

MP221

Microphone Preamplifier

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Box Contents:

- 1 x MP221
- 1 x 12_{DC} Power Supply – region specific
- 1 x 3-pole Jack output cable
- 1 x Handbook (this document)



Safety



This symbol is used to alert the user to important operating or maintenance instructions.



The Lightning bolt triangle is used to alert the user to the risk of electric shock.

1. It is important to read these instructions, and to follow them.
2. Keep this instruction manual in an accessible place.
3. No user serviceable parts. Refer all servicing to qualified personnel.
4. No objects filled with liquids, such as vases, shall be placed on the apparatus.



WARNING: Do not expose to dripping or splashing.

5. Clean only with a dry cloth.

AMPETRONIC

Introduction

The MP221 microphone preamplifier is designed for use with Ampetronic Induction Loop drivers, but can be used in other applications as a separate four input pre-amp.

The unit is designed to amplify two microphone channels by a maximum of 66 dB, and two line-level inputs by 6 dB.

- Each XLR microphone channel has an electronically balanced input with phantom power selected by a global switch.
- The balanced line-level inputs use 6.3mm (1/4") 3-pole jack socket.
- Unbalanced stereo phone input is summed into a mono signal before processing.
- A gain control is provided for each channel.
- The combined single channel (mono) output signal is electronically balanced and is fed out on a 6.3mm (1/4") 3-pole jack socket.
- Internal monitoring indicates signal 'overload' on front panel LED
- Power for the preamp is provided by the 12V_{DC} adaptor provided.

Installation

The MP221 is designed to be freestanding, but can be mounted in combination with many of the Ampetronic range of Induction Loop Drivers by using the RM-1U rack mount kit with correct blanking plate(s).

Connect each input as required using screened cable with a balanced connection where possible. Where phantom power for microphones is required, this must be enabled using the 'Phantom' recessed slide switch on the rear of the unit.



Note: this is a global supply which will deliver phantom power to both microphone inputs.

Each microphone channel gain can be individually adjusted by using an internal jumper link to either 46dB or 66dB total gain. The unit is factory set to 66dB.

Connect the 'Output' to the line level input of the audio system.

Connect the power adaptor to the external power socket and insert into the DC input. The green 'Power' LED should illuminate.

Operation

Adjust each of the front panel level controls to set the desired mix of signal inputs, while ensuring that the red 'Overload' LED is never illuminated.

Note: There is no master output level control.

Troubleshooting

'Power' LED does not illuminate

- Check that the 12V DC supply is connected and switched on

No signal is heard further down the audio chain

- Check the audio source is producing signals, and is connected. If a microphone is used, ensure that is the correct type, and that the 12V phantom voltage is applied where required.
- Check that the relevant volume control is adjusted correctly.
- Check the output cable between MP221, and the next unit in the chain.

Signal is heard, but the 'Overload' LED is illuminated

One of the channels or the combined total of the inputs is creating a signal level internally that is near to or actually clipping.

- Disconnect each input in turn and wait a few seconds to see if the 'Overload' LED goes out. If removing one of the inputs causes the 'Overload' LED to extinguish, then turn this channels gain down and re-insert it. Slowly increase the gain to just below where the 'Overload' LED comes on. Re-adjust all the other input levels compared to this to achieve the desired mix. Note: Mic 1 and 2 channels have individual internal gain links which can be set to reduce overall level by 20dB if required.
- Turn all output gains to minimum. If the 'Overload' LED is extinguished – slowly increase the gain on each channel, and re-adjust all the other input levels compared to this to achieve the desired mix – without causing the 'Overload' LED to be illuminated.

Specification:

Frequency Response:

20Hz - 20kHz

Mic 1 & 2:

Balanced XLR Microphone inputs

Gain: +46dB / +66dB with gain control at maximum level

Input overload level: -26dBu

Input noise level: -124dBu 200Ω source

Input impedance: 5kΩ

Phantom power: global selectable 12V

Line 1:

Unbalanced summed twin phono inputs

Gain: +6dB with gain control at maximum level

Input overload level: +14dBu

Maximum unbalanced cable length 3m.

Line 2:

Balanced / Unbalanced 6.3mm Jack Line level inputs

Gain: +6dB with gain control at maximum level

Input overload level: +14dBu

Maximum unbalanced cable length 3m.

Output: 6.3mm 3-pole jack socket for Bal/Unbal connection.
<0.01% THD @ 1kHz with +10dBu (10mW into 600Ω)
Minimum load: 600Ω
Maximum output level: +10dBu un-bal, +16dBu balanced.
The insertion of a 2-pole plug will unbalance the output, whilst maintaining the output level.

Environmental: IP30, -10 °C to +45 °C, 20 – 90% relative humidity

Dimensions: 200 x 108 x 44 (50 including feet) mm
610g (excluding power supply)

Power: 12V_{DC} regulated 5.5/2.1mm power socket – centre positive.
Quiescent: 60mA_{DC} 0.72W
Maximum: 100mA_{DC} 1.2W
Use supply capable of delivering 150mA_{DC}
Regional AC-DC power convertor (No load) <0.25W
Maximum cable length 3m.

Accessories

Rack mounting tray, and blanking panels are available for the MP221.

See www.ampetronic.co for details.

Warranty Information

This product carries a five year parts and labour warranty from date of shipment from Ampetronic. To qualify for the five year warranty, the product must be registered at www.ampetronic.co (products/warranty), without which the warranty will be valid for two years only.

The warranty could be invalidated if the instructions in this handbook are not followed correctly, or if the unit is misused in any way. *Note: The power adaptor supplied with this product is only covered by the manufacturers warranty period.*

The MP221 designed and engineered in England.

Declaration of Conformity

Manufacturer: Ampetronic Ltd.,

Address: Unit 2, Trentside Business Village, Farndon Road, Newark, NG24 4XB

Declares that the products: 'Microphone Preamplifier' Type Name MP221

Conforms to the following Directive(s) and Norm(s):

Directive 2004/108/EC EMC: EN 55103-1:2009+A1:2012

Directive 2006/95/EC Safety: EN 60065:2002+A12:2011

Directive 2011/65/EU RoHS

January 2016 – J.R. Pieters - Managing Director, Ampetronic Ltd.

Tel: +44 (0) 1636 610062 Fax: +44 (0)1636 610063

www.ampetronic.co

Email: sales@ampetronic.co