AMERICAN INTERNATIONAL UNIVERSITY-BANGLADESH

Faculty of Engineering

Lab Report

Experiment # 06

Experiment Title: Study of Amplitude Modulator and Demodulator using Simulink

Date of Perform:	Tuesday, October 03, 2023	**Date of Submission:**	16-12-2023
Course Title:	Data Communication Lab		
Course Code:	COE3103	**Section:**	G
Semester:	Fall 2023-24	**Degree Program:**	BSc in CSE
Course Teacher:	**Sadman Shahriar Alam**		

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Carrier signal (Sc) = $A_c \sin(2\pi f_c t)$
Message signal (Sm) = $A_m \sin(2\pi f_m t)$
Modulated Signal = $(A_c + A_m \sin(2\pi f_m t)) * \sin(2\pi f_c t)$

Blocks Required:

1. Carrier Signal Source
2. Message Signal Source
3. Blocks for viewing the signals – Scope
4. Product Block
5. Summer Block
6. Constant Block

Simulink Simulation

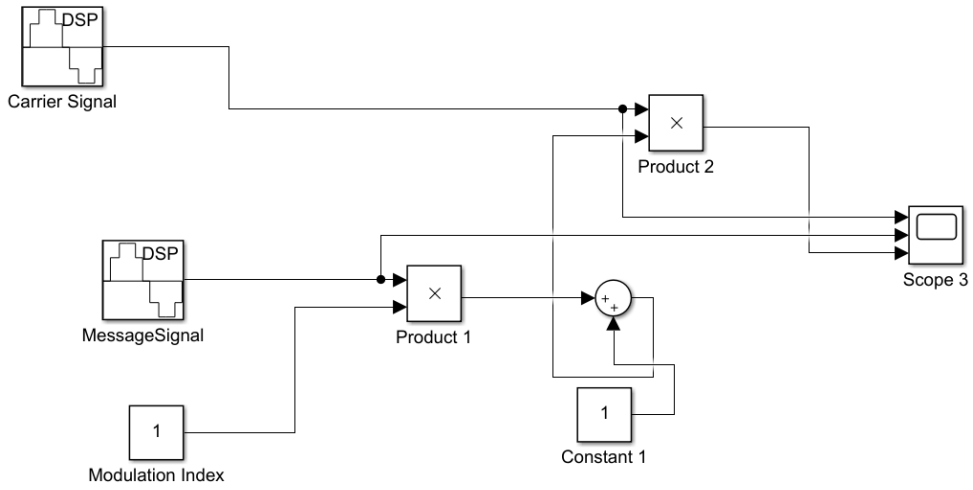

Figure 1: AM Generation using Simulink – Block Diagram

Simulink Waveform:

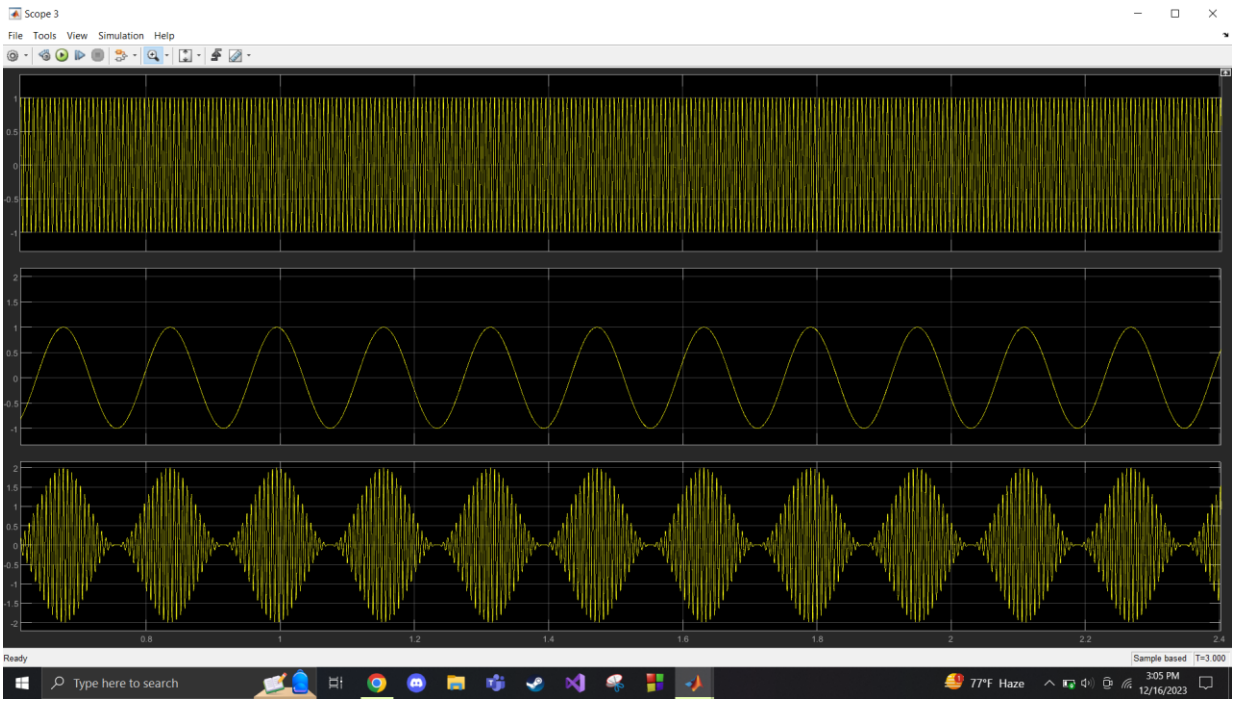

Figure 2: Message signal, Carrier signal and Modulated signal

Performance task:

Simulink Simulation

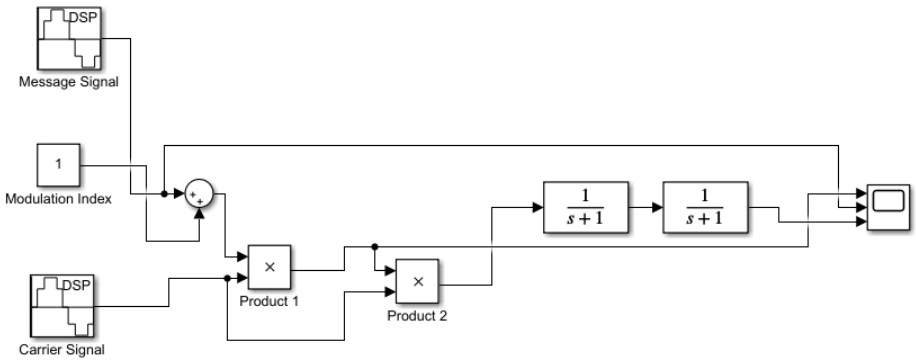

Figure 3: AM Modulation and Demodulation

Simulink Waveform:

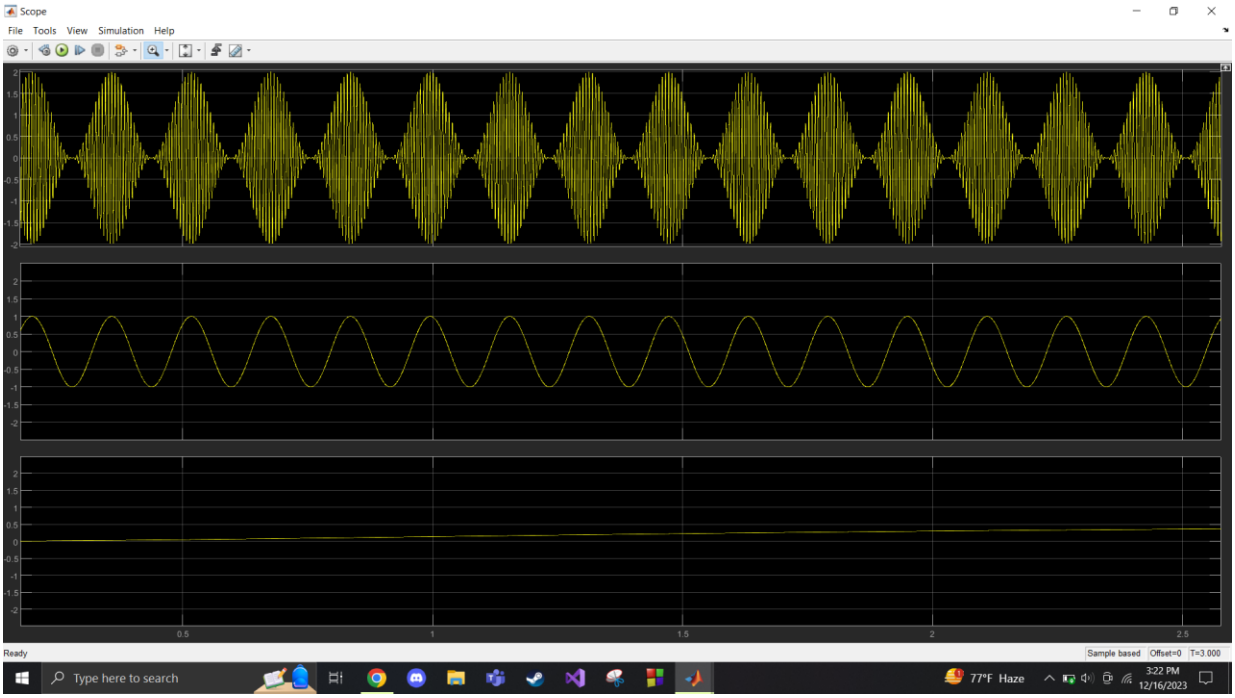

Figure 4: Modulated signal, Message signal and Demodulation si