Electronic Measurements
Equipment for Measurements

- Oscilloscope
- Triple DC Power Supply
- Function Generator
- Multimeter
Oscilloscope

- A device for measuring waveforms which are constantly varying voltage signals.
Horizontal & Vertical Adjust

- The larger knob changes the scale/size of signal
- The smaller knob changes the location/offset of signal on the screen
- The CH buttons select, turn on, and turn off the channels
Autoset

- Automatically sets all scales and positions based off of the current signal being sampled by the Oscilloscope. (2 above)
Trigger

- The trigger causes the Oscilloscope to hold the signal steady for easier interpretation.
- Can also change which channel is acting as the trigger.
- Light will come on when the trigger is active
Probe Calibration

- Every Oscilloscope has probe compensation pins (pictured right)
- Hook up probe as seen
- Locate and adjust the calibration screw on the probe to match the images below
Triple DC Power Supply

- A device for generating three different voltage supplies.
Triple DC Power Supply

- Allows for setting all three dc lines to different values (6, 15, and -25V)
- Can also set a current limit to ensure circuits are safe
- It is necessary to tie the earth ground of the machine (green) to the commons of each line (black) with a couple wires
Function Generator

- Used to create a stable digital output signal to test equipment
- Use with oscilloscope to verify equipment signals
- Some of the most common waveforms produced by the function generator are the sine, square, triangular and sawtooth shapes.
Multimeter
Device used to measure resistance, voltage and low current.
Multimeter

- Probes can be used to measure current up to 10 Amps
- The Fluke 8486 has 12 digit precision with a DC voltage accuracy of 0.0024%
- The Multimeter can record over time.