



SPM 1050 MKII POWER AMPLIFIER MANUAL

OPERATING INSTRUCTIONS

INSTALLATION

Your amplifier should be positioned to ensure a free flow of air over the rear heat sink and through the upper and lower grilles. When driven continuously at well above average listening levels, the temperature on the heat sink may exceed 50°C. This is not a fault, but an indication of the need for adequate ventilation.

Please ensure that the IEC mains lead is correctly terminated.

UK/EUROPE	Brown =	LIVE	= Black	USA/CANADA
	Blue =	NEUTRAL	= White	
	Yellow/Green =	EARTH	= Green	

**THE SPM 1050 MKII MUST BE EARTHED AT ALL TIMES VIA ITS OWN MAINS LEAD.
FAILURE TO DO THIS MAY BE HAZARDOUS.**

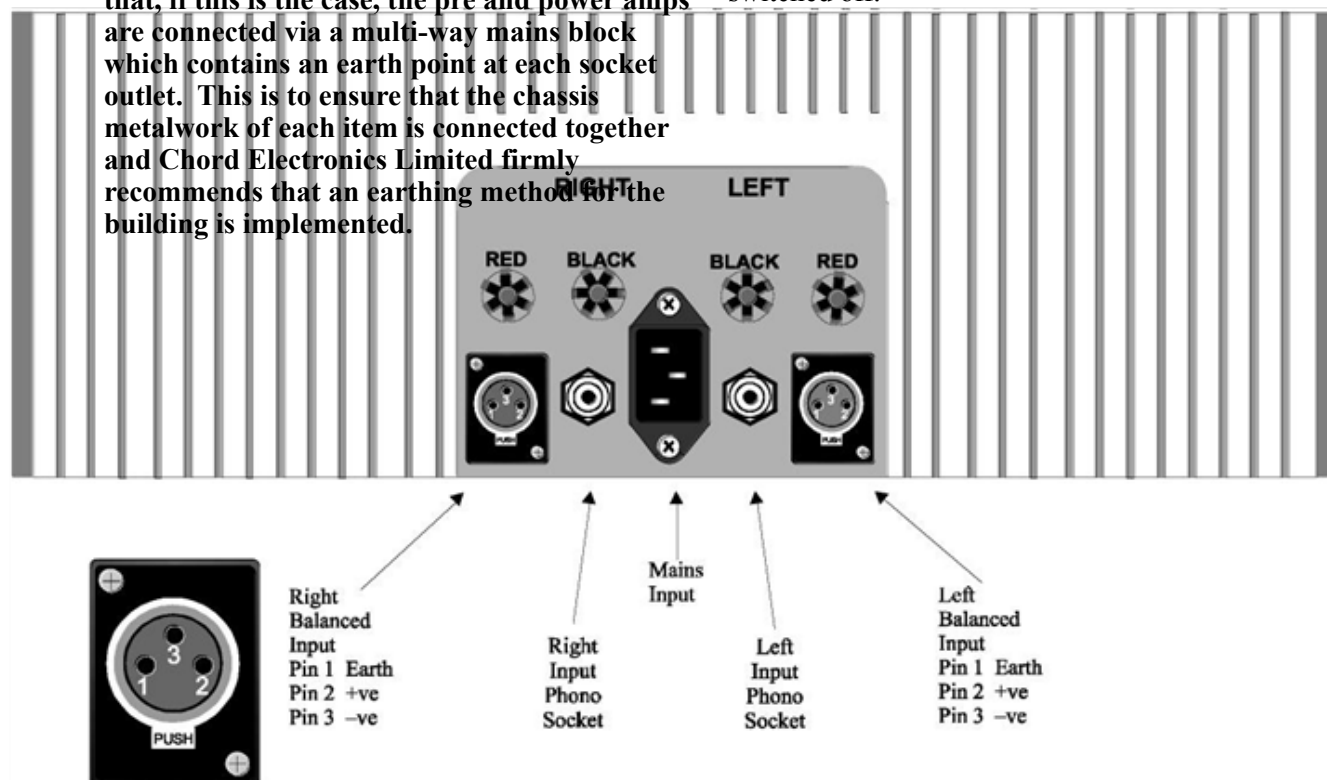
CE This unit complies with EN 50081-1 & IEC 801/2

The input

It has come to light that, in some European countries a hum may occur if Pre and Power Amplifiers are connected to mains wall sockets which do not have an earth. Please ensure that, if this is the case, the pre and power amps are connected via a multi-way mains block which contains an earth point at each socket outlet. This is to ensure that the chassis metalwork of each item is connected together and Chord Electronics Limited firmly recommends that an earthing method for the building is implemented.

REAR PANEL

two female XLRs are pre-amplifier inputs. Also, phono sockets are available immediately outboard of the IEC mains plug. Please connect these last, with the amplifier switched off.



OPERATION

When the amplifier is connected to the mains the LED immediately above the power switch will indicate red (standby). When switched on, this LED will change to illuminate green (operational). There will be a delay of about 12 seconds before the output signal is fed to the loudspeakers, with the subsequent illumination of the blue Status LED. This is to allow the amplifier to stabilise.

In the event of a major overload or a short circuit across the output of any channel, the green "power on" LED will indicate trip by fading and immediately re-illuminating to red standby mode. The amplifier will shut down.

switched on and will power up as normal. A minimum period of eight seconds must be allowed to elapse between switching off and switching on again. This is to allow the power supply protection circuitry to re-set itself.

There are no user serviceable parts in your SPM 1050 MKII. It should only be serviced by Chord Electronics Limited or their expressly approved Service Agents.

CARE AND CLEANING

The SPM 1050 MKII requires no special care other than common-sense. Spray window cleaner (clear type) may be used (if first sprayed on to a soft cloth) to remove surface blemishes such as finger marks from the metal casing or the piano black finished wooden side cheeks. Never spray directly on to the amplifier and never use abrasive cleaning materials, use only a lint free soft cloth as described.

SERVICE INFORMATION

WARNING - The power supply components within this amplifier are designed to be operated at lethal voltages and energy levels. Circuit designs that embody these components conform with applicable safety requirements. Precautions must be taken to prevent accidental contact with power-line potentials. Do not connect grounded test equipment.

NEW TECHNOLOGY

Much of what Chord has achieved is the result of using innovative, leading edge technology. For example, we believe that we are unique in using the technique of 'dynamic coupling' of the power supply rails. Whatever transient demand is presented to the amplifier stages, the positive and negative rails remain in perfect equilibrium, with each compensating for the demands made on the other. This means that power delivery is always balanced and free from ground loop modulation distortion.

This, combined with enormous reserves of instantly delivered, precisely controlled power is what makes the SPM 1050 MKII sound so effortless. The power supply rails operate nominally at ± 80 volts, well above that which most amplifiers can accommodate. This and other advanced techniques enables the ultra high frequency low ESR power supply to store a great deal more energy far more efficiently. Clipping is virtually impossible. Furthermore, compared to other amplifiers of a similar power rating the SPM 1050 MKII weighs in at a mere 15Kg. Another new technique is used to protect the amplifier against overload, internal and external short circuits. The output signal path is totally free of any fuses or sound-degrading resistive components often employed for overload sensing. The SPM 1050 MKII is designed to surpass the highest European safety and electromagnetic interference standards.

The amplifier sections are also highly sophisticated designs that make the most of the best high voltage, lateral structure MOSFETs available, 4 x 300 watt devices per channel. Combining the subtlety and musicality of a good valve design with the punch and accuracy of 'state of the art' solid state products. The result is a 'sliding bias' class A/B design with all drive circuitry operating in class A. At usual listening levels, most of the music will be reproduced in class A. Chord's no-compromise design philosophy means there is no better built amplifier. Individually hand-crafted, it is constructed to aerospace standards from the circuit boards up.

OPERATION

When the amplifier is connected to the mains the central clear ball will illuminate red (standby). Press the ball in to switch on the amplifier. The ball will illuminate green (operational). There will be a delay of about 12 seconds before the output signal is fed to the loudspeakers the ball will then change to blue to indicate the output relays are engaged.

In the event of a major overload or a short circuit across the output of any channel, the blue "power on" illumination will indicate trip by fading and immediately re-illuminating to red standby mode. The amplifier will shut down automatically and it should then be switched off at the mains outlet. When the fault condition has been rectified, the amplifier can be switched on and will power up as normal. A minimum period of 1 minute must be allowed to elapse between switching off and switching on again. This is to allow the power supply protection circuitry to re-set itself.

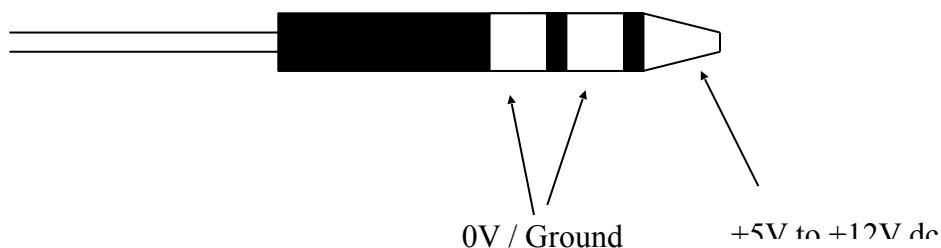
This amplifier is fitted with a trigger system designed to switch the unit on or off remotely.

N.B. with no plug inserted in the 12V trigger socket, the amplifier will operate as normal.

The external trigger should be connected to the amplifier via a standard 1/8th inch / 3.5mm (mono or stereo) jack plug to the socket fitted to the rear of the unit.

The amplifier should be switched into the standby position (red illumination) and the 12V trigger lead inserted. The amplifier will now switch on when the trigger voltage is applied, and will switch off again when the voltage is removed (Positive Trigger). The front panel ball will indicate orange when the trigger is connected and change to purple when the trigger is operating to switch on the amplifier. You do not need to switch on the amplifier by pressing the ball on the front panel when the trigger is used – however it will still operate normally if you use the front panel button.

The connections are as follows:



The tip of the plug is the +5V to +12V dc connection, the centre and rear connection are the 0V or ground connection

SPECIFICATIONS	SPM 1050 MKII POWER AMPLIFIER
OUTPUT POWER	200W rms per channel @ 0.05% distortion into 8Ω, 300W rms per channel into 4 Ω, 360W rms into 2Ω. Thermal limitation only, 1 channel driven.
DYNAMIC HEADROOM	280W rms per channel into 8Ω, 360W rms per channel into 4Ω. - 1 KHz, 20 cycles on, 480 cycles off. Peak pulses 8 milliseconds burst 75V peak (the equivalent of 800W per channel peak into 4Ω)
FREQUENCY RESPONSE (8 OHMS)	-1dB, 0.2Hz to 46KHz -3dB, 0.1Hz to 77KHz
FREQUENCY RESPONSE (4 OHMS)	-1dB, 0.2Hz to 39KHz -3dB, 0.1Hz to 75KHz
SIGNAL TO NOISE RATIO	Better than -100dB, 'A' weighted two thirds power.
CHANNEL SEPARATION	Better than 95dB.
PRE-AMPLIFIER INPUT CONNECTION	2 x gold-plated, fully balanced XLR sockets. 2 x gold-plated custom phono sockets, unbalanced.
INPUT IMPEDANCE	100kΩ. Unbalanced/Balanced.
INPUT CAPACITANCE	<30pf.
OUTPUT IMPEDANCE	0.04Ω
OUTPUT INDUCTANCE	2.6μH
OUTPUT CONNECTIONS	4 x 4mm rhodium binding posts (1 pair Left, 1 pair Right)
SLEW RATE	60V per μS, 1KHz 20V square wave
GAIN	30dB.
STABILITY	Unconditional
DIMENSIONS	420mm (w) x 355mm (d) x 133mm (h)
WEIGHT	15Kg

Made in England by:

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