Revision of Lockheed Martin's Human Type Target System for Manufacturability

LOCKHEED MARTIN

Team 7

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Project Scope

Lockheed Martin's current human type target system is incomplete and requires further design for manufacturability and durability. The goal of this project is to revise Lockheed Martin's current prototype and take it to a production-ready-state.

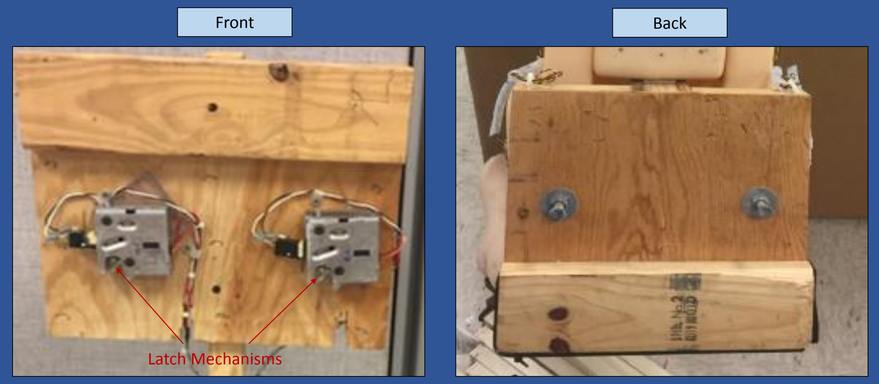
Constraints

- Perform at least 1000 drops
- Ricochet averse
- Moveable by 1 person
- Max 2ft x 2ft base plate
- Capable of withstanding impacts from rounds
- Operable in a variety of environmental conditions

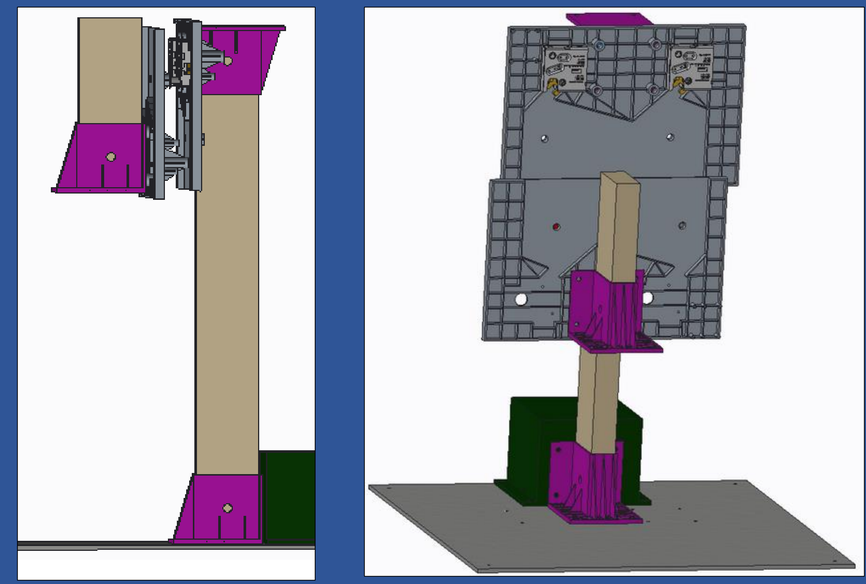
Parts to be Redesigned and Goal Price

- Stand: $70/ea per batch of 100
- Interface Plate: $50/ea per batch of 100
- 2x4 Adaptor: $25/ea per batch of 100

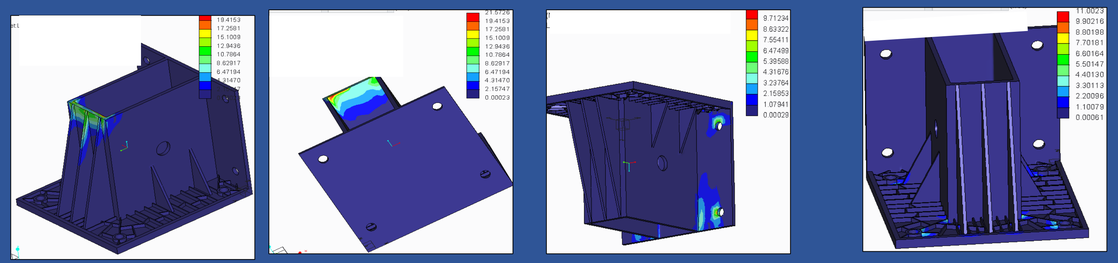
Interface Plate Design



Current Complete Design



2x4 Adaptor Design and Analysis



FEA for Standard Loading Conditions

FEA for Lifting with Vertical Attachment

FEA for Lifting with Horizontal Attachment

Future Work

- Finalize designs for injection molding
- Create design for mobility
- Order all necessary components for prototyping

Acknowledgments

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