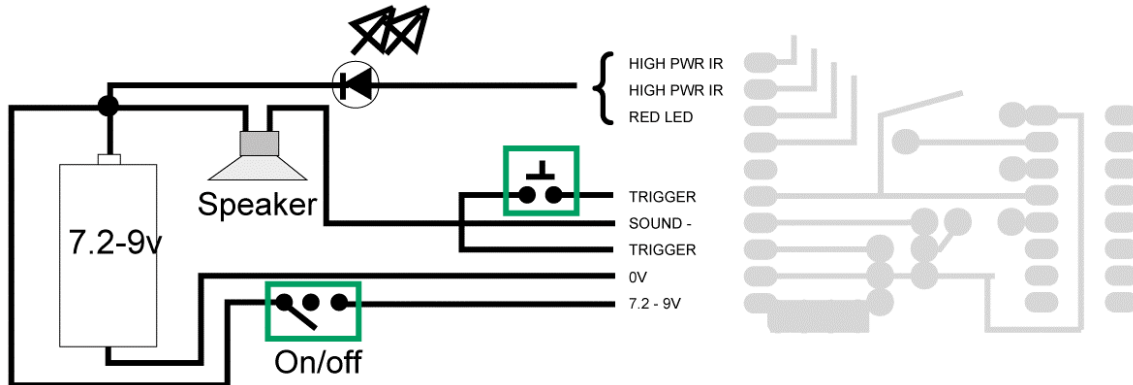


Long Range Crystal Gun

Here is a circuit diagram for a complete long range tag gun that uses a crystal for maximum frequency stability by Phil Higgins.

Wiring the circuit up is a relatively simple task requiring minimal tools, including a soldering iron, solder and a pair of wire cutters (or pliers).

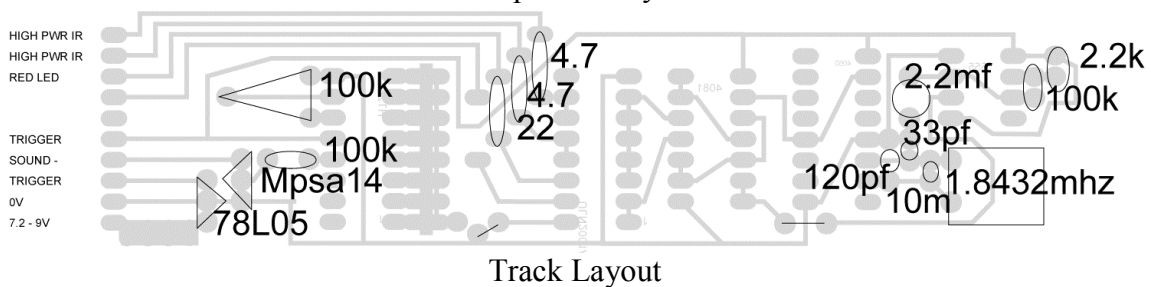
The power supply should be a 7.2-9 volt DC supply (battery pack).

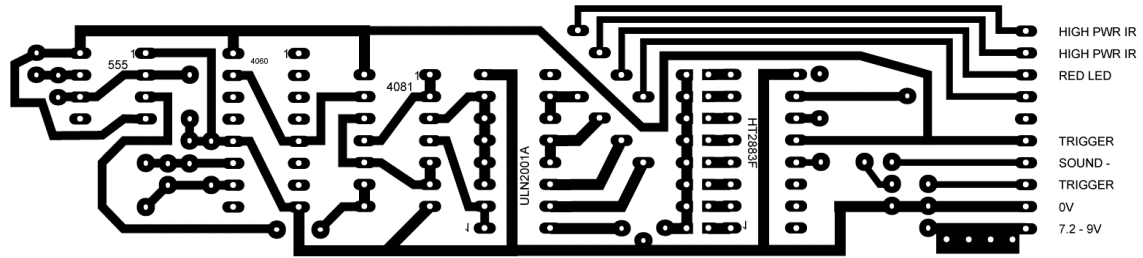


Make sure the connector side is at the left side of the board when viewed from above (the side the components are on). The LED outputs are connected Cathode to the board and Anode straight to the power supply. The speaker should be connected in a similar manner, one connection to the supply voltage and the other to the connector labeled sound on the diagram, it should be the 8 Ohm type. The circuit also requires two switches, one a single pole single throw, for on/off like a rocker or slide switch. The other is for the trigger of your gun, use either a simple momentary push switch or a micro switch connected to a trigger. If you want you can omit the power on/off switch by connecting your trigger where the on/off switch should be and connecting the two connects labeled trigger together. The circuit will then only use power (and work) when the trigger is pulled.

If you have any queries, e-mail Phil at col.priest@bigfoot.com

Component Layout





Component list

I.C.s

- 1x 555
- 1x 4060
- 1x 4081
- 1x ULN2003A
- 1x HT2883F
- 1x 78L05
- 1x Mpsa 14
- 1x 1.8432MHz Xtal

Capacitors

- 1x 2.2 mF
- 1x 120 pF
- 1x 33pF

Resistors

- 1x 10M
- 2x 100K
- 1x 22K
- 1x 22
- 2x 4.7
- 1x 100K variable