

# MA3 Microphone Amplifier



## MA3 Overview

The MA3 is a two-channel microphone amplifier for auditory scientists. This high-quality low-cost system is designed for use with both ¼" audio jack microphones and balanced XLR inputs for optimum impedance and noise characteristics. The MA3 is able provide a bias voltage for microphones that require it. Two BNC connectors provide analog output. A variable gain knob provides amplification from 10 dB to 55 dB in 5 dB steps. A toggle switch provides 20 dB of additional gain for over five thousand fold amplification.

### Power

The MA3 Microphone Amplifier is powered via the System 3 zBus (ZB1PS). No PC interface is required.

## MA3 Features

### Inputs

The MA3 comes with three inputs: an XLR microphone input and two ¼" TRS connector inputs. Signals from two microphones can be amplified simultaneously.

### Bias

The Bias switch produces a bias voltage for microphones that require it.

### Gain Control

The gain control amplifies the microphone input in 5 dB steps from 10–55 dB (3x–560x). The Gain Switch adds an additional 20 dB (10x) of gain for a maximum amplification of 5600.

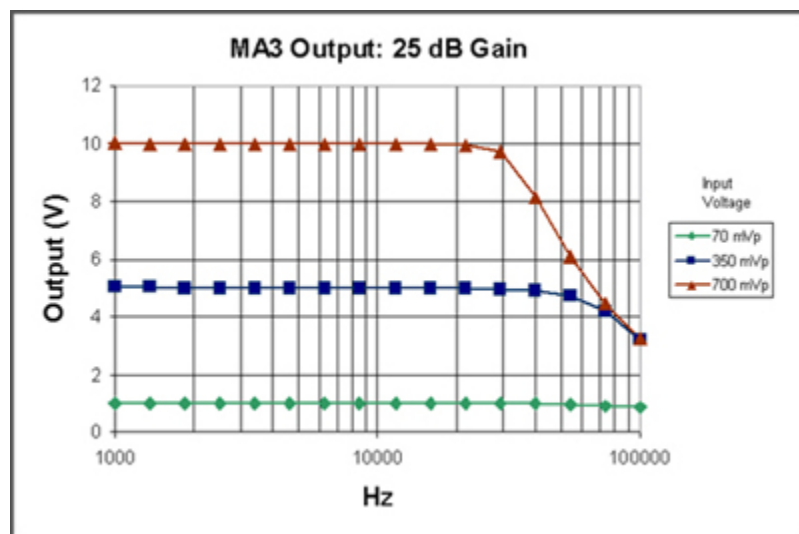
## Outputs

Two BNC outputs give easy connection to any TDT System 3 device. The maximum voltage output is  $\pm 10$  Volts. Clip lights indicate and overvoltage on the signal output.

## MA3 Technical Specification

Input Signal Range	$\pm 10$ V peak
-3dB Bandwidth	200 kHz @ 40 dB gain
Gain Accuracy	$\pm 1$ dB
Spectral Variation	1 dB from 20 Hz to 20 kHz
Signal/Noise	110 dB (20 Hz to 30 kHz at 9.9 V)
Noise Floor	9.2 $\mu$ V rms
THD	< 0.002% (1 kHz tone, $\pm 7$ V peak)
Input Impedance	600 Ohm
Output Signal Range	$\pm 10$ V peak
Bias Voltage	10 V, 150 mA max, superimposed onto microphone
Output Impedance	5 Ohm

## Output Diagram



### Frequency Response Diagram

