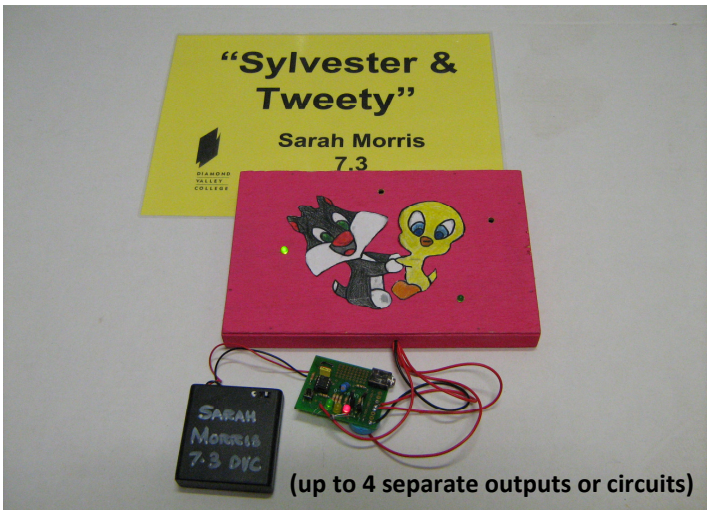
How to Build your Light & Sound Extension Board

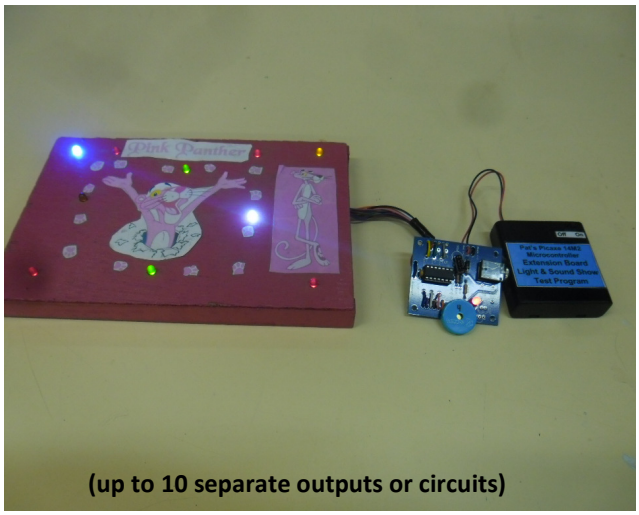
Pat McMahon– V1– 22/2/2016

Design Brief – You will Build a Light & Sound Extension Board to run from either your Picaxe 8M2 Uniboard or Pat's 14M2 Infrared Microcontroller.

Using the 8M2 Uniboard

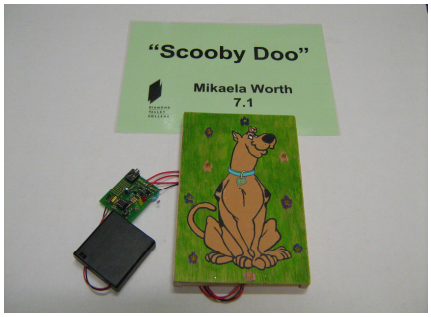


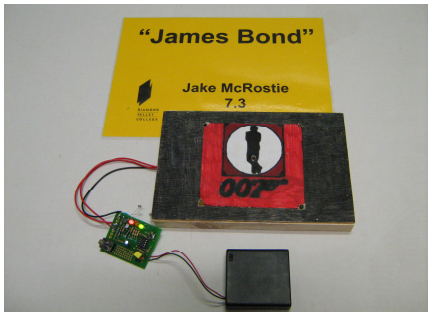
Using Pat's14M2 Microcontroller

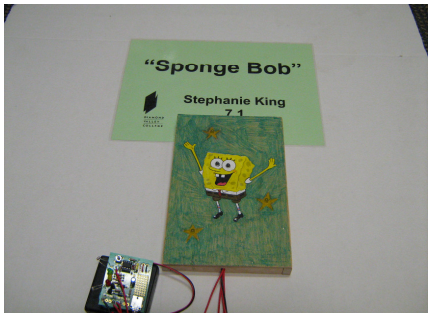


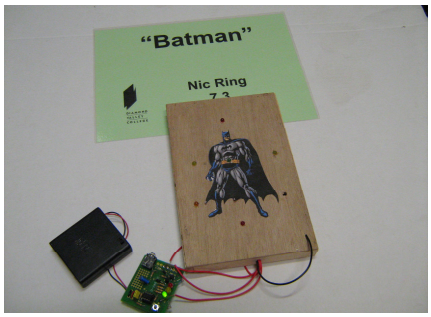
Below are some of the Production Steps, Tick off each box as you complete a task and Document it.

☐ **Select your Tune first, from the Picaxe Tune Folder.** ☐ **Draw or search the web for pictures, of the Tune you selected.**

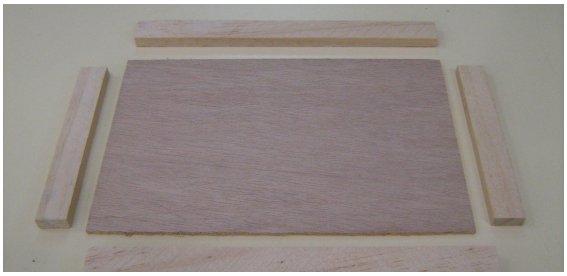




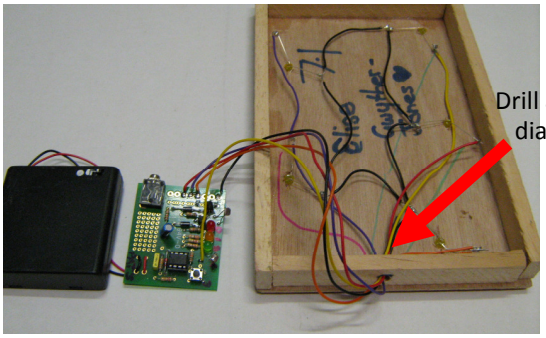




☐ **Build the edge frame for the plywood Extension Board ,using PVA glue and brads. Paint it at home, let dry, then return.**

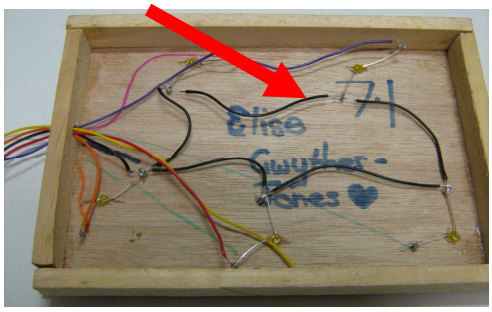


☐ **Drill a 6 mm hole for wires to go to Microcontroller.**

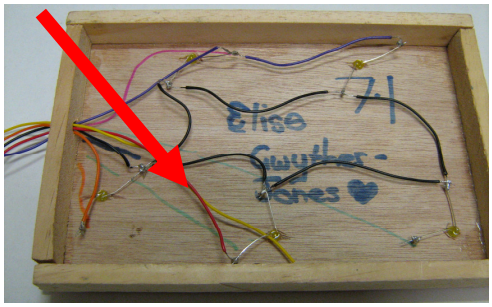


☐ **Using a 3/16" (4.76mm) drill, drill your holes, this should allow for a tight fit to insert the 5mm LED's.**

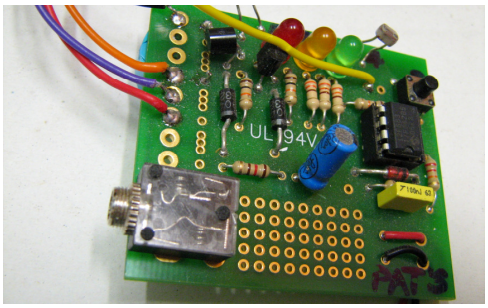
☐ **Bend down only the short legs (negative) of all the LED's and loop all up by soldering them together with a black loop wire. Then run a black wire out to the microcontroller. Leave all the positive long legs standing up.**



☐ **Bend down the long legs(positive) for one set only that you wish to go on together. Link them up and attach the same coloured wire(~200mm) to go out the drilled hole . Repeat this for each additional sets.**



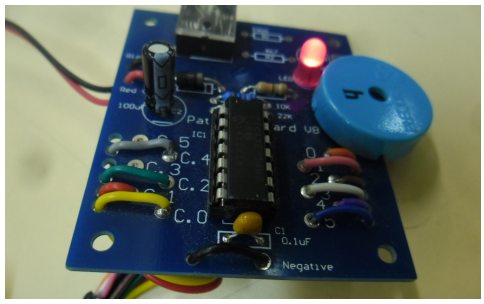
☐ **The 8M2 Uniboard has 4 outputs or circuits (4 Coloured Wires + 1 Black Negative)**



On the 8M2 Uniboard, if needed, connect (+)'s to pin 0, 1, 2 & 4.

Note-pin 3 is input only on 8M2.

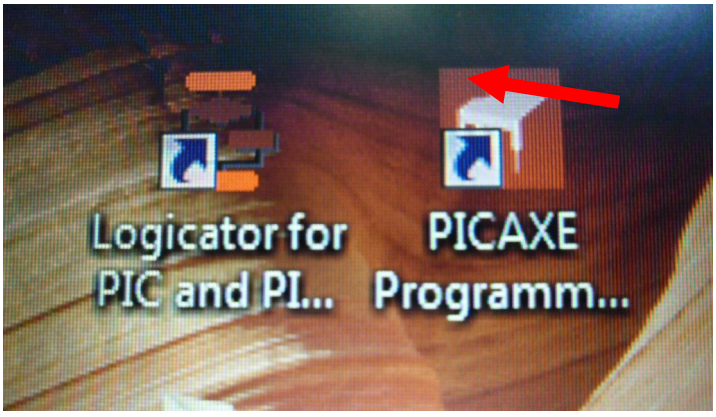
☐ **The 14M2 Pat's board has up to 10 outputs or circuits (up to 10 Coloured Wires + 1 Black Negative)**



On the 14M2 Pat's Board, if needed, connect (+)'s to pin 0, 1, 2, 3, 4, 5, C.0, C.1, C.2, C.5.

Note -pin C.3 & C.5 are inputs only on 14M2.

☐ **Program your Board with your desired Tunes and Flashing LED's, using Picaxe Programming Editor.**



☐ **Well Done!**

Congratulations on Building & Programming your own Light & Sound Extension Board.