Digital Communication Lab

Laboratory report submitted for the partial fulfillment of the requirements for the degree of

Bachelor of Technology in Electronics and Communication Engineering

by

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Chapter 1

Experiment - 6

1 Aim

1. Implement Matched Filter Receiver for Rectangular Pulse Shaped Transmitted Symbols.

2 Apparatus Used

- 1. ICs: 555(Timer IC)
- 5. LM741
- 8. 7474 (D Flip Flop
- 11. Connecting wires

- 2. CD4016 (Analog Switch)
- 6. Resistance
- 9. Capacitor
- 12. DC Power Supply

- 3. Digital Storage oscilloscope
- 7. Breadboard 10. DSO Probe
- 13. Function Generator

4. 74161(4-bit Counter IC)

3 Theory

3.1 Circuit Diagram

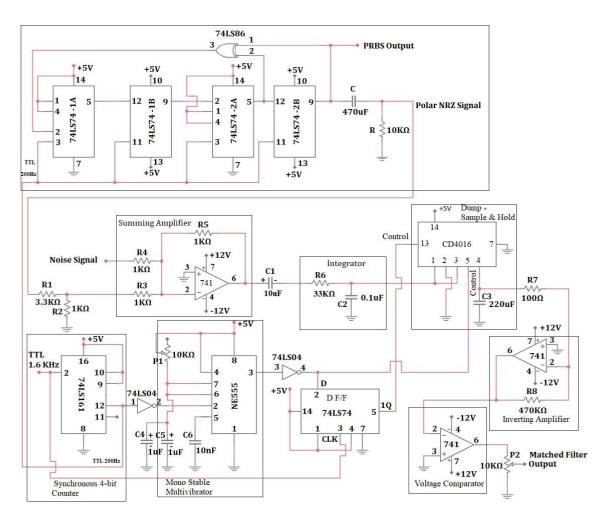


Figure 1: Matched Filter Circuit

1.1 Observations

1.1.1 Result Screenshots

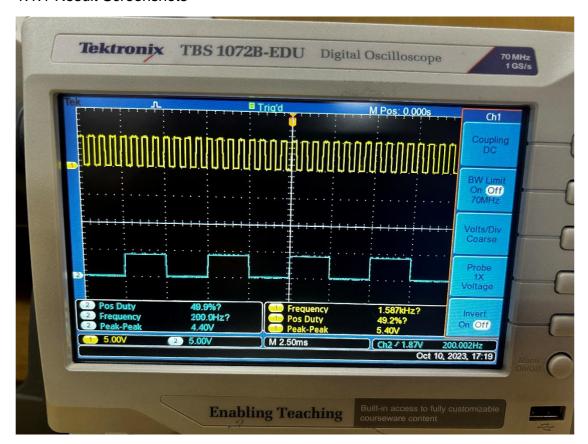


Figure 1

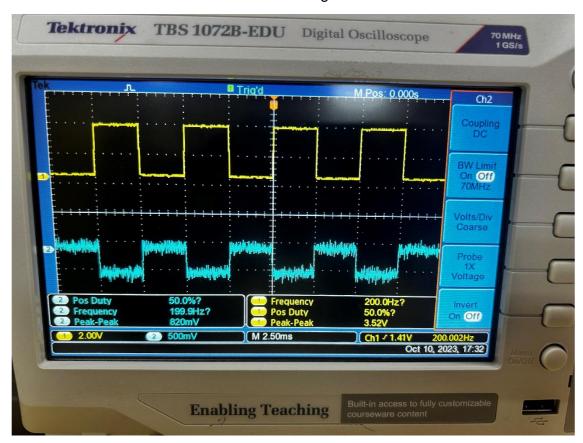


Figure 2

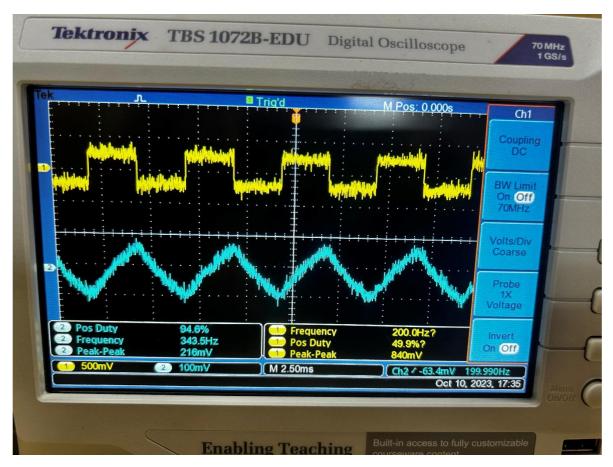


Figure 3

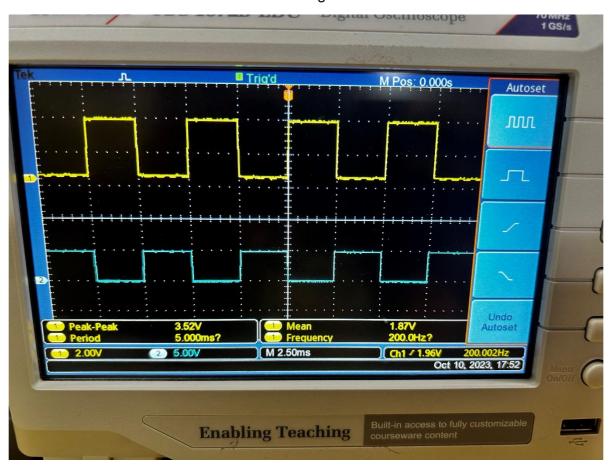


Figure 4

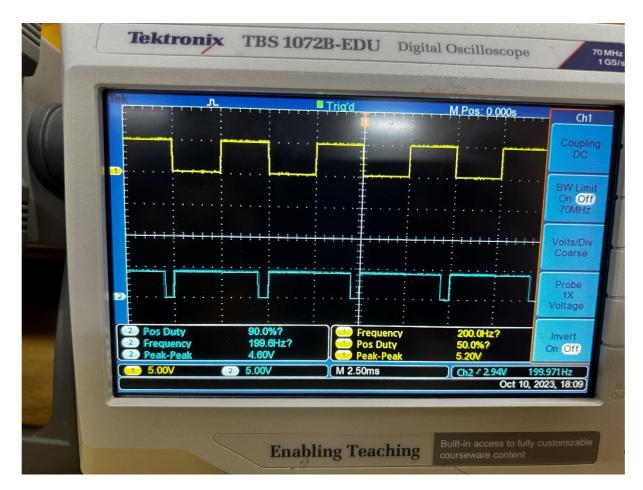


Figure 5

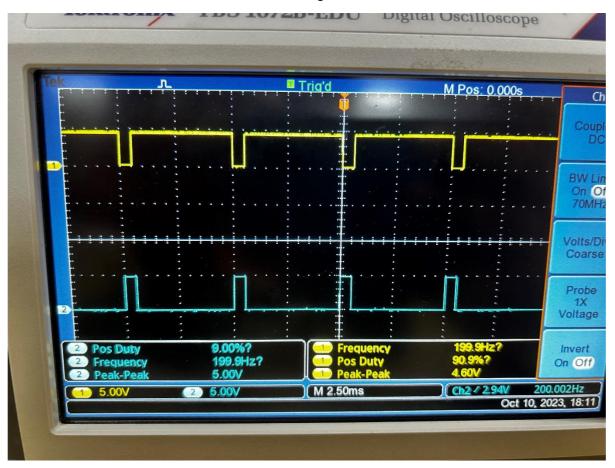


Figure 6

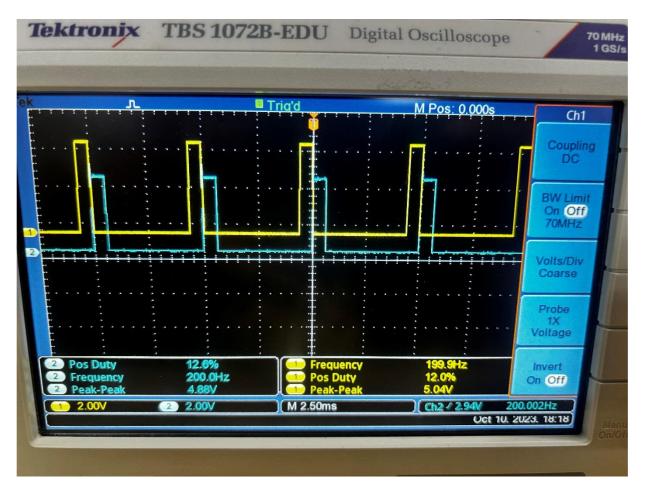


Figure 7

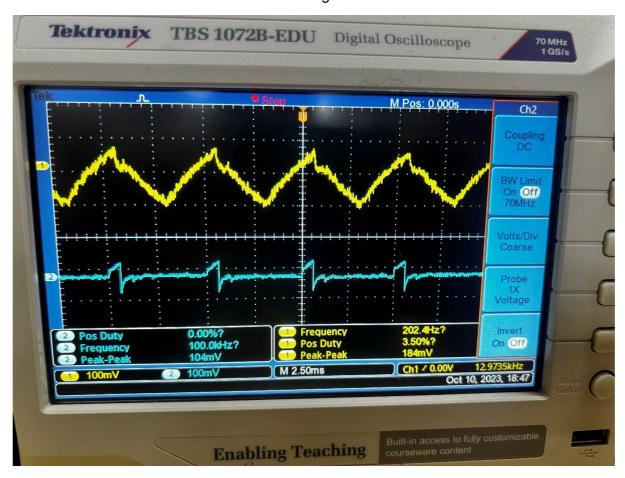


Figure 8



Figure 9

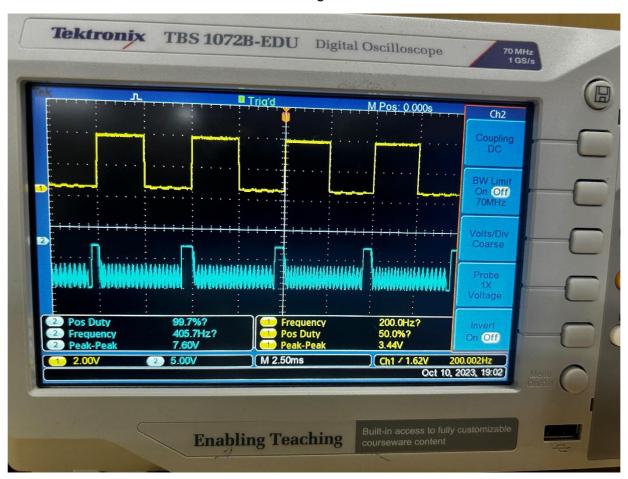


Figure 10

Precautions

- 1. Check the connections before switching on the kit.
- 2. Connections should be done properly.
- 3. Observation should be taken properly.