

# When that thing failed, I learned...

This is the place for all those lessons learned the HARD WAY!

- [Strange Errors with Electronics](#)
- [Unexpected Obsolescence](#)

# Strange Errors with Electronics

There are times throughout life, when something throws an error or says it has some crazy problem... *Now what?*

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It doesn't matter what was going on or why, any time that a piece of electronics says there is a problem, my first line of defense is the old catch phrase from IT Crowd: "Hello, IT. Have you tried turning it off and on again?" [YouTube Link to Video](#)

I realize how stupid and basic this sounds... really I do. Unfortunately there is often a reason for clichés, and this is one of those.

Any electronic equipment typically has some kind of processor inside and as we all know it is unreasonable to expect those processors NOT to have the occasional error. Processors are having and recovering from errors all the time, however when those errors are found & corrected on the fly, end users never even know anything happened.

The simplest way to combat the occasional uncorrectable or strange error/issue is to power cycle everything. This way, if we see the same problem again we know it *IS a problem*, and not likely to be a random bug or other temporary error.

## The best practice:

- [Make the room quiet](#)
  - Every part peripherally connected to the system needs to be off before anything gets powered back on (Some things rely on others)
- [Revel in the silence](#)
  - Wait a minimum of 10 seconds with everything fully powered OFF. This ensures that all volatile memory has been completely cleared away
- [Crawl before Running](#)
  - Begin turning on equipment by waiting for each piece to complete it's boot process before powering on the next
  - I start with the smartest equipment first, leaving the dumbest devices for later because the smart ones are sometimes needed to tell the dumb devices how to power up and connect etc.

- **Example:** Raspberry Pi (Octoprint), 3D Printer, Lights, Chamber Heater, Dehydrator, Air Filter, etc. as needed

# Unexpected Obsolescence

I want another of, or maybe a replacement for, a good product...

Unfortunately, it is no longer available.

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One problem is that many manufacturers want to be "everything to everyone". Unfortunately, this means LOTS of companies will purchase an order of predesigned & produced "white box" product with their logos and marketing info integrated. The company sells that model until their stock begins to get low, which gives the company an opportunity to re-evaluate whether that product was profitable enough to buy more stock of. Sometimes the answer is No.

Even when the answer is yes, this long time between stock orders means the "white box" manufacturer is likely to have changed the product to better match THEIR cost/profit ratios. Sometimes the changes are small and only a few parts are different, but if the product has changed completely it will need all new marketing materials. That makes it a "new & improved" model they must charge extra for: recoup their marketing investment, and maybe add some tiny, insignificant, additional profits for the shareholders. These creative business tactics can make it tough for an end user to get correct replacement parts or accessories over the useful life of a product.

## How does it affect me?

- When purchasing something cheap
    - I now get all desired accessories at time of original device purchase (more or less)
    - They are not likely to be correct & possibly not even available by this time next year
  - Anything being used regularly, becomes important and therefore worth the extra cash for extra quality/reliability
    - This prevents the previous problem almost entirely since most manufacturers with a reputation for quality, typically have that reputation for a reason and will often do whatever is reasonable to maintain those standards
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