

EA6061 UNIVERSAL RADAR ALTIMETER TEST SET

DATA SHEET



- Test & Calibrate All Radar Altimeters
- Altitudes to 6350 Feet
- Accurate to Better than 0.5%

*We Bring the Test Range
to your Test Bench*



A Veteran Owned Small Business

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DS-0012 REV 2

Parameter	Specification	Notes
Frequency Range	4 — 5 GHz	
Altitude Accuracy	2 inches or 0.25%	NIST Traceable
Altitude Repeatability	0.01%	At Constant Temperature
Bandwidth	0.1 — 5 GHz	Ultra wide band
VSWR	2 : 1	Maximum
Spurious Free Dynamic Range	100 dB/Hz ^{2/3}	Minimum
Maximum Input Power	30 dBm	CW or Pulsed
Input/Output Impedance	50 Ω	Nominal
Dimensions	19" Rack Per EIA-310-D	3U, 22" deep
Power	120/230 VAC	Rechargeable Battery Available

Feature	Options / Description
Number of Delays	7
Altitude Settings	Up to 6350 in 128 steps (customer specify)
Altimeter Protocols	All formats and encryptions including FMCW, Constant Difference Frequency (CDF) , pulsed or non-pulsed, spread spectrum, frequency hopping, variable power, and low probability of intercept (LPI).
Remote Control	Ethernet, USB, GPIB, TTL
Calibration	Built-in automated software for easy system calibration.
RF connector	Customer specify
Aircraft cable compensation (AID)	User programmable 35 to 150 feet in one foot steps.
Amplitude Control	User defined or coupled to altitude settings (free space propagation loss)
Coupled Test Ports	10 and 20 dB.
Switching Speed	< 10 ms
Travel Case	Water-resistant, portable



PRODUCT SUMMARY

Description

The EA6061 Altimeter Test Set is designed to test and calibrate any and all radar altimeter systems regardless of protocol or encryption including FMCW and LPI (Low Probability of Intercept). The EA6061 provides multiple, programmable delays with front panel and/or remote computer control. It features ultra wide bandwidth, low loss, high isolation, and high dynamic range. Able to simulate various altitudes, the test set operates from 4 to 5 GHz and offers NIST traceable altitude accuracy up to 2 inches.

Technology

EOX fiber optic technology overcomes the shortcomings of conventional schemes such as acoustic, digital, and coaxial transmission line delays including:

- Quantization Errors
- Triple Transit Time
- Dispersion

Core Technology - Delay Lines

Eastern OptX core technology enables the conversion of microwave signals to optical signals (E/O), time delaying this signal then reconvert the light back to original microwave signal (O/E) with superior fidelity over traditional time delay methods. Products include Radar Target Simulation, Radar Altimeter Testing, Channel Simulation (Air Interface) and Multipath Creation. Many of our products allow users to test “in the lab” resulting in dramatically lower costs and higher efficiencies than available with outdoor test ranges. Systems are available with fixed or programmable delays ranging from a few nanoseconds (2 feet) to hundreds of microseconds (150 miles), input RF frequencies of up to 40 GHz, internal attenuation control accurately simulates free space propagation loss. All features can be touch-screen controlled using an intuitive graphical user interface. Founded in 1998, Eastern OptX is a Veteran Owned Small Business whose management & engineering team has over a century of experience in Radar and Telecommunications testing.



FEATURES

- ⇒ Easy, repeatable operation
- ⇒ Altitude settings from 0 to 6350 feet in 50 foot steps
- ⇒ Propagation loss is programmable and coupled to each altitude setting per range formula
- ⇒ Built-in automated self calibration using external PNA
- ⇒ Programmable for automated production testing
- ⇒ Four aircraft cable compensation settings
- ⇒ 10 ns zero-delay offset
- ⇒ 35 foot intrinsic delay with user defined AID

APPLICATIONS

- ⇒ Altimeter design and development, production testing and calibration
- ⇒ Altimeter manufacturers, calibration labs, and aircraft avionics integrators.

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