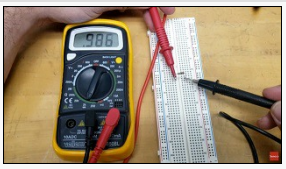
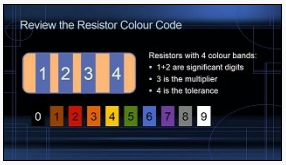
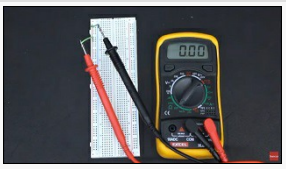
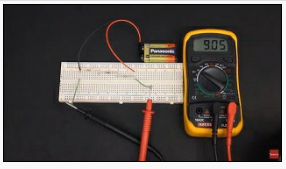
ETY155 - Additional Online Resources

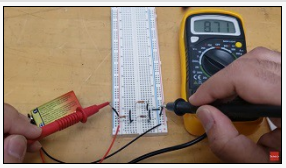
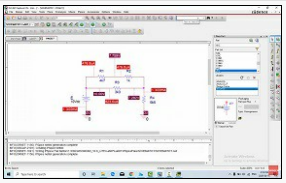
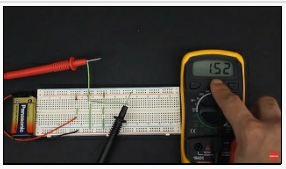
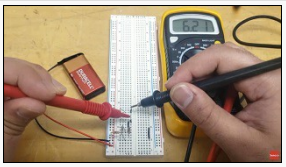
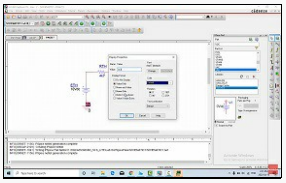
Version 1

Published 5/2/2025 by Fabio Pricinato Costa Last updated 2/18/2024 2:30 PM by Karen Craigs

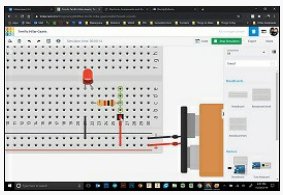
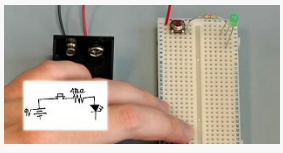
Navigation of this Page:

Videos from Lab Work:

	http://youtu.be/Fqh6aaHBM6E Lab Introduction *SEMET*
	http://youtu.be/yVtX7-1mmh4 Lab Kit Tips - How To Organize Your Toolkit *kekaroo*
	http://youtu.be/IN8FkO7zRWk Breadboarding and Resistance *SEMET*
	http://youtu.be/7Uf8193oQAE Series Circuits Measurements (Voltage and Current) *SEMET*
	http://youtu.be/hLKYl61uIAA Parallel Circuits Measurements (Voltage and Current)

	*SEMET*
	http://youtu.be/FovggK_hE6s Series-Parallel Circuits Measurements (Voltage and Current) *SEMET*
	http://youtu.be/lIkkzWQ-NbU OrCAD Simulation 1 (Series-Parallel Circuit) *SEMET*
	http://youtu.be/sxBPcc4OVqU Superposition Theorem *SEMET*
	http://youtu.be/2rRAfsUczK0 Thévenin Theorem *SEMET*
	http://youtu.be/P3OBxfm4sEs OrCAD Simulation 2 (Thévenin and Max Power) *SEMET*

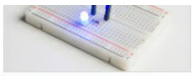
How to Use a Breadboard:

	http://youtu.be/LrOM2GABK1g Introduction to Tinkercad Circuits & Breadboarding - Part 1 *Remi Wauthy*
	http://youtu.be/vJUX9cvyYjU How to Wire Circuits from Schematics *Parallax Inc.*

SparkFun Tutorials:

What is Electricity?

We can see electricity in action on our computers, lighting our houses, as lightning strikes in thunderstorms, but what is it? This is not an easy question, but this tutorial will shed some light on it!



What is a Circuit?

Every electrical project starts with a circuit. Don't know what a circuit is? We're here to help.

Polarity

An introduction to polarity in electronic components. Discover what polarity is, which parts have it, and how to identify it.

Working with Wire

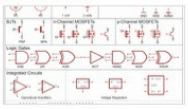
How to strip, crimp, and work with wire.

How to Use a Breadboard

Welcome to the wonderful world of breadboards. Here we will learn what a breadboard is and how to use one to build your very first circuit.

PCB Basics

What exactly IS a PCB? This tutorial will breakdown what makes up a PCB and some of the common terms used in the PCB world.

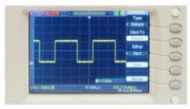


How to Read a Schematic

An overview of component circuit symbols, and tips and tricks for better schematic reading. Click here, and become schematic-literate today!

How to Use a Multimeter

Learn the basics of using a multimeter to measure continuity, voltage, resistance and current.

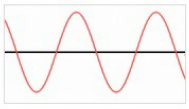


How to Use an Oscilloscope

How to work the dials and buttons on an oscilloscope, and a glossary of the o-scope lexicon.

Electric Power

An overview of electric power, the rate of energy transfer. We'll talk definition of power, watts, equations, and power ratings. 1.21 gigawatts of tutorial fun!



Analog vs. Digital

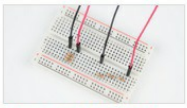
This tutorial covers the concept of analog and digital signals, as they relate to electronics.

Capacitors

Learn about all things capacitors. How they're made. How they work. How they look. Types of capacitors. Series/parallel capacitors. Capacitor applications.

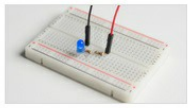
Resistors

A tutorial on all things resistors. What is a resistor, how do they behave in parallel/series, decoding the resistor color codes, and resistor applications.



Series and Parallel Circuits

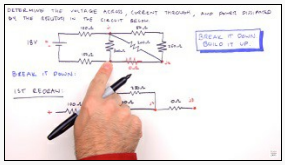
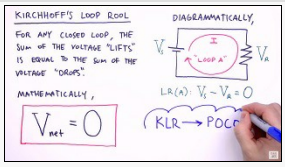
An introduction into series and parallel circuits.



Voltage Dividers

Turn a large voltage into a smaller one with voltage dividers. This tutorial covers: what a voltage divider circuit looks like and how it is used in the real world.

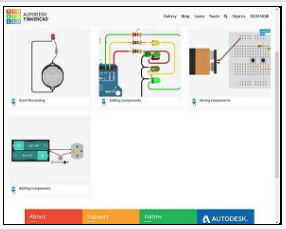
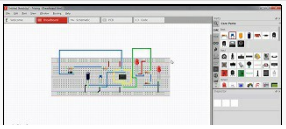
Circuit Analysis Explanations:

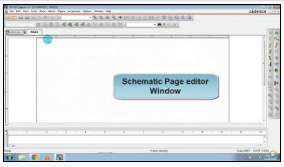
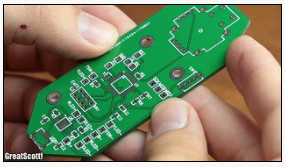
	http://youtu.be/mvuHsu8S6v8 Volts, Amps, and Watts Explained *Techquickie*
	http://youtu.be/-PiB2Xd3P94 How to Solve Any Series and Parallel Circuit Problem *Jesse Mason*
	http://youtu.be/SKdK_L4jbV0 Review Kirchhoff's Laws *Jesse Mason*

How to Use Equipment:

http://youtu.be/bF3OyQ3HwfU	– Multimeter Tutorial
http://youtu.be/sKuPd3XYwuA	– How to Measure V, R, and I with a DMM
http://youtu.be/zb7WHaL_dz8	– The Basics of a DMM
http://youtu.be/b4jLZWiaoq0	– Digital Power Supply Demonstration
http://youtu.be/w99Q23mUEZg	– Get -12V and +12V from a Dual Power Supply
http://youtu.be/CzY2abWCVTY	– How to Use an Oscilloscope
http://youtu.be/8VEg6L2QG5o	– AC vs DC on the Oscilloscope

Software Tutorials:

	https://www.tinkercad.com/learn/ Tinkercad Lessons - Circuits *AutoDesk Tinkercad*
	http://youtu.be/hZkenZgyDZ0 Fritzing Tutorial 1 | Breadboard and Schematic views *CWAIN Microsystems*

	
	http://youtu.be/vaCVh2SAZY4 Introduction to KiCad *(Part 1 of 4)* *Digi-Key*
	http://youtu.be/NU8i39HZTik Orcad Tutorial 1 | Getting started *(Part 1 of 18)* *India Engineered*
	http://youtu.be/35YulLUlfGs From Circuit Idea to Schematic to PCB Design *GreatScott*

Advanced Search Topics:

http://youtu.be/BcIDRet787k	– AC vs. DC
http://youtu.be/ZjwzpoCiF8A	– How Transformers Work
http://youtu.be/VucsoEhB0NA	– Transformer Animation
http://youtu.be/B8CPGiK59f8	– The Basics of Inductance

- Electrical Resistance
- Electric Potential Difference
- Electrical Current
- Electrical Energy and Power
- Conductors, Insulators, Semiconductors
- Electrostatics
- Electromagnetism
- Capacitance
- Inductance

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tags : ety155, lin155