**Group 18 Design Review**

**ECE 411, Fall 2019**

**Reviewing Group: Team 15**

Notes on our Design Review

1. Pin 3 on IC1 (AS3320 VCF) has some kind of unnecessary junction dot.
2. Add XRef labels to PWM->Filter net (Pins 1,2,6,7)
3. Make sure labels don’t overlap components
4. Our power supply labels are cute.
5. Documents need a document number
6. Make -15V net name more clear near R19.
7. Make all reference designators horizontal (consistent)
8. Add revision number
9. Our jumper symbols are cute also.
10. Spread out decoupling for better clarity.
11. AM oscillator reference designators are not clear
12. LEDs on true bypass circuit need resistors
13. Board needs via stitching
14. Oscillator sections need short traces all the way through mixer stage.
15. Make crystal trace lengths identical
16. Don’t connect grounds with traces, just use vias to ground.
17. Power trace width must be thicker
18. Some traces not well laid out for solid pad reference (weird angles)
19. Line up the components more nicely.
20. Move crystal closer to Atmega328p
21. I hate how huge that crystal is. Nobody likes it.
22. So many vias, put down so many vias.
23. Make sure our components are connected.
24. Need 5v nets on U4 according to the DRC.
25. May need vias to ground on some IC pins
26. Use ratsnest before running DRC!
27. Don’t use default DRC, use OshPark settings.
28. Don’t bring in traces at right angles
29. Fix all the bad autorouting stuff.
30. We need a slick logo on the PCB.