SPIRENT GSS7765

INTERFERENCE SIMULATION SYSTEM

The GSS7765 Interference Simulation System, when combined with one of Spirent's GNSS satellite constellation simulators, offers a comprehensive solution for testing satellite navigation equipment in the presence of intentional or unintentional RF interference.

Key Features

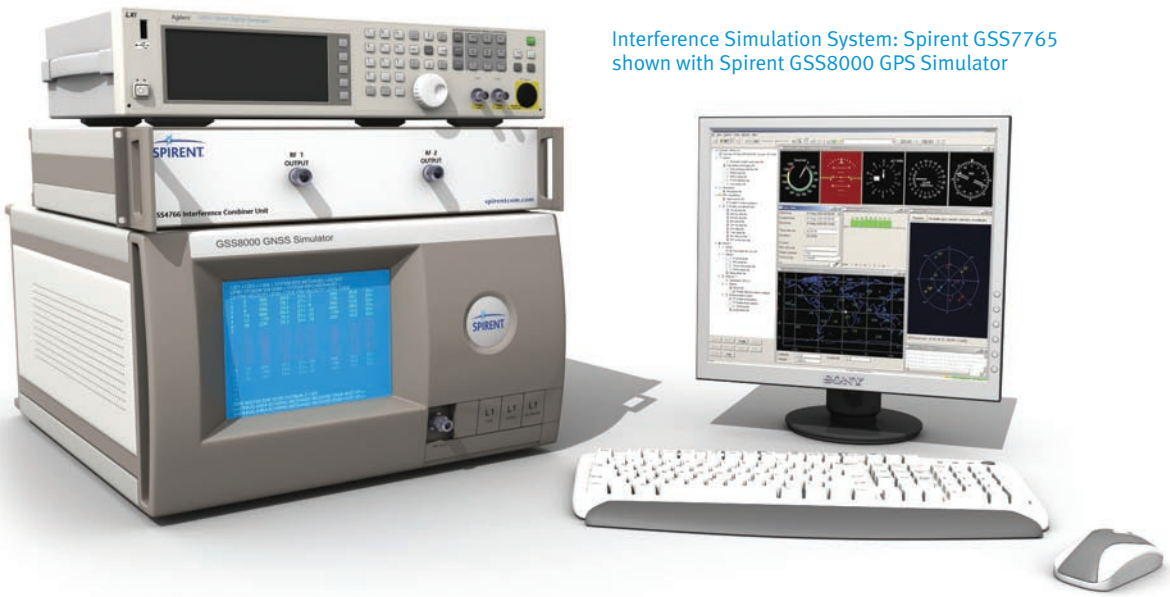
- Fully supported in SimGEN™ scenarios
- Full control over interference signal content and dynamics
- Wide range of interference types
- Large power and frequency range
- Modelled and static operating modes
- Interactive mode enables power and modulation to be controlled in real-time
- Multiple configurations
- Compatible with embedded jamming (where available on the underlying system)
- Up to 4 fully independent interference sources supported

The GSS7765 package comprises one or more high quality commercial signal generators plus an Interference Combination Unit (ICU). The package is supported by Spirent's SimGEN™ software suite.

The GSS7765 offers a very broad range of interfering signal options, which may be used to represent a varied array of threat sources. Interference signals available include Continuous Wave (CW), AM, FM, some of which may be pulsed. The generator also supports noise generation with variable bandwidth.

The GSS7765 can be configured to support up to 4 fully independent interference sources by the addition of extra generators to the single-source base configuration.

The SimGEN™ software supports three operating modes. Fixed mode allows a scripted series of events to be defined, while Modelled mode allows the user to position interference sources in the scenario and model the level effects as the simulated vehicle moves within the specified environment. Interactive mode enables the interference source power level and modulation characteristics to be controlled in real-time.



Interference Simulation System: Spirent GSS7765 shown with Spirent GSS8000 GPS Simulator

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INTERFERENCE SIMULATION SYSTEM

SPECIFICATION

Output Frequency

- All signal types — 500MHz to 2GHz
- Resolution — 0.01Hz
- Stability — ‹± 1ppm per year
  ‹± 1ppm typical over 0 to 55°C

May also be frequency locked to an external standard of 1,2 or 10MHz

Signal Quality

- Harmonics — ‹-30 dBc
- Non-harmonics — ‹-48 dBc
- Sub-harmonics — ‹-76 dBc

Signal Level at Generator Output

- Noise — -169 to –23dBW
- Other signals — -166 to –20dBW
- Resolution — 0.02 dB

Interference/Signal Ratios (via ICU)

Relative to GPS L1P signal at –163dBW

- Noise — -16 to +130 dB
- Other signals — -13 to +133 dB
- Modulation types

CW	
Stepped-CW	2 to 65535 steps, 0.1ms to 100s dwell time
AM	0 to 90% in 0.1% steps, sine, square, ramp, triangle rate 0.1Hz to 10kHz (sine 50kHz), 0.1Hz steps
FM	20MHz max, 0.1% steps, sine, square, ramp, triangle rate 0.1Hz to 10kHz (sine 50kHz), 0.1Hz steps
NOISE	1Hz to 48MHz bandwidth, 0.1Hz steps
PULSE	On/Off ratio ›80dB Rise/Fall ‹50ns (typ) Period 2µs to 42s

Connections

- RF Output (ICU and generators) Type N female co-axial

Size (HxWxD approx)

- Generators — 133 x 426 x 432mm (5.25 x 16.8 x 17inch)
- ICU — 133 x 426 x 200mm (5.25 x 16.8 x 7.9inch)

Weight

- Generators ‹13.5kg (28lb)

Configurations

- 1 to 4 generators, plus ICU

Product Specifications (MS3055/MS3008) are available on request
Performance figures and data in this document are typical and must be specifically confirmed in writing by Spirent Communications plc. before they become applicable to any particular order or contract.

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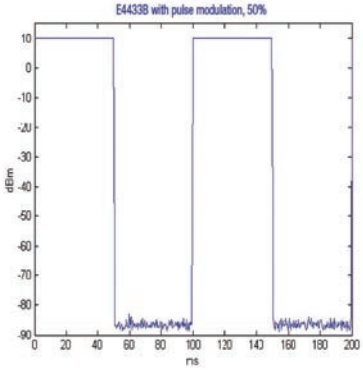
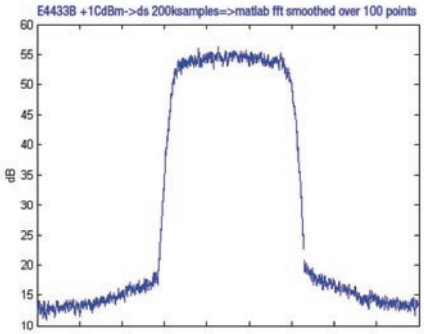
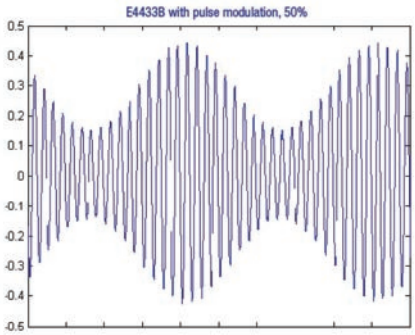
For current product data, visit the Spirent websites at www.spirent.com/positioning or www.spirentfederal.com







SALES AND INFORMATION
Spirent Communications plc, Aspen Way, Paignton, Devon TQ4 7QR, UK
T: +44 1803 546325 globalsales@spirent.com www.spirent.com/positioning

US Government & Defense: Spirent Federal Systems Inc. 22345 La Palma Avenue, Suite 105, Yorba Linda, CA 92887
T: +1 714 692 6565 info@spirentfederal.com www.spirentfederal.com

ISO 9001:2008 — UKAS QUALITY MANAGEMENT Reg. No. 059 — 9001:2008 - AJA99/1371

ISO 14001:2004 — UKAS ENVIRONMENTAL MANAGEMENT Reg. No. 059 — 14001:2004 - AJA04/7994

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INVESTORS IN PEOPLE

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