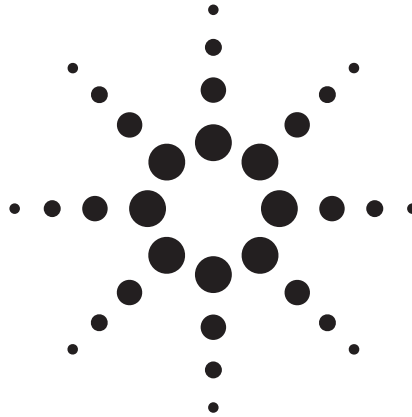


Agilent N8972A, N8973A, N8974A, N8975A NFA Series Noise Figure Analyzers

Configuration Guide



This configuration guide will assist with optimization of an NFA series noise figure analyzer for specific applications.

Models

- N8972A noise figure analyzer (10 MHz to 1.5 GHz)
- N8973A noise figure analyzer (10 MHz to 3.0 GHz)
- N8974A noise figure analyzer (10 MHz to 6.7 GHz)
- N8975A noise figure analyzer (10 MHz to 26.5 GHz)



NFA series noise figure analyzers

N8972A 10 MHz to 1.5 GHz NFA series noise figure analyzer

N8973A 10 MHz to 3.0 GHz NFA series noise figure analyzer

N8974A 10 MHz to 6.7 GHz NFA series noise figure analyzer

N8975A 10 MHz to 26.5 GHz NFA series noise figure analyzer

Standard NFA series noise figure analyzers include:

- A flexible and intuitive user interface
- Easy measurement setup
- Low instrument uncertainty
- Color graphical display of noise figure and gain versus frequency
- Enhanced PC and printer connectivity
- SNS series noise source compatible
- Ability to automatically upload ENR calibration data from SNS series noise sources
- Local oscillator control through second dedicated GPIB

Upgrading a model

All options other than those marked with *, can be ordered at any time for use with an instrument.

Frequency reference

N897XA-1D5 NFA series high stability frequency reference*

Calibration documentation

N897XA-A6J NFA series ANSI Z540 compliant calibration with test data*

Accessories

N897XA-1CP NFA series rack mount and handle kit

N897XA-UK9 NFA series front panel cover

N897XA-1FP NFA series calibration, performance verification and adjustment software

Documentation

A hard copy and CD version of the English language quick reference guide, user's guide, programmers reference, and calibration and performance verification manual are included with the NFA as standard. Selections can be made to change the localization of the manual set or to delete the hardcopy.

N897XA-AB0 NFA series manual set for Taiwan - Chinese localization

N897XA-AB1 NFA series manual set - Korean localization

N897XA-AB2 NFA series manual set - Chinese localization

N897XA-ABE NFA series manual set - Spanish localization

N897XA-ABF NFA series manual set - French localization

N897XA-ABZ NFA series manual set - Italian localization

N897XA-ABD NFA series manual set - German localization

N897XA-ABJ NFA series manual set - Japanese localization

N897XA-0B0 Delete hard copy manual set*

Note: The localization options will include a localized version of the quick reference guide and user guide, and an English language version of the programmers reference, and calibration and performance verification manual.

Additional documentation

N897XA-0B1 NFA series manual set (English version)

N897XA-0B2 NFA series user manual (English version)

N897XA-0BF NFA series programmer reference (English version)

Service options

Warranty

Standard warranty is 12 months.

R-51B Return to Agilent warranty and service plan*

Calibration¹

For 3 years, order 36 months of the appropriate calibration plan shown below.

R-50C-001 Standard calibration plan*

R-50C-002 Standard compliant calibration plan*

* Options marked with * may only be ordered at initial system purchase.

1. Options not available in all countries.

Noise sources

(required to make noise figure measurements)

The Agilent SNS Series of noise sources are recommended for use with the Agilent NFA. These noise sources work in conjunction with the NFA Series analyzers to simplify measurement set-up and improve accuracy.

Frequency range:

N4000A nominal ENR 6dB	10MHz to 18GHz
N4001A nominal ENR 15dB	10MHz to 18GHz
N4002A nominal ENR 15dB	10MHz to 26.5GHz

The new SNS Series of noise sources are designed specifically for use with the NFA Series of noise figure analyzers. The new noise sources cover the majority of applications with a range of frequencies, ENR and also coaxial connector types.

Unique calibration data is stored electronically inside the SNS and is automatically downloaded when connected to the Agilent noise figure analyzer. The SNS Series also has the capability to measure its own temperature so that compensation can be applied to its calibration. These features will lead to more reliable measurements.

Other compatible noise sources include the Agilent 346 (co-axial) series and the 347 (waveguide) series.

Compatible local oscillators

The NFA Series noise figure analyzers support the use of a local oscillator as part of your measurement setup, if you are making measurements on frequency translating devices or making measurements out of one standard frequency range of your noise figure analyzer. SCPI compatible signal generators are recommended, but users may also use their own custom command set.

Please note: Care must be taken when specifying a local oscillator, as factors such as phase noise, spectral purity and noise floor of the signal generator may affect noise figure measurements. Filtering may therefore be required on some models of signal generators to enable accurate noise figure measurements to be made.

Compatible printers

A supported printer is defined as one that is equipped with a parallel interface and accepts printer control language (PCL) level 3 or 5. Purchase an IEEE 1284 compliant printer cable to enable the printer to be used.

For further information

Agilent NFA Series – noise figure analyzer application and product information is listed below.

Key literature

Please visit the Agilent noise figure analysis web site for on-line access to literature or contact your local Agilent sales office or representative.

NFA Series - Noise Figure Analyzers, Brochure, literature number 5980-0166E

NFA Series - Noise Figure Analyzers, Technical Specifications, literature number 5980-0164E

NFA Series – Noise Figure Analyzer Programming Examples, literature number 5968-9498E

Fundamental of RF and Microwave Noise Figure Measurements, Application Note 57-1, literature number 5952-8255E

Noise Figure Measurement Accuracy Application Note 57-2, literature number 5968-4545E

10 Hints for Making Successful Noise Figure Measurements, Application Note 57-3, literature number 5980-0288E

SNS Series – Noise Sources, Product Overview, literature number 5988-0081EN

Key web resources

For the latest information on our noise figure solutions, visit our web page at:

www.agilent.com/find/nf

For the latest news on the component test industry, visit our web page at:

www.agilent.com/find/component_test

For on-line manuals, visit our web page at:

www.agilent.com/find/manuals

Fundamentals of Noise Figure Measurements Net Seminar (archived version)

www.netseminar.com



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Japan:

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(fax) (81) 426 56 7840

Korea:

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(fax) (080)769 0900

Latin America:

(tel) (305) 269 7500

Taiwan:

(tel) 0800 047 866
(fax) 0800 286 331

Other Asia Pacific

Countries:

(tel) (65) 6375 8100
(fax) (65) 6755 0042

Email: tm_ap@agilent.com

Contacts revised: 05/27/05

For more information on Agilent Technologies' products, applications or services, please contact your local Agilent office. The complete list is available at:

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