

# PathTrax

- ▶ Measures Path Loss, Signal Strength Shielding Effectiveness
- ▶ 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 PathTrax is a user-friendly, transmitter and receiver system that measures path loss and shielding effectiveness in RF shielded enclosures. Lightweight and compact, each PathTrax unit measures approximately 12" x 5" x 5" and weighs 5.5 lbs., making PathTrax ideally suited to field measurement tasks. Rugged construction insures instrument survivability in a field test environment.

PathTrax 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.

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

PathTrax allows the user to set a minimum shield level threshold. While sniffing around the enclosure, a tone will sound in the headphones should the shield level drop below the threshold. The pitch of the tone varies based on the measured shield level's distance from the set threshold value.

The PathTrax receiver and transmitter are synthesized, with a minimum tuning step size of 10 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.

The transmitter provides a maximum output power of +30 dBm (1 watt). Output power can be adjusted in 10 dB steps down to -30 dBm. Internal ALC circuitry maintains output level accuracy. The output of the transmitter is fully protected against damage.

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

The PathTrax system is available on the GSA Schedule.

# PathTrax

## Complete System

Includes	PathTrax Receiver PathTrax Transmitter 3 amp Battery Charger / AC Power Pack (2 each) Antennas (2 each) 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 - PathTrax Receiver

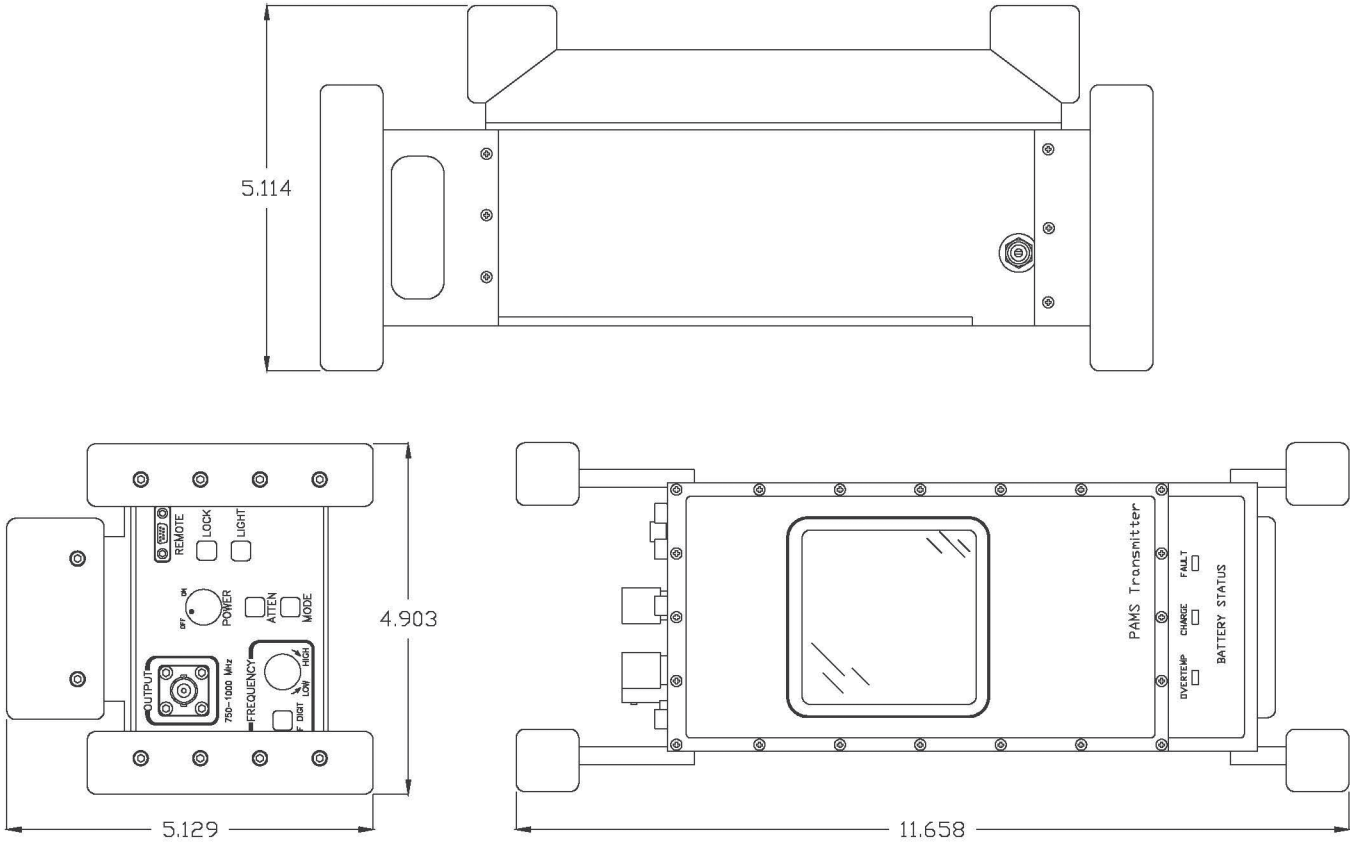
Operating Frequency	PathTrax 915: 885-960 MHz PathTrax 860: 824-900 MHz PathTrax 838: 806-870 MHz PathTrax 500: 489-512 MHz
Tuning Step Size	1 MHz, 100 KHz and 10 kHz
Operating Modes	Signal Strength, Spectrum Monitor, Path Loss, Shield Level
IF Bandwidth	15 kHz nominal
1st IF	90 MHz
2nd IF	450 KHz
RF Input Connector	TNC Female (BNC on PathTrax 500)
RF Input Impedance	50 ohms nominal
Input Preselection	4 pole Chebychev, 80 MHz 1 dB Bandwidth
Measurement Accuracy	+/- 1.0 dB (-110 dBm to 0 dBm)
Absolute Level Accuracy	+/- 2.0 dB (-120 dBm to -110 dBm)
Maximum Safe Input Level	+10 dBm (10 mW) minimum
Battery Operation	4 hours minimum at full charge
AC/Charger Operation	95-265VAC, 48-65 Hz
Charge Time	90 minutes typical
Remote Operation	Via USB Interface
I/O Connectors	5-pin, mini-USB, type B Connector
Controllable Functions	All functions except ON/OFF/Volume
Output Data	All measurement data and instrument status
Controls	On/Off/Volume, Frequency Tune, Coarse/Fine, Thold (sets threshold for go/no-go testing), LOCK (locks out control panel), MODE (Signal Strength, Spectrum Monitor, Path Loss, And Shield Level) and CAL (provides path loss or shielding reference level normalization)
LED Indicators	Battery Overtemp, Battery Charge, Battery Fault
LCD Displayed Functions	Frequency, Battery Level, Mode (Signal Strength, Spectrum Monitor, Path Loss, and Shield Level), CAL Status, LOCK Status, Frequency Adjust Status (Coarse or Fine)
Weight	5.5 lbs nominal
Case Size	11.7" H x 5.1" D x 4.9" W

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## Specifications - PathTrax Transmitter

Tuning Step Size	1 MHz, 100 kHz, 10 kHz
Maximum Output Power	+30 dBm nominal (1 Watt)
Output Power Control	1 dB steps from -30 to +30 dBm
Output Level Accuracy	+/-1.0 dB maximum over Temp and Frequency
Harmonics	-50 dBc maximum
Output Impedance	50 ohms nominal
Load VSWR	Safe operation into infinite VSWR
RF Output Connector	TNC Female (BNC on PathTrax 500)
Battery Operation	2 hours minimum at full charge
Batteries	Nickel Cadmium 9.6V @ 1800 mAh.
AC/Charger Operation	95-265VAC, 48-65 Hz
Charge Time	90 minutes typical
Remote Operation	Via USP Interface
I/O Connectors	5-pin, mini-USB, type B connector
Controllable Functions	All functions except ON/OFF
Output Data	Instrument Status
Reading Rate	500 ms (step tuning frequency)
Weight	5.5 pounds nominal

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► PathTrax Ordering Information

PathTrax 915	310-010044-001
PathTrax 860	310-010043-001
PathTrax 838	310-010072-001
PathTrax 500	310-010075-001