

Raindrop Switch

SUMMARY

Overview

The Raindrop Switch is a small, cost-effective, 3D-printed assistive switch. The switch is 32 mm L x 22 mm W x 9 mm H and uses a standard 3.5 mm cable. Using the model of tactile switch specified, the activation force is about 1.3 N (130 gf). This switch is comparable in size, activation force, and travel to the AbleNet Mini Cup Switch.



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SUMMARY

Product Information

Product Name

Raindrop Switch

Device Category

Mark any relevant categories with an "X":

	Adapted Toys
	Aids for Daily Living (ADL)
X	Assistive Switches
	Communication Aids (AAC)
	Computer Access
	Environmental Controls
	Gaming

	Keyguard
	Kits
	LipSynchs
	Mounting
	Recreation and Leisure
	Seating and Positioning
	Switch Interfaces
	Writing Aids

User Value Statement

The Raindrop Switch is a cost-effective accessibility switch, an assistive device used by people with physical disabilities to control electronics (e.g. phones, computers, adapted toys, game controls, etc.).

This particular switch is well-suited for use by a finger. It can be plugged into any standard 3.5 mm AT interface and even the Xbox Adaptive Controller. Users can arrange multiple switches in an array to get input from more than one finger. The switch can be mounted using adhesive on the rear surface.

Designer

Neil Squire Society

Device Information

Overview

If you need a small, affordable assistive switch, the Raindrop Switch offers a nickel-sized solution for cost-effective control of assistive devices.

Disability Type

Select one or more disability types and mark with an "X":

x	Agility / Dexterity
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	Arthritis
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Raindrop Switch

SUMMARY

	Cognitive
	Hearing
	Mobility
	Mobility

	Pain
	SCI
	Vision
	Other

Disability Type Description

The device is intended for users who have difficulty used small buttons or switches, and needs an accessible switch to operate them.

How To Use

This switch is well-suited for use by a finger. This switch can be plugged into any standard 3.5 mm port on an assistive device. It can also be used with the Xbox Adaptive Controller. Multiple switches can be used to get input from more than one finger. The switch can be mounted using adhesive on the rear surface.

Estimated Cost

The estimated material cost of the device for a single build:

X	\$0 - \$10
	\$11 - \$25
	\$26 - \$50

	\$51 - \$100
	\$101 - \$250
	\$250+

Attribution

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Maker Information

Project Skills

Mark the required project skills with an "X":

X	3D Printing
	Custom PCB
	Electronics

	Laser Cutting
	Mechanics
	Software



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SUMMARY

X	Soldering
	Woodworking

	Other
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Skills Description

This build requires the use of a soldering iron, hot glue gun, flush cutters, wire strippers, and pliers.

Tools Needed

X	3D Printer
	Common Hand Tools
	Common Power Tools

	Laser Cutter
X	Soldering Iron
	Specialized Tooling

Print time (hrs)

1 hour

Assembly time (hrs)

0.25 hours

Build Instructions

This build uses a tactile button and mono cable in a 3D printed housing to form the switch. The cable is cut in half and the wires stripped before soldering them to the leads on the button. The button is held in the enclosure using hot glue.

Download Link

<https://github.com/makersmakingchange/Raindrop-Switch/archive/refs/heads/main.zip>

Project Link

<https://github.com/makersmakingchange/Raindrop-Switch>

License

License

Hardware: CERN 2.0 Weakly Reciprocal License (CERN-OHL-W v2) or later

Documentation: Attribution-ShareAlike4.0 International



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