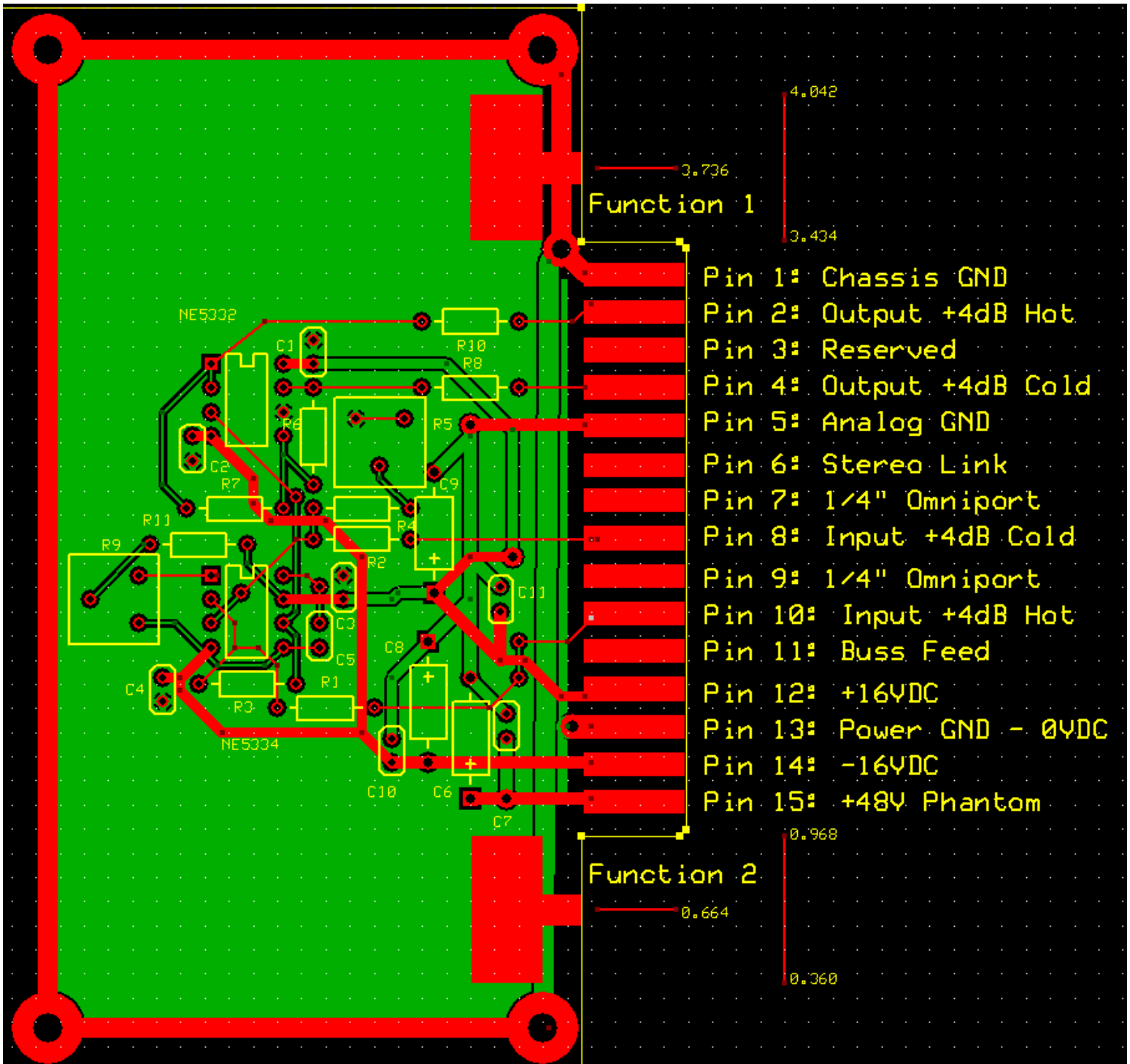


Build of Materials:

| | |
|--------|---------|
| C1 | 0.1uF |
| C2 | 0.1uF |
| C3 | 0.1uF |
| C4 | 0.1uF |
| C5 | 58pF |
| C6 | 100uF |
| C7 | 10uF |
| C8 | 100uF |
| C9 | 100uF |
| C10 | 10uF |
| C11 | 10uF |
| NE5332 | |
| NE5534 | |
| R1 | 1K 0.1% |
| R2 | 1K 0.1% |
| R3 | 482K 1% |
| R4 | 368K 5% |
| R5 | 100K |
| R6 | 10K |
| R7 | 10K |
| R8 | 10K |
| R9 | 100K |
| R10 | 10K |
| R11 | 22K |

Layout:



Writeup:

In the Schematic, the main changes were for aesthetic purposes. However some functional purposes were made as well. The four bypass capacitors on the NE5332 were reduced to 2 because even though there are two sets of inputs and outputs, the power pins are shared. Also, the distinction between analog and power ground was made in the schematic and the capacitors were added between ground and all power sources.

The layout was completely redone, with much more consideration for placing components close to the input and output pins to minimize trace lengths. All bypass capacitors were placed closer to their op amps and I made an emphasis on using diagonal lines when possible to reduce trace lengths. The use of ground planes also reduced the number of traces needed and gave an added flexibility to placement of components. I also made a point to reduce the number of vias when possible, even if it meant violating the convention of lower layer for vertical traces and upper layer for horizontal. The last detail was the inclusion of a trace around the edge for chassis ground.