

CLIO

ELECTRICAL & ACOUSTICAL TESTS

MICROPHONE PREAMPLIFIER

PRE01

OPERATING MANUAL

PRODUCT DESCRIPTION

The microphone preamplifier PRE-01 has been designed to match Audiomatica's microphones MIC-01, MIC-02 and MIC-03. It is particularly useful when the microphone has to be operated far from the analyzer or when weighted measurements are needed. PRE-01 powers the microphone connected to its input with an 8.2V phantom supply and adds a selectable weighting filter (A or B or C); also available there is a 20 dB gain stage. The unit is operated with one standard 9V battery or with an external DC power supply.

TECHNICAL SPECIFICATIONS

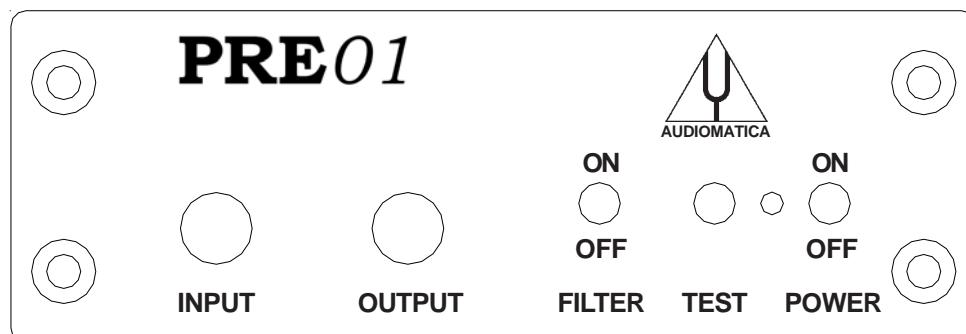
FREQUENCY RESPONSE: 7Hz÷110kHz (-3dB)
WEIGHTING FILTERS: A, B, C (IEC 651 - TYPE I)
PHANTOM POWER SUPPLY: 8.2V (5600 Ohm)
GAIN : 0 & 20dB (INTERNAL SETTINGS)
INPUT IMPEDANCE: 5600 Ohm
OUTPUT IMPEDANCE: 100 Ohm
MAXIMUM OUTPUT VOLTAGE (@1kHz): 25 Vpp

THD (@1kHz): 0.01%
INPUT NOISE (@20dB gain): 7uV LIN, 5.3uV A
DRIVE CAPABILITY: ±7mA
BATTERY DURATION: >12h (alkaline cell)
SIZE: 12.5x19x5cm
WEIGHT: 900g

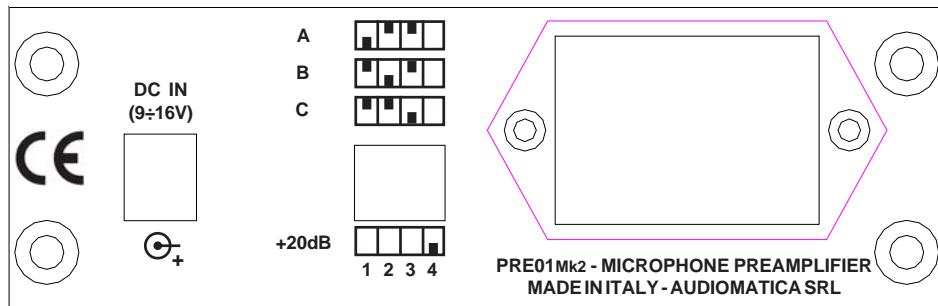
USE OF THE PREAMPLIFIER

The MIC-01, MIC-02 or MIC-03 microphone cable has to be connected to the preamplifier input while the preamplifier output has to be connected to the analyzer input. The unit is switched on with the POWER switch, while the TEST push-button controls the state of the unit; when pressing it, if the led light is on then the unit operates correctly, otherwise not: either the battery is low or the external power supply is not connected. The FILTER switch inserts the weighting filter. To choose the desired weighting filter type and to set the amplifier gain you have to modify the preamplifier settings as described later.

NOTE: if the 20 dB gain stage is inserted the overall sensitivity (microphone + pre) is 10 times higher. For example if your microphone has a sensitivity of 17.1 mV/Pa and you preamplify it of 20 dB then you get a sensitivity of 171 mV/Pa.



PRE-01 front panel.



PRE-01 rear panel.

USE OF AN EXTERNAL POWER SUPPLY

As it may be seen from the above figure the unit can be powered by an external DC power supply in the range 9÷16V capable of delivering a minimum of 100 mA. The silk-screen also reports connector wiring with the positive at the tip contact.

HOW TO REPLACE THE BATTERY

Open the battery holder and substitute the 9V cell with an equivalent among the many available in the market (PP3, 6AM6, 6LR6, MN1604 etc.). You may also use a rechargeable one. Take great care to the polarity when inserting it into the holder.

PREAMPLIFIER SETTINGS

TO SELECT A WEIGHTING FILTER

Use dip switches 1-3, selecting one at a time, as follow:

- 'A weighting' filter ⇒ dip switch 1 ON (2&3 OFF)
- 'B weighting' filter ⇒ dip switch 2 ON (1&3 OFF)
- 'C weighting' filter ⇒ dip switch 3 ON (1&2 OFF)

Factory setting: 'A weighting' filter.

TO CHANGE AMPLIFIER GAIN

Use dip switch 4 as follow:

- +20 dB gain ⇒ dip switch 4 ON
- 0 dB gain ⇒ dip switch 4 OFF

Factory setting: +20 dB gain.



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VIA MANFREDI 12 - 50136 FIRENZE -ITALY
TEL : +39-0556599036- FAX : +39-0556503772
E-MAIL: info@audiomatica.com
INTERNET: www.audiomatica.com

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