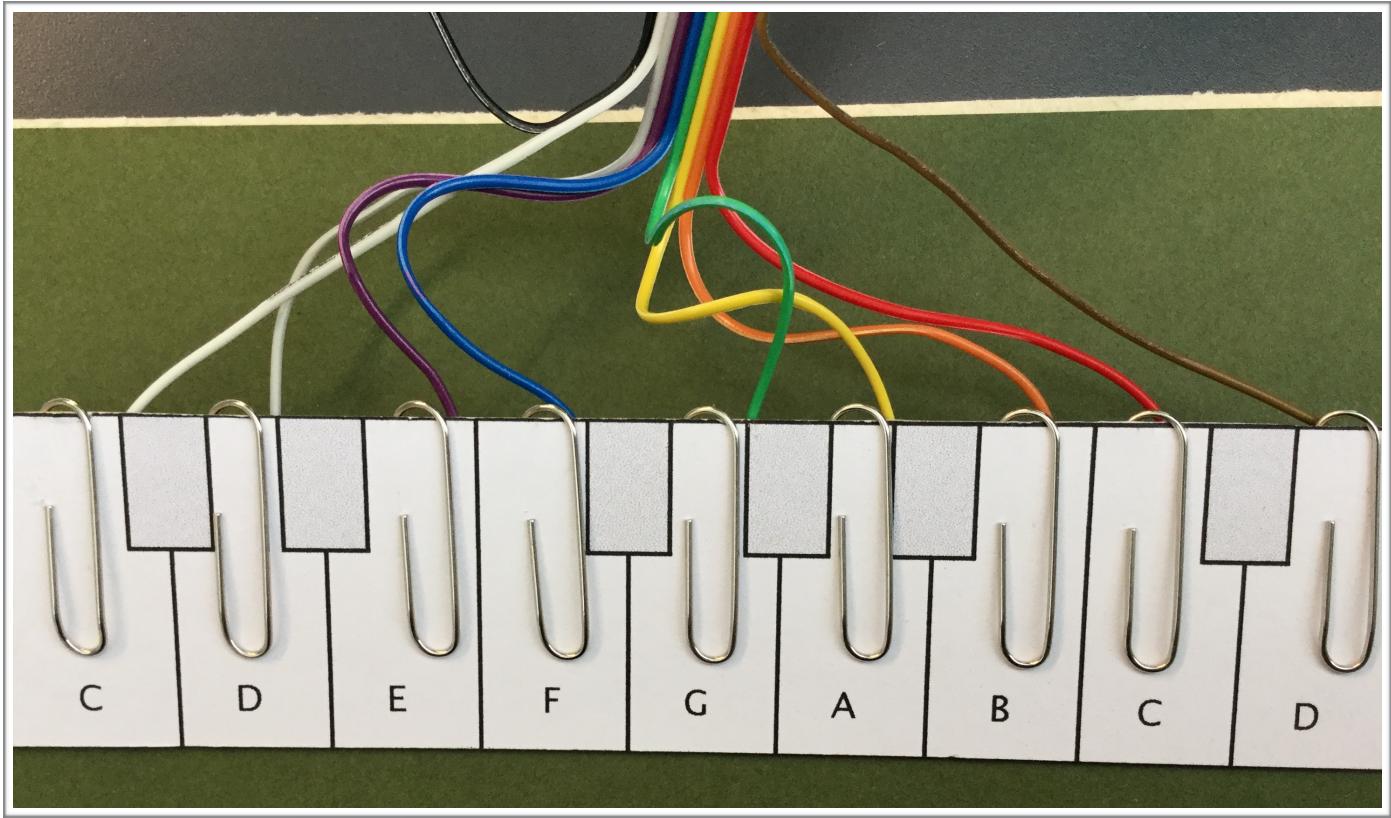


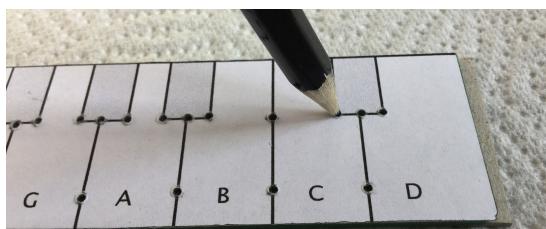
Paperclip Player

Instructions for construction



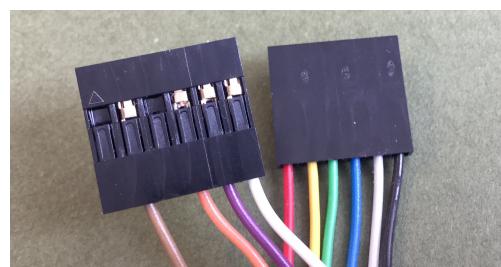
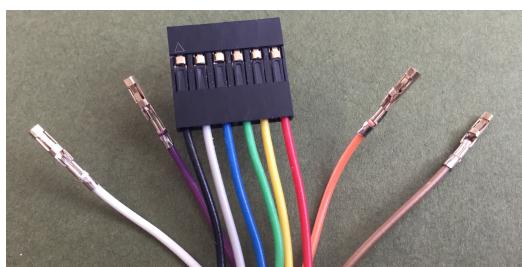
Step 1 - Mark out the card

Place the template over the card and mark through the holes with a pencil. Join up the dots to make the piano keyboard design. Optionally shade in the black notes and write the note name on each note.



Step 2 - Fit wires to the connectors

Insert the wires into the connectors, make sure the colours are correct and exactly like the photographs. If you make a mistake ask a helper to get the wire removed from the shell, do not try this yourself. Note the location of the triangle, make sure yours match.



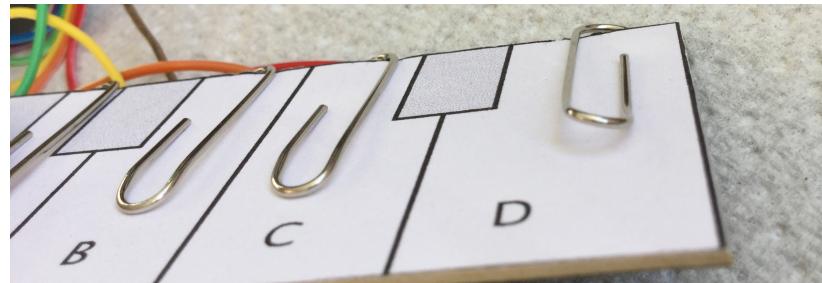
Step 3 - Fit wires to the paperclips

Insert the connectors into the paperclips, use all the colours except the black one, that is 9 paperclips. Hold the paper clips in the pliers and firmly insert it in the way shown below. You might have to waggle the clips or even slightly open up the crimped end with the supplied scribe. The inner loop of the paper clip must point upwards.

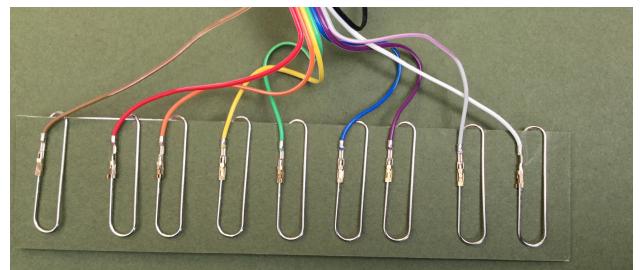


Step 4 - Fit the paperclips to the board

Attach the paperclip to the board, there are two ways to do this, one right and the other wrong. The wrong way is shown on the D note and the right way on the B and C notes. The point of the inner loop of the paperclip must point down.



Make sure that the wire colours match this photograph, it is of the back of the card.



Step 5 - Make the paperclip stylus

Take a separate small wire and attach a paperclip to the end of the inner loop. Then using the pliers straighten the paperclip by unwrapping the long loop half a turn. Connect the other end of the stylus wire to the black wire with a single pin connector.



Step 6 - Connect To the Pi and try the software

Connect the two shells to the Pi's GPIO connector, you can mark one end with paint and glue the two shells together when you get home. Run the software:-
paperclip_playRPi.py, press the space bar to change the instrument.

This document and the software can be found at:-

<https://github.com/Grumpy-Mike/Mikes-Pi-Bakery/tree/master/Paperclip>

Video at <https://vimeo.com/205931428>

