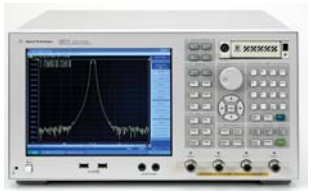
Quick Demo Guide

# E5071C ENA Series Network Analyzer

## Procedure overview

1. Connect DUT to E5071C
2. Preset system and launch setup wizard
3. Configure E5071C with setup wizard VBA

The E5071C Setup Wizard VBA program is a free VBA program available at http://www.agilent.com/find/enavba
Download file (EnaSetupWizard_xxxx.vba) and save it under D:\VBA of E5071C beforehand.



E5071C ENA Series Network Analyzer

N-Type Cable

Band pass filter

In this demo guide, we will use BPF (Center frequency = 947.5MHz) but you can use another filter. Prepare appropriate cable and adapter to connect between ENA and DUT.

## 1. Connect DUT to E5071C


**Figure 1. DUT connection**

In this demo, we will use 4 port E5071C. However, you can do the same demo with 2 port E5071C.

Legend: [Key name] = front panel hardware key
Key name = soft key
Number = front panel hardware numeric key

## 2. Preset system and launch setup wizard

a. Press [**Preset**] front panel key then **OK** soft key
b. Press [**Macro setup**]
c. Press **Load Project** to load EnaSetupWizard_xxxx.vba. VBA file is located in D:\VBA folder.

## 3. Configure E5071C with setup wizard VBA

a. Press [**Macro run**] and wizard window is shown (Figure2)


**Figure 2. E5071C Setup Wizard**

b. Click **Next** to start step by step to setup band pass filter measurement
c. Select "2-port" for number of DUT ports and DUT port type (Figure3)

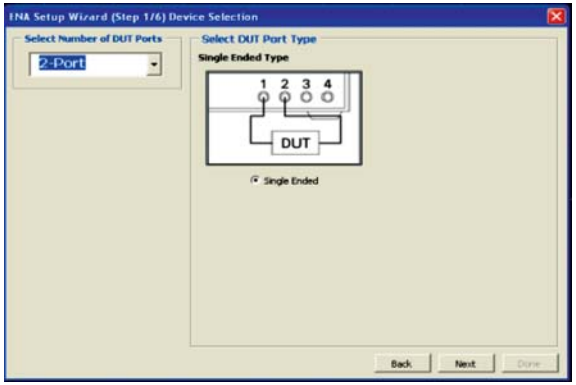



**Figure 3. Device selection**

d. Click **Next** to continue
e. Select "Display1" as type of display mode in measurement parameter setup (Figure 4)

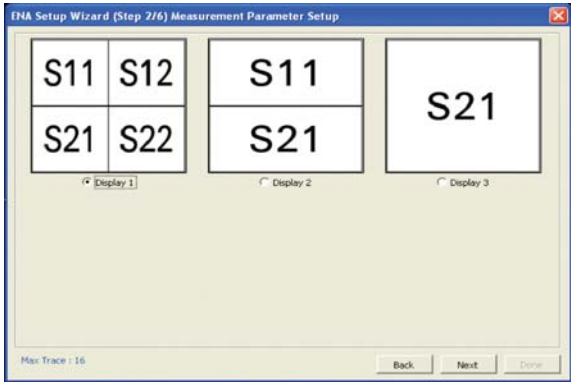



**Figure 4. Measurement parameter setup**

f. Click **Next** to continue

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g. Set Center frequency to ***947.5 MHz***, and frequency span to ***100 MHz*** (Figure 5)

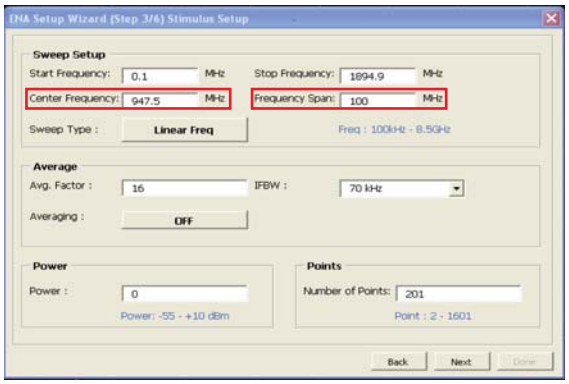


**Figure 5. Stimulus setup**

Depending on the DUT, you need to set appropriate frequency range.

h. Click **Next** to continue

i. If you have calibration kit, perform calibration by referring **additional demo1**. If not, we skip calibration. Click **Next** to continue .

j. This time we skip port setup: Click **Next** to continue

k. Click **Done** to start measurement. (Figure 6)

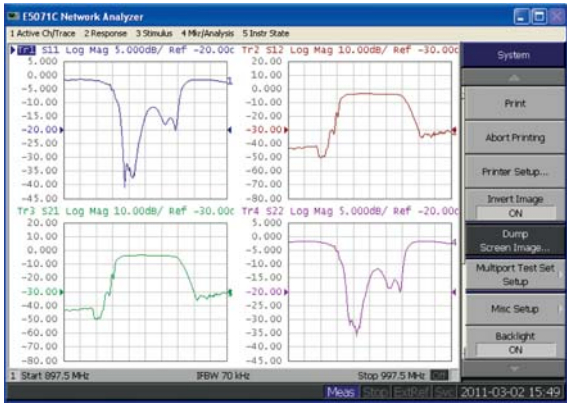


**Figure 6. Measurement Result**

## Additional Demo1: Calibration

Select calibration kit at calibration setup window
Connect Open standard to port1 as shown in figure7

a. Select calibration kit at calibration setup window

b. Connect Open standard to port1 as shown in figure 7


**Figure 7. Connect open standard**

c. Click **OPEN** under port1 to perform open measurement. The background of open will be changed to light blue.

d. Connect open standard to port2 and click **OPEN** under port2

e. Repeat step a.-d. for short and load standard measurement

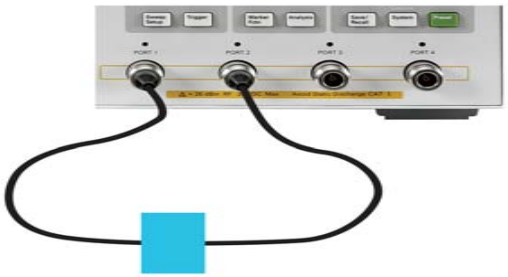

**Figure 8 Thru connection**

f. Connect Thru connection as shown in figure 8

g. Click **port 1-2** under thru menu to run thru calibration.

h. Press **Done** in order to reflect the measurement result of standards to the ENA. Once calibration is done, the message "corrected" is shown in the left-bottom corner of the window as Figure 10.

i. Click **Next** to continue with E5071C Setup Wizard

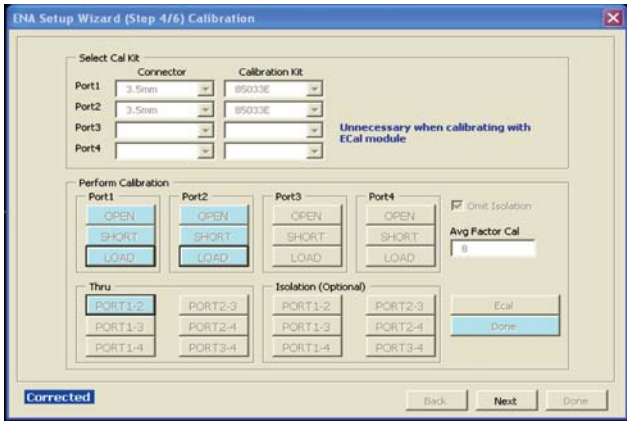


**Figure 9. Calibration Done**

## Additional Demo2: Analyze measurement result

- To scale measurement result, press [**Scale**], then **Auto Scale** or **Auto Scale All**
- To search Maximum point, press [**Marker Search**], then **Max**
- To search Minimum point, press [**Marker Search**], then **Min**
- To search peak, press [**Marker Search**], then **peak**, then **Search peak**
- To show statistic, press [**Marker Fctn**] then turn on **Statistics**
- To change the trace, press [**Trace Prev**] or [**Trace Next**]
- To maximize or minimize the trace, press [**Trace Max**]

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