

## Screenshots of VNANView, V5.2, April, 2009

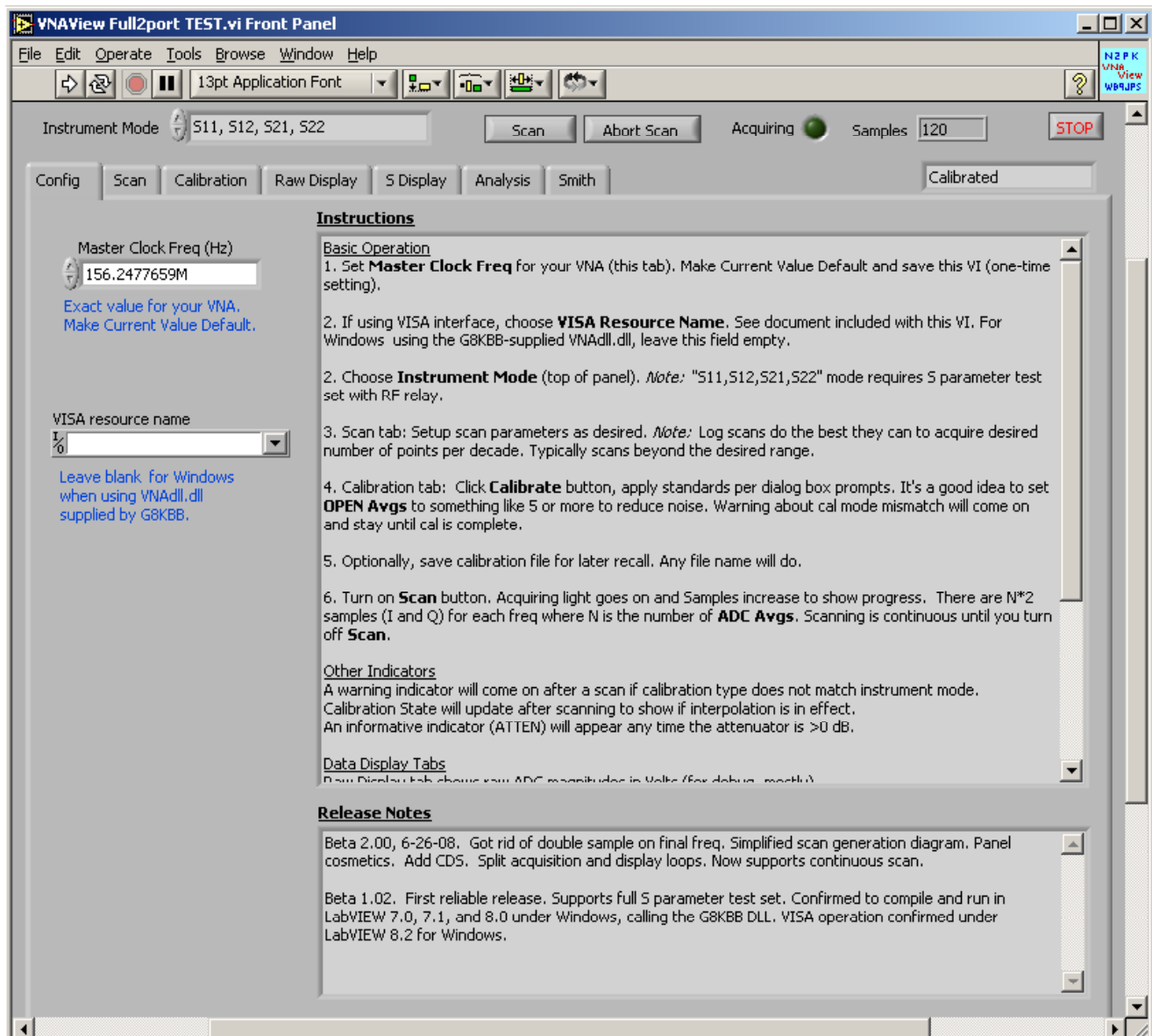
Gary W. Johnson, WB9JPS. <http://web.me.com/gwj/iWeb/Site/VNA.html>

Written in LabVIEW 8.5, all source code is supplied. Supports the N2PK VNA with full S-parameter test set, using the G8KBB USB adapter.

Download VNANView from: <http://idisk.me.com/gwj-Public>

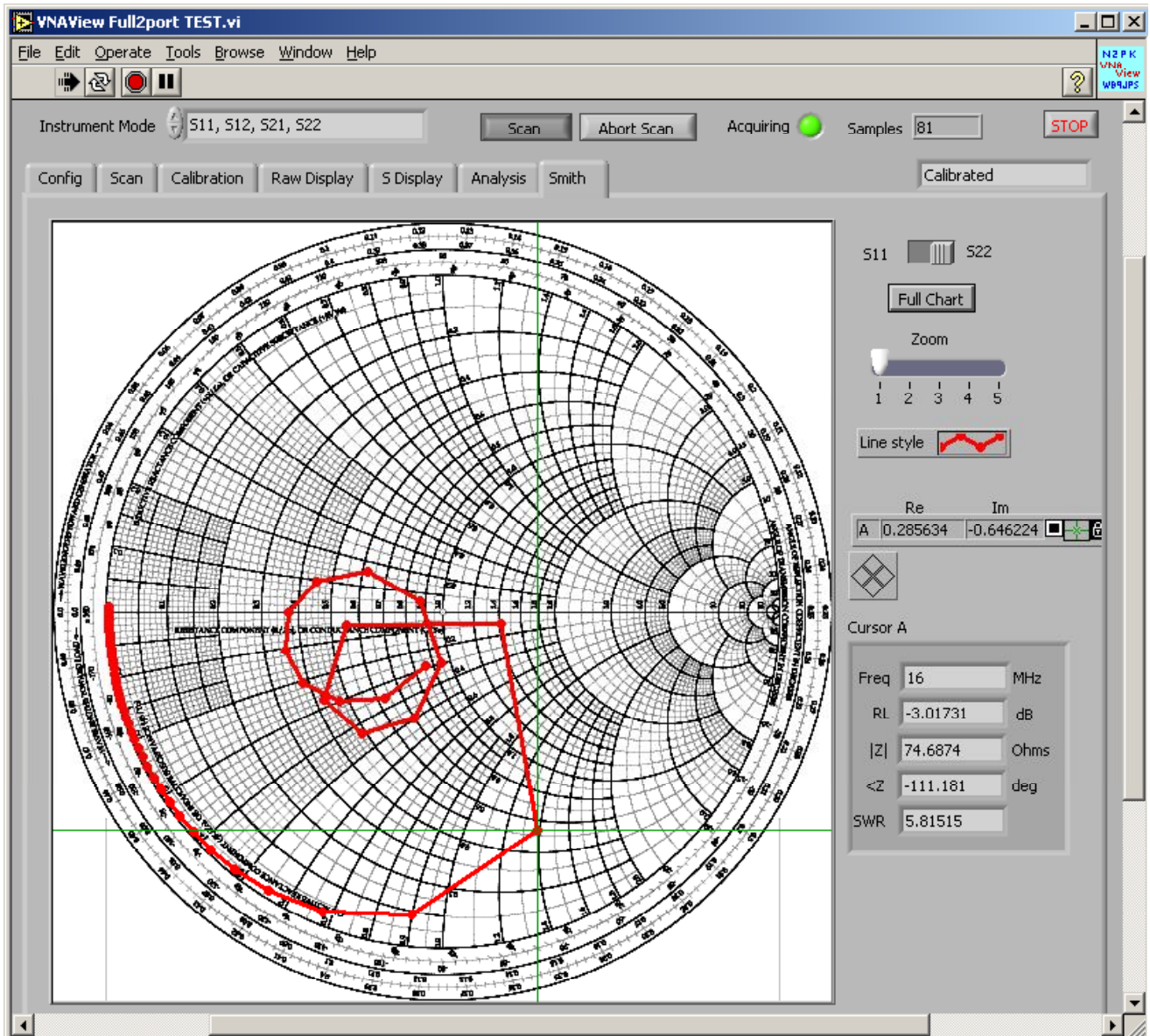
### Configuration and Instructions Tab

Sets up your master clock frequency calibration, and allows you to choose to use VISA instead of the default DLL interface. Mac and Linux users can only use VISA. This page also has instructions and release notes.



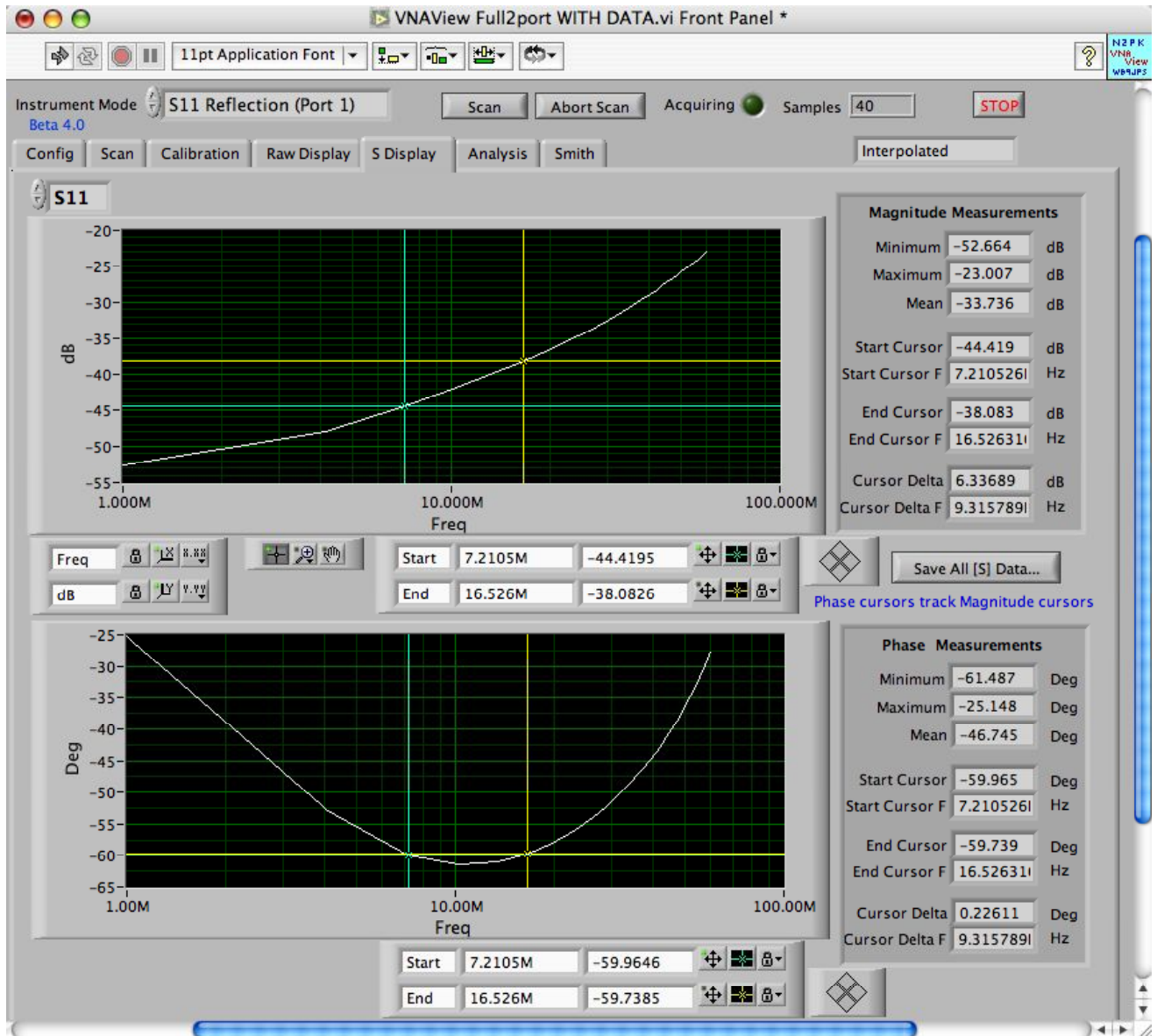
## Smith Chart Tab

Has zoom and cursor readouts. The background is from a high-resolution PDF of a real Smith Chart. Only works in reflection (S11 or S22) modes.



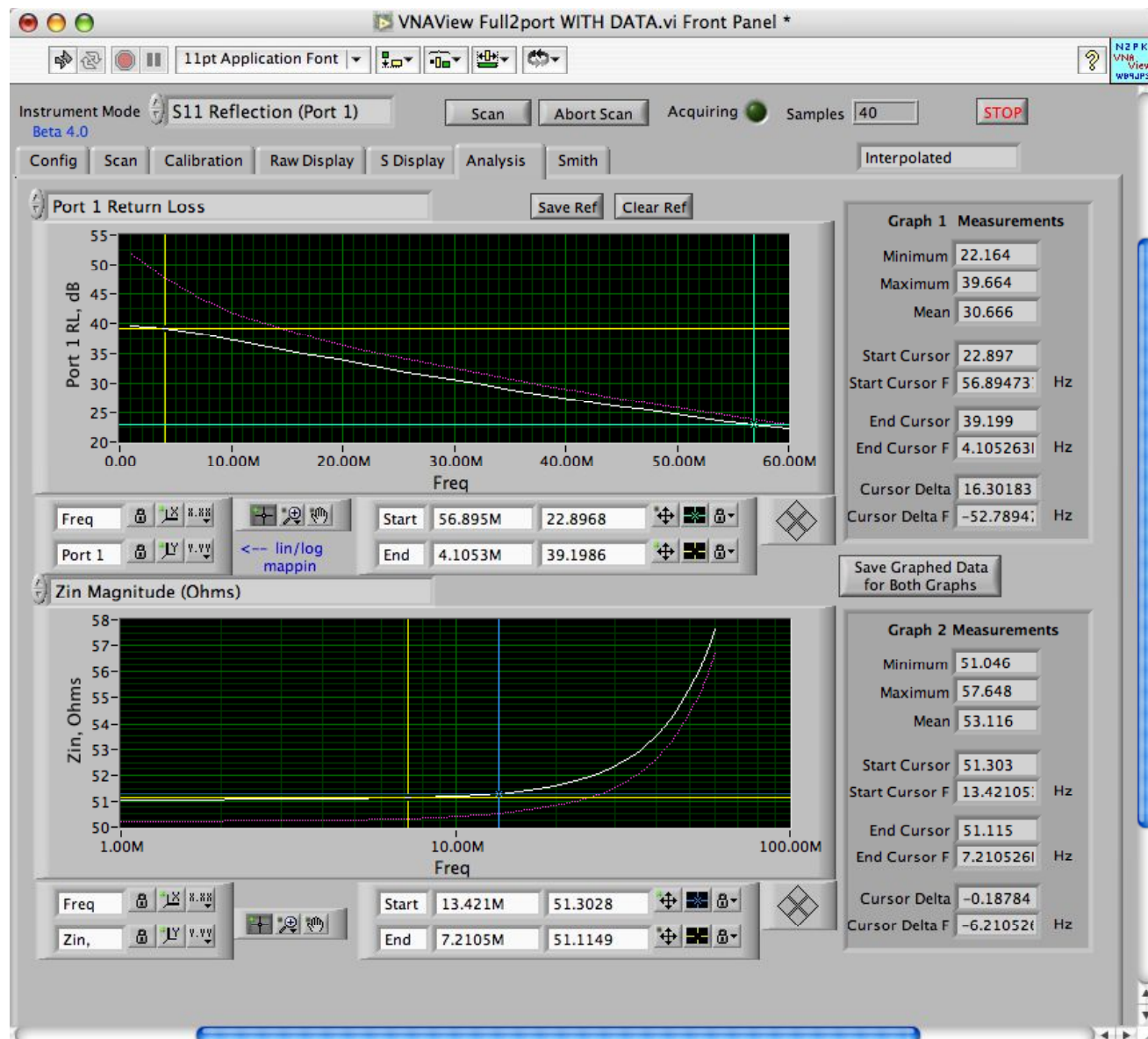
## S Parameter Display Tab

Displays magnitude and phase of any of the four S parameters. Cursors on the two graphs track one another in frequency. Numerous measurements are displayed.



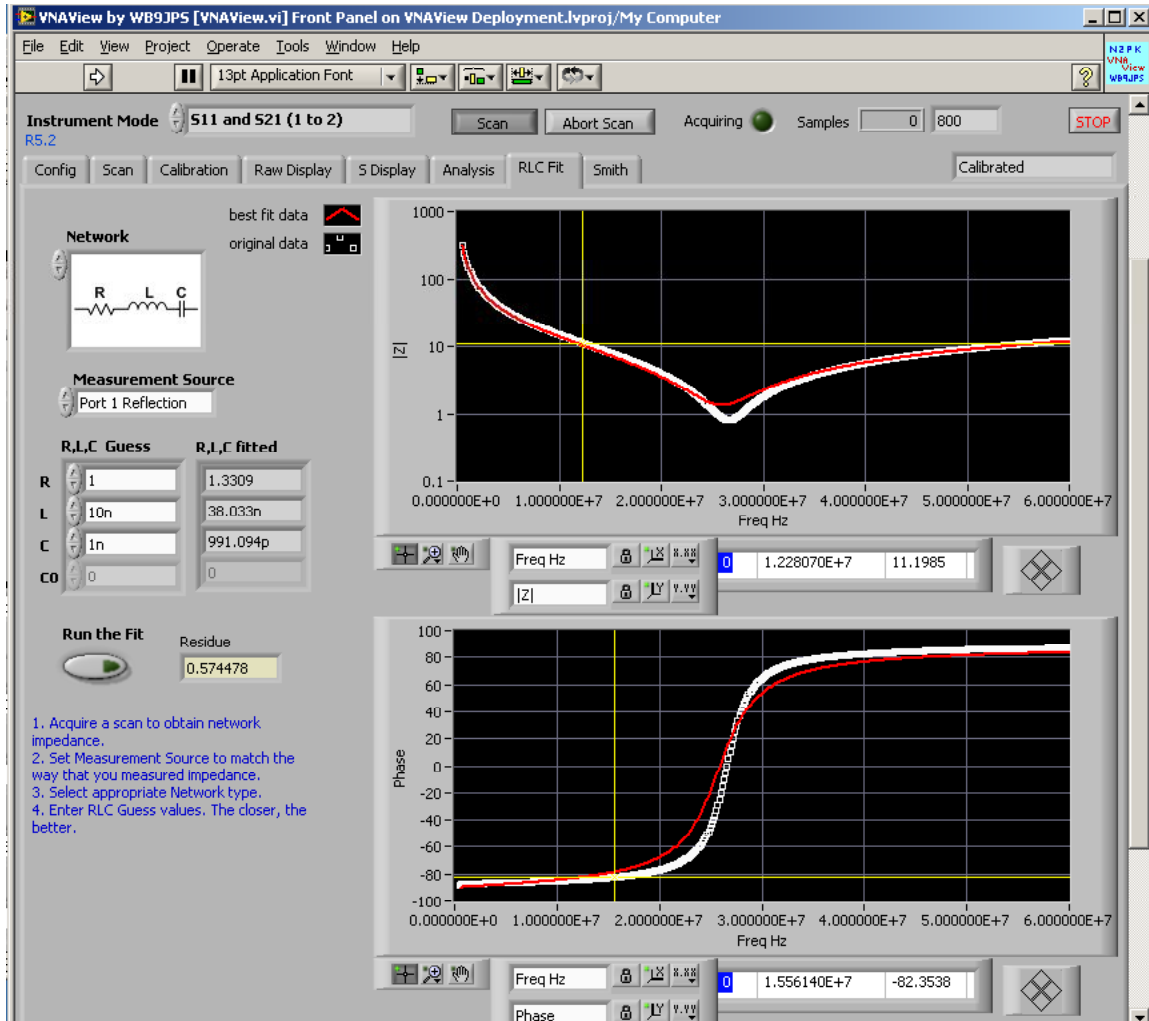
## Analysis Display Tab

Displays many useful measurements such as return loss, SWR, impedance, transimpedance, series inductance and Q, shunt capacitance, and T-Check results. Numerous measurements are available. Adding new analysis functionality in LabVIEW is *extremely* easy. All you need is a mathematical expression in terms of S parameters and frequency.



## RLC Fit Tab

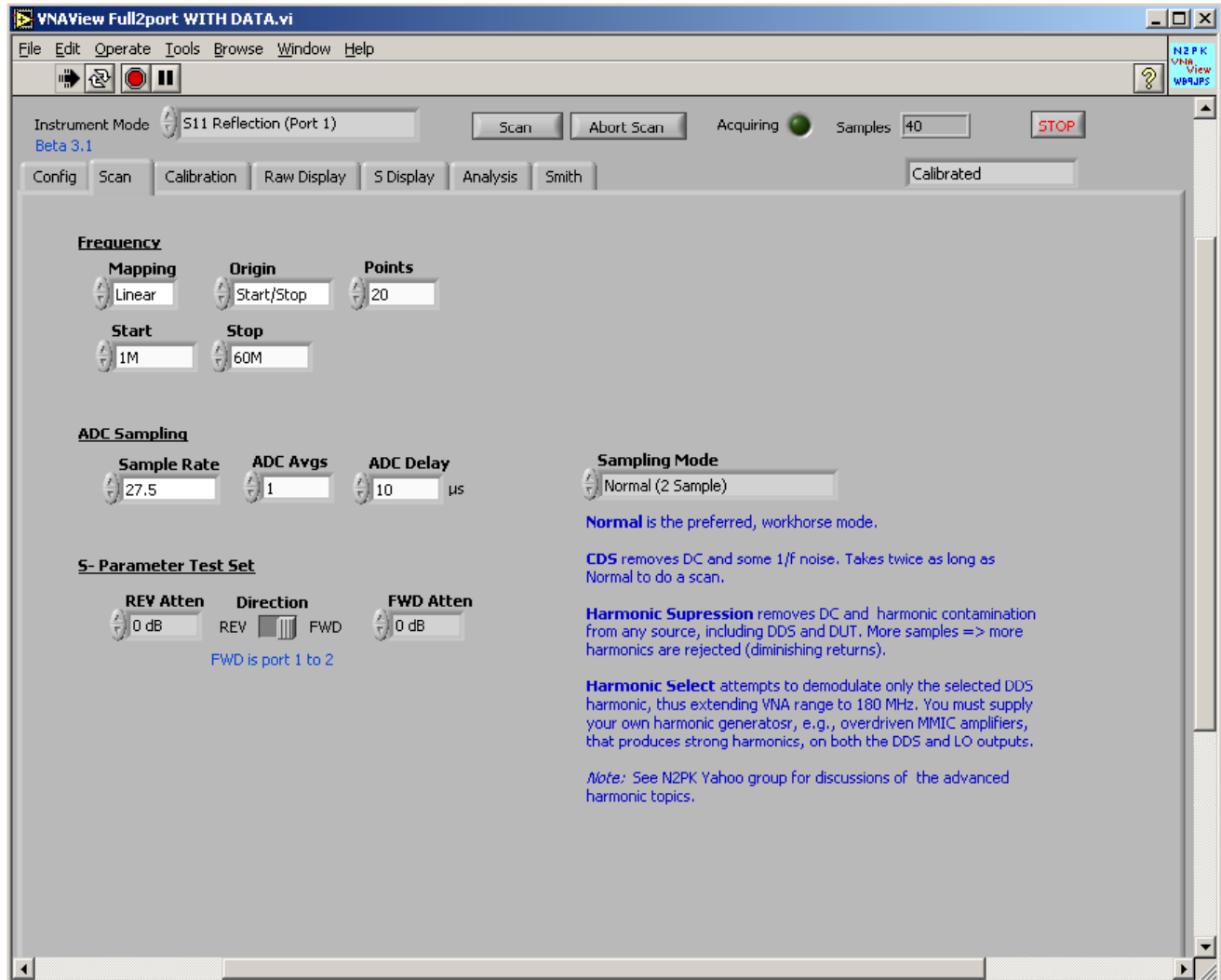
Uses nonlinear curve fitting to fit measured impedance to a variety of common RLC circuit topologies such as series and parallel. Allows you to compare magnitude and phase results with measured data.



## Scan Setup Tab

Supports linear and logarithmic sweeps. All known modes of ADC acquisition are supported including CDS, harmonic rejection, and harmonic selection. You can also manually control the RF relay and attenuator if you have an S parameter test set.

You can change any of these scanning parameters on the fly while a scan is in progress (though the results may be a bit strange!)



## Calibration Tab

Runs calibration procedures, prompting you to connect various standards. Calibrations may be saved to and recalled from disk. Interpolation is supported if you change scan parameters. If the scan is outside the bounds of calibration, you still get accurate data for the part of the scan that is in-bounds.

The screenshot shows the VNAView Full2port TEST.vi software interface. The 'Calibration' tab is selected, and the status is 'Calibrated'. The 'Cal File Path' is set to `\\.\PSF\Win Shared\VNAView VIs\2port 1-60 60pt`. The 'System Z0' is 50, and 'OPEN Avgs' is 5. The 'Calibrator Values' section includes: C open (0), R short (0), L short (0), R load (50), L load (0), and C load (0). The 'Cal Measurements' section, displayed for debug purposes, contains the following data:

Measurement	Value
Meas Open Port 1	0 -0.736291 +0.0525369 i
Meas Fwd Thru	0 0.73581 -0.0568827 i
Meas Short Port 1	0 0.736142 -0.0512331 i
Meas Fwd Refl Thru	0 0.0026601 -0.00357724 i
Meas Load Port 1	0 0.0002316 -4.95203E-5 i
Meas Rev Thru	0 -0.734642 +0.0577867 i
Meas Open Port 2	0 0.736631 -0.061624 i
Meas Rev Refl Thru	0 -0.00153936 +0.00288941 i
Meas Short Port 2	0 -0.731492 +0.0650824 i
Meas Fwd Leakage	0 0.000285426 +0.000542193 i
Meas Load Port 2	0 0.00173543 +0.000833914 i
Meas Rev Leakage	0 0.000570888 +0.000333109 i