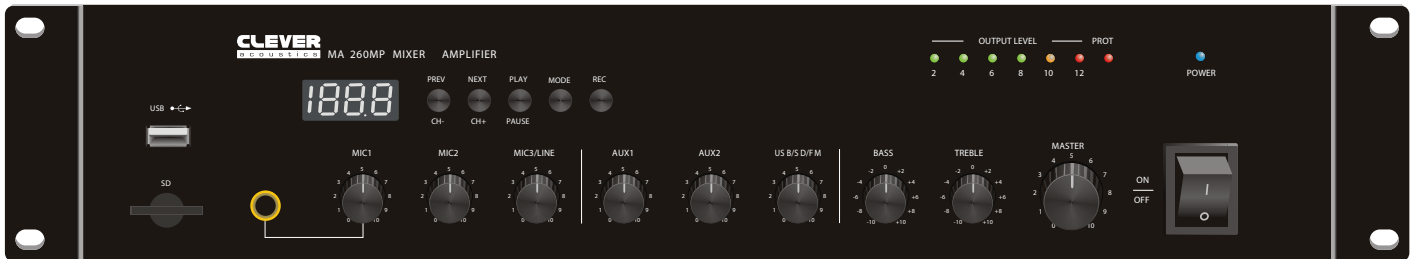




Mixer Amplifier series with MP3 & FM Tuner

User Manual



Order codes:

CRAM14 - MA 260MP

CRAM15 - MA 2120MP

CRAM16 - MA 2240MP

WARNING

FOR YOUR OWN SAFETY, PLEASE READ THIS USER MANUAL CAREFULLY BEFORE YOUR INITIAL START-UP!

- Before your initial start-up, please make sure that there is no damage caused during transportation.
- Should there be any damage, consult your dealer and do not use the equipment.
- To maintain the equipment in good working condition and to ensure safe operation, it is necessary for the user to follow the safety instructions and warning notes written in this manual.
- Please note that damages caused by user modifications to this equipment are not subject to warranty.



IMPORTANT:

The manufacturer will not accept liability for any resulting damages caused by the non-observance of this manual or any unauthorised modification to the equipment.

- Never let the power cable come into contact with other cables. Handle the power cable and all mains voltage connections with particular caution!
- Never remove warning or informative labels from the unit.
- Do not open the equipment and do not modify the unit.
- Do not switch the equipment on and off in short intervals, as this will reduce the system's life.
- Only use the equipment indoors.
- Do not expose to flammable sources, liquids or gases.
- Always disconnect the power from the mains when equipment is not in use or before cleaning! Only handle the power-cable by the plug. Never pull out the plug by pulling the power-cable.
- Make sure that the available voltage is between 100~240V, 50/60Hz.
- Make sure that the power cable is never crimped or damaged. Check the equipment and the power cable periodically.
- If the equipment is dropped or damaged, disconnect the mains power supply immediately and have a qualified engineer inspect the equipment before operating again.
- If the equipment has been exposed to drastic temperature fluctuation (e.g. after transportation), do not connect power or switch it on immediately. The arising condensation might damage the equipment. Leave the equipment switched off until it has reached room temperature.
- If your product fails to function correctly, stop use immediately. Pack the unit securely (preferably in the original packing material), and return it to your Pro Light dealer for service.
- Only use fuses of same type and rating.
- Repairs, servicing and power connection must only be carried out by a qualified technician. **THIS UNIT CONTAINS NO USER SERVICEABLE PARTS.**
- **WARRANTY:** One year from date of purchase.

OPERATING DETERMINATIONS

If this equipment is operated in any other way, than those described in this manual, the product may suffer damage and the warranty becomes void. Incorrect operation may lead to danger e.g: short-circuit, burns and electric shocks etc.

Do not endanger your own safety and the safety of others!

Incorrect installation or use can cause serious damage to people and/or property.

Mixer Amplifier series

The MA 260MP, MA 2120MP and MA 2240MP are ideal for installation into shops, offices and commercial premises, and feature three microphone inputs, two AUX inputs plus integral MP3 player and FM radio tuner. MIC 1 features switchable +48V phantom power and adjustable VOX priority over the other inputs. Individual gain controls for microphone and AUX inputs plus controls for bass, treble and master volume.

- 19" rack mountable chassis (removable rack ears)
- 70V, 100V, and low impedance 4-16Ω loudspeaker outputs
- Integral MP3 (USB/SD) player with FM radio tuner
- Three microphone inputs and two AUX inputs (MIC 3 switchable (MIC/LINE))
- MIC 1 features VOX priority and VOX level
- MIC 1-2-3, AUX 1-2, master volume controls and bass/treble tone control
- Line output via phono sockets
- LED VU meter and over temperature indication
- Short circuit, overload and high temperature protection
- Operational DC input for use with battery backup power sources or for operation using high capacity batteries



Specifications	MA 260MP	MA 2120MP	MA 2240MP
Power output	60Wrms	120Wrms	240Wrms
Speaker output	70V, 100V, 4-16Ω	70V, 100V, 4-16Ω	70V, 100V, 4-16Ω
Frequency response	50Hz-18kHz	50Hz-18kHz	40Hz-17kHz
Power supply	240V AC 50Hz / 12V DC (8A)	240V AC 50Hz / 24V DC (8A)	240V AC 50Hz / 24V DC (16A)
Order code	CRAM14	CRAM15	CRAM16

Radio mode: In radio mode press and hold the **PREV/NEXT** button to search for channels automatically or press **PREV/NEXT** to scroll through the channels.

USB/SD card mode: The integral MP3 player features auto-selection to select between USB and SD media. If only one SD or USB media is inserted MP3 player will automatically play the inserted media, if a second media source is then inserted the MP3 player will automatically begin to play the last inserted media. If one of the two media sources is then removed the MP3 player will revert to playing the media source still inserted into the machine.

REC function: To enter the record function press the **REC** button once. Pressing a second time will begin recording and a third time will stop and save the recording. When in the **REC** mode press the **PLAY** button to play the recording selected. Use the **UP/DOWN** buttons to select between recordings.

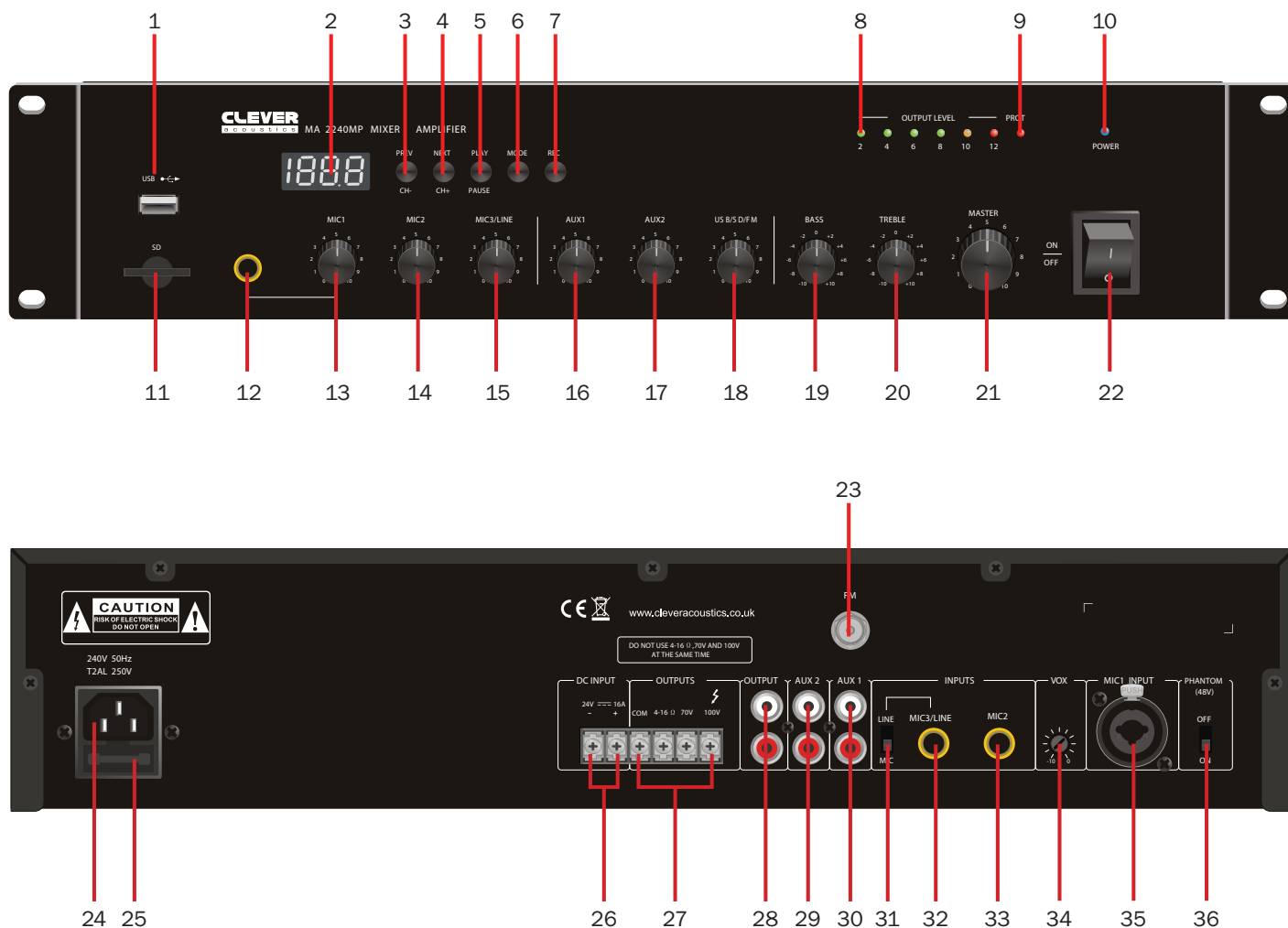
Mode button: Press the MODE button to select between the FM & MP3 modes. In MP3 mode press and hold down the MODE button to select the playback mode. Each time the button is held it will move along to the next mode.

ONE - Repeat track

NO - Repeat off

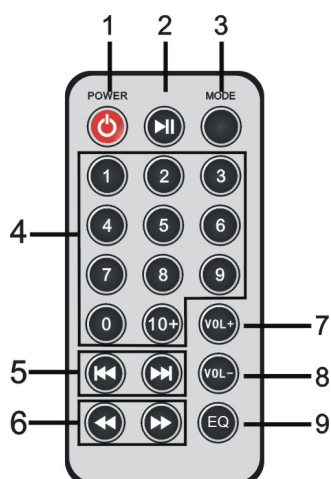
RAN - Random

All - Repeat all



In the box: **1 x fixture,**
1 x power cable, IR
remote, FM antenna &
1 x user manual

- | | | |
|---------------------------------|--------------------------------|------------------------------------|
| 01 - USB 2.0 port | 13 - MIC 1 volume control | 25 - Fuse |
| 02 - LED display | 14 - MIC 2 volume control | 26 - DC 24V input |
| 03 - PREV/CH- button | 15 - MIC 3/LINE volume control | 27 - COM, 4-16Ω, 70V, 100V outputs |
| 04 - NEXT/CH+ button | 16 - AUX 1 volume control | 28 - Output |
| 05 - PLAY/PAUSE button | 17 - AUX 2 volume control | 29 - AUX 2 |
| 06 - MODE button | 18 - USB/SD/FM volume control | 30 - AUX 1 |
| 07 - REC (record) button | 19 - Bass frequency control | 31 - LINE/MIC 3 input switch |
| 08 - Output level indicator | 20 - Treble frequency control | 32 - LINE/MIC 3 |
| 09 - PROT (protector) indicator | 21 - Master volume | 33 - MIC 2 unbalanced input |
| 10 - Power indicator | 22 - Power switch | 34 - MIC 1 mute control |
| 11 - SD card slot | 23 - FM antenna socket | 35 - MIC 1 unbalanced input |
| 12 - MIC 1 input | 24 - IEC in socket | 36 - Phantom power switch |

Remote control identification:

- 01 - Power button
- 02 - PLAY/PAUSE/CONFIRM button
- 03 - MODE button
- 04 - Number control
- 05 - LAST/NEXT buttons
- 06 - REWIND/FAST FORWARD buttons
- 07 - VOL + button
- 08 - VOL - button
- 09 - EQ button

Rack Installation

The MA Series are rack mountable. The rack you use should be a Double Door Rack where you can open the front and rear panel. When mounting the amplifier into the rack, please make sure that there is enough space around the amplifier.

Be careful when mounting the amplifier into the rack. Put the heaviest products into the lower part of the rack.

The front panel is not designed to absorb acceleration forces occurring during transportation.

Inputs

Short cables runs improve the sound quality remarkably. Input cables should be short and direct, since high frequencies will mostly be absorbed if the cables are unnecessarily long. Besides that a longer cable may lead to humming and noise problems. If the cable runs are unavoidable, you should use balanced cables.

Outputs

The high damping factor of your amplifier supplies a clear sound reproduction. Unnecessarily long and thin cables used for low impedance (4-16Ω) speakers will influence the damping factor and thus the low frequencies in a negative way. In order to safeguard good sound quality, the damping factor should lie around 50. The longer a cable has to be the thicker it should be. For longer cable runs please ensure the 100V outputs are used for 100V speakers.

Connect your speaker systems via the speaker terminals (COM = -VE)

Examples: 1) COM + 4-16Ω
 2) COM + 70V
 3) COM + 100V

Note: Please do not use more than one pair of output terminals.

Connections To The Mains

Before connecting the amplifier to the local mains voltage outlet should be checked to ensure the available supply is 240V~AC 50Hz. This product is CLASS1 and requires a protective mains earth to be connected at all times. DO NOT remove or disconnect the earth.

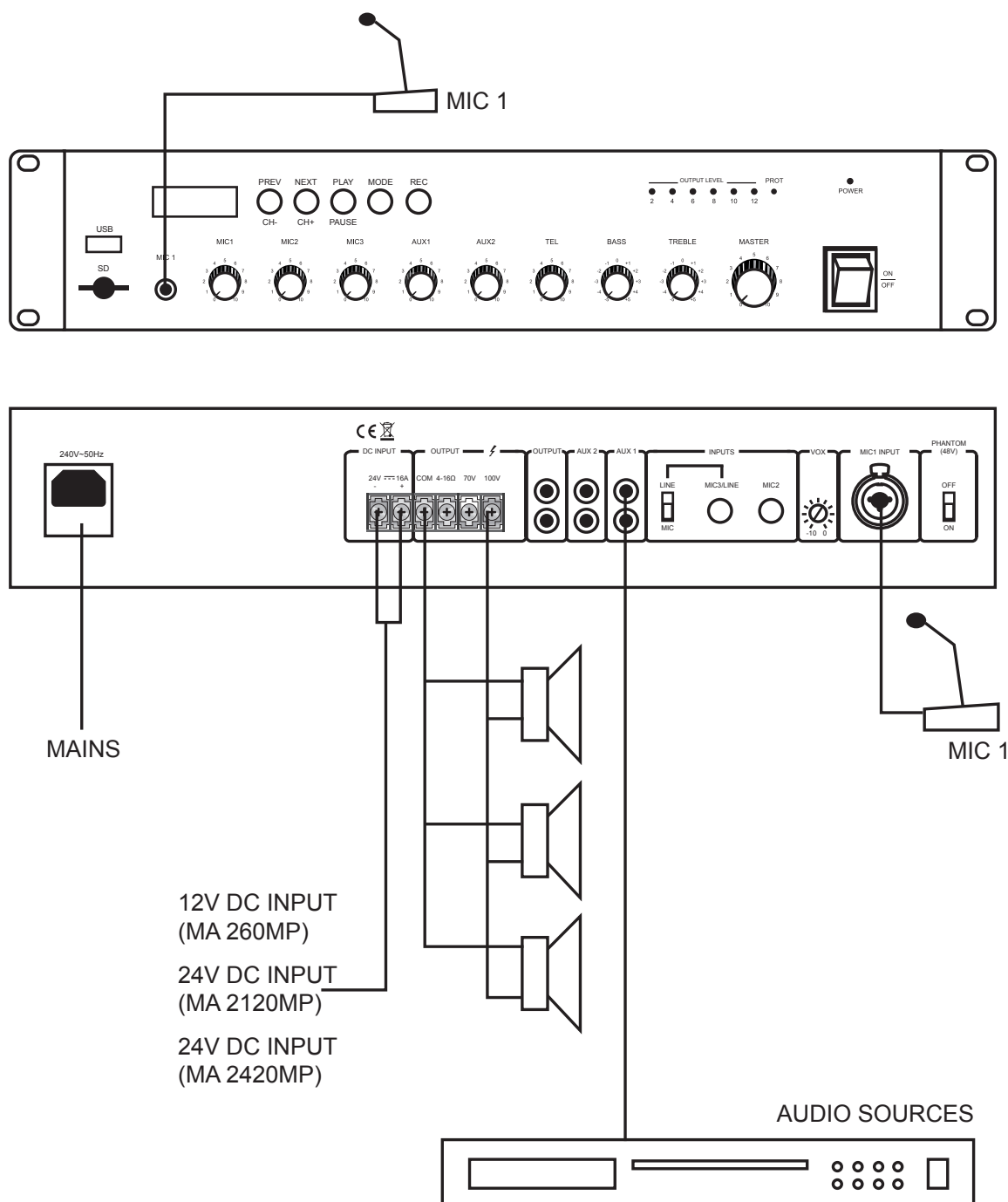
Power On/Off Procedure

After connecting your amplifier to the mains, turn all controls counter clockwise to the “min” position. Turn on audio sources (MP3 players, CD players, Microphones etc) before powering the amplifier ON. The last product to be switched on is the amplifier.

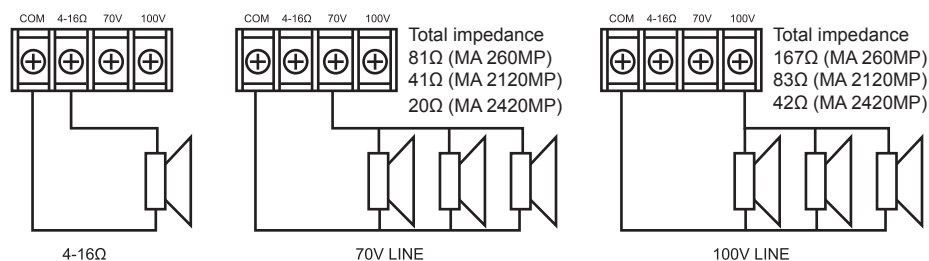
If you wish to power off the system, turn the amplifier’s master volume control counter clockwise to the “min” position before switching the amplifier OFF before any audio sources are switched off. By following this procedure it will prevent acoustic shocks to the speakers or potential damage to system components.

Machine operation

1. After connecting all audio sources and powering on the mixer amplifier, adjust the level of each audio input to achieve the desired "mix". Care should be taken to when adjusting microphone input volumes and the master volume, adjust both of these in small increment's to avoid feedback (howl around). The goal is to achieve a clear balance between music and voice ensuring announcements can be clearly heard.
2. Microphone input No.1 features adjustable voice operated override (VOX), this will mute all other inputs. After 3 seconds of no signal to MIC1 inputs the other input will return to their original state. The VOX mute level can be adjusted on the rear panel.
3. The Clever Acoustics amplifiers all feature output VU meter's with PEAK indication. Should the PEAK indicator illuminate (flashing) the output of the amplifier is too high, turn the master volume anti-clockwise to reduce the output.
4. The Clever Acoustics amplifiers all feature protection with LED indication. Should the PROTECT indicator illuminate, turn the master volume control anti-clockwise fully and switch off the amplifier for 15 seconds as the amplifier may have entered PROTECT mode temporarily due to a peak signal, care should then be taken to ensure all input levels are set correctly. If the amplifier persists to enter PROTECT mode the amplifier should be switched off and left to cool for 5-10 minutes before switching back on. If the PROTECT indicator remains lit this indicates a problem with the amplifier or amplifier load (ie Short Circuit).
5. The Clever Acoustics amplifiers all feature protection with LED indication. Should the TEMP (over temperature protection) indicator illuminate, turn the master volume control anti-clockwise fully and switch off the amplifier for 15 seconds as the amplifier may have entered TEMP (over temperature protection) mode temporarily due to the internal temperature reaching the preset limit, care should then be taken to ensure all input levels are set correctly and that all ventilation slots are clear of obstruction. If the amplifier persists to enter TEMP mode the amplifier should be switched off and left to cool for 5-10 minutes before switching back on. If the TEMP indicator remains lit this indicates a problem with the output level (ie bass heavy music), amplifier cooling or amplifier load (ie Short Circuit).
6. Speaker & Amplifier systems can produce high sound pressure levels, please operate all controls with caution to ensure people are not exposed to excessive or dangerous sound pressure levels.



Speaker connections



Notes:

- Both the 4 - 16Ω and 100V terminals cannot be used at the same time.
- Impedances indicated in the figures represent the total speaker system (load) impedances.
- Loads presented to the amplifier must be equal to or greater than listed above. Speaker impedances must be measured using a true impedance meter, do not standard multimeters.



WARNING!

Be sure to attach the supplied terminal cover attached after connection. Because high voltage is applied to the speaker terminals, care should be taken never touch these terminals to avoid electric shock.

All speaker connections should be made using bare wire or suitable insulated crimp terminals. Please ensure no loose strands are present as these may short across terminals causing damage to the amplifier.

Connection With The Mains

Connect the unit to the mains via the IEC mains inlet using the 13A UK - IEC cord supplied.

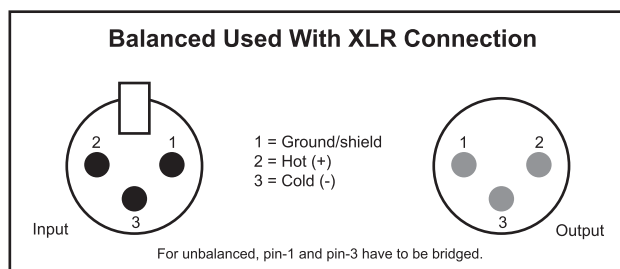
The earth has to be connected.

Switch the unit on. After switching on the speaker system, wait 8 - 10 seconds before you turn the volume control up in order to avoid speaker damage.

CAUTION! Increase the level of each channel up to the point where the clip LEDs illuminate.

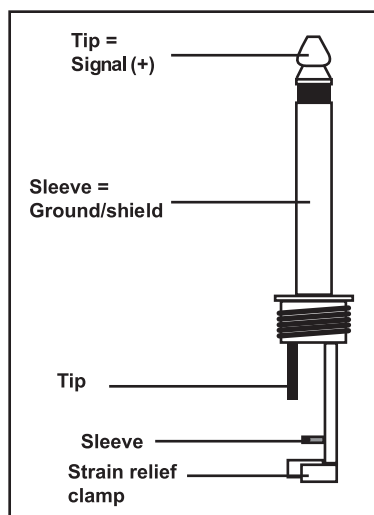
Always check the sound pressure level with a meter in order to keep to the legal threshold.

Balanced XLR jack connection

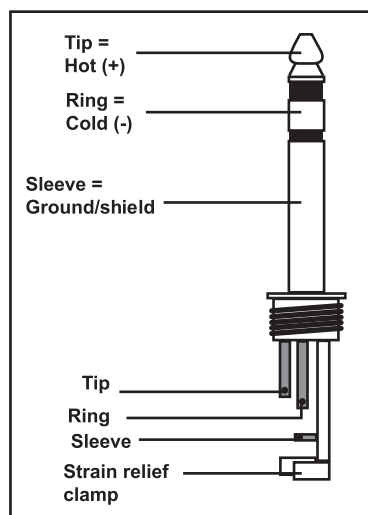


Jack plug

**Unbalanced mono
1/4" jack plugs**



**Balanced/stereo
1/4" jack plugs**



For connection of balanced and unbalanced plugs, the ring and sleeve have to be bridged in the stereo plug.

Problem chart

Problem	Cause	Solution
No power	The power cord is not connected.	Check the power cord and any extension cabled.
No sound	The power cord of the respective product is not connected properly or not at all.	Check the power cord and if the plugs are properly connected with the sockets.
	The connection socket or the plug is dirty.	Clean the socket and/or the plug.
Noise	The input signal is too strong.	Reduce the input signal via the gain control.
Distorted sound	Load impedance is too low.	Check load impedance vs amplifier specification, reduce as required.



CAUTION - DANGER TO LIFE
DISCONNECT FROM THE MAINS BEFORE
STARTING MAINTENANCE OPERATION

Cleaning and Maintenance

We recommend a frequent cleaning of the product. Please use a soft lint free and moistened cloth. Never use alcohol or solvents.

There are no serviceable parts inside the product except for the fuse. Maintenance and service operations are only to be carried out by authorised dealers.

Replacing the fuse

Only replace the fuse by a fuse of the same type and rating.

Before replacing the fuse, unplug the mains lead.

Should you need any spare parts, please use genuine parts.

Should you have any further questions, please contact your dealer.



***Correct Disposal of this Product
(Waste Electrical & Electronic Equipment)***

**(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 of where and how they can take this item for environmentally safe recycling.

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.

