

# BigEasyDriver v1.2

www.schmalzhaus.com/BigEasyDriver

An easy to use bipolar stepper motor driver  
 Use 4 wire, 6 wire or 8 wire stepper motors  
 From 0mA/phase to over 2A/phase  
 Defaults to 5V for Ucc (logic supply), settable to 3.3V  
 Supply 8V to 35V DC power input on JP1 or JP7  
 Do not connect or disconnect motor while BigEasyDriver is powered

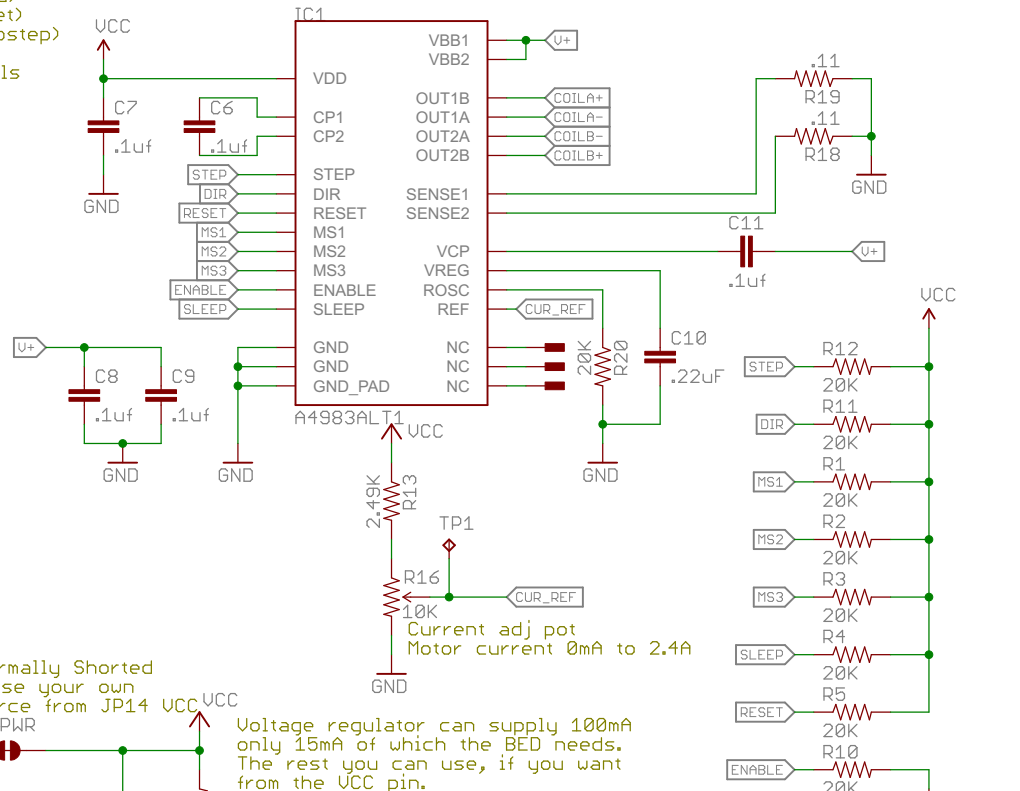
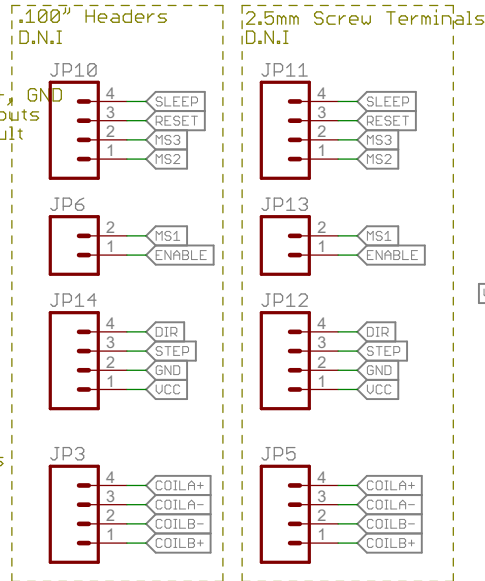
DEFAULT OPTIONS  
 Short JP10, or JP6 pins to GND or Ucc to override  
 SLEEP = Ucc (awake)  
 MS1 = Ucc (1/16 microstep)  
 MS2 = Ucc (1/16 microstep)  
 ENABLE = GND (enabled)  
 RESET = Ucc (not reset)  
 MS3 = Ucc (1/16 microstep)

NOTE: UCC is normally an OUTPUT. You do not need to supply power to the Big Easy Driver through UCC. The only power needed is through M+ (motor power).

You only need to connect M+, GND, STEP, DIR and the motor outputs  
 All other I/O is set to default to 1/16th microstep mode

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

Bi-polar Stepper Motor Outputs  
 Coil A of motor across COILA+ and COILA-  
 Coil B of motor across COILB+ and COILB-



Power Input JP1, JP7  
 8V to 35V DC

APWR Normally Shorted  
 Must use LM317 Cut to use your own  
 For 35V U+ input Ucc source from JP14

Voltage regulator can supply 100mA only 15mA of which the BED needs. The rest you can use, if you want from the UCC pin.

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Change List:  
 v1.0 Original version  
 v1.1 Added pull-ups, re-routed  
 v1.2 5/2/11 Silk screen corrections, sense resistors now .11 ohms  
 SparkFun design rules applied - minor layout tweaks, R13 now XXX

1/10/12 -v13- Changes:  
 -updated footprint for driver IC (1:1)  
 -ran all traces directly away from IC  
 -moved vias and retraced as necessary on UCC and GND TOP layers



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TITLE: BigEasyDriver11876	SFE
Design by Brian Schmalz Revised by Patrick Alberts Produced by Spark Fun Electronics	REV: v15
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