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**SOUNDMASTER** <sup>TM</sup>

**VF 250**

**MOS-FET POWER AMPLIFIER**

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**OWNERS MANUAL**

U.K. 220-240v

*Before you use this equipment  
please read the instructions*

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are the registered trade marks of M-Jay Electronics Limited*

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# INTRODUCTION

Please read this manual before connecting the amplifier.

## Introduction

Your new SOUNDMASTER amplifier has been manufactured from the highest quality components and materials. Please read these instructions carefully and your amplifier will provide many years of service. This amplifier is designed for use in professional high power sound systems and it should be installed by a competent technician as described in the following instructions.

Before switching the amplifier on please check that the mains lead is correctly wired and that the mains voltage selector is set to the correct supply voltage. The mains voltage selector is set in the factory to 240v AC

## Technical Specification

Output power per channel	130 watts into 4Ω RMS 90 watts into 8Ω RMS
Bandwidth	5Hz to 60KHz
Input sensitivity	0dB (0.775v)
Input impedance	10Kohms Unbalanced
Hum and Noise	Less than -96dB
Output rise time	7uS
A. C. Power input	220-240v AC 50Hz 300VA max
Dimensions	19" x 3.5" x 9.5"
Shipping weight	5 kilos

## Protection Details

- A. C. Power supply fuse
- D. C. Power supply fuse (2 per channel)

# Declaration of Conformity

Equipment Soundmaster VF 250 power amplifier

Manufacturer M Jay Electronics Limited

Address Albion Mills  
Church Street  
Morley  
Leeds  
LS27 8LY

European Standards

- 1) EN 50 081-1 Emission
- 2) EN 50 082-2 Immunity
- 3) EN 60 555 Conducted Emissions
- 4) EN 60065

Conformity Criteria

- 1) Radiated emissions are less than 30 dB $\mu$ V/m @ 10m from the equipment.  
Conducted emissions are less than 56dB $\mu$ V/m.
- 2) The performance of the equipment will not be impaired by a radiated signal in the band 27MHz to 500MHz with a signal strength of 3v/m and with 80% modulation
- 3) The AC power input current harmonics are within the limits set by EN 60 555-3,-3. The conducted RF emissions are below the limits described in EN55 022 class b.

Description of Equipment 250 watt Audio Power Amplifier

I certify that the apparatus identified above conforms to the requirements of Council Directives 89/336/EEC and 73/23/EEC and therefore complies with the requirements of Council Directive 73/23/EEC, (The Low Voltage Directive) on the harmonisation of the laws of Member States relating to electrical equipment designed for use within certain voltage limits as amended by Article 13 of Council Directive 93/68/EEC

Signed .....

Date 19 August 1997

Position Managing Director

Company M Jay Electronics Limited

# FRONT PANEL FEATURES

## A. C. Power Switch

The power switch is a double pole type to ensure that both the live and neutral mains supply is disconnected from the amplifier when it is not in use. When the mains power supply is on, the switch will be illuminated.

## Input Attenuators

Both the input channels have an input attenuator to adjust the incoming signal and these are usually set to the same position for stereo or mono applications. If the amplifier is used in systems when the two channels are supplying different signals or different loads they can be set separately e.g. Bi-amplified speaker systems or for sound distribution to two different rooms in a building.

The amplifier is designed for an input signal level of 0dB to provide full drive to the output (which is the output level of most sound mixers) so that the controls may be set to maximum (10) to obtain full output.

Caution The use of a graphic equalizer between the mixer and the amplifier can result in the signal to the amplifier being higher than 0dB. The use of VU type meters on some mixers can cause under reading on certain types of signal, in this case the output level should be set to ensure that the output of the amplifier does not go into distortion.

When the amplifier is used with music or speech it is possible to exceed the full power rating of the amplifier, this is due to the power stored in the reservoir capacitors being discharged only by peaks in the music and recharging in quiet passages. In these circumstances up to double the rated output power may be available for short periods.

## Bridge Mode

The amplifier can be used in the bridged mode by changing the internal link to the bridge position. The link is located on the main PCB near to the right hand output connectors. The signal is connected to the left hand input jack socket. The right input socket should not be used and the right channel input attenuator should be turned to O. The speaker load should now be connected between the positive outputs of the left and right channels. (The tip of the jack plug). NB the minimum load should be 8Ω. Should a signal be connected to the right input the output will be the difference between the left and right inputs and will sound distorted.

## Signal Inputs

Each channel can be connected by either of the ¼" Jack connectors. Both the jack sockets for each channel are wired in parallel to enable amplifier inputs to be linked together for large sound systems. The inputs which are unbalanced have a 3 pole jack socket for compatibility with balanced systems. They should be wired as follows:

Tip	Positive phase
Ring	Negative phase
Sleeve Screen	

For balanced inputs the screen and negative phase will be connected together if a 3 pole jack plug is used or the input can be wired to a 2 pole jack plug with the positive phase to the tip and the negative phase and the screen connected to the sleeve. DO NOT leave either of the negative or positive phase inputs unconnected as this will result in a reduced output level and increased noise.

## Amplifier Outputs

Two Standard ¼" 2 pole jack sockets are provided for each channel. The minimum load impedance is 4Ω. The connectors are wired:

Tip	Signal
Sleeve	Ground

In the bridge mode the output should be taken between the tip of the jack socket of each channel.

## AC Power Input

The AC power is supplied via a 3 pin IEC Euro-Connector moulded plug and cable which is supplied with the amplifier. The free end of the cable is not supplied with a 3 pin plug so that the cable can be wired into the equipment rack power distribution system.

The lead should be wired using the following code:

Green/Yellow	Earth
Brown	Live
Blue	Neutral

**CAUTION - THIS AMPLIFIER MUST BE CONNECTED TO EARTH, FAILURE TO DO SO COULD BE FATAL.**

**DO NOT** disconnect the green/yellow mains safety earth. This amplifier has a special electronic circuit to eliminate hum loops.

## DC Fuses

There are two 20mm DC fuses for each amplifier, one for the positive and one for the negative power supply and they are rated at 5·0A quick blow. Before changing a fuse turn the amplifier mains switch off and disconnect the mains supply from the amplifier.

# INTERNAL FACILITIES

## Bridge Link

The bridge Link is located inside the amplifier in front of the right hand output sockets so that it is not inadvertently connected and therefore requires the removal of the lid to operate it. Caution You should disconnect the mains supply before removing the amplifier lid.

# GENERAL DETAILS

## Ventilation

To keep the amplifier cool a good flow of air is required. If the amplifier is housed in a rack or other enclosed space it is essential that adequate ventilation is provided, with holes in the bottom of the rack for cool air to enter and holes in the top for hot air to escape. In large systems involving many amplifiers in the same rack, forced air ventilation may be required.

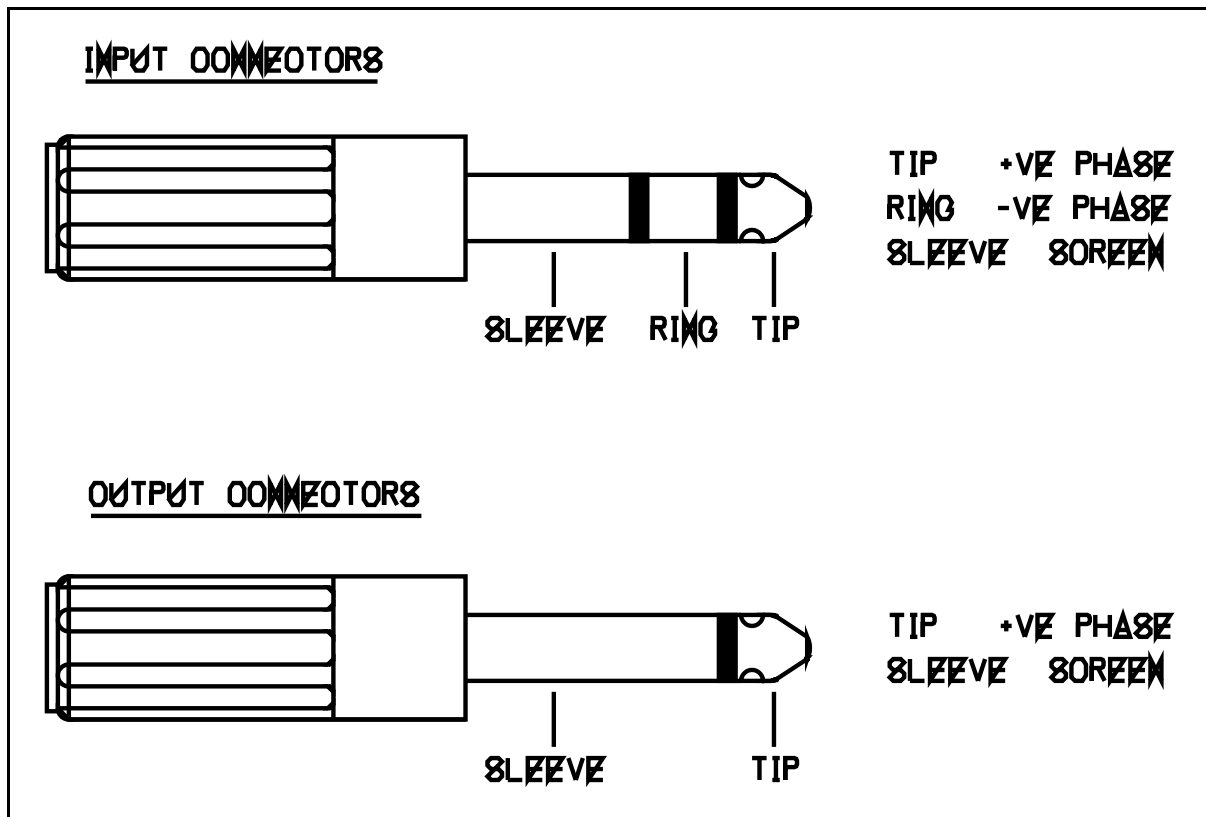
## Service

This amplifier is a precision piece of equipment, should it require servicing it should be returned in it's original packing to the dealer or agent it was purchased from. Service work should only be carried out by qualified and experienced engineers. Please note that any work on or modification to the amplifier by unauthorised persons may invalidate the guarantee.

## Rack Fitting Details

The amplifier will fit in a standard 19" rack and is 2 units high.

# CONNECTOR WIRING



M-Jay Electronics have a policy of continuing development and we reserve the right to alter models and/or specifications at any time. E&OE

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