

IR Remote Controlled Motorized Potentiometer-Arduino Compatible Project

This is an Infrared Remote controlled motorized potentiometer controller. It's an open-source project built on the Arduino platform and compatible with Arduino IDE for custom programming. The project consists ATMEGA328 microcontroller, IR sensor, L293D motor driver, ALPS Motorized potentiometer, a connector for Arduino programming, etc. The L293D H-bridge drives the potentiometer motor, 2 Parallel direction pins are used to change the motor direction which moves the POT in a forward or reverse direction.

Motorized Potentiometers are built with a highly reliable linear potentiometer, with a slip clutch, geartrain and motor in a single panel mount assembly which can be manually adjusted.

Arduino Pins

Digital Pin D2 >> IR Sensor, Digital Pin D5 >> Motor Direction IN1+IN3, Digital Pin D6 >> Motor Direction IN2+IN4

Components

U1 IR Sensor, U2 ATMEGA328 Micro-controller, U3 Motor Driver, CN3 Programming Connector, CN2 Potentiometer Connection, CN1 Power Input 5 To 6V

Arduino Code and IR Remote

- Arduino Code available as download
- Switch A and Switch C of IR Remote Controls Motor Direction.
- User May modify this code as per requirement
- Project is compatible with Spark fun IR Remote COM-1489.
- Any IR Remote with 38Khz frequency Can work with this project

More info about Spark fun IR Remote

- <https://www.sparkfun.com/products/14865>

Any IR Remote Can work with this project, to learn more....

<https://randomnerdtutorials.com/arduino-ir-remote-control>

<https://www.maxphi.com/ir-remote-control-decoder-using-arduino>

<https://learn.adafruit.com/using-an-infrared-library/hardware-needed>

<https://create.arduino.cc/projecthub/opilitex/ir-decoder-using-irremote-h-v3-0-1-2bcae2>

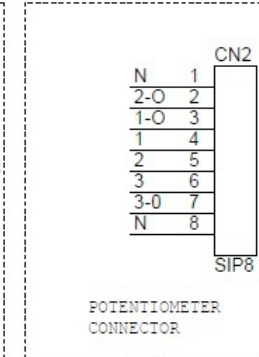
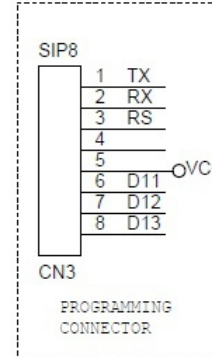
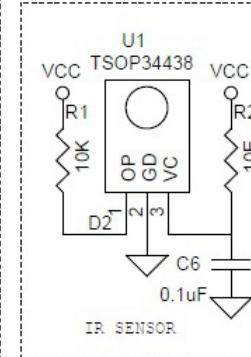
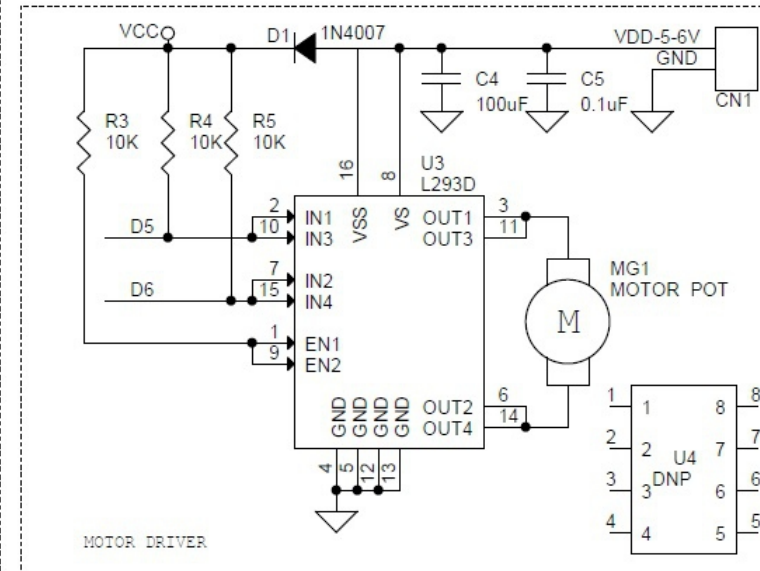
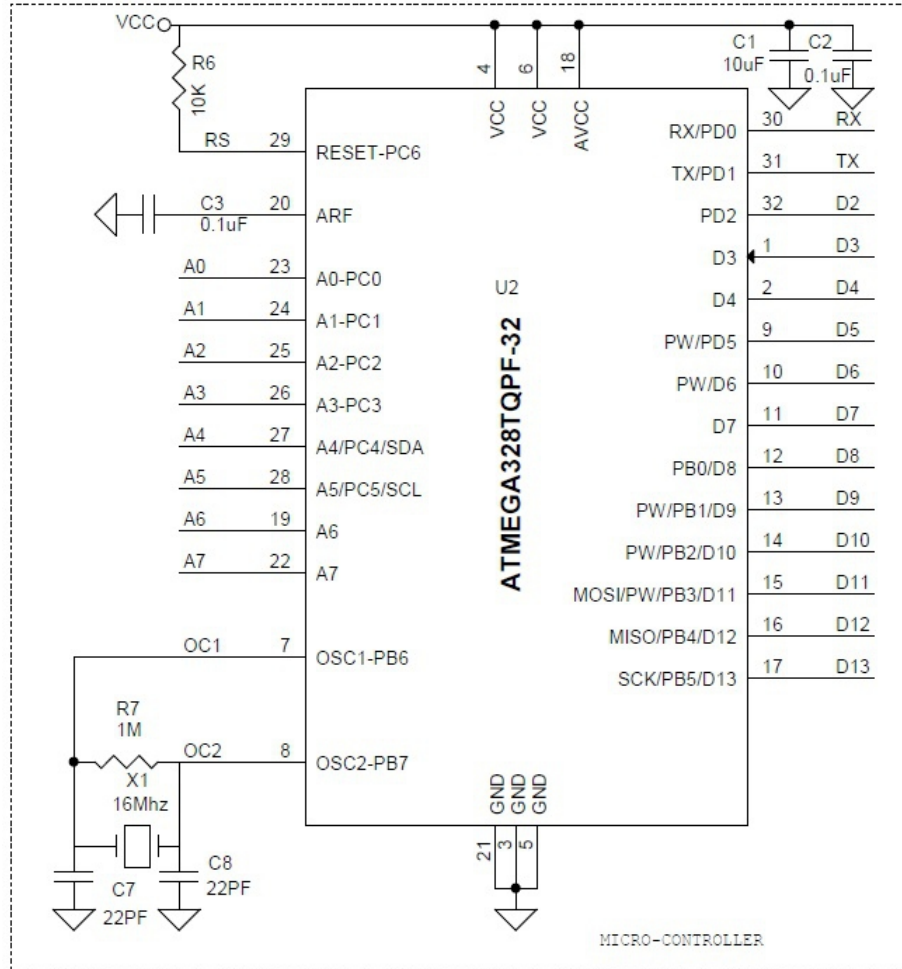
Programming the project with Arduino IDE (Use CN3 for Boot-Loader & Arduino Programming)

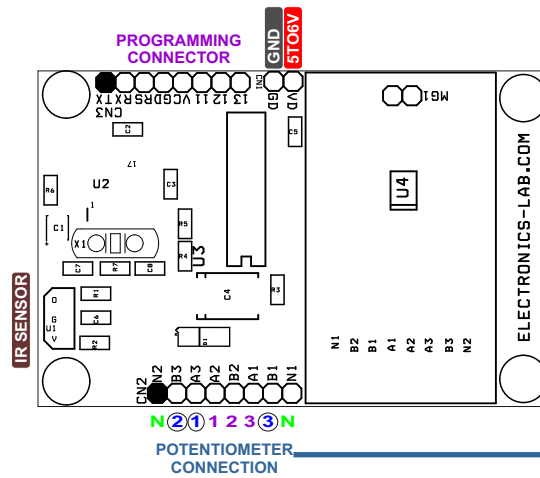
<https://www.arduino.cc/en/Tutorial/BuiltInExamples/ArduinoToBreadboard>

Features

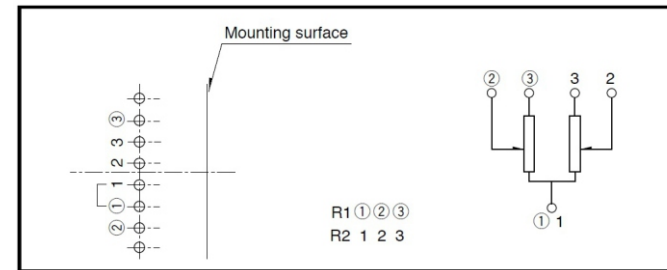
- Supply Input 5-6V DC @ 100mA
- PCB Dimensions 67.47MM x 44.77MM

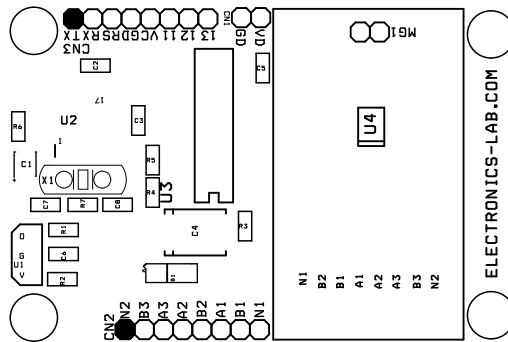




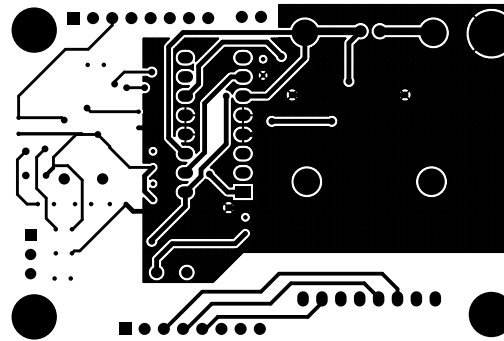


Terminal Layout / Circuit Diagram

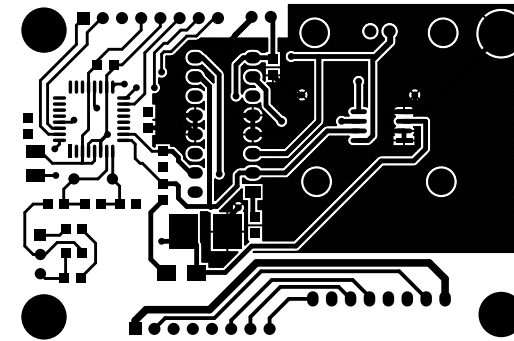




SILK SCREEN TOP



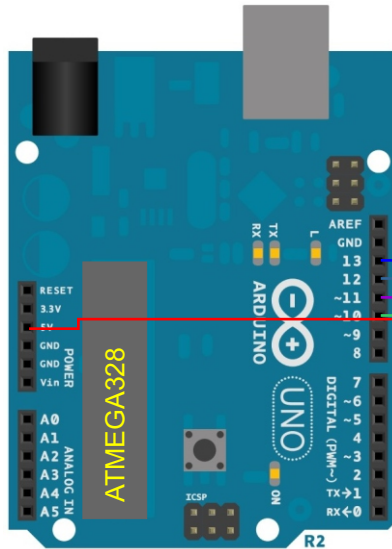
BOTTOM LAYER



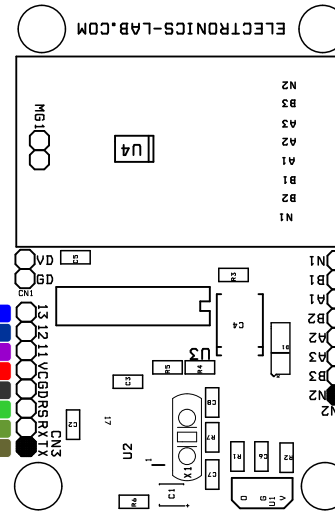
TOP LAYER

PCB DIMENSIONS 67.47MM X 44.77 MM

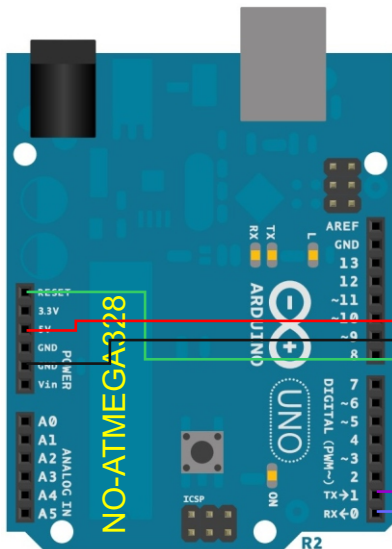
BOM						
NO	QNTY.	REF.	DESC.	MANUFACTURER	SUPPLIER	SUPPLIER PART NO
1	1	CN1	2 PIN MALE HEADER PITCH 2.54MM	WURTH	DIGIKEY	732-5315-ND
2	2	CN2,CN3	8 PIN MALE HEADER PITCH 2.54MM	WURTH	DIGIKEY	732-5321-ND
3	2	C1	10uF/16V SMD SIZE 1210	MURATA/YAGEO	DIGIKEY	
4	4	C2,C3,C5,C6	0.1uF/50V SMD SIZE 0805	MURATA/YAGEO	DIGIKEY	
5	2	C7,C8	22PF/50V SMD SIZE 0805	MURATA/YAGEO	DIGIKEY	
6	1	D1	1N4007 SMD	DIODE	DIGIKEY	S1MBDITR-ND
7	1	MG1	MOTORIZED POT	ALPS	MOUSER	688-RK16812MG099
8	6	R1,R2,R3,R4,R5,R6	10K 5% SMD SIZE 0805	MURATA/YAGEO	DIGIKEY	
9	1	R7	1M 5% SMD SIZE 0805	MURATA/YAGEO	DIGIKEY	
10	1	U1	TSOP34438 OR TSOP1838	VISHAY	DIGIKEY	TSOP34438-ND
11	1	U2	ATMEGA328TQPF-32	MICROCHIP	DIGIKEY	ATMEGA328PB-AURCT-ND
12	1	U3	L293D	ST	DIGIKEY	497-2936-5-ND
13	1	X1	16Mhz	ECS INC	DIGIKEY	X1103-ND
14	1	C4	100uF	AVX CORP	DIGIKEY	478-1718-1-ND



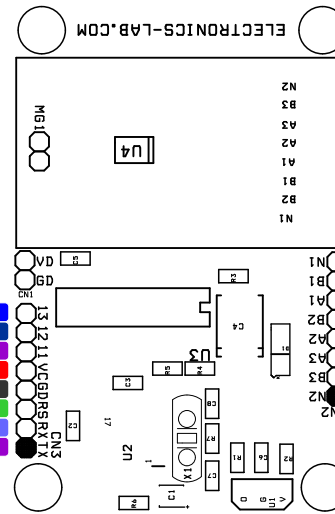
D13
D12
D11
VCC
GND
RESET
RX
TX



Boot-Loader Connections



D13
D12
D11
VCC
GND
RESET
RX
TX



Arduino Programming Connections