

Sound to RC Servo Driver

The project is designed for Animatronics and Puppeteer applications, however it can be used in other applications like sound responsive toys, robots. Especially this project helps to move the jaw or mouth of animatronics creature.

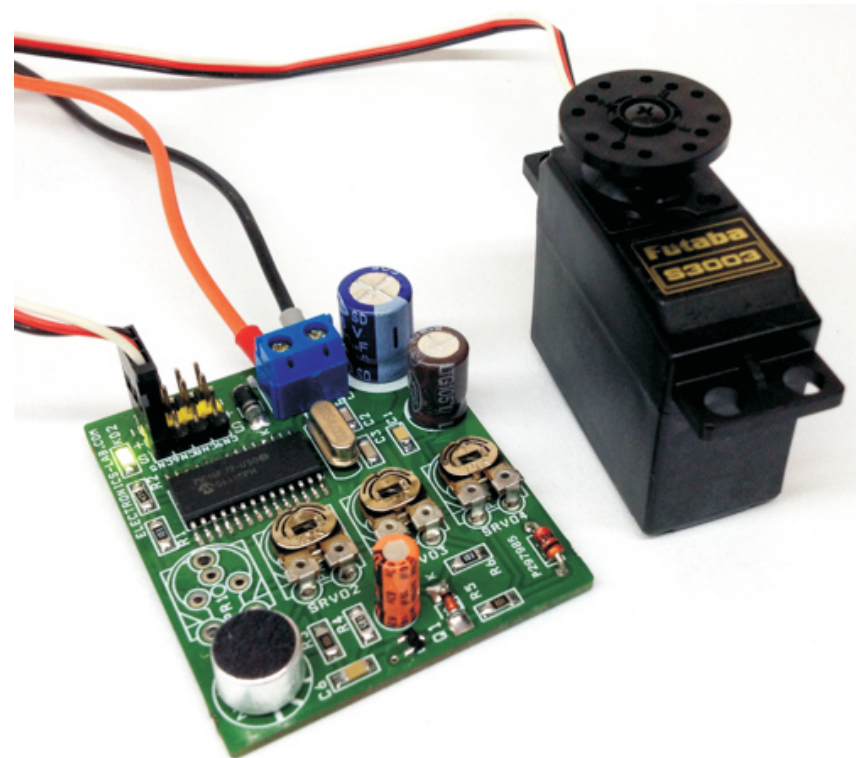
The project moves RC servo once receives any kind of sound. Rotation angle depends on sound level, more the sound level more the movement. Movement of the servo is proportional to sound level.

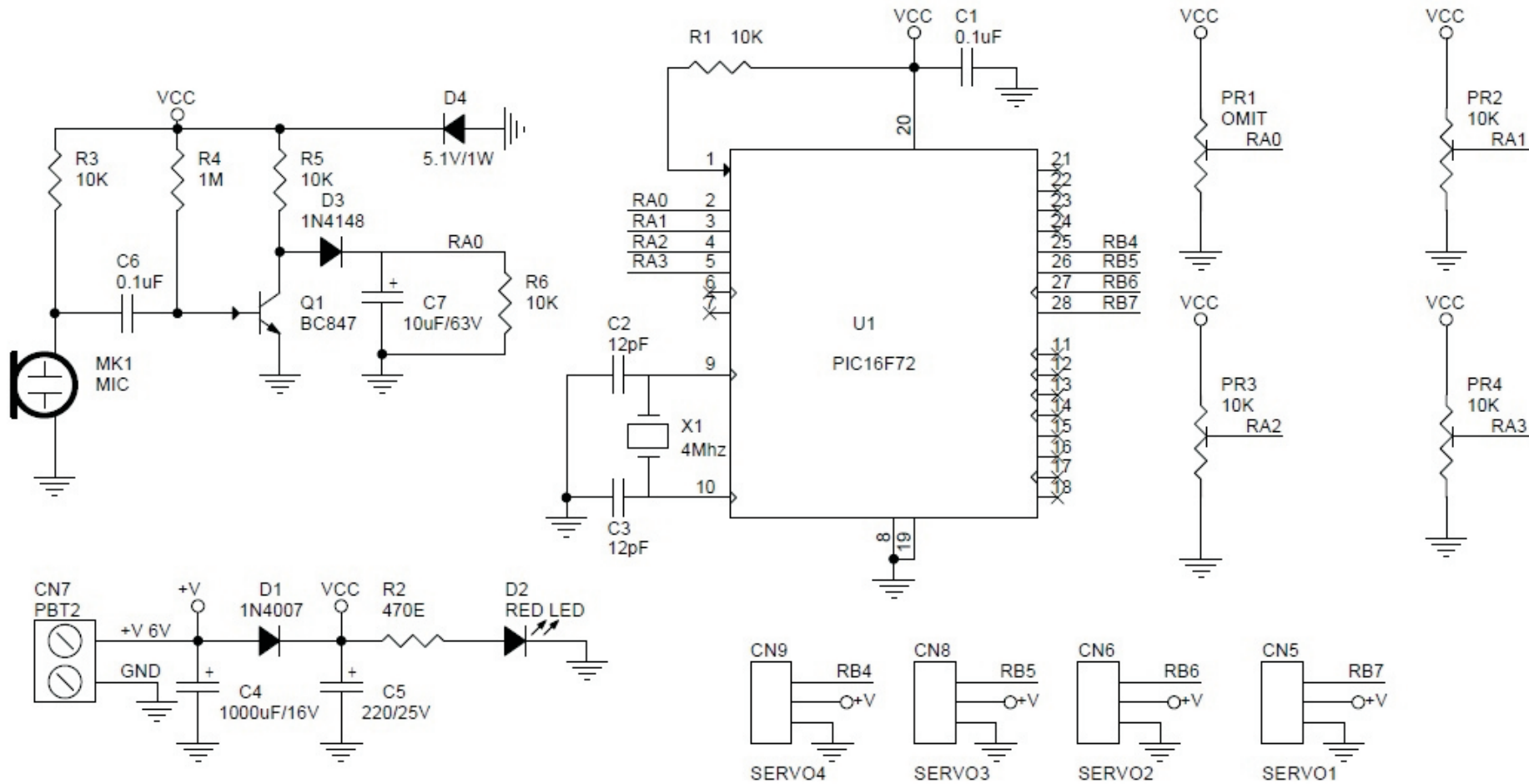
Circuit has 4 channel servo drivers, First channel is driven by sound, and rest 3 RC servos controlled by on board trimmer potentiometer, these 3 channels helps to drive other movement of animatronics figure.

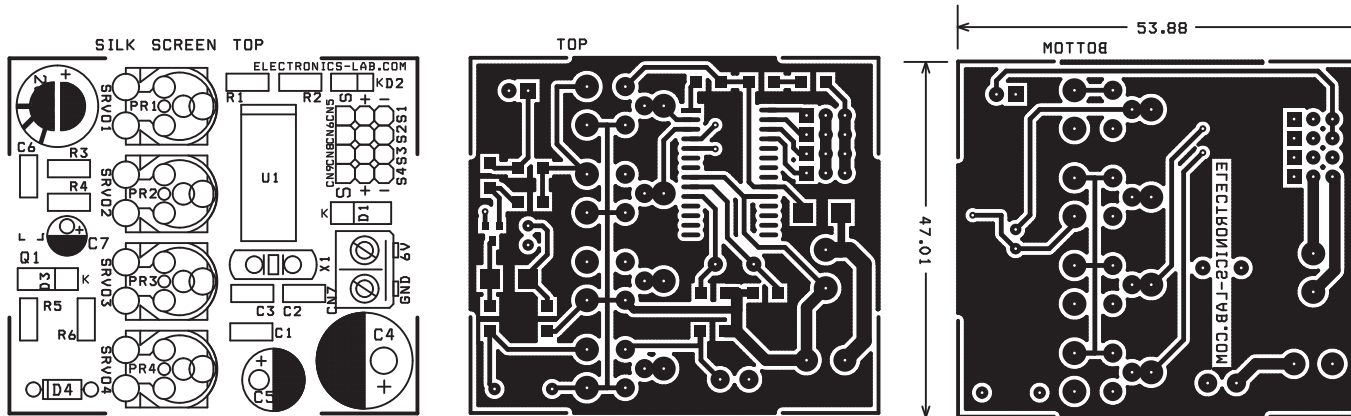
Sound Receive by microphone converts in to DC voltage, PIC16F72 microcontroller converts DC voltage into RC PWM signal. Circuits works with 6V DC , advisable to use battery for low jitter.

Features,

- Supply 6V DC (1.5V X 4 AA or Large 6V SLA Battery)
- 4 Channel RC Servo Drivers
- 1st Channel works with Sound
- 3 Channel works with on board potentiometer
- CN7 Supply
- D2 Power LED
- CN6,CN8,CN9 Connecters for RC Servo works with Potentiometer
- Trimmer Potentiometer PR2= SERVO 2, PR3=SERVO 3, PR4=SERVO4
- CN5 Connector for RC Servo works with Sound







BOM			
SR.	QNTY.	REF.	DESC
1	4	CN5,CN6,CN8,CN9	3 PIN HEADER CONNECTOR
2	1	CN7	2 PIN SCREW TERMINAL
3	2	C1,C6	0.1uF SMD 1206
4	2	C2,C3	12pF
5	1	C4	1000uF/16V
6	1	C5	220/25V
7	1	C7	10uF/63V
8	1	D1	1N4007 SMD SM4007
9	1	D2	SMD 1206 RED
10	1	D3	1N4148 SMD
11	1	D4	5.1V/1W
12	1	MK1	CONDENSOR MICROPHONE
13	1	PR1	OMIT
14	3	PR2,PR3,PR4,	10K TRIMMER POT
15	1	Q1	BC847 SMD
16	1	R2	470E SMD 1206
17	1	R4	1M SMD 1206
18	1	U1	PIC16F72 SMD
19	1	X1	4Mhz CRYSTEL
20	4	R1, R3,R5,R6	10K SMD 1206
21	1	PR1	OMIT