**1. From [2], perform experiments 1 to 9 on Quadrature Phase Shift Keying (QPSK). The page numbers for the same are given in the table of contents. Youneed to follow the procedures given in the manual and observe the output as suggested in the observations. See the instructions below for preparing the report.**

**solution:**

Results for the above experiments

**Experiment 1:**

Objective:

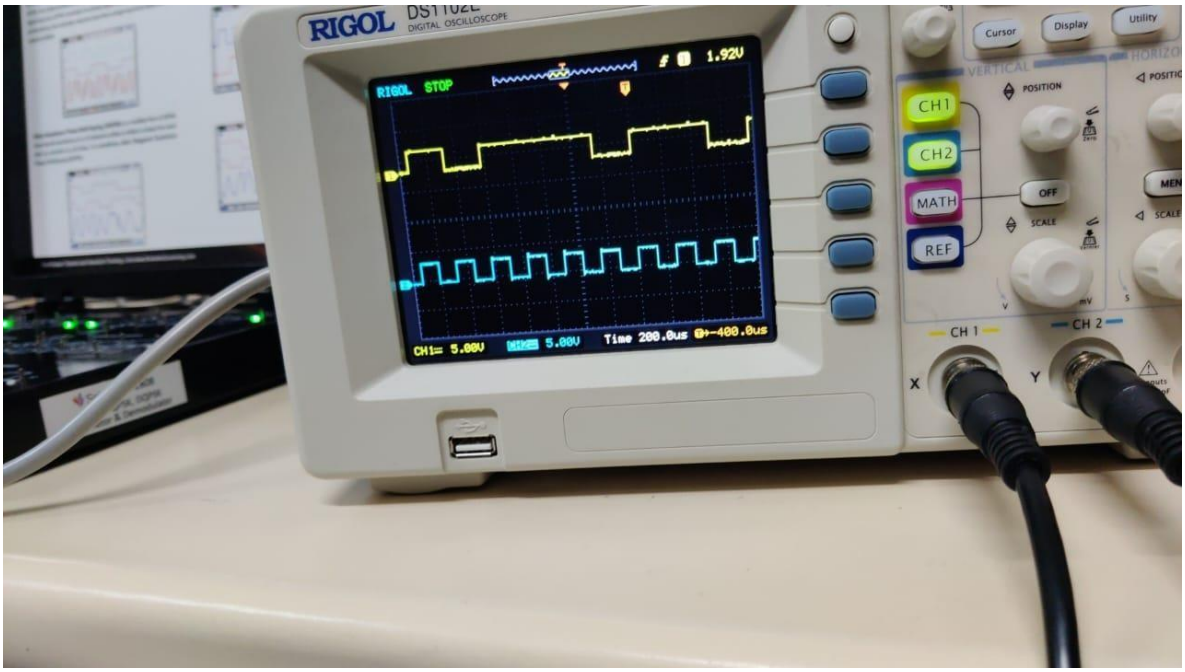
- Study and analysis of bit pattern generation.
  - 8 bit, 16 bit, 32 bit and 64 bit.
- Observe bit pattern generation at different data rate i.e.
  - 2 KHz, 4 KHz, 8 KHz and 16 KHz.

Data Bit: 32 Bits

Data Rate: 2 KHz

D1: TP1

D7: TP2

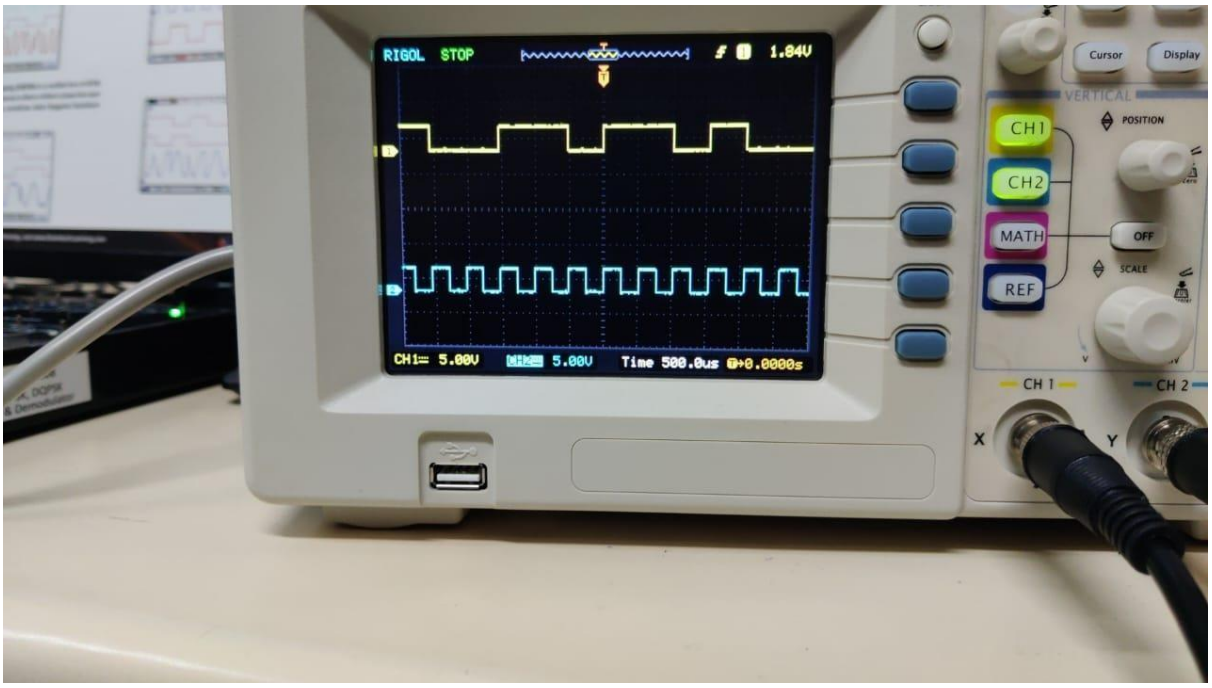


Data Bit: 32 Bits

Data Rate: 4 KHz

D1: TP1

D7: TP2

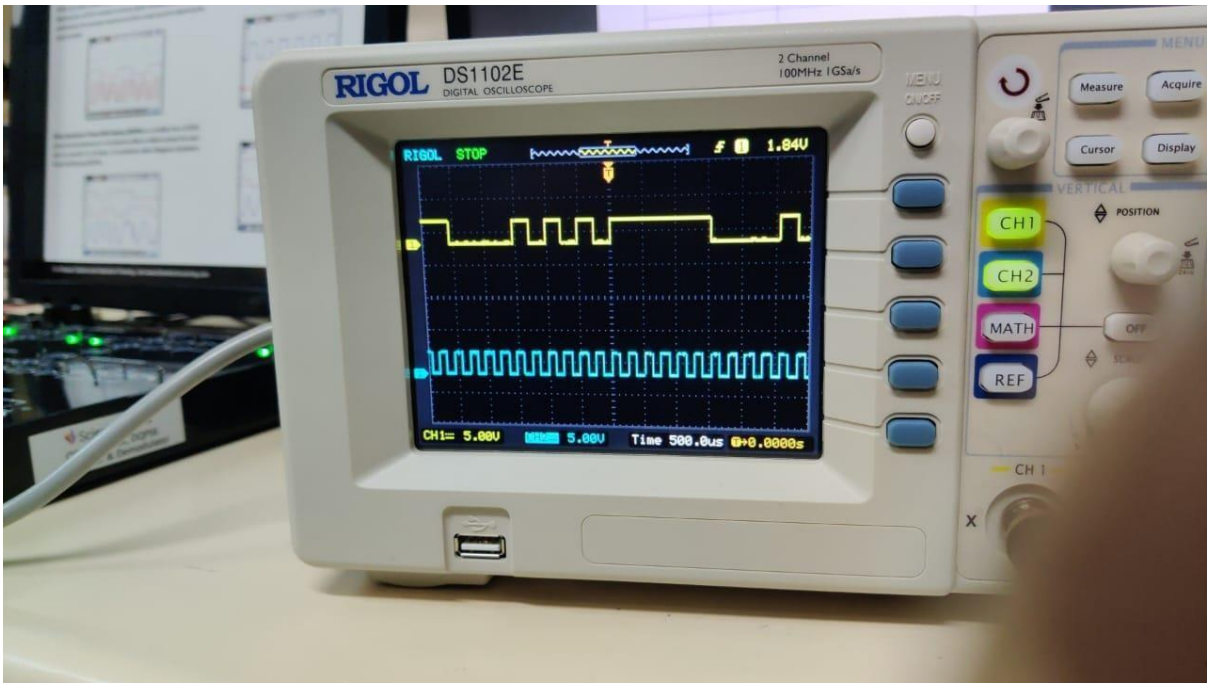



Data Bit: 16 Bits

Data Rate: 4 KHz

D1: TP1

D7: TP2



**Experiment 2:**

Objective:

- Study and analysis of 2-bit encoding.
    - I-Channel
    - Q-Channel

Data Bit: 8 Bit

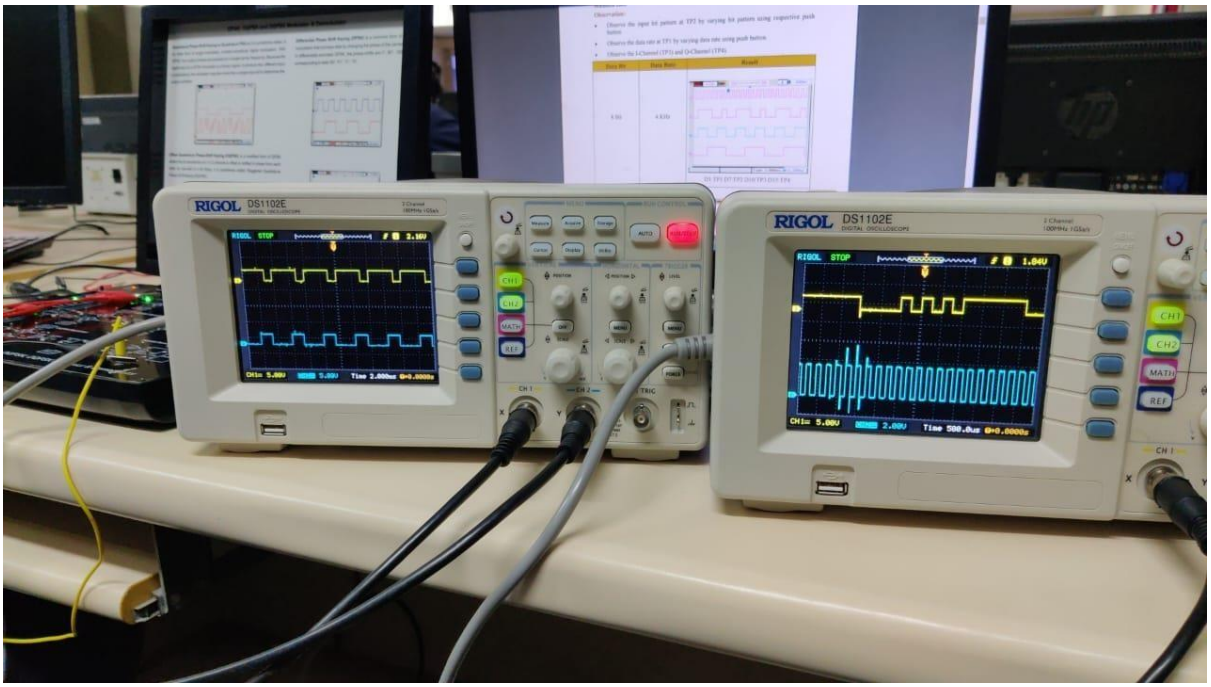
Data Rate: 4 KHz

D1: TP1

D7: TP2

D10: TP3

D15: TP4



Data Bit: 32 Bit

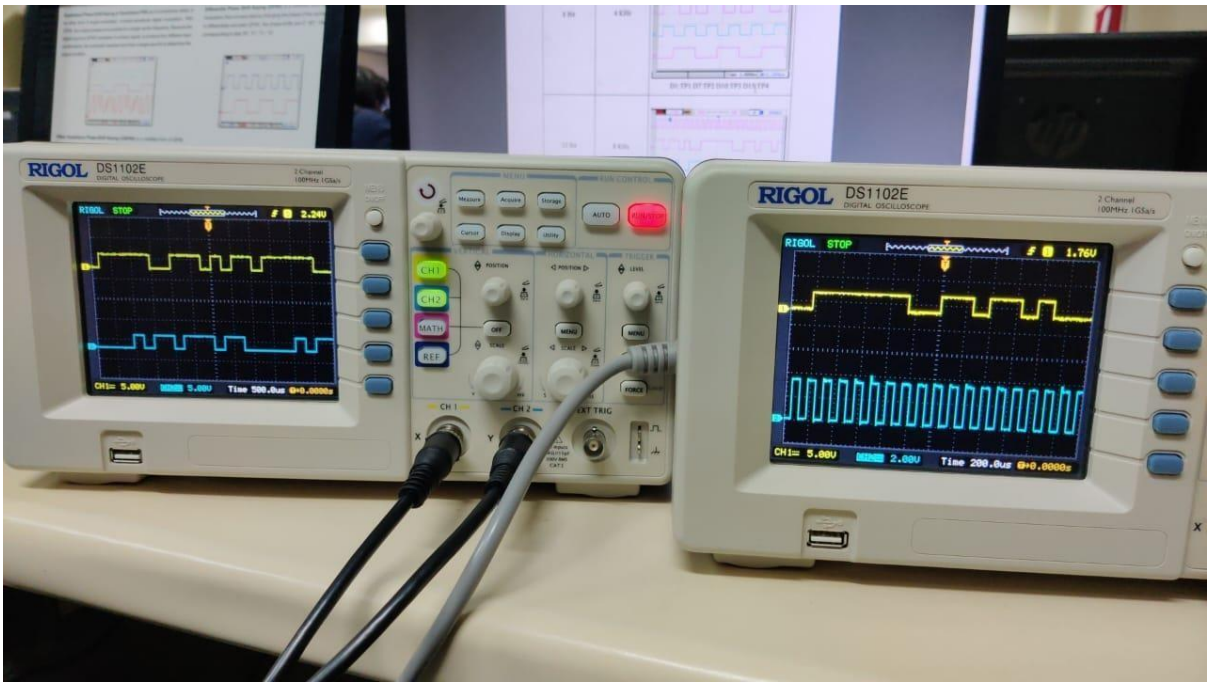
Data Rate: 8 KHz

D1: TP1

D7: TP2

D10: TP3

D15: TP4




Data Bit: 64 Bit

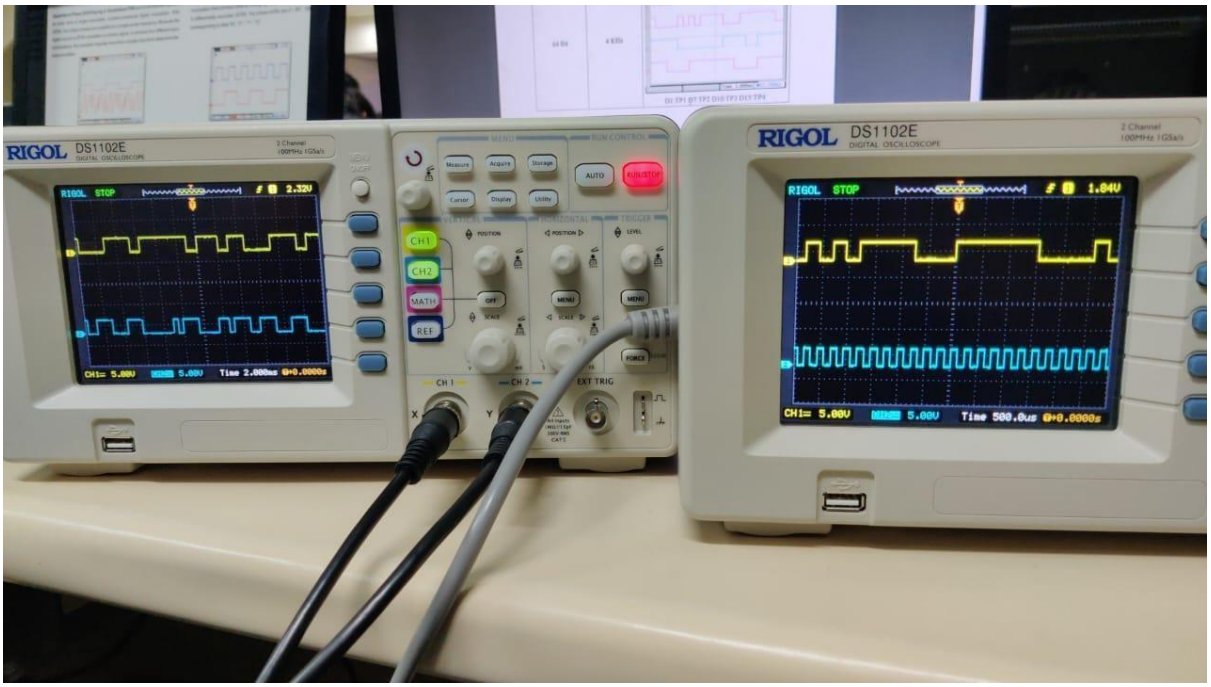
Data Rate: 4 KHz

D1: TP1

D7: TP2

D10: TP3

D15: TP4



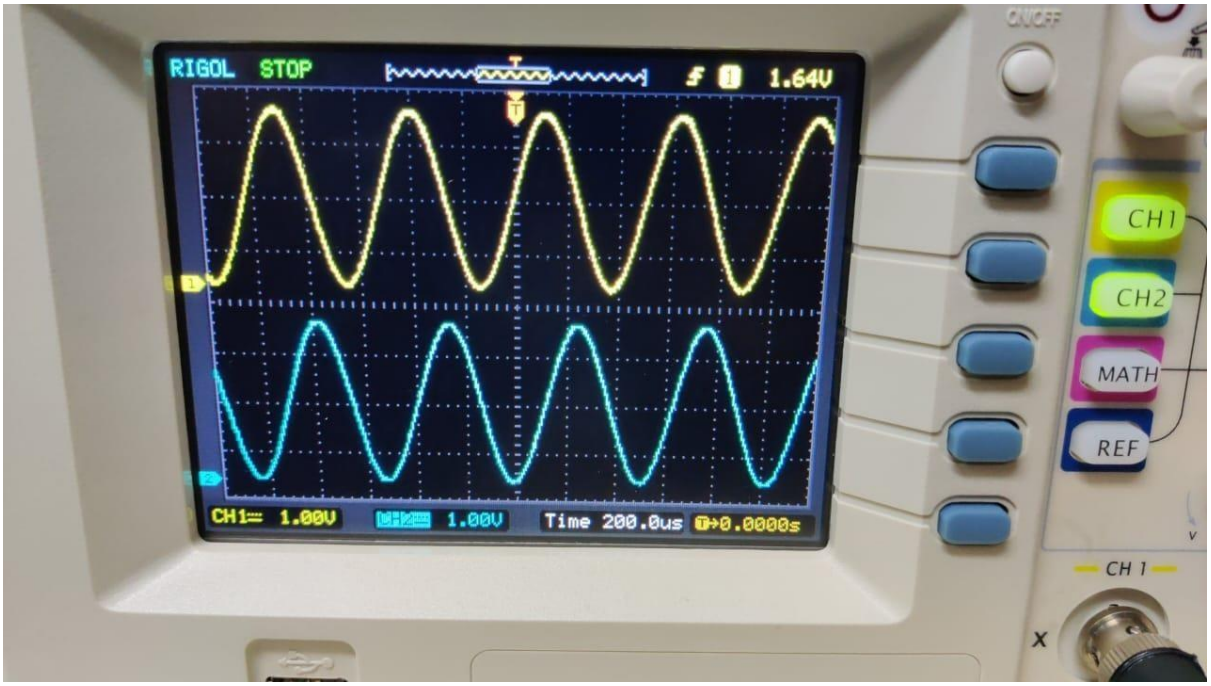

**Experiment 3:**

Objective:

- Study and analysis of carrier signal.
  - Co-sine
  - Sine

CH1: Carrier sine signal (TP6)

CH2: Carrier cosine signal (TP5)



**Experiment 4:**

Objective:

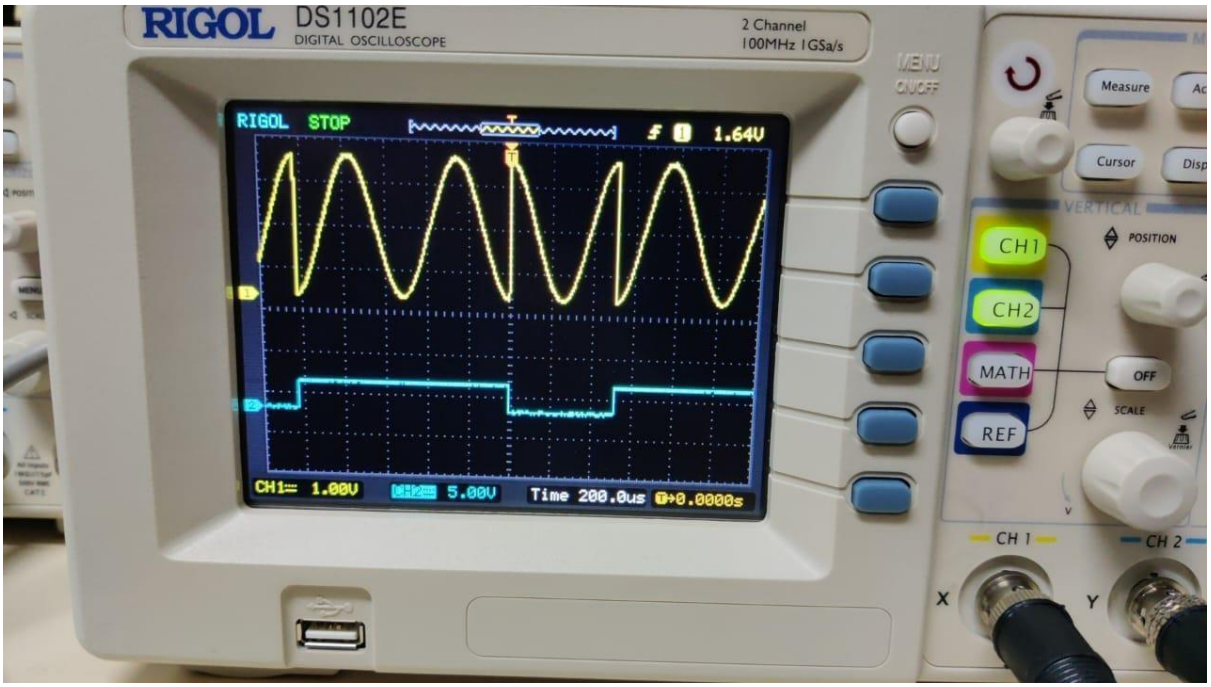
- Study and analysis of I-Channel and Q-Channel Modulation.

Data Bit: 32 Bit

Data Rate: 4 KHz

CH1: TP3

CH2: TP7

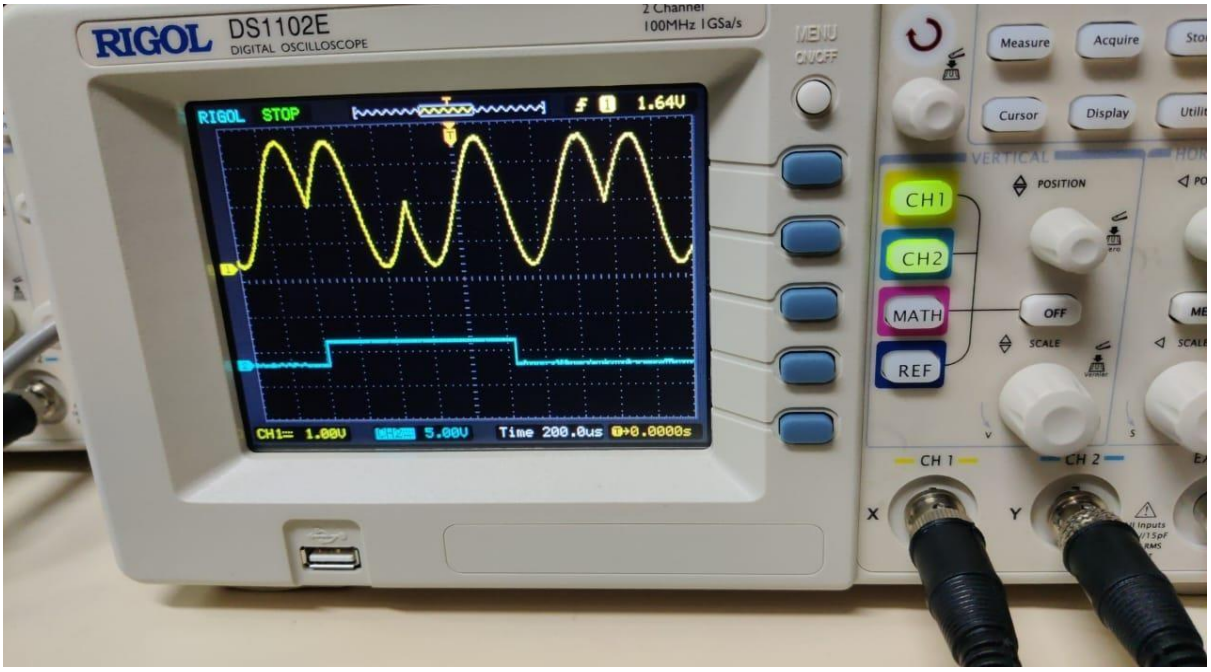



Data Bit: 32 Bit

Data Rate: 4 KHz

CH1: TP4

CH2: TP8




**Experiment 5:**

Objective:

- Study and analysis of QPSK Modulation.

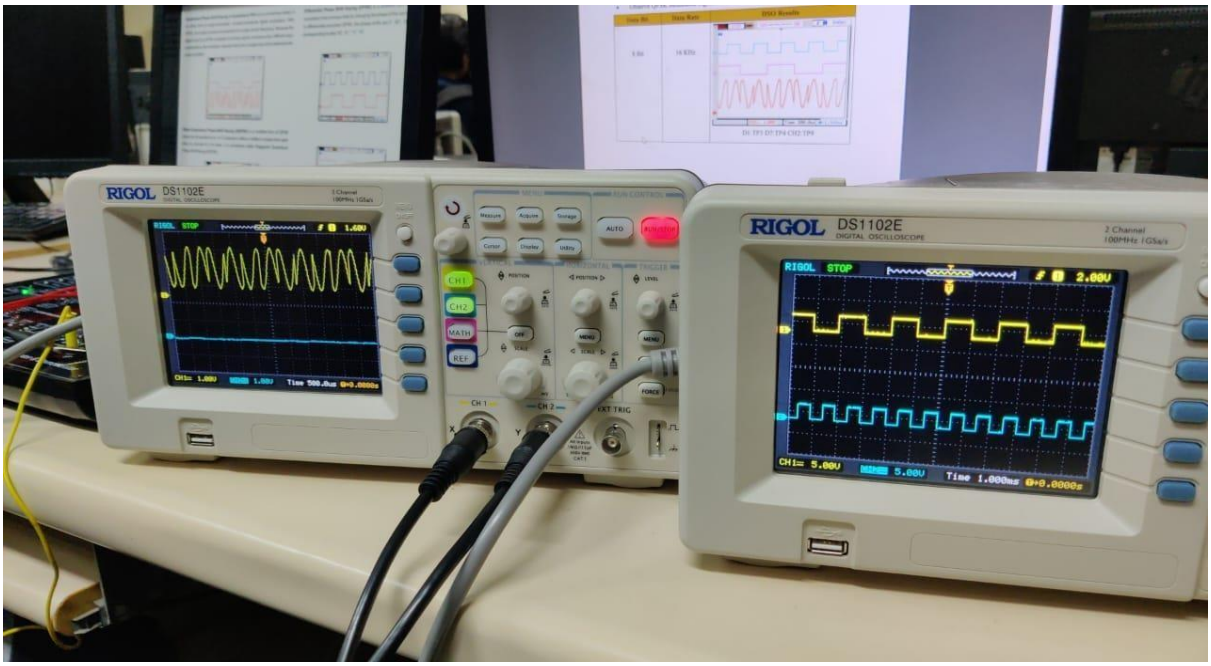
Data  Bit: 8Bit

Data Rate: 16 KHz

D1: TP3

D7: TP4

CH2: TP9



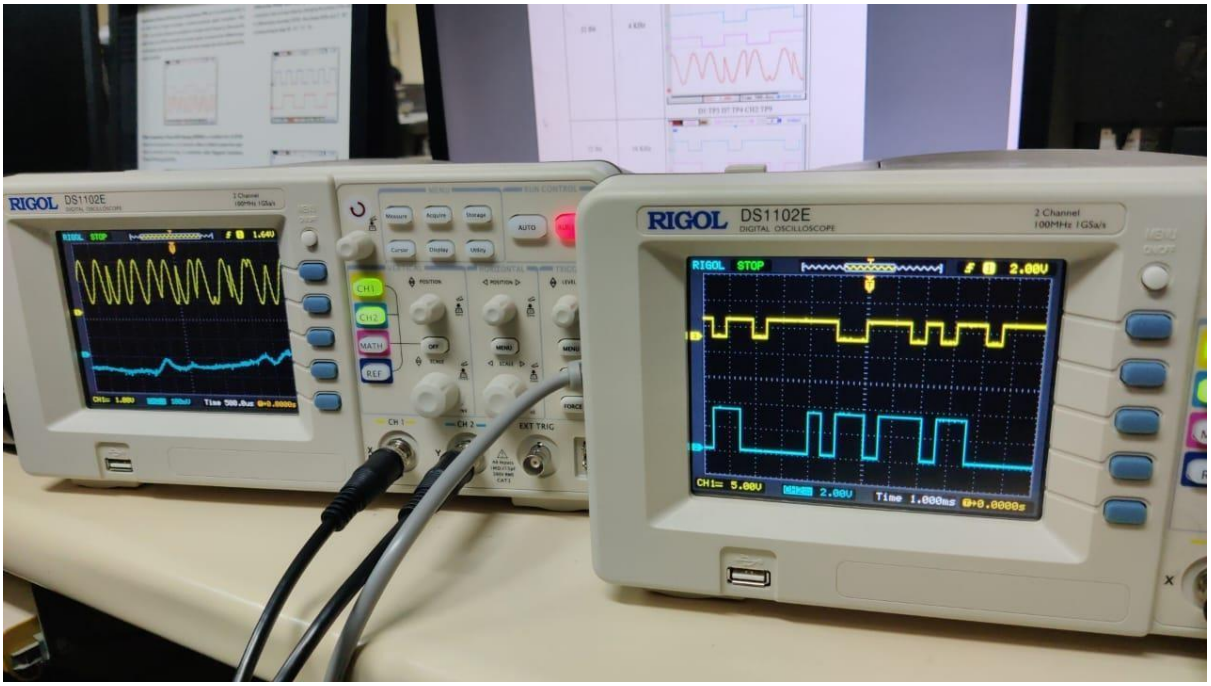
Data Bit: 32 Bit

Data Rate: 4 KHz

D1: TP3

D7: TP4

CH2: TP9



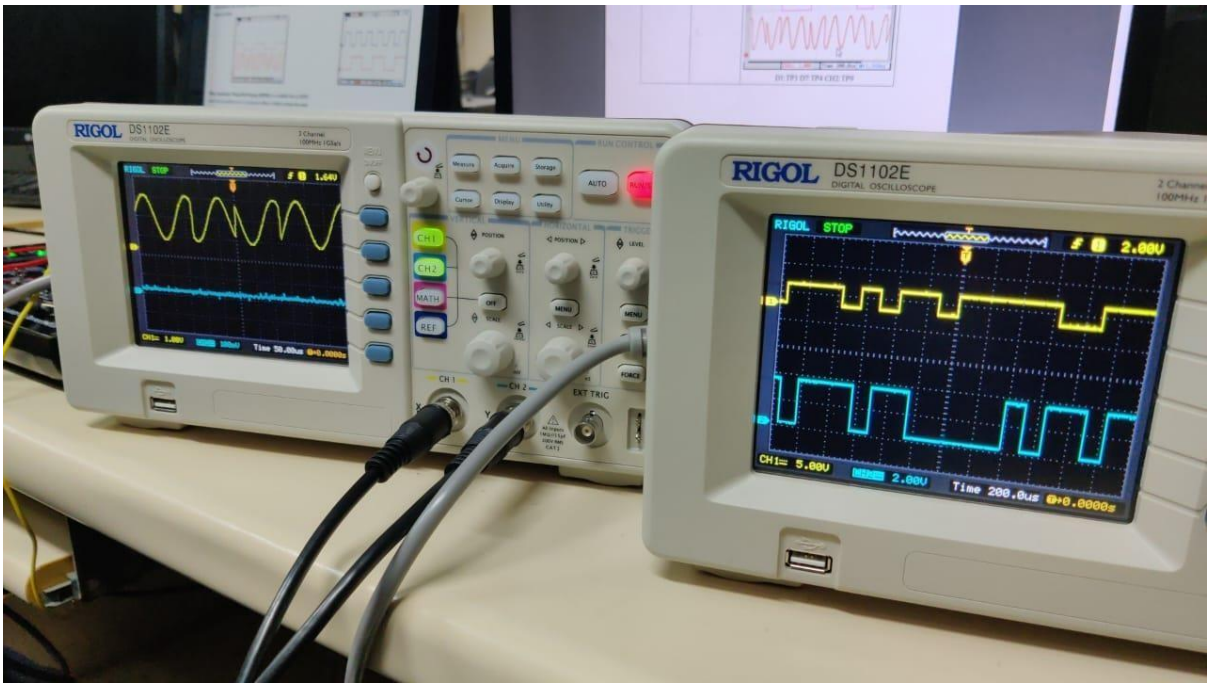

Data Bit: 32 Bit

Data Rate: 16 KHz

D1: TP3

D7: TP4

CH2: TP9




**Experiment 6:**

Objective:

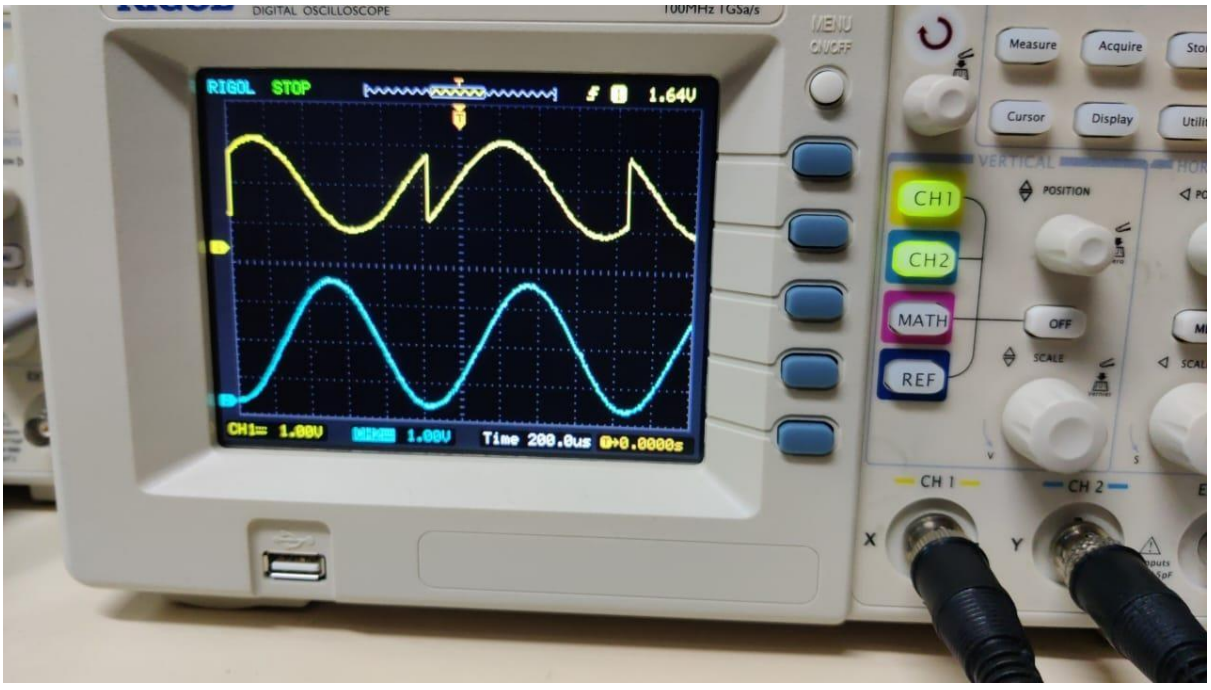
- Study and analysis of Complex Multiplier output.

Data Bit: 8Bit

Data Rate: 2 KHz

CH1: TP9

CH2: TP10

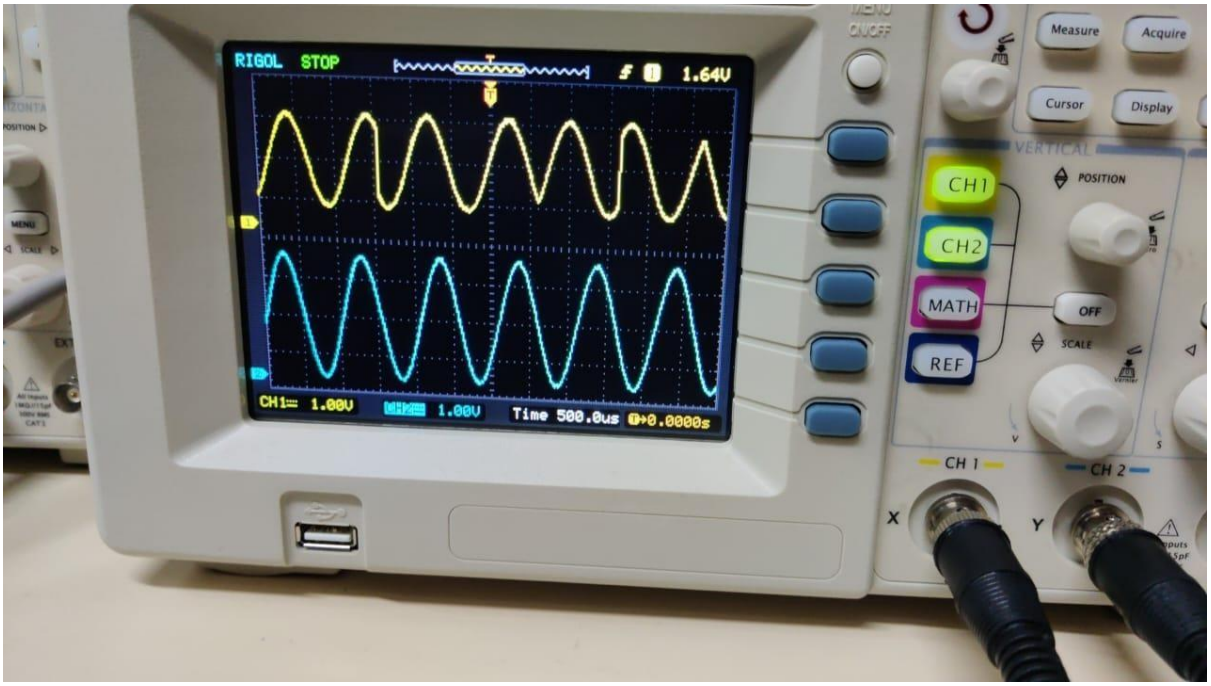


Data Bit: 16 Bit

Data Rate: 2 KHz

CH1: TP9

CH2: TP11

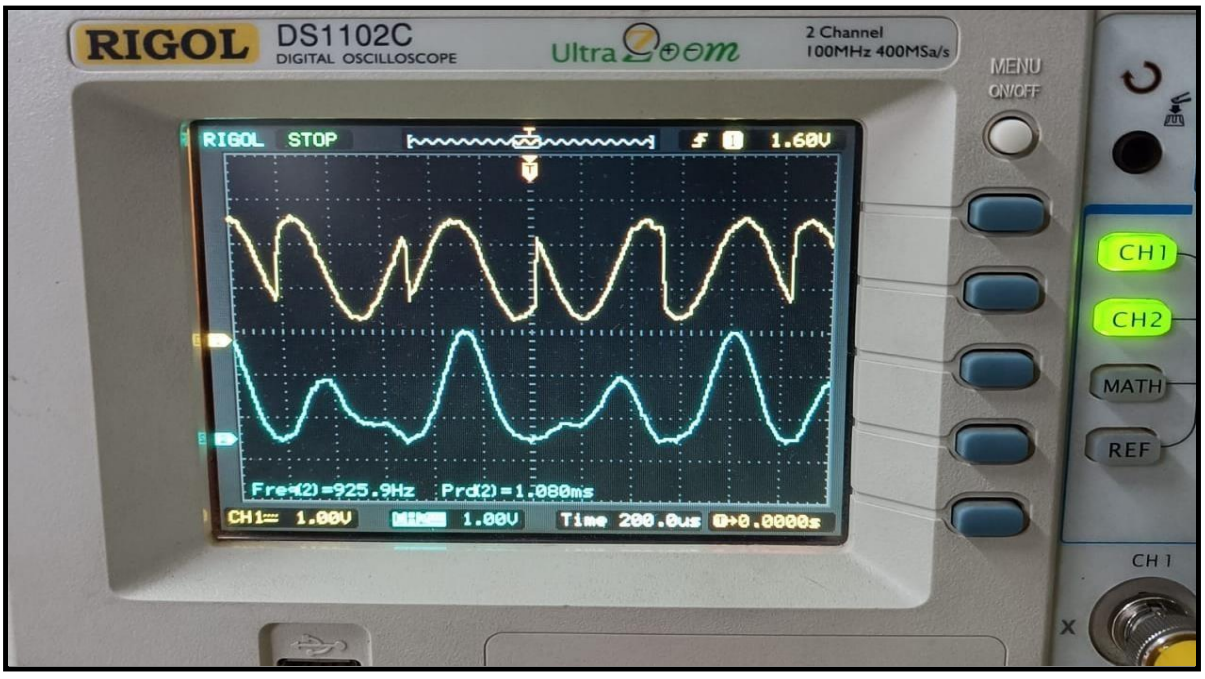



Data Bit: 8Bit

Data Rate: 4 KHz

CH1: TP9

CH2: TP12

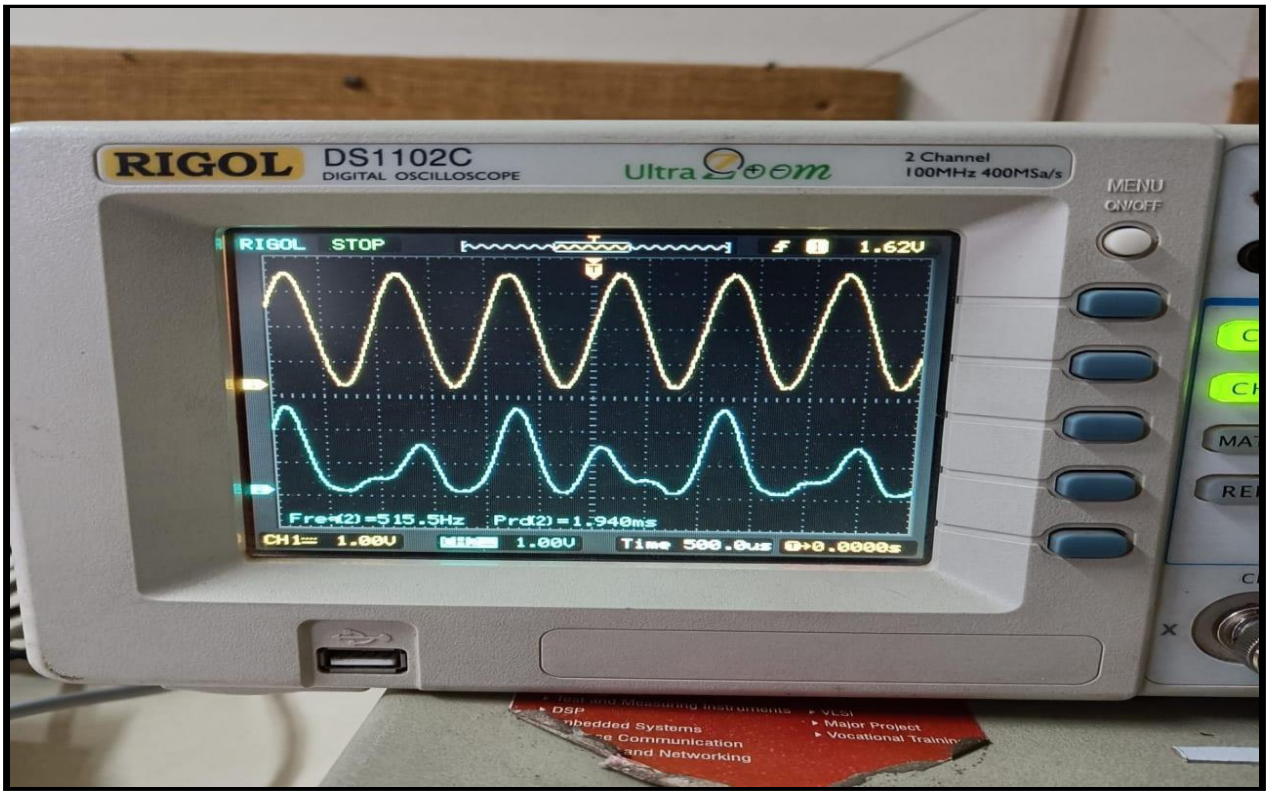


Data Bit: 8Bit

Data Rate: 2 KHz

CH1: TP10

CH2: TP12

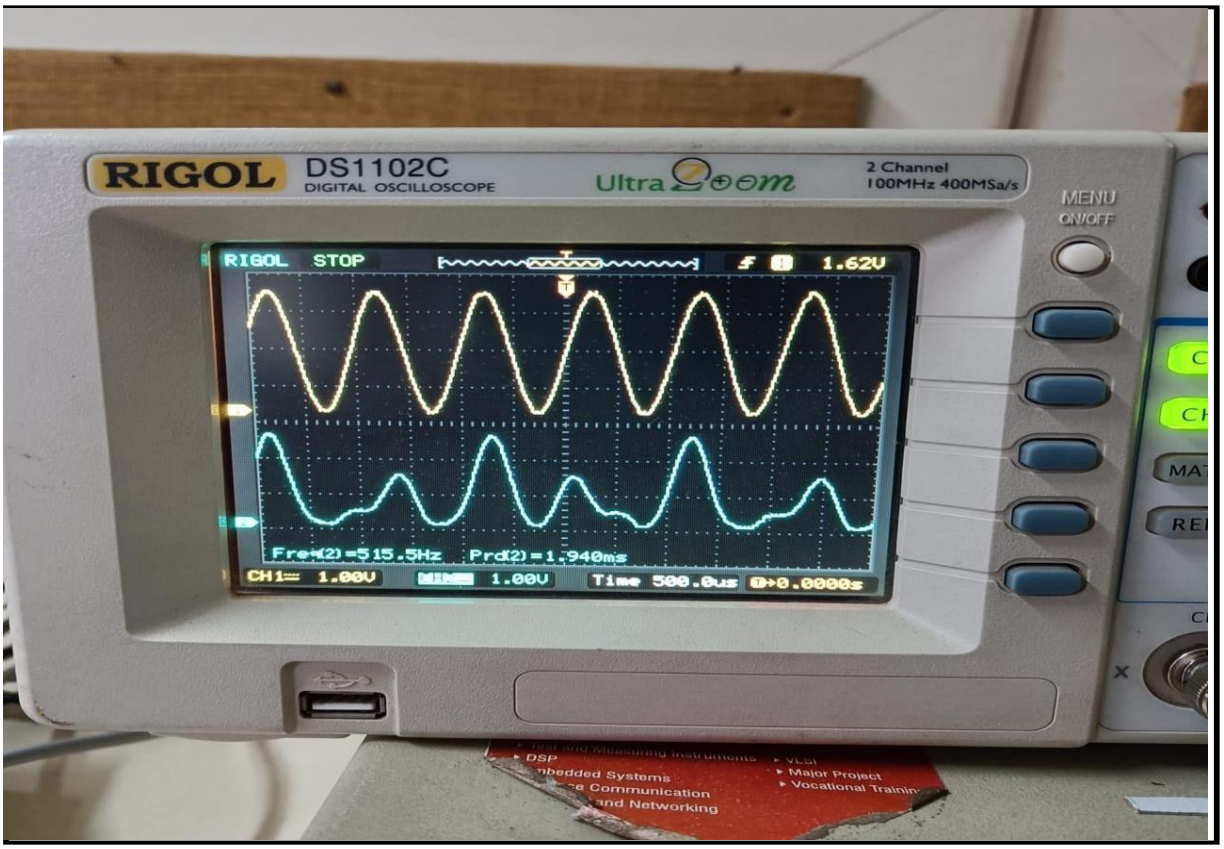



Data Bit: 16Bit

Data Rate: 2 KHz

CH1: TP10

CH2: TP12

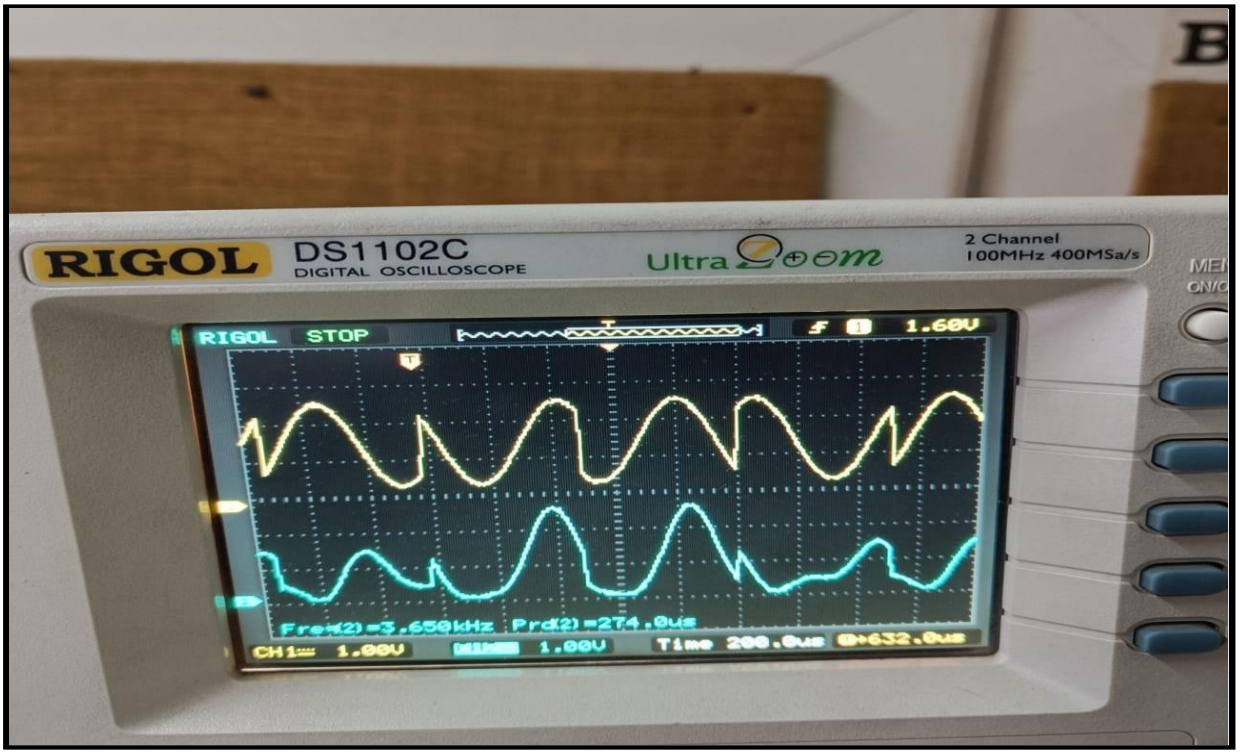



Data Bit: 8 Bit

Data Rate: 4 KHz

CH1: TP9

CH2: TP13

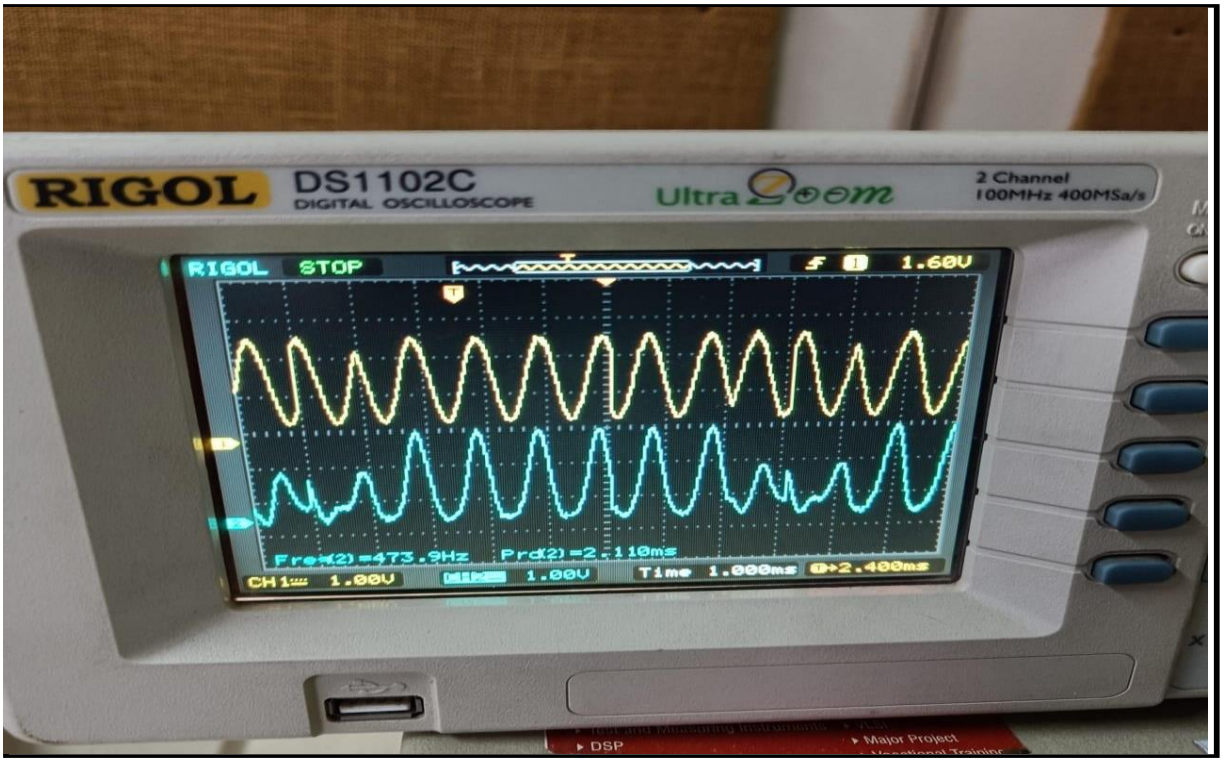



Data Bit: 16 Bit

Data Rate: 2 KHz

CH1: TP9

CH2: TP13

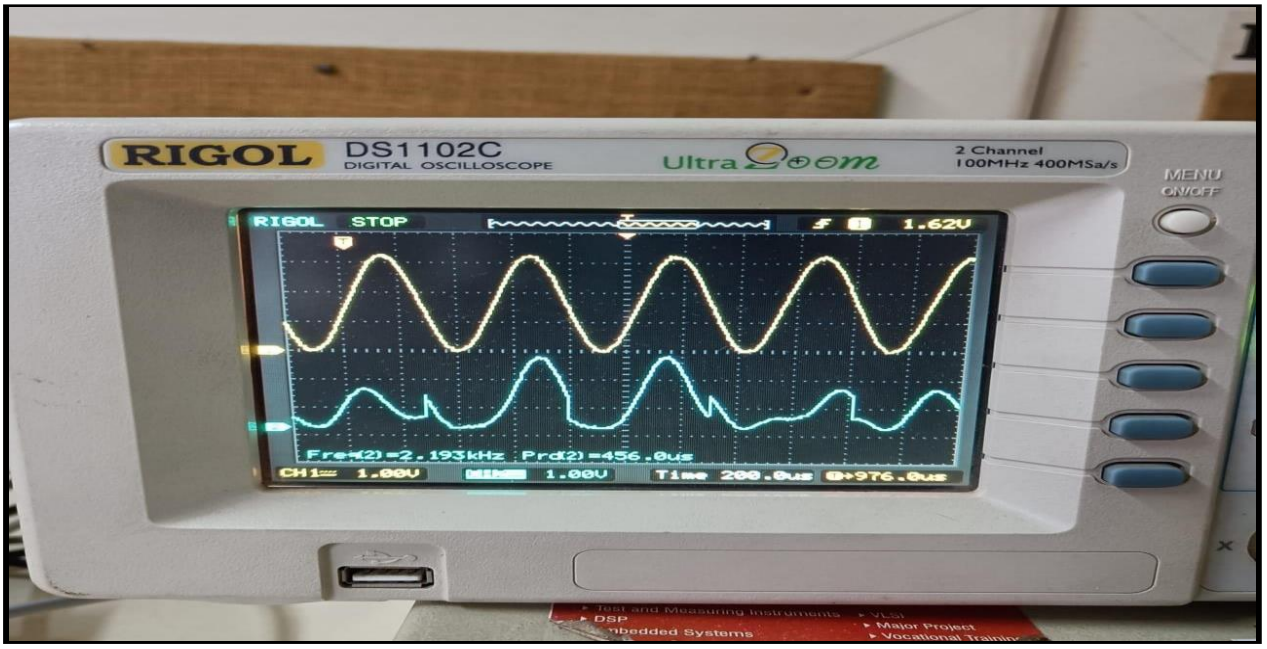


Data Bit: 8Bit

Data Rate: 4 KHz

CH1: TP11

CH2: TP13

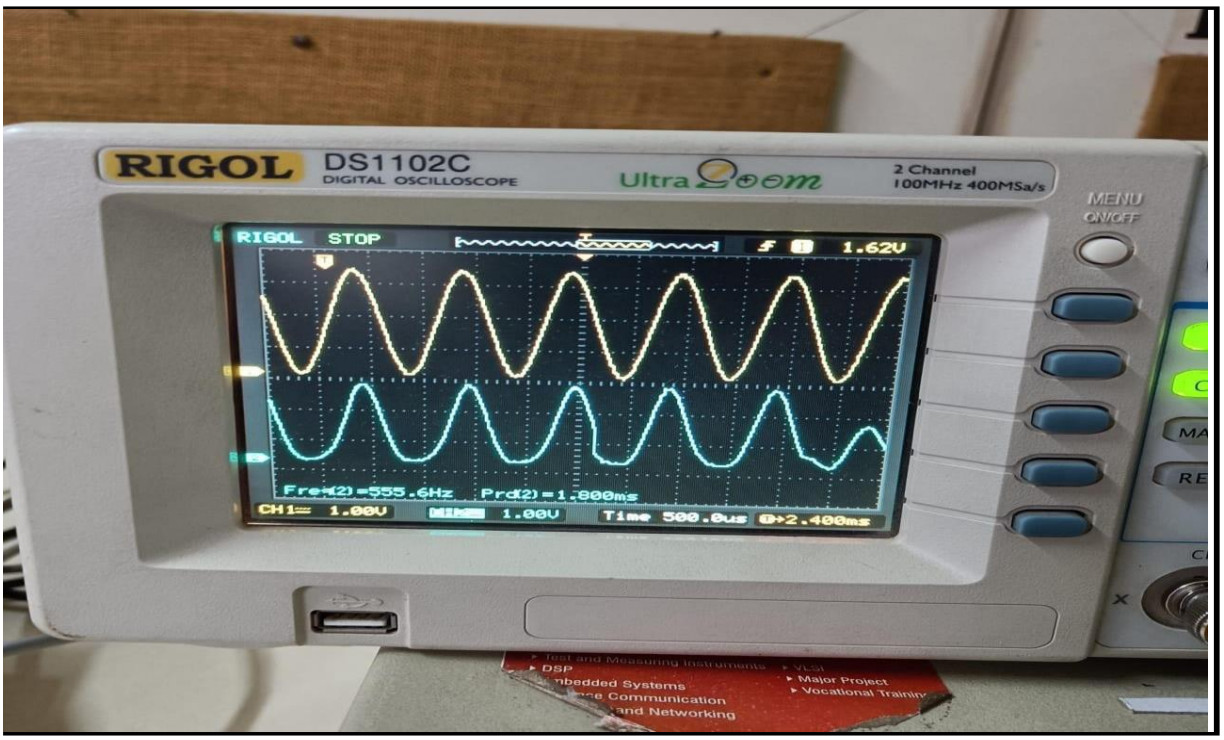



Data Bit: 16Bit

Data Rate: 2 KHz

CH1: TP11

CH2: TP13



**Experiment 7:**

Objective:

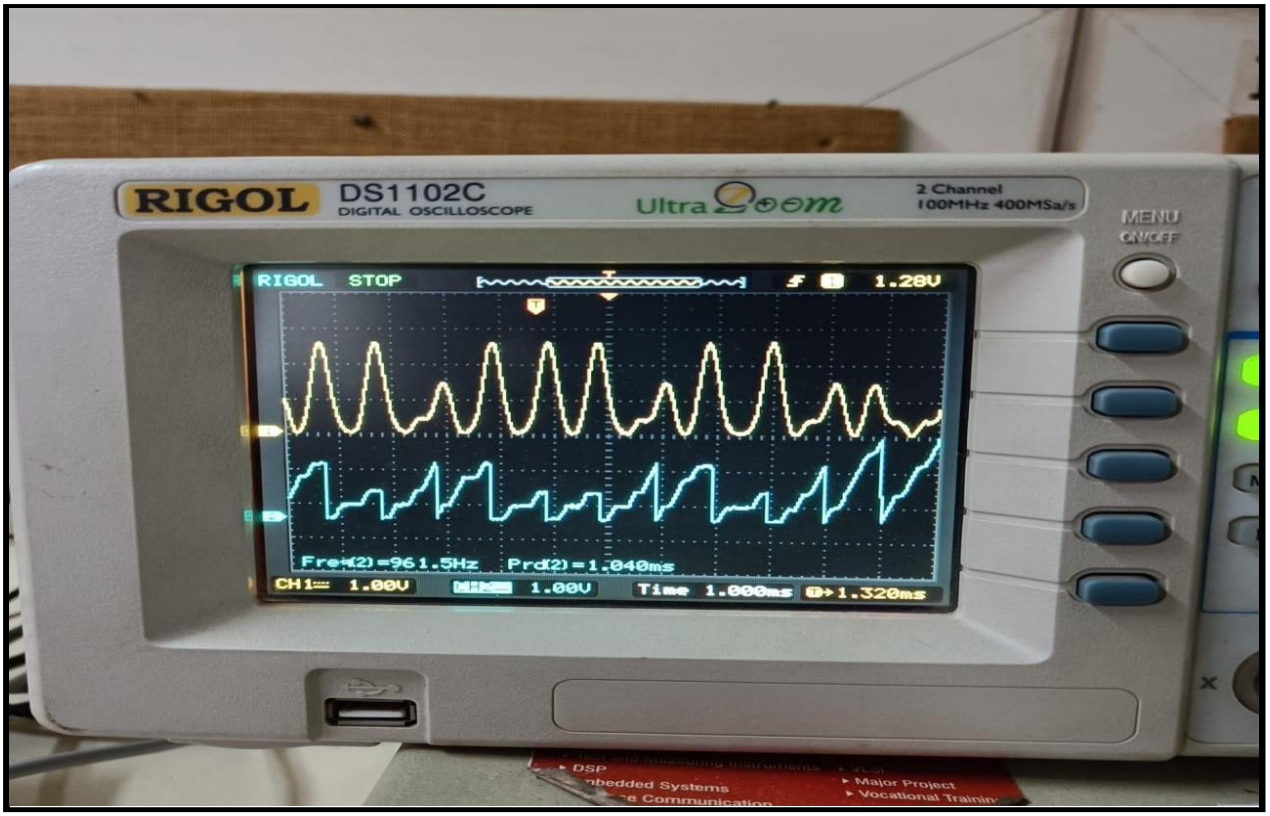
- Study and analysis of Integrator output.

Data Bit: 32Bit

Data Rate: 2 KHz

CH1 : TP12

CH2: TP14

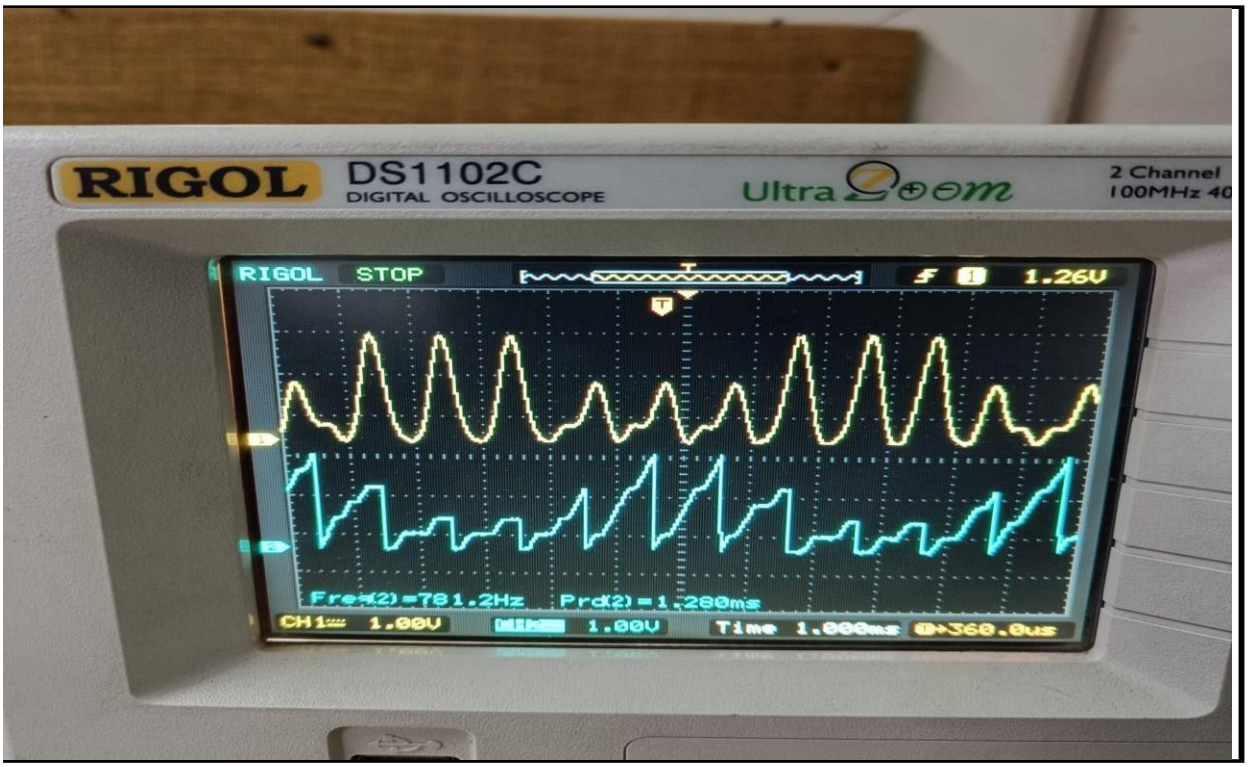



Data Bit: 64Bit

Data Rate: 2 KHz

CH1 : TP12

CH2: TP14

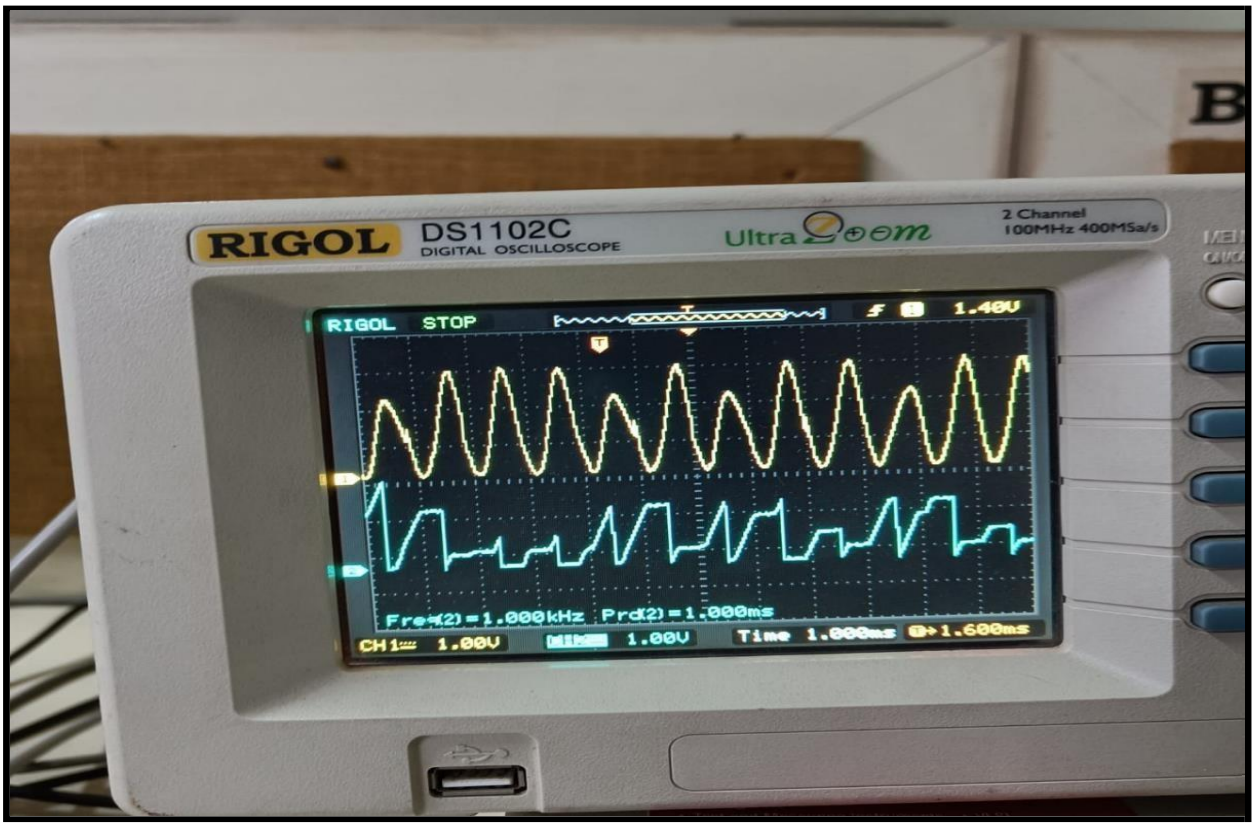



Data Bit: 32Bit

Data Rate: 2 KHz

CH1 : TP13

CH2: TP15

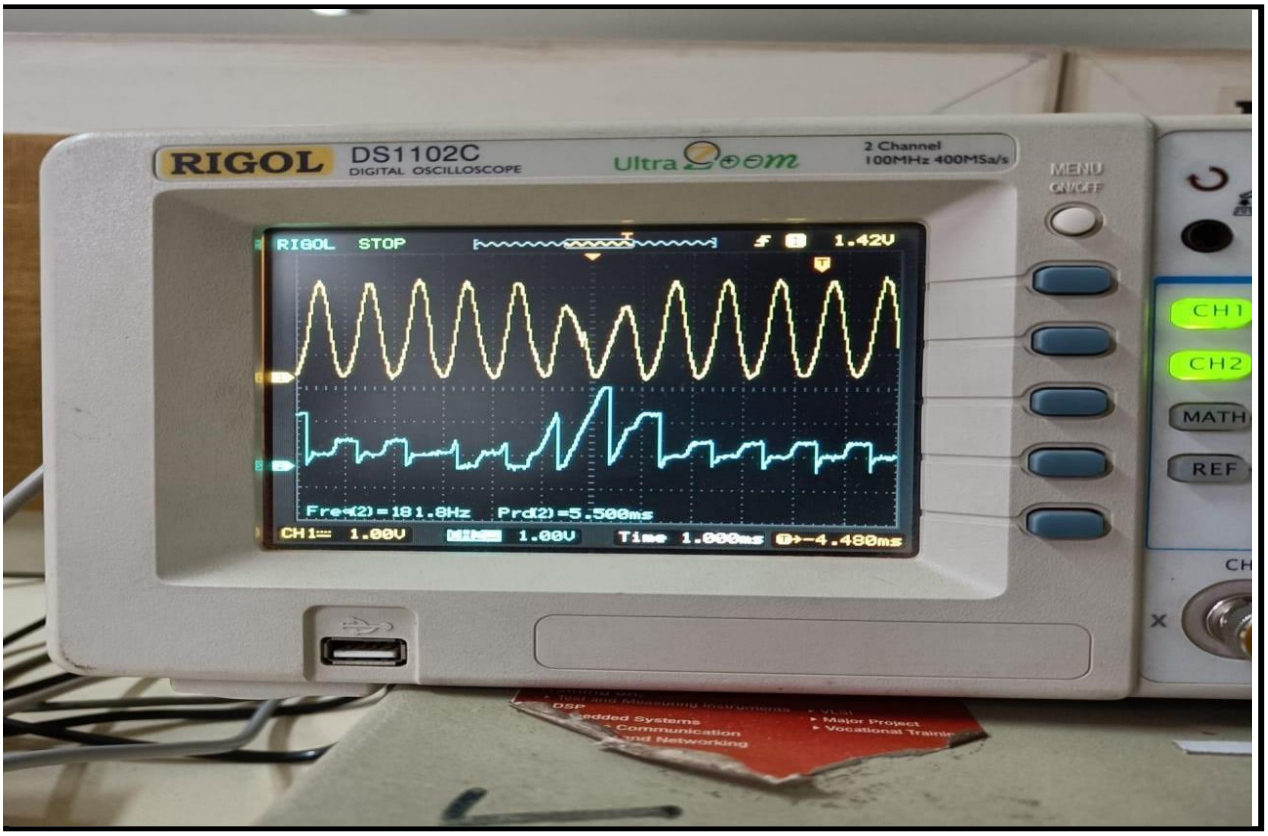


Data Bit: 64Bit

Data Rate: 2 KHz

CH1 : TP13

CH2: TP15




**Experiment 8:**

Objective:

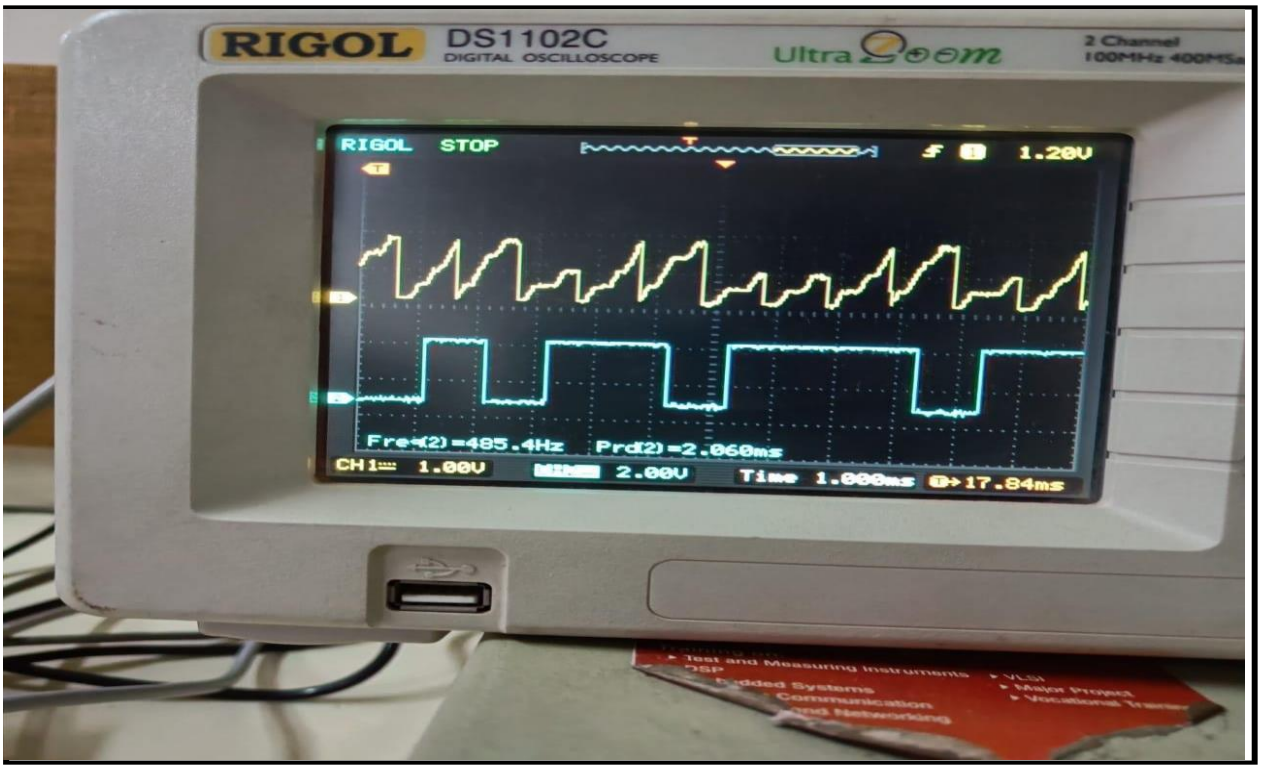
- Study and analysis of Comparator Output.

Data Bit: 32Bit

Data Rate: 2 KHz

CH1: TP14

CH2: TP16

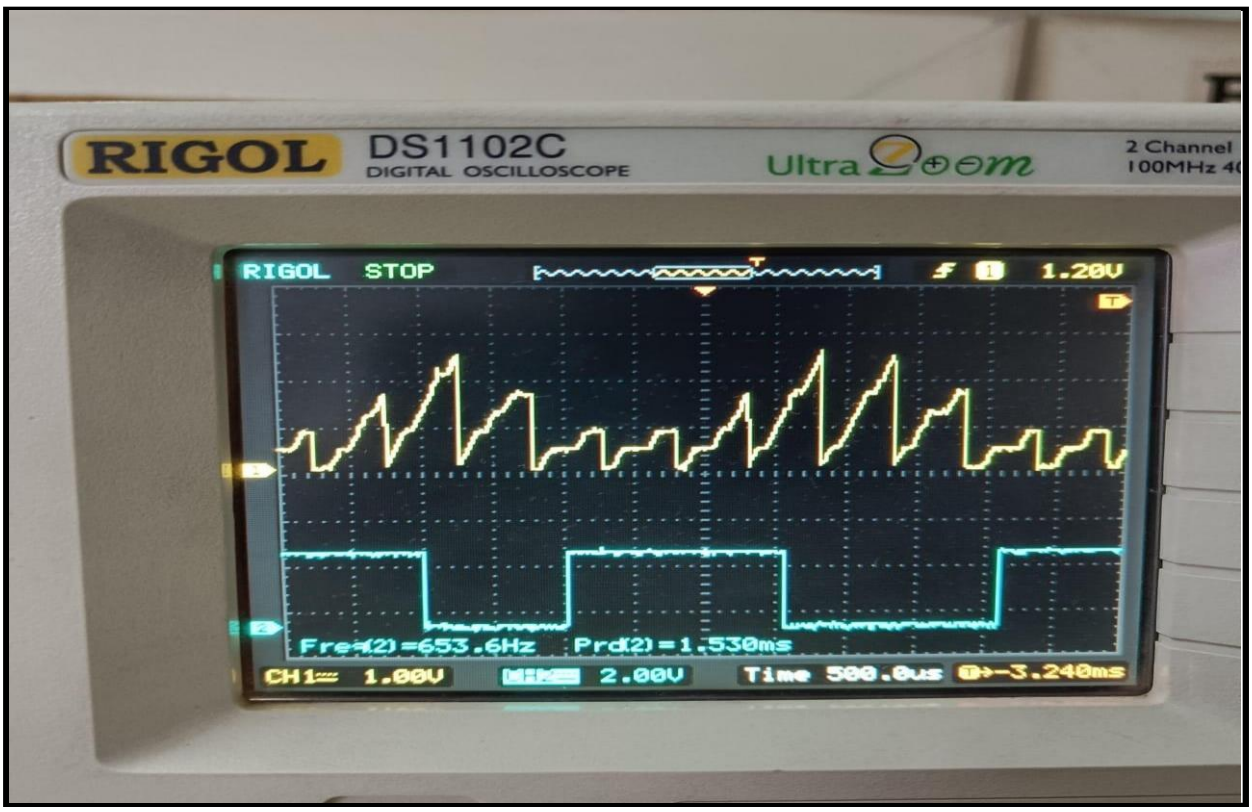



Data Bit: 64Bit

Data Rate: 2 KHz

CH1: TP14

CH2: TP16

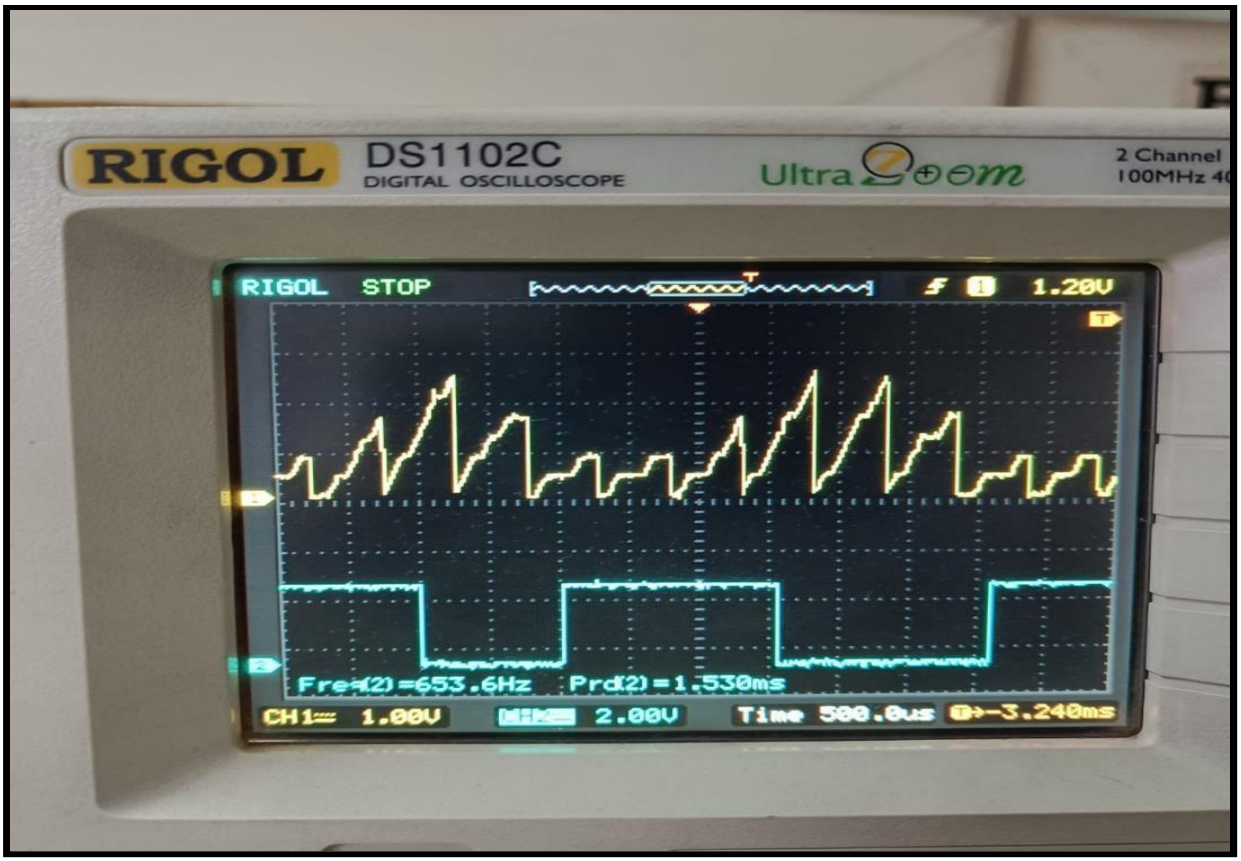


Data Bit: 64Bit

Data Rate: 4 KHz

CH1: TP14

CH2: TP16

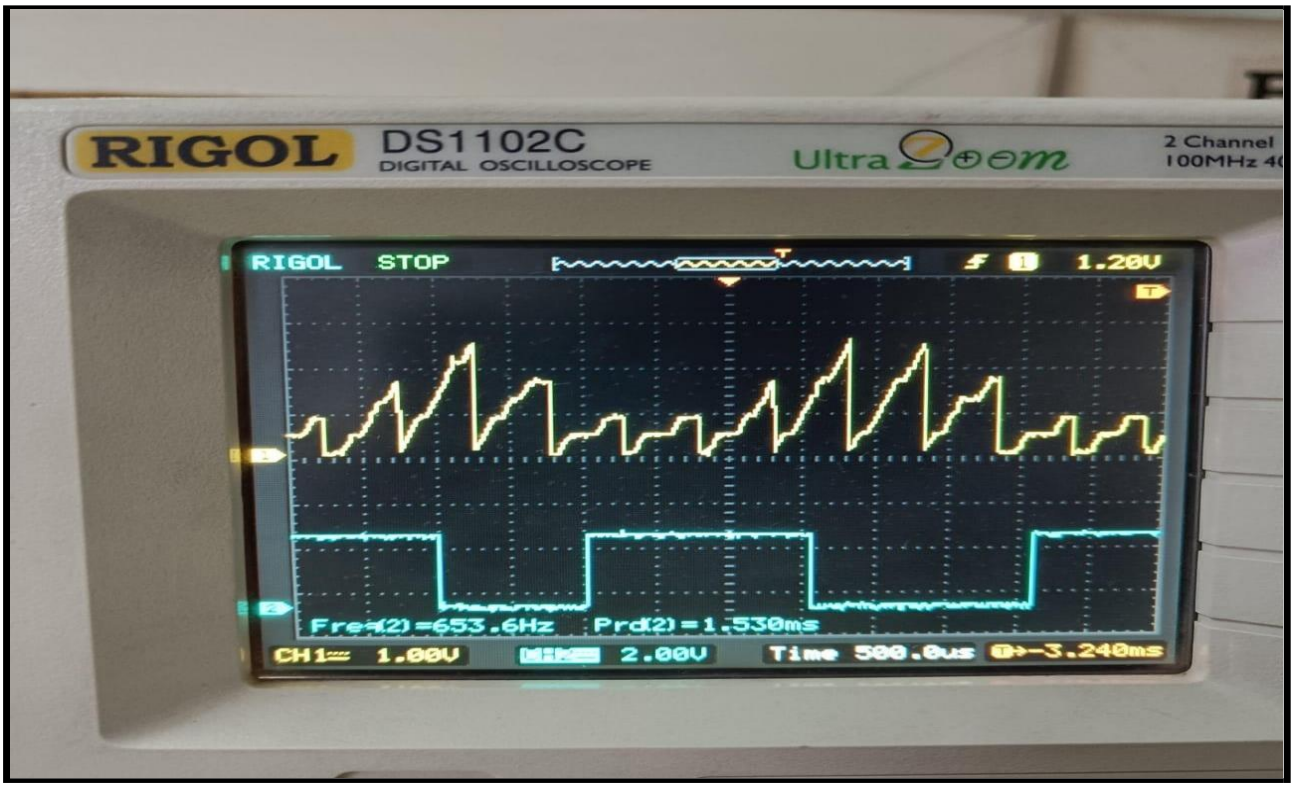



Data Bit: 32Bit

Data Rate: 4 KHz

CH1: TP15

CH2: TP17

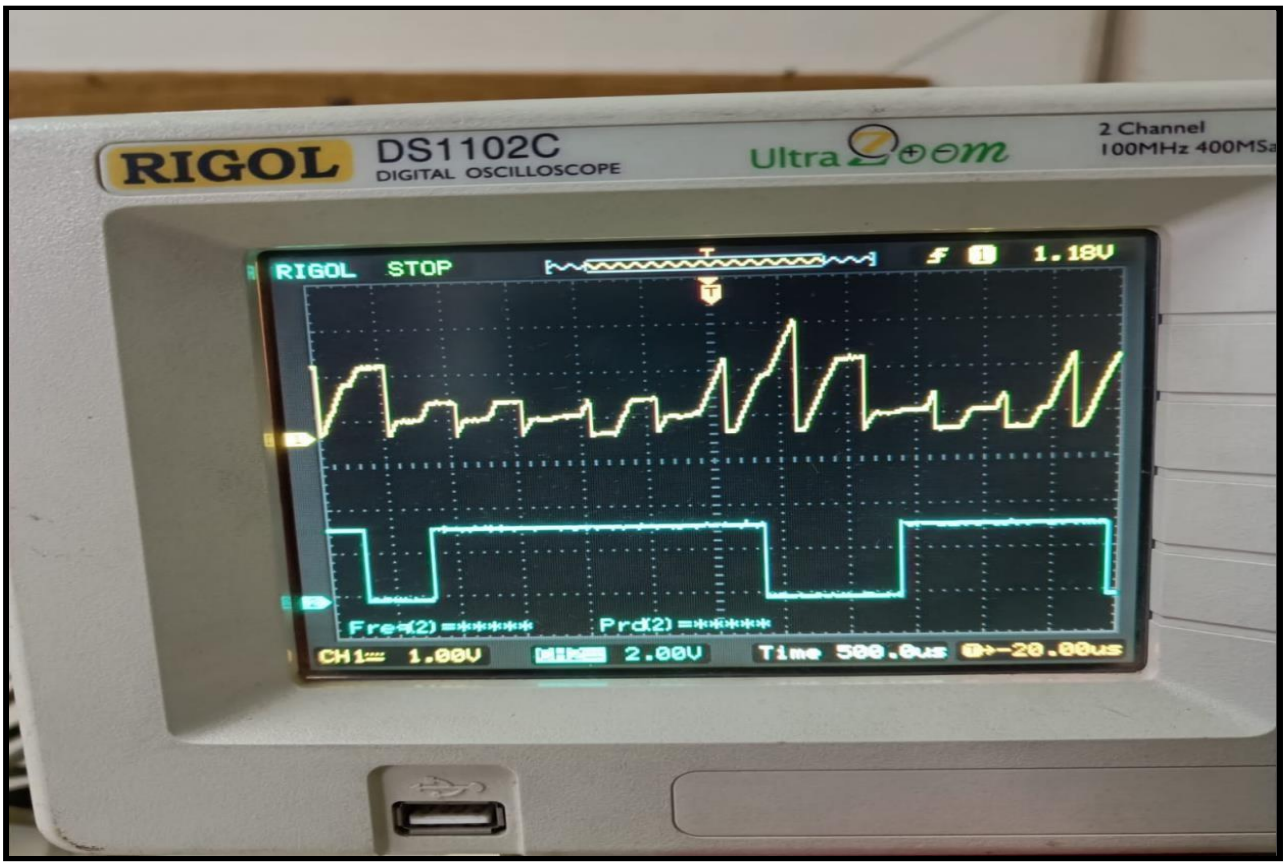



Data Bit: 64Bit

Data Rate: 2 KHz

CH1: TP15

CH2: TP17



Data Bit: 64Bit

Data Rate: 4 KHz

CH1: TP15

CH2: TP17