Assembly Guide - Switch-Adapted Water Gun and Custom Switch

This guide explains how to assemble a custom accessibility switch and adapt a shark water gun to work with it. It's meant for those who are replicating the project.

Tools and Materials Needed:

- 3D printed switch base and top
- Electric shark water gun
- Momentary push button (normally open)
- 3.5mm mono jack (with exposed wire ends, pre-attached)
- Copper wire
- Soldering iron and solder
- Wire strippers
- Drill with small drill bit
- Small Phillips screwdriver

Part 1: Building the Switch

Step 1 - Print the switch base and top using the provided STL files. Use the recommended print settings from the Printing Guide.

Step 2 - Place the momentary push button inside the switch base. It should sit firmly and align with the top when pressed.

Step 3 - Solder the exposed ends of the 3.5mm jack wires to the terminals of the push button. Make sure the connections are secure.

Step 4 - Place the top on the switch base. Make sure the button presses down easily and springs back. Secure the top if needed.

Part 2: Adapting the Water Gun

Step 1 - Remove all factory screws to open the water gun. Carefully split the shell in two.

Step 2 - Locate the internal trigger switch and battery compartment. The battery section is in the handle, behind the trigger.

Step 3 - Drill a small hole on the side of the water gun shell, just behind the trigger. This will be the jack port.

Step 4 - Solder two wires from the terminals of the water gun's internal trigger switch to a new 3.5mm jack. This should be done in parallel so the external switch and factory trigger both work.

Step 5 - Mount the 3.5mm jack into the hole you drilled. Make sure it's snug and secure.

Step 6 - Reassemble the water gun by carefully fitting the shell back together and replacing all screws.

Final Steps:

- Insert 2 AA batteries into the compartment in the handle.
- Plug your custom switch into the jack.
- Press the switch to activate the water gun.
- Test both the built-in trigger and external switch to confirm functionality.

Assembly is now complete.