

# EasyDriver v4.3

www.schmalzhaus.com/EasyDriver

An easy to use bipolar stepper motor driver  
 Use 4 wire, 6 wire or 8 wire stepper motors  
 From about 150mA/phase to about 750mA/phase  
 Defaults to 5V for Vcc (logic supply), settable to 3.3V  
 Supply 8V to 30V DC power input on JP1  
 Do not connect or disconnect motor while EasyDriver is powered

**DEFAULT OPTIONS**  
 Short JP5, JP6, JP7 pins to GND or Vcc to override

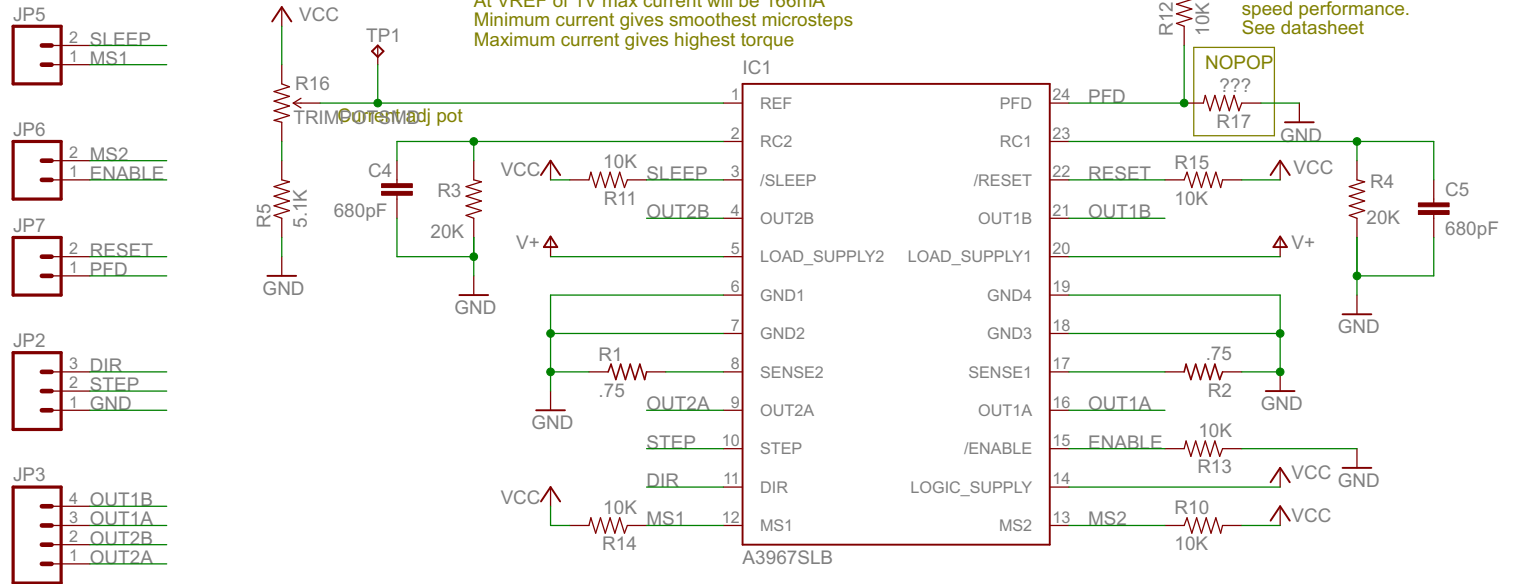
SLEEP = Vcc (awake)  
 MS1 = Vcc (1/8 microstep)  
 MS2 = Vcc (1/8 microstep)  
 ENABLE = GND (enabled)  
 RESET = Vcc (not reset)  
 PFD = Vcc (slow decay mode)

DIR is level sensitive  
 A rising edge on STEP causes a step  
 Both take 0V to Vcc

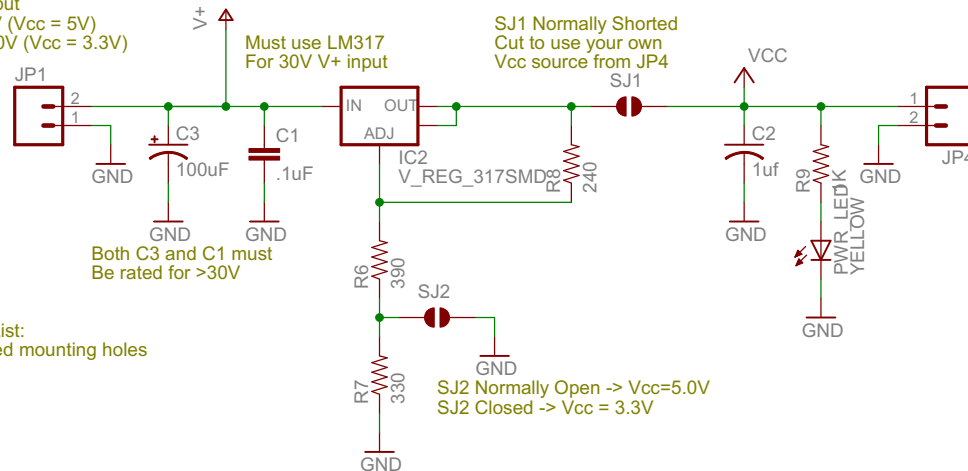
Coil 1 of motor across OUT1B and OUT1A  
 Coil 2 of motor across OUT2B and OUT2A

TP1 - VREF input to driver  
 Monitor this test point with meter as you adjust current adj pot  
 Valid range 1.0V to Vcc  
 At VREF of 5V max current will be 833mA  
 At VREF of 3.3V max current will be 550mA  
 At VREF of 1V max current will be 166mA  
 Minimum current gives smoothest microsteps  
 Maximum current gives highest torque

PFD intermediate voltage  
 Change R12 and add in R17 to create any voltage on PFD for best high speed performance.  
 See datasheet



**Power Input**  
 8V to 30V (Vcc = 5V)  
 6.3V to 30V (Vcc = 3.3V)



Vcc output  
 Max 70mA used by EasyDriver  
 The rest you can use

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Change List:  
 v4.3 Added mounting holes

Designed by Brian Schmalz	
Produce by Spark Fun Electronics	
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