Keysight Technologies
N9340B Handheld Spectrum Analyzer (HSA)

Configuration Guide

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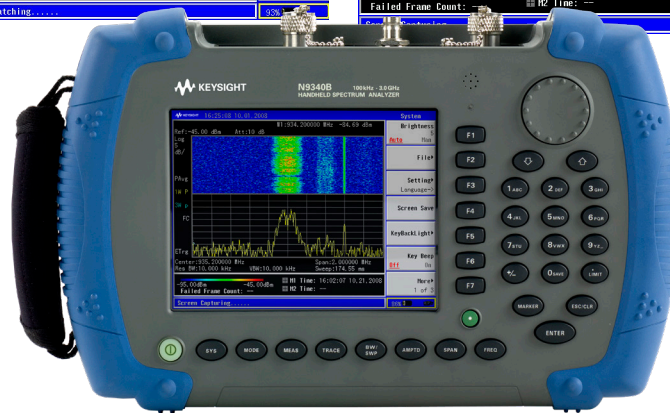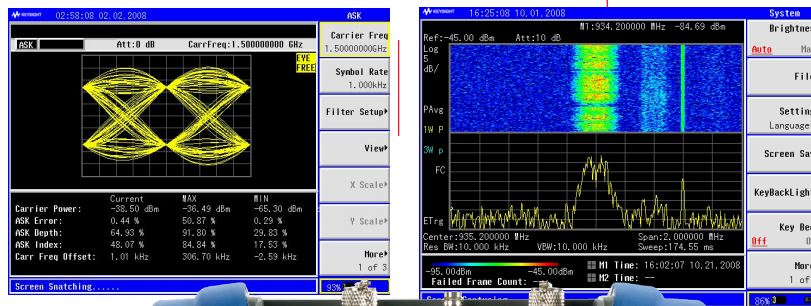
This configuration guide will help you determine which performance options, measurement application software, accessories, and services to include with the Keysight Technologies, Inc. N9340B HSA, or to add as upgrades to an existing N9340B HSA.

Configure your Keysight N9340B Handheld Spectrum Analyzer (HSA)

This step-by-step process will help you configure your N9340B HSA. Capabilities that are listed as standard come with the instrument at no additional charge. Tailor the performance, and service packages to meet your requirements. Ordering optional capabilities at the time of purchase provides the lowest overall cost.

For performance information, refer to the N9340B Handheld Spectrum Analyzer Data Sheet.

Description	Option number	Additional information
Step 1. Add a preamplifier		
Preamplifier, 1 MHz to 3 GHz	N9340B-PA3	
Step 2. Add a tracking generator		
Tracking generator, 5 MHz to 7 GHz	N9340B-TG3	Output level -25 dBm to 0 dBm, 1 dB step
Step 3. Add optional measurement features		
Low frequency performance enhancement and AM/FM In-Band On-Channel IBOC measurement	N9340B-IBC	Adds in-band on-channel (IBOC) measurement capability through a dedicated measurement application and selected hardware improvements
Spectrogram monitoring	N9340B-INM	Adds dual-display (spectrogram and trace), continuous spectrogram monitoring and unlimited data logging
AM/FM modulation analysis	N9340B-AMA	Provides modulation metrics, including carrier power, modulation rate, and AM depth/FM deviation.
ASK/FSK modulation analysis	N9340B-DMA	Provides modulation metrics, including carrier power, ASK depth/index, and FSK deviation.
Step 4. Add an accessory		
Spare battery	N9340B-BAT	Lithium ion, 10.8 V, 4.56 A-hr
Spare external battery charger	N9340B-BCG	
Spare AC/DC adapter	N9340B-ADP	1 output: 15 V, 5.33 A
Automotive 12 V DC adapter	N9340B-1DC	Provides DC power supply, no charging
Automotive 12 V DC adapter and charger	N9340B-1DN	Provides DC power supply and power charging
Hard transit case	N9340B-1TC	
Adaptor, 50 Ω to 75 Ω	N9340B-TAD	Type N(m) 50 Ω to type N(f) 75 Ω
Calibrator	N9311x-201	Precision mechanical calibrator, 3-in-1 OSL, DC to 7 GHz, N(m)
Antenna	N9311x-500	70 MHz to 1000 MHz, 65 g, 180 degree tilt angle adjustable, N(m) telescopic whip antenna
Antenna	N9311x-501	700 MHz to 2500 MHz, 70 g, 210 mm x 20 mm, omni-directional, N(m)
Antenna	N9311x-504	700 MHz to 4 GHz, 4 dBi gain, 270 g, 340 mm x 200 mm x 25 mm, logarithmic-periodic, N(m)
Antenna	N9311x-508	680 MHz to 8 GHz, 5 dBi gain, 250 g, 340 mm x 200 mm x 25 mm, logarithmic-periodic, N(m)
Antenna	N9311x-518	680 MHz to 18 GHz, 5 dBi gain, 250 g, 340 mm x 200 mm x 25 mm, logarithmic-periodic, N(m)
Bandpass filter	N9311x-550	– 3 dB passband 814 to 850 MHz – rejection ≥ 36 dBc at 740 MHz/≥ 36 dBc at 915 MHz – insertion loss ≤ 0.5 dB – VSWR ≤ 1.5

Configure your Keysight N9340B Handheld Spectrum Analyzer (HSA) *(continued)*

Description	Option number	Additional information
Step 4. Add an accessory (continued)		
Bandpass filter	N9311x-551	– 3 dB passband 880 to 915 MHz – rejection ≥ 35 dBc at 826 MHz/≥ 36 dBc at 932 MHz – insertion loss ≤ 1 dB – VSWR ≤ 1.5
Bandpass filter	N9311x-552	– 3 dB passband 1707.5 to 1787.5 MHz, – rejection ≥ 35 dBc at 1550 MHz/≥ 35 dBc at 1925 MHz – insertion loss ≤ 0.4 dB – VSWR ≤ 1.5
Bandpass filter	N9311x-553	– 3 dB passband 1845 to 1915 MHz – rejection ≥ 35 dBc at 1770 MHz/≥ 35 dBc at 1986 MHz – insertion loss ≤ 0.6 dB – VSWR ≤ 1.5
Bandpass filter	N9311x-554	– 3 dB passband 1910 to 1990 MHz, – rejection ≥ 35 dBc at 1825 MHz/≥ 35 dBc at 2070 MHz, – insertion loss ≤ 0.6 dB – VSWR ≤ 1.5
Adapter	N9311x-540	Type-N(m) to BNC(f), DC to 2 GHz
Adapter	N9311x-541	Type-N(m) to SMA(f), DC to 12.4 GHz
Adapter	N9311x-542	Type-N(f) to 7/16 DIN(f), DC to 7.5 GHz
Adapter	N9311x-543	Type-N(f) to BNC(m), DC to 4 GHz
Adapter	N9311x-544	Type-N(f) to 7/16 DIN(m), DC to 7.5 GHz
Adapter	N9311x-545	Type-N(f) to SMA(m), DC to 12.4 GHz
Adapter	N9311x-546	Type-N(f) to Type-N(f), DC to 18 GHz
Adapter	N9311x-547	Type-N(m) to DIN(f), DC to 7.5 GHz
Cable	N9311x-580	Phase stable, 1.5 m, N(m) to N(m)
Cable	N9311x-581	Phase stable, 3 m, N(m) to N(m)
Cable	N9311x-582	1.5 m, SMA(m) to SMA(m)
Cable	N9311x-583	1.5 m, BNC(m) to BNC(m)
Cable	N9311x-585	Phase stable, 1.5 m, N(m) to DIN(f)
Cable	N9311x-586	Phase stable, 1.5 m, N(m) to N(f)
Attenuator	N9311x-560	40 dB, N(m) to N(f), 10 watts average
Attenuator	N9311x-561	40 dB, N(m) to N(f), 50 watts average
Attenuator	N9311x-562	40 dB, N(m) to N(f), 100 watts average
Step 5. Add calibration service		
Select Keysight calibration plan		
Commercial calibration certificate with test data	N9340B-UK6	Keysight provides a commercial calibration certification; only available at time of purchase; provides measurement results
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

Instrument Upgrades

Upgrade your existing Keysight N9340B (HSA)

Keysight provides a fast upgrade process for performance options that do not require additional hardware.

1. Place an order for the upgrade with Keysight and ask to receive the option upgrade entitlement certificate through email.
2. Redeem the certificate through the Web by following the instructions on the certificate.
3. Install the license file and latest software on the N9340B.
4. Begin using the new capability.

Installation, calibration, and verification information is available at: **www.keysight.com/find/N9340B_upgrades**

Description	Option number	Additional information
Instrument upgrades		
Preamplifier, 1 MHz to 3 GHz	N9340BK-PA3	
Tracking generator, 5 MHz to 7 GHz	N9340BK-TG3	Output level -25 dBm to 0 dBm, 1 dB step
Spectrogram monitoring	N9340BK-INM	Adds dual-display (spectrogram and trace), continuous spectrogram monitoring and unlimited data logging
AM/FM modulation analysis	N9340BK-AMA	Provides modulation metrics, including carrier power, modulation rate, and AM depth/FM deviation
ASK/FSK modulation analysis	N9340BK-DMA	Provides modulation metrics, including carrier power, ASK depth/index, and FSK deviation

Hardware Upgrades

Add additional accessories to your existing Keysight N934xC (HSA)

Description	Option number	Additional information
Hardware upgrades		
Spare battery	N9910X-870	Lithium ion, 11.1 V, 4.6 A-hr
Spare external battery charger	N9340BK-BCG	
Spare AC/DC adapter	N9340BK-ADP	1 output: 15 V, 5.33 A
Automotive 12 V DC adapter	N9340BK-1DC	Provides DC power supply, no charging
Automotive 12 V DC adapter and charger	N9340BK-1DN	Provides DC power supply and power charging
Hard transit case	N9340BK-1TC	
Adaptor, 50 to 75 Ω	N9340BK-TAD	Type N(m) 50 Ω to type N(f) 75 Ω

Other Information

Description	
Connectivity (standard)	
1 USB 2.0 type A port, female	N9340B behaves like a host controller, USB 2.0 compatible port
1 USB 2.0 type-mini AB port, female	N9340B behaves like a host controller, USB 2.0 compatible port
10 Base-T LAN interface	
HSA PC software	An easy-to-use, PC-based remote control tool for your N9340B handheld spectrum analyzer (HSA)
Instrument weight and dimensions	
Dimensions (W x H x D)	318 mm x 207 mm x 69 mm (12.5 in x 8.15 in x 2.7 in)
Weight (with battery)	3.5 kg (7.7 lbs)
Hard transit case weight and dimensions	
Dimensions (W x H x D)	580 mm x 300 mm x 230 mm
Weight (empty)	10.5 kg (23.1 lbs)
Standard shipped items	
N9340B HSA	
RoHS addendum	
USB cable	
Battery Li-Ion	
Screwdriver	
Help kit CD	
Ear phone	
AC/DC power supply	
Quick start tutorial	
Soft carrying case	

Additional Resources

Related Keysight literature

Publication	
Publication number	**Publication title**
5989-7847EN	Keysight N9340B Handheld Spectrum Analyzer Technical Overview

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