

Sound Activated LED Light With Timer

Clap to light switch with timer project is very useful project for power saving applications , the project switch on the LED light for 45 to 60 seconds when receives two clap sound. This project can be used in store room, toilets, dark area where switch is not visible, night lamp, places where light on off switch is not accessible easily.

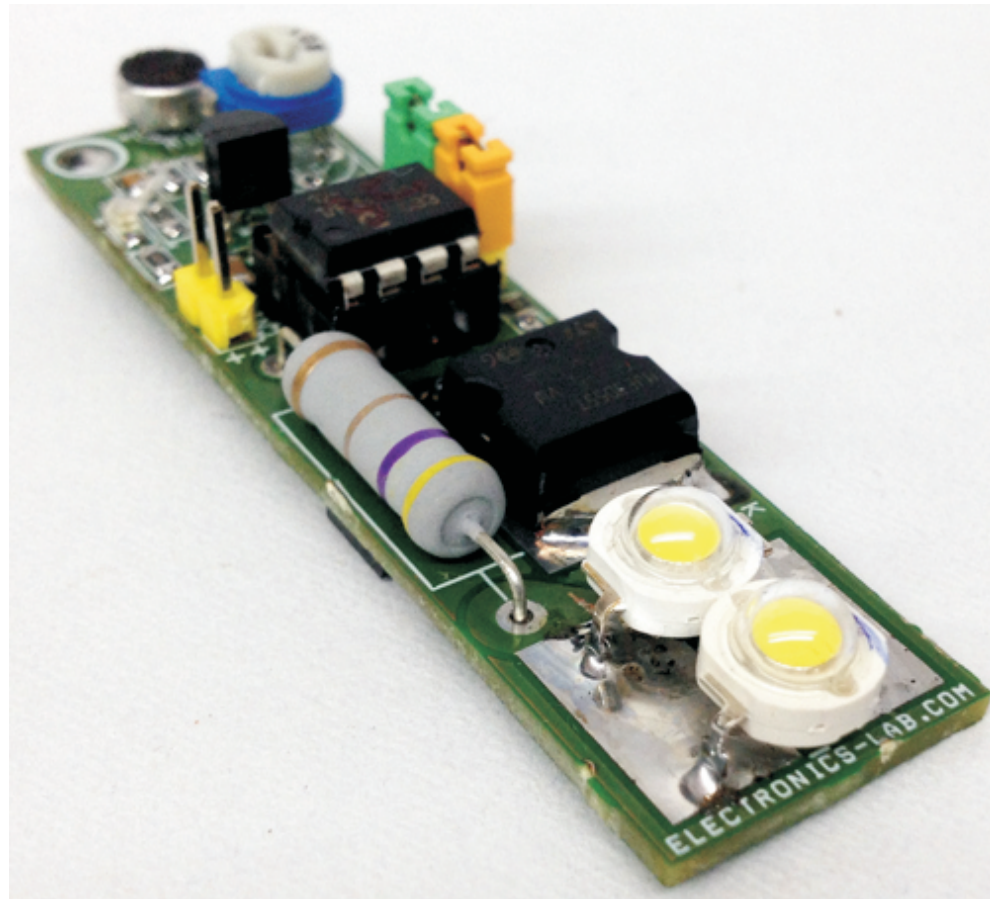
Single transistor used as Microphone preamplifier, diode converts AC signal in to DC , and PIC micro-controller take care of LED On/OFF Time, LED time depend on two jumpers J1, J2 which provides four options s 45,50,55,60 seconds. MJE3055 transistor used in output to drive LED, one series resistor R10 helps to control the current going through LED, R10 can be alter as per LED Voltage and current.3V to 12V LED with maximum current 500mA can be used. Use higher current Darlington transistor like TIP147 for higher current Load. Onboard potentiometer trimmer for sound sensitivity adjust. D1 power LED.

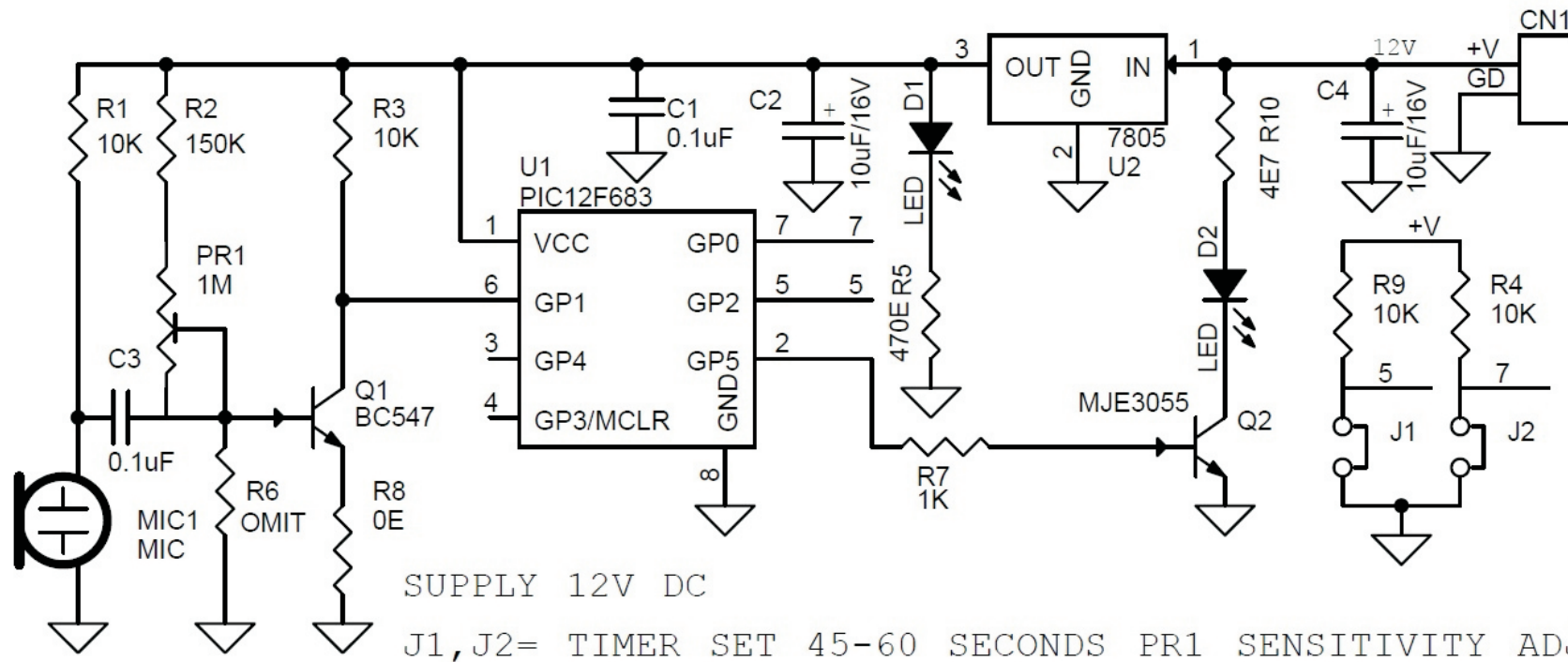
Jumper Settings (Timer)

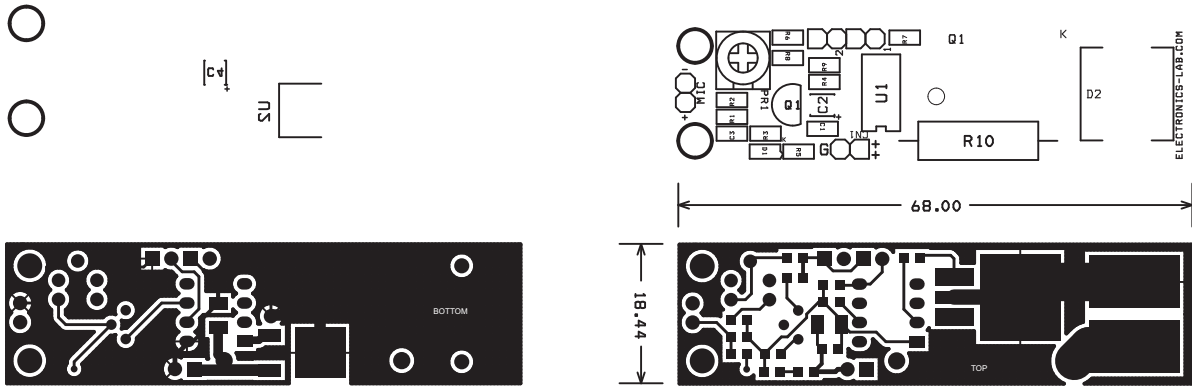
- J1 Close J2 Close = 60 Seconds*
- J1 Open J2 Open = 45 Seconds*
- J1 Open J2 Close = 50 Seconds*
- J1 Close J2 Open = 55 Seconds*

Specifications:

- Supply 12V DC @ 500mA
- On board preset to set the sensitivity
- On board Microphone
- D1 1W/3W White LED







BOM			
SR.	QNTY.	REF	DESC.
1	1	CN1	2 PIN HEADER CONNECTOR
2	2	C1,C3	0.1uF SMD 0805
3	2	C2,C4	10uF/16V
4	1	D1	LED SMD 0805
5	2	J1,J2	JUMPER
6	1	MIC1	CONDENSOR MICROPHONE
7	1	PR1	1M
8	1	Q1	BC547
9	1	Q2	MJE3055
10	4	R1,R3,R4,R9	10K SMD 0805
11	1	R2	150K SMD 0805
12	1	R5	470E SMD 0805
13	1	R6	OMIT
14	1	R7	1K SMD 0805
15	1	R8	0E SMD 0805
16	1	R10	4.7E /3W
17	1	U1	PIC12F683
18	1	U2	LM78M05 DPAK
19	1	D2	LED 1W X 2

