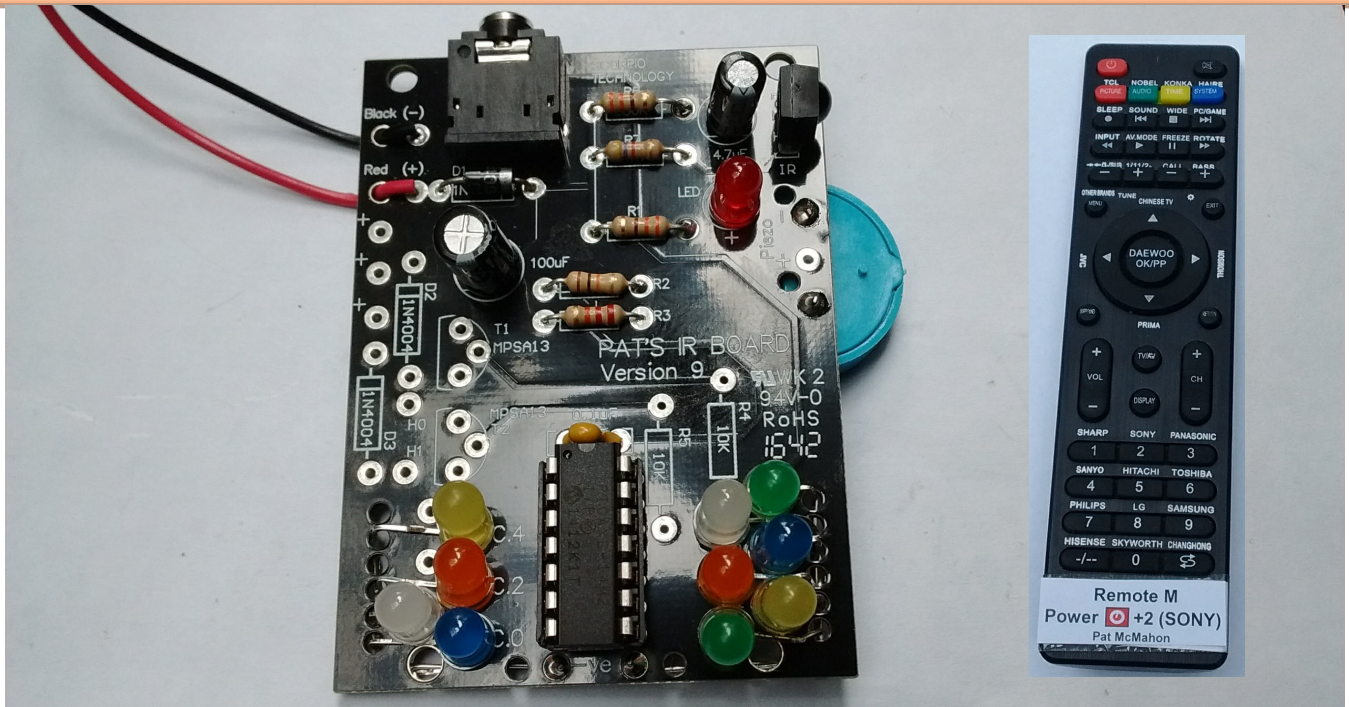


How to build your own Infrared Controlled 10 LED's & 12 Tunes, PICAXE 14M2 Microcontroller.

Pat McMahon- V2- 1/11/2016

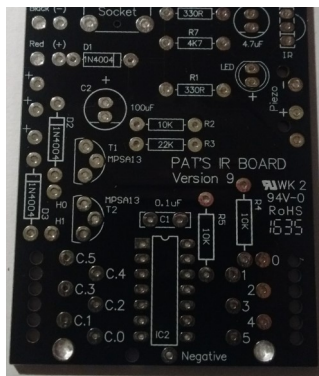
Design Brief – You will build your own Infrared controlled 10 LED Lights & 12 Tunes, to run from Pat's 14M2 Picaxe Microcontroller..



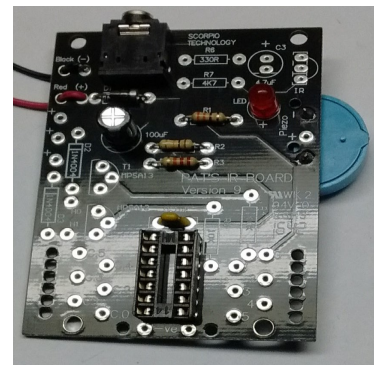
Below are the steps to build your own Infrared Controlled 10 LED's & 12 Tunes, Picaxe 14M2 Microcontroller.

Tick off each box as you complete each step.

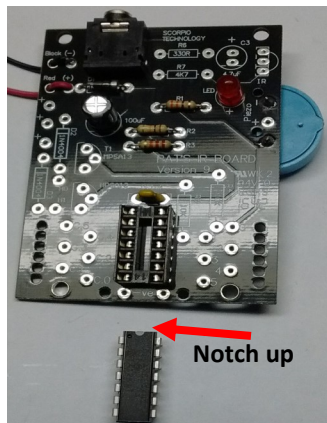
Use Pat's 14M2 Microcontroller PCB V9 Black Board.



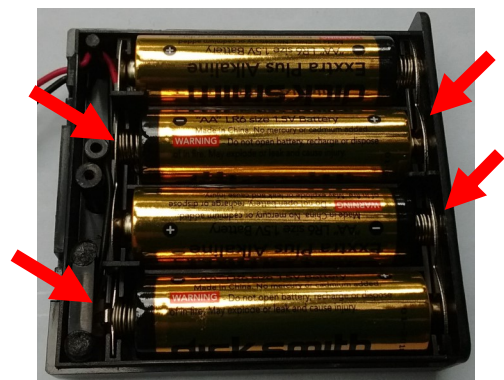
Using the "How to Build Pat's 14M2 Microcontroller" sheet, populate the basic parts & Solder in place.



Carefully insert the 14M2 Chip into the IC Socket, with the notch up.

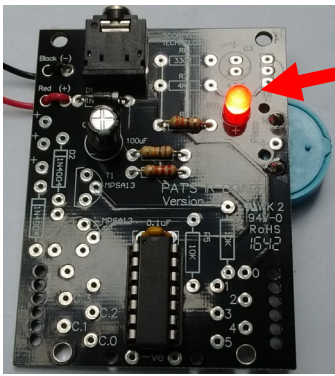


Carefully insert the 4 x AA batteries into the Battery Pack, ensuring the negatives are to the springs.

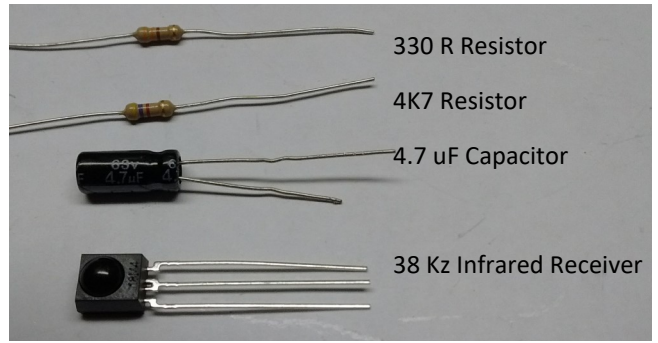


Test basic board at this stage, by turning on battery pack.

Select the 4 add on Infrared components.



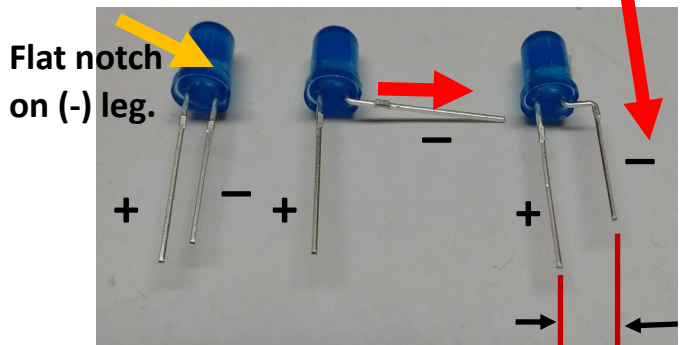
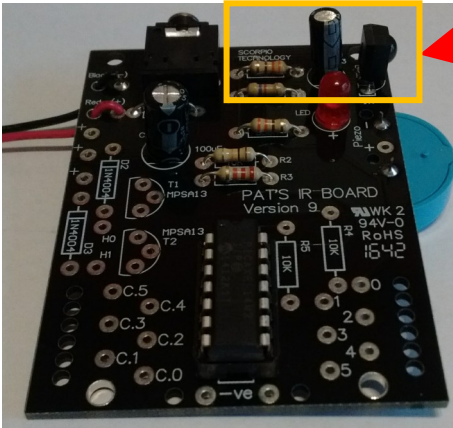
Red LED only should come on at this stage.



330 R Resistor
4K7 Resistor
4.7 uF Capacitor
38 Kz Infrared Receiver

Insert & solder the 4 add on, Infrared components.

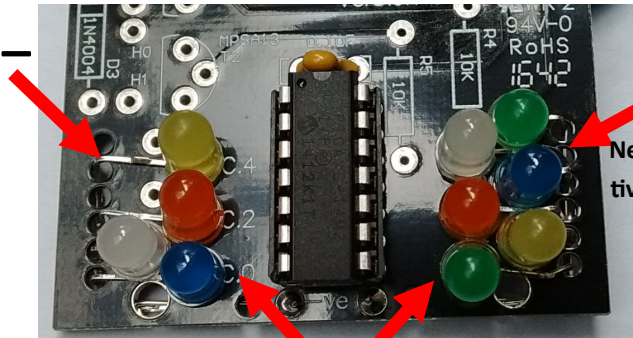
Get 10 LED's, leave long legs down (+), bend across short legs (-) at right angles, then bend down negatives on 6 LED's @ 10mm offset & 4 LED's @ 5mm offset.



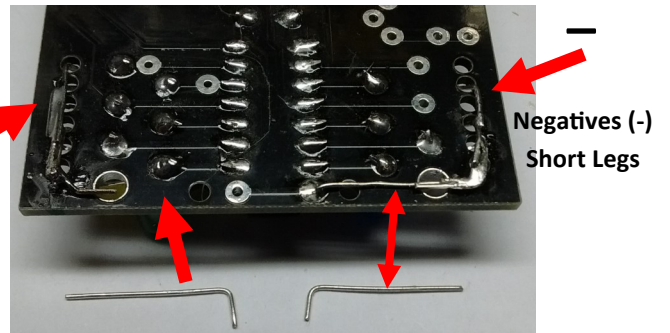
6 @ 10mm offset, 4 @ 5mm offset.

Balance the different colour LED's, insert the straight (+) in doughnut pads (0,1,2,3,4,5,c.0,c.1,c.2,c.4, not c.3) negatives in tug holes & carefully solder positives (+)

Bend down all the negatives (-) in the tug holes ,towards the bottom of the PCB & solder together.



Positives (+) Long Legs
Insert closest to the Chip



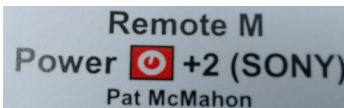
Using the old cut off legs from resistors, bend and connect each row of negatives (-) to the two negative doughnut pads on each side, at the bottom of the chip.

Program your Board with Pat's "10 LED's & 12 Tunes" Program or CODE your own ,using the free "Picaxe Programming Editor."

Program your Universal Infrared Remote to 38Kz, SONY Protocol.

Test, Well Done!

Congratulations on Building & Programming your own Light & Sound, Infrared Microcontroller.



Push the Red Power Button & Button 2 at the same time, its now Programmed to the SONY Protocol .

Refer to Pat's "What each Button does" Sheet, if using Pat's Code.

