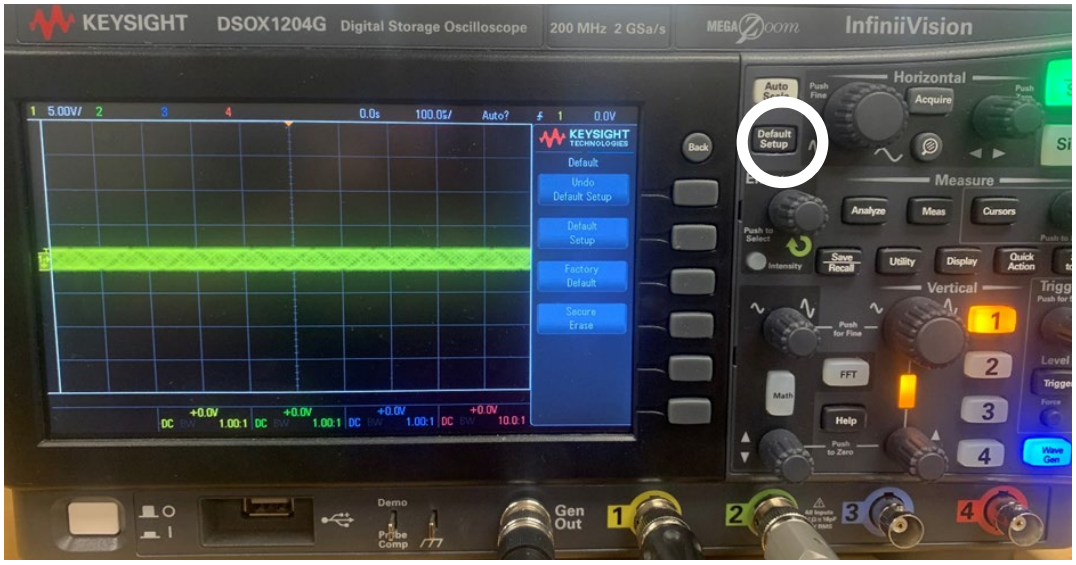
Frequency Response Analysis
using the
Keysight DSOX1204G Oscilloscope

A. Default Setup



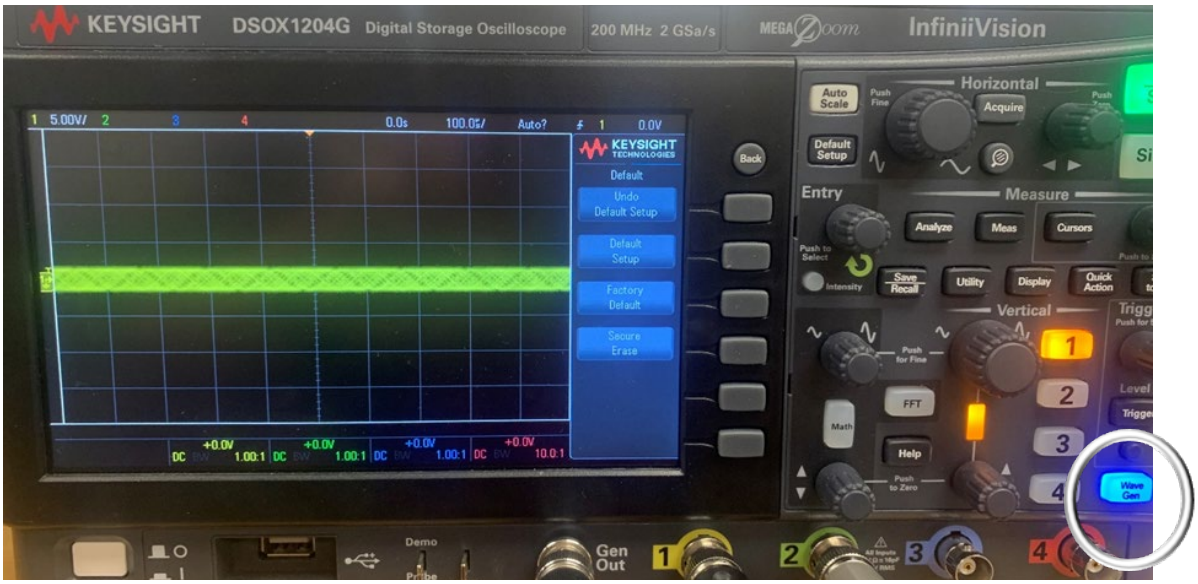
B. Connections

Gen Out connects to the input of the circuit under test.

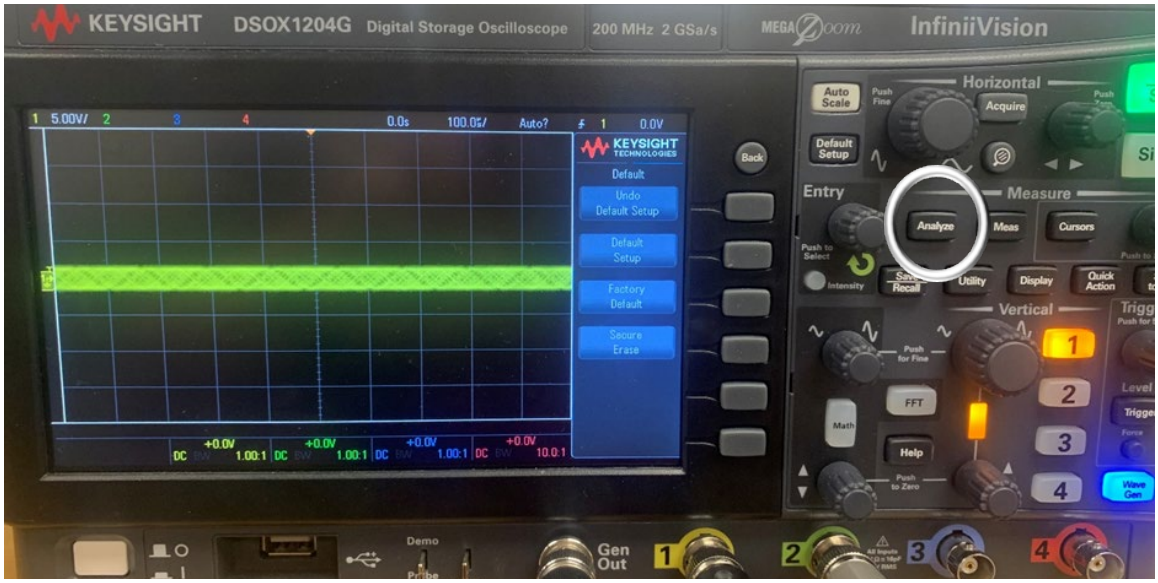
Channel 1 also connects to the input of the circuit under test. Set the probe attenuation to 1:1 and assure that that channel also has the probe at 1:1.

Channel 2 connects to the output of the circuit under test. Set the probe attenuation to 1:1 and assure that that channel also has the probe at 1:1.

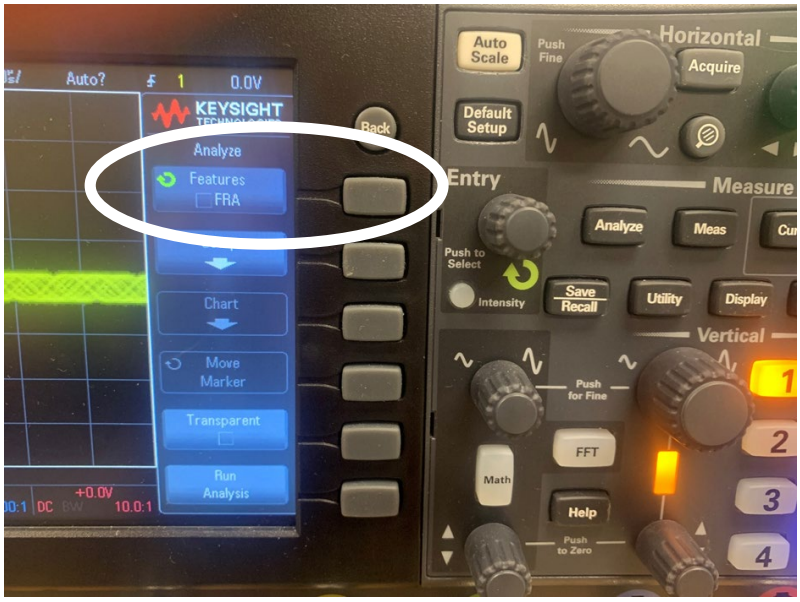
C. Waveform Gen



D. Analysis



E. Frequency Response Analysis (FRA)



F. Setup

Adjust the parameters in the **FRA Setup** menu by pressing the button to the right of the parameter, then rotating the **Entry** knob to get the value needed.

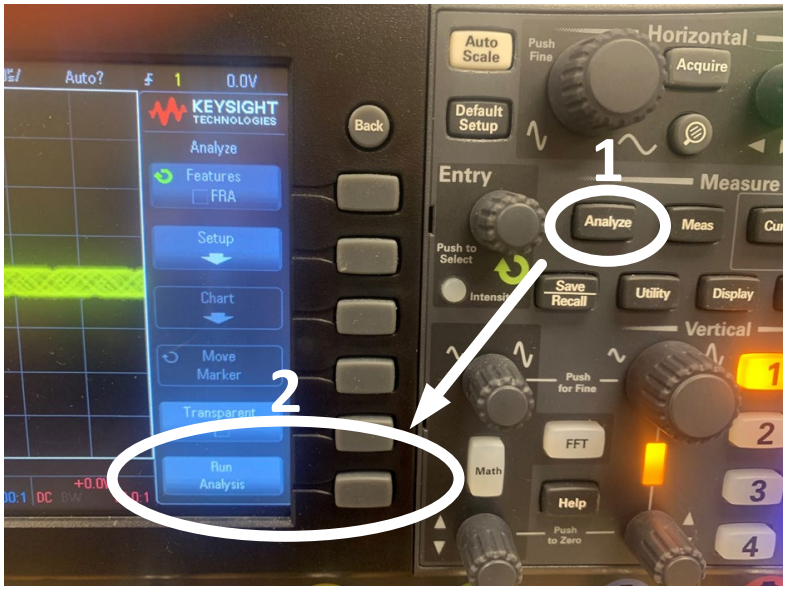
Adjust the **Start Frequency** and the **Stop Frequency** to values that interest you. Too wide of a range will cause the sweep to take a *long* time.

Notice that the **Amplitude** is in V_{pp}. Set this to 2.8 V_{pp} to send 1 V_{RMS} to the circuit.

Increase the **Points** to get finer resolution. But the more points you use, the longer the sweep.

G. Run Analysis

Press the **Analysis** button again to get back to the Analysis menu. Then select **Run Analysis**.



H. Displays

The signals are swept by the oscilloscope and are displayed on the screen with the measured magnitude and phase. In the background you can see the plot growing.

Once the analysis is complete the plot is shown. Use the Entry knob to move cursors to the points of interest. The cursor values are shown below the plot.