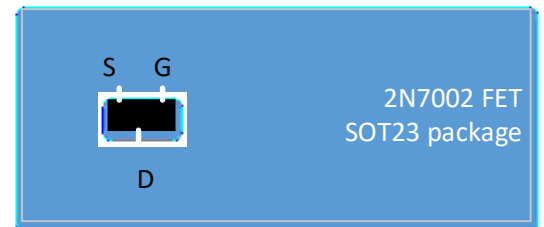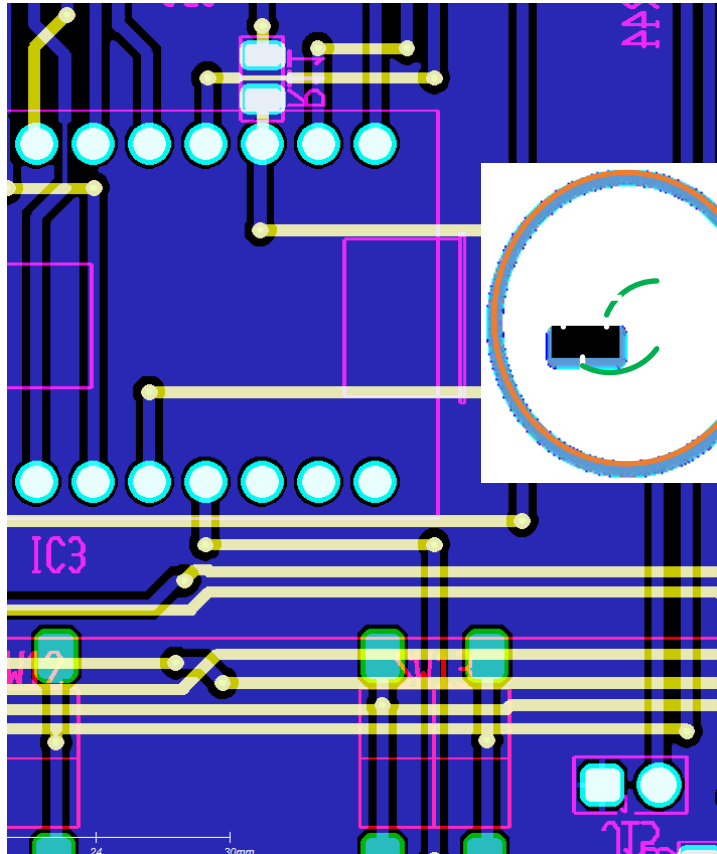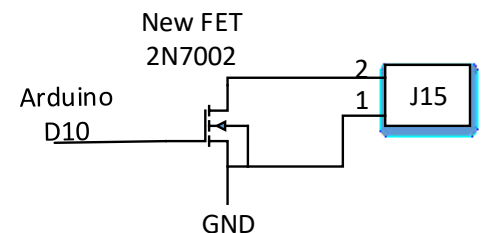# Early Andromeda Modifications

Display PWM Output

On some TFT displays, there is a flicker if the "brightness" PWM output is directly driven by the Arduino. This can be corrected by adding a 2N7002 FET. This can be assembled using proto boards attached to J15, or it can be backwired onto the front of the PCB under the display near the Arduino.

2N7002 FET
SOT23 package

1. Remove R11
2. Cut track (red)
3. Scrape away solder resist in 3 spots (grey)
4. solder FET to scraped area in the copper plane
5. add 2 wires to the cut track (green)

Microphone PTT Connection

Some microphones have no connection between GND (RJ45 pin 7) and MIC GND (RJ45 pin 4).

There are two potential fixes:

1. A ferrite bead connecting RJ45 pin 7 and AGND will allow the PTT input to work. (This could allow RF pickup – check)
2. A better fix is as follows:
   a. Remove the RJ45 connector
   b. Cut the 4 tiny traces joining pin 7 to ground
   c. Re-solder the RF45 connector
   d. Add a ferrite bead from RJ45 pin 7 to J2 pin 8
   e. Add a 10nF capacitor from RJ45 pin 7 to AGND