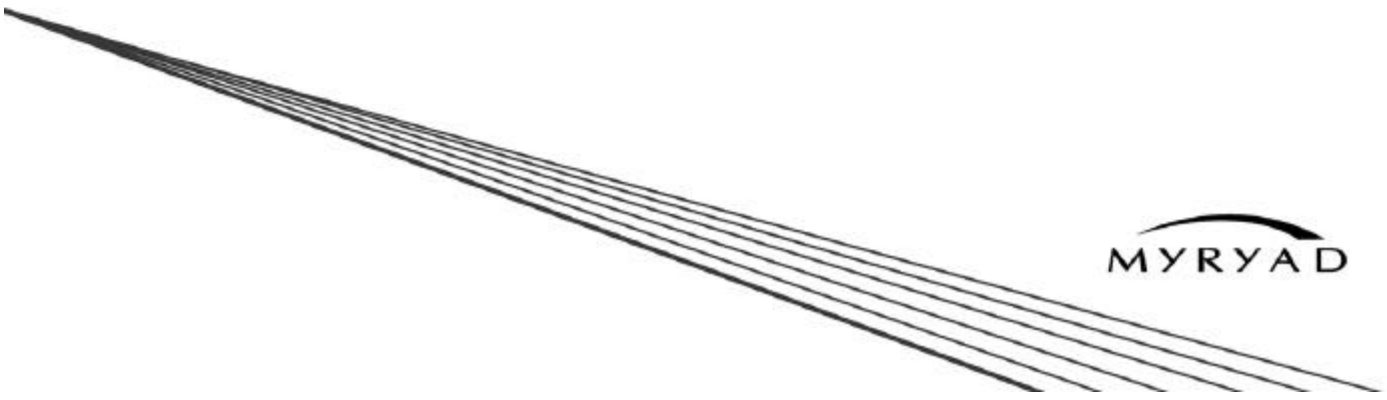
MXA2080

Stereo Power Amplifier

Owner’s Manual



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INTRODUCTION

The Myryad MXA2080 Power Amplifier has been designed to provide a flexible solution to a wide range of power amplifier requirements. It can be used with the Myryad MXP2000 Stereo Preamplifier (or other high quality preamplifier) to deliver audiophile quality stereo. Alternatively it can be partnered with the MXI2080 Integrated Amplifier (which uses identical power amplifiers) for bi-amplification of suitable loudspeakers. It can also be used in multi-channel or multi-room installations to provide two channels of amplification, easily controlled via its My-Link or DC trigger control inputs.

Each amplifier channel has a line input plus a directly linked line output both on high-quality gold-plated RCA phono sockets and a loudspeaker output on a pair of solid metal gold-plated 5-way binding posts.

The MXA2080 may be controlled remotely via the My-Link communications bus when used with other Myryad products. My-Link allows remote control of standby and mute functions. In addition to this, the MXA2080 may be switched into or out of standby remotely using its DC trigger input.

Applications of the MXA2080 Power Amplifier include:

- Use in conjunction with the MXP2000 Stereo Preamplifier in a high quality stereo system
- Various bi-amplifier or tri-amplifier configurations together with the MXI2080 Integrated Amplifier or MXP2000 Preamplifier.
- Use in conjunction with the MXD6000 Digital Preamplifier-Processor - for example to drive surround or rear channels.
- Use in a multi-room setup, possibly together with other MXA2080s, to deliver high-quality audio to a number of different rooms.

INSTALLATION AND SAFETY

This amplifier generates a significant amount of heat when operating and thus requires good ventilation. Do not place it on a rug or other soft surface into which it could sink, obstructing the air inlets in its underside. Do not allow papers or cloth to obstruct the ventilation grille in the top cover. The amplifier should not be installed in a built-in situation such as a bookcase or cabinet unless proper ventilation is provided. If the amplifier is moved shortly after operation take care not to touch the heatsinks, which are accessible from below, as they may be very hot. The amplifier is designed for use in moderate climates.

CAUTION:
THIS APPARATUS MUST NOT BE EXPOSED TO DRIPPING OR SPLASHING. OBJECTS FILLED WITH LIQUIDS SUCH AS VASES MUST NOT BE PLACED ON THE APPARATUS

THE REAR PANEL POWER SWITCH DISCONNECTS MAINS LIVE ONLY. THE POWER CORD MUST BE DISCONNECTED FROM THE REAR OF THE APPARATUS, OR THE WALL SOCKET, TO PROVIDE TOTAL ISOLATION. ONE OR OTHER OF THESE CONNECTIONS MUST BE READILY ACCESSIBLE WHEN THE APPARATUS IS IN USE.

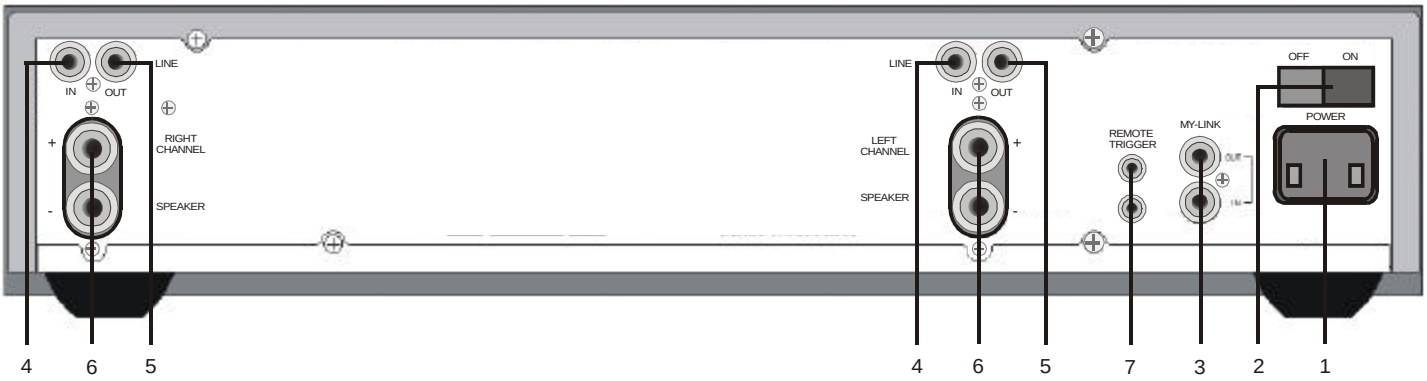
Do not remove the cover, or attempt to modify or repair the amplifier yourself. Refer all servicing to a qualified technician.

ACCESSORIES

Your Myryad Power Amplifier is supplied complete with the following accessories:

- My-Link interconnect (0.5m RCA-RCA)
- Separate mains power cord to suit country of sale.

SETTING UP YOUR SYSTEM



REAR PANEL CONNECTIONS

1. Power Inlet
Before making any connection, check that the mains voltage setting printed on the rear panel is the same as your local mains supply.

Plug the female (socket) end of the power cord into the power inlet on the rear of the amplifier. Plug the male (plug) end of the cord into a "live" wall socket or a suitable heavy-duty extension cable.

UK version: The mains plug is supplied fitted with a 5A fuse. It should only be replaced with a fuse of the same rating (13A) which complies with BS1362.

2. Power Switch
Press one side of this rocker switch (the side nearer the edge of the rear panel) to switch amplifier ON and the other side (towards the speaker terminals) to switch it OFF. When the POWER switch is in the OFF position all power is disconnected from the amplifier. In this condition the amplifier cannot be powered up from the front panel or the My-Link or remote trigger. When the POWER switch is in the ON position (and the power cord correctly inserted and plugged into a live wall socket) the amplifier will power up in standby mode (see FRONT PANEL CONTROLS, STANDBY, below).

It is recommended that the POWER switch be turned OFF if the amplifier is not going to be used for an extended period of time.

IMPORTANT: Make sure the POWER switch is turned OFF before making or changing any connections to the amplifier.

3. Smart My-Link®
When the MXA2080 is used in a system with other Myryad products (e.g. MX-Series, M-Series, Cameo or Z-Series) all may be joined together via the My-Link. This will allow all the products to be remotely controlled via the infra-red receiver on, for example, an MXP2000 Preamplifier or MXI2080 Integrated Amplifier.

When joined via the My-Link, the MXA2080 will respond to STANDBY and MUTE operations on the preamplifier (whether operated from the front panel or by remote control). For example, if both the preamplifier and the MXA2080 are in STANDBY, then switching the preamplifier out of standby will also bring the MXA2080 out of standby. In this way an MXP2000 + MXA2080 can be operated with the same ease as an integrated unit. If a number of MXA2080s are being used in a multi-amp or multi-room system *all* the amplifiers may be My-Linked so that they can be controlled as one.

Use a short RCA-to-RCA (phono-to-phono) interconnect cable to connect from the MY-LINK OUT socket on the integrated or preamplifier to the MY-LINK IN socket on the MXA2080. A suitable 0.5m long My-Link cable is supplied with the MXA2080. A second cable can then run from the MY-LINK OUT socket on the MXA2080 to the MY-LINK IN socket on a third Myryad component (if desired) and so on – in “daisy-chain” fashion. Inexpensive interconnects may be used as the My-Link bus carries only control signals, not audio, so these cables have no effect on sound quality.

Please note:
- Manually switching the MXA2080 into standby will not switch other My-Linked units into standby.
- When the My-Link is connected it is recommended that no connection be made to the REMOTE TRIGGER input (see below).

4. Line inputs
The line inputs can be driven from the line outputs of any good quality preamplifier (such as the Myryad MXP2000) or any other suitable line level source. High quality RCA-to-RCA (phono-to-phono) interconnects should be used.

5. Line outputs
The line outputs are directly connected to the line inputs - without buffering. The line outputs allow power amplifiers to be “daisy-chained” so that more complex multi-amplifier
or multi-room systems may be built.

6. Loudspeaker outputs
Each channel is capable of driving any loudspeaker with a rated impedance of 4 ohms or greater. The loudspeaker terminals are high-current binding-posts, coded red and black.

CAUTION: THE RED TERMINALS ARE MARKED WITH A HAZARD SYMBOL TO INDICATE THAT THEY CAN BE LIVE, READ ALL THE LOUDSPEAKER WIRING INSTRUCTIONS CAREFULLY. IT IS RECOMMENDED THAT READY-MADE LEADS BE USED WHERE POSSIBLE.

For correct imaging it is important that the two loudspeakers are wired "in phase". To ensure correct phasing wire the black (-) terminal on the amplifier to the black or "-" terminal on the loudspeaker. The red (+) terminal on the amplifier should be wired to the red or "+" terminal on the loudspeaker.

7. Remote Trigger Control input/output

If the MXA2080 is being used in a system without a Myryad preamplifier, processor or integrated equipped with My-Link, the REMOTE TRIGGER input may be used to allow the MXA2080 to be remotely switched into or out of STANDBY.

If your preamplifier or processor has a TRIGGER output which delivers a DC trigger signal when the unit is switched on (or out of standby) then it can be linked to the MXA2080 to switch that out of/into standby also. A lead must be used which is fitted with
a 3.5mm mini-jack plug to connect to the MXA2080's REMOTE TRIGGER input socket. The lead must be wired according to the rules below

Remote Trigger Control Details

Connector to MXA2080 REMOTE TRIGGER input:…….		3.5mm mini-jack plug
Jack plug wiring:……..		sleeve negative, tip positive
Trigger voltage:…….		DC, 4.5V to 24V
Nominal loading of MXA2080 REMOTE TRIGGER input:…….		2200 Ohms
Operation:	TRIGGER voltage change from 0 to +ve:…	MXA2080 switched from standby to active
	TRIGGER voltage change from +ve to 0:…	MXA2080 switched from active to standby

IF YOU ARE IN ANY DOUBT ABOUT MEETING ANY OF THESE CRITERIA, OR PREPARING A SUITABLE LEAD, ASK YOUR DEALER OR INSTALLER TO HANDLE THIS FOR YOU.

Note: If the TRIGGER input is active when the rear panel POWER switch is turned ON, then the amplifier will not power up into standby mode as usual. It will power up immediately into its "active" state - with its normal power-on mute delay (see FRONT PANEL CONTROLS, STANDBY below).

The REMOTE TRIGGER output is wired directly to the input. Using this output, further MXA2080s, or other products, may be connected from a single trigger source without needing any special adaptors.

USING YOUR MXA2080

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FRONT PANEL CONTROLS

1. Standby

When the amplifier is plugged into a live wall socket and the POWER switch is turned ON, it will power up in "standby" mode and the central standby LED (Light Emitting Diode) in the display window will glow red. In this mode only a small part of the internal circuitry of the amplifier is powered up, so it consumes very little power and all loudspeaker outputs are isolated by relays.

When the STANDBY ellipse is touched the MXA2080's circuitry will be activated, but the loudspeaker outputs will remain muted for a short period to allow the internal voltages to stabilise. During this delay period the standby LED will flash blue. Following the delay the standby LED will glow blue continuously and the outputs will be de-muted.

When the STANDBY ellipse is touched again the amplifier will be returned to standby mode and the standby LED will glow red.

Please note: When the power amplifier is remotely activated from another unit, there may be a time difference between the closing of the loudspeaker output relays of the two units. This is normal and no cause for concern.

CAUTION: WHEN IN STANDBY MODE THE INTERNAL CIRCUITRY OF THE MXA2080 IS STILL LIVE, SO ALL SAFETY PRECAUTIONS MUST BE FOLLOWED

2. Loudspeaker output protection and muting

When the amplifier is in standby mode the loudspeaker output terminals are isolated from the amplifier by high quality relays. When the amplifier is first switched on from standby mode the loudspeaker outputs remain disconnected for a few seconds to allow the internal voltage levels to settle. The loudspeaker outputs are immediately disconnected again when the amplifier is switched back into standby mode.

The same loudspeaker mute relays are used to protect both the amplifier and your loudspeakers against possible damage. If any one of a number of fault modes is detected in any channel (loudspeaker output short circuit, amplifier overheating, amplifier DC fault) the loudspeaker will be disconnected from that amplifier channel to protect both. In the case of a short circuit the loudspeaker will be re-connected after a few seconds, but will be disconnected again if the fault persists. If overheating has caused the protection system to operate, then it will take some time for the module's heatsink to cool sufficiently to allow the loudspeaker to be re-connected (probably between ten and twenty minutes depending upon the room temperature and ventilation). The amplifier will cool more quickly if it is switched to standby mode.

The protection circuit in each channel of the MXA2080 is totally independent of the other. When a channel's protection is activated, for whatever reason, only that channel's speaker relay will open muting only that channel.

FAULT CONDITION INDICATION

Each of the MXA2080's power amplifier channels has an intelligent loudspeaker protection system. If a fault occurs in either power amplifier channel it will report the nature and location of the fault using five LEDs in the amplifier's display window. When a fault occurs, the display will change as follows.

First the display will show the fault type – numbered from 1 to 5 – indicated by the number of blue LEDs illuminated starting from the leftmost.

■~~~~ Fault type 1
■■~~~ Fault type 2
■■■~~ Fault type 3
■■■■~ Fault type 4
■■■■■ Fault type 5

A blue LED illuminated is shown "■" and no LED illuminated is shown "~".

The above display will appear for about 2 seconds, after which it will change to show which channel is faulty. The channel is indicated by illuminating all LEDs, but only the one relating to the faulty module location will be blue "■", the others will be red "□".

Hence:

□□■□□□ Left channel fault
□□□■□□ Right channel fault

This display will appear for about 2 seconds, after which it will alternate with the "Fault type" display. The displays will continue to alternate while the fault persists, or until the unit is switched off or into standby.

The table below indicates what action should be taken when a fault is reported. "Overheat" and "Short-circuit" faults can usually be cured by checking your amplifier setup. The other faults indicate a failure within the amplifier so the unit must be returned for service.

Fault Type	Description of Fault	Action required
1	"Overheat" Amplifier channel has overheated	Make sure that ventilation grilles in amplifier's top cover and bottom chassis are not obstructed. Allow amplifier channel to cool - typically 10 - 20 minutes depending upon the room temperature and ventilation - after which the channel's loudspeaker will be re-connected. The amplifier will cool more quickly if switched to standby. When the loudspeaker is re-connected, make sure that the volume is not set too high – i.e. that the sound is clean and undistorted. If the sound is distorted on loud passages, reduce the volume setting. If the problem persists return unit to approved Service Agent.
2	"Short-circuit" Loudspeaker wiring short-circuited, or very low impedance loudspeaker connected, or too many loudspeakers wired in parallel to one amplifier channel	Switch amplifier POWER off at rear. Check that load on each channel is no less than 4Ω (one 4Ω speaker or two 8Ω speakers to each channel). Check loudspeaker wiring – at both amplifier and speaker ends. Make sure there are no small strands of wire that might be causing a short circuit. Re-wire if necessary. If the problem persists return unit to approved Service Agent.
3	Excessive positive DC output	Return unit to approved Service Agent.
4	Excessive negative DC output	Return unit to approved Service Agent.
5	AC power failure to power amplifier channel	Return unit to approved Service Agent.

TROUBLE-SHOOTING GUIDE

Some of the most common problems:

No sound from any channel:

- Power turned off or system in standby mode. Check that the standby LED in the display window is lit blue.
- Input connections loose or missing. Check that all connections are secure.
- UK version only: The fuse in the mains plug has failed. Check and replace if necessary.

No sound from one channel only:

- Loudspeaker cable pulled loose. Check all connections, both at the loudspeakers and amplifier.
- Interconnect cable pulled loose or making poor contact. Check and, if necessary, un-plug and re-plug all relevant cables.
- Protection relay has operated because of a short circuit loudspeaker wire or amplifier overheating (see Fault Condition Indication on Page 6). Carefully check all wiring after switching amplifier POWER OFF. Allow amplifier to cool.

Incorrect operation - some functions not working:

- Control processor latched. Switch off POWER on rear panel and wait for 5 minutes. Then switch POWER on and switch out of standby. Normal operation should resume.

Amplifier fails to respond to Smart My Link® remote commands from Myryad Preamplifier, Preamp-Processor or Integrated:

- My-Link cable is loose or not connected. Check connections on all linked units.

Loud buzz or hum:

- Interconnect cable pulled partially out of its socket.
- Defective interconnect cable.

SPECIFICATIONS

Continuous rated power output, stereo:	8 Ohms:	80 W
	4 Ohms:	120 W
THD: @ 80% rated power, 8 Ohms, 20Hz-20kHz)		0.02 %
Signal/Noise ratio (A weighted, ref. 80W)		>116 dB
Input sensitivity (ref. 80W into 8 Ohms)		900 mV
Input impedance		60 k Ohms / 440 pF
Frequency response	20Hz - 20kHz	± 0.2 dB
	96kHz	-2 dB

Physical Specification

Dimensions (width x height x depth)	436 x 95 x 355 mm
Weight (net)	10.2 kg

Power Requirements

Voltage (set internally)	120 or 230 V

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