Switch Adapted Climbing Ducks Toy
ASSEMBLY GUIDE

Makers Making Change
A Neil Squire Program

Required Components

1. 	2. 	**BOM** 1. Amazon LED Electric Duck Climbing Stairs Toy 2. Mono jacks x2 3. 22 AWG Wire 4. 2 AA Batteries
3. 	4. 	

Required Tools

- Phillips Screwdriver
- Soldering iron
- Wire stripper
- Flush cutter
- Drill and ¼ drill bit

Required Personal Protective Equipment (PPE)

- Safety Glasses

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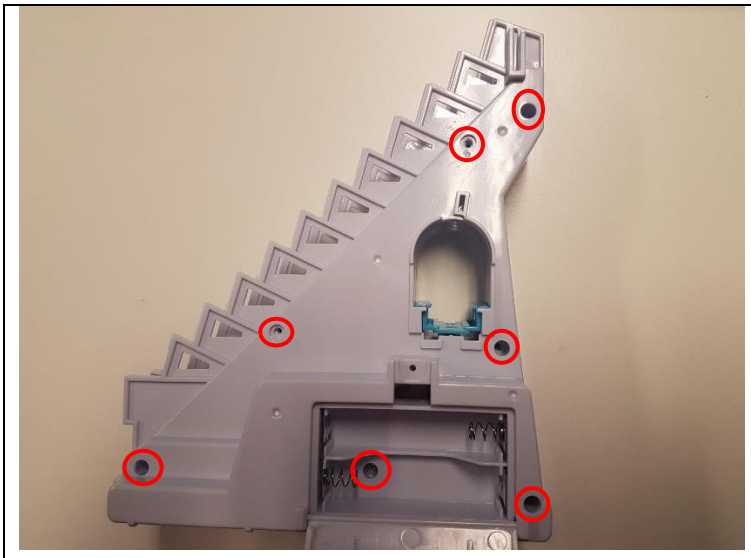
Assembly Instructions

Step 1



- Carefully remove toy from packaging, the toy will be put back in packaging (if possible) after it is adapted
- This toy has a lot of parts – ducks and a track that can be kept in the box
- Using a screwdriver, turns screws indicated in the red circles to open the toy – including the screw inside the batter compartment
- Set screws aside in a safe place

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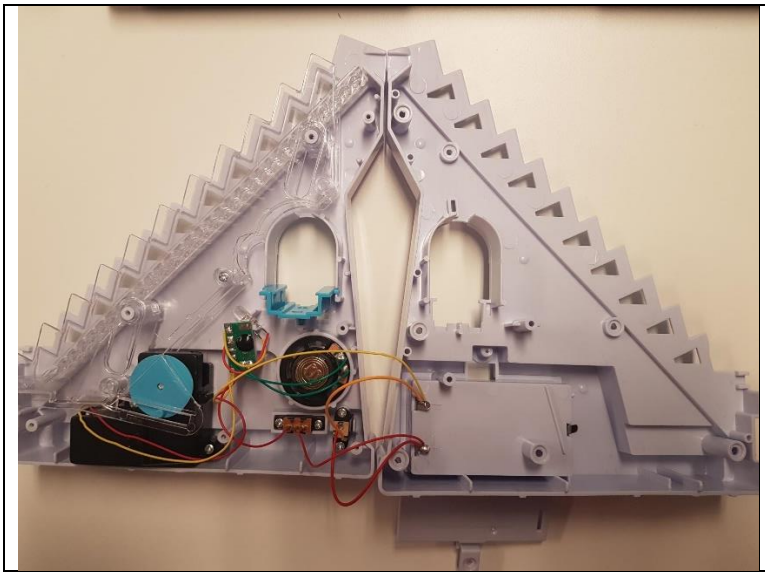
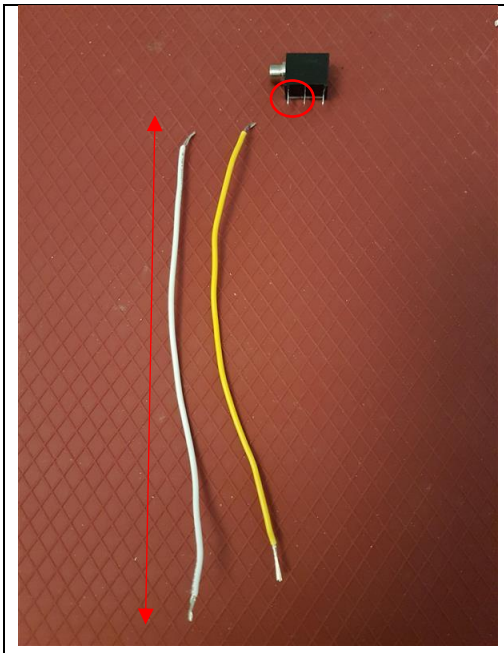
Step 2



- After screws are undone, gently pull the toy into two halves. Be very careful while doing this as to not pull off any existing wires or connections

- If some parts move, just take note of how everything fits together but they can also be set aside while you work on the toy.

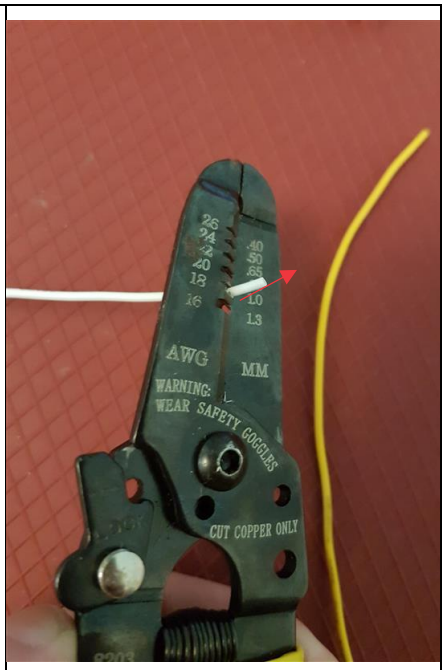
Step 3



Next we will prepare the mono jack and wires.

Cut 2 pieces of wire each 8 cms in length

Strip both ends of both wires, leaving about .5 cm of exposed wire on each end



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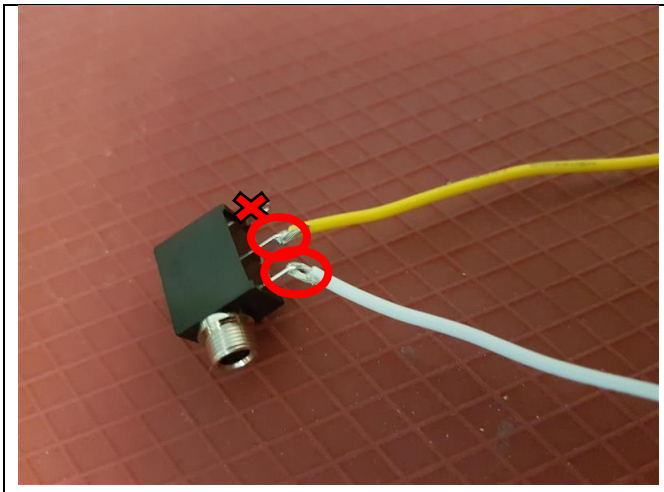
Step 4



- Pick one wire, slide exposed wire into first metal arm on mono jack (the arm closest to the circular jack)
- With second wire, slide one end of exposed wire into the middle metal arm on mono jack
- Solder wire to mono jack

Please Note: Check that you have the correct metal arms of mono jack, refer to picture

Step 5

- Tin the ends of your wire. The best way to do this is cover the exposed wire end in solder.
- This will help you stick the wires to an existing spot where the is solder

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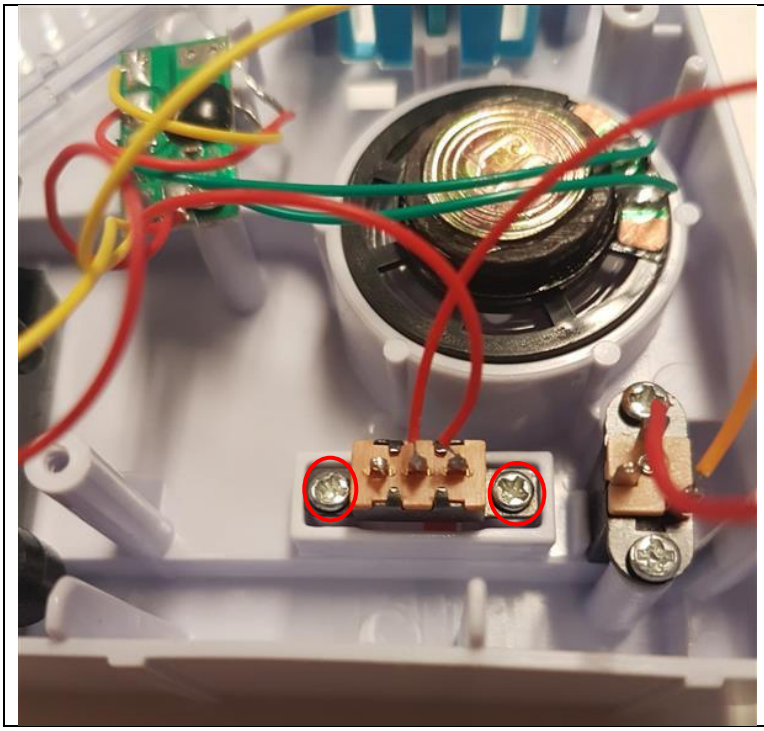
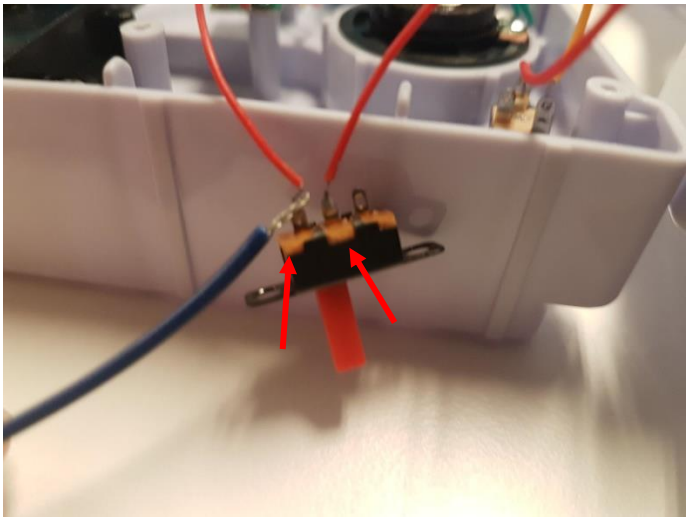
Step 6



- Locate where the on/off switch is located. Undo the screws and gently pull the switch to give yourself space to work with it
- For this assembly, we are attaching our mono jack + wires to the same spots on the original switch

Step 7



- Using the wires and mono jack you previously prepared, you will solder the ends of your new wire to where the current red wires are.
- You will have one new wire and one old wire coming from each spot indicated in the circles
- **Test your connections using an assistive switch.** Listen for the motor to start when the switch is activated.
  Please note: you will need batteries to test

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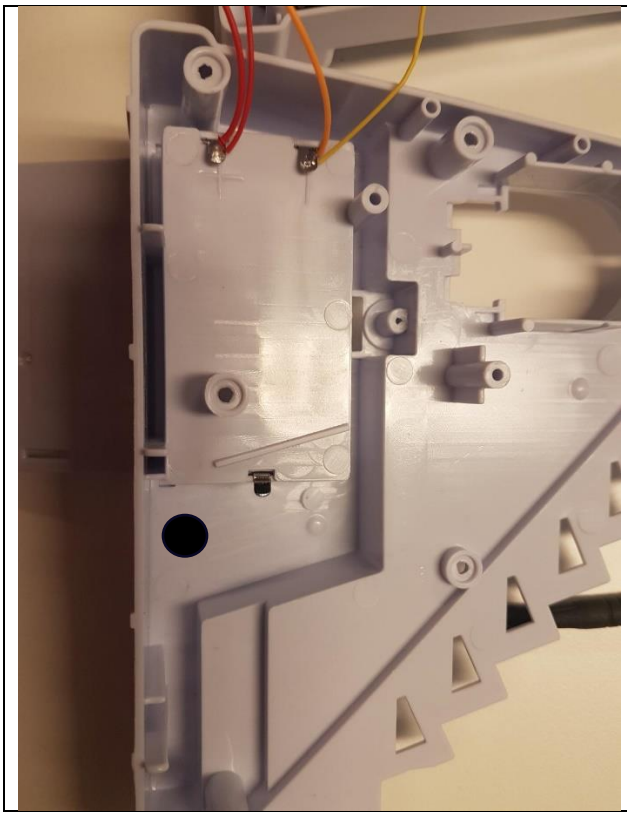
Step 8



- Using a ¼ inch drill bit, drill a hole to the side of the battery compartment.
- Check that the mono jack end fits through the hole and that it does not interfere with any mechanism of the toy.
- Add the ring to the outside of the toy to hold the mono jack in place.

Step 9

- Reassemble the original switch to its original position, close the toy – checking that no wires are being pinched and the mechanics are moving.
- Reassemble by adding the screws to their original spots.

Test the toy again once reassembled.