

Lab #2:

1. Cables: Measure the transmission across a cable
 - a. Fit the transmission to a line
 - b. Assume the cable loss is linear with frequency. What is the attenuation per unit anlength?
2. Filters: Measure the transmission across a low pass filter
 - a. What is the cutoff frequency?
 - b. How does this differ from a basic low pass LC filter?
3. Filters: Measure the transmission across a bandpass filter
 - a. What is the high frequency cutoff?
 - b. What is the low frequency cutoff?
 - c. How does this differ from a basic LC bandpass filter?
4. Filters: Measure the transmission across high pass filter
 - a. What is the cutoff frequency?
 - b. How does this differ from a basic high pass LC filter?
5. Nonreciprocal components: Measure the transmission across a circulator
 - a. Construct the 3x3 scattering matrix
6. Nonreciprocal components: Measure the transmission across an isolator
 - a. Construct the 2x2 scattering matrix
 - b. How does the isolator differ from the circulator?
 - c. What happens if you terminate one port with a grounding cap? A 50 ohm cap?