# Required Components

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|  | 1. A small black box with a silver ring     AI-generated content may be incorrect. | **BOM**   1. Amazon LED Electric Duck Climbing Stairs Toy 2. Mono jacks x2 3. 22 AWG Wire 4. 2 AA Batteries |
|  | 1. One duracell batteryOne duracell battery |

# Required Tools

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

# Required Personal Protective Equipment (PPE)

* Safety Glasses

# Assembly Instructions

## Step 1

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| A grey plastic object with a hole  Description automatically generated | * 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 |

## Step 2

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| A plastic triangle with wires and wires  Description automatically generated | * 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

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|  | 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 |  |

## Step 4

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|  | * 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

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|  | * 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 |

## Step 6

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| A close up of a device  Description automatically generated | * 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

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| A close up of a device  Description automatically generated | * 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 |

## Step 8

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| A plastic piece of electronic device  Description automatically generated with medium confidence | * 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

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|  | * 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.** |