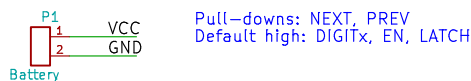
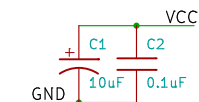
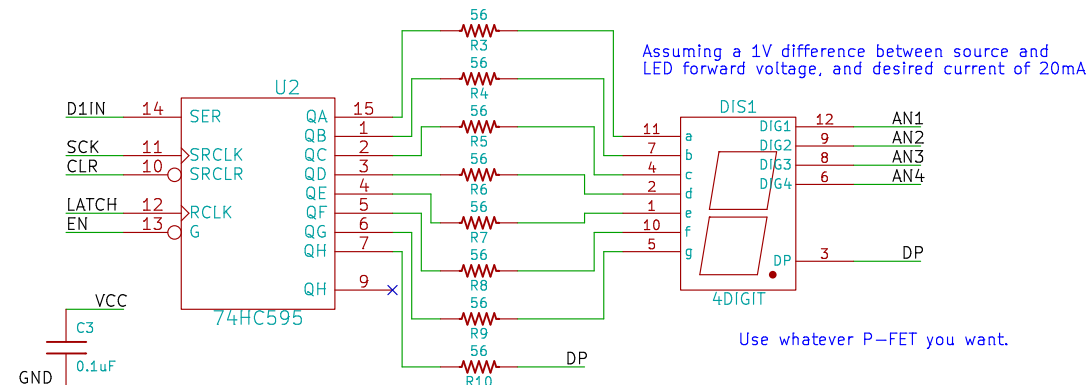
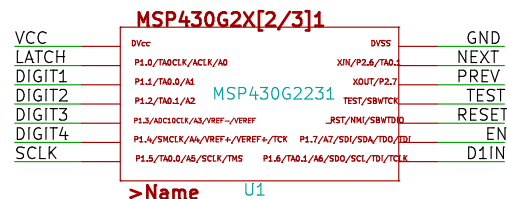
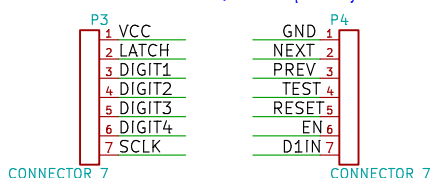


Operation:

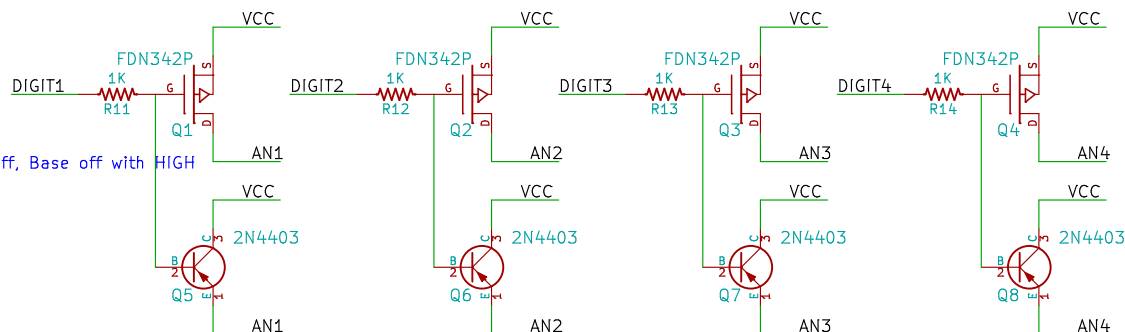
1. MCU will boot up in extremely low power mode (LPM4) upon battery insertion. EN is high/floating?
2. Once PREV or NEXT (acting as PWRON) receives a debounced HIGH from the switch between the pin and VCC, the MCU will switch into LPM1 and display either flashing d6 (first boot, dX selection of 4, 6, 8, 10, 12, 20, or 100) OR whatever it displayed last time, in which case, a NEXT is required to get it to the flashing d6.
3. NEXT finishes dX selection, moving on to Y(dx) selection, starting from 1dX and going up to 99 (a moving left-right animation will have to be done for d12-d100). Y will be 1 by default and not flash. Short NEXT proceeds, short PREV back. Long press either to enter Y selection where Y flashes. NEXT up, PREV down. Long press again to exit. If the die is d12-d100, the animation will stop so that Y is displayed flashing for a 5 second period when either NEXT or PREV has been long-pressed.
4. NEXT goes to number generation. The numbers that the MCU reads from the TEMP ADC + TIMER (so it overflows) are fed continuously through the display.
5. After a 1 sec delay or a NEXT, the result will be displayed and flash for 5 seconds. Pressing PREV here will loop back to 4, and reroll the same dice.
6. After 2 minutes of inactivity in any stage, the display will shut down, and the device will enter LPM4.



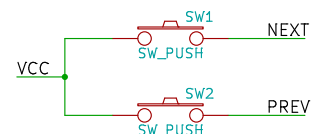
Breakout headers, launchpad style



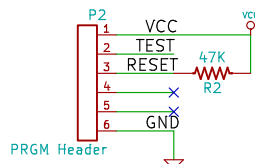
Normally off, Base off with HIGH



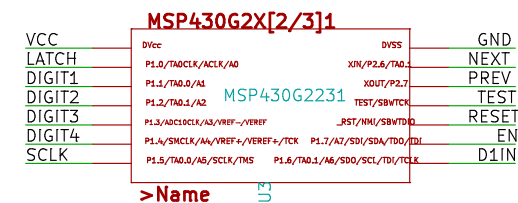
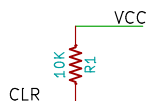
Use a PNP, I don't care.
2N4403 seems better suited than 2N3906, though, because amplifier gain (hfe) is assumed to be 80.



Interface Buttons with internal 30K Pull-downs



I would connect 4 and 5 so we could use software UART, but there's simply not enough pins for that.



the dummy symbol for the extra TSSOP footprint we have

File: mspDice.sch		
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Title:		
Size: A4	Date: 9 oct 2012	Rev:
KiCad E.D.A. eeschema (2011-05-25)-stable		Id: 1/1