



Data Sheet

UFX7000A
Programmable
Noise Generator



Count on the noise leader

UFX 7000A Programmable Noise Generator Series

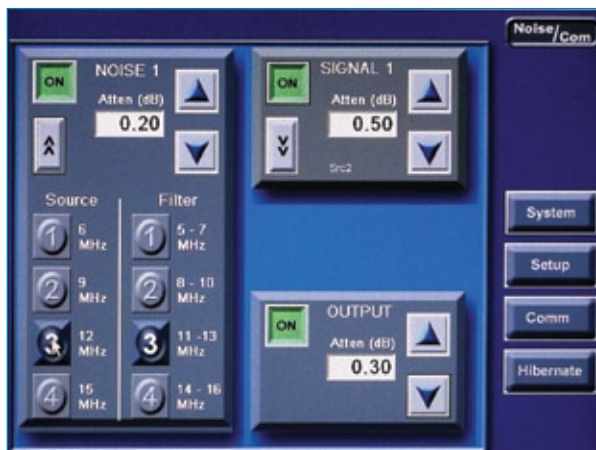
The UFX700A Series instruments contain an amplified noise source that is tuned to provide the best flatness and optimized to deliver an output with a Gaussian amplitude distribution. Noise output power level can be adjusted from 0 to 127 dB in 1 dB (optionally 0.1 dB) steps. The output signal is controlled by an RF type switch. In the standby state, the noise is terminated into an RF load, and in the "on" state it is directed to the output connector. The UFX700A Series flexible architecture allows many options to be specified. An internal combiner allows the user to inject an external signal via a front panel connector to add a controlled amount of noise. Noisecom will modify base units for specific customer needs. For pricing and availability, consult the factory.

Optional signal attenuation is available up to 127 dB, in 0.1 or 1 dB steps. A switching filter bank in the noise path allows up to four filters to be connected. The optional filters can be specified in any combination of band pass, low pass, high pass, or notch, with a thru line and 50 Ohm termination (RF load) included. Connectors on the back panel provide a pathway for the external filters to the internal combiner and the front panel instrument output.

The UFX7000A Series is microprocessor-controlled and provides information about operation of the instrument via a 6.25" color TFT display. Control of the noise level, noise on/off switching, signal on/off switching, and noise source selection can be controlled either manually by the touch screen, or remotely via IEEE-488 bus, Ethernet, or serial type RS232. The UFX7000A series instruments can be integrated into an ATE test station.

General Specifications

- Output White Gaussian noise
- Output power up to +30 dBm
- Minimum 18 dB Crest factor
- Output noise power -3 dBm (+/- 0.5 dBm)
- Noise attenuation 0 to 63 dB in 0.1 dB steps for > 2 GHz
- Attenuator Resolution 0.1 dB step size
- Noise attenuator ± 0.2 dB or 0.5%
- Signal path gain 0 ± 1 dB
- Ultra-low distortion signal path
- Standard connectors SMA female
- 6.25" color VGA, TFT touch screen
- Dimensions: 17.22 in. wide x 6.30 in. including feet, high x 19.5 in. deep
- Fold-down feet for bench top use
- Power 115 VAC, 60 Hz
- Operating Temperature: -10° to $+65^{\circ}\text{C}$



Custom filter control menu



Intuitive standard control menu



Specifications

UFX7000A Series

Model	Frequency Band	Power	Output Characteristics		
			dBm / Hz (dBm)	Flatness (dB)	uV / root (Hz)
UFX7101A	10 Hz - 20 kHz	+13	-30	±0.5	7071
UFX7103A	10 Hz - 500 kHz	+13	-44	±0.5	1414
UFX7105A	10 Hz - 10 MHz	+13	-57	±0.5	316
UFX7107A	100 Hz - 100 MHz	+13	-67	±0.75	100
UFX7108A	100 Hz - 500 MHz	+10	-77	±1.0	31.6
UFX7109A	100 Hz - 1 GHz	+10	-80	±1.5	22.4
UFX7110A	100 Hz - 1.5 GHz	+10	-82	±1.5	18.2
UFX7111A	1 GHz - 2GHz	+10	-80	±1.5	22.4
UFX7112A	1 MHz - 2 GHz	0	-93	±2.0	5.01
UFX7124A	2 GHz - 4 GHz	-10	-106	±2.0	1.58
UFX7218A	2 GHz - 18 GHz	-20	-122	±2.0	0.18
UFX7240A	2 GHz - 40 GHz	-20	-126	±4.0	0.11

UFX7900A Series (1 Watt output)

Model	Frequency Band	Power	Output Characteristics	
			dBm/Hz	Flatness (dB)
UFX7903A	500 Hz - 500 kHz	+30	-27	±2
UFX7905A	500 Hz - 10 MHz	+30	-40	±2
UFX7907A	250 kHz - 100 MHz	+30	-50	±2
UFX7908A	1 MHz - 200 MHz	+30	-53	±2
UFX7909A	1 MHz - 300 MHz	+30	-55	±2
UFX7910A	2 MHz - 500 MHz	+30	-57	±2
UFX7911A	5 MHz - 1 GHz	+30	-60	±3

* High power units have a reduced crest factor.

Applications

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

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 [†]
U7opt04	Switch elements, 2 X SP6T for 4 filter paths, 1 thru-path, 1 termination (filters are 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**
U7opt10	Line power 230 VAC, 50 Hz
U7opt11	RS-232 in addition to standard IEEE-488 interface
U7opt12	0 to 127 dB signal attenuator in 1 dB steps*
U7opt13	0 to 127.9 dB signal attenuator in 0.1 dB steps [†]
U7opt15	Optional 19" rack mount brackets
U7opt16	GPIB IEEE-488
U7opt17	Removable storage media security option

[†] N/A for UFX7218A and UFX7240A (0 to 79.9 for UFX7124A and UFX7126A)

* U7opt07 must also be included when ordering this option, 0 to 79 dB above 2 GHz

** Consult factory for pricing and availability

