Noisecom

Data Sheet

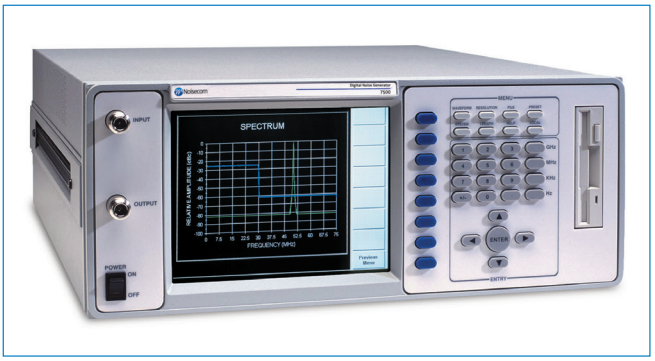
DNG7500
Digital Noise Generator

Count on the noise leader

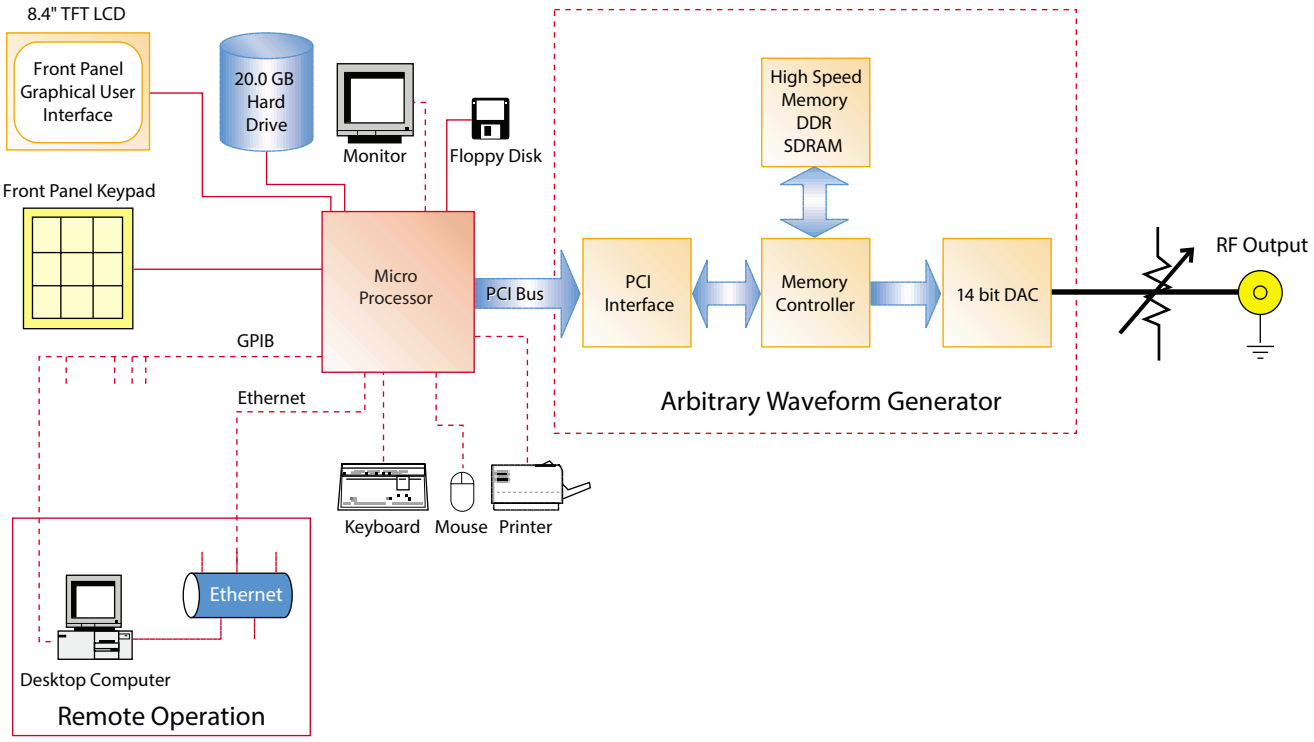
DNG 7500 Digital Noise Generator

The Noisecom DNG7500, generates programmable, user specified, pseudo-noise and CW signal spectrums for RF, Microwave, and Fiber Optic equipment testing. It can provide a 70 MHz RF spectrum output including noise and CW waveforms to precisely emulate real-world noise and interference conditions. Noise and Signal parameters can be entered via keypad and a 8.4 inch color Graphical User Interface (GUI). It can also generate signals from data files supplied by the user and downloaded via an Ethernet remote interface. The DNG7500 can provide digitally simulated Additive White Gaussian Noise (AWGN) with the following user settable parameters: precise start and stop frequencies with brick wall filters; tilt; notch (stop-band) filters with programmable frequency, bandwidth, and depth.

The DNG7500 can generate any combination of noise and signals adjacent or occupying overlapping frequency positions with precise relative amplitudes.

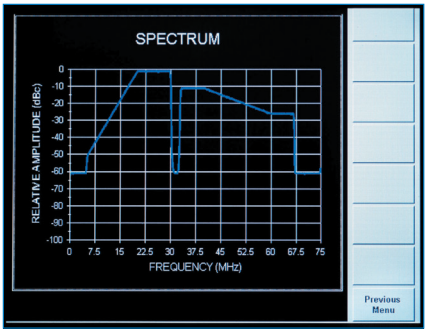


CW signals are generated with user programmable amplitude and frequency. Optionally, other types of signals can be included or loaded by the user via Ethernet. At the heart of the DNG7500 is a state-of-the-art 14-bit, 150 M-Sample/s Arbitrary Waveform Generator (AWG) with 64 M-Bytes of memory. This allows the most accurate signal and noise simulation to date.

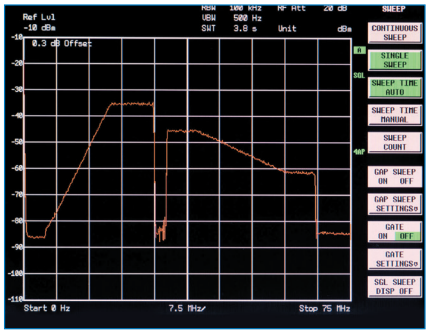


DNG7500 Functional Block Diagram

Waveform edit screen



Predicted Spectral Plot

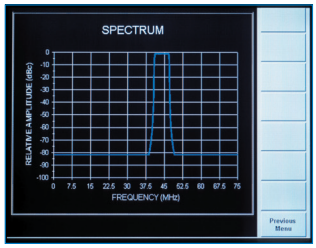


Actual waveform displayed on spectrum analyzer

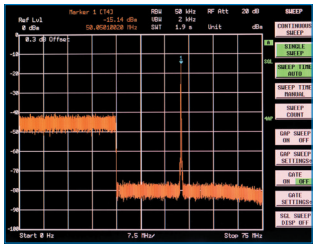
General Specifications

- 70 MHz RF output bandwidth generates noise and interfering signals for all types of communications applications
- Graphical User Interface which can plot predicted spectrum
- 8.4" Color VGA Display
- Keypad-Full Local Control
- Waveform building from front panel
- Keyboard interface
- Rugged N-type Connectors
- 64 M-Byte memory
- Generate and save waveforms with Programmable CW and Noise Parameters in Windows XP.
- View noise and CW spectrum plot on display.
- Variable output attenuator
- Rack mountable chassis
- The DNG includes interfaces for video display, keyboard, and mouse.
- Remote operation and data access is available through optional integral GPIB and Ethernet ports.
- Output signals are available at a type N connector with maximum VSWR of 1.50:1.

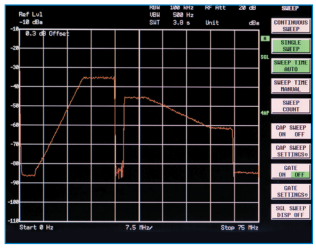
Applications



Custom pseudo noise generation with precise bandwidth.

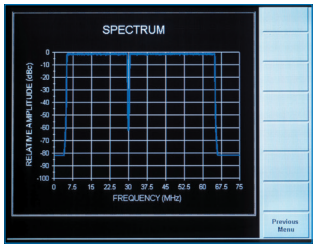


Satellite Communications
Noise and interference



CATV

- Test this equipment against every possible noise & interference
- Upstream Interference. Cable Modem Termination (CMTS) System, Noise and interference testing
- Return Path monitoring systems testing - Creates interfering spectrums including shaped noise, ingress, signals & bursts
- Loading signals for Optical Transmit Lasers
- A/D Converter Characterization



Noise Power Ratio Testing
Programmable noise bandwidth, notch bandwidth & frequency. Custom frequency conversion & automated NPR measurement systems available.

Specifications

RF Output

Frequency Range	500 kHz to 70 MHz
Frequency Resolution	
Noise	1 Hz
CW	1 KHz
Output Bandwidth	70 MHz
Output Power	0 dBm
Output Attenuator	63.9 dB in 0.1 dB steps
Impedance	50 Ohms
VSWR	1.5:1
Output Connector	Type N
Harmonically Related Spurs	-60 dBc typical
Non-harmonic Spurs	-60 dBc typical <50MHz
	-55 dBc typical <60MHz
	-50 dBc typical >60MHz

Generator AWG

Memory	32 MB standard
	optionally up to 64 MB
DAC Resolution	14 bits
DAC Output Rate	150 MSPS

General

Controller/Processor	Pentium Class 500 MHz
Memory	256 MB
Hard Drive	20.5 GB
Display	8.4" TFT-LCD 640x480 resolution
Operating System	Windows XP
Interfaces	Ethernet 10/100baseT, Video,
	Keyboard, mouse, GPIB
Remote	Ethernet or GPIB (optional)

Options

- Dopt02 — Custom Frequency Converters.
- Dopt03 — Rack Mount Kit.
- DoptBNG — Burst Noise Function.
- Dopt016 — GPIB.
- Dopt017 — Removable Hard Drive plus one additional HD with system STRONGLY SUGGESTED FOR SECURE ENVIRONMENTS.

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