The Model 527 radar signal simulator is a handheld, portable device designed to determine the status of electronic warfare (EW) radar warning receiver (RWR) systems on operational aircraft through free-space radiation functional testing. The Model 527 delivers organizational-level flight line verification of the operational status of an aircraft and its EW systems. Operational readiness and threat recognition are verified from antenna to cockpit display. This includes antennas, transmission lines, radomes, cockpit displays and controls. The performance of avionics systems (B-kit) and transmission paths (A-kit) can be verified pre-launch.
MODEL 527
RADAR SIGNAL SIMULATOR

CHARACTERISTICS & BENEFITS

Frequency Range
500 MHz to 18 GHz (base);
28 GHz to 40 GHz millimeter wave (mmwave);
10 MHz to 500 MHz (optional)

Minimum Pulse Width
50 ns

Frequency Switching Speed
One μsec

Frequency Modulations
Bi-phase, chirp, jitter and hop

Number of Emitters
Eight, fully independent in frequency, pulse width, pulse repetition and scan model

Scan Modulations
Fully programmable advanced modulations including circular, sector, spiral, conical and others

Operating Power
BB-2590/U battery (one or two), or 110 to 240 V alternating current, 50 to 60 Hz

Direct Connect Power
+10 dBm via threaded Neill-Concelman, or TNC, output (base)

Operating Time
Greater than six hours with two batteries installed

Radiated Power
-35 dBm minimum at 40 feet (base); -42 dBm at 40 feet (mmwave)

Remote Control
Handheld controller or Ethernet

Temperature
-40 to 55°C (AC power)
-20 to 55°C (battery power)

Weight
Less than 27 lb with two batteries, less than 25 lb with one battery

VERTICAL INTEGRATION:
JSECST™ and A²PATS™

PROVIDING CONFIDENCE AND RELIABILITY THROUGH TOTAL SPECTRUM TEST AND TRAINING SOLUTIONS.
The Model 527 can perform end-of-runway and walk-around testing up to 120 feet from the aircraft, depending on the receiver. Antennas and transmission paths mounted high on the aircraft can be verified without direct coupling. Our advanced threat modeling software allows threat emitters to be developed offline and stored on removable PCMCIA media, enabling the system itself to be unclassified when powered down with disk removed. The Model 527 supports up to eight simultaneous, multiplexed emitters, allowing the development of complex test cases and the verification of threat priority in the RWR system. Once emitters or groups of emitters are developed, test personnel can progress through them easily.

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