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Post-Lab Report #2

**Summary**: The purpose of this lab was to educate students on the methods and importance of calibration before taking measurements with the vector network analyzer. To calibrate the device, one sets the signal source to sweep from the low frequency end of the VNA to 3 Ghz. This provides the device with a comprehensive range of frequencies to ensure the calibration is accurate. Then, add a short, open and loaded end to the VNA cable and run the calibration operation for each. This allows the VNA to zero in on what is happening at the end of the test cable rather than the port of the machine. Without calibration, the measurements taken on the device would appear far out of phase because the cables are multiple wavelengths of the signal long and would wildly vary the perceived phase measurements. After calibration, measurements were taken with different loads, examining the power reduction on signals with attenuators attached, effects of higher frequency signals on identical loads. Inductive and capacitive loads showed their filtering characteristics, in this case, demonstrating behavior of a high pass filter.