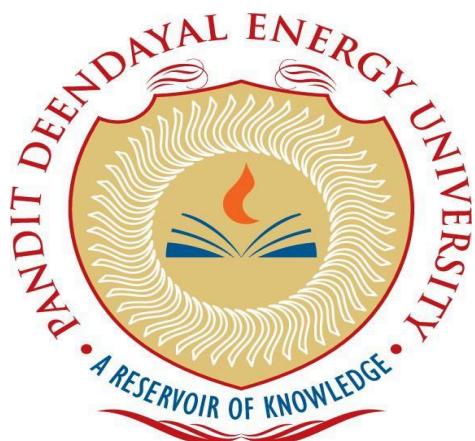


**PROJECT REPORT**  
DESIGN AND IMPLEMENT FSK FOR ARBITRARY 8-BIT DATA  
MODULATION AND DEMODULATION

**SUBMITTED BY**  
KALRAV MISTRY (23BEC124)  
MUKUND SIKARWAR (23BEC125)  
MAHI PATEL (23BEC126)  
SARANSH BANSAL (23BEC127)

**SUBJECT**  
DIGITAL COMMUNICATIONS LAB

**SUBMITTED TO**  
DR. DEVOLINA ADHIKARI



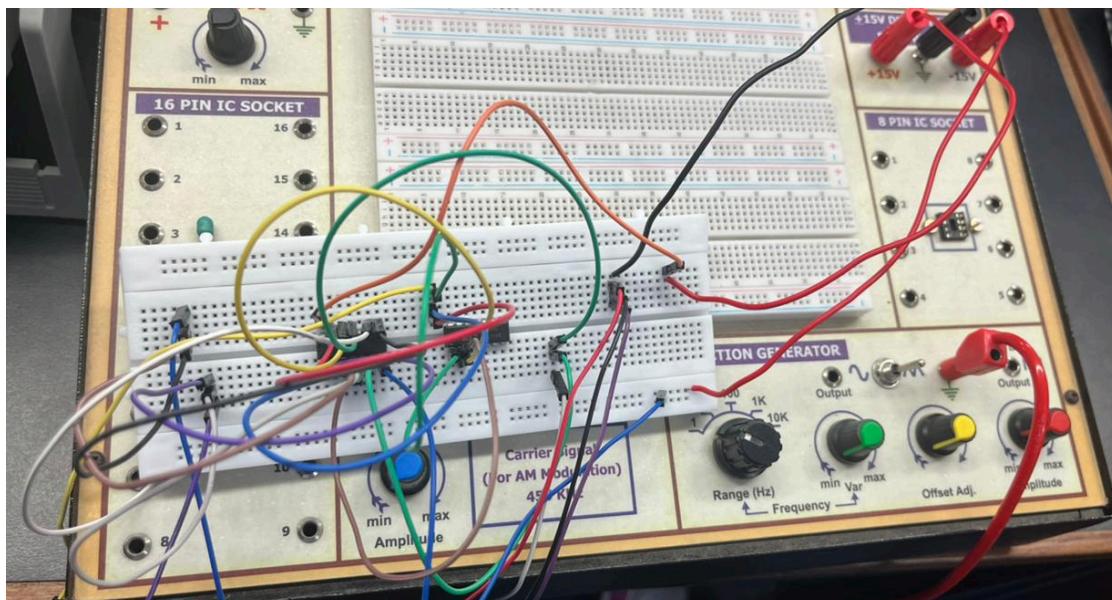
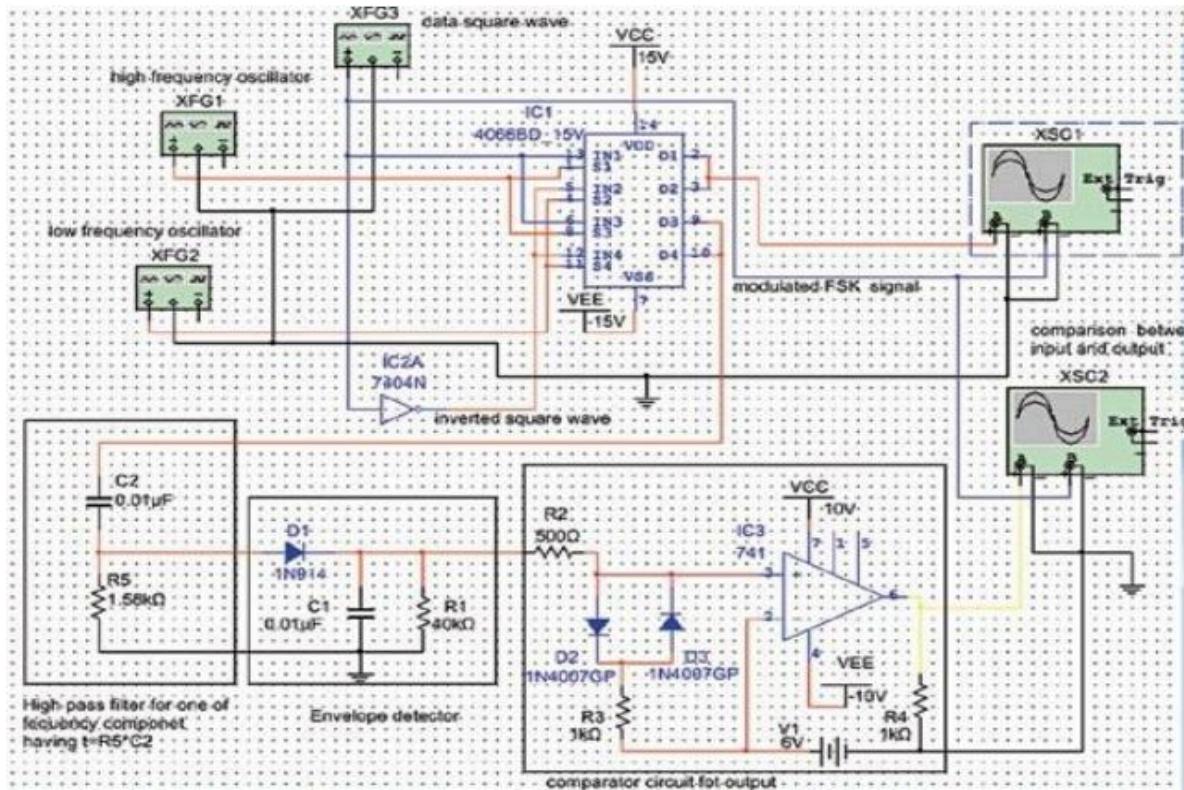
**DEPARTMENT OF ELECTRONICS AND COMMUNICATION ENGINEERING**  
**SCHOOL OF TECHNOLOGY**  
**PANDIT DEENDAYAL ENERGY UNIVERSITY, GANDHINAGAR**  
**NOVEMBER 2025**

## **Group Photo:**

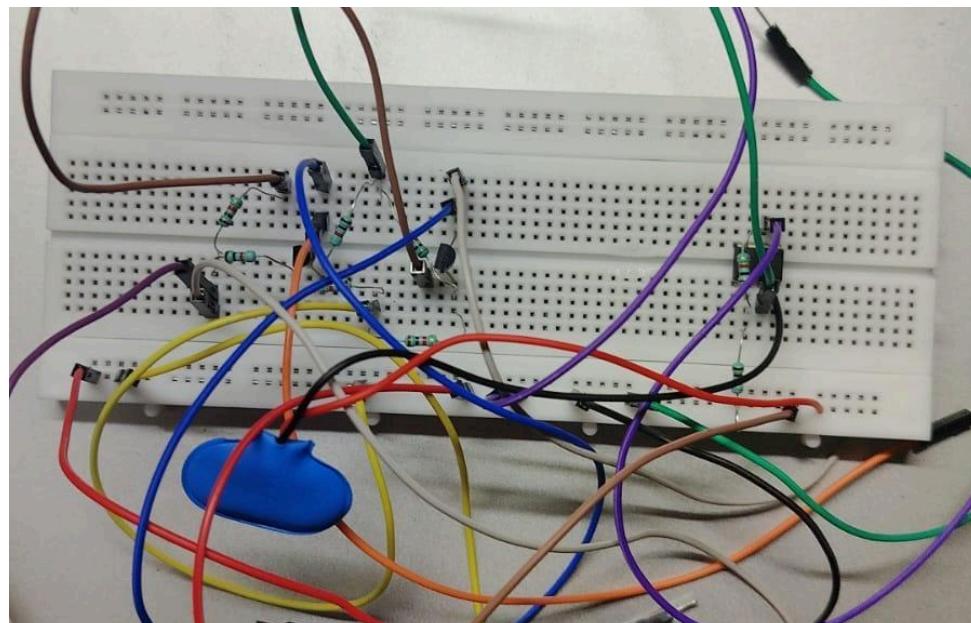
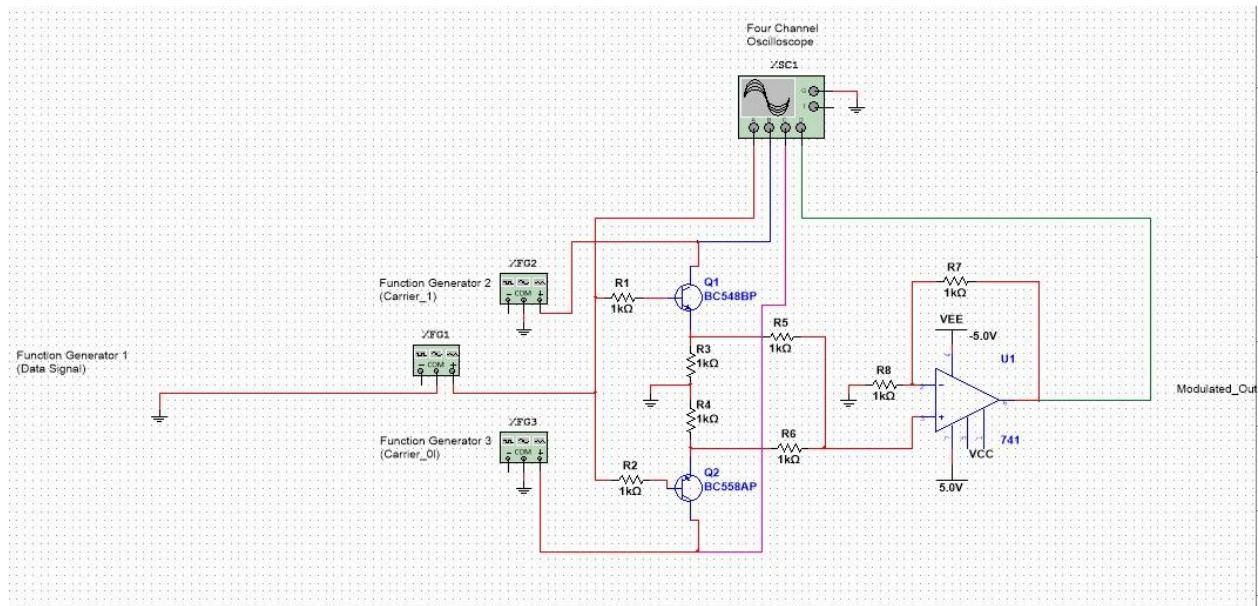


Standing from left- Kalrav Mistry,Mahi Patel , Saransh Bansal and Mukund Sikarwar

## Circuit of MODULATION (1) [Hardware & Software]

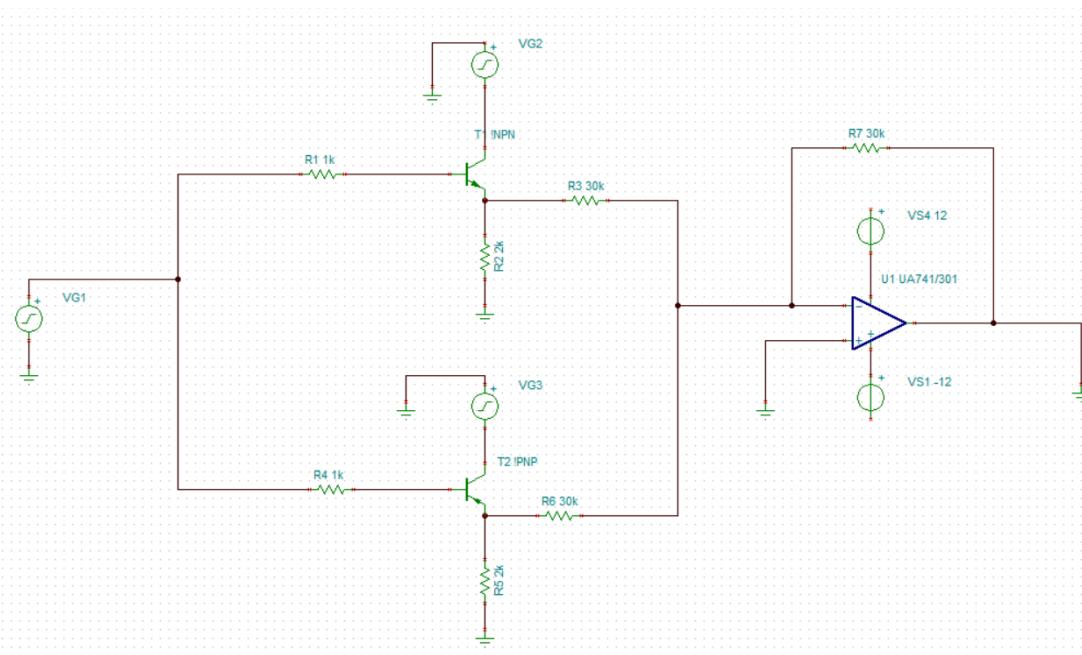
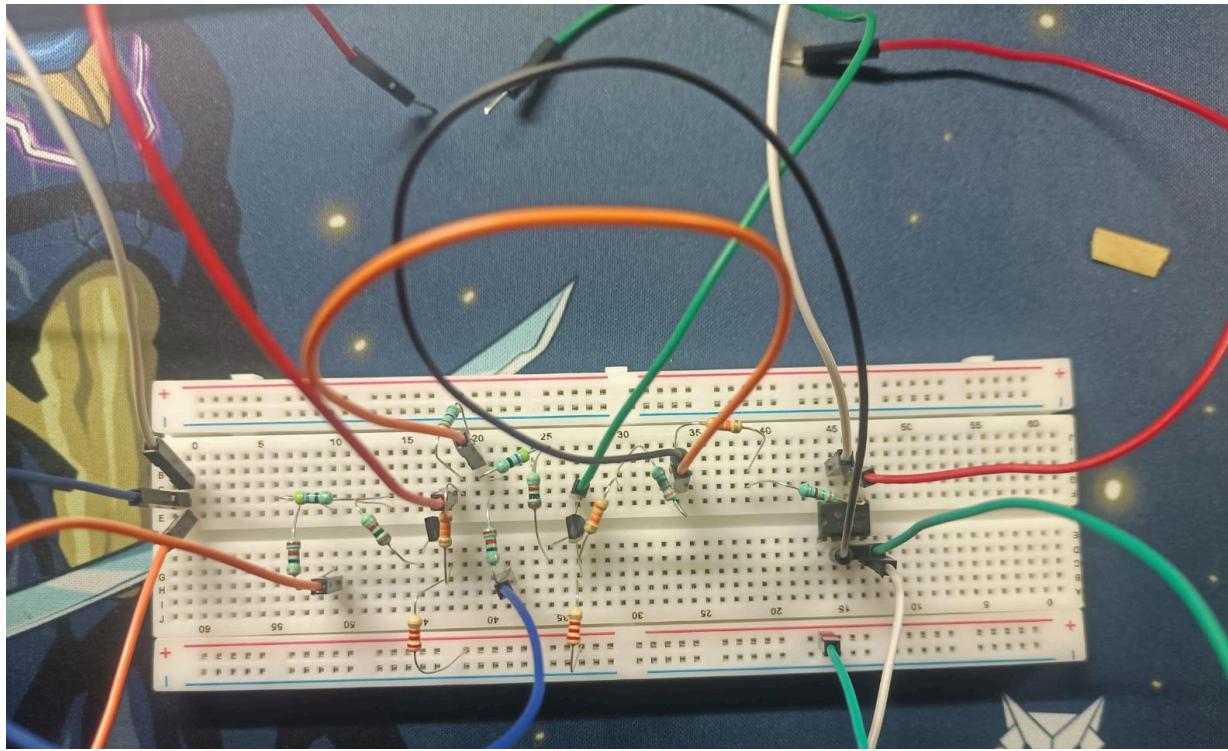


## Circuit of Modulation (2) [Hardware] and [ Software]

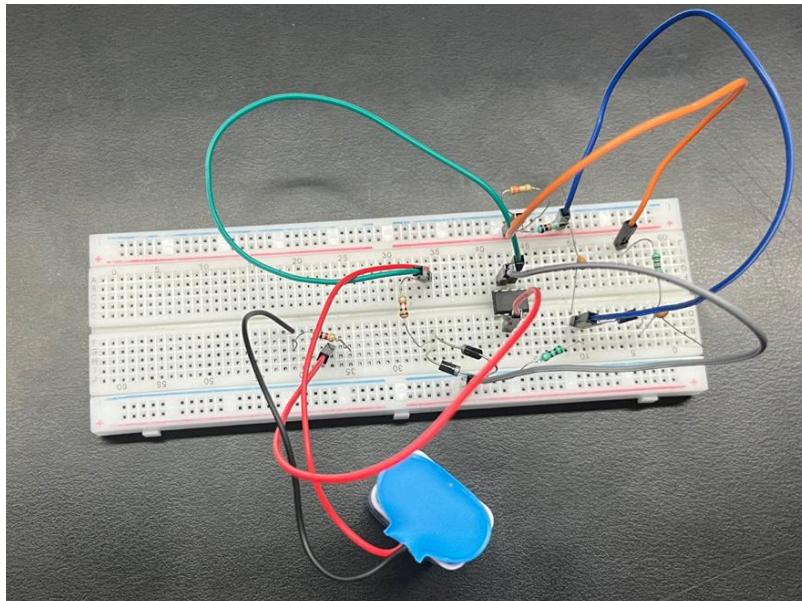


## Final Circuit of Modulation (3) [Hardware & Software]

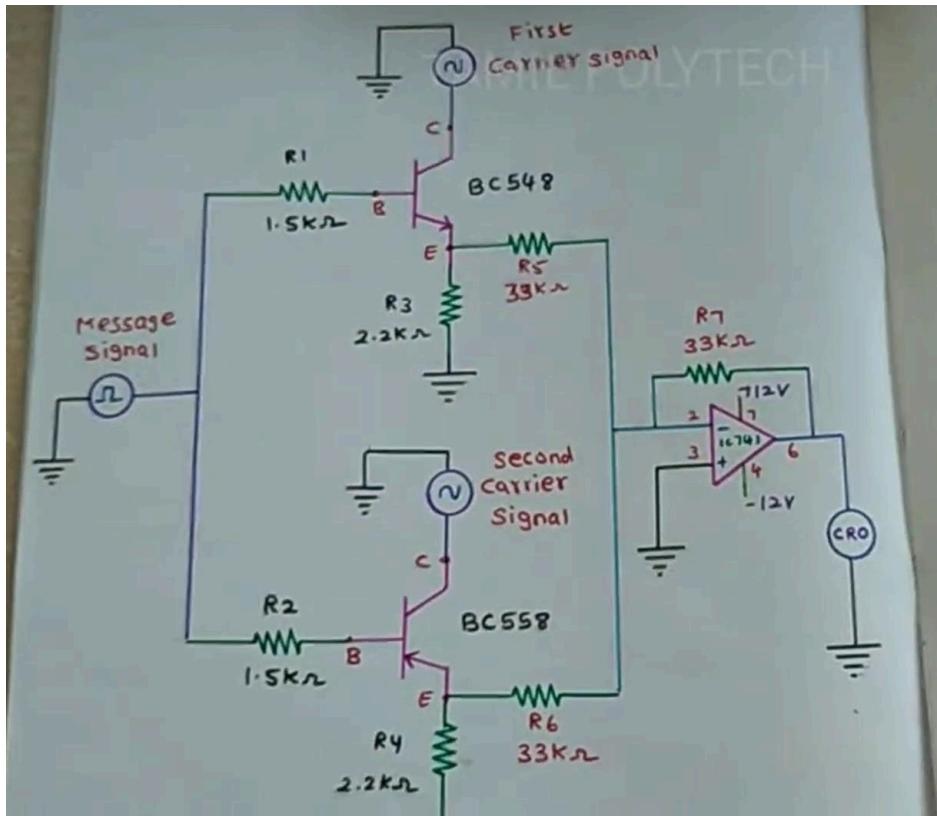
## Hardware Circuit



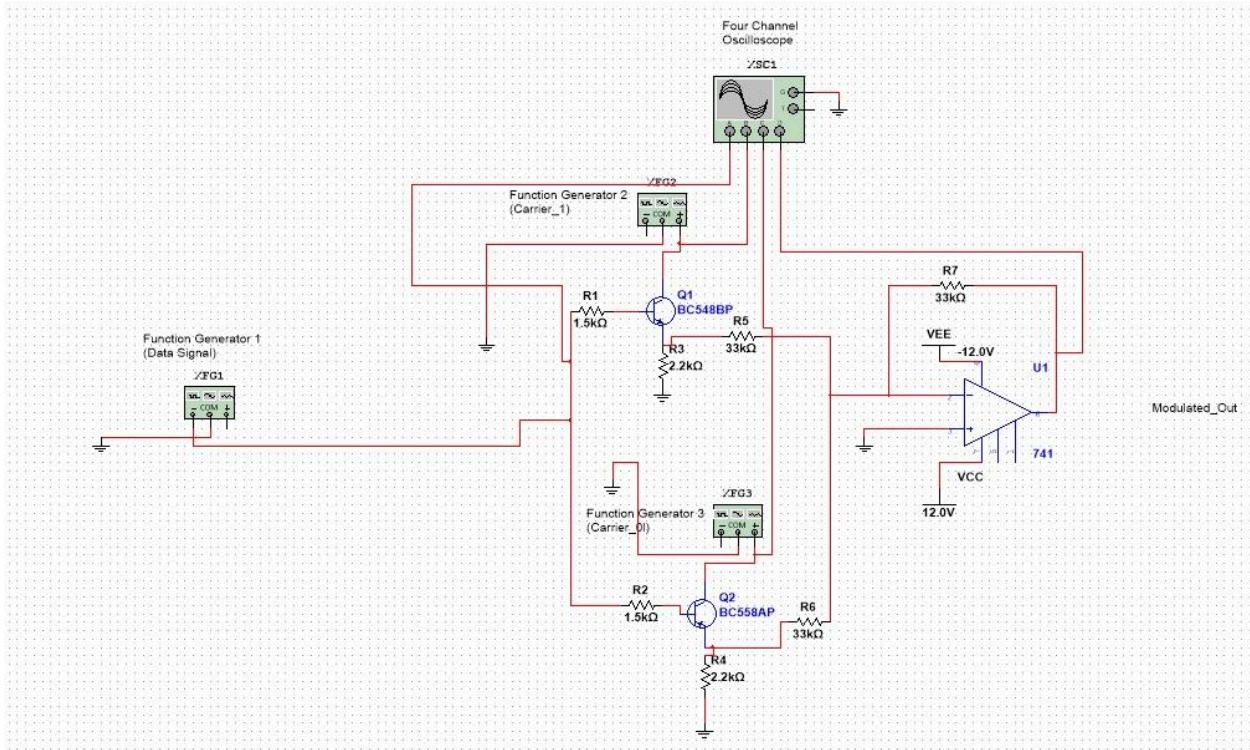
## Circuit of Demodulation [Hardware]



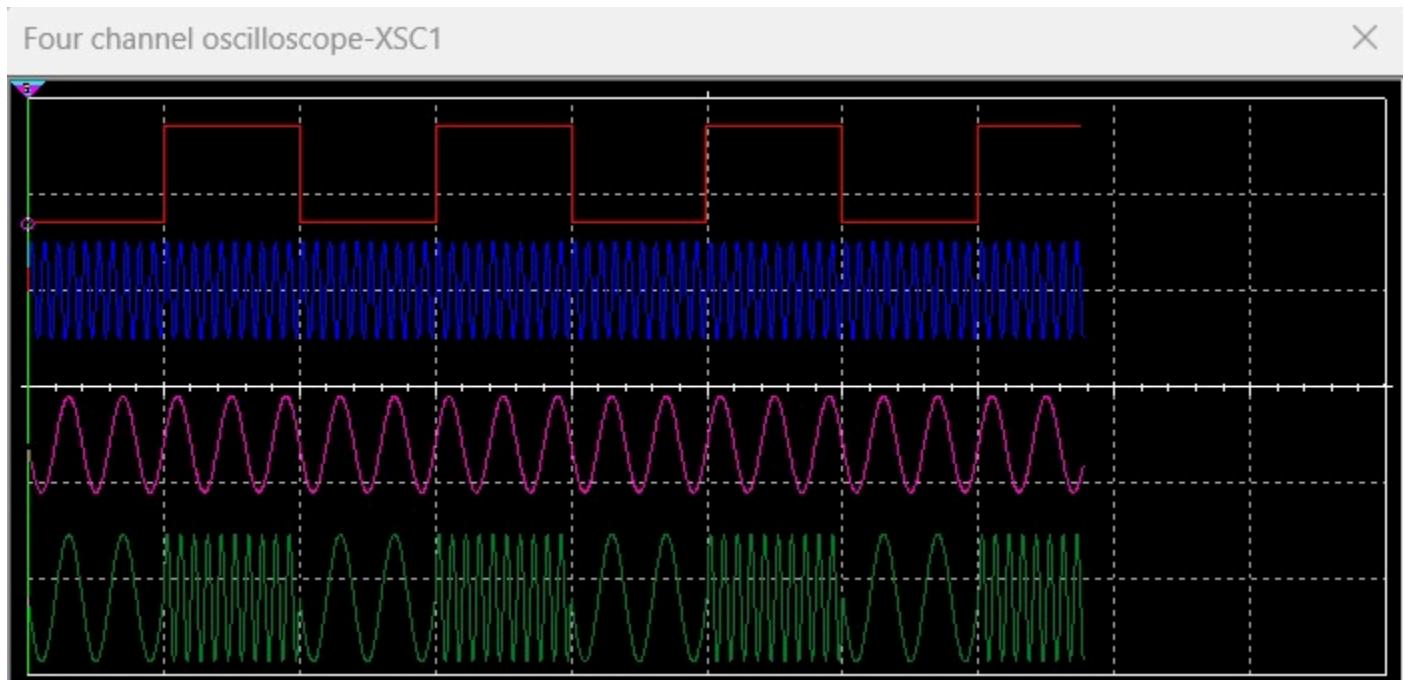
## Circuit Diagram of MODULATION and WAVEFORM (FINAL IMPLEMENTATION)



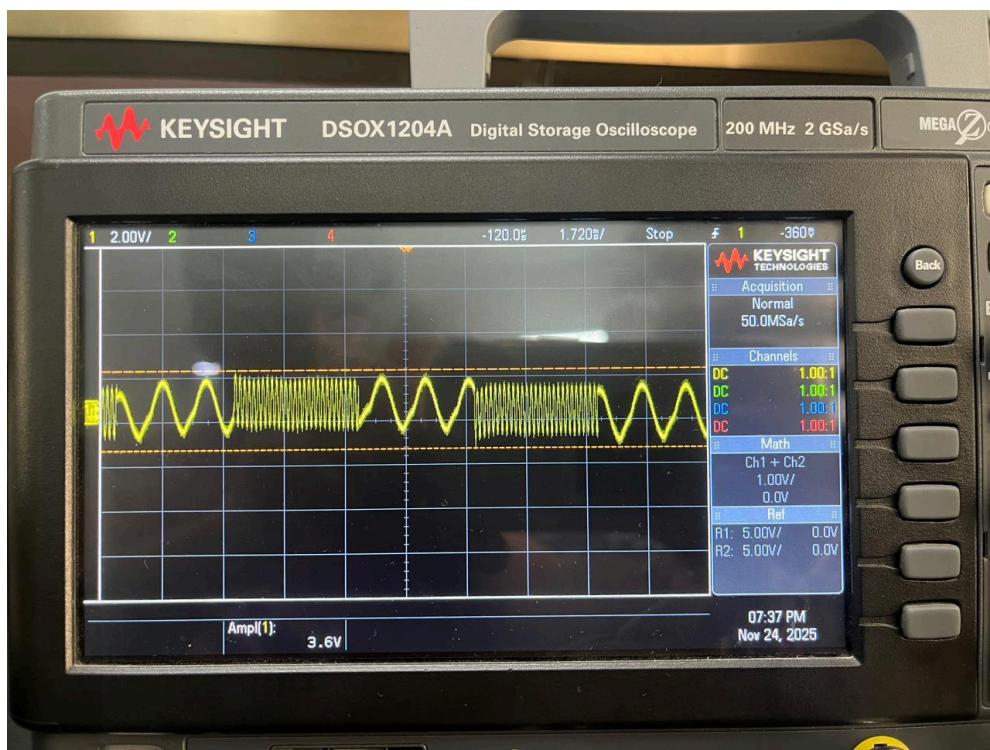
## Modulation Circuit implemented on Multisim



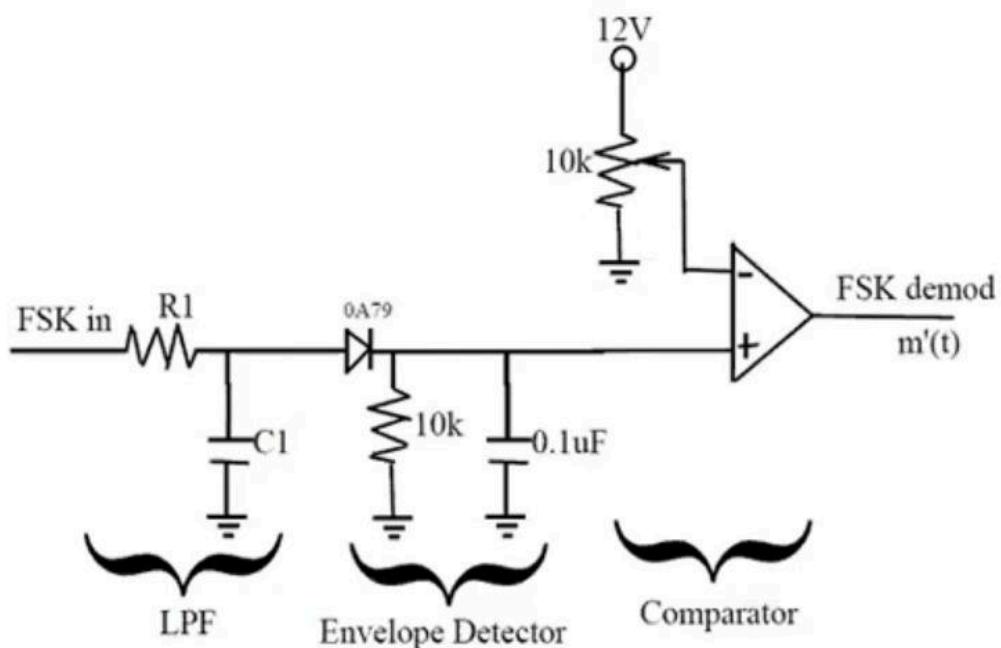
## Software Output on Multisim



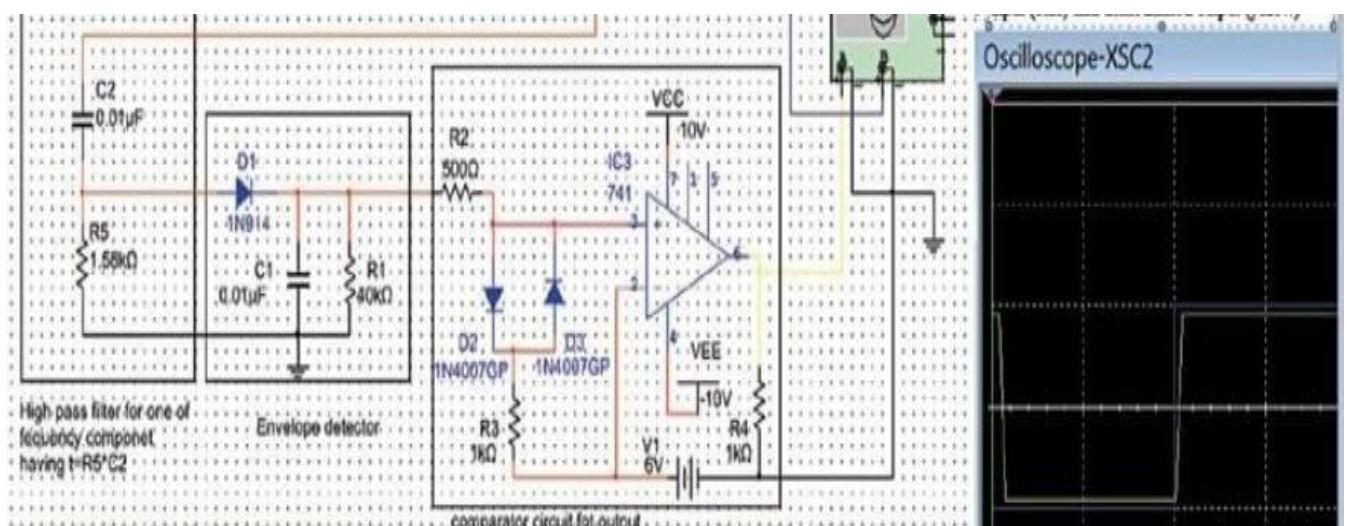
## Hardware Output on DSO



## Circuit Diagram of DE-MODULATION and WAVEFORM



## Demodulation circuit and Output on Multisim



## **FSK Demodulation Binary Output**

