COM-POWER CORPORATION

# Preamplifier
## PAM-103

## Features

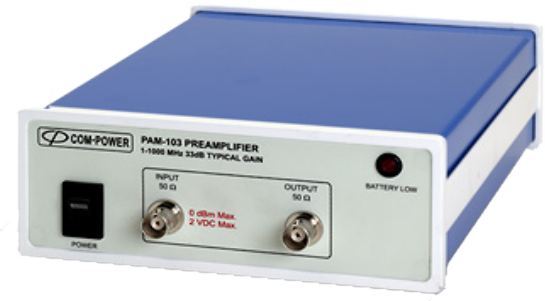
**Ultra Wideband - 1 MHz to 1 GHz**

**High Gain - 33 dB**

**Flat Response - ± 3 dB**

**Low Noise Figure - < 6 dB**

**Battery powered for field use.**




## Description

The model PAM-103 is a broadband, high gain, bench top preamplifier with a frequency range of 1 MHz to 1 GHz. It has a minimum gain of 28 dB and minimal gain variation of ± 3 dB for the entire frequency range for ease of use and to reduce measurement errors.

The simple front panel consists of two 50Ω matched BNC or N type connectors for input and output with a battery low indicator. It can be powered by the supplied DC adapter or by the pre-installed two rechargeable 6V NimH battery packs. It can operate on a fully charged battery for up to 14 hours. The batteries can be recharged using the same DC adapter used to power the preamplifier.

Each preamplifier is individually calibrated using equipment traceable to NIST. The test data will be shipped with each unit. The Optional accredited calibration service is available upon request.

## Application

Adding preamplifier such as PAM-103 can improve sensitivity to low level signals during EMC emissions testing. Although, the intended application of Com-Power PAM-103 is for EMC testing it can also be used in other applications that require a high gain.

During EMC testing increasing sensitivity to low amplitude signals is very helpful for accurate measurements. This can be acheived by adding a PA-010 to a emi emissions measurement setup using antennas or near field probing . The added system sensitivity 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 low amplitude signals to be visible above the background noise of the analyzer. These frequencies may have gone undetected without a preamplifier. The PAM-103 can also be used to increase the available power from your sweeper or signal generator for transmitting signals.

For added convenience, PAM-103 can be powered by the internal battery when AC power source is not be available.

# Specifications

| | |
|---|---|
| Frequency Range | **1 MHz to 1 GHz** |
| Intended Application | **EMC measurements** |
| Gain | **33 dB ± 3 dB** |
| Noise Figure | **<6 dB** |
| $P_{out}$ @ 1 dB compression | **+ 4 dBm** |
| Max Input | **+0 dBm, 2 VDC** |
| VSWR | **1.3 : 1** (Average) |
| Connector Types | **50Ω BNC type (female) standard**<br>**N type (female) option** |
| Power Input | **15 VDC, 500A** |
| Battery Type | **Two 6 VDC NimH, 500 mA** |
| Battery life | **Approximately 14 Hour with full charge** |
| Charging time | |
| Dimensions | **7.5 x 5 x 3 inches**<br>**9 x 13 x 7.6 cm** |
| Weight | **3.3 lbs. / 1.5 kg** |

*All values are typical values unless otherwise specified.*
*Specifications are subject to change without notice.*

# Typical Data