Eddie's Electronic Workshop (Occupy LH-1)

Punch List

- Sign Attendance
- Overview
- First Lesson
  - Voltage Current Resistance (Bungee Analogy)
    Voltage = Distance, Resistor = Bungee, Current = Tension
  - Battery, LED Resistor Explanation

3:00pm to 3:15pm

LED LAB

3:15pm to 3:45pm

- Learn to use a meter
- Do the voltage drops add up?
- $V_{LED} + V_{resistor} = V_{battery}$

Volts across LED + Voltage across resistor = battery

- Calculate: $C_{urrent} = \mathbf{V}_{resistor} / \mathbf{R}_{esistance\ in\ ohms}\ (\Omega)$
- Measure Current by inserting the meter IN SERIES with the circuit.
- Reverse the LED: What happens?_____
- End of LAB-1

AC / DC Power Supplies and Rectifiers

3:45pm to 4:00pm

- A Diode is a semiconductor...
- A capacitor holds a charge like a battery but not as long (coulomb)
- An oscilloscope allows you to see waveforms
- Let's listen to a rectifier...

Where does GAIN come from?

4:00pm to 4:15pm

- Tubes are similar to...
- JFETS (Junction Field Effect Transistors)
- Transistor = Trans-Resistor
- Voltage Gain vs Current Gain
- Soft overload

LISTEN and COMPARE

4:15pm - 4:30PM

- Electric Bass through mixer or through preamp buffered out. This is impedance matching via current gain.

Q + A = ???

LABS 4:30pm - 5:00pm

- Soldering (cable making)
- Oscilloscope + Guitar Amp LAB

  IDENTIFY
  - Power Supply
  - Preamp
  - Tone Stack
  - Power Amp (master volume and feedback)

GUESTS

- **Noah Gillfillan:** synth, record player, sub kick
- **John Kargol:** guitar amp (master volume and feedback mods), re-amp box
- **Dan Kennedy?**