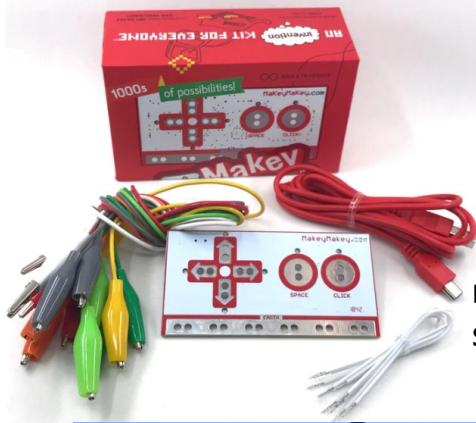
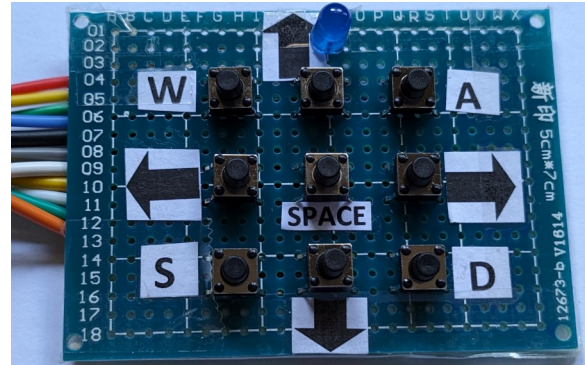
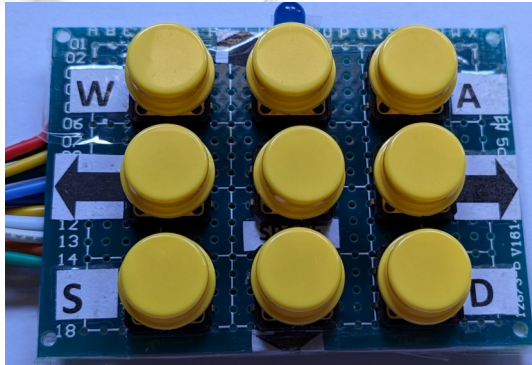


How to Build a 3x3 Button Gaming Keypad for your Makey Makey

Pat McMahon V3 23/3/2024

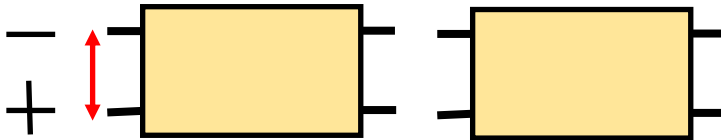


Design Brief— Using a Prototype Board and Push Button Momentary Switches, build a 3x3 Gaming Keypad for your Makey Makey.

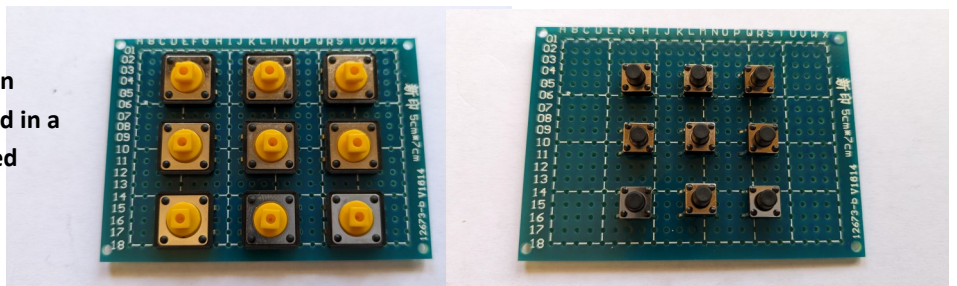


Use 12 mm Momentary Push Button Switches or the smaller 6 mm Button Switches.

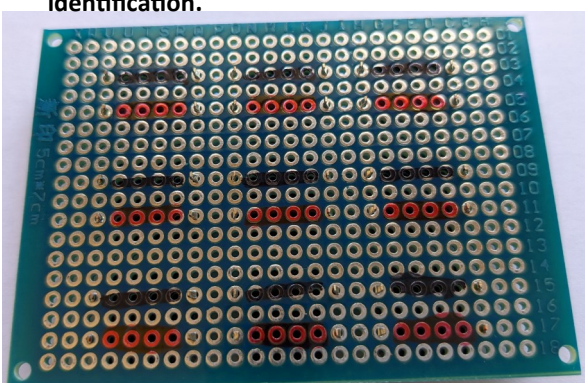
1— Use a Multimeter to check which legs, when the button is pushed, activates the Switch. It is usually the two legs that are closer together.



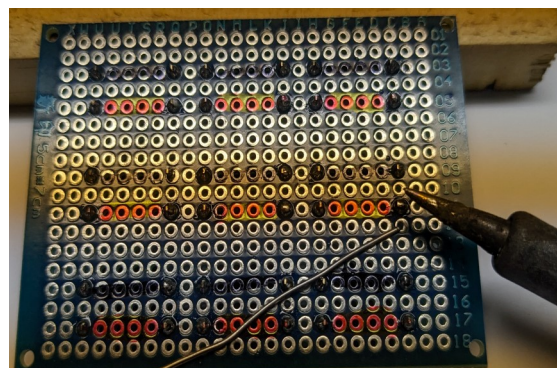
2 — Insert your Momentary Push Button Switches into the Blank Prototype Board in a 3x3 pattern, ensuring they are all aligned and facing the same way.



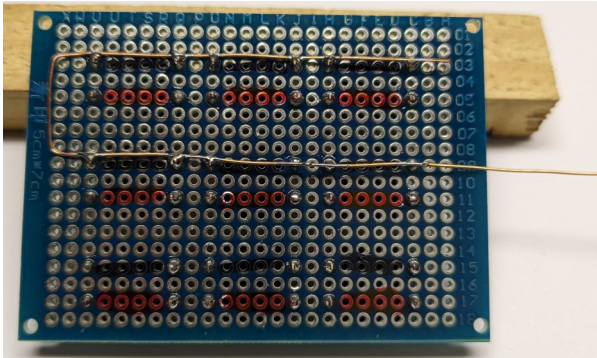
3 — On the back, Draw with a permanent pen, Black (—) and Red (+) lines, between the inserted legs of the switches, for ease of identification.



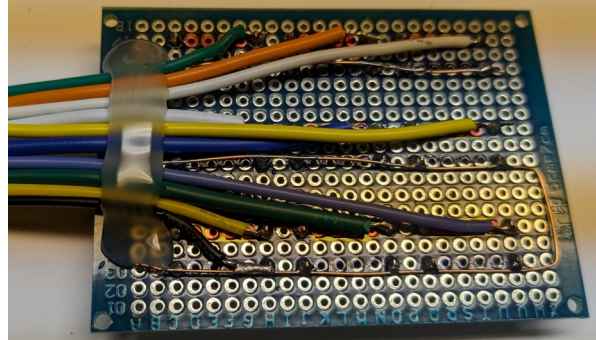
4 — Solder all of the legs to the Prototype Board, to stabilise the switches, when they are pushed.



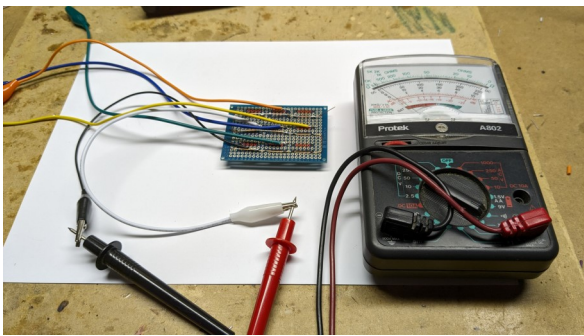
5 — Join and Solder all the Black (—) legs together using Enamelled Copper Wire to form a Ground or Earth to all switches.



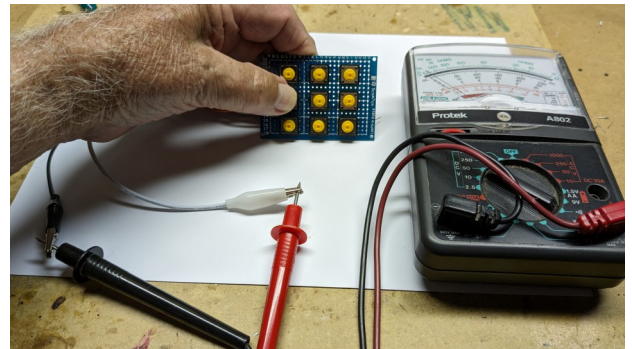
6 — Use 6 Alligator Clip Wires, one Black one to the Earth (Ground) and the 5 others to the positive leg of the Left, Up, Right, Down and centre Space Arrow Switches. Solder normal wires to W, A, S, and D Switches positive legs.



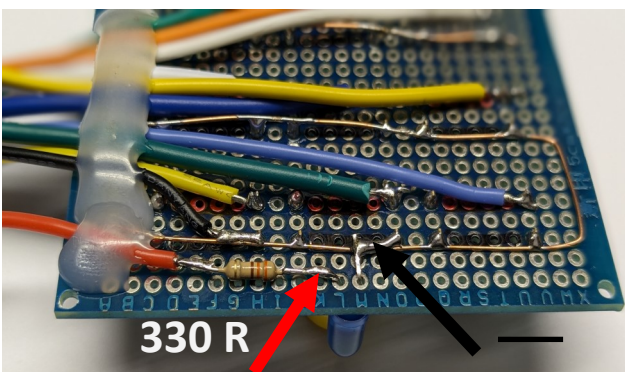
7 — Use a Multimeter and attach it to the Earth (Ground) and to each attached Clip/Wire to test continuity.



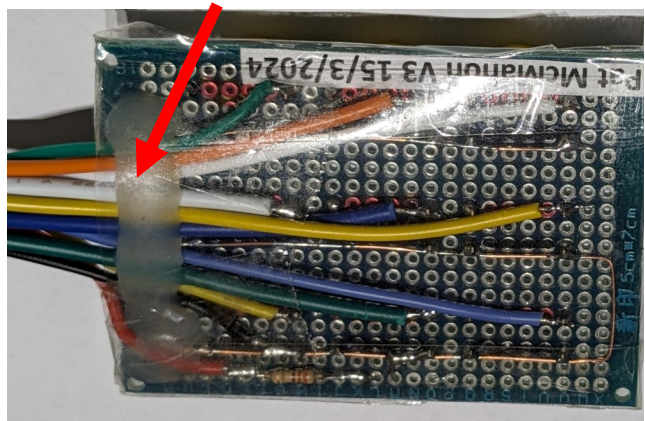
8 — And Test each one to ensure each works when the Button is pushed.



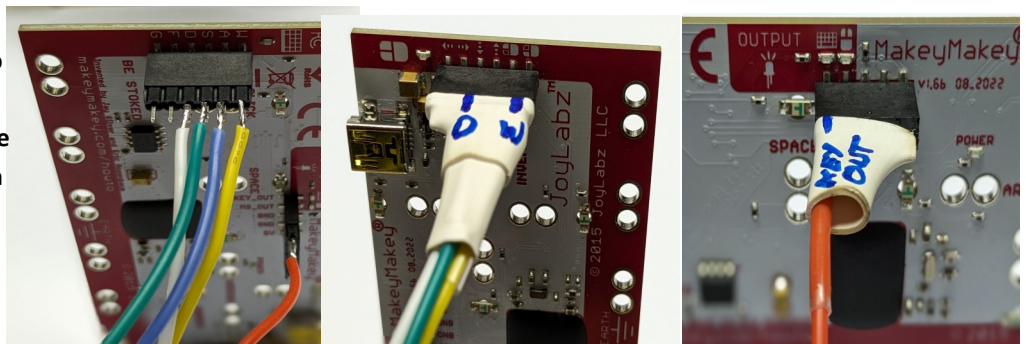
9 — Insert an Indicator LED on the top of the Board. Underneath, solder the (—) leg to the Common Earth. Insert a 330 R Resistor inline to the (+) LED leg and connect it



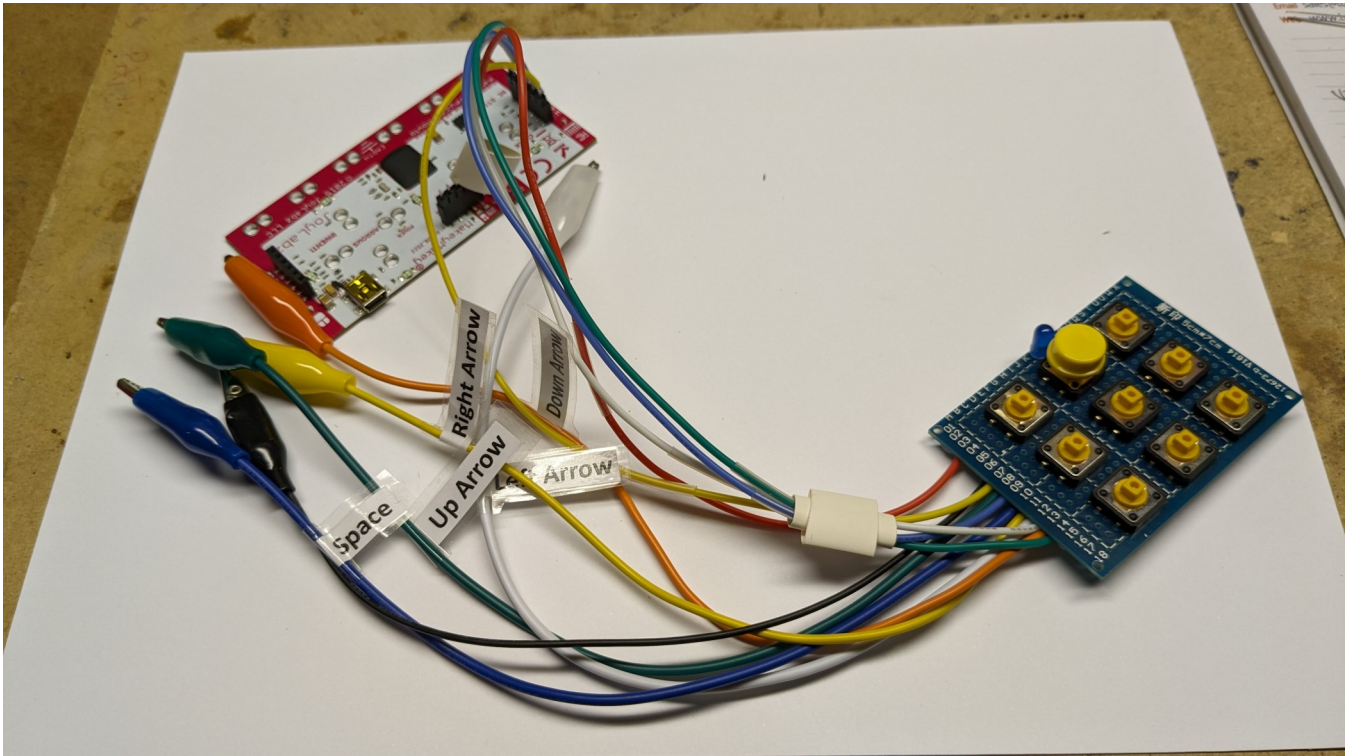
10 — Using a Hot Glue Gun, secure all the wires to the board, to stop them from moving. To stop activating the Makey Makey on the back with your fingers, I secured a clear Acetate Sheet (for wiring identification) or cardboard for insulation, with tape.



11 — Solder the W,A,S,D wires to a 6 pin Header inserted in the Makey Makey. Attach the (+) wire from the 330 R Resistor to a 5 pin Header inserted in the Makey Makey, to Key Out. Secure with Shrink Tubing if available and label for correct connection.



12 — Make up Identification Labels for the Alligator Clip wires for correct connection and connect all wires & Alligator Clips, To the Makey Makey.



13—Attach the USB cable from your Computer to the Makey Makey.

14— Search on the web “Makey Makey”.

15— Open “Makey Makey Joylabz Official Store” and select “Apps”.

16 —Select “Plug and Play Apps”.

17 —As a Test, select “Audio Sampler” and press “Play”.

18—Select the bottom left hand pull down menu. (.—)

19—Pick, Drag and Drop your choice of Sounds, on to the 3x3 option arrows/letters.

20— Click the Save symbol Button below the 3x3 Keypad, to save a copy into your Downloads Folder, if using your own Computer, to retain for next time.

21— Touch the 9 Buttons to Test & Play your Interactive Art / Sound Display or mouse click the 9 buttons on the app on the Computer screen.

22 — If your Keypad is working, try some of the other apps, ie Pinball, Space Rocks, Soccer, etc.

Audio Sampler



Congratulations on building your own 3x3 Push Button Gaming Keypad for your Makey Makey, Well Done!