Agilent ENA Series Network Analyzers

Amplifier Measurement Wizard Operation Manual

Rev. 01.11

April 2010

Notices

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Sample Program

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Overview of the program

The ENA Amplifier Measurement Wizard VBA macro assists setting measurement conditions for amplifier tests..

Program Description

Program title	Amplifier Measurement Wizard
VBA File Name	EnaAmplifierWizard_0111.vba
Revision	Rev.01.11

Supported ENA models and firmware

Models	**Firmware**
E5070B/E5071B 2-port/3-port/4-port (Requires opt.x13 extended power range)	Rev.6.50 or later
E5071C 2-port/4-port	Rev.8.00 or later

Required external instruments

- Power meter and power sensor (for harmonics and gain compression measurement)

Measurements supported in the Wizard

- S-parameter measurements
- Harmonic measurements (ENA Opt 008 FOM is required)
- Gain compression measurements (CW / Swept)

Starting VBA Program

Step1. Copy VBA file to local drive of ENA.

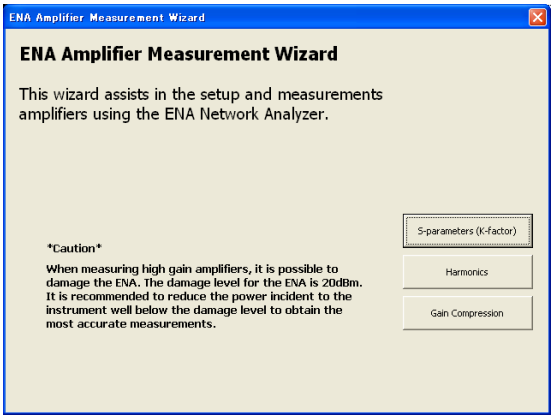
Step2. Press Macro Setup on the front panel.

Step3. Press **Load Project** and load VBA file.

Step4. Press Macro Run on the front panel.

VBA Procedure: Startup Dialogue

The VBA starts with following dialogue.

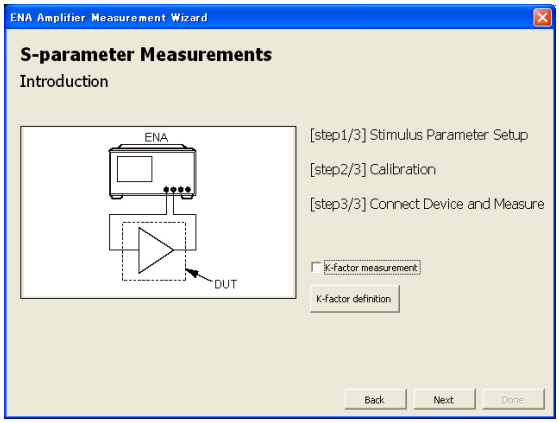


The measurement type can be selected with this dialog. The procedure of the wizard and measurement result for each measurement type is described below.

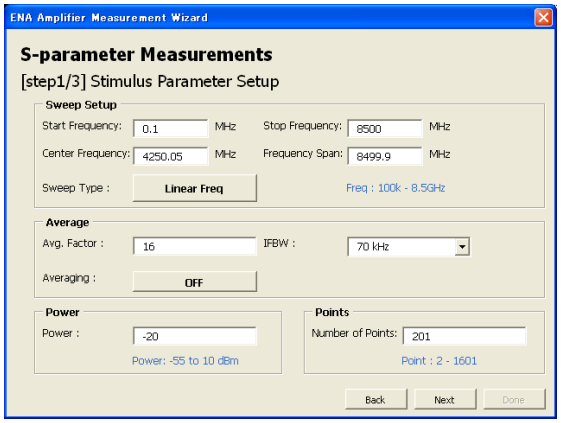
(Note: If the measurement wizard dialogue gets behind the ENA application during the operation, press [Focus] hard key on ENA.)

VBA Procedure: S-parameter Measurements

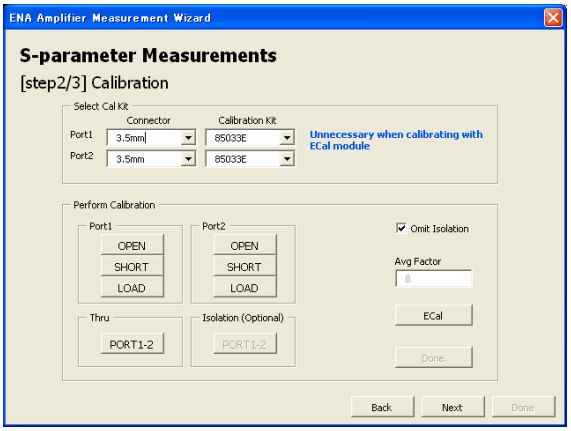
Introduction



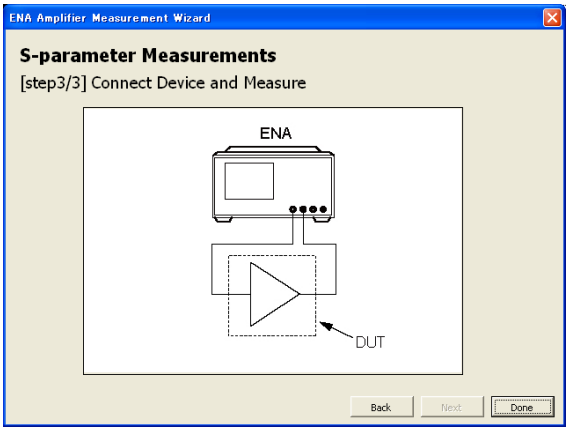
[step1/3] Stimulus Parameter Setup



[step2/3] Calibration



[step3/3] Connect Device and Measure

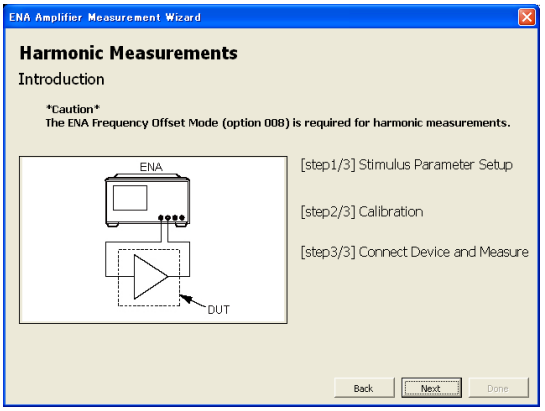


Measurement result (Without K-factor)

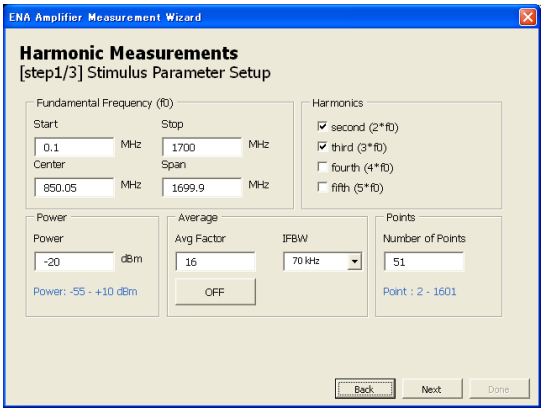
Measurement result (With K-factor)

VBA Procedure: Harmonics Measurements

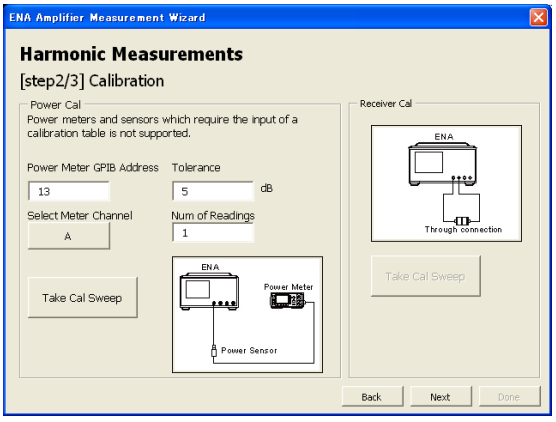
Introduction



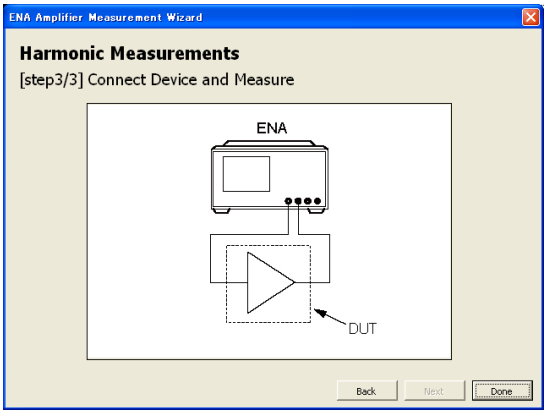
[step1/3] Stimulus Parameter Setup



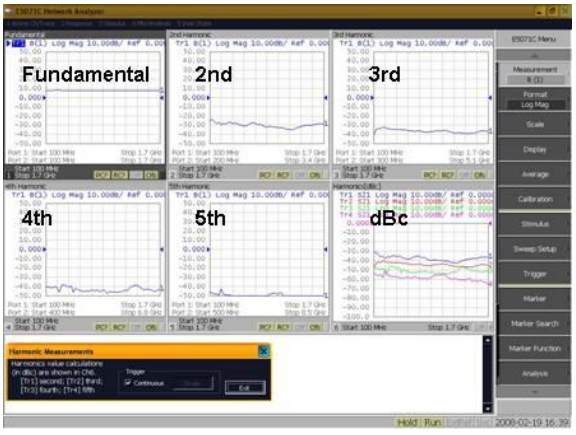
[step2/3] Calibration



[step3/3] Connect Device and Measure

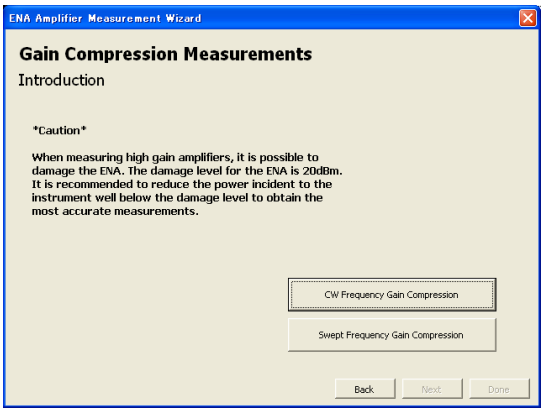


Measurement result

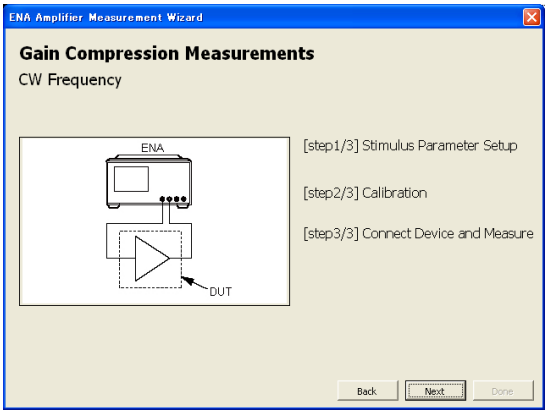


VBA Procedure: Compression Measurements (CW)

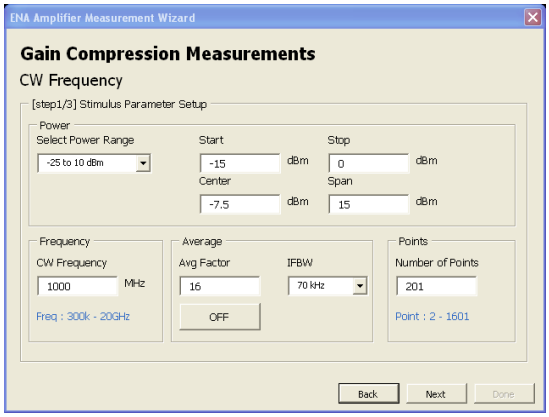
Introduction (Select Sweep Mode)



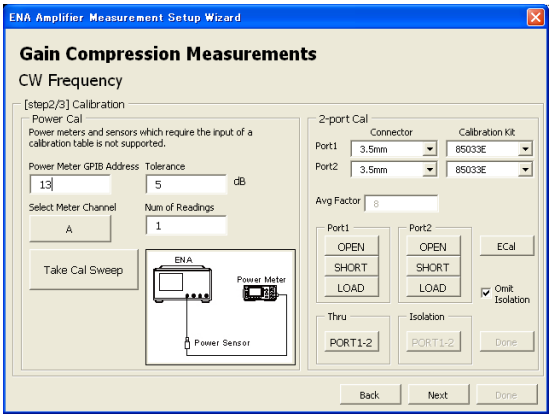
Introduction (CW Frequency)



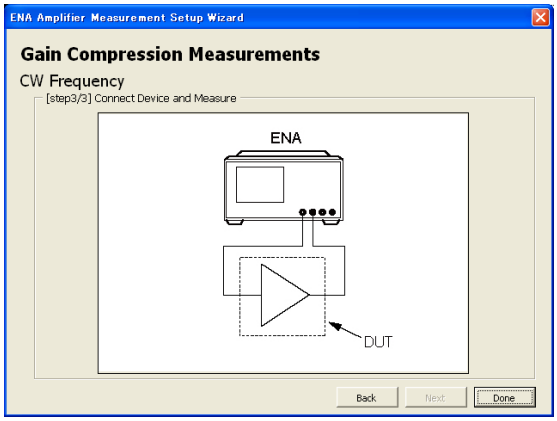
[step1/3] Stimulus parameter setup



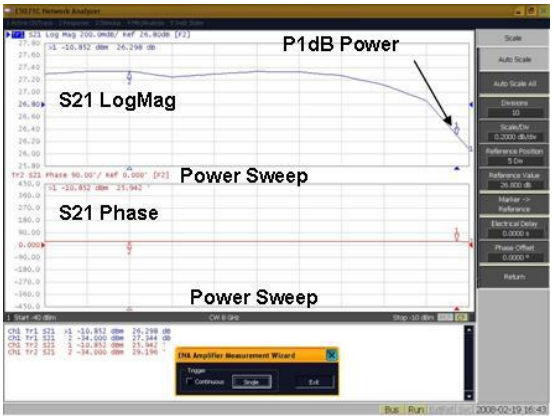
[step2/3] Calibration



[step3/3] Connect Device and measure

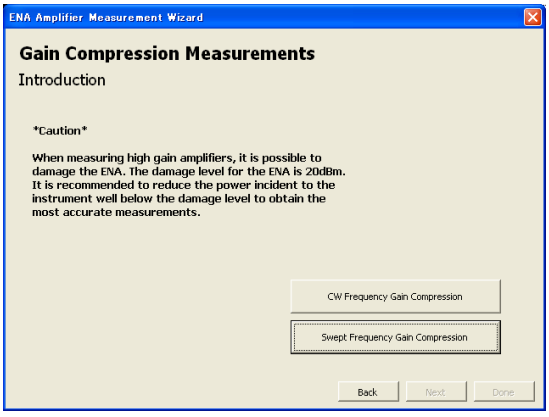


Measurement result

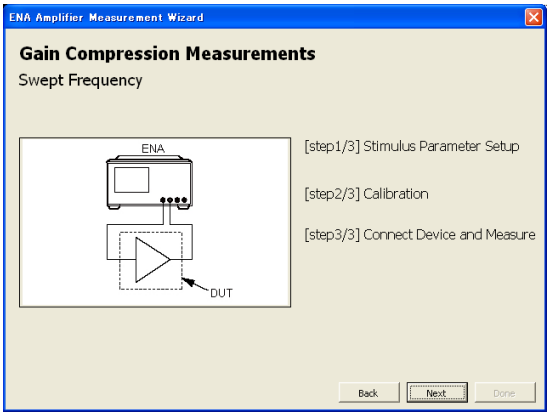


VBA Procedure: Compression Measurements (Swept)

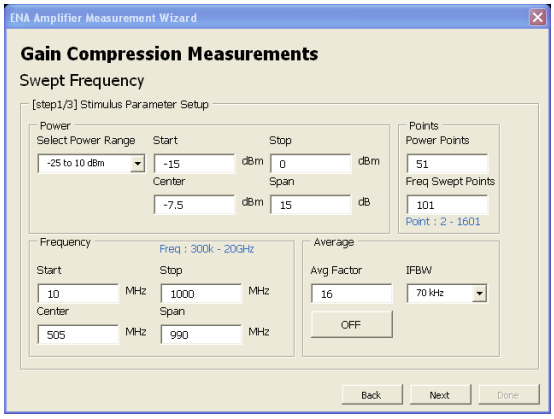
Introduction (Select Sweep Mode)



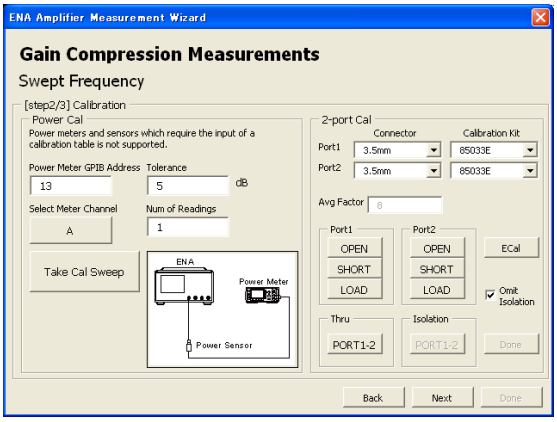
Introduction (Swept Frequency)



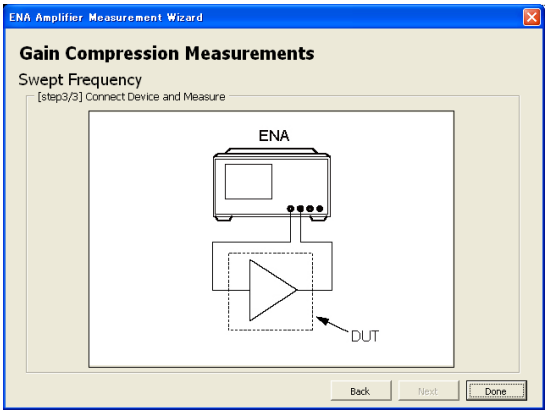
[step1/3] Stimulus parameter setup



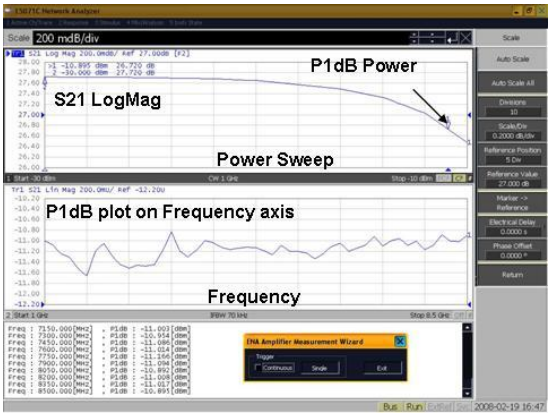
[step2/3] Calibration



[step3/3] Connect Device and measure



Measurement result



Revision History

Revision	Date	Description
01.00	Mar 2008	Initial Revision
01.01	Apr 2008	Modified Frequency Range Check
01.10	Oct 2008	Supported 20GHz Option
01.11	Mar 2009	Revised the Image of K-factor Definition