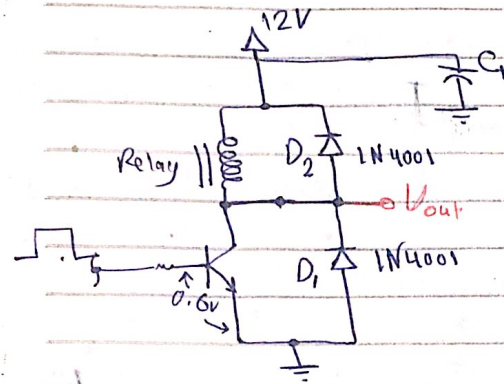


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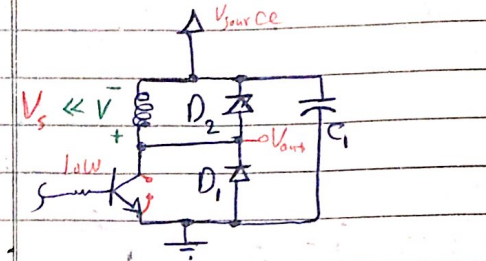
Subject: Transistor relay protect

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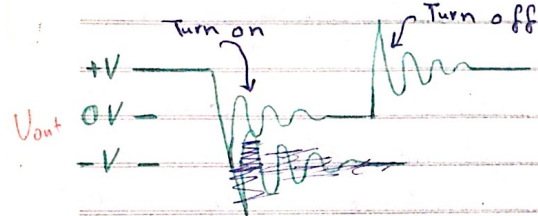
* Transistor Relay Driver Protection Circuit



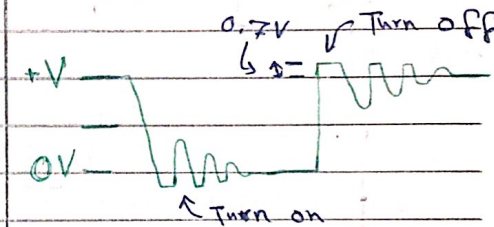
but turning off the source current starts to decay instantaneously, so the coil try to pull the current by generating very high back EMF, which is too big at V_{CE} of Q



1) if Flyback diodes not added

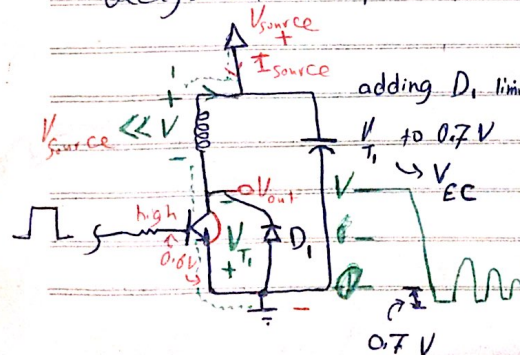


D_2 provides low resistance to the back emf, so it limits it to 0.7V as follows



1.4 \Rightarrow When turning on

coil try to repel the source current and produce high emf bigger than V_{source} and decays with time,



Also, Spikes harm relay contacts because they are viciously slapped during shut during an inductive spikes