Experiment 1: Amplitude modulation: DSB-AM and SSB-AM

Submite a short report, no longer than five pages, of your findings

IMPORTANT:
You need the following six files (Matlab scripts) to carry on the experiment. Right-click and save as:
fftseq.m
Spower.m
Dsb1.m
Dsb_dem.m
Lssb.m
Lssb_dem.m
Save the files in the same folder. Run Matlab and set the *working directory* to the folder where you saved the files.

The experiment consists of the following 5 parts:
(1) DSB-AM modulation
Run the script Dsb1.m (by typing "Dsb1" in the command window).
The purpose of this part is to simulate the generation of a DSB-AM modulated signal, with and without noise. Print the plot of the spectrum of the noiseless and noisy modulated signals. (This is the last plot produced by the script.)
(2) DSB-AM demodulation without noise
Run the script Dsb_dem.m.
The purpose of this part is to examine the demodulation process of a DSB-AM modulated signal, without noise. Print the plot of the message and demodulated signals. (Last plot produced by the script.)
(3) DSB-AM demodulation with noise
The purpose of this part is to examine the effects of Gaussian noise on the demodulation of DSB-AM signals. Modify the script in part (2) so that additive Gaussian noise is added in the same way as in the script of part (1). Print the resulting plot of the message and demodualted signals.
(4) LSSB-AM modulation
The purpose of this part is the same as (1) for the case of (lower sideband) LSSB-AM modulated signals. Repeat (1) using the script Lssb.m
(5) LSSB-AM demodulation with and without noise
The purpose of this part is the same as (2) and (3) above. That is, to examine the process of demodulation of an LSSB-AM signal with and without the presence of noise. Repeat (2) and (3) using the script Lssb_dem.m