The RSS8000/P Radar Threat Simulator offers the latest digital, RF and software technologies for generating accurate signals in an easy-to-use, portable format. Capable of 8 to 80 independent multiplexed emitters, the RSS8000/P offers unsurpassed performance. Standard capabilities include pulse (including PD) and CW generation.

The DirectorLt® software provides a unique, fast setup method for signal generation. A standard laptop PC provides the user with a single page fill-in-the-blanks form to program each emitter. Emitters can then be programmed directly or periodically switched on and off using an event script. Emitters can be sequenced together to provide a dynamically changing environment over time. Data is stored on the PC hard disc for re-use.

The RSS8000/P is ideal both for specific operator controlled testing and for lengthy automated system testing, whether at the dockside, flight-line, or test facility.

The RSS8000/P also provides remote control facilities for integration with other equipment. Databases are compatible with larger multi-channel RSS8000/DF systems.
RSS8000/P Radar Threat Simulators

Specifications

System
- Laptop PC simulation controller
- C++ / MATLAB® software
- Microsoft Windows™ application
- VME64 bus architecture
- 1000 Mbps Ethernet control link
- Embedded PowerPC & VxWorks™ OS
- Real-time simulation engine
- Dynamic update of emitter parameters
- Employs live threat databases
- DirectorLT® static test builder
- Microsoft Excel™ - based pattern data entry
- Microsoft Access™ - based emitter database
- Database import/export

RF Source
- Complete 100 MHz to 40 GHz coverage
- Frequency resolution 250 KHz
- Fast-tuning internal FLO or synthesiser
- Up to 800 kpps
- >90 dB dynamic range
- <85 dBm/MHz noise
- <60 dBC spurious level
- <60 dBC harmonic level
- Modular banded operation
- 0 dBm RF output power (others available)

Digital Pulse Generator (DPG)
- Up to 80 complex emitters
- Modular DPG card architecture
- Simultaneous FMOP & PMOP/AMOP
- Scan to pulse train synchronization
- Fast synthesizer operation

Additional Facilities
- Event file logging
- Pulse timing sync output
- PDW and video output options
- Portable 19” rack-mounted format
- Automatic BIT fault isolation to LRU
- Unattended RF calibration possible
- Remote control of emitter parameters/activity
- 12U and 5U packaged formats
- LAN/IRIG-B/1553B interfacing

Emitters
- 1.1 μs (+PW) to 800 ms PRI range
- 10 ns PRI resolution
- 20 ns to 160 ms and CW PW range
- 10 ns PW resolution
- Overlapping Co-Pulse Emitters
- Modulation
  - Stable
  - Agile
  - Sinusoidal
  - Sawtooth
  - Periodic
  - Groups
  - Burst
  - Switcher
  - Cycler
  - Synch
  - Jitter
  - Triangular
  - Exponential
  - Discrete
  - Doublet and triplet
  - Drift
  - Dwel
  - Wobble
  - User defined
- 8k staggered hopper tables with 512 pattern definitions per emitter and 64k pulse repeats
- Jitter: uniform or Gaussian, up to 99%
- Up to 8 synchronized pulse trains or beams
- Scan patterns
  - Stable
  - Circular
  - Helical
  - Conical
  - Spiral
  - Nodding
  - Lobing
  - Multibeam
  - Lock-on
  - Unidirectional sector
  - Bidirectional sector
  - Unidirectional raster
  - Bidirectional raster
  - TWS
  - Electronic
  - User defined
  - SinX/X
  - CosX
  - Cos2X
  - Cosine Taper
  - Isotropic
  - User Defined
  - 0.5° to 40° antenna beam width
  - 0.1° beam-width resolution
  - Antenna coverage: Az ±180°, El ±90°
  - 90 dB modulation range

Information Subject to Change Without Notice.