RSS-2500
Data Sheet

MicroKim
Leading Communication Technologies

GENERAL DESCRIPTION

The **RSS–2500** is a light-weight, compact, man-portable **R**adar **S**ignal **S**imulator and EW test unit designed for flight-line operation. A single operator can perform a complete Radar Warning Receiver (RWR) or EW check of the entire system from antenna through cockpit-display. The **RSS–2500** basic design goals were simplicity and ease of operation. The system has proved to be extremely reliable and user-friendly, both for operation and programming of threat scenarios. All frequency sources in the **RSS–2500** are fast tuning VCOs for broad band frequency coverage

KEY FEATURES

- Man-portable rugged package
- 2 complex radar emitters simulation
- All emitters can be PRI, PW, and FREQ Agile
- Dual Beam, pulse-on-pulse, pulse-on-CW simulation
- Battery operation from 1-3 hours
- Built-in antennas for flight-line, shipboard and pier side radiation
- Variety of pulse patterns available
- Scan Modulation option

ADDITIONAL FEATURES

- All sources are fast settling VCO's (1 μSec)
- GUI man machine interface (Windows 95)
- Hand-held Remote Control
- Radiated output constantly monitored
- Phase locked option on all sources for stable CW simulation
- Modular Software
- Networked operation over RS232 or 485
- Extensive built-in test

FREQUENCY CHARACTERISTICS

Coverage	0.5 to 18.0 GHz 18-40GHz Option
Accuracy	0.5 to 2.0 GHz:+/-1.0 MHz
	2.0 to 6.0 GHz: +/-1.0 MHz
	6.0 to 18.0 GHz: +/- 3.0 MHz
	0.5 to 18.0 GHz: +/-200 KHz (Synth)
Resolution	0.5 to 2.0 GHz: 50 KHz (VCO)
	2.0 to 6.0 GHz: 250 KHz(VCO)
	6.0 to 18.0 GHz: 250 KHz(VCO)
	2.0 to 18.0 GHz: 1 MHz (Synth)

FREQUENCY CHARACTERISTICS

Switching Time	VCO: 1.0 usec, Synth: 3 msec
Dynamic Range	60 dB
Spurious	-50dBc
Harmonics	-20dBc (-50 dBc option)
Modulations	Stable, Agile, Slider, Stagger, Chirp,

Bi-Phase coded, Simultaneous sync Beams

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APPLICATIONS

- Transmission of simultaneous multi-threats in both CW and pulses
- Fully computerized and keyboard operated
- Pre-programming of selected threat signals output power enables directional threat testing around aircraft
- Controlled output power with attenuation steps
- Battery operated or 115/230 VAC
- Automatic or Manual modes of operation
- Full solid state construction
- Built-in-Test (BIT) circuitry, with On-Line Monitoring
- Easily maintainable, using removable, plug-in modules
- Durable and ruggedized to withstand severe environmental conditions, based on Standards for Combat Field Test Equipment
- Typical ERP +33 dBm radiated

PULSE CHARACTERISTICS

PRI Range	2.0 to 65,535µsec
PRI Resolution	100nsec
PRI Modulations	Stable, Stagger, Jitter, Agileand User-Defined
PW Range	200nsec to 999µsec
PW Resolution	100nsec
PW Rise/Fall Time	<30nsec
PW Modulation	Same as PRI Modulation

- Easily maintainable, using removable, plug-in modules
- Durable and ruggedized to withstand severe environmental conditions, based on Standards for Combat Field Test Equipment
- Typical ERP +33 dBm radiated

OUTPUT POWER (Referring to antenna output)

0.5-2.0 GHz	22 dBm Max
2.0-6.0 GHz	23 dBm Max
6.0-18.0 GHz	23 dBm Max

EMITTER ANTENNA CHARACTERISTICS

Aperture Distribution:	Omni, Sin X/X, User-Defined
Beam Width	1 to 99 degrees (band dependent)
BW Resolution	0.1 degrees
BW Modulation Range	0 to 64 dB in 1 dB steps

EMITTER SCAN CHARACTERISTICS

Scan Motion	Omni, circular, sector, conical, electronic, helical, raster, custom
Dynamic Range	0 to 64 dB in 1 dB steps
Sector Width	0 to 180º
Scan Rate	0.1 to 16 Hz
Scan Coverage	60 to 10,000 mSec

ANTENNAS

Type	Freq Coverage	Gain
Planar	0.5-2.0 GHz	0dBi Min
Horn	2.0-6.0 GHz	9dBi Min
Horn	6.0-18.0 GHz	10dBi Min

Note: All specifications are subject to change.

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