

Keysight Technologies

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 a 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.

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	$< \pm 1 \times 10^{-6}$, $< \pm 1 \times 10^{-7}$ with Option PFR installed
Output power	-127 to +13 dBm; (maximum +20 dBm settable)
Level uncertainty	$< \pm 1$ 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

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 $\pm 1 \times 10^{-7}$ annual aging rate and $\pm 5 \times 10^{-8}$ temperature stability (5 to 50 °C)
- Additional analog IQ input capability (Option N9310A-001)
- Optional 30 dB power attenuator (Option N9310A-1PA)



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



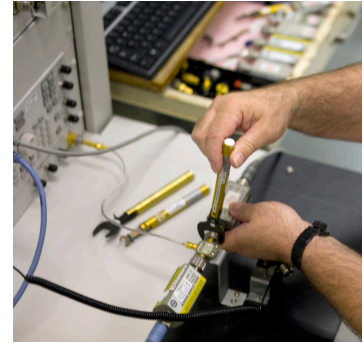
I/Q modulator (Option 001 required) Precision frequency reference (Option PFR required)

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.

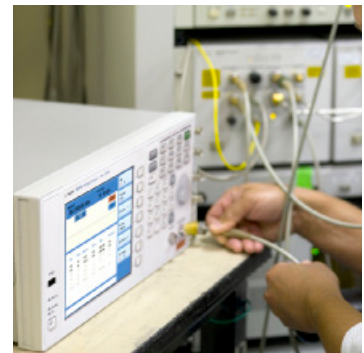
- The large, high-resolution, full-color graphical user interface (GUI) makes it easy to check set up of output values and parameters
- Interface options in 11 languages adds to its user-friendliness
- Hard keys on the front panel and soft keys on the unit's screen, provide fast, direct access to frequently-used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

Keysight RF teaching lab suite
 – Greater flexibility for your lab

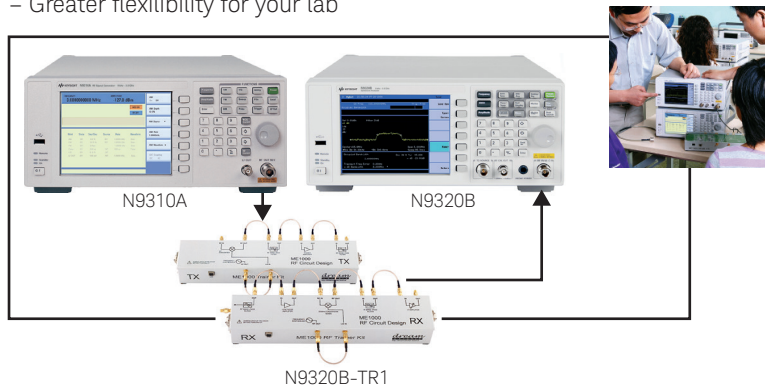


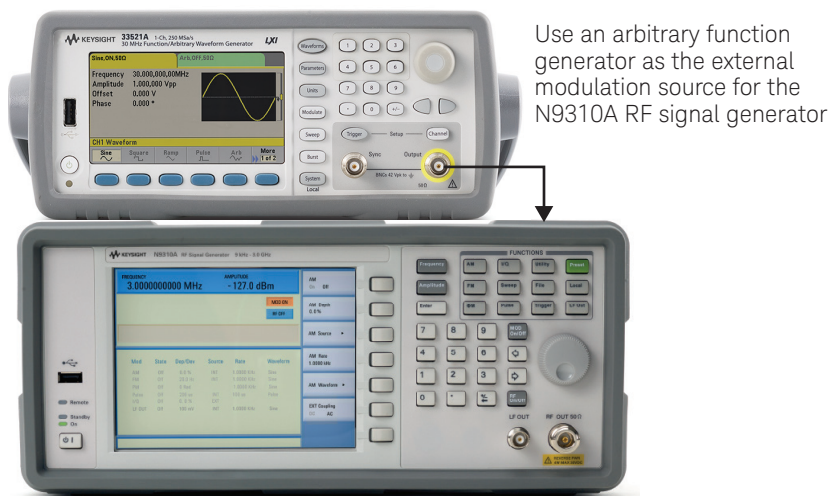
Figure 3. Keysight RF teaching lab solution

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



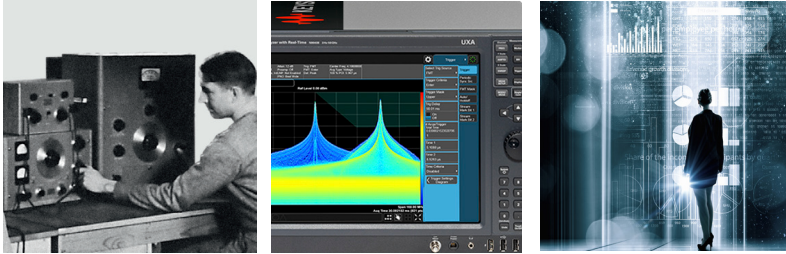
Use an arbitrary function generator as the external modulation source for the N9310A RF signal generator

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

Evolving Since 1939

Our unique combination of hardware, software, services, and people can help you reach your next breakthrough. We are unlocking the future of technology.

From Hewlett-Packard to Agilent to Keysight.



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

myKeysight

myKeysight

www.keysight.com/find/mykeysight

A personalized view into the information most relevant to you.

www.keysight.com/find/emt_product_registration

Register your products to get up-to-date product information and find warranty information.

KEYSIGHT SERVICES

Accelerate Technology Adoption.
Lower costs.

Keysight Services

www.keysight.com/find/service

Keysight Services can help from acquisition to renewal across your instrument's lifecycle. Our comprehensive service offerings—one-stop calibration, repair, asset management, technology refresh, consulting, training and more—helps you improve product quality and lower costs.



Keysight Assurance Plans

www.keysight.com/find/AssurancePlans

Up to ten years of protection and no budgetary surprises to ensure your instruments are operating to specification, so you can rely on accurate measurements.

Keysight Channel Partners

www.keysight.com/find/channelpartners

Get the best of both worlds: Keysight's measurement expertise and product breadth, combined with channel partner convenience.

www.keysight.com/find/n9310a

Americas

Canada	(877) 894 4414
Brazil	55 11 3351 7010
Mexico	001 800 254 2440
United States	(800) 829 4444

Asia Pacific

Australia	1 800 629 485
China	800 810 0189
Hong Kong	800 938 693
India	1 800 11 2626
Japan	0120 (421) 345
Korea	080 769 0800
Malaysia	1 800 888 848
Singapore	1 800 375 8100
Taiwan	0800 047 866
Other AP Countries	(65) 6375 8100

Europe & Middle East

Austria	0800 001122
Belgium	0800 58580
Finland	0800 523252
France	0805 980333
Germany	0800 6270999
Ireland	1800 832700
Israel	1 809 343051
Italy	800 599100
Luxembourg	+32 800 58580
Netherlands	0800 0233200
Russia	8800 5009286
Spain	800 000154
Sweden	0200 882255
Switzerland	0800 805353
	Opt. 1 (DE)
	Opt. 2 (FR)
	Opt. 3 (IT)
United Kingdom	0800 0260637

For other unlisted countries:

www.keysight.com/find/contactus
(BP-9-7-17)

DEKRA Certified
ISO 9001 Quality Management System

www.keysight.com/go/quality

Keysight Technologies, Inc.
DEKRA Certified ISO 9001:2015
Quality Management System

