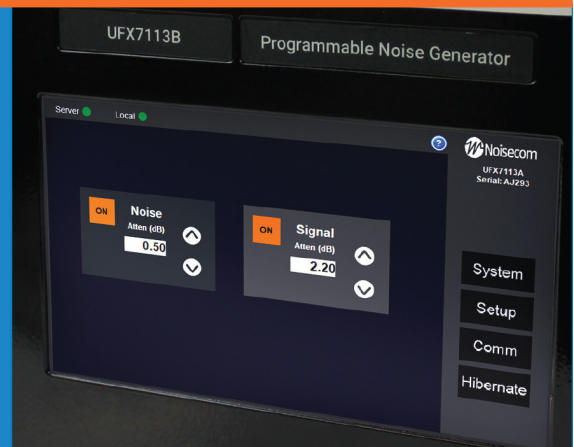# Noisecom

UFX7000B
Programmable Noise Generator

The Noisecom UFX7000B broadband AWGN noise generator has a powerful single board computer with flexible architecture used to create complex custom noise signals for advanced test systems. This versatile platform allows the user to meet their most challenging design requirements. Precision components provide high output power with superior flatness, and the flexible computer architecture allows control of multiple attenuators, switches, and filter banks.

The standard RF configuration includes a broadband noise source and noise path attenuator with a maximum attenuation range of 127 dB in 0.1 dB steps. Additional attenuation ranges, and step sizes are available. Optional filters can be specified in any combination of low pass, high pass, band pass, or band reject. Combined with advanced switching circuitry, the designer can create many different path combinations. The signal output connectors can be located on the front, or rear panel to provide convenient customer access on the bench, or in a rack system. An optional signal combiner, and signal attenuator allow independent control of the noise & signal paths to vary SNR while BER testing.

The unit has a 7-inch touch-screen display, mouse, and keyboard for manual control, or standard Ethernet for ATE remote control. Optional IEEE 488.2 GPIB and RS232 remote interfaces are also available. If there are additional requirements for your noise application, please contact the factory for more information about custom designs.

Applications

- Eb/No, C/N, SNR
- BER Testing
- Military Jamming
- GPS Receiver Testing
- Spectrum Analyzer Calibration
- Filter Testing
- EMI Testing

UFX 7000B Programmable Noise Generator

General Specifications

- Output White Gaussian noise

- Output power up to +30 dBm

- 127 dB of attenuation; 0.1 dB step size

- Units > 2 GHz have total attenuation of 79.9 dB

- Low distortion signal path

- Power 115 VAC, 60 Hz

- Noise attenuator accuracy:
  ±0.2 dB or 0.5% at 1 – 500 MHz
  ±0.2 dB or 1% at 0.5 – 1.0 GHz
  ±0.3 dB or 2% at 1 – 2 GHz

- Standard connectors SMA female

- Ethernet connection standard, GPIB and RS-232 optional

- 7'' touch screen display

- Dimensions: 17.25 in. wide x 6.50 in. including feet, high x 19.50 in. deep

- Removable hard drive for added security

- Operating Temperature: -10° to +65°C

Custom filter control menu

Intuitive standard control menu

Specifications

Model	Frequency Range	Output Power	dBm / Hz	Flatness	µV / root Hz	Noise Attenuation
UFX7105B	10 Hz - 10 MHz	+13 dBm	-57 dBm	±0.5 dBm	316	0 - 127.9 dB, 0.1 dB steps
UFX7108B	100 Hz - 500 MHz	+10 dBm	-77 dBm	±1.0 dBm	31.6	0 - 127.9 dB, 0.1 dB steps
UFX7110B	100 Hz - 1.5 GHz	+10 dBm	-82 dBm	±1.5 dBm	18.2	0 - 127.9 dB, 0.1 dB steps
UFX7111B	1 GHz - 2 GHz	+10 dBm	-80 dBm	±1.5 dBm	22.4	0 - 127.9 dB, 0.1 dB steps
UFX7112B	1 MHz - 2 GHz	0 dBm	-93 dBm	±2.0 dBm	5.01	0 - 127.9 dB, 0.1 dB steps
UFX7113B	10 MHz - 3 GHz	0 dBm	-95 dBm	±2.5 dBm	5.01	0 - 127.9 dB, 0.1 dB steps
UFX7116B	10 MHz - 6 GHz	-12 dBm	-110 dBm	±3.0 dBm	0.071	0 - 127.9 dB, 0.1 dB steps
UFX7128B	10 MHz - 10 GHz	-17 dBm	-117 dBm	±3.5 dBm	0.3251	0 - 79.9 dB, 0.1 dB steps
UFX7218B	2 GHz - 18 GHz	-20 dBm	-122 dBm	±2.0 dBm	0.18	0 - 79.9 dB, 0.1 dB steps
UFX7226B	2 GHz - 26.5 GHz	-18 dBm	-122 dBm	±3.0 dBm	0.18	0 - 79.9 dB, 0.1 dB steps
UFX7240B	2 GHz - 40 GHz	-20 dBm	-126 dBm	±4.0 dBm	0.11	0 - 79.9 dB, 0.1 dB steps
UFX7911B	5 MHz - 1 GHz	+30 dBm	-60 dBm	±3.0 dBm	—	0 - 127.9 dB, 0.1 dB steps

Rear panel removable drive and
input/output connectivity

Options

		UFX7105B	UFX7108B	UFX7110B	UFX7111B	UFX7112B	UFX7113B	UFX7116B	UFX7128B	UFX7218B	UFX7226B	UFX7240B	UFX7911B
Connector Options													
U7opt01	N Female Output Connector	X	X	X	X	X	X	X	X	X			X
U7opt02	BNC Female Output Connector	X	X	X	X	X							X
U7opt9B	Rear Panel Connectors	X	X	X	X	X	X	X	X	X	X	X	X
U7opt08	Switched dual noise outputs	X	X	X	X	X	X	X	X	X	X	X	X
Signal and Noise Combining Options													
U7opt07	Signal & Noise Combiner (6 dB loss in Noise & Signal Paths)	X	X	X	X	X	X	X	X	X	X		X
U7opt07UH	Signal & Noise Combiner (6 dB loss in Noise & Signal Paths)											X	
Signal Attenuation Options (Requires U7opt or U7opt07UH)													
U7opt13	0 to 127.9 dB signal attenuation in 0.1 dB steps	X	X	X	X	X							X
U7opt13X	0 to 127.9 dB signal attenuation in 0.1dB steps						X						
U7opt13EX	0 to 79.9 dB signal attenuation in 0.1 dB steps							X	X	X	X		
U7opt13U	0 dB to 79.0 dB signal attenuation in 1 dB steps											X	
Switching and Filtering Options													
U7opt04	Switch elements, 2x SP6T for 4 filter paths	X	X	X	X	X	X	X	X	X			X
U7opt4UH	Switch elements, 2x SP6T for 4 filter paths, 1 thru-path, 1 termination										X	X	
U7opt9A	Typical Cost Per Filter	X	X	X	X	X	X	X	X	X	X	X	X
Pulsed Noise Options													
U7opt19	Pulsed Noise Generation	X	X	X	X	X	X	X	X	X			X
Remote Control Options													
U7opt11	RS-232C, RS-422, RS-423 in Addition to Standard TCP/IP Interface	X	X	X	X	X	X	X	X	X	X	X	X
U7opt16	GPIB/IEEE-488 Remote Control	X	X	X	X	X	X	X	X	X	X	X	X
Rackmount Options													
U7opt15	19'' Rack Mount Brackets ''A'' case	X	X	X	X	X	X	X	X	X	X	X	X
U7opt18	3U High Enclosure (Must be included at time of original order, no retrofit available)	X	X	X	X	X	X	X	X	X	X	X	X
Miscellaneous Options													
U7opt06	75 Ohms Output Impedance (6 dB loss in the noise path & 12 dB loss in the signal path)	X	X	X	X	X							
U7opt10	230 VAC, 50 Hz	X	X	X	X	X	X	X	X	X	X	X	X
U7opt17-SRHD	Spare removeable hard drive	X	X	X	X	X	X	X	X	X	X	X	X
Customization Options													
U7opt09	Custom frequency, power, flatness	X	X	X	X	X	X	X	X	X	X	X	X

Wireless Telecom Group