CIE 337 Project I Report (Part III)

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Generation of a Frequency-modulated Signal Using Simulink® Frequency Modulator for Sawtooth and Sinusoidal Message Signals

In this part, Simulink frequency modulator block is used to generate the FM signal for the message signal one's encountered in Part **B**.

Verification of Part-B Results (Sawtooth-message FM Signal)

The frequency modulator frequency deviation parameter is changed to 1000 Hz, and the carrier frequency is 10000 Hz. In **Figure 1**, the block diagram of the Simulink modulator is shown.

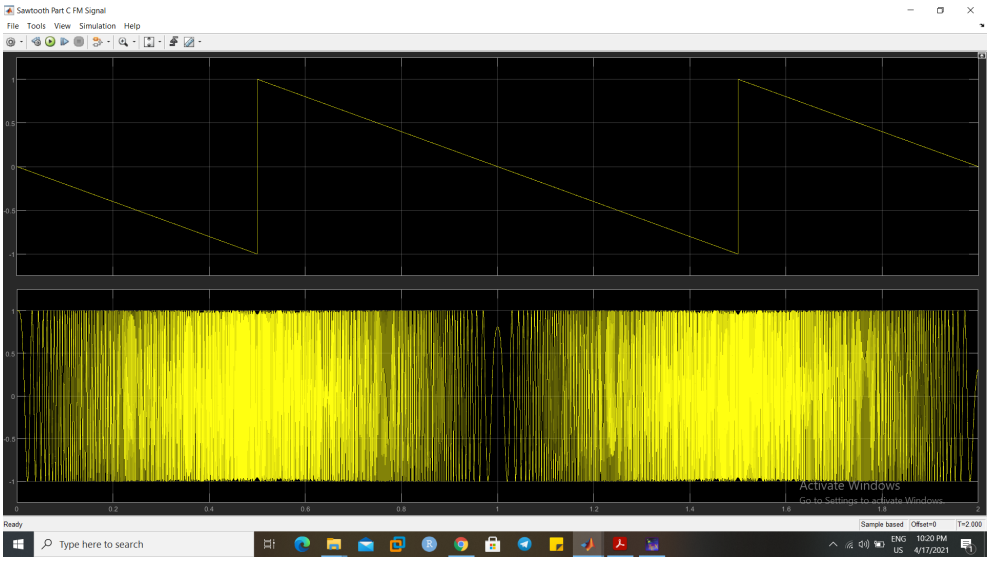

Figure 1: The Layout of the Frequency Modulator

When running the simulation, one'd obtain the results shown in **Figure 2**.

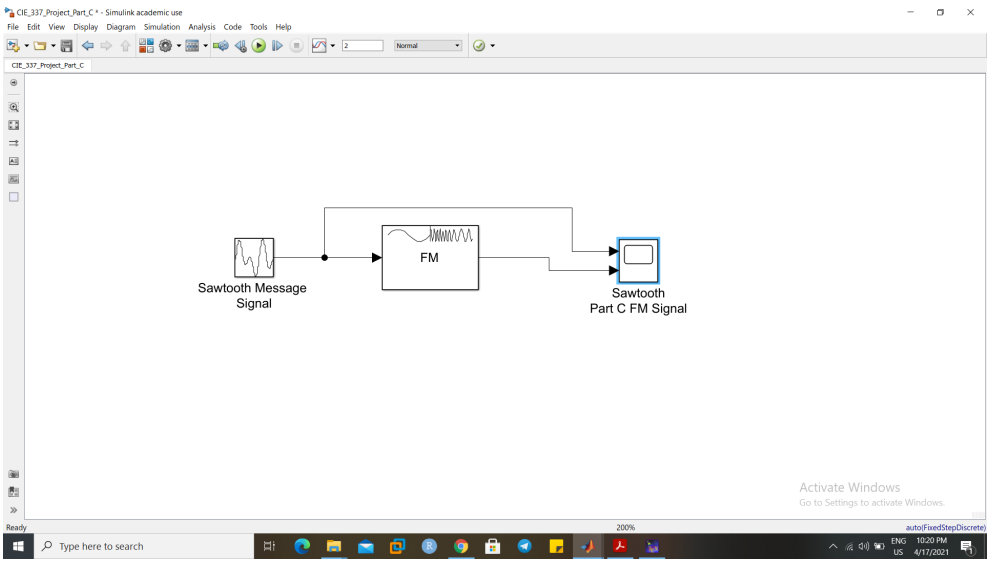

Figure 2: The Layout of the Frequency Modulator

One notices same findings that were found in Part **B**.

Verification of Part-B Results (Sine-message FM Signal)

The frequency modulator frequency deviation parameter is changed to 5000 Hz, and the carrier frequency is 10000 Hz. In **Figure 3**, the block diagram of the Simulink modulator is shown.

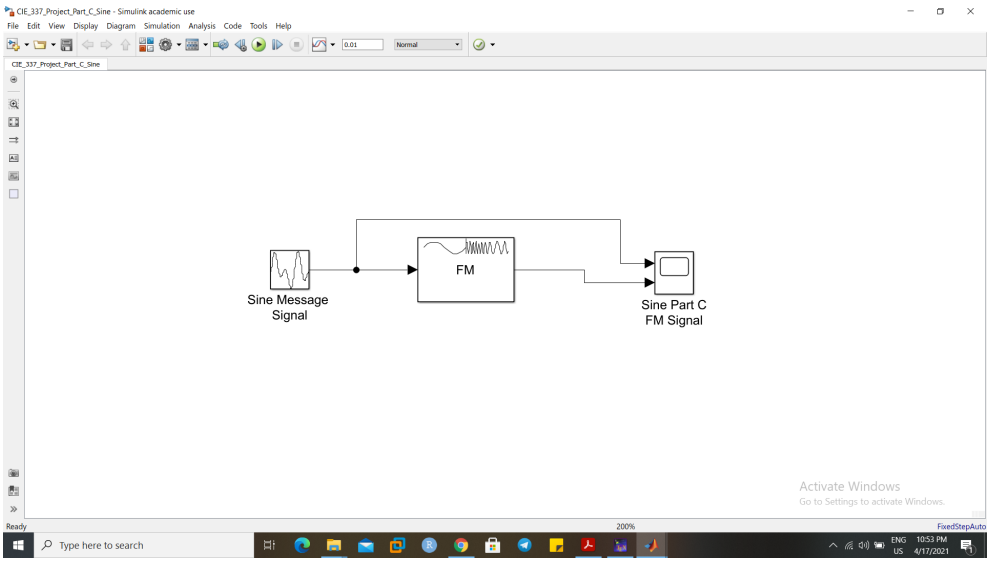

Figure 3: The Layout of the Frequency Modulator

When running the simulation, one'd obtain the results shown in **Figure 4**.

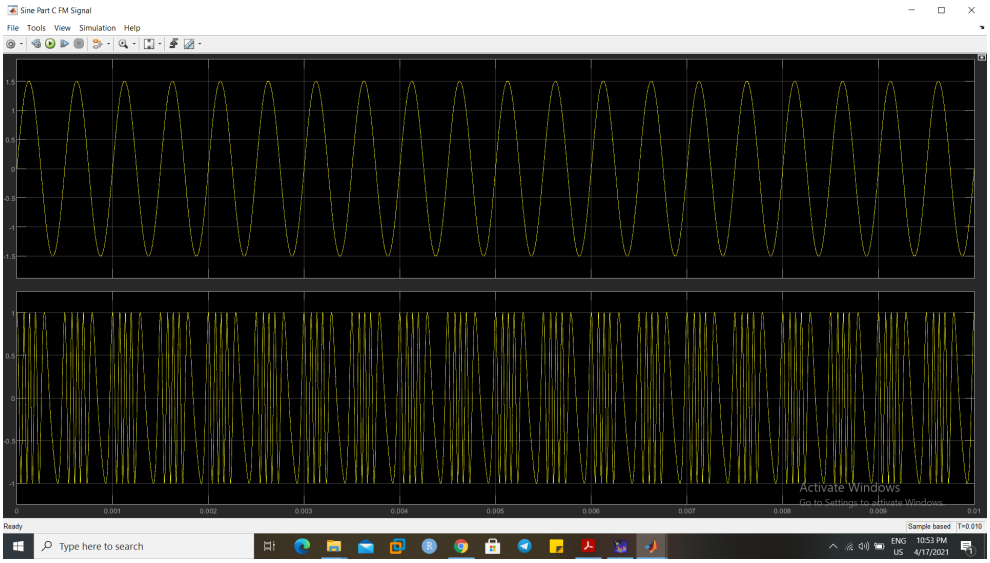

Figure 4: The Layout of the Frequency Modulator

One notices same findings that were found in Part **B**.