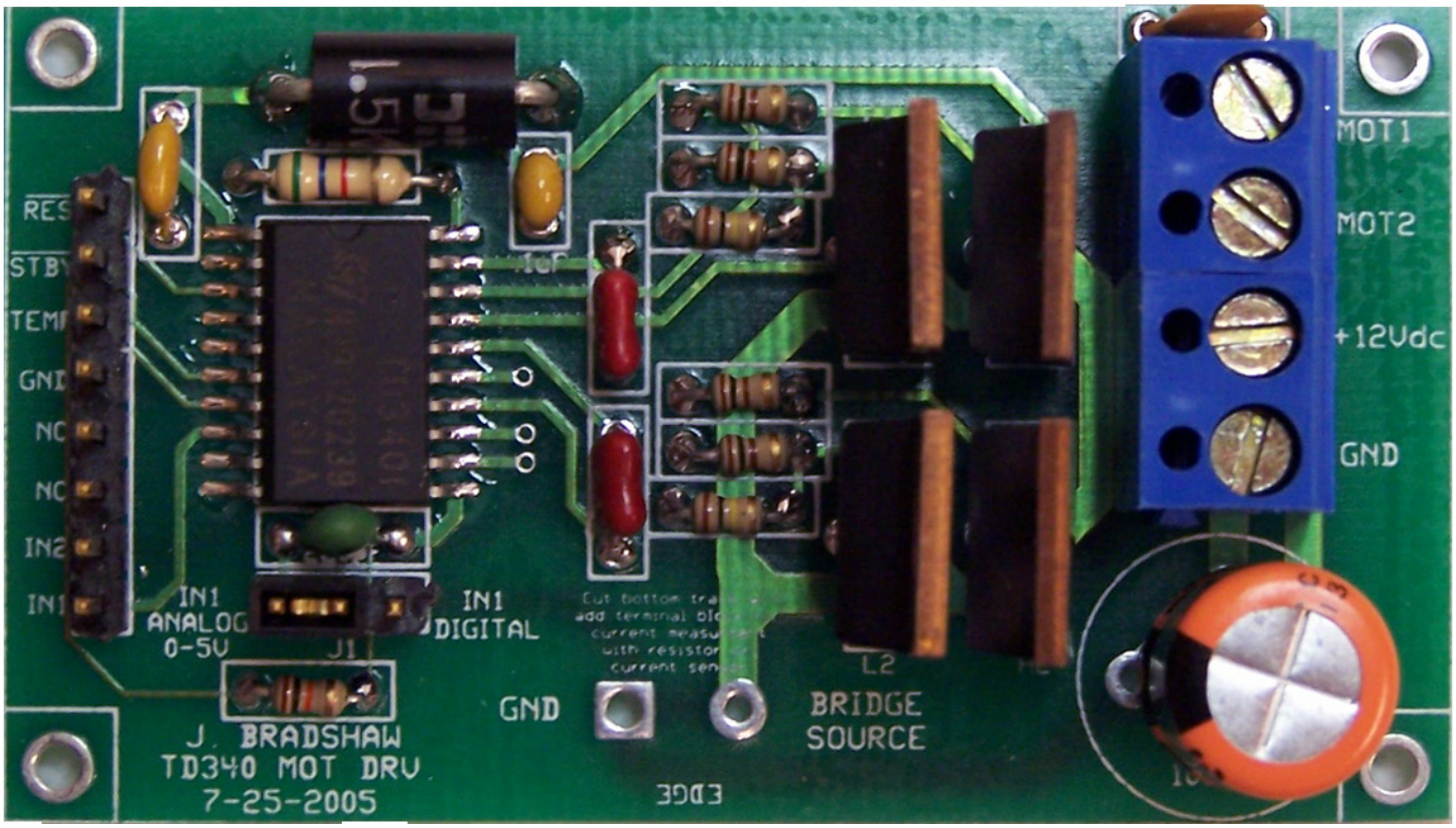
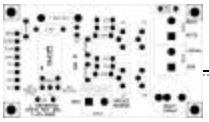
WEAPONS AND SYSTEMS ENGINEERING

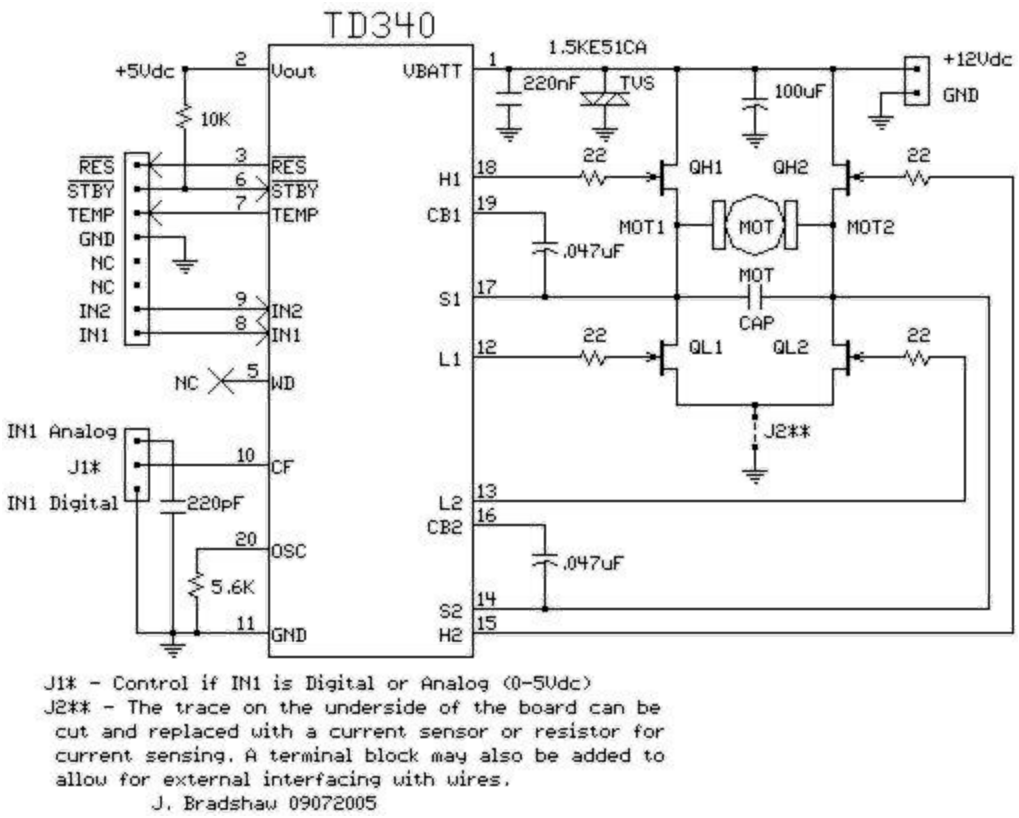
TD340 MOTOR DRIVER BOARD



HARDWARE LAYOUT

 (-CSCO-3h--TD340_pcb7.jpg)

SCHEMATIC



J1* - Control if IN1 is Digital or Analog (0-5Vdc)
J2** - The trace on the underside of the board can be cut and replaced with a current sensor or resistor for current sensing. A terminal block may also be added to allow for external interfacing with wires.
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This circuit board uses the TD340 H-Bridge DC motor driver IC to drive a DC motor with digital, or digital and analog control. The board will drive motors with a 6.5Vdc to 18.5Vdc supply voltage. The board has an 8-pin header for interfacing to control circuits although only 3 pins on the header are necessary for motor control (IN1, IN2, and GND). IN1 is an analog voltage from 0-5Vdc or a digital signal (PWM) depending on the position of J1. IN2 controls the motor direction. Two not-connected pins are added to increase compatibility with other motor driver boards supplied by TSD. The TD340 provides an active low RESET output signal to the controller indicating when the VOUT +5Vdc voltage has dropped below 4.2V and remains low until the voltage has increased beyond 4.3Vdc. The active low input signal STBY will switch off the MOS drivers and stop the internal charge pump oscillator. However, the 5V regulator and reset circuitry will still be active. The TD340 also contains a TEMP temperature output which may be useful in some designs. Additional information can be obtained from the TD340 datasheet (/+CSCO+3h75676763663A2F2F766167656E6172672E6866616E2E727168++/WRCLabs/PARTS/-CSCO-3h--MOT/-CSCO-3h--MOTCON_IC_DB/MOTOR_DRIVER_IC/TD340_Full_bridge_Driver.pdf) or application note (-CSCO-3h--TD340_app_note.pdf) (AN1304), or visit http://www.st.com/stonline/ (https://sslvpn.usna.edu/+CSCO+0h756767633A2F2F6A6A6A2E66672E70627A++/stonline/).

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