PRODUCT BROCHURE

N9310A RF Signal Generator

All the capability and reliability of a Keysight instrument you need – at a price you've always wanted.

Reliable Performance. Essential Test Capability

The Keysight Technologies, Inc. N9310A RF signal generator covers a frequency range from 9 kHz to 3 GHz. With its low price, reliable performance, and straightforward functionality, it's well-suited for start-up R&D, service maintenance, manufacturing, and education.

There are some applications where basic functionality of a signal generator is all you need—or want, such as the RX level test of a receiver, components characterization, and EMC test of an product. For those instances, the N9310A RF signal generator is ideal. You can count on the N9310A signal generator to provide the reliable performance you need that's just right for general purpose testing.

KEYSIGHT TECHNOLOGIES

Key specifications	N9310A RF signal generator
Frequency range	9 kHz to 3 GHz (RF); 20 Hz to 80 kHz (LF)
Switching speed	< 10 ms
Frequency reference	< ± 1 × 10^{-6}, < ± 1 × 10^{-7} with Option PFR installed
Output power	–127 to +13 dBm; (maximum +20 dBm settable)
Level uncertainty	< ± 1 dB
Reverse power protection	+36 dBm (RF power); 30 V (DC voltage)
Phase noise	< –95 dBc/Hz
Residual FM	< 20 Hz rms

You also count on the N9310A signal generator to provide the functionality you need that's just essential for general purpose testing.

- Step or point swept CW output (maximum 1,001 points)
- LF (low frequency) output
- Analog modulation output: AM, FM, FM, and pulse modulation
- Internal modulation source able to:
  - Provide 20 Hz to 80 kHz sine wave for N9310A
  - Output via the LF output port on the N9310A's front panel

Figure 1. N9310A front view (default configuration, without handle and bumper).

For those that are price sensitive, yet need a few additional functions, the N9310A offers:

- Optional OCXO frequency reference (Option N9310A-PFR) improves the frequency stability. Provides up to ± 1 × 10^{-7} annual aging rate and ± 5 × 10^{-8} temperature stability (5 to 50 °C)
- Additional analog IQ input capability (Option N9310A-001)
- Optional 30 dB power attenuator (Option N9310A-1PA)

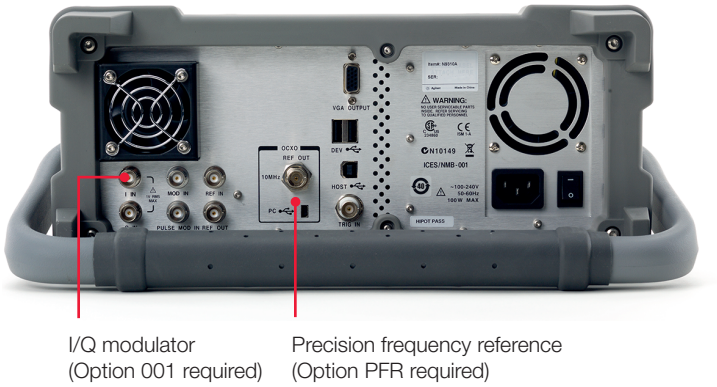


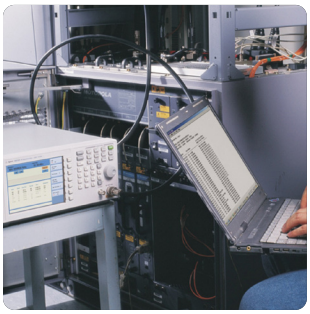
Figure 2. N9310A back view.

Easy to Learn. Easy to Operate.

Just one look at the N9310A and you'll see why this RF signal generator is so easy to learn and operate, allowing productivity to ramp up quickly.

- The large, high-resolution, full-color graphical user interface (GUI) makes it easy to check set up of output values and parameters
- Interface options in 11 languages adds to its user-friendliness
- Hard keys on the front panel and soft keys on the unit's screen, provide fast, direct access to frequently-used features

Solid Quality. Superior Reliability.



When you're conducting R&D, testing in manufacturing, performing installation or maintenance, or teaching in a lab, you need to know that you can rely on your equipment. Keysight has built its reputation on producing high-quality products that perform to their stated specifications. That means you can depend on the N9310A day in and day out. With optional calibration options, there's the added assurance of long-term accuracy.

With Keysight, quality and reliability go beyond the product — it extends to responsive customer support and service too. Buying test equipment from Keysight's basic RF series gives you access to top-line service and support when you need it.

Competitive Price Plus Value.

Budgets are a fact of life. That's why Keysight created the economically-priced N9310A — to give you an affordable solution and one that delivers value for your purchase.

- N9310A provides the capability you need to assure quality while minimizing the cost of test
- For applications like automated testing and RF teaching labs, the N9310A pricing means you can buy more units than alternative products and stay within your budget
- Feature-rich, the standard N9310A comes equipped with the functionality you need, including analog modulation—all for one affordable price

The Right Choice for Your Application

The N9310A is a general purpose RF signal generator, covering a frequency range from 9 kHz to 3 GHz. With a low price, just enough performance, and multiple built-in functions, it's well-suited for R&D, manufacturing, education and service maintenance.

Development

Even the simplest of today's electronic products with RF content demand adequate and proper design verification. While you may occasionally need a full-function and high-performance signal generator, most of the time you just need a simple continuous wave (CW) source. For this application, the Keysight N9310A RF signal generator is ideal.

Whether you're developing new products, creating product enhancements, or creating a redesign N9310A's small footprint saves room on space-limited R&D benches and other areas where standalone use is desirable.

Manufacturing

Trimming your manufacturing costs without compromising product quality is essential. While RF signal generators come with a variety of functions and price levels, you need the solution that provides just the functionality you need at the lowest cost possible. That's the N9310A RF signal generator.

Whether you're testing on a line, or using an automated test configuration with rack mounted equipment, the N9310A also has the flexibility need. For bench line testing, the bumper handle elevates the unit to comfortable viewing angle, or stack the N9310A with other test equipment on automated test lines. The compact N9310A needs just 3U and the optional rack mount kit makes it easy to incorporate into an EIA standard 19-inch (482.6 mm) rack or cabinet.

Service Maintenance

Service and maintenance isn't exempt from the pressure to reduce costs. The low-cost N9310A is packed with capabilities you need to perform general purpose installation and maintenance, or service and repair. The large screen makes it easy to view from a distance. User friendly GUI and hard and soft keys help users quickly set up signal output parameters in the field. Light weight and portable this signal generator has an optional bumper handle and hard transit case to add to its durability.

RF education

Every RF teaching lab needs RF signal generators. The N9310A provides the capabilities students need and is a reliable general-purpose local oscillator or signal source. As one of the lowest priced signal generators from Keysight Technologies, the N9310A makes it practical to purchase multiple units, allowing your students benefit from more hands-on RF circuit experiments and exercises. You'll also appreciate its straightforward operation, external modulation source, and the ability to inject external baseband signals to the N9310A. From the class room to performing basic research, the N9310A delivers.

Combine the N9310A RF signal generator, N9320B RF spectrum analyzer, and the RF training kit to establish your modern RF teaching lab. You can easily address the hands-on labs needs for your students, covering the classic transceiver characterization, and individual RF component tests, and even test automation practice.

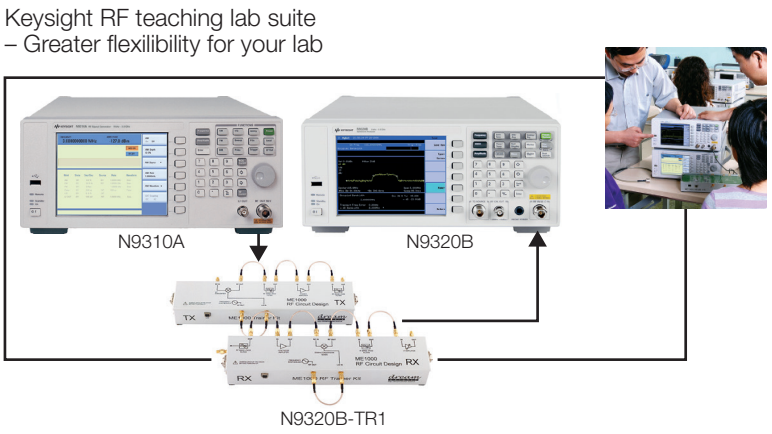


Figure 3. Keysight RF teaching lab solution.

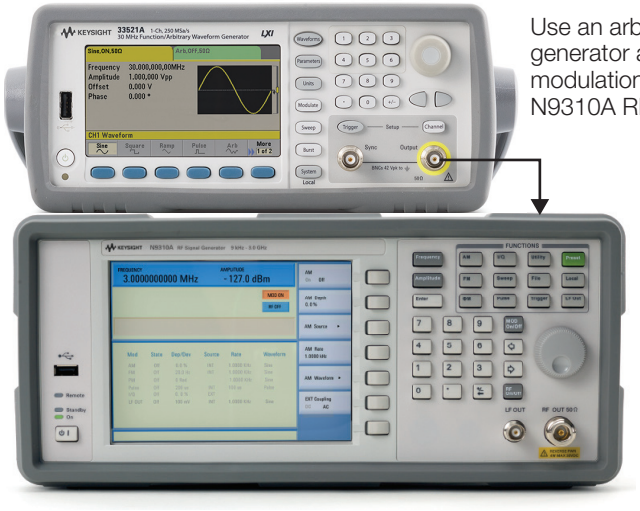


Figure 4. The combined use of Keysight 33500 series arbitrary waveform generator and N9310A RF signal generator.

The Choice You Want

Value, functionality, performance, and Keysight support. The N9310A RF signal generator has most of things you need and with Keysight, you can be confident that you are making the right choice for the right price. Contact your nearest Keysight partner (www.keysight.com/find/channelpartners) and order your Keysight solution today.

Additional Information

- *N9310A RF Signal Generator, Data Sheet,* literature number 5990-8116EN
- *N9310A RF Signal Generator, Configuration Guide*, literature number 5990-8117EN

Learn more at: www.keysight.com

For more information on Keysight Technologies' products, applications or services, please contact your local Keysight office. The complete list is available at: www.keysight.com/find/contactus

KEYSIGHT TECHNOLOGIES

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