

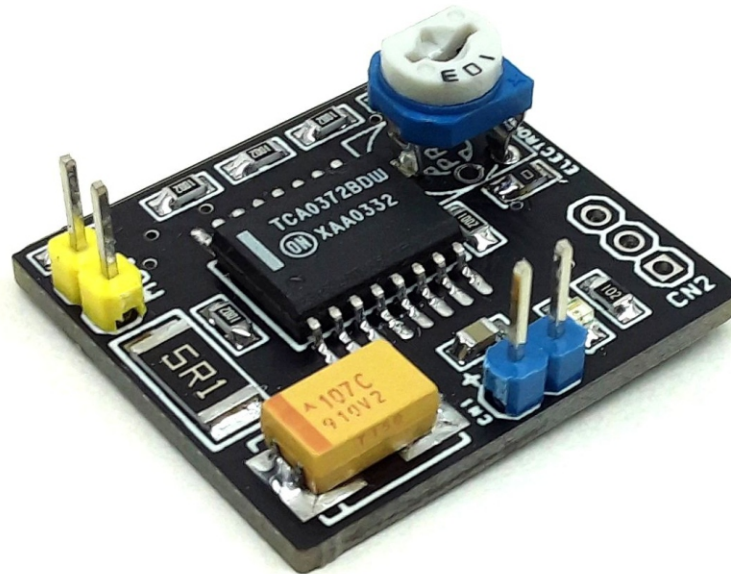
Bidirectional Speed Control of DC Motors

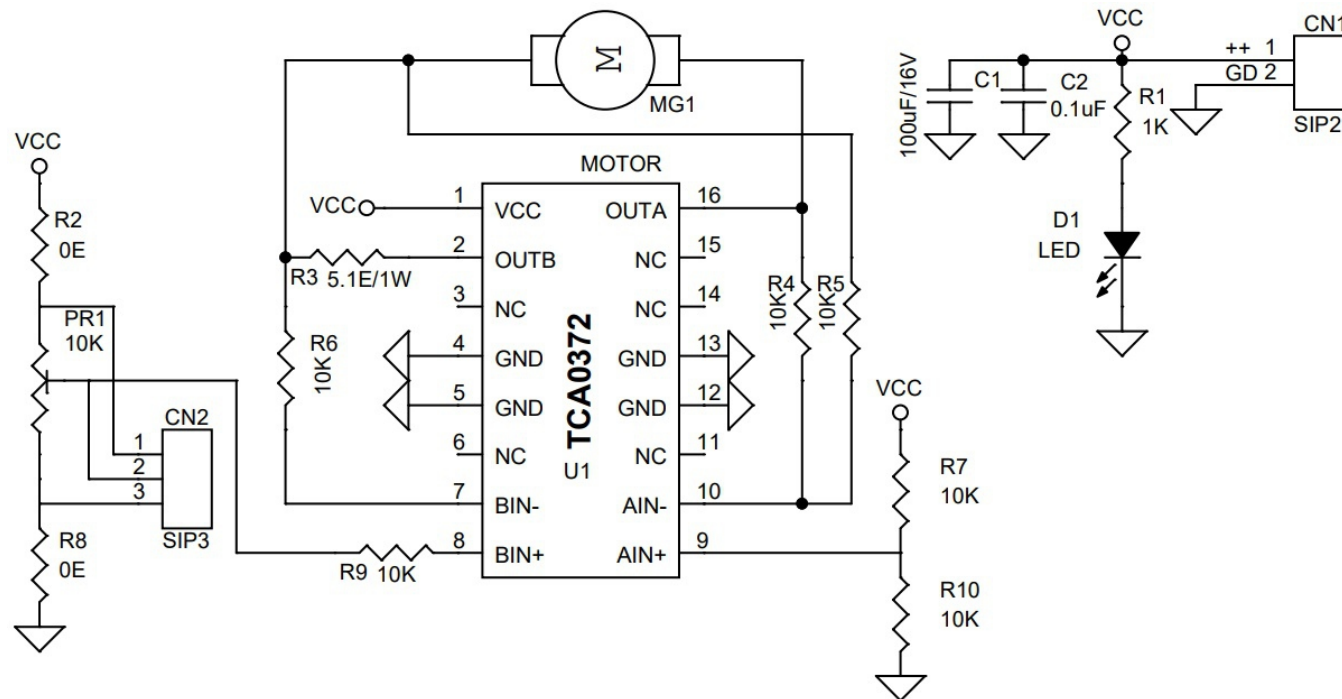
This is a very simple bidirectional speed control of a small DC brushed motor. The project is built using power OPAMP TCA0372 which can drive a load up to 1A. Connecting a small DC motor and trimmer pot will control the motor forward/reverse operation along with speed control. A Trimmer potentiometer is provided to set the speed and direction of the motor. The motor is stopped when the potentiometer is in the center, turn the pot clockwise to run the motor in the forwarding direction, turning the pot counterclockwise will run the motor in the reverse direction. Operating power supply 12V DC.

Note: Motor control is also possible using a joystick. Trimmer pot can be replaced with Joystick using optional connector Cn2.

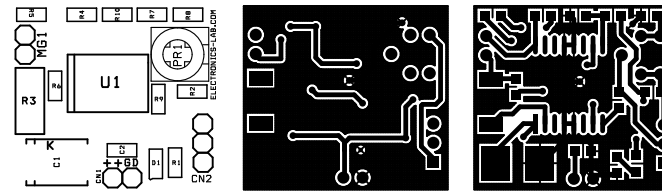
Features

- DC Motor 6-12V DC
- Maximum Motor current up to 1Amp
- Operating Power Supply 12V DC
- Single Trimmer Pot Controls CCW/CW and Speed Control
- Potentiometer Can be Replaced with Joystick
- PCB dimensions: 27.62 x 24.92 mm









SILK SCREEN TOP BOTTOM LAYER TOP LAYER

PCB DIMENSIONS 27.62MM X 24.92MM

BOM						
NO.	QNTY.	REF.	DESC.	MANUFACTURER	SUPPLIER	SUPPLIER PART NO
1	1	CN1	2 PIN MALE HEADER PITCH 2.54MM	WURTH	DIGIKEY	732-5315-ND
2	1	CN2	3 PIN MALE HEADER PITCH 2.54MM	WURTH	DIGIKEY	DNP
3	1	C1	100uF/16V SMD TANTLUM	KEMET	DIGIKEY	399-18082-1-ND
4	1	C2	0.1uF/50V SMD SIZE 0805	MURATA/YAGEO	DIGIKEY	
5	1	D1	LED RED SMD SIZE 0805	LITE ON INC	DIGIKEY	160-1427-1-ND
6	1	MG1	2 PIN MALE HEADER PITCH 2.54MM	WURTH	DIGIKEY	732-5315-ND
7	6	R4,R5,R6,R7,R9,R10	10K 5% SMD SIZE 0805	MURATA/YAGEO	DIGIKEY	
8	1	R1	1K 5% SMD SIZE 0805	MURATA/YAGEO	DIGIKEY	
9	2	R2,R8	0E SMD SIZE 0805	MURATA/YAGEO	DIGIKEY	
10	1	R3	5.1E/5E 1W SMD SIZE 2512	MURATA/YAGEO	DIGIKEY	
11	1	U1	TCA0372	ONSEMI	DIGIKEY	TCA0372DWR2GOSCT-ND
12	1	PR1	10K TRIMMER POT	KYOCERA	DIGIKEY	478-601030-ND