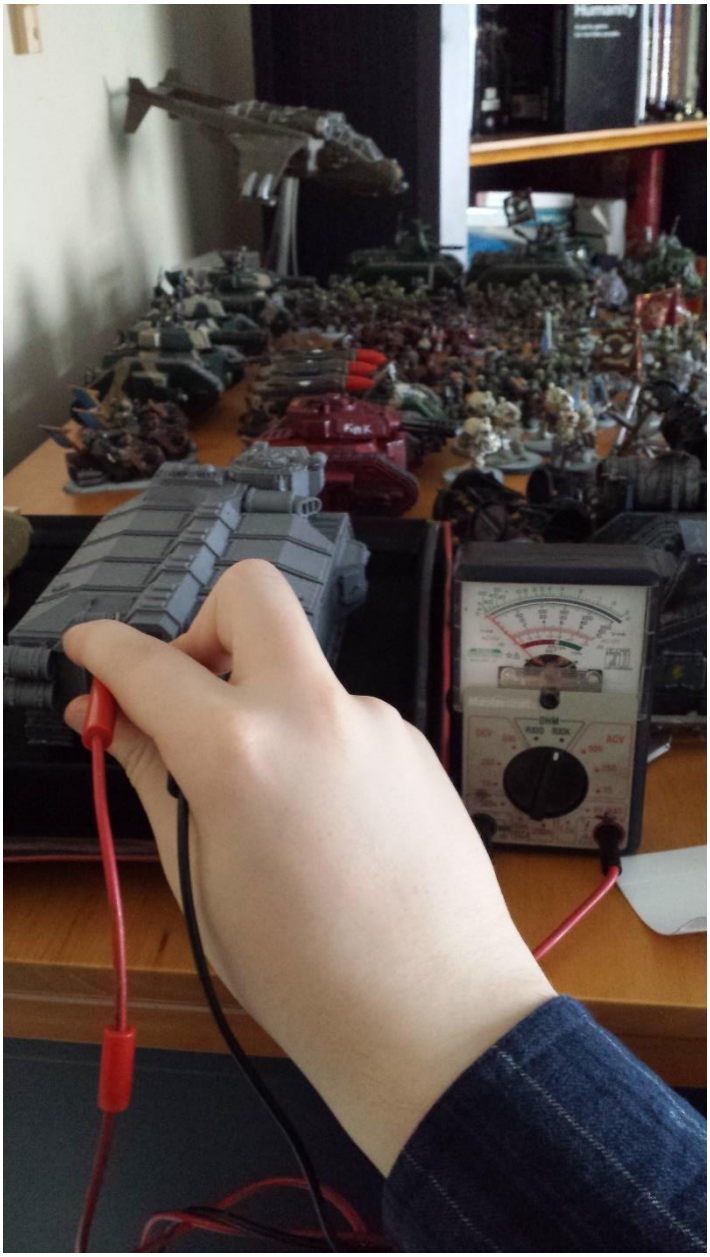
Etude 1

For this etude I focused on objects I use every day, either for their functionality or how much I enjoy them. While I had some assumptions on their conductibility which were mainly proven true, I was non-the less surprised. This was done with a rather old multi-meter that simply tested the resistance on the object between the two contacts.

Object 1: Miniature Model.

With one of my hobbies being the assembly and painting of miniature models, I saw an opportunity to explore in detail a rather large aspect of my life. Seeing as how the vast majority of the models start inert in more ways than one, and are brought to life through assembly, sculpting and painting. The resin allows for superb details, however can be prone to disastrous mold slippage and loss of detail. This iteration of sculpt built off the old pewter and metal models allows for paint to adhere better once primed, lose less details and remain very sturdy once glued, but sadly no longer conducts electricity.

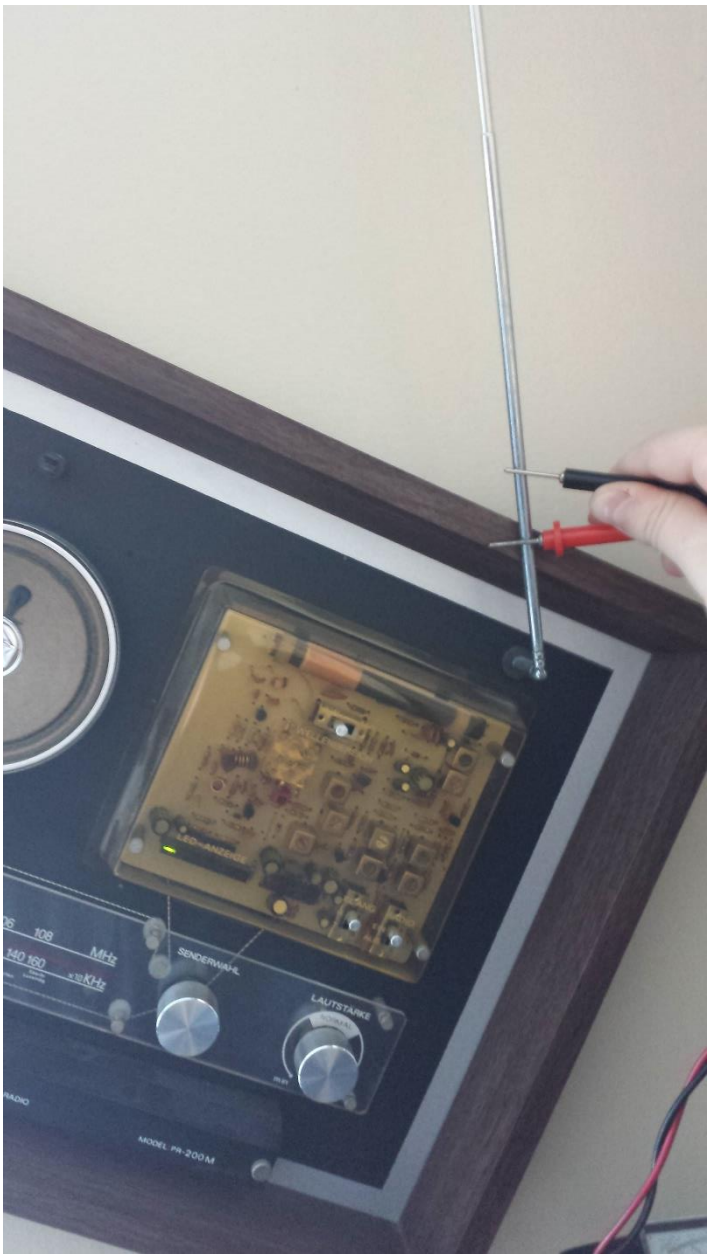


Object 2: Casio Pathfinder Watch.

This sturdy outdoor watch is one that I've worn most of my life, boasting incredible durability, waterproofness and many useful features. I had assumed rightfully that the resin band would offer no conductivity, but when testing the metal panel on the underside was surprised to see that it did not conduct either. In retrospect this makes sense: it would be very hazardous for a digital watch (a waterproof one even more so) to have a conducting panel that touches the wearer and the outside, potentially harming the wearer and draining the battery, in addition to allowing it to be affected by minor electric charges.

Object 3: Wall-mounted Radio.

This radio has been a part of my daily life for a long time. A gift from my grandfather, it was built in East Berlin, and demonstrates a simple, utilitarian design. While I had no doubt that the circuit board itself would conduct, I also discovered that the antennae conducted nicely, something that probably helps with receiving radio signals. Perhaps due to the age of the multi-meter, but there was no discernable change in voltage, resistance or current when the radio was on vs when it was off.



Of all of these, my favourite is likely my models, as they are one of my hobbies I consistently turn to. Turning one of them into a switch may be a challenging endeavor, but one that might actually serve a role within the hobby. Part of the hobby is called “Armies on Parade”, where a selection of your best painted unit are placed in thematic terrain and shown off to others. The winners of these competitions usually spend countless hours not only painting, but setting up terrain with things such as LED’s and fog machines for atmosphere and lighting. In this regard turning the models into a switch makes it play a role in the overall stage.

Switch 1: The easiest way to turn the model into a switch would be to incorporate its weight and size into a pressure switch, when activated would complete the scene and any additional circuits in it. It is the easiest switch but also the one that is the least involved with the model itself.

Switch 2: The second switch would be the polar opposite of the first; incredibly involved with the model itself, but horribly complicated and prone to failure. If the model itself was one of the old metal-cast version, or had metallic compound added into the coat of paint, it would allow the model to conduct, and therefore play a role as a switch whenever it would be introduced or removed from the circuit.

Switch 3: The mid-ground between the two switches by being involved with the model proper but remaining simple to do. Many of the models use a base for which the model stands on, and incorporating a metal band across the model’s base would be simple to add and minimally interfere with the model itself, allowing the model to be a key component in completing a circuit without potentially damaging it.

This third idea for a switch not only works well in the scenario imagined, but could be very rewarding if integrated in other aspects of the hobby. Many people who build and paint such models often have their favourite piece: a specific model that they consider the masterpiece of their collection, and as such they often put lots of care and time into creating a proper display for the model that both fits thematically nut also provides the proper lighting and attention it deserves. This 3rd switch concept aids this, by giving a minimal addition to the base of a model that could easily slot into the scene or stand prepared for it, allowing the model itself to complete the circuit and quite literally become the keystone of the entire display.