

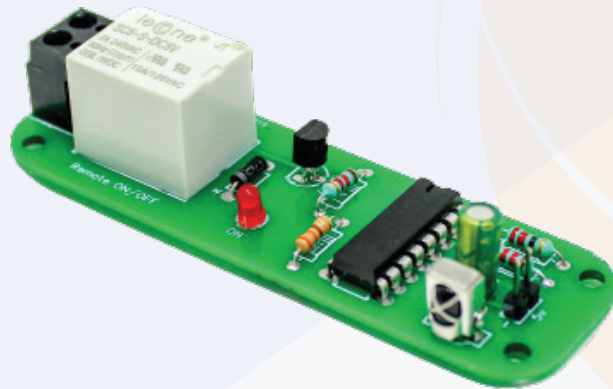
IR Relay Controller

For Beginners



INTRODUCTION

This Remote Control Circuit is made up of a simple CD4017 Counter IC with no microcontroller and no coding. This remote control Circuit can operate with any remote. With this circuit, you can control the AC / DC Bulb and all kinds of electrical devices with range upto 10 meters.



SPECIFICATION

Input Voltage (V)	5 V DC
Operating Current (A)	200mA
IC	CD4017
Relay	7A/240VAC, 10A/125VAC
Range	10 meter
IR	VS1838B

DESCRIPTION

An IR receiver is connected to the remote control circuit. which receives the signal, received by pressing the button on the remote, and sends it as a High and low signal to pin 14 of the CD4017 IC. The output of the CD4017 IC corresponding to this signal goes through the transistor and turns the relay ON / OFF.

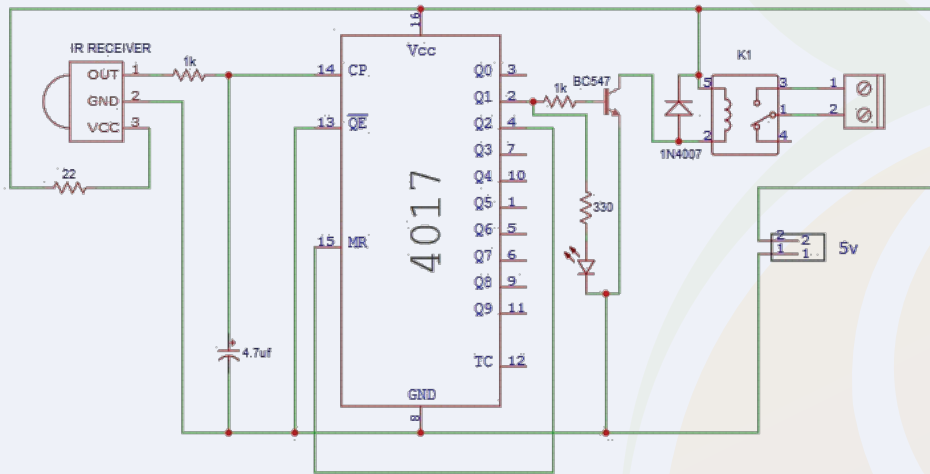
A decade counter counts to 10. You can remember it by thinking of a decade in years, which is ten years.

It's very common that a counter will give you the output in binary form. But the output from the decade counter in the CD4017 is decoded, meaning that it will set one of the output pins (Q0 to Q9) high corresponding to the counter value. Ex: If Q3 is high, the counter value is 3.

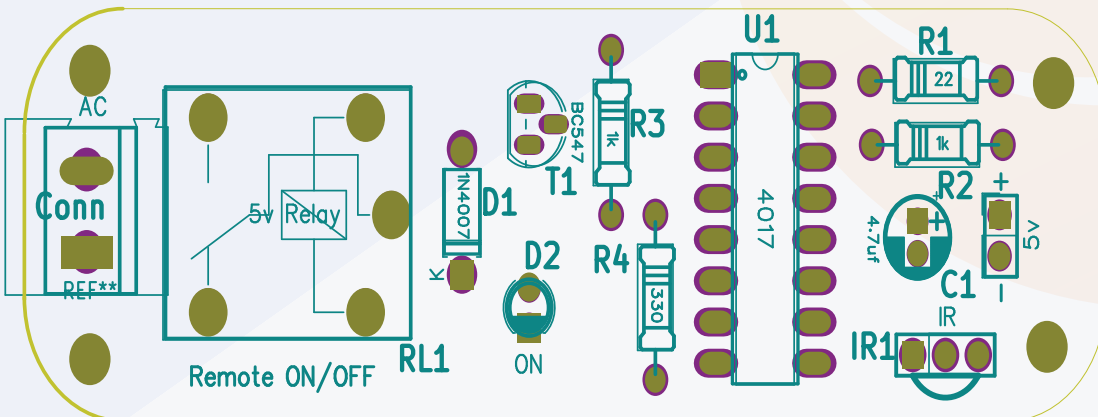
The easiest way to create a decade counter is by connecting 10 D flip-flops in series to create a shift-register. Then you connect the output of the last flip-flop back into the input of the first. And you connect the reset signal so that it sets the first flip-flop to one and the rest to zero on reset.

For Beginners

CIRCUIT DIAGRAM



ASSEMBLY DETAILS



BOM

1	4017	1	U1
2	5V Relay	1	RL1
3	VS1838B	1	IR1
4	1n4007 Diode	1	D1
5	RED LED	1	D2
6	Screw Terminal	1	conn
7	BC547	1	T1
8	1.2k Resistor	2	R2, R3
9	330 resistor	1	R4
10	22 resistor	1	R1
11	4.7uf capacitor	1	C1

APPLICATIONS

To control short distance 240v AC application like Light,Fan.