

Foot Pedal Switch

DESIGN RATIONALE

Introduction

This device is a foot pedal switch that functions like a standard 3.5mm mono jack switch, but can be operated with a foot.

Research

Name	Picture	Price	Link
G-Switch GS04		\$29.00	Link
Single Foot Switch Computer Interface		\$41.60	Link
Three Switch Computer Controller Pedals		\$58.13	Link

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Requirements

Goals

G01	Create a foot operated switch
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Functional Requirements

F01	Activate a mono jack switch with activation of a foot pedal
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Non-functional Requirement

NF01	Cost less than 15 dollars
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Constraints

C01	Buildable by users with minimal experience soldering
C02	Built using easily available components

Testing

When the foot pedal switch was assembled, it was tested with the switch tested. It was found to have roughly a 1.5-pound activation weight and worked normally.

Opportunities for Improvement

An enclosure could be designed to protect the wire connection between the switch and the jack.

Metal Switch Body

It was found that for some use cases, the plastic switch body used in the original switch could shatter with heavy use, and some users wanted the cable to come out the same side as the hinge. A metal switch body was sourced on Amazon and added to the BoM and Maker Guide as an alternate design.