Notes for Lab 3

Additional information for Lab 3.

Sampling Rate

In this lab you will be using sampled signals to compute the spectra of continuous waveforms. You should use a sampling rate much (say, 10x) higher than any of the frequencies in your signals in order to avoid various problems that can result from doing this.

Pre-Lab Assignment

Hand in the answers to the following questions before the start of the lab:

1. Compute the autocorrelation function and the power spectral density (PSD) of the random binary NRZ waveform given in Section 1. Compute the PSD of the modulated signal and its null-to-null bandwidth.

2. What values of Fd and Fs will you supply to the `rcosflt()` function to complete Section 2?

3. For Section 3, how will you generate the QPSK signal from the raised-cosine filtered waveform(s)?

Lab Report

The lab report requirements are given in the last paragraph of the lab instructions.