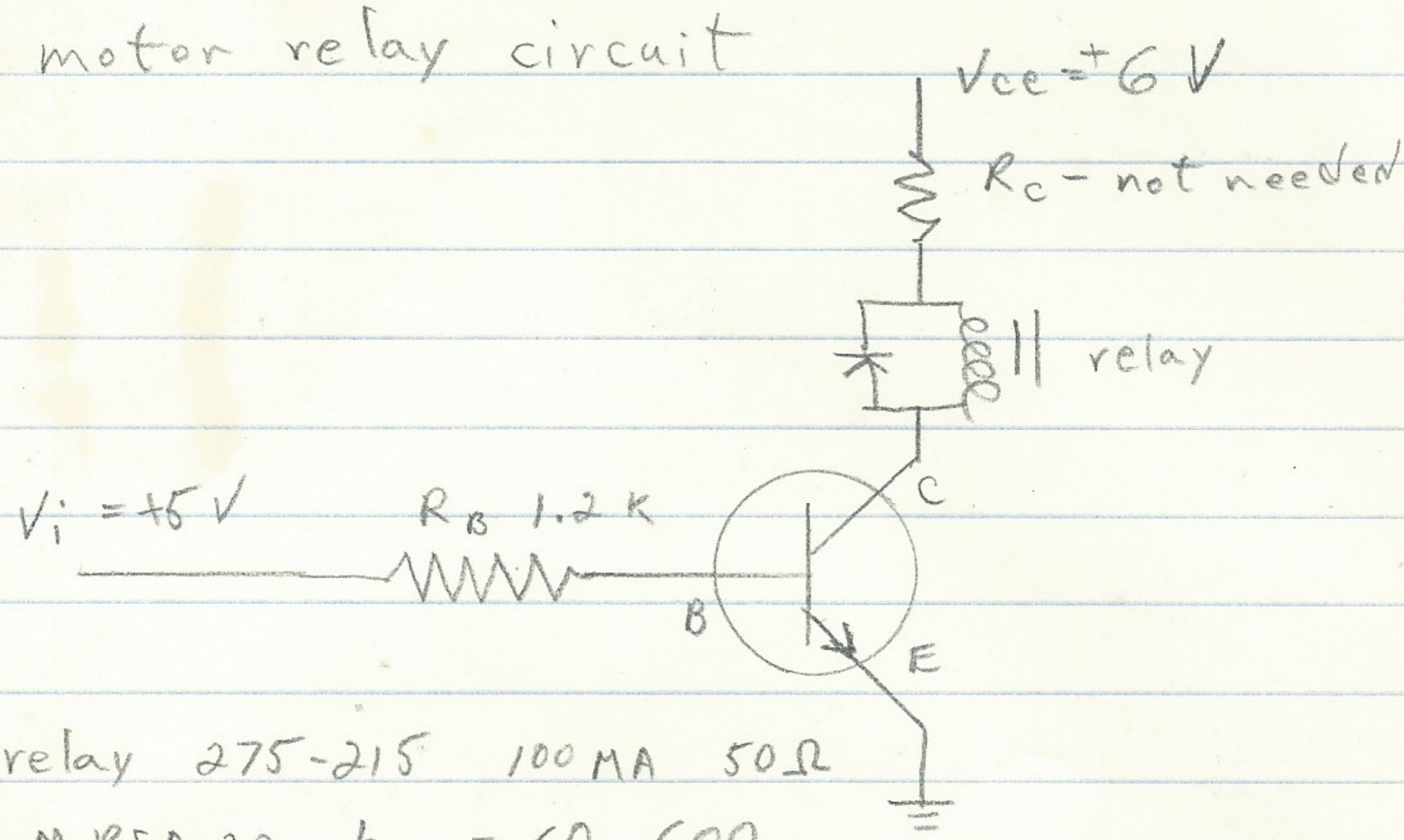
11-10-81

motor relay circuit



1 relay 275-215 100 MA 50Ω

1 MPSA 20 h_{FE} = 60-600

1 Diode 1N4149

1 R_B = 1.2 k

1 R_c = 10Ω (not needed)

1 Load : Relay 50Ω 100 MA

2 Supply voltage : +6V

3 Transistor : MPSA 20 h_{FE} = 60-600

4 $R_c = \frac{6-5}{.1} = \frac{1}{.1} = 10\Omega$ $V_L = 50 \times .1 = 5V$

7 Collector current = 100 MA

8 Base current $= \frac{2 \times .1}{60} = \frac{.2}{60} = .0033$ amps

9 Base resistor $\frac{5-.7}{.0033} = 1303 = 1.2k$