

==Design Log==

3/5/2018

UPDATE: Design procedure begins

3/10/2018

UPDATE: Design procedure begins again. Research into interrupts starts.

3/15/2018

UPDATE: Interrupts working, however whenever I implement anything new, they stop working. Not sure why.

3/17/2018

UPDATE: Nothing works and I have no idea why. I've switched computers and the same issue remains. I don't know what's going on. I can't even get a single interrupt to work.

3/18/2018

UPDATE: I think I tracked it down, whenever I use the CMP function between a register that has been used in an interrupt, I get a crash. I'm not sure why though.

UPDATE: I was making false correlations, the reason why nothing worked was because I was parsing registers between interrupt and the main loop. I also wasn't checking for interrupts that could be external. What I didn't know was that this could only work if the interrupt happened right at the beginning of the main loop. Sometimes this happened, a lot of the time it didn't. This gave the impression of things working sometimes and sometimes not working. Whenever I would rearrange the program, I would get a different pattern of crash vs working, which would give me the impression of progress.

What I did eventually was write to the ram DURING the interrupt, which allowed me to maintain the SAME registers that were before and after, and not worry about them inputting the wrong value in a random part of a function we just had been interrupted from. This also allows me to have the main loop start off fresh from the new values at the expense of a few thousand clock cycles.