Week 8 Report

This week I built the class-D audio amplifier on a perforated board. The protoboard from the previous week had a lot of capacitances, which created delays in the two channels of my amplifier. The perforated board has no capacitances and I got a nice clean signal at the end.

Another problem was that the classs-D amplifier needed to be supplied with a lot of current and required 8Volts to switch on. This current and voltage could not be supplied by the microcontroller. So I built a pin driver that acts as a pre-amp to our class-D audio amplifier. The pin driver and our class-D audio amplifier work very well together in series and can be seen in the figures below. The were driven by a signal generated by a oscillator, which is very similar to the microcontroller in terms of current and voltage supply

The I also began working on writing the printed circuit board. I feel very strongly about writing the PCB and having it ordered by next week to keep our project on tracked. But we still do not have a microcontroller programmed.
Figure 1. Class D audio amplifier on a perforated board.

Figure 2. Pin driver.
Figure 3. Oscilloscope reading showing 27 VPP, with 300 milliamps this equals 9 watts
Figure 4. PCB early stages.