Digital Communications

1. Microphone (transducer) = convert energy from one form to another: sound-electric

2. Analog voltage: $v(t)$

3. Analog voltage to amplified voltage: $n_s(t) = A_v n_s(t)$

4. As long as $N_{sh}(t) > N_{ramp} \rightarrow$ output '0'

5. $N_{sh}(t) < N_{ramp} \rightarrow$ output '1'

6. Sample & Hold

7. Comparator

8. Ramp Voltage Generator

9. Binary Counter

10. Parallel/Serial Converter

11. Low Pass Filter

12. Mixer

13. Analog Amplifier

14. Antenna

Clock Frequency Oscillator (must faster than $T$)

Reading Commands

Output '0' or '1'

Stops the binary counter