PAM-1840VH
Preamplifier
Operation Manual

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INTRODUCTION

BEFORE APPLYING POWER

Review this manual and become familiar with all safety markings and instructions. Verify that the equipment line voltage is compatible with the main power source.

INTENDED PURPOSES

This equipment is intended for general laboratory use in a wide variety of industrial and scientific applications, and designed to be used in the process of generating, controlling and measuring high levels of electromagnetic Radio Frequency (RF) energy. Therefore the output of the amplifier must be connected to an appropriate load such as an antenna, field-generating device, or receiver. It is the responsibility of the user to assure that the device is operated in a location which will control the radiated energy such that it will not cause injury and will not violate regulatory levels of electromagnetic interference.

HAZARDOUS RF VOLTAGES

The RF voltages on the center pin of the RF output connector can be hazardous. The RF output connector should be connected to a load before AC power is applied to the amplifier.

RANGE OF ENVIRONMENTAL CONDITIONS

This equipment is designed to be safe under the following environmental conditions:

Indoor use

Altitude up to 2000M

Temperature of 5°C to 40°C

Maximum relative humidity 80 % for temperatures up to 31°C. Decreasing linearly to 50% at 40°C

Mains supply voltage fluctuations not to exceed +/- 10% of the nominal voltage or minimum and maximum autoranging values.

Pollution degree 2: Normally non-conductive with occasional condensation.

While the equipment will not cause hazardous condition over this environmental range, performance may vary.

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GENERAL INFORMATION

GENERAL DESCRIPTION

Review this manual and become familiar with all safety markings and instructions. Verify that the equipment line voltage is compatible with the main power source.

POWER SUPPLY

The model PAM-1840VH is supplied with an external power supply, that can be used on 110 VAC, 50/60 Hz, and supplies 12.0 VDC at 180 mA. The power supply has a standard AC input connector and uses a 5.5 x 2.1mm plug. An optional battery source maybe used for this unit.

SPECIFICATIONS

The PAM-1840VH Pre-amplifier specifications:

Power output	+6 dBm at 1 dB compression
Frequency Range	18 GHz - 40 GHz
Maximum input for rated output	-25 dBm
Gain	35 dB
Gain Flatness	+/- 3.5 dB
Noise Figure	6.0 dB Max
Modulation capability	will reproduce AM, FM or pulse modulation
Primary Power	+12 VDC, 180 mA
RF Connectors	Type 2.9mm(female)
Impedance	50 ohm, < 2.5 VSWR
Weight	1.1 lbs.
Size (W x H x D)	3.75 X 2.5 X 6.25 (inches)

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OPERATING INSTRUCTIONS

ASSEMBLY INSTRUCTIONS

The model PAM-1840VH pre-amplifier is shipped completely assembled. Simply supply the required 12 VDC to the pre-amplifier.

MOUNTING INSTRUCTIONS

The model PAM-1840VH is a bench top pre-amplifier.

GENERAL USE INSTRUCTIONS

Operation of the model PAM-1840VH low noise amplifier is quite simple. The unit is turned on by first plugging the phone type plug from an external power supply into the power input connector. The power supply is then plugged into the appropriate line voltage supply. The input signal is connected to the jack marked “INPUT”. The output signal is taken from the jack marked “OUTPUT” and fed to the desired amplifier or test equipment.

The preamplifier is turned on by pulling out and lifting the switch to the on position, the Power indicator LED will light.

The input signal should normally be at a level of –15 dBm or lower. Signal levels greater than –15 dBm will drive the amplifier into compression, resulting in distortion of the signal.

CAUTION:

The model PAM-1840VH amplifier is not critical in regards to source and load VSWR and will remain unconditionally stable with any magnitude and phase of source and load VSWR. However, input signals greater than +10 dBm can damage the amplifier.

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MAINTENANCE

To ensure reliable and repeatable long-term performance, annual re-calibration of your pre-amplifier by A.H. Systems experienced technicians is recommended. Our staff can recalibrate almost any type or brand of antenna.

For more information about our calibration services or to place an order for antenna calibration visit our website at http://www.AHSystems.com or call 1(818) 998-0223.

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