

## Features

**Broadband** - 100 Hz - 1000 MHz

**High Gain**

**Flat Response**

**Individual Calibration**

**Two Year Warranty**



## Description

The model PA-010 and PA-103 are general purpose, broadband, high gain, bench top preamplifiers. These preamplifiers reduce floor noise and increase system sensitivity to low level signals during Electromagnetic Interference (EMC) testing. They also provide input isolation to your expensive test equipment. The PA-103 has a frequency range of 1 MHz to 1000 MHz. The PA-010 operates from 100 Hz to 30 MHz.

The simple front panel consists of two 50  $\Omega$  matched BNC connectors for input and output. The preamplifiers were designed to have minimal gain variation for the entire frequency range to reduce EMC measurement errors.

Each preamplifier is individually calibrated and the gain data is shipped with the unit. Power to the model PA-103 is supplied by a 9 VAC, 1 AMP external wall mount adapter supplied with the preamplifier. The PA-010 is powered by 115 VAC, 60 Hz line input.

## Application

The PA-103 and PA-010 are primarily used for EMC radiated emissions testing. These preamplifiers can be used during EMC testing for FCC, CISPR, EN, FAA and MIL-STD. These preamplifiers could also be used in other applications that require a high gain preamplifier.

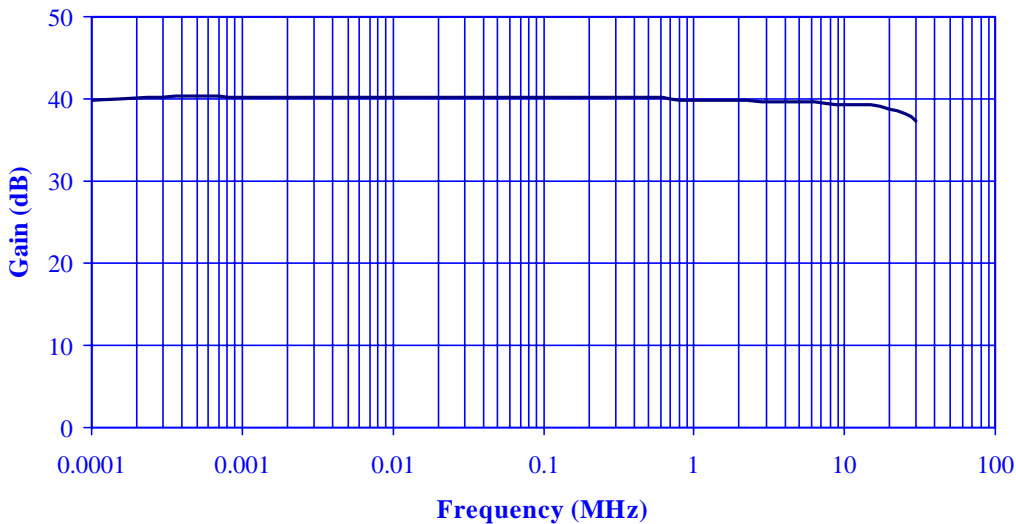
The enhanced system sensitivity due to high gain is very helpful when making EMC measurements using antennas on an Open Area Test Site (OATS) or probing a printed circuit board using Near Field Probes. This allows measurements of those frequencies from the equipment under test, that are not visible on the spectrum analyzer display unless amplified. The preamplifier gain will cause peaks to be visible above the background noise of the analyzer. These frequencies may go undetected if a preamplifier with a high gain was not used.

In addition, preamplifiers could improve sensitivity of counters and power meters. The PA-103 and PA-010 can also be used to increase the available power from your sweeper or signal generator.

# Specifications

Model	PA-010	PA-103
Frequency	100 Hz - 30 MHz	1 MHz - 1000 MHz
Gain	39 dB	32 dB
Flatness	$\pm 3$ dB	$\pm 2$ dB
3 dB Bandwidth	20 Hz, 40 MHz	500 kHz, 1200 MHz
Noise Figure	< 7 dB	< 6 dB
P1dB	+13 dBm	+4 dBm
VSWR	1.3:1	1.3:1
Reverse Isolation	>30 dB	>30 dB
Impedance	50 Ohms	50 Ohms
Temperature Range	0° - 40° C	0° - 40° C
Max. DC Input	2 VDC, 0 dBm	2 VDC, 0 dBm
Connector Type	BNC (f)	BNC (f)
Input Power	120 VAC, 60 Hz	9 VAC, 1 Amp
Dimensions (L x W x H)	7.5" x 5" x 3" (19 x13 x 7.6 cm)	7.5" x 5" x 3" (9 x13 x 7.6 cm)
Weight	3.3 lbs. (1.5 kg)	2.5 lbs (1.1 kg)

Typical Gain model PA-010



Typical Gain model PA-103

