

# Indian Institute of Information Technology Allahabad

## Department of Electronics and Communication Engineering

Course Name: Digital Communication

### EXPERIMENT NO: 8

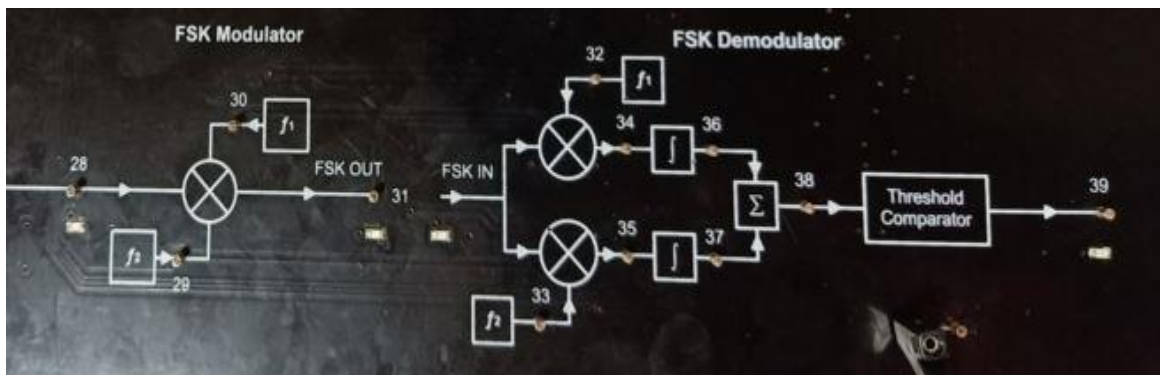
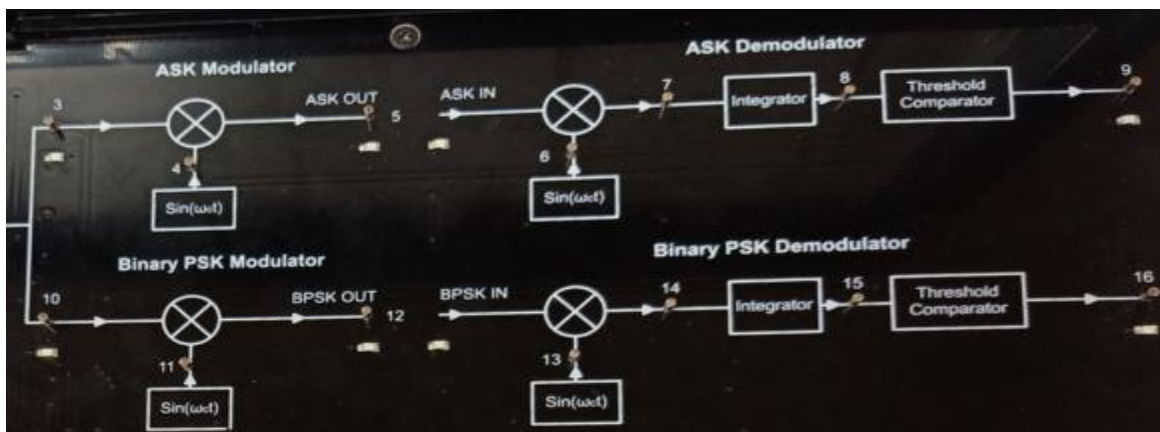
**Objective/Aim** – Study and analysis of the ASK, BPSK, and FSK modulation schemes.

#### Setup requirement -

- TechBook Board 2807
- Power Supply
- DSO
- Test Probe

**Theory** – Amplitude phase shift keying (ASK) or On/Off keying (OOK) is a form of modulation that represents digital data as variation in the amplitude of a carrier wave. The amplitude of an analog carrier signal varies in accordance with the bit stream (modulating signal), keeping frequency and phase constant. Whereas, in binary phase shift keying (BPSK), phase of the carrier signal is shifted by 180 degrees with the change in digital bit, keeping frequency and amplitude constant. Similarly, in frequency shift keying (FSK), we change the frequency in response to bit information.

#### Block Diagram/ Circuit Diagram -



### Observation table -

Modulation Schème	Modulated Output	De-modulated output
ASK		
BPSK		
FSK		

**Results -** By using the **2807 kit**, we observe input data at TP2, 1-bit encoded input data at TP3, modulated output at TP5, and integrator output at TP7. Similarly, we observe output at different terminal point for PSK and FSK. Accordingly, modulated and integrator output graphs are plotted in observation table.

### Precautions-

1. Switch off the experimental kit during making connections.
2. Use proper main cord.
3. Ground the instrument.
4. Use in proper atmosphere.