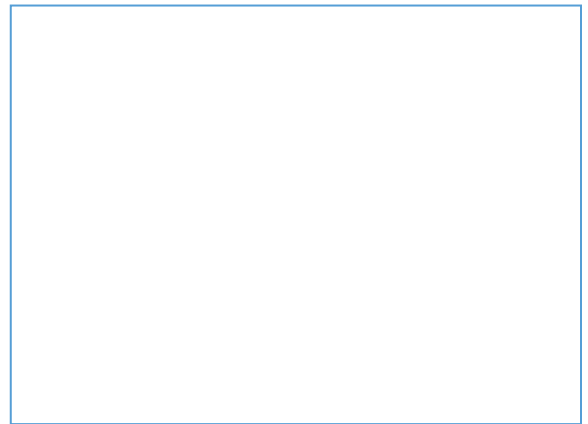


Configurable Link Test Set (CoLTS-LJ)

Hardware-In-The-Loop Jamming and Fading Channel Simulator

CoLTS-LJ is the next generation of Welkin Sciences' heritage of Hardware-In-The-Loop (HWIL) simulators. User-defined RF propagation effects include delay, Doppler, amplitude, noise, flat fading, and frequency-selective fading. Nuclear-induced scintillation is implemented with Defense Threat Reduction Agency (DTRA) models. Jammer emulation includes broadband noise, partial band noise, compressed noise, multi-tone CW, pulse/blink jamming, and modulated waveforms. Real-time generation of jammer waveforms are based upon National Air & Space Intelligence Center (NASIC) jammer models.



Features & Benefits

- Enables HWIL test & evaluation of communication links and modems in contested and wartime RF environments
- Flat or frequency-selective fading based upon user-provided ACIRF files
- Jamming emulation includes selection of jammer types and durations
- Jamming may be scintillated or not based upon user selection (*not included in prototype*)
- L-band input/output interfaces
- 125 MHz instantaneous bandwidth
- Available with 1, 2, or 4 independent channels (*prototype is one channel*)
- Compliant with DTRA nuclear scintillation models
- Jamming emulation utilizes NASIC jammer models



Fading/Scintillation Capabilities

Channels	1, 2, or 4+ (<i>prototype is one channel</i>)	Input Power	-30 to -10 dBm
Interface Frequency	1.0 to 2.0 GHz	Geo Delay	Optional
Bandwidth	125 MHz (tunable over L-band)	Distributions	Rayleigh, Rician
Fading	Benign, Frequency-Selective, Flat	Doppler Spectrum	Gaussian, f^{-4} , f^{-6}
Modes	Benign, Scripted per ACIRF file	TEC	Delay, Doppler

Jamming Capabilities

Jammer Types	Full & Partial-band Noise, Single & Multi-tone, Swept & Pulsed, Modulated, User-defined	Multiple Jammers	Multiple, simultaneous jammers available with multiple channels (<i>not included in prototype</i>)
Interface Frequency	1.0 to 2.0 GHz	Fading	(<i>not included in prototype</i>)
Instantaneous Bandwidth	125 MHz Max (tunable over L-band)	Synchronization	10 MHz reference
Output Power	0 dBm Max (higher power optional)	Control	GUI
J/S and S/N Settings	Configurable (<i>not included in prototype</i>)	Other	Jammer Event Scripting Tool (JEST)

For further information on our products, email request to info@welkinsciences.com.



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