

# Electronic Testing Devices

|          |                                                                                                                                                      |
|----------|------------------------------------------------------------------------------------------------------------------------------------------------------|
| About    | There are four general devices available for testing electronic circuits: digital multimeter, function generator, oscilloscope, and DC power supply. |
| Category | Electronics                                                                                                                                          |
| Location | Front Room                                                                                                                                           |

| Title              | Brand /Model                                   | About                                                                                                                                                                                                                                                                                                                                                                                                                           |
|--------------------|------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| DC Power Supply    | Keithley 2231A-30-3                            | A DC power supply is a consistent energy source to test electronic devices with. The Garage has two, 3-channel DC power supplies. Two channels are rated for 30V and 3A and one channel is rated for 5V and 3A. The voltage and current accuracies are 0.06% and 0.2% respectively.                                                                                                                                             |
| Oscilloscope       | Tektronix TBS 2000                             | The oscilloscope measures and plots voltage signals from electronic devices. These are useful for testing signals, troubleshooting circuits, and quantifying noise.                                                                                                                                                                                                                                                             |
| Function Generator | Tektronix AFG1022 Function Generators          | A function generator is a device that can produce various patterns of voltage at a variety of frequencies and amplitudes. The function generators available have dual channels, 25 MHz bandwidth and up to 10 V <sub>P-P</sub> output amplitudes. They also have 4 run modes, 50 built-in frequently-used waveforms and a built-in 200 MHz frequency counter to cover most waveform generation needs for tests and experiments. |
| Digital Multimeter | Keithley - Model 2110 - 5 1/2 Digit Multimeter | The digital multimeter is suitable for reading two or more electrical values. This model can perform the following measurements: DC and AC voltage, ratio (DC voltage input / DC voltage reference), DC and AC current, resistance, frequency and period, continuity, diode testing, temperature, and capacitance.                                                                                                              |

## Training

Sign up for training here: [Training Registration Calendar](#)

| Training        | Type       | Time Estimate | Prerequisites | Checklist/Document |
|-----------------|------------|---------------|---------------|--------------------|
| ED - Training 1 | ON-MACHINE | 50 min        | None          |                    |