



Light Switch Extension Lever

DESIGN RATIONALE

Introduction


For some users with arthritis, limited grip strength or finger dexterity, it can be difficult to use a light switch. The Light Switch Extension Lever allows the user to flip the switch without needing any grip strength or nearly as much precision.

Research

Name	Photo	Price	Link
Commercial			
Light Switch Extender for Children		\$15.95	Link
Light Switch Extender		N/A	Link
DIY			

Light Switch Extension Lever

DESIGN RATIONALE

Light Switch Extension Lever		N/A	Link
------------------------------	-----------------------------------------------------------------------------------	-----	----------------------

Requirements

Goals

G01	Extend the toggle lever of a light switch so it can be toggled by bumping it with the hand
-----	--------------------------------------------------------------------------------------------

Functional Requirements

F01	Device must work, or be easily customizable to work with multiple thicknesses of light switch toggles
-----	-------------------------------------------------------------------------------------------------------

Constraints

C01	Must be entirely 3D printed
-----	-----------------------------

Testing

The original design was tested, and found to require supports, and was too big for most of the light switches tried. It was remodeled in Fusion 360, with a changeable user parameter to accommodate any light switch.

Opportunities for Improvement

Design could be altered to include a spring or some mechanism that would allow a one size fits all, instead of changing the Switch_Thickness parameter for each switch.