

## Model: PAM-1840



### FEATURES:

- Wide Bandwidth (18 GHz – 40 GHz)
- Low Noise, High Gain
- Individually Calibrated
- Low VSWR
- Improve Overall System Sensitivity
- Rugged Design

### INTRODUCTION

A.H. Systems' Preamplifier line is an excellent choice with a rugged design, no hassles with soldering your own power leads and they improve overall system sensitivity by at least 20 dB. All of the Preamplifiers come with a 15-volt DC regulated power source. A low voltage indicator confidently allows you to power the amplifier with your own external 15-volt DC battery. This makes it a convenient choice for field measurements.

### INTENDED PURPOSES

This equipment is intended for general laboratory use in a wide variety of industrial and scientific applications and is 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.

### RECOMMENDED ACCESSORIES

- **SAS-574** Double Ridge Guide Horn Antenna
- **SAS-572** Standard Gain Horn Antenna
- **SAC-40G-1.5** Low-Loss, High Frequency Cables



**Innovation**

**Quality**

**Performance**

Phone: (818)998-0223 ♦ Fax (818)998-6892  
<http://www.AHSystems.com>

**A.H. Systems**



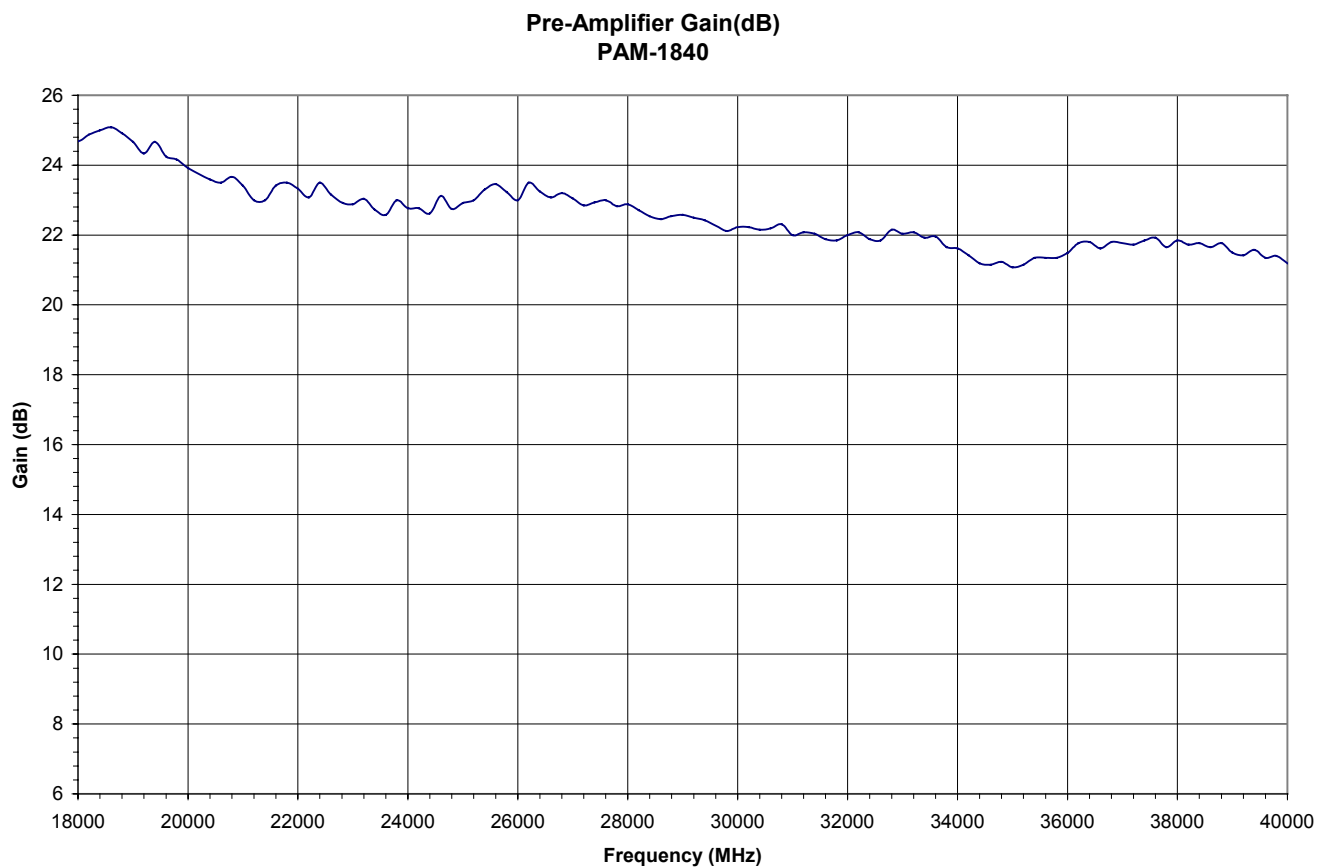
## RANGE OF ENVIRONMENTAL CONDITIONS

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 conditions over this environmental range, performance may vary.

### Frequency Response (Typical)

**Innovation****Quality****Performance**

Phone: (818)998-0223 ♦ Fax (818)998-6892  
<http://www.AHSystems.com>

**A.H. Systems**

**SPECIFICATIONS**

The PAM-1840 Preamplifier Specifications:

Power output .....	+10 dBm at 1 dB compression
Frequency Range .....	18 GHz - 40 GHz
Maximum input for rated output .....	-20 dBm
Gain .....	20.0 dB
Gain Flatness .....	+/- 3.5 dB
Noise Figure.....	4.2 dB Max
Modulation capability .....	will reproduce AM, FM or pulse modulation on the input signal
Primary Power .....	+15 VDC, 180 mA
RF Connectors.....	Type N (female)
Impedance .....	50 ohm, < 2.5 VSWR
Weight .....	1.1 lbs. / 0.5 kg
Size (W x H x D) .....	3.75" x 2.5" x 6.25"
.....	95.3 x 63.5 x 158.7 mm

**POWER SUPPLY**

The model PAM-0126 is supplied with an external power supply that can be used on 110/120/220/240 VAC, 50/60 Hz, and supplies 15.0 VDC at 180 mA. The power supply has a standard AC input connector and uses a 2.5mm coax output connector. An optional battery source may be used for this unit.

**GENERAL USE INSTRUCTIONS**

Operation of the model PAM-1840 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. Please allow 15 minutes of warm up time to allow the preamplifier to stabilize. The input signal should normally be at a level of -20 dBm or lower. Signal levels greater than -20 dBm will drive the amplifier into compression, resulting in distortion of the signal.

**CAUTION:**

**The model PAM-1840 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 -20 dBm can damage the amplifier.**

**MAINTENANCE**

Annual recalibration is recommended to ensure reliable and repeatable performance. A.H. Systems experienced technicians 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.



**Innovation                      Quality                      Performance**

Phone: (818)998-0223 ♦ Fax (818)998-6892  
<http://www.AHSystems.com>

**A.H. Systems**

