Design Project 2 Report Template

What’s the secret message?

What was the maximum range at which you received the message? (Analytical and measured)

What is your receiver system temperature? (Analytical and measured)

What is your receiver IIP3? (Analytical and measured)

-- EACH OF THE FOLLOWING ENTRIES SHOULD BE ON A SEPARATE PAGE --

Picture of your setup at 3m range

Oscilloscope trace of your receiver output at 3m range

Picture of your setup at max range

Oscilloscope trace of your receiver output at max range

One page discussion of how to decode the oscilloscope trace to extract the secret message, possibly using an annotated copy of the oscilloscope trace to help explain your decoding scheme.

Picture of your receiver

Schematic of your receiver drawn in Powerpoint or some other illustration program

Output spectrum from each stage of your receiver with cursors showing signal power, noise floor, and distortion products. You may include multiple spectra on one page if you can fit and label them well. The Siglent VNA can be used as a spectrum analyzer, and has good support for including multiple cursors on a screenshot. (I think the Agilent spec. an. can do so too, but the Siglent tool is newer.)

S11 of your antenna. You don’t need to extract the antenna gain using the anechoic, but extra credit is available if you do so for a new, weird antenna (and document the process).

One page explanation of how you found the theoretical signal, noise and distortion levels for your receive chain. Also upload an Excel spreadsheet that includes these calculations for my review. Include both your analysis and your measured data in the spreadsheet.