1. Use copper defined pads instead of mask defined pads. Reason is the mask is not as effective at preventing leakage as the copper. 0.1mm past edge of copper.
2. Straight into the pads is important. Want to minimize chances for shorts by placing traces orthogonal to pads
3. **Move all traces so they’re orthogonal to pads.**
4. **Adjust traces so they aren’t bigger than the pad they’re attaching to**
5. Going to want to “staple” the ground signals
   1. Help ground by stitching ground planes together. This prevents ground signals from traveling vast distances.
   2. **Via ‘gnd’ will be used to put ground vias everywhere to “stitch” the planes together.**
   3. Since gnd is everywhere, ground stitching is very important.
   4. Put gnd stitches at regular intervals.
   5. **OSH Park makes our boards…their rules should be used for a DRC. Included in OSH Park DRU file in the oresat libraries folder.**
6. Use ERC (electrical rule check) on the schematic before layout of board
   1. When placing components, make sure to give room from the main line
7. Resistor blocks current flow in a circuit
   1. Pyro gives full 4.2V; if I was using a 1ohm resistor, the circuit pulls 4.2V. Current flows depending on the resistance of the circuit
   2. The resistor we put in will limit current
   3. **R = 4.2V-fwdV / current of the opto-isolator for those diode resistors**
8. **Put LED in 0603 package all over the place; needs to be selected**
9. Stm32 can output a few mA, so 90mA from speaker won’t work
   1. To fix this, use a transistor to switch the speaker on/off, while giving it direct power from 3.3V.
10. **Remake H-bridge symbol: inputs on left, outputs on right. Makes data easier to read**
    1. Use “!” with a symbol name to make the bar for active low
    2. “Bar” means active low…
    3. **Adjust my symbols to correctly show a bar**
11. Edward Tufte wrote visual design of qualitative information…it’s a book about designing representative quantitative things by reducing visual noise. Add white space, rid unnecessary color, and align things.
12. **Find new transistor to replace A06405. It only has one source and could use more leads with both P-channels**
13. **Keep power on same side, and via the small signals.**
14. Never make traces larger than pad its attaching to