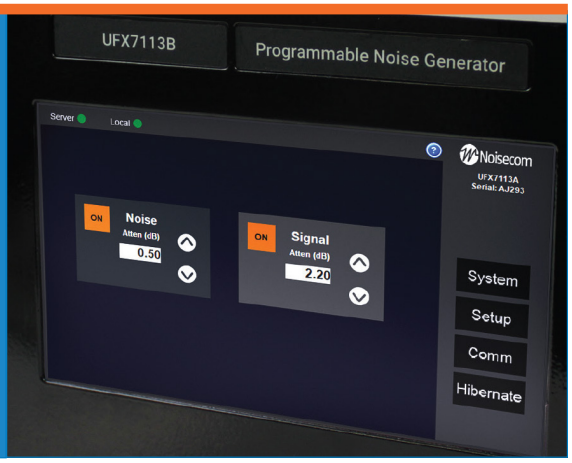
Noisecom

Data Sheet

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 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.

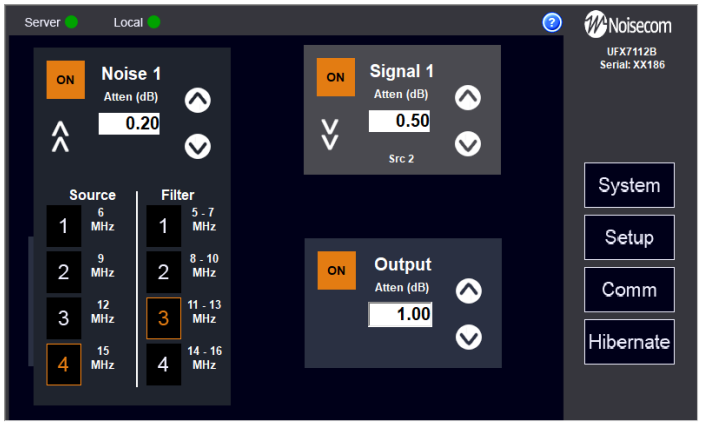
Applications

- 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; 1 dB step size
- Optional 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
- 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

UFX7000B Series — Output Characteristics

Model	Frequency Band	Power	dBm / Hz (dBm)	Flatness (dB)	uV / root (Hz)
UFX7101B	10 Hz - 20 kHz	+13	-30	±0.5	7071
UFX7103B	10 Hz - 500 kHz	+13	-44	±0.5	1414
UFX7105B	10 Hz - 10 MHz	+13	-57	±0.5	316
UFX7107B	100 Hz - 100 MHz	+13	-67	±0.75	100
UFX7108B	100 Hz - 500 MHz	+10	-77	±1.0	31.6
UFX7109B	100 Hz - 1 GHz	+10	-80	±1.5	22.4
UFX7110B	100 Hz - 1.5 GHz	+10	-82	±1.5	18.2
UFX7111B	1 GHz - 2GHz	+10	-80	±1.5	22.4
UFX7112B	1 MHz - 2 GHz	0	-93	±2.0	5.01
UFX7113B	10 MHz - 3 GHz	0	-95	±2.5	5.01
UFX7114B	10MHz to 4 GHz	-7	-103	±2.5	1.58
UFX7124B	2 GHz - 4 GHz	-10	-103	±2.0	1.58
UFX7116B	10 MHz - 6 GHz	-12	-110	±3.0	0.71
UFX7126B	2 GHz - 6 GHz	-14	-110	±2.5	0.71
UFX7128B	10 MHz - 10 GHz	-17	-117	±3.5	0.3251
UFX7218B	2 GHz - 18 GHz	-20	-122	±2.0	0.18
UFX7226B	2 GHz - 26.5 GHz	-18	-122	±3.0	0.18
UFX7240B	2 GHz - 40 GHz	-20	-126	±4.0	0.11

UFX7900A Series (1 Watt output) — Output Characteristics

Model	Frequency Band	Power	dBm/Hz	Flatness (dB)
UFX7903B	500 Hz - 500 kHz	+30	-27	±2
UFX7905B	500 Hz - 10 MHz	+30	-40	±2
UFX7907B	250 kHz - 100 MHz	+30	-50	±2
UFX7908B	1 MHz - 200 MHz	+30	-53	±2
UFX7909B	1 MHz - 300 MHz	+30	-55	±2
UFX7910B	2 MHz - 500 MHz	+30	-57	±2
UFX7911B	5 MHz - 1 GHz	+30	-60	±3

Options

Option number	Description
U7opt01	N female output connector
U7opt02	BNC female output connector
U7opt03	0 to 127.9 dB noise attenuator in 0.1 dB steps instead of 127 dB in 1 dB steps [1]
U7opt04	Switch elements, 2 X SP6T for 4 filter paths, 1 thru-path, 1 termination (filters optional)
U7opt06	75 Ohm output impedance (6 dB loss in the noise path and 12 dB loss in the signal path)
U7opt07	Combiner for input signal (6 dB loss in noise and signal paths)
U7opt08	Double output terminals (switched)
U7opt09	Custom frequency, power, or flatness requirement [3]
U7opt10	Line power 230 VAC, 50 Hz
U7opt11	RS-232 interface
U7opt12	0 to 127 dB signal attenuator in 1 dB steps [2]
U7opt12x	0 to 127 dB signal attenuator in 1 dB steps [4]
U7opt13	0 to 127.9 dB signal attenuator in 0.1 dB steps [2 6]
U7opt13x	0 to 127 dB signal attenuator in 0.1 dB steps [4]
U7opt15	Optional 19" rack mount brackets
U7opt16	GPIB IEEE-488
U7opt17-SRHD	Spare Removable Hard Drive
U7opt18	3U High Enclosure[5]
U7opt19	Pulsed Noise Generator

[1] 0 to 79.9 for UFX7124B, UFX7126B, UFX7128B & UFX7240B
NOTE: For UFX7240B, this option reduces output power by 2dB, flatness of ±6 dB, Power -136 dBm/Hz (-30 dBm)

[2] Requires opt7, signal combiner

[3] Consult factory for pricing and availability

[4] UFX7113B only

[5] Must be included at the time of original order

[6] 0 to 79.9 for UFX7124B, UFX7126B, UFX7128B
"N/A" for UFX7240B

Rear panel removable drive and input/output connectivity

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Note: Specifications, terms and conditions are subject to change without prior notice.