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FITTING A MAINS PLUG

In the UK tma3 needs to be connected to a mains supply of 240V 50Hz, the frequency is not so important 60Hz can be used with impunity, it is however vital to use a 240V supply. The mains socket panel on the rear of the amplifier will indicate if it has been adapted for use on a foreign electricity supply network eg 120V 60Hz.

The mains lead supplied with tma3 has been left without a mains plug to enable you to fit one to suit your own supply outlets. For the vast majority of UK users this will be a fused 13 Amp plug with 3 square section pins (to BS1363) for which we strongly recommend the use of MK Safety plugs. The fuse fitted should be a 1" 5 Amp or 13 Amp type, a 5 Amp 1" fuse carries a black painted stripe whilst a 13 Amp 1" fuse carries a brown painted stripe. As the plug system at the amplifier end of the lead is only rated up to 6 Amps (BS4491/CEE22) the lead should not be used for any piece of equipment other than tma3, which contains the correct value of fuse for the amplifier and lead combination.

To wire the mains lead to a 3 pin mains plug:

- connect the brown wire to the pin marked L, brown or red
- connect the blue wire to the pin marked N, blue or black
- connect the green/yellow wire to the pin marked E or green

If you have any doubts consult a qualified electrician.

CONNECTING TMA3

a) Mains

The mains lead should be plugged into the input socket at the left of the amplifier's rear panel. The drawer incorporated in the socket contains the amplifier's mains fuse in the innermost compartment, if the original fuse ever 'blows' it should only be replaced by one of the same value and size ie 20 x 5 mm 1.6 Amp anti-surge. The other end of the mains lead should ideally be plugged into a 13 Amp wall socket - some types of distribution panels have a very poor internal construction method which renders them unsuitable for Hi-Fi use, your dealer will advise.

b) Speakers

With the amplifier switched off the speakers may be connected. The four terminals on the back panel (one pair to each side of the finned heatsink) are self explanatory. Using heavy duty cable, your dealer can advise on specific types, the green terminals should be connected to the relevant speaker's terminal marked '-', 'e' or coloured green or black and the red terminals should be connected to the relevant speaker's terminal marked '+', 'hot' or coloured red. Tma3's terminals will accept crimped-on 4 mm spade terminals (recommended) or 4 mm plugs. The use of bare wire ends to the speaker leads is not

recommended due to the danger of wire strands coming adrift and shorting out to the adjacent heatsinks. N.B. The far ends of the speaker wire **should not be allowed to touch each other** (short circuiting the output). Such output shorts will damage the amplifier and unfortunately invalidate your guarantee.

c) Signal sources

With the amplifier switched off up to four signal sources may be connected to tma3. The relevant sockets are to the right of the rear panel and comprise three din sockets and a pair of phono sockets. The phono sockets are for a conventional record player (rias equalised signal) whose left channel should be connected to the socket marked L (this lead may be coloured either black or white) and the right channel (coloured red) should be connected to the socket marked R (the channel identities are automatically maintained by the use of din plugs on the other inputs). A third earthing wire may be fitted to the arm lead, this should be attached to the earth terminal above the phono sockets. The sensitivity and loading characteristics of this input are determined by the particular disc loading board fitted (see later).

The right hand socket is for connecting a radio tuner and is wired

Pin 2	Earth
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Pin 3	Left signal (150 mV)
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Pin 5	Right signal (150 mV)
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The adjacent socket is for a 'two head' tape recorder (this being by far the most common type) and can be used for connecting the majority of cassette and reel to reel recording machines. This socket is wired

Pin 2 Earth

Pin 3 Left playback (500 mV)

Pin 5 Right playback (500 mV)

Pin 1 Left record out (750 mV/680R)

Pin 4 Right record out (750 mV/680R)

The final, left hand socket has a dual function; primarily it is a direct injection point for a compact disc player - signals from this socket bypass the pre-amplifier entirely and pass via the volume control directly into tma3's power amplifier section for maximum fidelity. However, due to the provision of a second tape output feed on this socket it can also be used for connecting a professional 'three head' tape machine, the c.d. button on the front panel then becoming a tape monitor/source switch. Consult your tape recorder instruction sheet for details. The socket is

wired Pin 2 Earth

Pin 3 Left input (750 mV)

Pin 5 Right input (750 mV)

Pin 1 Left record out (750 mV/680R)

Pin 4 Right record out (750 mV/680R)

d) Cabling

The cabling used to connect signal sources to tma3 can and will affect the sound quality produced. As with speaker leads it pays to fit the highest quality types - especially on the c.d. input. Your dealer will advise you on suitable types. We at myst can supply leads of the necessary quality for the connection of tuners and compact disc players into tma3. Wherever possible we would advocate the use of twisted pair leads with an overall screen - the use of conventional screened cable is not recommended. Please note however that whilst a poor quality cable will impair the sound quality of a good signal the converse does not apply with equal certainty.

e) Selecting the correct disc board

Tma3 has the facility to change its disc input module to suit the various types of pick-up cartridge found. Your dealer will ensure that the necessary type is fitted upon purchase. If you need to check the type of board fitted, or to change it at some future date you will have to remove the lid from the amplifier to do so.

CAUTION Switch off, remove the mains lead and wait 5 minutes before removing the four screws on tma3's side panels to release the cover. The disc board is positioned at the left hand side of the chassis just behind the source switches. It is connected

by nine gold pins. If it proves necessary to remove the board lift it out with the thumb and forefingers of both hands, try not to bend the pins. When replacing the board ensure that the pins line up with the relevant sockets before pushing the board home gently but firmly with even pressure on both edges.

Disc modules are of two main types, the first generally suiting moving magnet cartridges, the second suiting moving coil cartridges. Boards are simply distinguished - mc boards have three 8 pin integrated circuit chips mounted in a T shaped layout whilst mm boards have only two. Coil boards also carry the legend 'coil' on their undersurfaces where the magnet boards have the letter 'm' in the same place.

Magnet boards load each channel of a cartridge with a standard 47k resistance and 180pF capacitance, these values will suit the majority of cartridges, however they can be adjusted for use with cartridges having special loading requirements (please contact us for details of this service). The input sensitivity of 5 mV will also suit the vast majority of magnetic cartridges and all moving coil cartridges used with their own head amplifier or matching transformer, however a higher gain (3 mV) mm board is available for use with the few very low output cartridges such

as the Technics EPC205 and some of the so called 'high output' mc cartridges. The dividing line between the two occurs with cartridge outputs of about 0.7 mV/cm/sec. (the Shure V15V is therefore marginal), above this figure we recommend the standard mm board but below this figure the high gain board would perhaps be more suitable (consult your cartridge literature for its output level at 1 cm/sec.). The sensitivity of your chosen speaker system will also play its part in determining the sound level produced.

The moving coil board has a special input stage which effectively loads the cartridge with a short circuit - conventional resistive input matching is thereby rendered obsolete. However, with the wide range of outputs for mc cartridges you may find that the disc input is either too loud or too quiet at normal volume settings. If this condition occurs and annoys you the board gain can easily be changed by substituting two resistors. Contact your dealer for details.

USING TMA3

Tma3 is switched on and off via the power switch on the right hand side of the front panel. When switched on a green light will appear in the small hole set between the disc and c.d. selector buttons, this will gradually fade away at switch-off. It is advisable to turn the volume control down before switching on or off.

Inputs are selected by following the engraved legend on the front panel, simply bearing in mind that each button overrides those buttons situated to its left. It is advisable to switch off other inputs when listening to compact disc.

May we wish you listening pleasure.