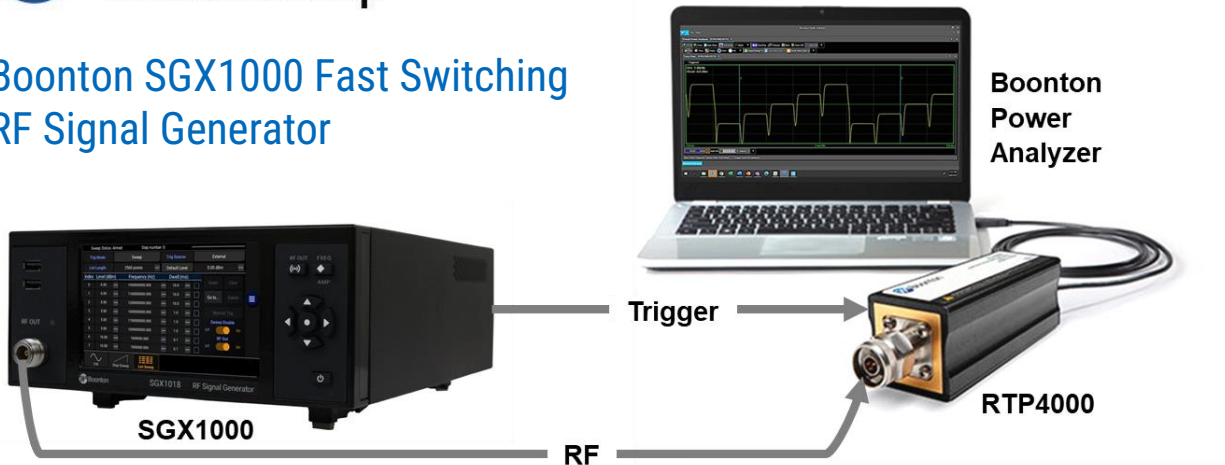


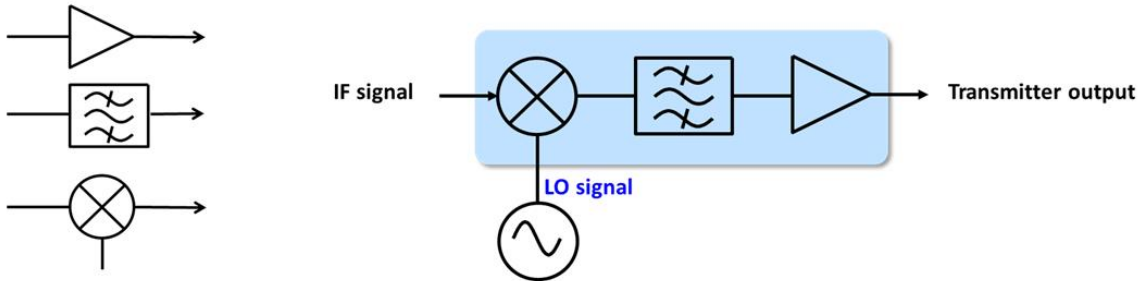
## Boonton SGX1000 Fast Switching RF Signal Generator



### Demonstration:

Typically, low phase noise and fast frequency switching speed are not available in low-cost RF & microwave signal generators. The **Boonton SGX1000** series utilizes a proprietary blend of direct digital and direct analog synthesis that enables ultra-low phase noise, such as -122 dBc/Hz at 3 GHz and 10 kHz offset, and a lightning-fast frequency switching speed of 350  $\mu$ s. With models offering up to 18 GHz upper-end frequency, the SGX1000 is a great solution for **component characterization, frequency-agile radar and communications systems, and high throughput manufacturing test applications**. All of this comes in a compact solution at a surprisingly low cost.

The demonstration on the booth here at IMS is showing the speed at which the SGX1000 can switch, in this case in amplitude using SGX1000's list sweep. The **Boonton RTP4018 Real-Time True Average Power Sensor** is used with the **Boonton Power Analyzer** software to measure, analyze, and display the resulting amplitude hopping signal.



Stimulus to characterize passive or active components

Frequency-agile local oscillator substitute for evaluation of up and down converter chains

### Target Users:

Target users include design engineers and technicians engaged in design, verification, and troubleshooting of RF and microwave components and sub-systems used in radar and communications applications.

**Product Overview:****SGX1000 RF Signal Generator**

The Boonton SGX1000 series of RF Signal Generators provides ultra-low phase noise and a lightning-fast frequency switching speed of 350  $\mu$ s. With models up to 18 GHz, it's a great solution for component characterization, frequency agile radar and communications systems, and high throughput manufacturing applications at a surprisingly low cost.

**Key Specifications and Features:**

- Frequency Ranges: 10 MHz to 3 or 6 GHz and 100 MHz to 18 GHz
- Ultra-Low Phase Noise: -122 dBc/Hz at 3 GHz, 10 kHz offset
- Lightning-Fast Switching Speed: 350  $\mu$ s
- Excellent Amplitude Accuracy:  $\pm$ 0.5 dB down to -40 dBm
- Premium Performance – Not Premium Price

**RTP5000 Real-Time Peak Power Sensors to 40 GHz**

The Boonton RTP5000 Real-Time Peak USB Power Sensors address challenges faced by engineers and technicians who design, verify, and maintain systems utilizing pulsed signals. The RTP5000 series incorporates real-time power processing™ and offers faster rise times, better time resolution, the fastest measurements, and a complementary simple, intuitive, and powerful graphical user interface.

**Key Specifications and Features:**

- Accurate Pulse Measurements
- Industry Widest Video Bandwidth of 195 MHz
- Fastest Rise Time of 3 ns and finest Resolution of 100 ps
- Crest Factor, CCDF, and Statistical Measurements
- Synchronized Multi-channel Measurements

**RTP4000 Real-time True Average Power Sensors To 18 GHz**

The Boonton RTP4000 true average power sensors provide 80 dB dynamic range and a frequency range down to 4 kHz. Delivering 100,000 measurements per second, virtually no gaps in acquisition, and zero measurement latency, they can capture and measure pulsed, CW, and modulated signals. RTP4000 power sensors are the ideal instrument for fast and accurate RF power measurements.

- Pulse, Average, CW, and Modulation Modes
- 100,000 Measurements per Second
- Synchronized Multi-Channel Measurements

**About Boonton Electronics:**

Boonton Electronics is a leader in high performance RF and microwave test equipment for radar, avionics, electronic warfare, satellite and wireless communications, and EMI/EMC applications. Used across the semiconductor, military, aerospace, medical, and communications industries, Boonton products enable a wide range of RF signal generation, power measurement, and signal analysis for RF product design, production, maintenance, and system integration. The Boonton product portfolio includes RF signal generators, peak and average RF and microwave power meters, real-time USB power sensors, LAN power sensors, RF voltmeters, modulation analyzers, and audio analyzers.

**More Resources:**

- SGX1000: <https://boonton.com/sgx1000>
- RTP5000: <https://boonton.com/products/rf-power-sensors/rtp5000-real-time-peak-power-sensors>
- RTP4000: <https://boonton.com/products/rf-power-sensors/rtp4000-real-time-true-average-power-sensors>