

8000 Series Radar Threat Simulators

FOR TRAINING, TEST & EVALUATION APPLICATIONS

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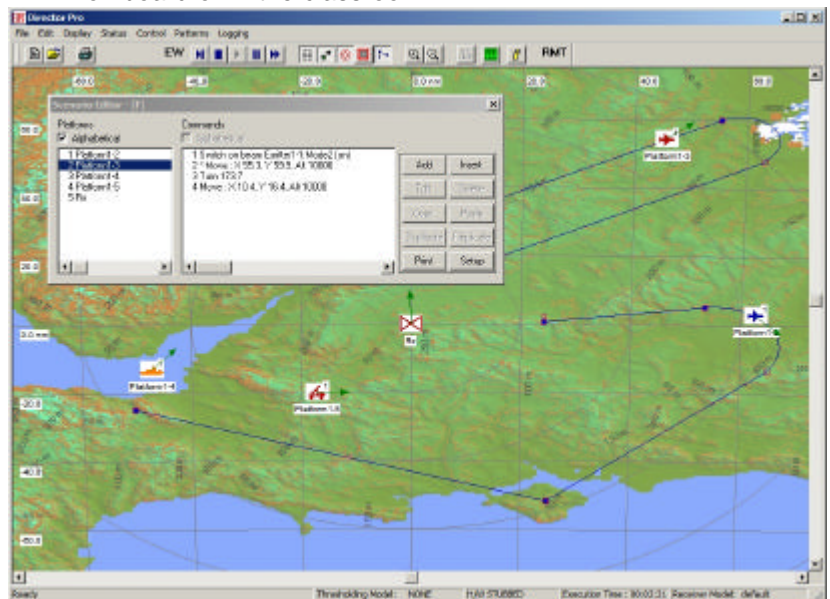
- ➔ **Windows® GUI Software**
- ➔ **AOA, Phase, DTOA DF**
- ➔ **100 MHz - 40 GHz Coverage**
- ➔ **Enhanced UMOP Facilities**



The 8000 series of radar threat simulators offer the latest integrated technologies for generating complex and accurate radar signals. Available in a wide variety of modular constructions ranging from small portable units to large multi-source, multi-channel DF systems, the 8000 series can be configured to meet all EW system test, evaluation and training requirements.

The 8000 system provides enhanced UMOP signal generation capabilities including simultaneous FMOP/PMOP/AMOP together with sub-nanosecond PRI resolution.

The 8000 system is ideally suited for EW system test and evaluation applications and for EW operator training, whether on-board or in the classroom.



System

- ◆ Pentium PC Simulation Controller
- ◆ C++ Software
- ◆ MS-Windows XP ©
- ◆ Vme64 Bus Architecture
- ◆ 100Mbps Ethernet Control Link
- ◆ Embedded PowerPC & VxWorks© OS
- ◆ Receiver Has 6 Degrees Of Freedom
- ◆ Real-Time Simulation Engine
- ◆ Dynamic Update Of Emitter Parameters
- ◆ Employs Live Threat Databases
- ◆ Director© Dynamic Scenario Builder
- ◆ Director/Lt Static Test Builder
- ◆ MS-Excel© Based Pattern Data Entry
- ◆ MS-Access© Data Base engine

RF Source / DF Ports

- ◆ Complete 100 MHz To 40 GHz Coverage
- ◆ Frequency Resolution 1MHz or better
- ◆ Multiple RF Source Configurations
- ◆ Dynamic Range >90dB
- ◆ Noise <-90dBm/MHz
- ◆ Spurious Level <-60dBc
- ◆ Harmonic Level <-60dBc
- ◆ Fast Tuning Internal DTO, FLO or Synthesiser
- ◆ External Fast Or Slow (GPIB) Synthesiser
- ◆ Modular Banded Operation
- ◆ AOA (Amplitude), Phase Or DTOA DF Options
- ◆ 512k Pattern Points Az, El & Frequency Cuts
- ◆ Independent Patterns In Every Port

Platforms

- ◆ Curved Earth Modelling
- ◆ All Capable Of X,Y,Z, Roll & Pitch Motion
- ◆ Movement Over 2000nm (X,Y) To 100,000ft (Z)
- ◆ Placement To 1m (X,Y & Z)
- ◆ Speed To 2000 kts
- ◆ Straight Or Curved Motion
- ◆ Turn Rate To 180° Per Second
- ◆ Flight Path Definition Via Waypoints
- ◆ Absolute Or Relative Movement
- ◆ Independent Or Convoyed Platforms
- ◆ Targeted (Follow Me) Motion

Digital Pulse Generator (DPG)

- ◆ Up To 4096 Complex Emitters
- ◆ Modular DPG Card Architecture
- ◆ Real-Time Geometry & Path Loss Calculations
- ◆ Scan Amplitude Calculated Every 100µs
- ◆ Unrestricted Agility On Each Emitter
- ◆ 10nsec Step AMOP, PMOP, FMOP
- ◆ Simultaneous FMOP, PMOP or AMOP
- ◆ Scan-To-Pulse Train Synchronisation

Emitters

- ◆ Pulse Density In Excess Of 0.8Mpps per RF Source
- ◆ PRI Range 1µs to 800ms
- ◆ PRI Resolution 10 ns (or 0.1ns Hi-Fi)
- ◆ PW Range 25 ns to 50 ms and CW
- ◆ PW Resolution 10 ns
- ◆ Modulations
 - Stable
 - Agile
 - Sinusoidal
 - Sawtooth
 - Periodic
 - Groups
 - Burst
 - Switcher
 - Cycler
 - Synch
 - Stagger
 - Jitter
 - Triangular
 - Exponential
 - Discrete
 - Doublet & Triplet
 - Drift
 - Dwell
 - Wobble
 - User Defined
- ◆ Stagger Positions - 4096 with 64k Pulse Repeats
- ◆ Jitter - Uniform Or Gaussian 1% - 99%
- ◆ Up To 8 Synchronised Pulse Trains Or Beams
- ◆ Scan Patterns
 - Stable
 - Circular
 - Helical
 - Conical
 - Spiral
 - Nodding
 - Lobing
 - Multi-Beam
 - Lockon
 - Uni-directional Sector
 - Bi-directional Sector
 - Uni-directional Raster
 - Bi-directional Raster
 - TWS
 - Electronic
 - User Defined
- ◆ Scan Rates - 0.01 To 200 Hz
- ◆ Electronic Beam dwell Period - 100µs To 1s
- ◆ Antenna Beam Patterns
 - SinX/X
 - Cos²X
 - Cosine Array
 - Fan
 - Isotropic
 - CosX
 - Cosec²X
 - Cosine Taper
 - Pencil
 - User Defined
- ◆ Antenna Beam-Width - 0.5° To 40°
- ◆ Beam-Width Resolution 0.1°
- ◆ Antenna Coverage Az ±180°, El ±90°
- ◆ DF Antenna Pattern Modulation Range 64dB

Additional Specifications

- ◆ Log Of Lost Pulses Due To Collision
- ◆ Scenario Event File Logging
- ◆ VCR Style Scenario Control Buttons
- ◆ Game Time > 24hrs
- ◆ Pulse Timing Sync Output
- ◆ Digital Pulse Descriptor Outputs
- ◆ Automatic BIT Fault Isolation To LRU
- ◆ Unattended RF Calibration
- ◆ 'Health Monitoring' BIST
- ◆ Maps
- ◆ Terrain Masking

