NI ELVIS II Bode Analyzer

Background

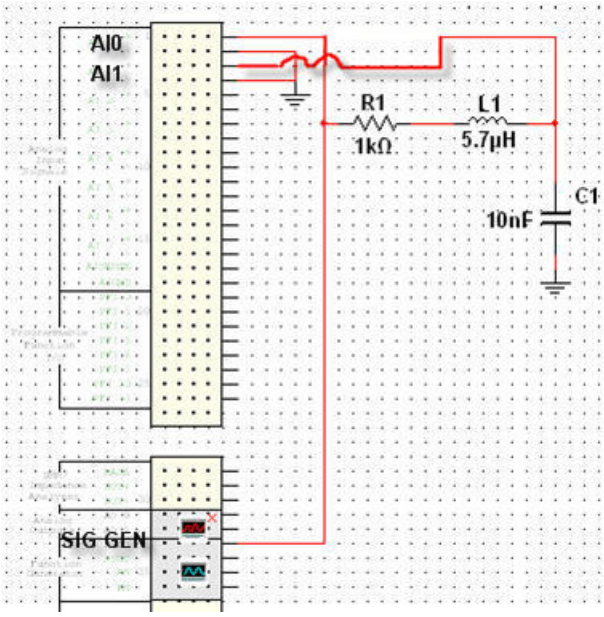
Bode Analysis is most commonly used to analyze filter circuits. The NI ELVIS II Bode Analyzer can perform a frequency sweep measurement and return the frequency response of a circuit. The frequency response of a signal shows voltage gain versus frequency and is generally used to characterize a range of frequencies that are compatible with the filter. Also shown is the signal's phase versus frequency which estimates how much a frequency will be phase-shifted.

The bode analyzer is a great instrument to demo because:

- it is not a common instrument but it is often taught n classes
- shows off the capabilities of NI ELVIS II hardware since we are performing read (analog input) and write (function generator) simultaneouslys

Procedure

1. Set up RLC Circuit as shown.
2. Connect FGen to both AI0+ and the positive input of the circuit.
3. Connect AI1+ to the output of the circuit. Ground AI0-, AI1- to the reference point of the circuit.



4. Launch the NI ELVISmx Bode Analyzer.

5. Change the steps to 20 (per decade) to show a smoother curve and keep the remaining default settings.