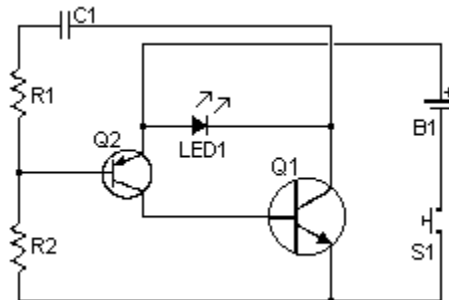


Infa-Red Remote Control

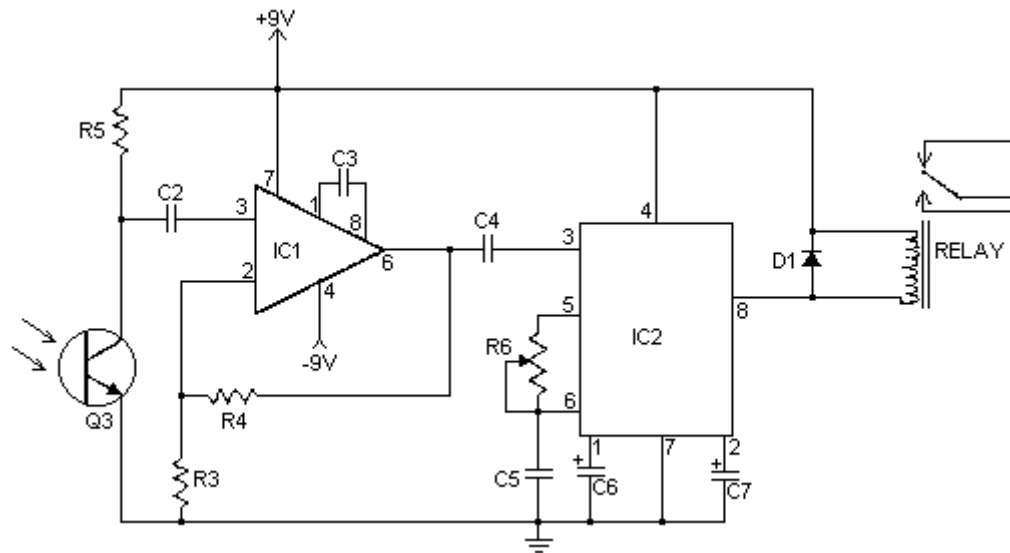
source: <http://www.aaroncake.net/>

I have received a number of emails requesting schematics for infa-red remotes. So here is one. This remote transmits a tone using an infa-red LED. This tone is decoded by the receiver. Since the receiver only switches when it "hears" the tone, there are no accidental activations.

Schematic For Transmitter



Schematic For Receiver



Parts:

Part	Total Qty.	Description	Substitutions
R1	1	22K 1/4W Resistor	
R2	1	1 Meg 1/4W Resistor	
R3	1	1K 1/4W Resistor	
R4, R5	2	100K 1/4W Resistor	
R6	1	50K Pot	
C1, C2	2	0.01uF 16V Ceramic Disk Capacitor	
C3	1	100pF 16V Ceramic Disk Capacitor	
C4	1	0.047uF 16V Ceramic Disk Capacitor	

C5	1	0.1uF 16V Ceramic Disk Capacitor	
C6	1	3.3uF 16V Electrolytic Capacitor	
C7	1	1.5uF 16V Electrolytic Capacitor	
Q1	1	2N2222 NPN Silicon Transistor	2N3904
Q2	1	2N2907 PNP Silicon Transistor	
Q3	1	NPN Phototransistor	
D1	1	1N914 Silicon Diode	
IC1	1	LM308 Op Amp IC	
IC2	1	LM567 Tone Decoder	
LED1	1	Infa-Red LED	
RELAY	1	6 Volt Relay	
S1	1	SPST Push Button Switch	
B1	1	3 Volt Battery	Two 1.5V batteries in series
MISC	1	Board, Sockets For ICs, Knob For R6, Battery Holder	
RELAY	1	6 Volt Relay	

Notes:

1. To adjust the circuit, hold down S1 while pointing LED1 at the receiver. Adjust R6 until you hear the relay click.
2. You can increase range by using a high output LED for LED1.
3. Bright light will stop the receiver from responding to the transmitter.