**Figure 1:** A block diagram of the system with two FSK modems.

**Figure 2:** A block diagram of the FSK transmitter.

**DATA SOURCE:** Function Generator = Square Wave, D = \(0.5\), \(f = 250\, \text{Hz}\), Digital High (5V to 15V), Digital Low (-5V to -15V)

*Note:* Function Generator connects to a Comparator such that any Digital High becomes +15V and any Digital Low becomes -15V.

**VCO**
- When \(T_x = 15\, \text{V}\) \(\Rightarrow f_{\text{osc}} = 10.5\, \text{kHz}\)
- When \(T_x = 0\, \text{V}\) \(\Rightarrow f_{\text{osc}} = 9.5\, \text{kHz}\)

**Cap** Remove DC component \(\Rightarrow +/- 7.5\, \text{Volts} \text{ or } 15\, \text{Volts P-P}\).

**Att** opamps: circuitry so \(V_{\text{in}} \leq 1\, \text{Volts P-P}\).

**R** 1k\(\Omega\): Standard Source Impedance.
LAB5

Vit

Figure 3: A block diagram of the FSK receiver.

Figure 4: Typical waveforms expected in the system.
Two LAB groups

Group 1: Transmit A, Receive B, one bread board
Group 2: Transmit B, Receive A, one bread board

The Line: Two wires: ① Signal ② Ground

Receiver B

Receiver A

Transmitter B

Transmitter A

Figure 5
ECEN 4618 - 27FEB98 (Friday in Class) (2 Hour)
Exam Review - Open Notes, Open Book
- 10% of grade

I. LAB 1
   A. 555 chip: Monostable, Astable
   B. Input Pulse Ckt.

II. LAB 2
   A. 555 chip: Astable
   B. CD4093: Nand/Inverter
   C. MOSFET: Switch
   D. Op Amp (LF353): Integrator, Current to Voltage
   E. DAC0808: Digital to Analog Conversion
   F. LM311: Comparator

III. LAB 3
   A. LM311: Comparator with Hysteresis
   B. Op Amp (LF353): Integrator
   C. MOSFET: Switches
   D. Potentiometer

III. General LAB
   A. Op Amp (LF353): Inverting/Non Inverting/Buffer
   B. Filters: HP/LP/BP
   C. Resistors: Color Code
   D. Capacitors: Code/Input Caps w/ Chip Power Supply
   E. Function Generator Volts to Scope Volts
   G. Power Supplies
   H. Pull up Resistor
   I. Scope Probes

1. Experiment 1: 5%
2. Experiment 2: 10%
3. Experiment 3: 15%
4. Experiment 4: 10%
5. Experiment 5: 15%
6. Experiment 6: 15%
7. Prelabs (total): 10%
8. Exam: 10%
9. Laboratory work: 10%