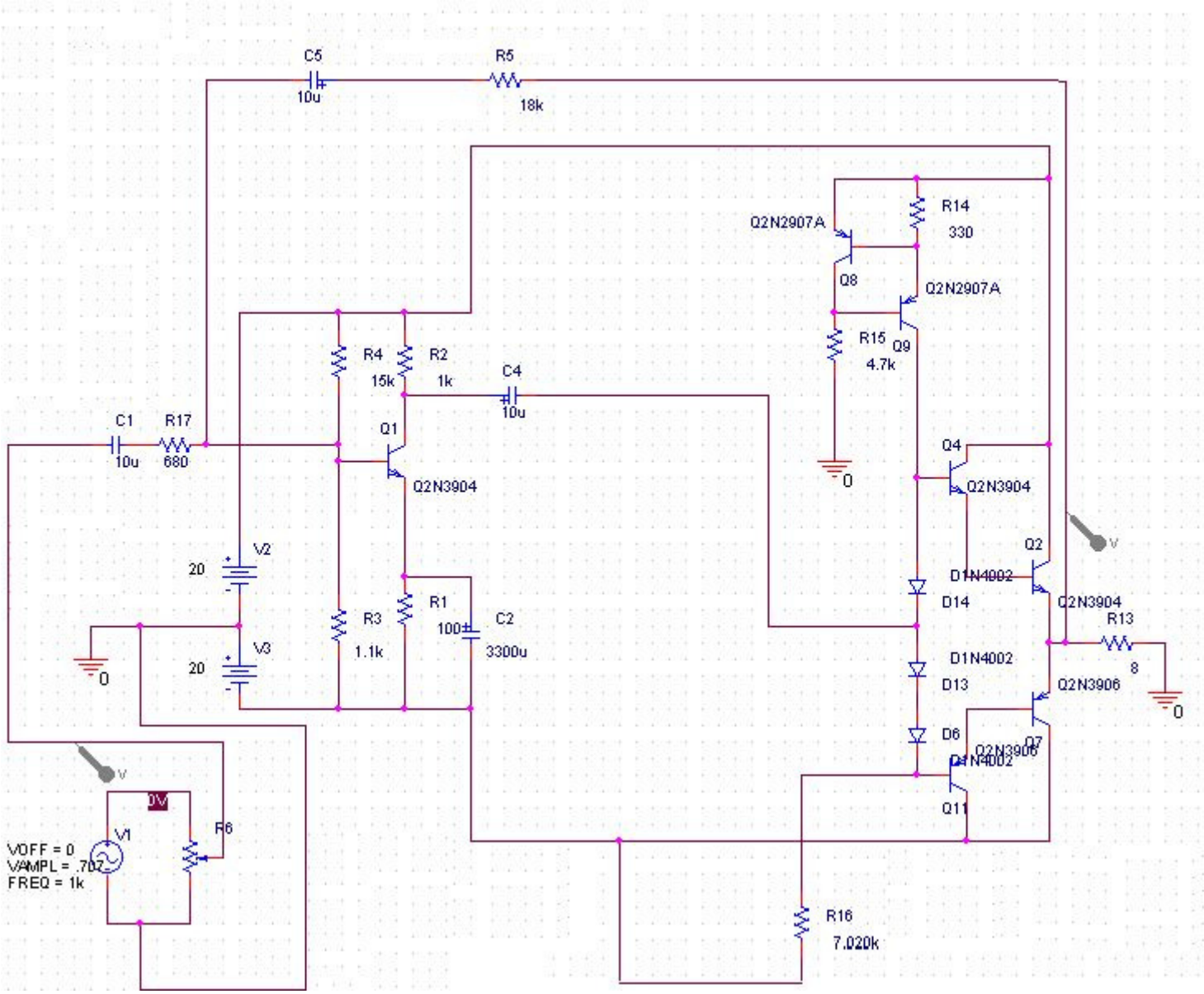
15 Watt Amplifier

Description:

A 15 watt amplifier made using discrete components. Sergio designed this circuit for his Electronics Level II course.



Notes:

This amplifier uses a dual 20 Volt power supply and delivers 15 watts RMS into an 8 ohm load. Q1 operates in common emitter, the input signal being passed to the bias chain consisting of Q8, Q9, D6, D13 and D14. Q8 and Q9 provide a constant current through the bias chain to minimize distortion, the output stage formed by a discrete darlington pair (Q2,Q4) and (Q7,Q11). The last two transistors are power Transitors, specifically the 2N3055 and MJ2955. The 7.02K resistor, R16 was made using a series combination of a 4.7K, 680 Ohms, and two 820 Ohms. The 1.1K resistor, R3 was made using a 100 Ohms and a 1K resistor. You can use this circuit with any walkman or CD player since it is designed to take a standard 500mv RMS signal.