ECE 440L
Last updated: 01/24/14

Lab 5 rubric

Overview

- 100 points possible
- Grade basis: Completeness, clarity, and correctness
- Assign partial credit when appropriate.

Problem	Item
1a	Data is presented for VCO output frequency versus input voltage
	Data is plotted in well-formatted and labeled plot
b	Student discusses the linearity of the data
	The value for f_d is correct
2b	Data and plot provided for amplitudes of carrier, 1st sideband, 2nd sideband versus beta
	- Includes three zeros of carrier, two of 1st band, one of 2nd band
	- Bessel functions are evident
3	Sinusoid
	- Spectrum analyzer (SA) plot is included
	- Result is compared with Carson's Rule, Woodward's Theorem
	Square
	- Spectrum analyzer (SA) plot is included
	- Result is compared with Carson's Rule, Woodward's Theorem
	Triangle
	- Spectrum analyzer (SA) plot is included
	- Result is compared with Carson's Rule, Woodward's Theorem
4a	Frequency response of discriminator filter is plotted
	- Linear region is indicated
b	Carrier frequency and max deviation are recorded
c	CD music is demonstrated to TA
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Problem	Item
5b	Oscilloscope printout showing phase lock is included in report
c	Lock range is recorded
	Capture range is recorded
6	N/A
7a	Under-damped waveform is included
	Over-damped waveform is included
b	Data and plot of PLL frequency response are included
8a	Oscilloscope printout showing non-linear lock-capture is included
b	CD music is demonstrated to TA