

Portable Attenuation Measurement System (PAMS)

310-010042-001

PAMS is a user-friendly, transmitter and receiver system that measures shielding effectiveness in RF shielded enclosures. Lightweight and compact, each PAMS unit measures approximately 12" x 5" x 5" and weighs 5.5 lbs., making PAMS ideally suited to field measurement tasks. Rugged construction insures instrument survivability in a field test environment.

PAMS incorporates a self-calibrating architecture that provides for ease of use. It requires only minimal operator instruction for error-free operation. Its backlit LCD output displays shielding effectiveness, battery status, and other operating parameters.

PAMS provides an optimum solution for measuring the shielding effectiveness of RF enclosures.

PAMS can also be used with the RF Antenna Switch and up to 12 Ground Plane Antennas (available separately). A monitoring network can be installed around a shielded room. The antennas are placed around the outside of the room, and using the PAMS Receiver attached to the RF Switch, the operator is able to monitor the shield from various places around the room.

When operating in the shielding level mode, PAMS determines shielding integrity to levels as high as 120 dB at 900 MHz.

The PAMS receiver and transmitter are synthesized, with a minimum tuning step size of 100 kHz. Both units are battery powered, and can be operated in an AC mode when connected to the external battery charger. Normal battery operation time is 5 hours for the receiver, and 2 hours for the transmitter. A complete charge cycle is completed in approximately 2 hours.

The receiver provides accurate level detection for signals in the range of -120 dBm to 0 dBm. Typical accuracy is +/-1.0 dB. An internal limiter provides protection to the receiver in the unlikely event that the receiver and transmitter are connected together.



- ▶ Measures Path Loss, Signal Strength Shielding Effectiveness
- ▶ 864-936 MHz
- ▶ Path Loss Accuracy: +/- 1 dB Typ.
- ▶ Receiver Range: 0 To -120 dBm
- ▶ Transmitter Power: -30 To +30 dBm
- ▶ Synthesized: 1 MHz And 10 KHz Step Size
- ▶ AC Power Or Battery Operation

The transmitter provides a maximum output power of +30 dBm (1 watt). Output power can be adjusted in 1, 2, or 5 dB steps down to -30 dBm. Internal ALC circuitry maintains output level accuracy. The output of the transmitter is fully protected against damage.

The PAMS transmitter features a built-in 750-1000MHz comb generator for measuring small enclosures. The -10dBm pickets can be measured with a spectrum analyzer.

The PAMS system includes transmitter, receiver, antenna switch box, batteries, power packs, manual and a rugged transit case.

The PAMS system is available on the GSA Schedule.

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Complete System

Includes	PAMS Receiver PAMS Transmitter 3 amp Battery Charger / AC Power Pack (2 each) Antennas (2 each) 12 Position Antenna Switch 32 ohm headphones Operator's Manual Airtight & Watertight Heavy Duty Transit Case
Weight	28 lbs. Nominal (all items installed in Transit Case)
Size	21.5" L x 14.6" H x 8.1" D (Transit Case)

Specifications - PAMS Receiver

Operating Frequency	864-936 MHz
Tuning Step Size	1 MHz and 100 kHz
Operating Modes	Signal Strength, Shield Level, Spectrum Monitor, Monitor (TS-31)
IF Bandwidth	20 kHz nominal
RF Input Connector	BNC female
RF Input Impedance	50 ohms nominal
Input Preselection	80 MHz 1 dB bandwidth
Signal Level Relative Accuracy	+/- 1.0 dB (-120 dBm to 0 dBm)
Absolute Level Accuracy	+/- 2.0 dB (-120 dBm to 0 dBm)
Maximum Safe Input Level	+30 dBm (1 watt) minimum
Battery Operation	5 hours minimum at full charge
Batteries	Nickel Cadmium
AC/Charger Operation	95-265VAC, 48-65 Hz
Charge Time	90 minutes typical, "REFLEX" charge control
Controls	On/Off/Volume, Frequency Tune / F.DIGIT(frequency tune), THOLD (sets threshold level for go/no-go testing), LIGHT (backlights LCD display), CAL (used to provide path loss or shielding reference level normalization), MODE (selects threshold or monitor mode)
LED Indicators	Battery Overtemp, Battery Charge, Battery Fault
LCD Displayed Functions	Frequency, Battery Level, Mode (Path Loss, Shielding Level), Threshold Level Set, CAL Status, LOCK Status, Freq Adjust Status (Coarse or Fine)
Weight	5.5 lbs nominal
Case Size	11.7" H x 5.1" D x 4.9" W
Standard Accessories	32 ohm headphones, battery charger/power pack, manual, 1/4 wave on top of 1/2 wave vertical monopole antenna

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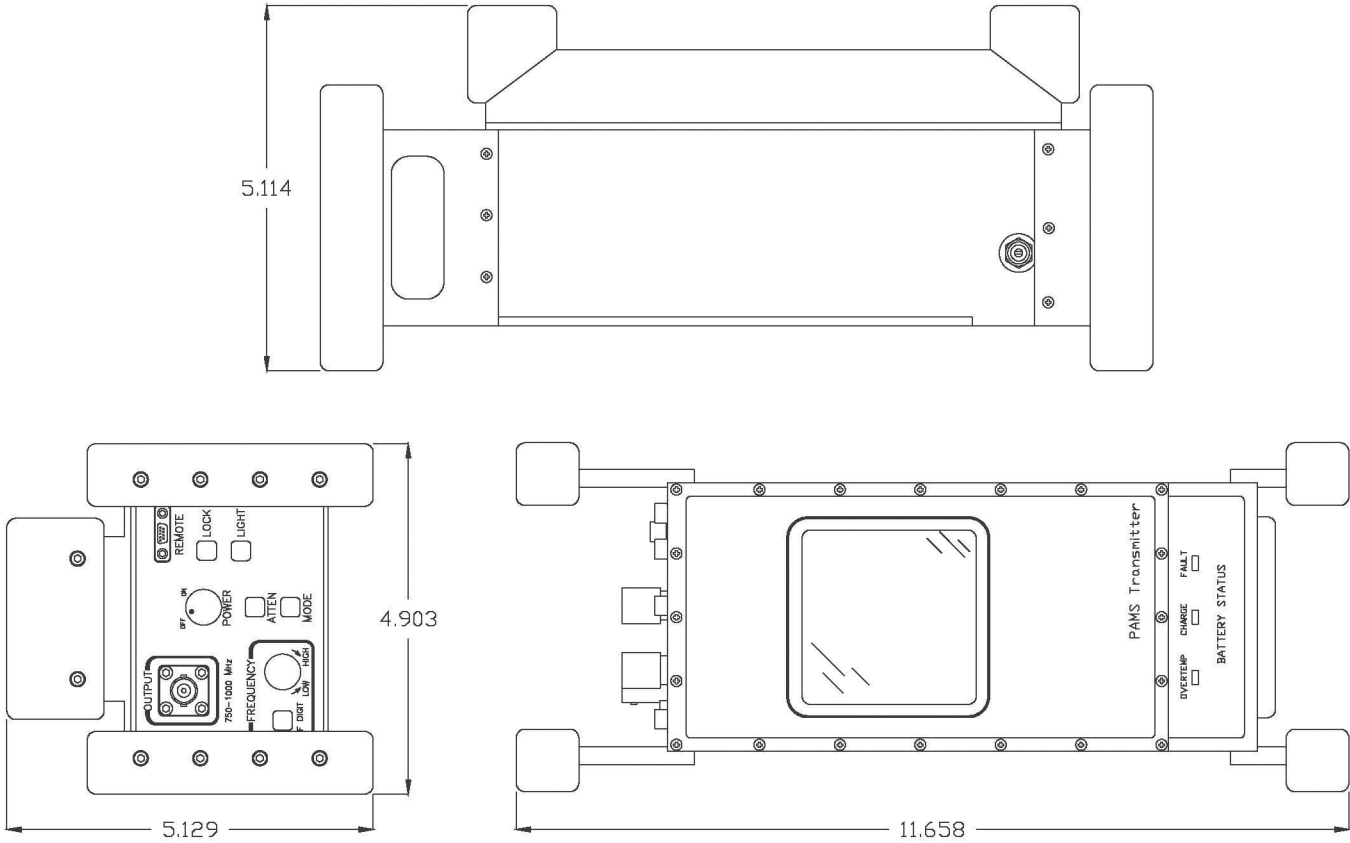
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Specifications - PAMS Transmitter

Operating Frequency	864-936 MHz
Tuning Step Size	1 MHz and 100 kHz
Maximum Output Power	+30 dBm minimum
Output Power Control	10 dB steps from -30 to +30 dBm
Output Level Accuracy	+/-1.0 dB maximum
Harmonics	-60 dBc maximum
Output Impedance	50 ohms nominal
Load VSWR	Safe operation into infinite VSWR (isolator protected)
RF Output Connector	BNC female
Battery Operation	2 hours minimum at full charge
Batteries	Nickel Cadmium
AC/Charger Operation	95-265VAC, 48-65 Hz
Charge Time	90 minutes typical, "REFLEX" charge control
Controls	On/Off, Frequency Tune, Coarse Fine (frequency tune), LIGHT (backlights LCD display), LOCK (locks out all controls), ATTEN (controls output power in 10 dB steps), MODE (selects CW or broadband mode)
LED Indicators	Battery Overtemp, Battery Charge, Battery Fault
LCD Displayed Functions	Frequency, Battery Level, Output Level, LOCK Status, Freq Adjust Status (Coarse or Fine), Broadband / CW Mode
Weight	5.5 pounds nominal
Case Size	11.7" H x 5.1" D x 4.9" W
Standard Accessories	Battery charger/AC power pack, manual, 1/4 wave on top of 1/2 wave vertical monopole antenna

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► Pams Ordering Information

PAMS Complete System	310-010042-001
PAMS Receiver Only	301-010046-001
PAMS Transmitter Only	310-010045-001
RF Antenna Switch, 12 Position	310-010040-001
Ground Plane Antenna	310-010041-001