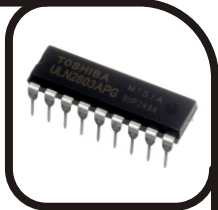
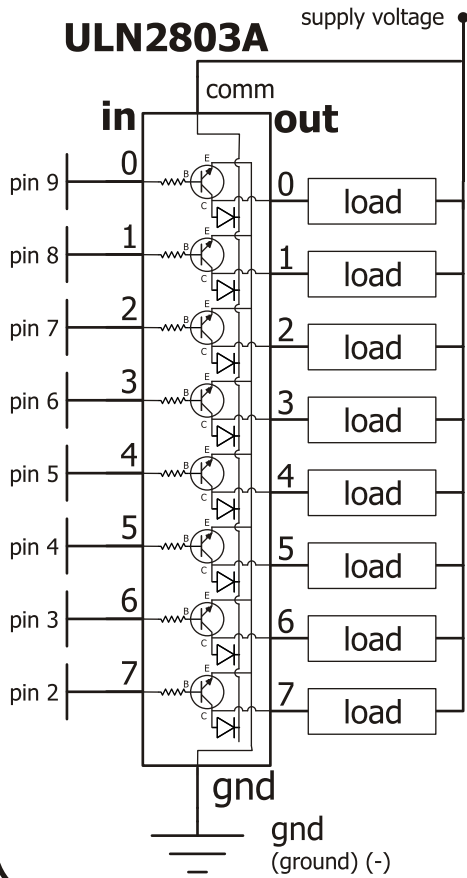


Transistor Arrays (ULN2803A)



The Schematic



The Theory & Code

the basics

The Arduino's digital pins are great for controlling small loads like LEDs, However if you want to control something bigger transistors are required. A ULN2803A is a really hand IC (integrated circuit) as it houses 8 high current transistors in a single package.

to use

Connect the input pin to a digital pin on your Arduino. Then connect the negative lead of your load to the output. Finally connect the positive lead of your load to its supply voltage (0.5-30 volts). To turn your load on set the digital pin HIGH. To turn your load off pull the pin to LOW or set it to INPUT.

flyback diodes

The ULN2803A also has fly-back diodes built in. This allows you to drive inductive loads with it (motors and relays) without worrying about damaging your Arduino.

∴ ULN2803A Datasheet <http://tinyurl.com/mv2598> ∴

The Pin-out



The Limits

∴Current Per Output∴

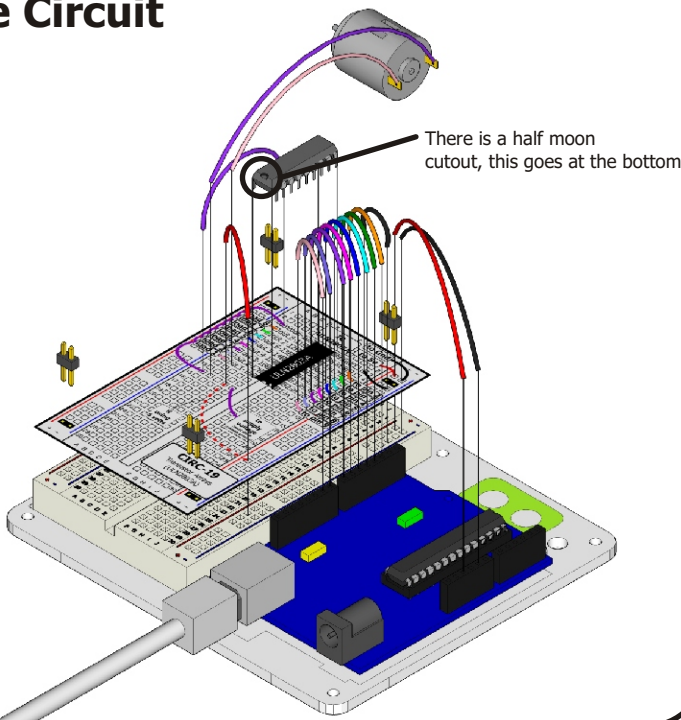
500 mA

∴Power Dissipation∴

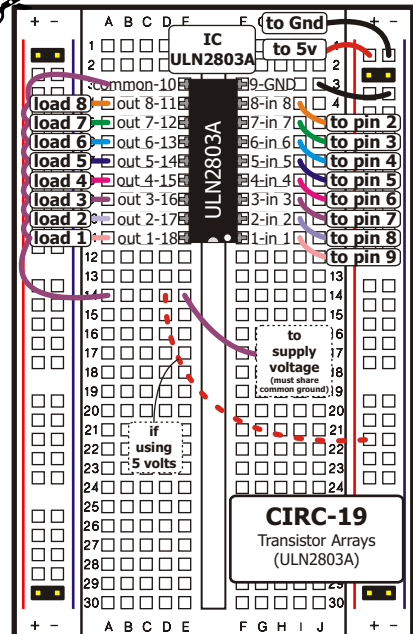
1.47 W

(this means under heavy loads the chip will get quite hot and may need additional heatsinking)

The Circuit



The Layout Sheet



∴ Instructions: print out, cut out, get making ∴
∴ for more details visit: <http://tinyurl.com/mx1jb4> ∴