

Get to know a ...

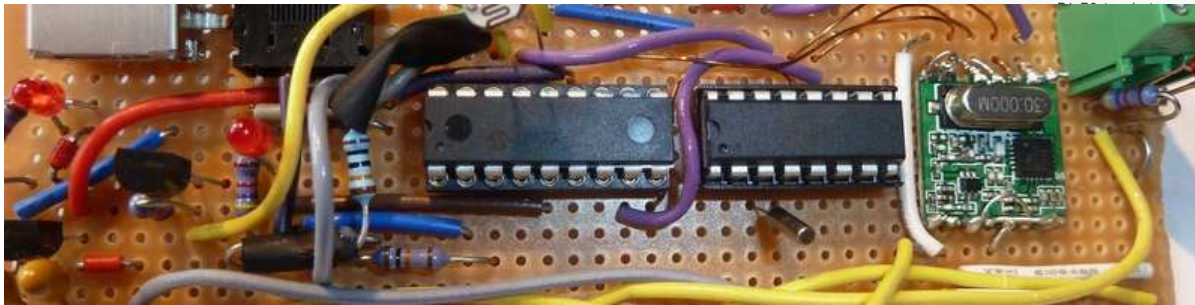
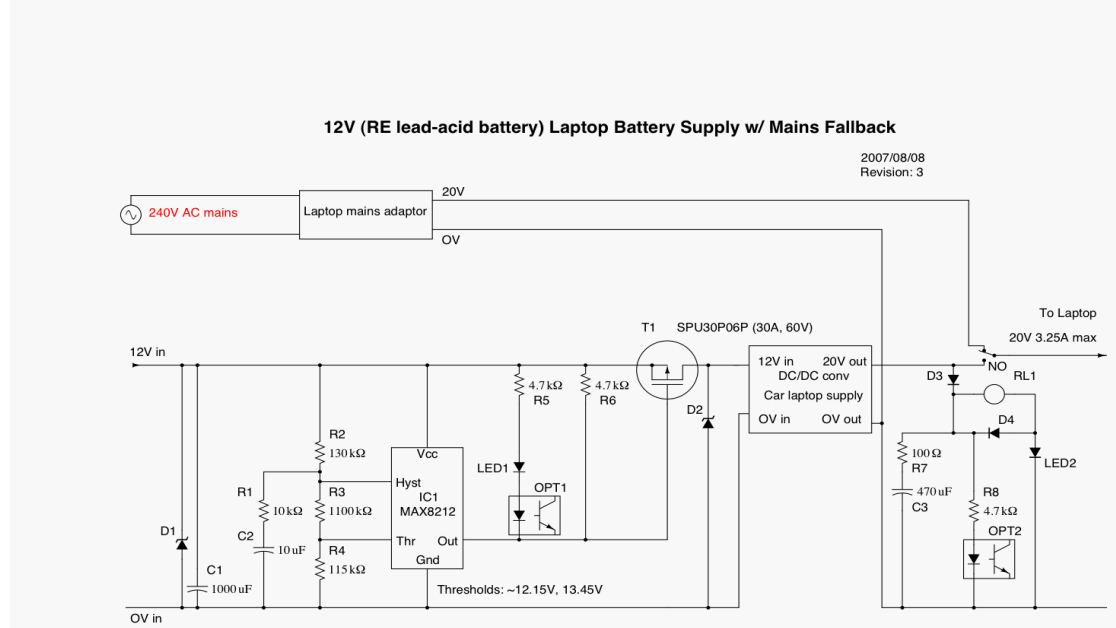
Hardware Developer

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How Did I Get Into It?

- My dad got me hooked at ~5yo (I think) with bulbs & batteries circuit, then later “100-in-1” electronics kits
- Got into electronics and soldering
- Then (late ‘70s!) got to play with computers, which burn up less and don’t need etching acid and don’t require pocket money and mail-order delays
- Most of my hardware is electronics that talks to or is computers

Scamp, OpenTRV, etc



...or diodes, 16V, 27A, 600W

...ull-in), 8A DC contacts

...ins power to the laptop mains power adaptor is never removed, resulting in ~7W minimum standby power draw.
...outputs drive monitoring digital inputs to the laptop; the LEDs provide visual indication of same.

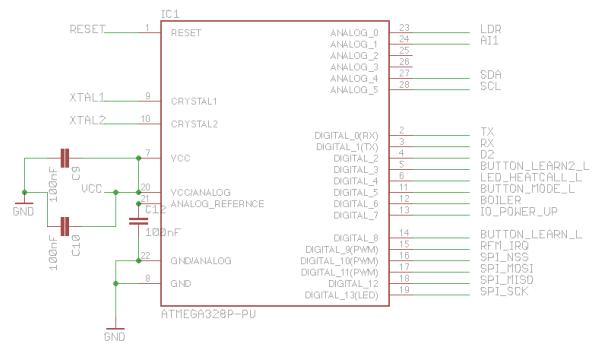
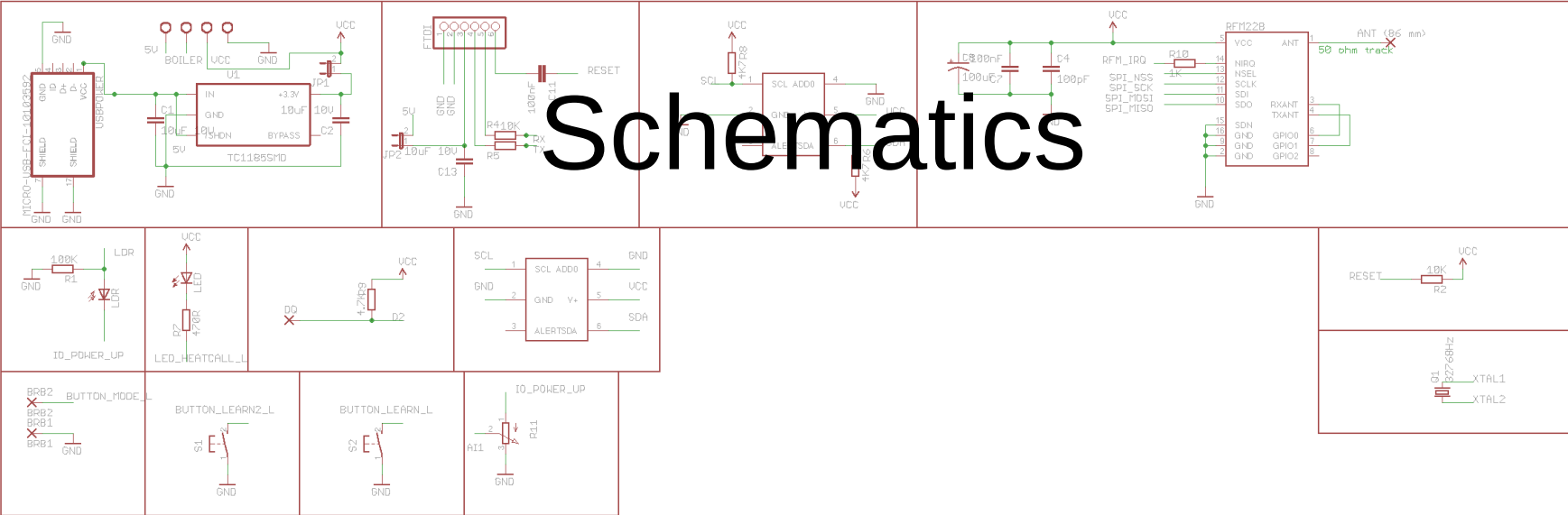
Distractions

- Scamp was before and during uni ('80s), more recent stuff this century, but never stopped tinkering
- AI and computing degrees
- Skills in handling fixed/capped resources also have been useful in defence, creating one of the UK's first ISPs and virtual credit card, working in finance (remember Lehman Brothers and RBS?)...

What Does It Involve?

- Designing electronics and the software to talk to it, typically in C or C++ eg since Scamp in '80s
- Code all the way up to app level or HTML/CSS/JS where needed
- ASM useful, Rust looks interesting, other languages possible, eg Java
- Essentially all skills can be learnt on the job, and you don't need piles of cash or expensive tools to do amazing things

Schematics



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OpenTRV Wireless TRV Controller	
TITLE: V0p2_Main_PCB2	
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Good and Bad?

- Only hardware talks to the real world, makes physical things go on and off, opens doors and valves and dams!
- The bridge between software and hardware is especially fascinating: squeezing every last drop of value out is fun!
- Hardware is hard, manufacturing is slow and expensive; software *can* turn on a sixpence

Q&A

- Thank you!
- Questions?