Travel Computer Mount & Assistive Jumping Device

By: TEAM 3
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Client Contact:
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Introduction

- There are many disabilities which can impair an individual’s communication skills.
- One such disability is cerebral palsy.
- Assistive communicative devices such as the Dynavox Vmax allow these individuals to effectively communicate.
- While these devices work extremely well there is a need for a travel mount that will allow for effective operation in motor vehicles.
Purpose

A mounting system for the Dynavox Vmax which will allow for its full usage while in a motor vehicle
Objective

The Device Will:

- Support the Dynavox Vmax
- Allow users and passengers to view and access Vmax easily
- Allow for easy re/detachment of the Vmax
- Allow for installation in variety of car models
- Withstand vehicle vibrations
- Not compromise safety of passengers
Final Design
Daessy Folding Quick Release Base
Elbow Joints and Frame
Headrest Mounting Plates
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Introduction

- Advances in the medical field have improved the lives of people with disabilities.
- Despite these advances, there is no assistive jumping device that will allow the severely disabled to jump on a trampoline.
- The benefits of jumping on a trampoline include: muscle conditioning, improved balance and coordination, and increased self-confidence.
The Assistive Jumping Device (AJD) will allow people with cerebral palsy and similar conditions to independently jump on a trampoline.
Objective

The Assistive Jumping Device must accomplish the following:

- Maintain support of the torso and upper extremities of the user while allowing full motion of the legs to jump.
- Maintain stability of the user while jumping in the device and to withstand the repetitive motion and usage.
- Framework must be sturdy and withstand the forces of usage.
- Withstand the outdoor elements (rain, snow, wind, lightning, etc.)
- Provide for the safety of the user as well as for other people on trampoline not using the device.
- Consider the growth of the user in future usage.
Final Design
Jib Crane and Trolley
Vertical Rail System
Bungee System
Harness System
Total Cost for AJD

$4155.83
Acknowledgements

- The National Science Foundation Engineering Senior Design Projects for Persons with Disabilities (NSF)
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- Dr. Donald Peterson
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- JR – Sean’s Physical Therapist
- Rich and Serge of UConn Machine Shop
- AYN Contractors
- Bill Lee of Custom Welding
- Gail Pizzoferrato
Questions?