



- R1 = 1940 ohms*
- R1 = 1940 ohms*
- R3 = 10k ohms
- D1 = 20 amp Diode
- D2 = 20 amp Diode
- D3 = Green LED 2.1 volt
- D4 = Green LED 2.1 volt
- D5 = Red LED 1.8 volt
- Relay 1 = 12 volt 30 amp
- Relay 2 = 12 volt 30 amp
- S1 = normally open momentary push button
- S2 = single throw double pole
- S3 = normally open momentary push button
- S4 = single pole single throw key lock switch
- S5 = normally open momentary push button
- * 1940 ohms was reached using two 470 and one 1k ohm resistors in series.

Here is a great 2 pad relay controlled launch controller. I used some parts I had laying around and I bought the rest at Radio Shack. This can be used with a 12 volt gel cell or car/motorcycle battery. Using the optional circuit breaker is recommended with use of car battery for circuit protection. This controller uses regular 110 volt single outlet so cabling to pad can be one or more extension cord(s) with short modified clip whips plugged into the other end. To use devise turn on the key switch and verify power LED. Switch to the correct pad and test continuity, if ok count down and push launch button.