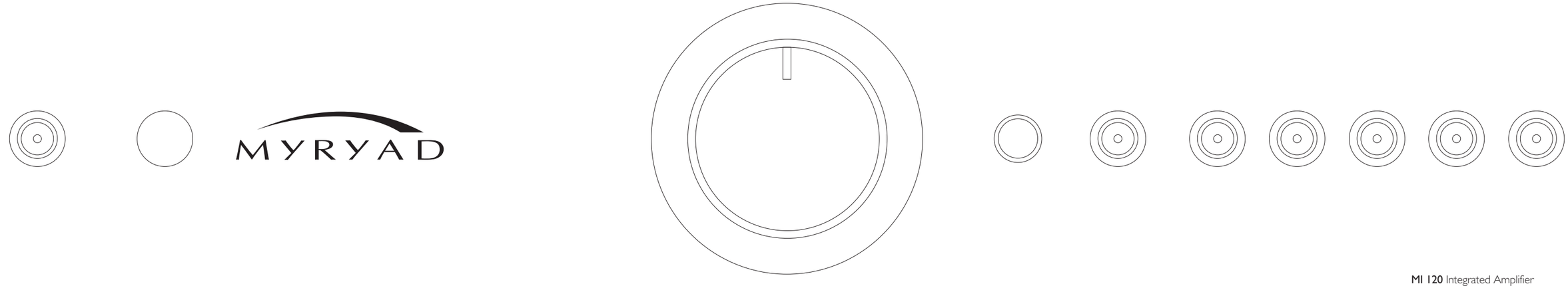
Myryad Systems Ltd
2 Piper's Wood
Waterberry Drive
Waterlooville PO7 7XU
Tel +44 (0) 23 9226 5508
Fax +44 (0) 23 9223 1407
info@myryad.co.uk

For further information,
please contact
Myryad direct or visit:
www.myryad.co.uk

MI 120

Remote Controlled
Stereo Intregated Amplifier
Owner's manual



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INTRODUCTION

The Myryad MI 120 Stereo Integrated Amplifier has been designed to offer a combination of high quality sound reproduction and elegant styling.

The amplifier can accept up to six line-level input sources, including two tape recorders. Outputs are provided for one pair of loudspeakers and for headphones. All functions – input selection, volume and standby – can be operated using the infra-red remote control handset.

The MI 120 offers a range of expansion possibilities:

- The AUX. input can be converted to accept the output from a phono cartridge by installing a Myryad Phono Cartridge Pre-Amp Module.
- A low-level "Bi-amp" output is provided to feed the Myryad MA 120 Power Amplifier, allowing bi-amplified drive of suitable loudspeakers.
- The "My-Link" input/output can be coupled to other Myryad products which can then be remote-controlled via the MI 120's infra-red receiver.

INSTALLATION AND SAFETY NOTES

This amplifier generates a modest amount of heat and thus requires 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 placed in a built-in installation such as a bookcase or rack unless proper ventilation is provided.

CAUTION: TO PREVENT A FIRE OR SHOCK HAZARD, DO NOT PERMIT THIS PRODUCT TO BECOME WET. IF LIQUID IS ACCIDENTALLY SPILLED ON IT, IMMEDIATELY SHUT OFF ITS POWER AT THE WALL SOCKET AND UNPLUG THE AC POWER CORD. ALLOW SUFFICIENT TIME FOR COMPLETE EVAPORATION TO OCCUR BEFORE OPERATING THE AMPLIFIER AGAIN. IF THE LIQUID IS ANYTHING BUT WATER AND/OR ALCOHOL, THE AMPLIFIER SHOULD BE EXAMINED BY A QUALIFIED SERVICE TECHNICIAN BEFORE IT IS USED AGAIN.

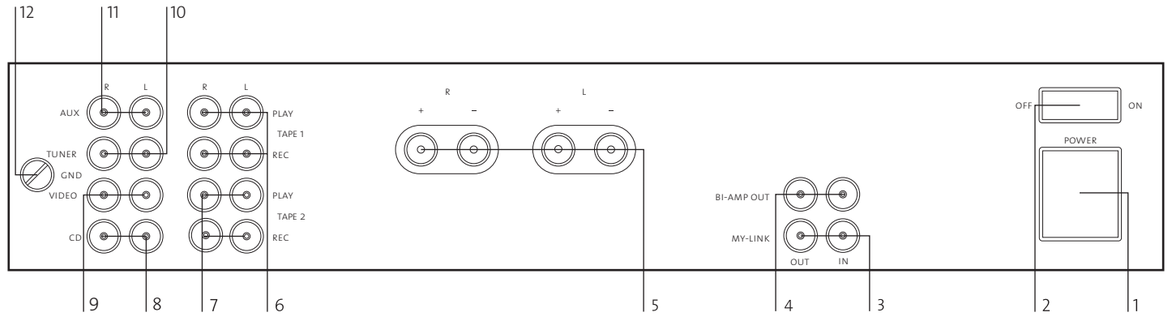
Do not remove the cover, or attempt to modify or repair the amplifier yourself. Refer all servicing to a qualified technician.

ACCESSORIES

Your MI 120 is supplied complete with the following accessories:

- Separate mains power cord to suit country of sale.
- Remote control handset.
- Four AAA batteries for handset (not in some countries).

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 (5A) 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 the 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 remote control. When the POWER switch is in the ON position (and the power cord correctly inserted and plugged in to a live wall socket) the amplifier will power up in standby mode (see FRONT PANEL CONTROLS, STANDBY, page 5).

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

3 My-link input/output

When the MI 120 is used in a system with other Myryad products all may be joined together via the My-Link. This will allow all the different products to be remotely-controlled via the infra-red receiver on the MI 120. My-Link offers two benefits. Firstly, only the MI 120 infra red receiver needs to be in "line-of-sight" from the remote handset. Secondly, the My-Link allows remote control of some Myryad products which do not have their own infra-red receiver.

4 BI-AMP output

Many loudspeakers today are made so that the bass and treble sections can be separated and fed from two sets of speaker cables. This is known as "bi-wiring" and can yield a significant improvement in sound quality. A further sound quality gain may be made by "bi-amplifying" the loudspeaker – using two separate power amplifiers to drive the bass and treble sections.

The MI 120 makes provision for this with its "BI-AMP" output, which can be used to feed a separate MA 120 Power Amplifier. The MI 120 loudspeaker outputs should be connected to the bass sections of the loudspeakers (left and right) while the MA 120 drives the treble. This mode of operation is described in more detail in the MA 120 Owner's Manual, or visit www.myryad.co.uk/technology.html

5 Loudspeaker outputs

The loudspeaker outputs are capable of driving all loudspeakers with rated impedances in the range 4Ω to 16 Ω. The loudspeaker terminals are high – current binding – posts, coded red or black. The terminals on the left side of the amplifier (viewed from the front) and marked "L" should be wired to the left hand loudspeaker. Those on the right, marked "R", should be wired to the right hand loudspeaker.

For correct stereo 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.

The loudspeakers should be positioned as recommended by the loudspeaker manufacturer. The two loudspeakers should always be placed at equal distances from the main listening position and usually spaced a similar distance apart. It is generally best to keep the loudspeakers away from room corners and many loudspeakers work best away from all walls.

6 Tape 1 input/output

These connectors are suited to any type of tape recorder, including high-quality "3-head" types which allow you to monitor the signal off the tape whilst it is being recorded. Connect a stereo cable from the TAPE 1 REC output sockets of the amplifier to the LINE IN or RECORD IN sockets on your tape deck. Connect a second stereo cable from the TAPE 1 PLAY input sockets of the amplifier to the LINE OUT or PLAY OUT sockets on your tape deck.

Any source selected for listening on the MI 120 will automatically be fed to the TAPE 1 REC output sockets for recording. If the

TAPE 2 input is selected then tape copies may be made from TAPE 2 to TAPE 1. It is NOT possible to copy from TAPE 1 to TAPE 2.

7 Tape 2 input/output

These connectors are suited to any type of tape recorder, but “off-tape” monitoring is not possible using TAPE 2. The wiring from TAPE 2 to your tape deck is identical to the TAPE 1 wiring described above.

Any source selected for listening, except TAPE 1, will automatically be fed to the TAPE 2 REC output sockets for recording. It is NOT possible to record from TAPE 1 to TAPE 2.

8 CD input

Connect the audio output cables from a CD player to these sockets. (Note: this input is for an audio signal, not for the digital output from your player.)

If you do not have a CD player then any other line level source may be connected to this input.

9 Video input

Connect the audio signal output cables from a video-related source such as video cassette recorder or TV set to these sockets. Alternatively any other line level source may be connected to this input.

10 Tuner input

Connect the audio output cables from a radio tuner to these sockets. If you do not have a tuner then any other line level source may be connected to this input.

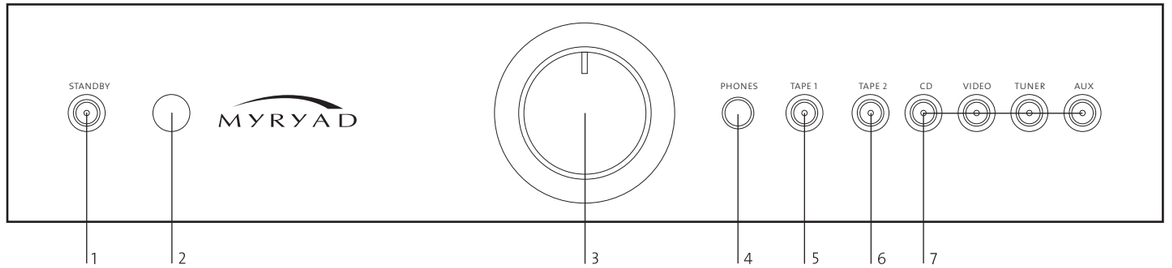
11 AUX input

The audio output from any line level source may be connected to this input. Alternatively a Myryad Module may be fitted internally in your MI 120 to convert this input for other applications – such as phono cartridge input for a record player. Your Myryad dealer can advise you on what Modules are currently available. Please follow the instructions supplied with the Module when making all connections.

12 Ground terminal

This terminal (marked GND) is provided for grounding a record player connected to the AUX. input when a Myryad Phono Cartridge Pre-Amp Module is fitted (see page 3).

OPERATING YOUR SYSTEM



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 LED (Light Emitting Diode) in the STANDBY button will illuminate. In this mode the internal circuitry of the MI 120 is powered up, but disabled so that it consumes very little power and is isolated by relays at its inputs and outputs.

When the STANDBY button is pressed the amplifier circuitry will be activated, the input used last automatically selected and, after a few seconds delay, the loudspeaker outputs will be connected to the amplifier. The LED in the STANDBY button will change to blue and the LEDs in the button of the selected input and the volume control will both light up. When first switched out of STANDBY after POWER ON, the CD input will be selected by default.

When the STANDBY button is pressed again the amplifier will be returned to standby mode. The LED in the STANDBY button will illuminate again and all other LEDs on the amplifier will be extinguished.

CAUTION: WHEN IN STANDBY MODE THE INTERNAL CIRCUITRY OF THE MI 120 IS STILL LIVE, SO ALL SAFETY PRECAUTIONS MUST BE FOLLOWED.

2 Infra-red receiver window

The infra-red (IR) remote control receiver is mounted behind this circular window. It must therefore not be obscured when the amplifier is to be operated using the remote control handset. Where possible it is best to arrange that the IR window is in “line-of-sight” of the remote handset.

3 Volume control

The volume control adjusts the sound level for both loudspeakers and headphones. It does not affect the signals fed to the TAPE 1 and TAPE 2 REC sockets so it can safely be adjusted whilst making a recording.

The blue LED pointer in the volume control illuminates when the amplifier is operating. The pointer may also be used to facilitate manual operation of the control. When the MUTE mode is engaged using the remote control, the volume control pointer will flash repeatedly to indicate this condition. Always press MUTE on the remote handset again to disengage the function before advancing the volume control setting.

4 Headphones socket

The headphones socket will accept a standard (6 mm) stereo jack plug or adapter. All types of headphones of any impedance may be used, with one exception: electrostatic headphones are usually supplied with an adapter unit which must be connected directly to the loudspeaker terminals.

Insertion of a plug into the headphones socket automatically disconnects the loudspeakers, silencing them. In order to resume listening to loudspeakers you must unplug the headphones from this socket.

The headphones output is not muted when switching in and out of STANDBY mode, so it is recommended that headphones are unplugged from the amplifier before switching to standby mode and plugged in again after switch-on.

5 Tape 1 (Monitor)

When you press the TAPE 1 button you can hear the output signal from a tape deck connected to the TAPE 1 PLAY sockets on the rear panel. This is a “toggle” function switch: you press it once to engage and press again to disengage. The blue LED in the centre of the TAPE 1 button illuminates to indicate that TAPE 1 is engaged. Pressing the TAPE 1 button has no effect on the other input select buttons. The signal source selected by the other input select buttons will be fed to the TAPE 1 REC output sockets, irrespective of whether the TAPE 1 button is engaged or not. Thus, if you have a “three-head” tape deck that permits off-tape monitoring you can use the TAPE 1 button to switch back and forth between the source signal and the off-tape signal, to check its quality, whilst the recording is in progress.

NOTE: IF THE TAPE 1 BUTTON IS ENGAGED WITH NO SIGNAL SOURCE CONNECTED TO THE TAPE 1 PLAY SOCKETS, OR WITH NO TAPE RUNNING, THEN YOU WILL HEAR ONLY SILENCE, REGARDLESS OF THE SETTINGS OF ANY OF THE OTHER CONTROLS.

6 Tape 2 input select

When you press the TAPE 2 button you can hear the output signal from a tape deck connected to the TAPE 2 PLAY sockets on the rear panel. The same signal will also be fed to the TAPE 1 REC output sockets, so allowing a

tape to be copied from a playback tape deck connected to TAPE 2 to a recording tape deck connected to TAPE 1. The blue LED in the centre of the TAPE 2 button illuminates to indicate that TAPE 2 is engaged.

Pressing the TAPE 2 button disconnects all signals from the TAPE 2 REC output sockets. It is therefore not possible to make a recording onto a tape deck connected to the TAPE 2 sockets when the TAPE 2 button is engaged.

7 CD, Video, Tuner and AUX. input selects

When you press one of these buttons you can hear the output signal from the source connected to respective input sockets on the rear panel. The same signal will also be fed to the TAPE 1 REC and TAPE 2 REC output sockets for recording. The green LED in the centre of the chosen button illuminates to indicate which source has been selected. Pressing any one of these buttons, or TAPE 2, will disengage whichever input was previously selected and extinguish its LED.

LOUDSPEAKER OUTPUT PROTECTION AND MUTING

When the amplifier is in standby mode all the input connectors and 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 same process occurs when the amplifier is switched back into standby mode. This power-on mute does not disconnect the headphone socket, so it is recommended that headphones are unplugged from the amplifier before switching to standby mode and plugged in again after switch-on.

The same loudspeaker mute relay is used to protect both the amplifier and your loudspeakers against possible damage. If any one of a number of fault modes is detected (loudspeaker outputs short circuit, amplifier overheating, amplifier DC fault) the loudspeakers will be disconnected from the amplifier to protect both. In the case of a short circuit or DC fault the loudspeakers 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 heatsinks to cool sufficiently to allow the loudspeakers to be re-connected (probably between five and fifteen minutes depending upon the room temperature and ventilation). The amplifier will cool more quickly if it is switched to standby mode, or if the POWER is switched OFF.

REMOTE CONTROL HANDSET OPERATION

The nine keys at the top of the handset operate the MI 120. The first six keys (CD, TUNER, AUX, TV, TAPE 1 and TAPE 2) function in exactly the same way as their counterparts on the front panel, allowing any input source to be selected for listening or recording.

Pressing one of the VOLUME ▲ or ▼ buttons will cause the motorised volume control in the amplifier to rotate clockwise or anti-clockwise respectively. There is one aspect in which the remote operation of the volume control is different from manual operation. If the amplifier is in mute mode (after pressing MUTE on the R/C handset) then pressing the VOLUME ▲ button will automatically disengage mute mode and re-connect the loudspeakers. This prevents an excessively high volume level from being set by mistake.

Pressing the MUTE button on the handset will engage mute mode. The loudspeakers will be disconnected and the blue LED in the volume control knob will flash slowly. MUTE is a "toggle" function, so pressing the button again will disengage the mute mode.
The green STANDBY button at the bottom left of the handset can be used to toggle the MI 120 into STANDBY mode (see page 5, Front Panel Controls, section 1).

Operation of Myryad CD Players and Tuners

The Myryad System Remote handset will also control Myryad CD Players and Tuners. The PLAY, PAUSE, STOP, SHUFFLE, TIME, REPEAT, SKIP ▶ and SKIP ◀ keys are for CD Player operation only. The PRESET, MANUAL, SEARCH, MONO, STORE, TUNE ▲ and TUNE ▼ are for Tuner operation only.

The remaining keys, the digits 0 to 9 and DIM, can operate either a CD Player or a Tuner. To control a CD Player, press the CD input source select button. Then "0-9" and DIM will control only the CD Player until the TUNER input source select button is pressed. To control a Tuner, press the TUNER input source select button. Then "0-9" and DIM will control only the Tuner until the CD input source select button is pressed.

INSTALLING AND REPLACING BATTERIES

The remote handset uses four 1.5V type AAA batteries. To fit new batteries first open the battery compartment in the rear of the handset and remove any existing batteries. Fit the new ones as directed by the symbols moulded inside the battery compartment, then replace the battery compartment cover.

The batteries should always be removed if they are flat (indicated by no remote control operation or by operation only at very short range), or if the remote control is not going to be used for an extended period.

TROUBLE-SHOOTING GUIDE

some of the most common problems

No sound:
- Power turned off or system in standby mode. Check that the green pointer LED in the volume control knob is illuminated.
- An inoperative input has been selected (e.g. CD input with no CD playing or TUNER input with the tuner switched off).
- An input has been selected with no source connected.
- TAPE 1 or TAPE 2 has been selected with no tape playing.
- Protection relay has operated because of a short circuit loudspeaker wire or amplifier overheating. Carefully check all wiring after switching the amplifier POWER OFF to allow it to cool.
- The fuse in the power cord inlet has failed. Unplug the power cord from both the wall socket and the amplifier and pull out the small receptacle below the power cord inlet. Two fuses should be visible. The further fuse is the operative one and should be checked. If it has failed, replace it with the nearer (spare) fuse. If this too fails, then return the amplifier to your dealer for service.
- UK version only: The fuse in the mains plug has failed. Check and replace if necessary.

Sound in 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.

Loud buzz or hum:
- Interconnect cable pulled partially out of its socket.
- Defective interconnect cable.

Hum in tape playback:
- Tape deck too close to the amplifier (e.g. directly above or below).
- Plugs making poor contact with sockets.

Incorrect operation – some functions not working:
- Control processor latched. Switch of POWER switch on rear panel and wait for at least one minute. Then switch POWER switch on and press STANDBY button. Normal operation should resume.

For further help please visit
www.myryad.co.uk/faqs.html

SPECIFICATIONS

Continuous rated power output 8Ω:60W
(Min. power per channel, 20Hz – 20kHz, both channels, <0.05% THD)
Rated distortion (THD 20Hz – 20kHz).....<0.05%
IHF dynamic power 8Ω:80
.....4Ω:120W
.....2Ω:160W
Slew rate .....>60V/µsec
Damping factor (ref. 8Ω, 50Hz) .....>100
THD, SMPTE I.M. and IHF I.M.....<0.05%

Line Level Inputs (Tape 1, Tape 2, CD, Video, Tuner, AUX)
Input impedance (R and C) 10kΩ/420pF
Input sensitivity (ref. 60 watts).....250mV
Maximum input signal .....>10V
Signal/Noise ratio A-weighted (ref. 60W) .....>104dB
Signal/Noise ratio A-weighted (ref. 1W) .....>86dB
Frequency response (20Hz – 20kHz) .....+0/-0.3dB

Line Level Outputs
Bi-amp output impedance.....450Ω
Output level.....775mV
Tape output impedance .....2kΩ + source impedance

Physical Specification
Dimensions (width x height x depth) .....436 x 95 x 303mm
Weight, Net 8.75kg

Power requirements
Voltage (set by internal wiring).....120/230V

Stock No: OST 0011270
Revision A