

# Keysight Technologies N9320B RF Spectrum Analyzer

## Configuration Guide



## Configure Your Keysight N9320B RF Spectrum Analyzer

The Keysight Technologies, Inc. N9320B is a general purpose spectrum analyzer from 9 kHz to 3 GHz. Its standard features include:

- Frequency power measurements
- One-button power suite, auto tune, and frequency counter
- AM/FM tune and listen
- 12 markers, 4 traces, and 2 customer-definable limit lines
- U2000 Series USB power sensor support
- USB and LAN connectivity

This step-by-step process will help you to configure your N9320B RF spectrum analyzer by tailoring its options to meet your requirements.

For detailed specifications, refer to the N9320B spectrum analyzer data sheet (5990-8119EN). For a product overview, refer to the N9320B spectrum analyzer brochure (5990-8118EN).

### Ordering information

Description	Model number	Additional information
RF spectrum analyzer, 9 kHz to 3.0 GHz	N9320B	Accessories supplied as standard with each analyzer: Quick Start Guide, USB cable, N-BNC adapter, BNC cable, power cord, and documentation CD-ROM
Description	Option number	Additional information
<b>Step 1. Add a preamplifier</b>		
Preamplifier, 3.0 GHz	N9320B-PA3	Preamplifier improves the noise floor for low-level signal detection
<b>Step 2. Add modulation analysis capability</b>		
AM and FM demodulation metrics	N9320B-AMA	Provides modulation metrics of an AM or FM signal: Carrier power, modulation rate, AM depth, frequency deviation, SINAD <sup>1</sup> , and carrier frequency offset
ASK and FSK demodulation metrics	N9320B-DMA	Provides modulation metrics of an ASK or FSK signal: Carrier power, ASK error, depth, and index, FSK deviation, FSK error, magnitude error, and carrier frequency offset
<b>Step 3. Add scalar stimulus-response measurement capability</b>		
Tracking generator, 100 kHz to 3.0 GHz	N9320B-TG3	A cost-effective method to measure transmission characters of RF devices. An external bridge or a directional coupler needs to be added to implement reflection measurements
<b>Step 4. Add optional features</b>		
Resolution bandwidth (–6 dB): 200 Hz, 9 kHz, 120 kHz, and 1 MHz	N9320B-EMF	Provides optional CISPR16-1-1 EMI filters for preliminary EMI pre-compliance measurements
GPIB interface	N9320B-G01	IEEE-488 bus connector, used in test automation systems
Customized save-last utility	N9320B-C20	N9320B automatically saves its settings and status once any changes are made. After the power cycle, the N9320B recovers the prior setups before powering off
Instrument power-on utility at AC power cycle	N9320B-C30	N9320B powers on directly at AC power cycle without the user pushing the power-on button on the unit's front panel. A solution designed for test automation systems

1. Signal-to-noise and distortion ratio.



## Configure Your Keysight N9320B RF Spectrum Analyzer (Continued)

Description	Option number	Additional information
<b>Step 5. Add optional accessories</b>		
RF training kit	Y1800A	Consists of RF transceiver and a full set of pre-written lab sheets. Prepared for RF teaching labs or training agencies
Hard transit case (D x W x H)	N9320B-1TC	645 x 444 x 268 mm, 13 kg nominal 25.4 x 17.5 x 10.6 in, 29 lb nominal
Rack mount kit	N9320B-1CM	Includes a rackmount flange and front handle kit. Fits standard 19-inch rack and occupies three units of rack space

Need more RF and microwave accessories? Visit [www.keysight.com/find/accessories](http://www.keysight.com/find/accessories).

Description	Option number	Additional information
<b>Step 6. Choose localized User's Guide</b>		
English User's Guide	N9320B-ABA	
Simplified Chinese User's Guide	N9320B-AB2	
Japanese User's Guide	N9320B-ABJ	
<b>Step 7. Add calibration, technical training, support, and upgrade</b>		
Commercial calibration certificate with test data	N9320B-UK6	Calibration certificate only available at time of instrument purchase; only provides measurement results
Select Keysight Calibration Plan		
– 3-year calibration assurance plan (return to Keysight)	R-50C-011-3	Priority calibration service covering all calibration costs for 3 years; 15% cheaper than buying stand-alone calibrations
– 5-year calibration assurance plan (return to Keysight)	R-50C-011-5	Priority calibration service covering all calibration costs for 5 years; 20% cheaper than buying stand-alone calibrations

Other calibration options may available, for more information on calibration, go to: [www.keysight.com/find/calibration](http://www.keysight.com/find/calibration).

For more information on training and application support services, go to: [www.keysight.com/find/training](http://www.keysight.com/find/training).



## Instrument Upgrades

Most of the Keysight N9320B RF spectrum analyzer options are available for post-sales retrofit.

For license-key upgrades that do not require additional hardware:

1. Place an order for the upgrade with Keysight and request to receive the software entitlement certificate through email
2. Install the license key in the N9320B. Upgrade firmware to the latest revision if required
3. Restart the N9320B
4. Begin using the new capability

Description	Upgrade number	Additional information
Add preamplifier, 3.0 GHz	N9320BK-PA3	
Add AM/FM demodulation metrics	N9320BK-AMA	
Add ASK/FSK demodulation metrics	N9320BK-DMA	
Add tracking generator, 100 kHz to 3.0 GHz	N9320BK-TG3	The tracking generator is additional hardware that is installed inside the N9320B. Upgrade is performed at Keysight's local service center
Add GPIB interface	N9320BK-G01	Requires additional hardware be installed inside the N9320B
Add EMC filter (-6 dB down)	N9320BK-EMF	
Add hard transit case	N9320BK-1TC	
Add rack mount kit	N9320BK-1CM	
Add customized save-last utility	N9320BK-C20	
Add instrument power-on utility at AC power cycle	N9320BK-C30	Upgrade performed at Keysight's local service center
Revision to current	N9320BK-R2C	Enables the latest feature set for the instrument

A comprehensive summary about the N9320B upgrades is also available at: [www.keysight.com/find/n9320b\\_upgrade](http://www.keysight.com/find/n9320b_upgrade).

## Related Literature

Publication title	Publication number
<i>N9310A RF Signal Generator - Data Sheet</i>	5990-8116EN

## Other Information

### Keysight product registration

Register your instruments for service notifications, firmware update alerts, application notes and more. You have the Keysight edge. Register today and keep it sharp: [www.keysight.com/find/register](http://www.keysight.com/find/register).

### Keysight education corner

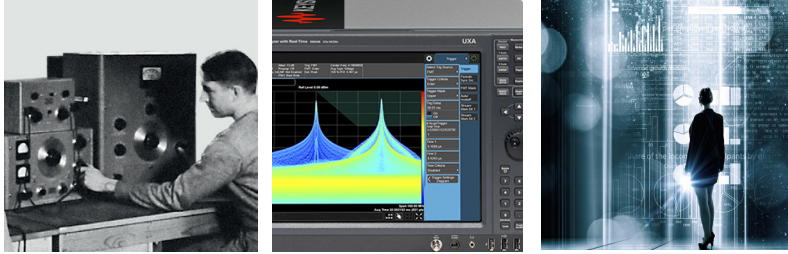
Your one-stop education resource for college and university engineering educators, researchers and students: [www.keysight.com/find/edu](http://www.keysight.com/find/edu).



## 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.



### myKeysight

#### myKeysight

[www.keysight.com/find/mykeysight](http://www.keysight.com/find/mykeysight)

A personalized view into the information most relevant to you.

[http://www.keysight.com/find/emt\\_product\\_registration](http://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](http://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](http://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](http://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/n9320b](http://www.keysight.com/find/n9320b)

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](http://www.keysight.com/find/contactus)

#### 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](http://www.keysight.com/find/contactus)  
(BP-9-7-17)

DEKRA Certified  
ISO9001 Quality Management System

[www.keysight.com/go/quality](http://www.keysight.com/go/quality)

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

This information is subject to change without notice.

© Keysight Technologies, 2013 - 2018

Published in USA, April 3, 2018

5990-8120EN

[www.keysight.com](http://www.keysight.com)

