

TWO-CHANNEL MICROPHONE PREAMP WITH PHANTOM POWER

Model 432

November 2003

This preamplifier was especially designed to drive a computer sound card's line-input so we wanted the output noise very low compared to the line-in maximum signal level. With a dynamic range of over 60 dB at the full gain of 60 dB, this goal was achieved. You can, of course, use the model 432 for any application where a low-noise microphone preamp is needed. The cast aluminum enclosure minimizes the pickup of unwanted signals. Internal shielding isolates the power supply from the amplifiers resulting in a very quiet preamp. The model 432 is another unit in our Industrial Sound Measurement System.



INPUT: Identical left and right channels match any dynamic or capacitor microphone needing an input impedance of 150 to 600 ohms. Differential input when using the XLR input connector if your microphone can use this feature. +5 volt phantom power through 6800 ohms for low voltage electret condenser microphones. (To use dynamic mics the phantom voltage can be disabled for either or both inputs with internal push-on jumpers.)

GAIN: Each channel has an independent gain control. Times 10 to 1000 (20 to 60 dB) in 4 dB steps using two 11-position rotary switches.

RESPONSE: Each channel has an "A", "B" or FLAT response as selected by a 3-position rotary switch. A four-pole Butterworth lowpass filter with a 25 kHz cutoff frequency reduces high frequency noise and serves as an anti-aliasing filter when driving a sound card input.

DYNAMIC RANGE: Over 60 dB at 60 dB gain, over 80 dB at 40 dB gain and about 90 dB at 20 dB gain. See Figures 1, 2 and 3.

CROSSTALK: -55 dB at 1 kHz and 10 kHz with both channels set to 60 dB gain and maximum output signal in one channel.

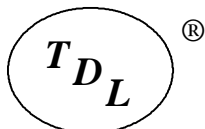
CONNECTORS: Two input connectors for each channel: 3-pin female XLR microphone connector, and female RCA. Three output connectors: left RCA, right RCA and ¼ inch stereo phone jack. 2.5 mm male input power connector. A red LED lights when the power is on.

POWER: The 24 VDC power supply plugs into any (US) standard 115 VAC, 60 Hz outlet. (Power supplies for other mains voltages and outlets available on special order.)

FURNISHED ACCESSORIES: 24 VDC wall power supply and Printed User Guide. The User Guide in .pdf format may also be downloaded from our web site.

PHYSICAL: Cast aluminum enclosure measuring 248 x 158 x 63 mm (9.9 x 6.3 x 2.5 inches) overall including connectors and knobs. Weight is 932 gm (2.1 pounds). There are rubber bumpers on the four corners of the enclosure bottom.

PRICE: \$ 283.00 (USD) plus shipping.



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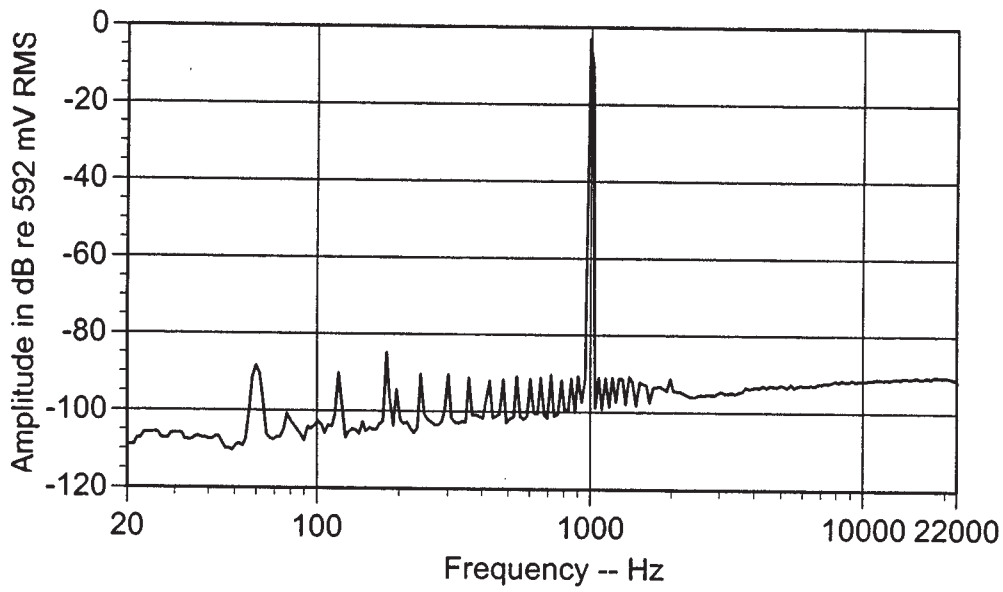


Fig. 1 -- Output spectrum. 1 kHz sine wave input, 20 dB gain and FLAT frequency weighting.

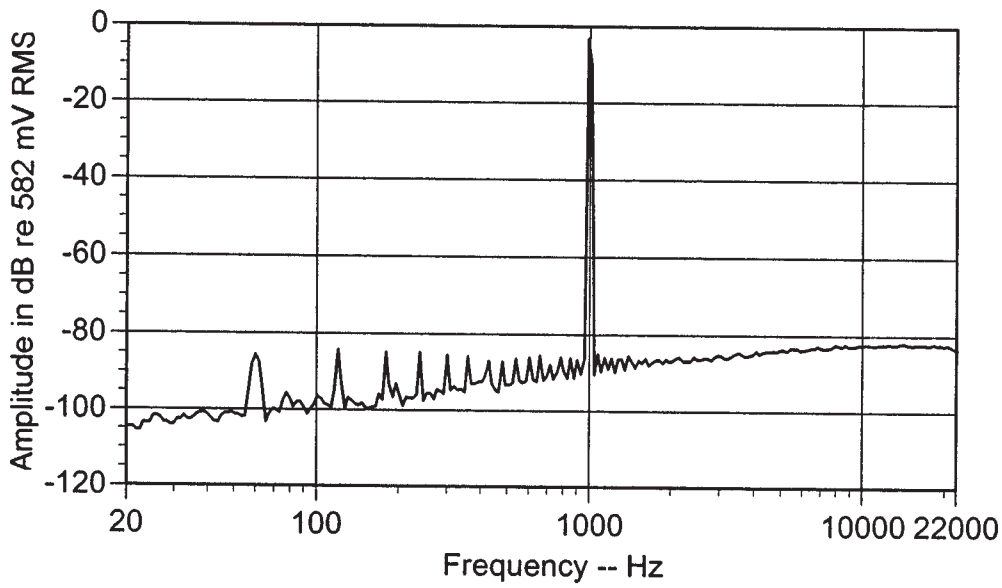


Fig. 2 -- Output spectrum. 1 kHz sine wave input, 40 dB gain and FLAT frequency weighting.

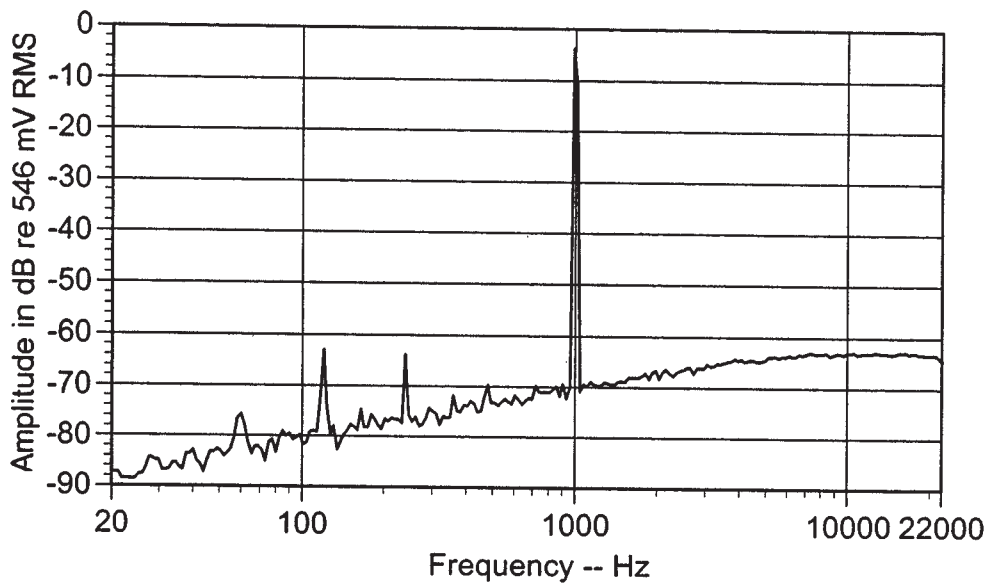


Fig. 3 -- Output spectrum. 1 kHz sine wave input, 60 dB gain and FLAT frequency weighting.