The UPS

I figure that, since the alarms have batteries, and my whole home automation system that I made these alarms report to is also on a conventional computer UPS, I decided this system also needs a battery backup. I chose a no-name generic 18650 Lithium cell UPS:



You can find them all over eBay and the like: It can be charged from a 5V/2A USB power supply, which I have far too many of already, and outputs a steady 12V at 1.2A (max). Simply install your preferred brand and capacity of 18650 cell and off it goes. I installed this UPS into an AC outlet box

with a blank cover plate, and added a panel mounted USB port for charging, and two DC barrel jacks in parallel for 12V output power. All this barely fit in by putting the UPS board in at an angle. Note also that I had to solder the battery holder onto the board, the UPS came in 2 halves like in the picture above.



I also desoldered the 3 indicator LED's on the board (red on/off, red charging, green fully charged), and added flying-lead LED's, which I then glued to the blank plate where I had drilled 3 holes for the lights to shine through.

With this setup, I am able to mount the UPS anywhere in my unfinished basement, in this case next to the basement alarm, and run the whole setup from an easily replaceable USB power brick.

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