

# R-501 Mic-Line Preamplifier



REAL Innovation

## ARREL Audio Overview

**ARREL Audio** products, conceived for the professional user, combines high reliability, rugged design, audio quality, versatility and ease of use. They are perfect for recording every kind of music in all the situations where the maximum sound quality is needed especially for actual digital recording 24bit/192kHz environments where superior performance is required.

They are based on the use of the latest circuit topologies, characterized by very low distortion, ultra-low noise and very wide frequency response. ARREL Audio systems are designed and hand-assembled in Italy with minimum cabling to obtain the best mechanical performances and the minimum degradation of the audio signal.

ARREL audio devices are designed utilizing mostly through-hole technology which provides better performances when compared to surface mount technology.

Moreover, no custom electronic components are used in ARREL Audio units.

Our aim is to transfer technology emerging from research in advanced innovative products.

## R-501 Mic-Line Preamplifier

The **ARREL Audio R-501** Mic-Line Preamplifier has been conceived to offer to the 500 series user the superior audio performance of the ARREL audio higher level products. The R-501 is characterized by high reliability, rugged design, outstanding audio quality, versatility and ease of use typical of the tradition of ARREL Audio products.

R-501 is based on the use of the latest circuit topologies, characterized by very low distortion, ultra-low noise and very wide frequency response. The amplifier architecture is based on two high dynamic range gain stages in order to avoid any saturation.

Even if the input stage of the R-501 could accept input signals up to +20 dBu, a special protection circuit limits the input level at +12 dBu in order to prevent any damage. The R-501 extended input dynamic range avoids the necessity of the input pad and the gain is controlled by a single large knob. The absence of the input pad means better sonic performances. In fact the pad degrades sound quality and affects signal to noise ratio.

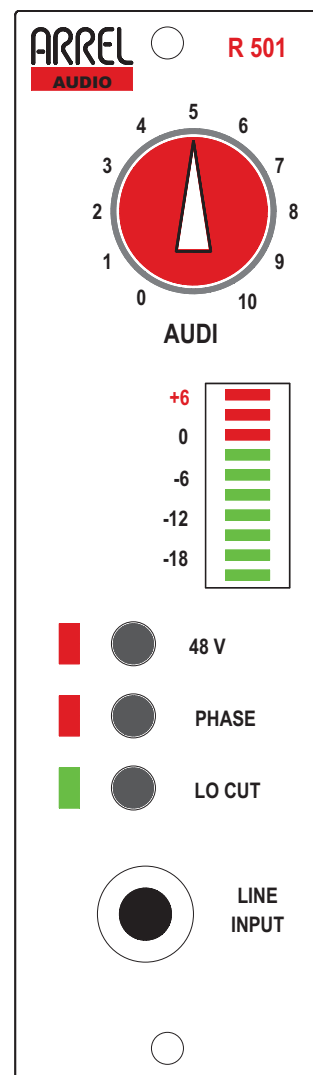
The R-501 contains a special circuit that allows the connection of microphones even if the unit is turned on with the Phantom Power activated (in any case we do not recommend this practice in order to protect your microphones).

The Line Input (unbalanced) is easily accessible from the front panel by a 1/4" TRS jack, the jack insertion excludes the mic input. Three buttons with LEDs are provided for Phantom Power, Phase inversion, LO-CUT filtering.

A LED bargraph (10 LEDs) is used to display the output level.

The R-501, offers a very cool satin finish stainless steel front panel and a semi closed stainless steel enclosure and has been designed to be compliant with the 500-series standard.

R-501 is dedicated (due to his absolute sonic level quality) to high professional vocal recordings, classical instruments, high dynamic range instruments such as drums and percussions.



# R-501 Technical Specifications



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Number of Channels:	1
Power Supply	± 16 V DC, 48 V DC, very low power supply currents with respect to the 500 series standard
Microphone Input	Electronically Balanced, Phantom Power switch (LED), Input Level +10 dBu/-56 dBu, Max input level +20 dBu (internal limited to +12 dBu), Input Impedance 4 KΩ
Microphone Gain	66 dB range with a continuous potentiometer control.
Line Input	Unbalanced, Impedance 47 KΩ, Line level 0/-30 dBu, Max +20 dBu.
Line Gain	30 dB range with a continuous potentiometer control.
Bandwidth	5 - 150 KHz ± dB, perfect square wave up to 20 KHz
Distortion + Noise	<0.003% ( typical 0.001%).
Low Cut Filter	80 Hz. 12 dB / oct., selected by a button (LED)
Output Level	Electronically Balanced, Level +4 dBu, Max +25 dBu.
Front Panel Controls	48V Phantom Power button, Lo-Cut button, Phase Reverse button.
Front Panel Input Connectors	1/4" TRS jack, Line-Mic switch by line jack insertion
Front Panel Indicators	Level Indicator 10-LED Bargraph (7x green, 3x red), 1.5 dB step, Range +6/-21 dBu, 3 x red LEDs (48V Phantom Power, Lo-Cut, Phase).
Rear Panel Input Connectors	Series 500 compatible connector
Construction	Compliant 500-series rack with PSU and external audio connections, Single 500-series rack slot required for each R-501 module.
Dimensions	Series 500 compatible module
Weight	500 g

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