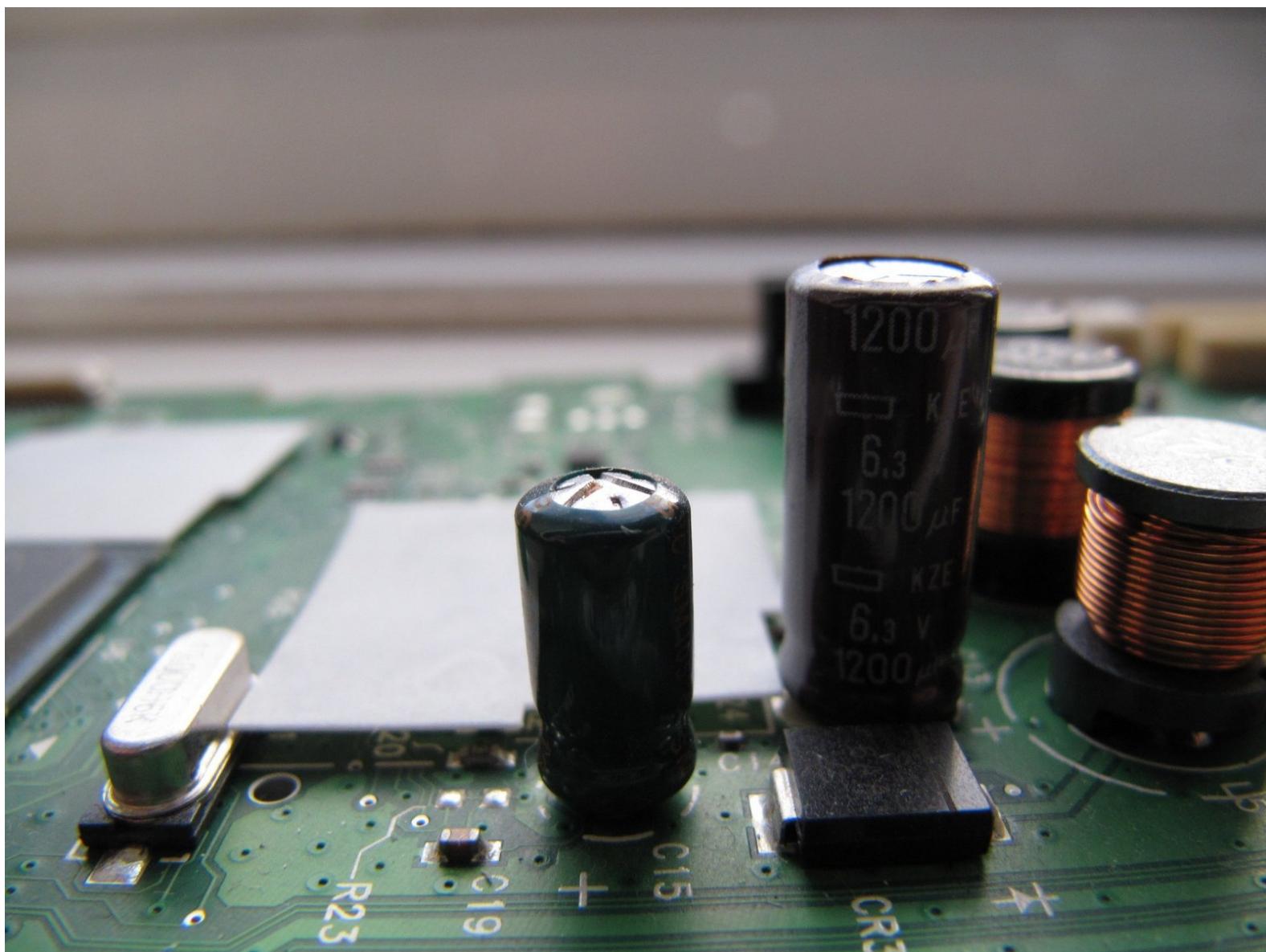




How stuff works

Basic electrical and electronic theory and a review of electronic components, what they do, how they work, and how they sometimes fail.

Written By: Philip Le Riche



INTRODUCTION

Many faults are plain to see if you only look. But when they're not, you need some level of understanding of how things work in order to make progress.

In the Restart Wiki we have a collection of articles covering everything from volts and amps to the theory of radios and power supplies.

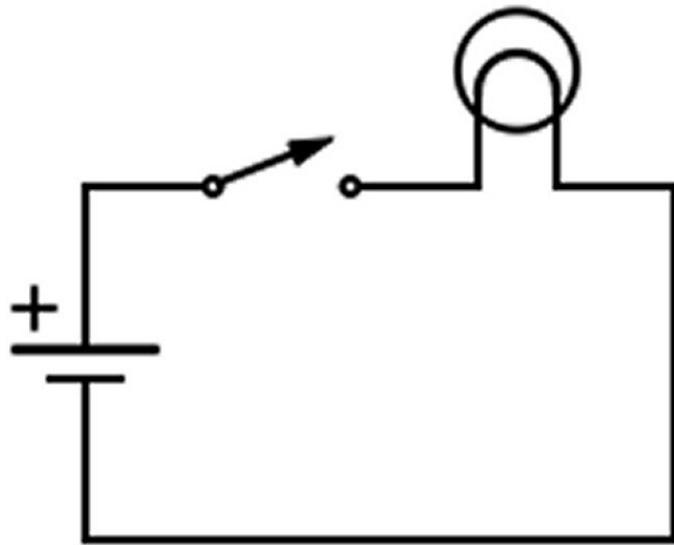
Step 1 — Cover the basics in under an hour!

Capacitors - Practical



- If you want to get up to speed quickly or revise the basics, this 50 minute tutorial based on a Restart training session is just the thing!

Step 2 — Electrical Theory 101



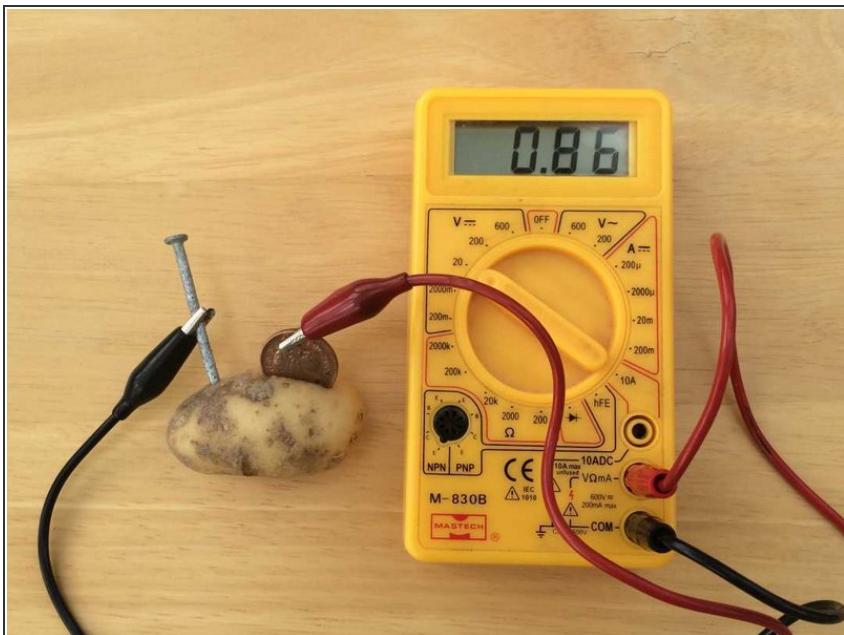
- If your volts, amps and ohms are a bit rusty (or even non-existent) then we have a simple introduction that anyone should be able to follow.
 - Start off with [Volts, Amps, Watts and Ohms](#) - what every Restarter should know.
 - So what's all this [AC and DC](#) nonsense all about, and why should I care?

Step 3 — Electronic Components



- We have several pages covering electronic components - how to recognise them, what they do and how they sometimes fail:
 - First of all, [Resistors, Capacitors, Inductors and Transformers](#).
 - Next comes [Diodes, Rectifiers, Transistors and Integrated Circuits](#).
 - Moving on, we look at [Switches, Push-buttons and Connectors](#).
 - And finally, [protection components](#). Fuses, the common-or-garden variety, are only the beginning!

Step 4 — Batteries - power to you!



- [Batteries](#) come in all shapes and sizes, and different types, some rechargeable and some throw-away. Here's pretty much all you need to know.

Step 5 — Build on all you've learned



- Finally for this section of the wiki we cover:
 - [Electric motors](#) - different types and how they work.
 - [Power supplies](#) - they quite often fail, and to fix them you need to understand how they work.
 - [How Radios Work](#). They contain a mass of components but if you at least understand roughly how they work you'll stand a much better chance of fixing them.

Now, you're an expert!