

1 Driver Amplifier

First, the Driver Amplifier was built. The associated schematic can be seen in Figure 1.

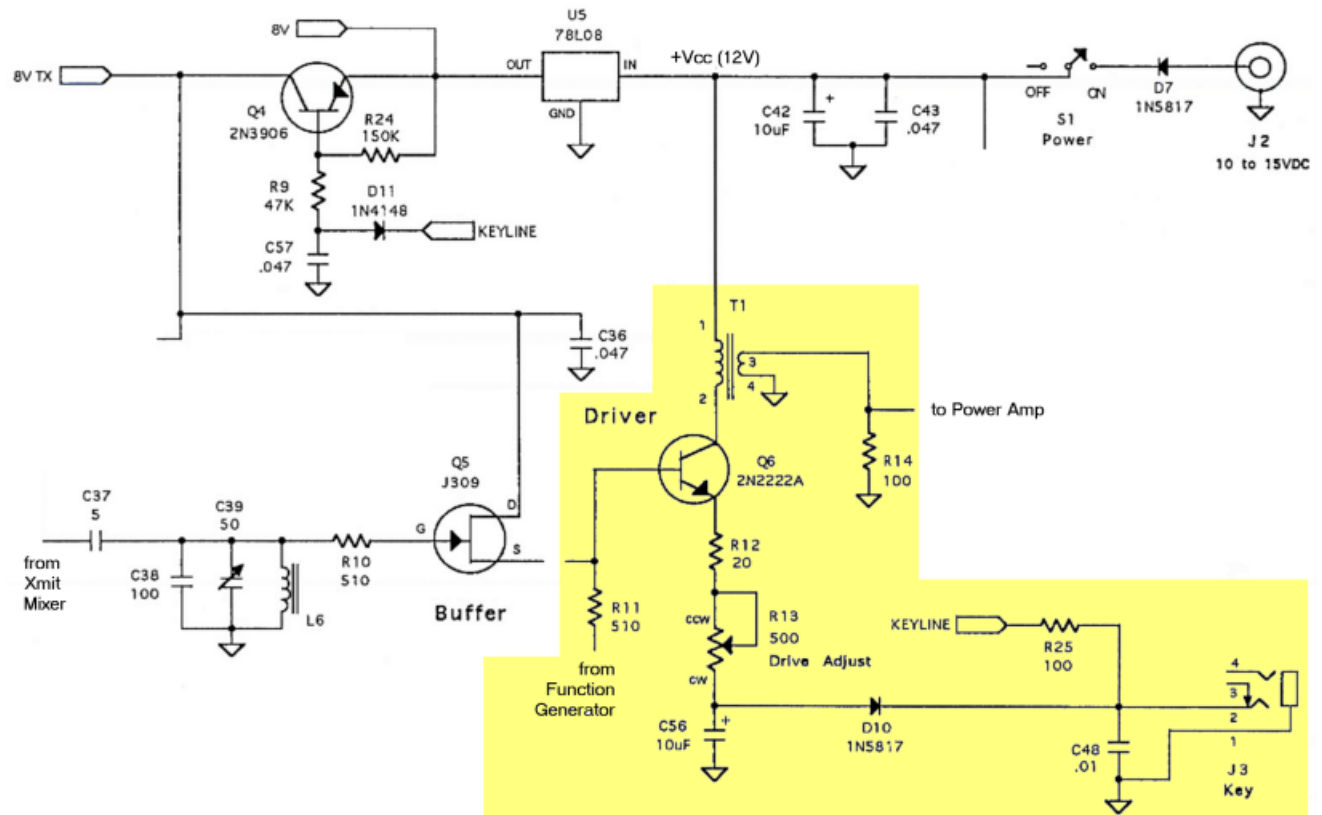


Figure 1: Circuit Schematic for the Driver Amplifier

1.1 Calculated Output Power: P_o

P_o is calculated using the following:

$$P_o = \frac{V_{cc}^2}{n^2 R_{14}}$$

Since V_{cc} is given as $12V$, $R_{14} = 100\Omega$ and transformer T_1 has a turns ratio $n = \frac{14}{4} = 3.5$:

$$P_o = \frac{12^2}{(3.5^2 \cdot 100)} i = \boxed{117.5mW}$$

1.2 Measured Output Voltage: V_o

With the function generator set to $7.04MHz$, and with an offset of $0.5V$. The output voltage across R_{14} was measured to be \boxed{V} .

1.3 Calculated Delivered Power: P_d

1.4 System Efficiency: η

1.5 Amplifier Gain: G

1.5.1

When R_{13} is fully clockwise, the gain was found to be \square .

1.5.2

When R_{13} is fully counter-clockwise \square .

1.6 Miller Capacitance, C_M

(*Note:* At the end of this step, the other end of R_{11} was soldered).

2 Buffer Amplifier

Figure ??.

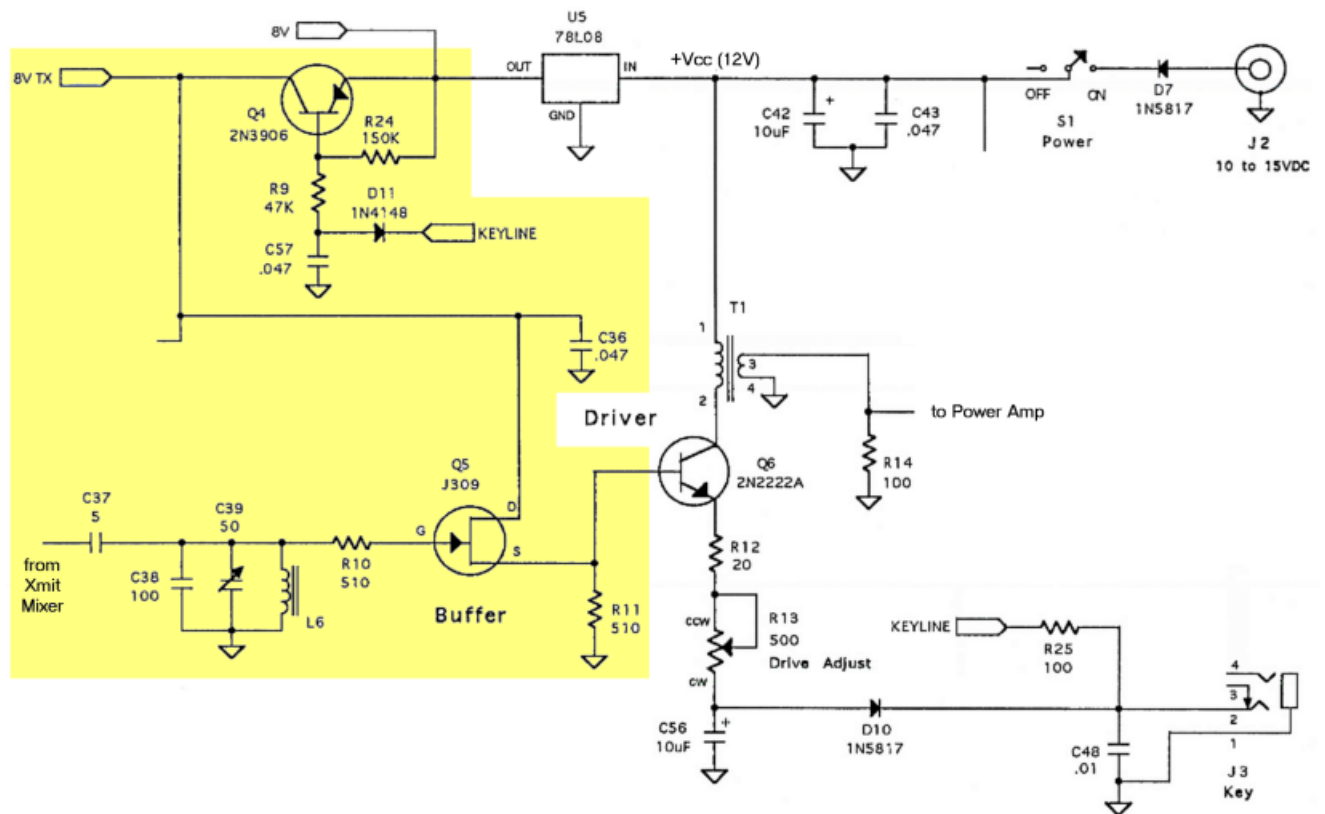


Figure 2: Circuit Schematic for the Buffer Amplifier