The Snail Practice Morse Key

Designed by Trevor Hughes (G4WKJ)

WARNING - Young children undertaking this project should have adult supervision!

Step 1 – Assemble components

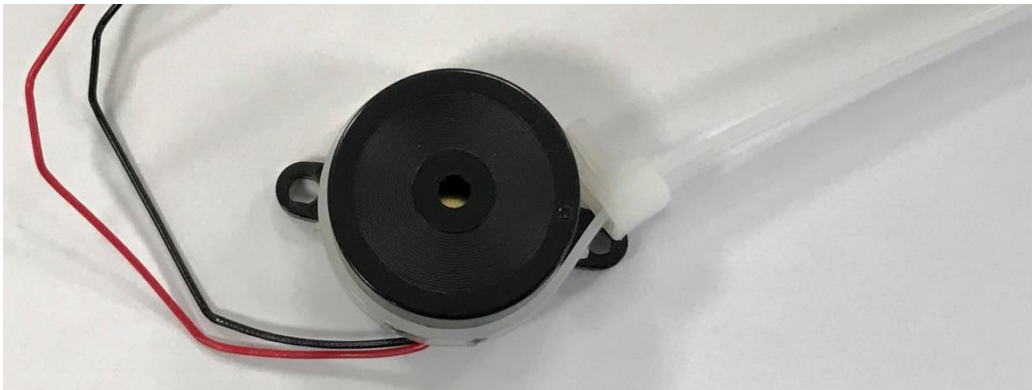You will need…   1 x block of wood (approx. 100 x 45mm)

4 x brass drawing pin (solid head type, not plastic covered)

1 x cable tie (approx. 160 x 7mm)

1 x AA battery

1 x AA battery holder

1 x 3v drum shaped piezo buzzer

1 x double sided sticky pad

Tools required…   1 x permanent marker

1 x pair side cutters

1 x pair wire strippers

1 x 300mm ruler

1 x pair safety goggles

Step 2 – Mark out cable tie

1. Place the cable tie around the piezo buzzer with the locking mechanism end going over the top of the buzzer and pull the cable tie tight (above).

2. Mark two spots on the bottom of the cable tie; this is where the drawing pins will secure the buzzer to the wooden block (above).

3. Position the buzzer and cable-tie assembly on the wood block (above) and trim the length of the cable-tie so that it reaches the end of the block and doesn't overhang too much.
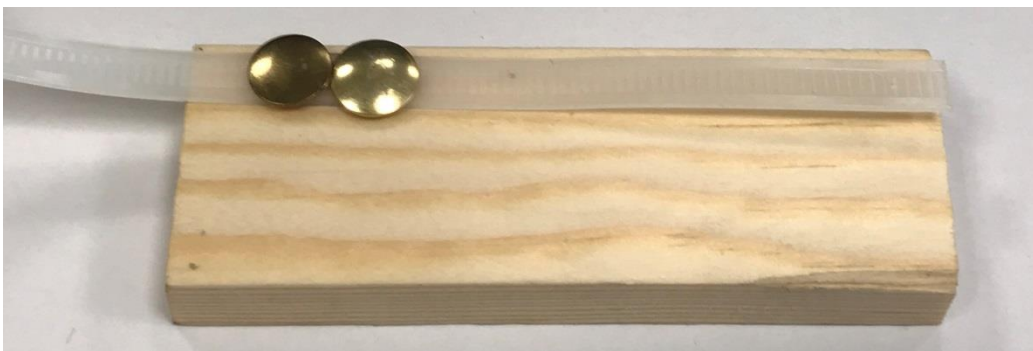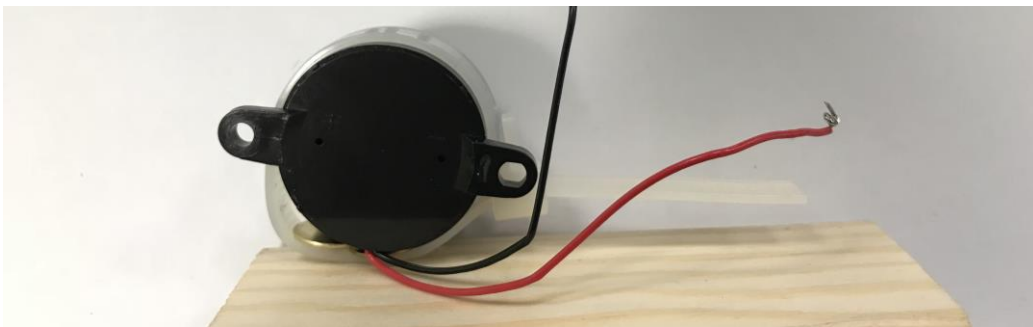
Step 3 – Fit the buzzer

1. Disassemble the buzzer and cable tie assembly.

2. Place two drawing pins through the cable tie at the spots marked earlier (above).

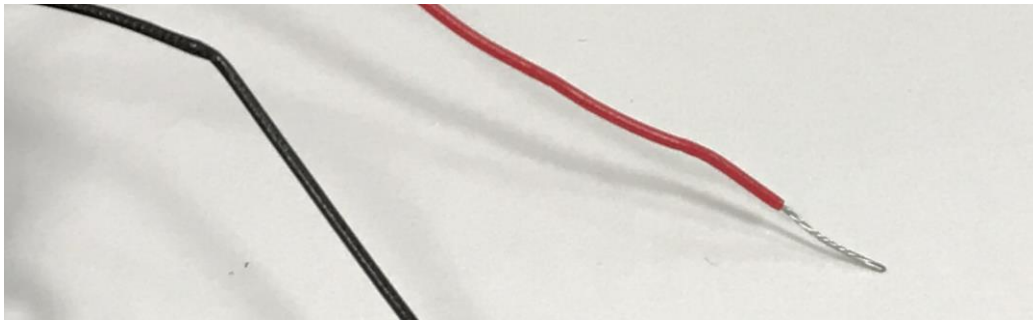3. Attach the cable tie to one side of the wooden block (above).

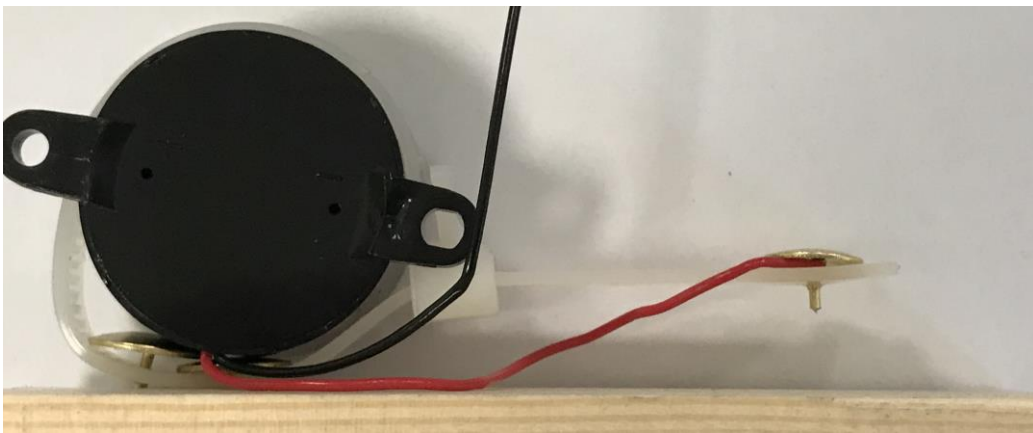4. Reattach the buzzer to the cable tie (above).

Step 4 – Create the buzzer's knob

1. Trim the red wire of the buzzer so that it is about 90mm long (don't throw the left-over red wire away, you'll need it in a bit) and strip the end back to reveal about 10mm of bare wire and twist the bare wire to give it some strength (above).

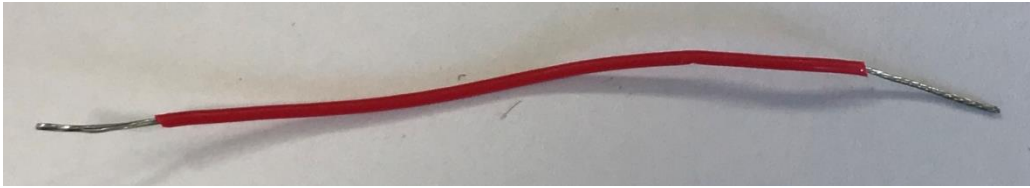2. Twist the end of the red wire tightly around a drawing pin (above).

3. Insert the drawing pin in the end of the cable tie (above) and trim the length of the drawing pin so that it's a few mm proud of the bottom of the able tie. WARNING – the end of the drawing pin may go flying off so protect it with you hand to prevent it getting in somebody's eye or get an adult to help you.
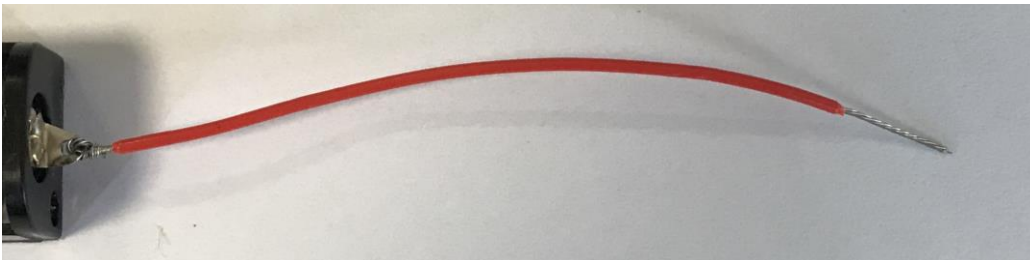
Step 5 - Assembling the battery pack

1. Strip the left-over red wire down by 10mm on each end and twists the wires around for added strength (above).

2. Bend the tabs on the battery holder out at both ends (above).

3. Wrap one end of the left-over red wire very tightly around the tab at the positive end of the battery holder (above).

4. Wrap the other end of the left-over red wire tightly around the remaining drawing pin (above).
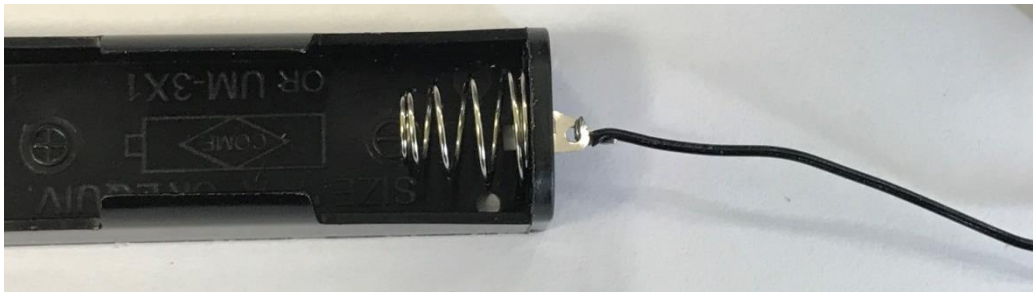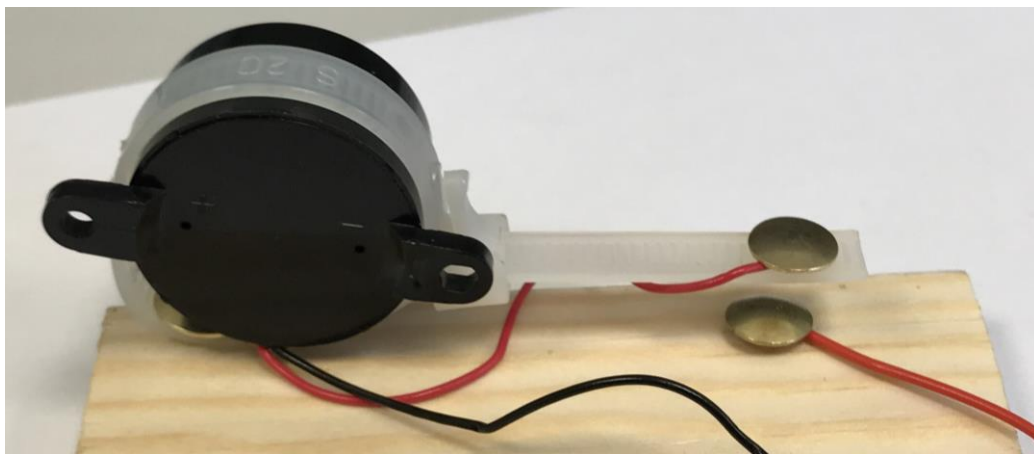
5. Strip back the end of the buzzer's black wire to reveal about 10mm of bare wire and twist the bare wire to give it some strength (above).

6. Wrap the buzzer's black wire very tightly around the tab at the negative end of the battery holder (above).
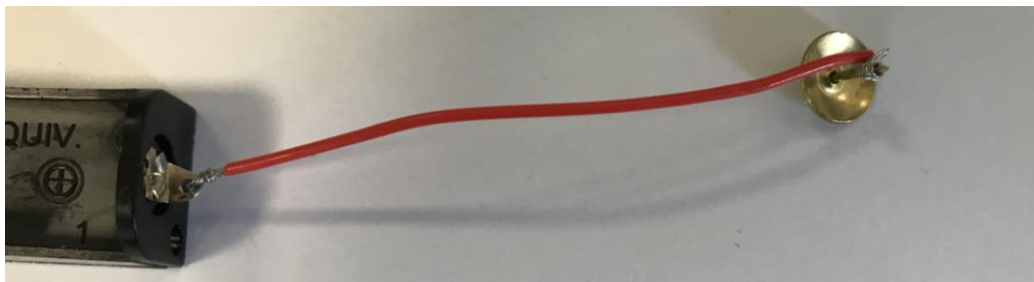
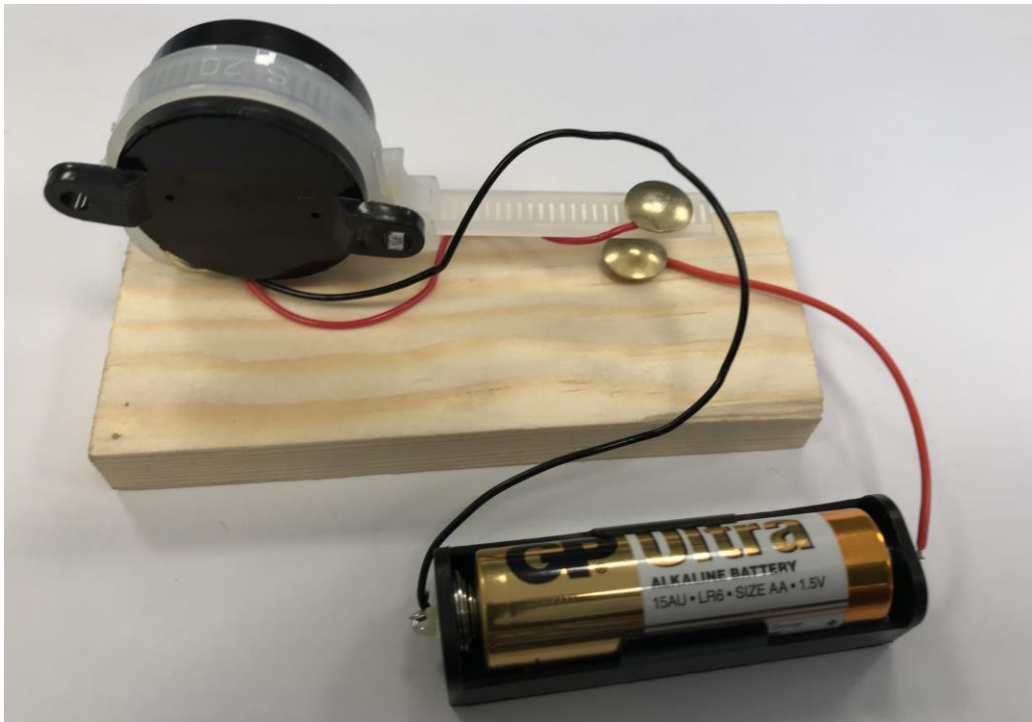7. Wrap the free end of the left-over red wire around the remaining drawing pin.

8. Insert the drawing pin in the wooden block below the end of the cable tie (above).

Step 6 - Start using your new Morse key

1. Place the battery in the battery holder (above).
2. When you press the cable tie down it'll make contact with the drawing pin in the wood beneath it, completing an electrical circuit and sounding the buzzer.
3. Releasing the cable tie will break the circuit causing the buzzer to cease sounding.
4. You can now use this to sound out characters in Morse code.

RSGB CW Transmissions

CW, known otherwise as Morse Code, is a very efficient way of sending and receiving plain text messages over a long distance using low power radio equipment.

The Radio Society of Great Britain transmits CW to enable you to learn Morse Code and improve your skills. Please visit the following web sites for more details…

http://rsgb.org/main/operating/morse/

http://rsgb.org/main/operating/morse/certificate-of-competency/gb2cw-broadcast-schedule/

Morse Code

Morse Code characters are made up of different combinations if dits (dots) and dahs (dashes).

How long should I hold the key down for?

- However long you press the key down to sound a dit, a dah should be three times longer.
- The gap between the dits and dahs should be one dit long.
- The gap between characters in a word should be one dah (three dits) long.
- The gap between words should be seven dits long.

Morse Code alphabet

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