

There are no user-serviceable parts inside your Caspian M2 Stereo Power Amplifier. If a fault should develop, refer any servicing to your appointed ROKSAN AUDIO dealer, distributor or ROKSAN AUDIO approved service agent.

Your Roksan Audio Caspian M2 Stereo Power Amplifier is guaranteed against any defect in materials and workmanship for a period of **five years** from the date of purchase.

This guarantee only becomes effective if the product is registered with Roksan Audio **online** within 14 days of purchase. Please retain your original proof of purchase as this may be required in the future.

This guarantee excludes:

1. Damage caused due to accident, misuse, neglect and incorrect installation, adjustment or repair.
2. Liability for damage or loss during transit from the retailer or purchaser to ROKSAN or its authorised distributor for the purposes of repair or inspection.

This guarantee excludes:
Carriage costs to ROKSAN that will be borne by the consignor.

All claims under this guarantee must be made through an authorised ROKSAN AUDIO retailer.

If equipment returned for repair to ROKSAN is found on inspection to comply with the product specification ROKSAN reserves the right to make a charge for examination and return carriage. **Unauthorised servicing will void this guarantee.**



ROKSAN WARRANTY REGISTRATION

VISIT

<http://www.roksan.co.uk/rw.php>

In Case Of Difficulty

CALL: +44 (0)20 8900 6801

ROKSAN AUDIO OFFERS OWNER OF THE NEW M2 STEREO POWER AMPLIFIER A RANGE OF SPEAKER CABLES AND INTERCONNECTS WHICH ARE OPTIMISED FOR USE WITH OUR AWARD WINNING COMPONENTS.

SPEAKER CABLES

ROKSAN AUDIO HDC 02S

The speaker cables are offered with full termination service. Please contact your nearest dealer or distributor for more details.

INTERCONNECT CABLES

ROKSAN AUDIO HDC 03A

The interconnects are offered with Roksan specially designed RCA and XLR plugs. Please contact dealers or distributor for more details.

ROKSAN

Caspian M2 Stereo Power Amplifier User Manual



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INTRODUCTION

Thank you and congratulations on your purchase of the ROKSAN M2 Stereo Power Amplifier. This amplifier is designed and manufactured to the highest specification and rigorously tested to offer you many years of trouble-free pleasure.

Your M2 Stereo Power Amplifier is the heart of your hi-fi system. Its correct installation, set-up and operation will have a profound influence on the sonic performance of the entire hi-fi installation.

Please read the contents of this manual thoroughly. It will help you to understand your hi-fi equipment better and enhance your listening pleasure.

This manual is divided into the following sections:

- Safety Instructions (*Accompanying card*)
- Introduction
- Cautions
- Installation
- Setup
- Operation
- Troubleshooting
- Guarantee
- Notes
- Specifications

UNPACKING

Included in the packing of your M2 Stereo Power Amplifier you will find:

- One mains lead fitted with the correct mains power plug for your country
- One information pack

After removing these items please retain **all** packing materials. Correct packing is necessary for future possible transportation of your M2 Stereo Power Amplifier.

MAINTENANCE

After disconnecting the amplifier from the mains supply, the cabinet and front panel may be cleaned with a lightly dampened soft cloth or chamois leather. **Avoid using abrasives or solvents.**

EU DIRECTIVES

This product is designed to comply with the legal provisions of EU Directives 89/3336/EC and 72/23/EC. The standards which have been applied are those which were in force at the time of the introduction of this product.

This product bears the CE mark.

This product is compliant to EN 60065.

This product must be earthed. Please ensure that other equipment connected to it is earthed according to the manufacturer's instructions.

ROKSAN

INPUTS

Input 1 (Balanced) 1x pair XLR sockets
Input 2 (Single ended) 1x pair RCA sockets

Input impedance 38k Ohm
Input sensitivity 240mV RMS
Signal input L+R channels. Balanced and single ended
Signal output Chain output L+R channels. Balanced and single ended

OUTPUTS

Output 1 1x pair RCA sockets
Output 2 1 x pair XLR 3 pin plugs
Output voltage 700mV
Power output 1x pair loudspeakers 4mm socket L+R

Output Power 85 watts in to 8 Ohm both channels driven
125 watts in to 4 Ohm both channels driven

Power supply 350VA Ultra low noise toroidal transformer
Current output 60A peak to peak

Damping factor 160A measured at 8 Ohm
Frequency response -3db , <3Hz. > 100Khz
Gain 31.6db straight or untrimmed 0.316 untrimmed to fully trimmed

Harmonic distortion <0.005% 1khz in to – 8 Ohm
Signal to noise ratio Line 100dba (ref 900mV)
Power source 100V/120V 50/60Hz 220V/240V 50hz/60hz

Power consumption (Full power 2 channels 8 Ohm
<330W, 4 Ohm <550W

Dimensions 432x330x70 (WxDxH)
432x330x80 (Including feet)

Weight 13Kg

AC MAINS SUPPLY

Your Caspian M2 Stereo Power Amplifier is set to operate from a fixed supply voltage which is marked on a label next to the mains input plug. Before connecting the mains lead please check that your mains supply corresponds to this label as below:

230V Products	Voltage Range: 220V – 240V
115V Products	Voltage Range: 100V – 120V
100V Products	Voltage Range: 90V – 110V

The mains lead supplied with this product has an IEC mains socket which plugs into the IEC connector on the unit's rear panel. The other end is normally attached to the appropriate mains plug for your country. In the UK this is the standard UK10A plug. **Please Note:** Other international markets will require a different value plug and protection fuses. Please contact us for more details.

This plug should ordinarily not be removed from the lead. If you do remove it, please dispose of it safely so that it cannot be plugged into a mains socket whilst in a potentially dangerous condition. We suggest that you obtain from your dealer a complete replacement lead.

Should you move to another area where either the mains voltage or the mains plugs are different from those as supplied with your Power Amplifier, please contact the appointed ROKSAN distributor for assistance.

Please observe correct mains polarity at all times.

The M2 Stereo Power Amplifier mains fuses are located on the rear panel next to the IEC mains connector. These must only be replaced by the fuse type and rating as described on the fuse rating label on the rear panel of the unit.

If the equipment is likely to be unused for some time, unplug it from the mains supply.

GENERAL CAUTIONS

FCC WARNING

This equipment may generate or use Radio Frequency energy. The user may lose the right to operate this equipment if unauthorised modifications are made.

INTERFERENCE

Properly installed, this unit should not cause harmful interference to radio communications. There is, however, no guarantee that such interference will not occur in a specific installation. If interference arises (which you can determine by switching the unit off and on) you could try to remedy this problem by the following:

- Re-orient or re-locate the receiving antenna
- Increase the distance between the amplifier and receiver
- Connect the unit to a different mains circuit from that of the receiver
- Consult your ROKSAN appointed dealer or an experienced Radio/TV technician for help and advice

LOCATION

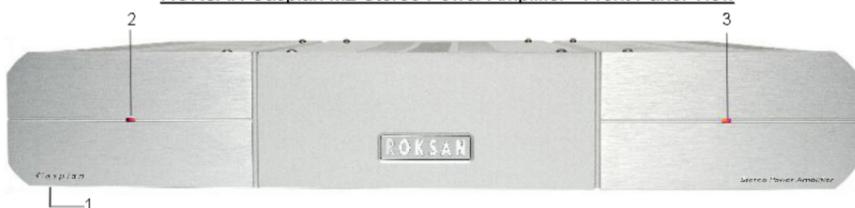
Your M2 Stereo Power Amplifier should be located in a well ventilated area and kept away from sources of heat, dust, humidity and direct sunlight.

The Amplifier may be positioned either as a free standing unit or alongside another audio/video product. Never place the amplifier on carpet or any surface likely to hinder normal ventilation. Never allow liquids or other objects to fall into the unit.

This unit contains no user serviceable parts. **Do Not remove any panels or attempt to service it yourself.**

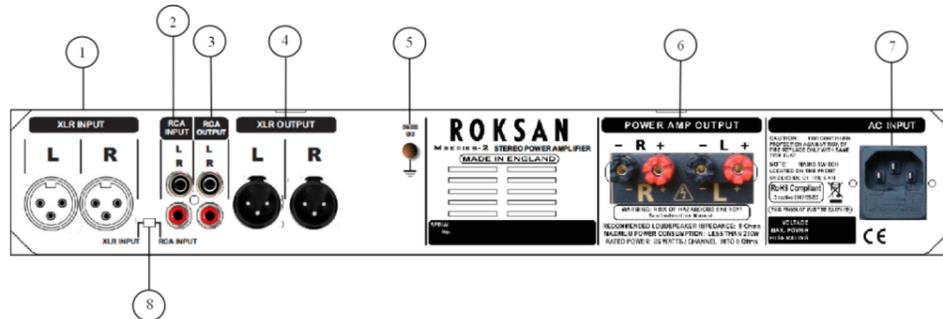
INSTALLATION

ROKSAN Caspian M2 Stereo Power Amplifier - Front Panel View



1. On/Off power switch. (Hidden under the chassis)
2. Left Channel LED. Red=On. Green=Standby. Orange/Green=Overload.
3. Right Channel LED. Red=On. Green=Standby. Orange/Green=Overload.

ROKSAN Caspian M2 Stereo Power Amplifier - Rear Panel View



1. XLR/Balanced inputs
2. RCA/Single ended inputs
3. RCA/Single ended output (Bypass)
4. XLR/Balanced output (Bypass)
5. Earth plug connection
6. Speakers output connection
7. Main power connection
8. Input selector switch

SETUP

CONNECTING MAINS POWER

Please note: **The M2 Power Amplifier uses a high current circuitry. Do not unplug the cable while the amplifier is in the ON or Standby position.**

Please refer to front & rear panel views on Page 2. The moulded IEC connector of the supplied mains lead should be plugged into the socket (rear panel 7) on the rear of the unit first and then plugged into the mains supply. The Mains power switch (front panel 1) is on the left front underside of the power amplifier. This amplifier can be left at the "ON" position between listening sessions; if however the amplifier is likely to be unattended for a long period, switch it off and unplug the mains lead from the wall.

SIGNAL CONNECTIONS

1) Signal Input connections:

Two pairs of Inputs (rear panel 1 & 2) are available on your M2 Power Amplifier. One input is a line input (RCA) the other is a balanced input (XLR) They are designed for connection to units which are equipped with a volume control. **Please note: Any attempt to connect the power amplifier directly to a source such as CD, Tuner, DVD etc may result in a volume level that will damage the amplifier and any speakers connected to it.**

2) Signal output connections:

Two pairs of outputs (Rear panel 3 & 4) are available on the M2 power amplifier. One output is a line output (RCA), the other is a balanced output (XLR). The outputs can be used to connect additional amplifiers in a chain that will maintain a stable and powerful signal to jointly control speakers with more than a single amplifier. **Please note:** The amplifier is designed as a two channel amplifier and can not be bridged to form a Monoblock.

In accordance with standard practice, the upper row of the phono sockets carries the LEFT channel and the lower carries the RIGHT channel. The XLR inputs and outputs are marked on each of their respective opposing sides for Left and Right.

IMPORTANT NOTE: For optimum performance it is recommended to use high quality inter-connect cables such as ROKSAN HDC-03A high definition Analogue Cable.

LOUDSPEAKER CONNECTIONS

The right and left loudspeakers are connected to the amplifier via the rear panel binding posts (Rear panel 6). The M2 Power Amplifier offers the standard 4mm speakers posts.

- **Please note: We strongly recommend that you use professionally terminated speaker cables using 4mm plugs. Any attempt to connect cables which are not terminated may result in damage to the amplifier.**

- **Connection to a bare cable** has both conductors insulated and enclosed in an overall plastic sheath. Carefully remove any overall sheath or split the figure 8 cable to a depth of about 75mm (3"). Carefully strip the insulation on each wire to a depth of about 12mm (1/2") exposing the bare core. If the conductor is stranded, twist the strands together on each conductor.

Please unscrew the binding post. There is a cross-hole about 5mm from the panel end of the binding post. Insert the bared conductor through the hole and tighten the binding post securely making sure that there are no loose strands or bare ends protruding through the post.

- **Speaker connection polarity**

Carefully observe polarity ensuring that the RED (+) speaker terminal is connected to the RED (+) amplifier terminal and the BLACK (-) speaker terminal to the BLACK (-) amplifier terminal.

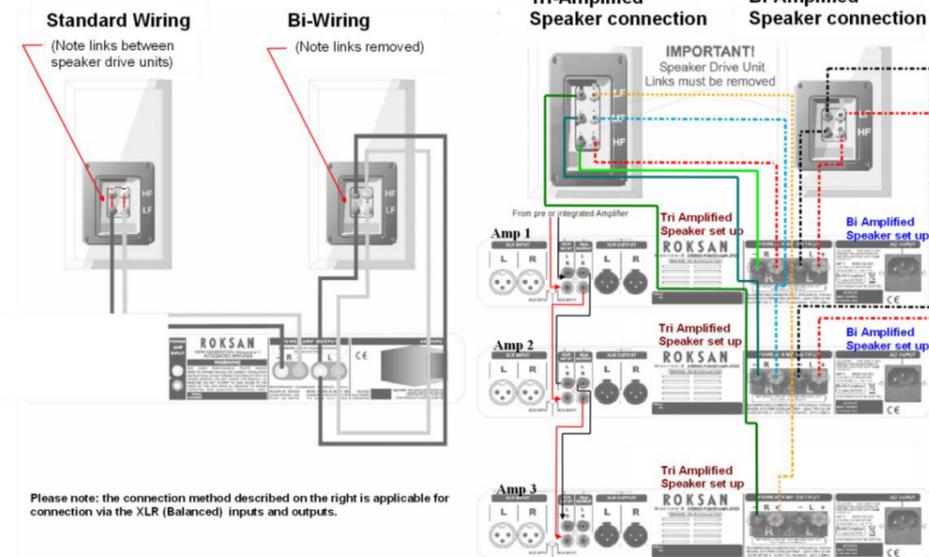
When both left and right channels are connected to their respective speakers the amplifier is ready for use.

IMPORTANT NOTE: For optimum performance it is recommended to use high quality cables such as ROKSAN HDC-02S high definition Loudspeaker Cable. Many speaker cables such as the ROKSAN HDC-02S are directional. Please observe this directionality.

MULTI-WIRING AND MULTII-AMPING

Multi-Amping The Loudspeakers

If the Loudspeakers utilise more than one drive unit with individual input terminals, for example a Tweeter and a Woofer, then the loudspeaker performance will benefit from Bi-Amping. Dedicating one amplifier to the Tweeter and another to the Woofer isolates them from each other reducing distortion and increasing reserved power. Speakers work far better with most amplifiers when Multi-Amped than using one yet more powerful amplifier. *Note: Bi-Wiring reduces the impedance seen by the Woofer and the Tweeter and is a first step towards Bi-Amping.*



SWITCHING ON

The power switch (Front panel 1) is on the left front underside of the amplifier. This switch should be left in the ON position for normal operation. If unattended for long periods, the amplifier should be switched to OFF and the power lead should be disconnected. When switched to ON the M2 stereo power amplifier runs a self test diagnosis and the amplifier enters WARM UP mode. The front LED indicators will switch to green (Front Panel 2&3). The amplifier is now ready for use.

PLAYING MUSIC FOR THE FIRST TIME

1. Please reduce the volume of the integrated amplifier or pre amplifier which is connected to the M2 Power Amplifier to minimum.
2. Start playing from your chosen source (CD, DAC, Tuner etc) and increase the volume slowly
3. The LED indicators will automatically switch to RED and the output stage will be activated within a few seconds.

BREAKING-IN THE NEW AMPLIFIER

A new electrical output stage requires a "break-in" period, warming up the components to optimum working temperatures and acquiring the electromagnetic properties and stability that offers the listeners optimal musical performance. We suggest that after the initial playing period the amplifiers should be left playing at low volumes for up to 40 hours. Clear improvements to clarity and speed will be apparent after the first 10-15 hours of playing with the amplifier reaching its optimal performance after 40 hours.

Please note: when switched off for long durations the procedure described above may need to be performed again.

TROUBLESHOOTING

If you suspect that your ROKSAN M2 Stereo Power Amplifier is not operating properly, you should check all the connections carefully. Pay particular attention to speaker phasing and channel connections. Phono plugs should be fully inserted- a frequent cause of problems is that Phono plug surrounds do not make proper contact. Below are some commonly encountered problems with suggestions for possible cure. The list is not exhaustive: If you have any unresolved problems, please consult your appointed ROKSAN dealer or distributor.

SYMPTOM	LIKELY CAUSE	SUGGESTED REMEDY
No power	AC Mains lead not inserted properly Unit not switched on at front	Ensure AC Mains lead is fully inserted Switch unit on at front left underside
No output on one or both channels	Amplifier in stand-by mode (MODE light GREEN) Missing or bad input signal connection Incorrect speaker connection Wrong input selected on integrated or pre Tape Monitor selected on integrated or pre amplifier Over heating Amplifier or pre amplifier are preset in MUTE position	Check to make sure that the integrated amplifier or the pre amplifier are connected. Check all input connections Check speaker output connections on rear panel Select correct input, ascertain source is working Deselect Tape Monitor on your integrated or pre Allow amplifier to cool, increase ventilation or use at lower volume Deselect MUTE (check volume setting first) Switch to RCA or XLR as appropriate
Very low sound output		
Poor speaker imaging, lack of Bass output	Loudspeakers connected out of phase	Check polarity of speaker connections (especially important if Multi-wiring, Multi-Amping)
Hum from speakers	Incorrect Grounding	Check Mains polarity and grounding on all connected equipment