*Date:*08.17.2012

Solution: The Rigol DSA-1000 and 800 Series of spectrum analyzers have a very nice Pass/Fail mask feature that can be implemented from the front panel or remotely.

We have put together a small application using an Excel 2010 Macro that eases the process of building and saving masks to the DSA.

Requirements:

- PC running Windows and Microsoft Excel version 2010 or later
- National Instruments VISA Runtime Engine (www.ni.com Search VISA Runtime and pick the appropriate runtime engine for your Operating System)
- A copy of the file 'PFMaskBUilder_DSA.xlsm' which can be downloaded from the software tab here:

  http://www.rigolna.com/products/spectrum-analyzers/dsa800/dsa815-tg/

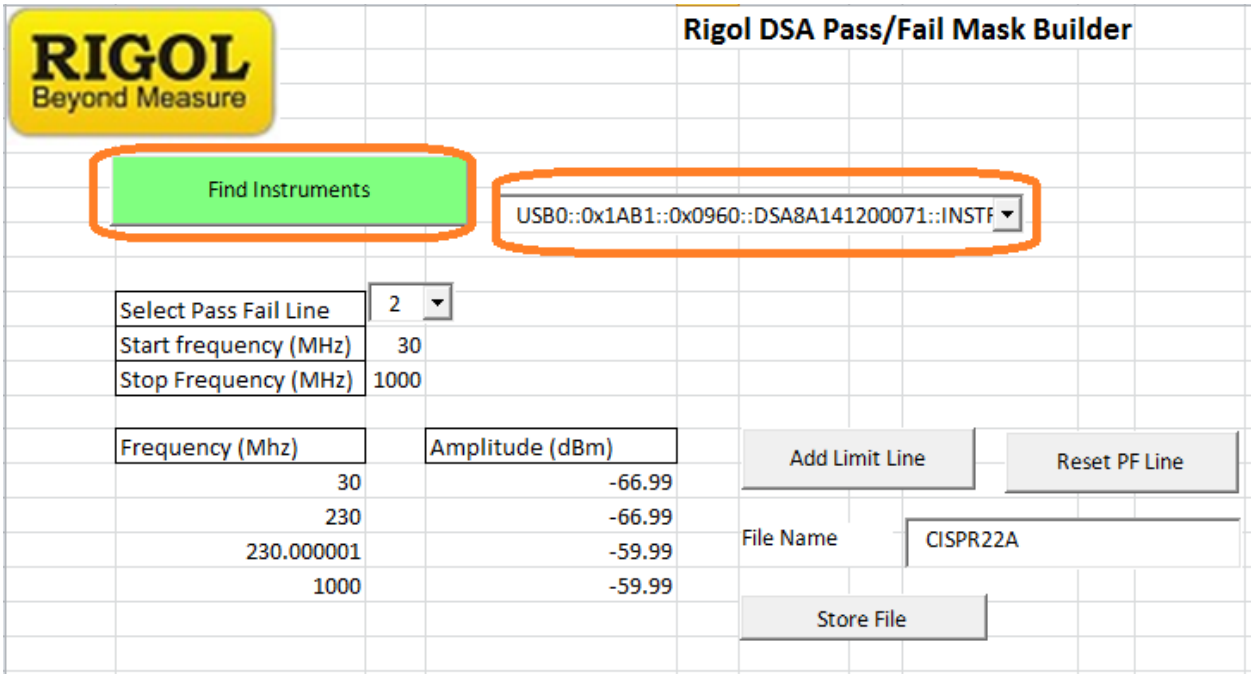
- A Rigol DSA1000, 1000A, or 800 series spectrum analyzer
- A USB cable to connect the PC with the DSA

1. Connect DSA to power line

2. Connect DSA to controlling PC using USB

3. Run the program “PFMaskBuilder_DSA.XLSM”

4. If you are connected via USB, press the Find Instruments button and select the correct instrument address from the drop down, as shown below:



NOTE: A Rigol DSA connected over USB will have an address like below:

“USB0::0x0400::0x09C4::DSA1A124400151::INSTR”

5. Select the Pass/Fail line number. 2 is the Upper Limit and the most commonly used.

6. Select a start frequency. This will be the lowest frequency displayed on the DSA

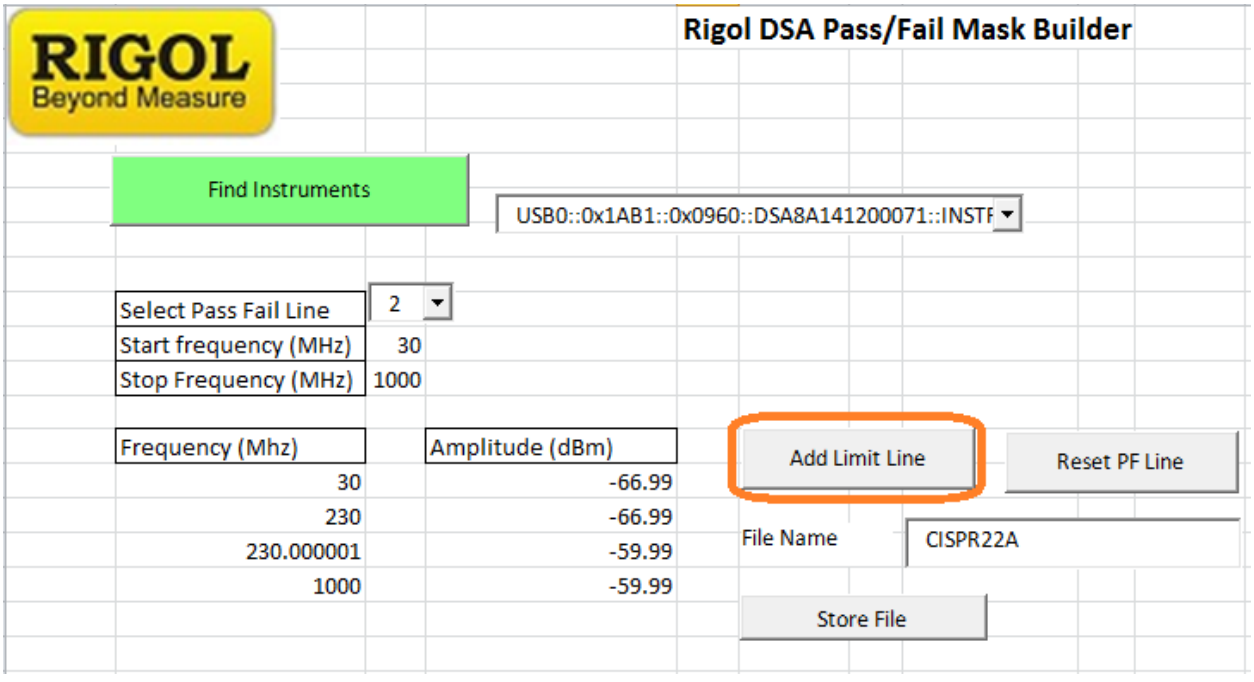
7. Selet the stop frequency. This will set the highest frequency displayed on the DSA

8. Enter the frequency (MHz) and the Amplitude (dBm) for each point in the limit line profile.

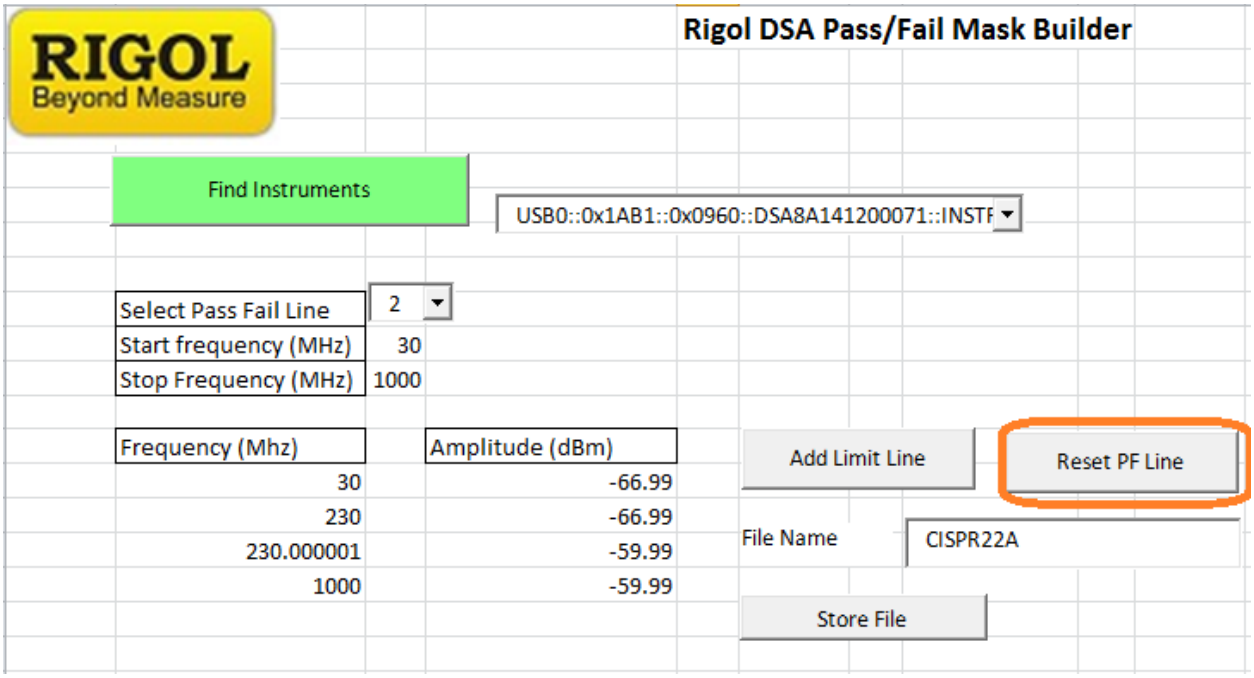
   NOTE: You will need to place a small frequency offset for each continuing point. For example, if you want a line to go from 30 MHz to 300MHz at -10dbm, then from 300MHz to 1GHz at -20dBm, the sheet would look like the following:

Frequency (Mhz)	Amplitude (dBm)
30	-10
300	-10
300.000001	-20
1000	-20

9. Press Add Limit Line button to send the new limit to the instrument



10. Press Reset PF Line button to reset limit line to 0dBm



11. Enter File Name and Store File Button to save the limit line to the internal storage of the instrument