Mr. J
Audio - Animatronic Robot

Sandra Patricia Mejias Vega
Department of Entertainment Technology

Mr. J

Audio - Animatronic Robot

ELECTRONIC COMPONENT / CONNECTIONS

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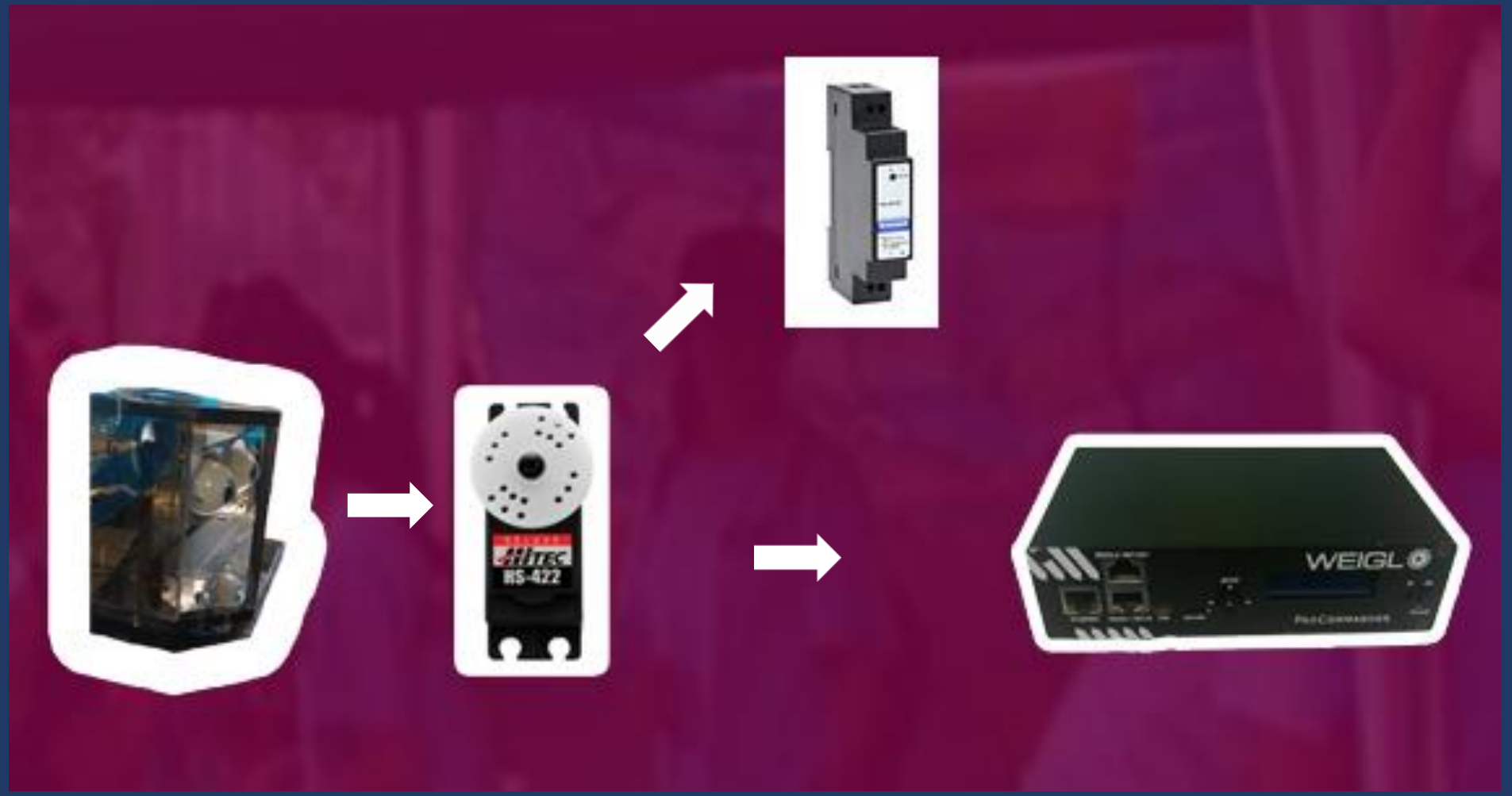
EYES



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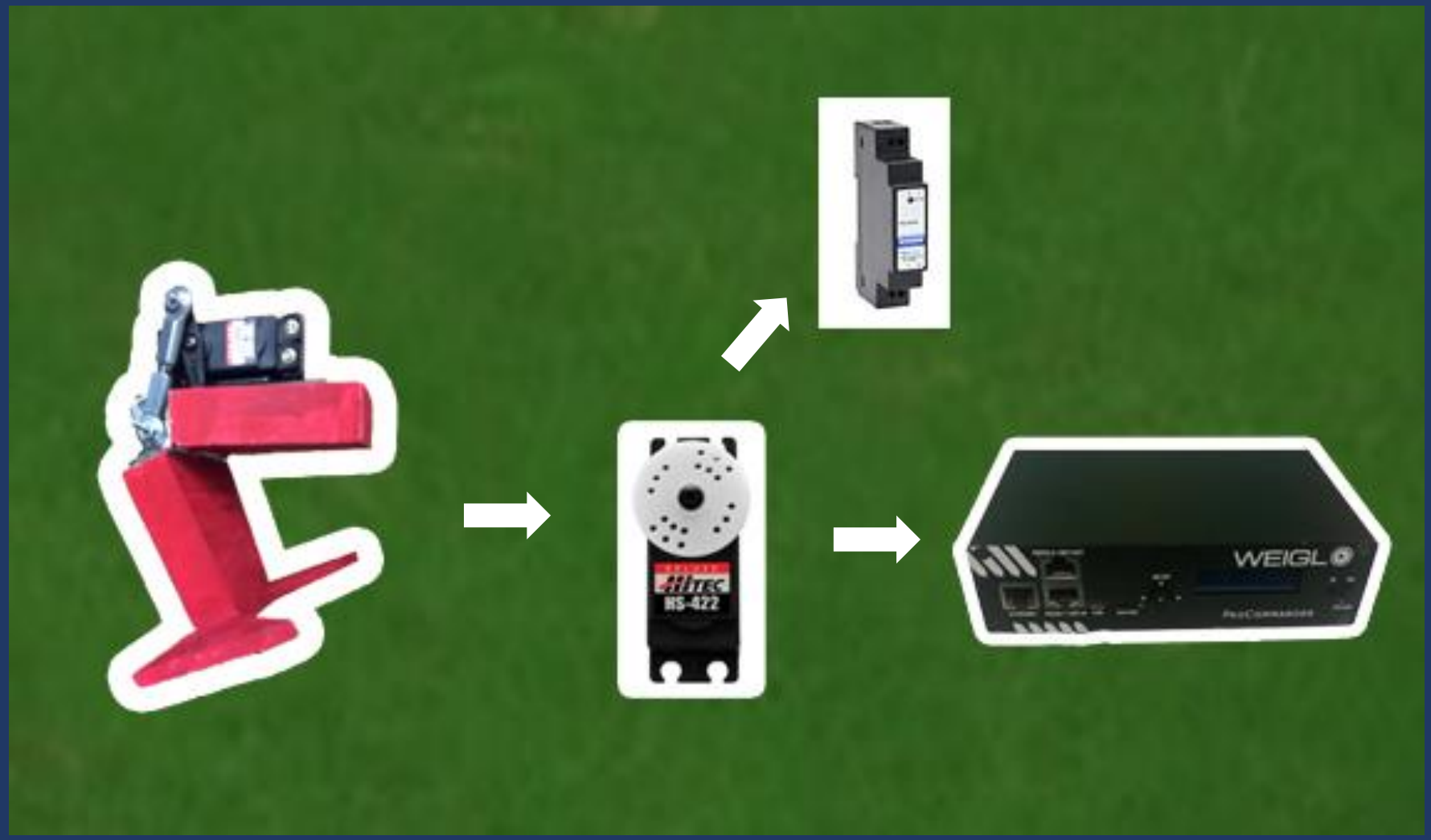
MOUTH



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ARM

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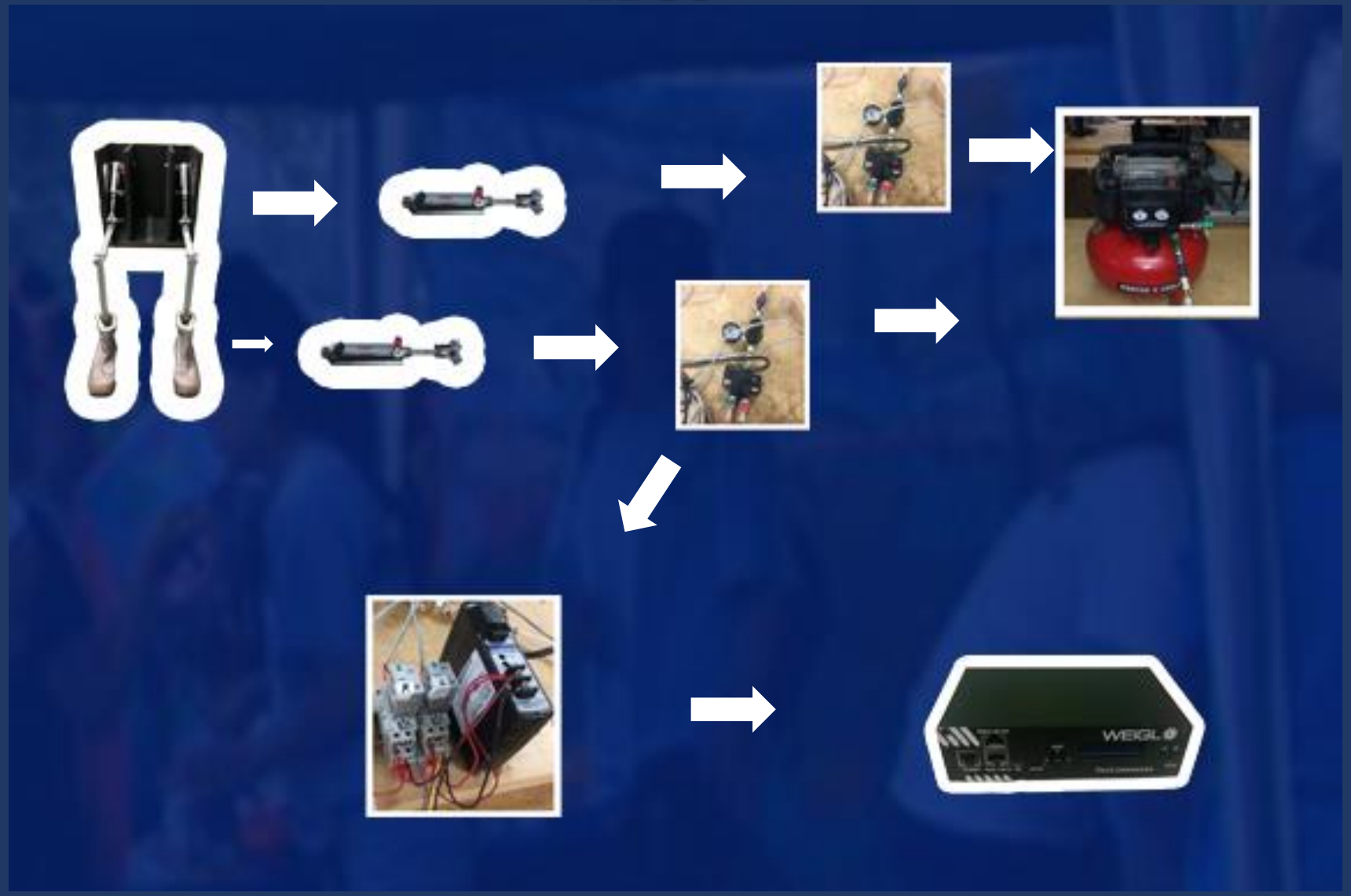
LEGS



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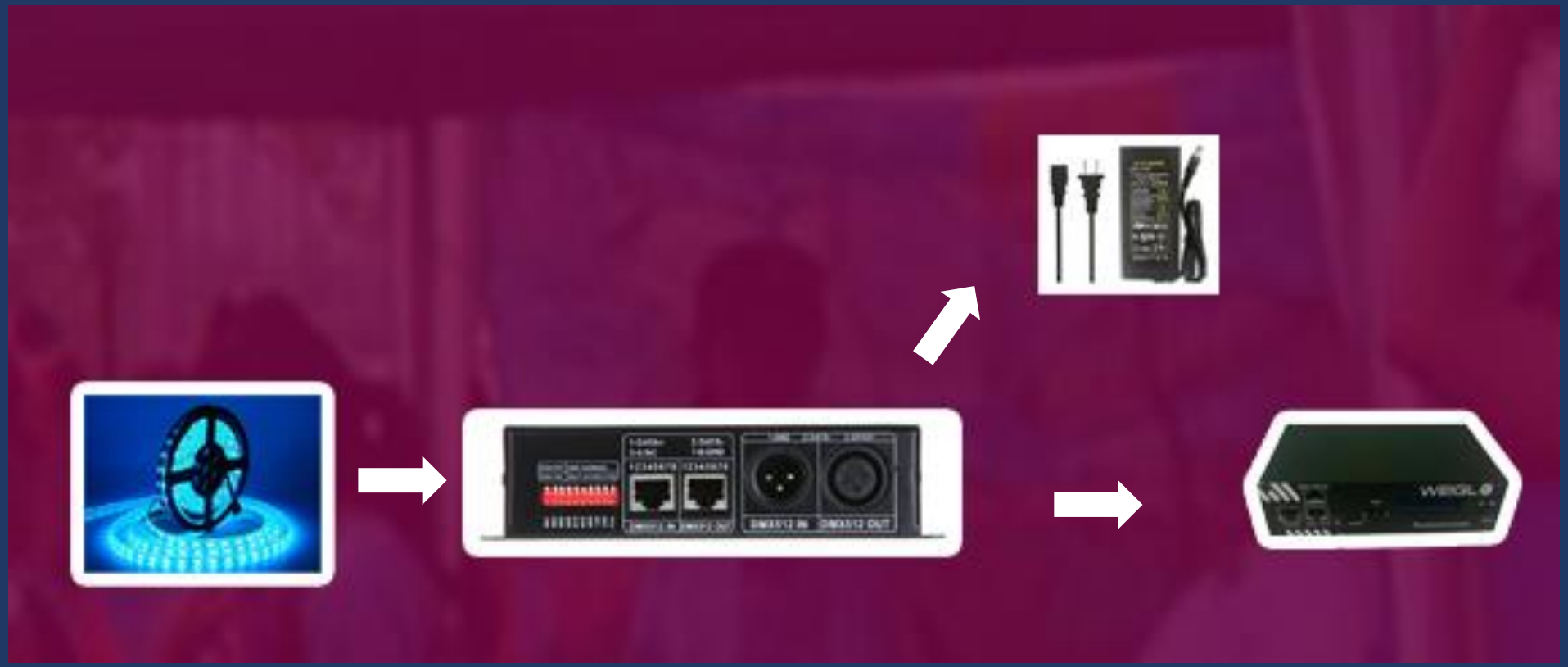
LED LIGHTS



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SPEAKERS

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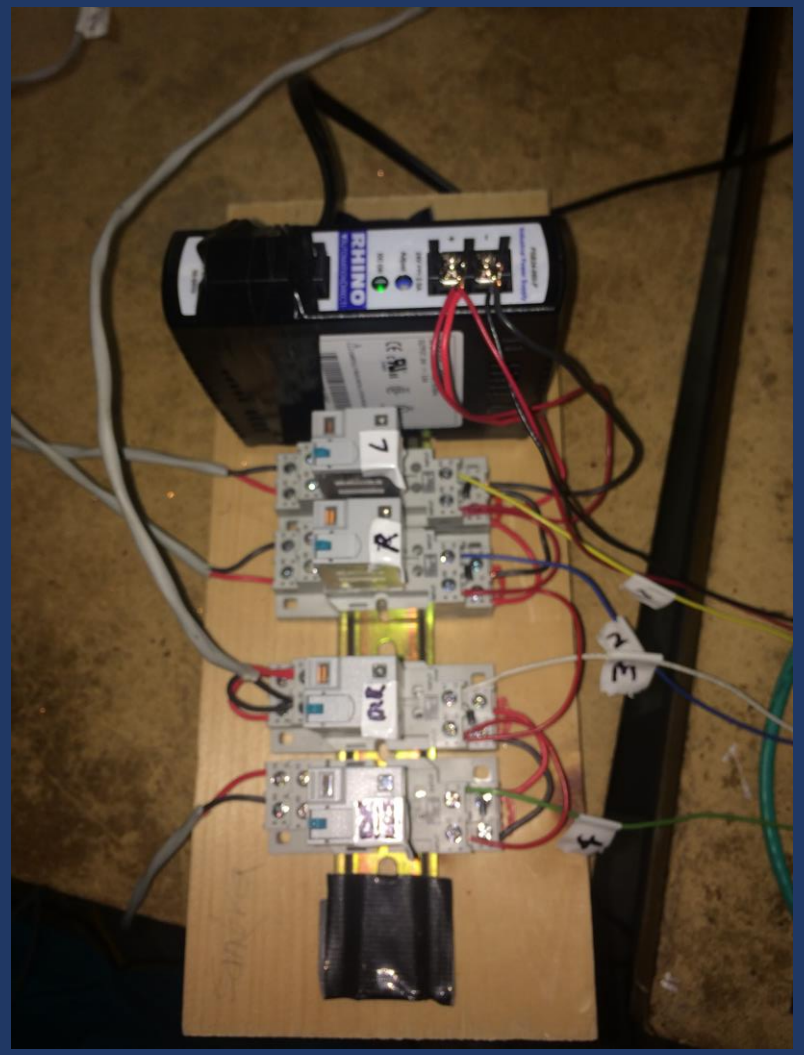

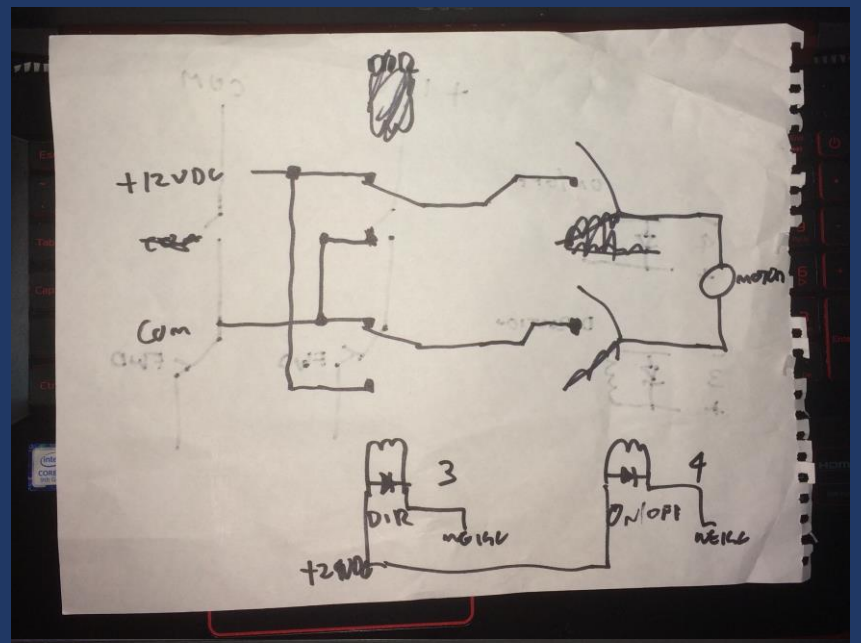

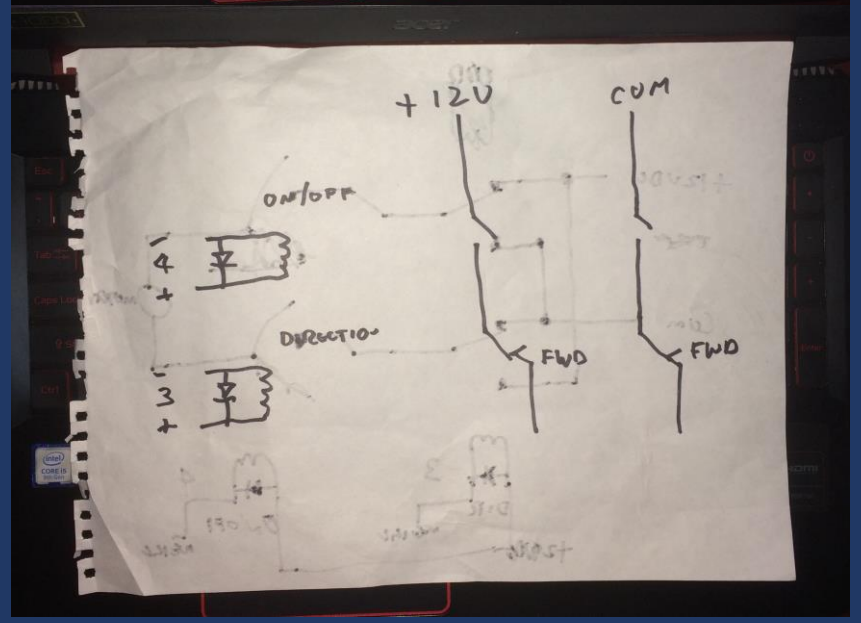

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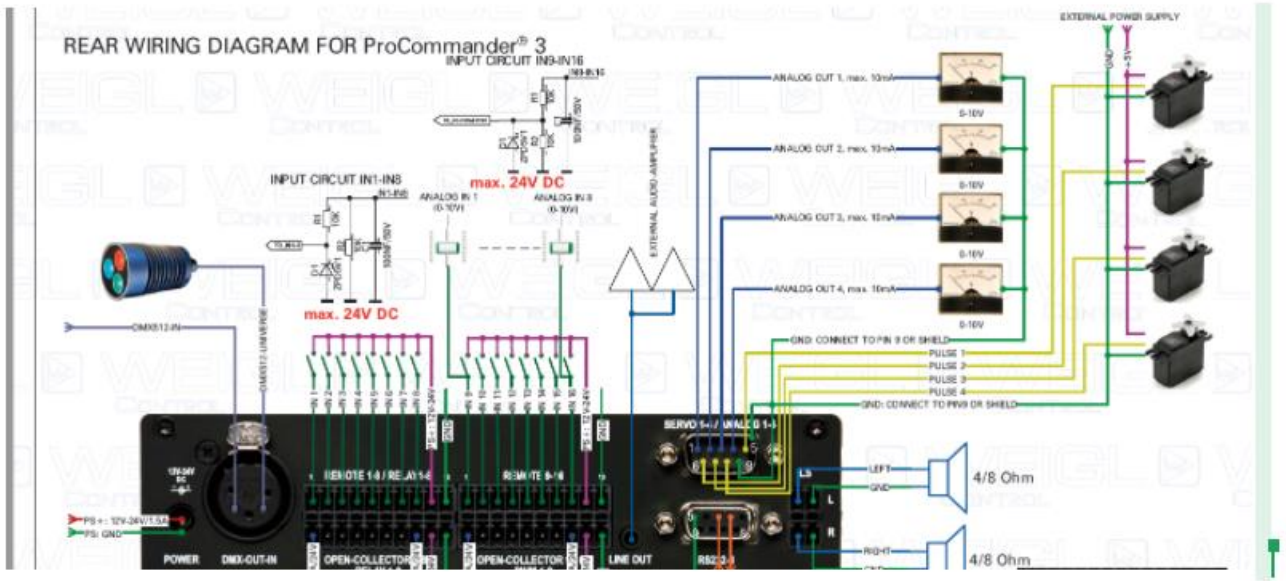

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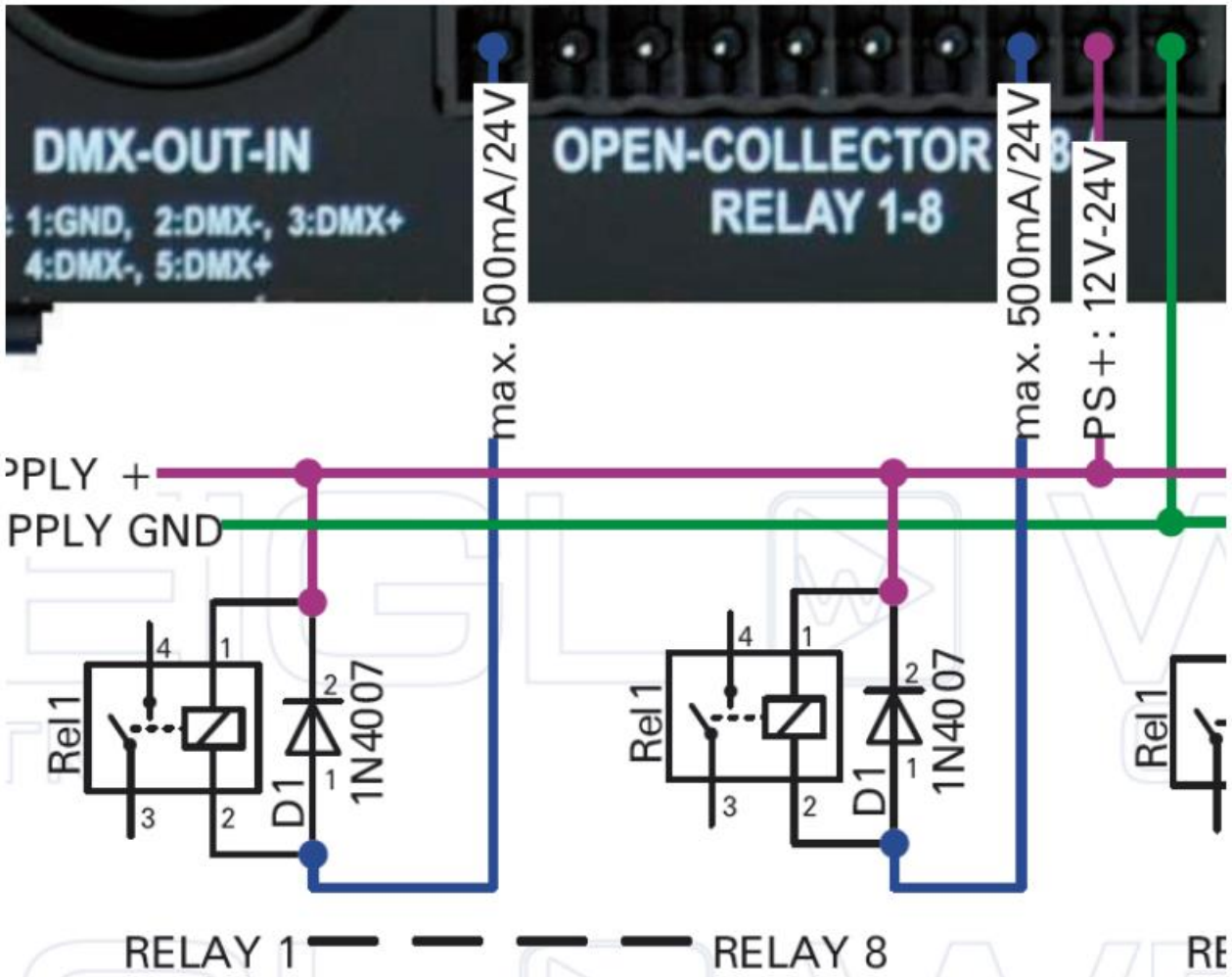

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PROTOTYPES

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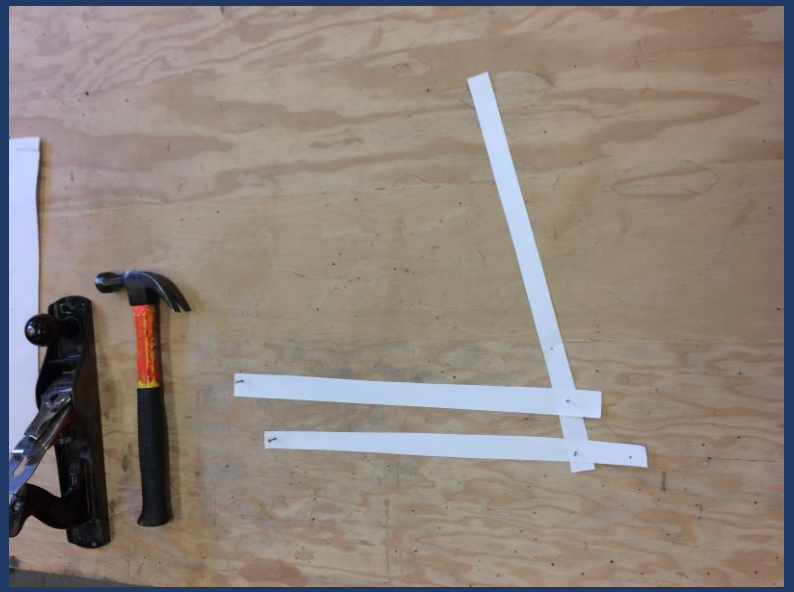
ARM



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ARM

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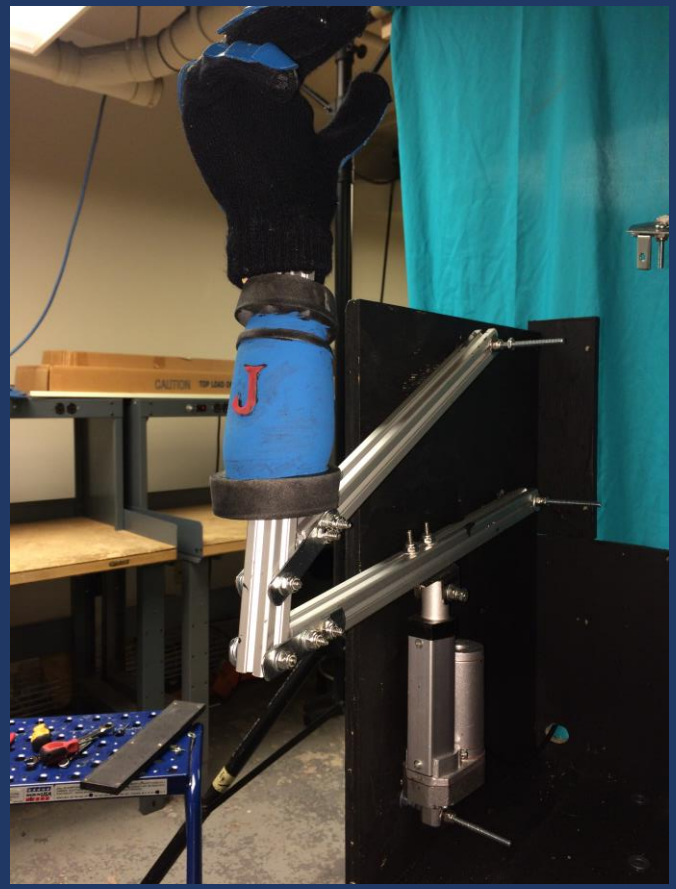
ARM



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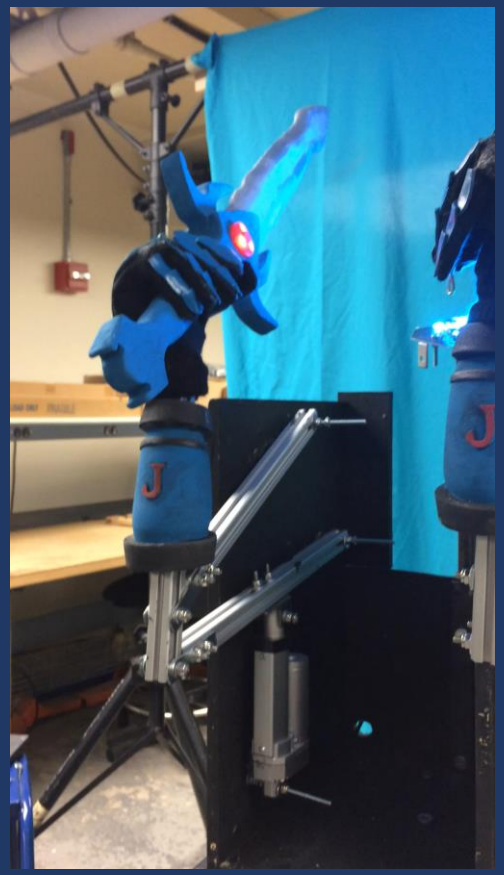
ARM



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LEGS

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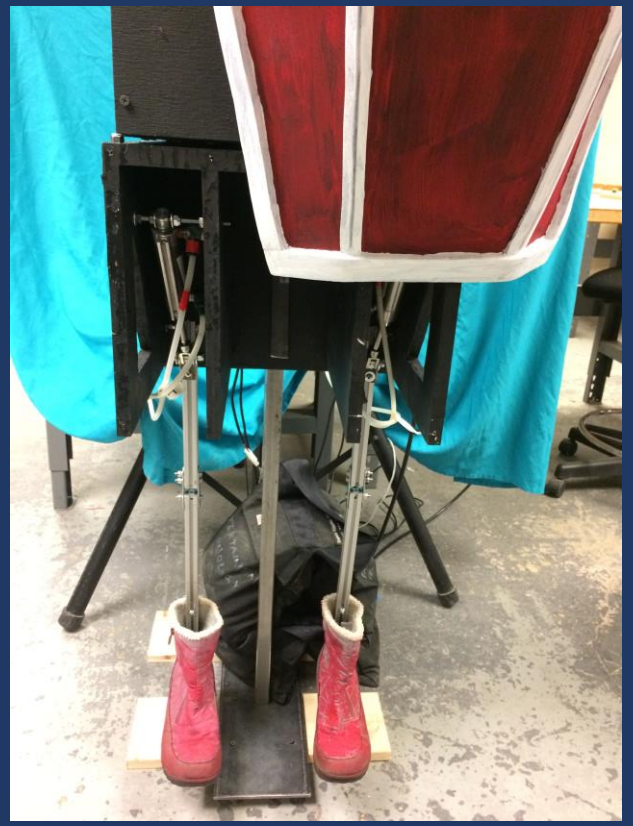

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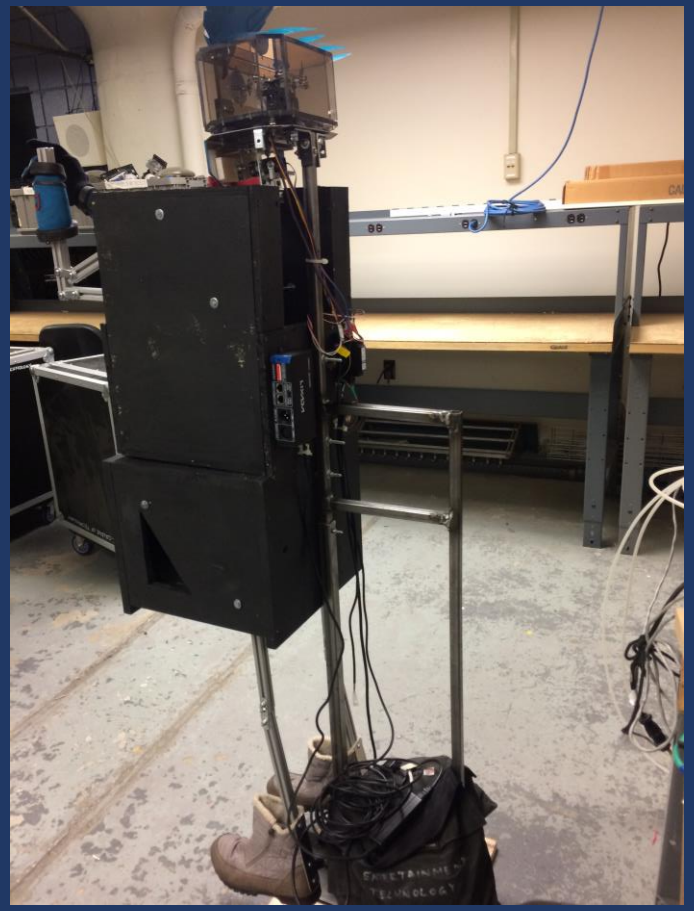

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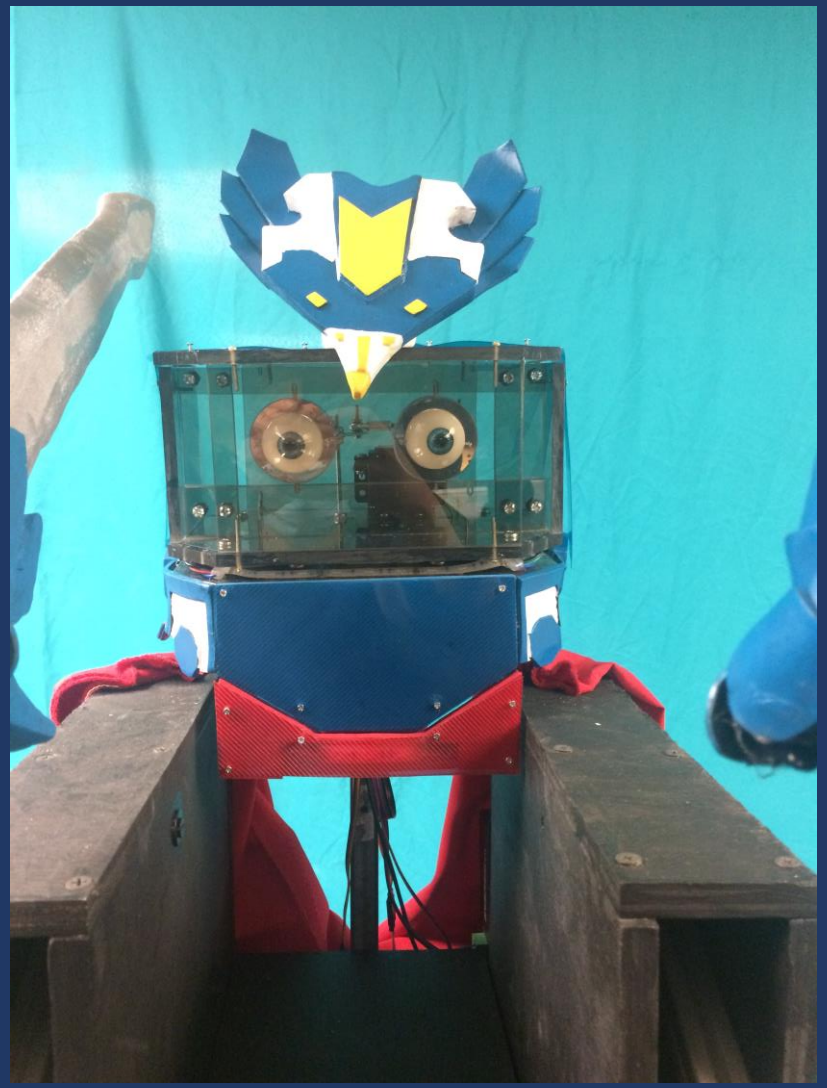

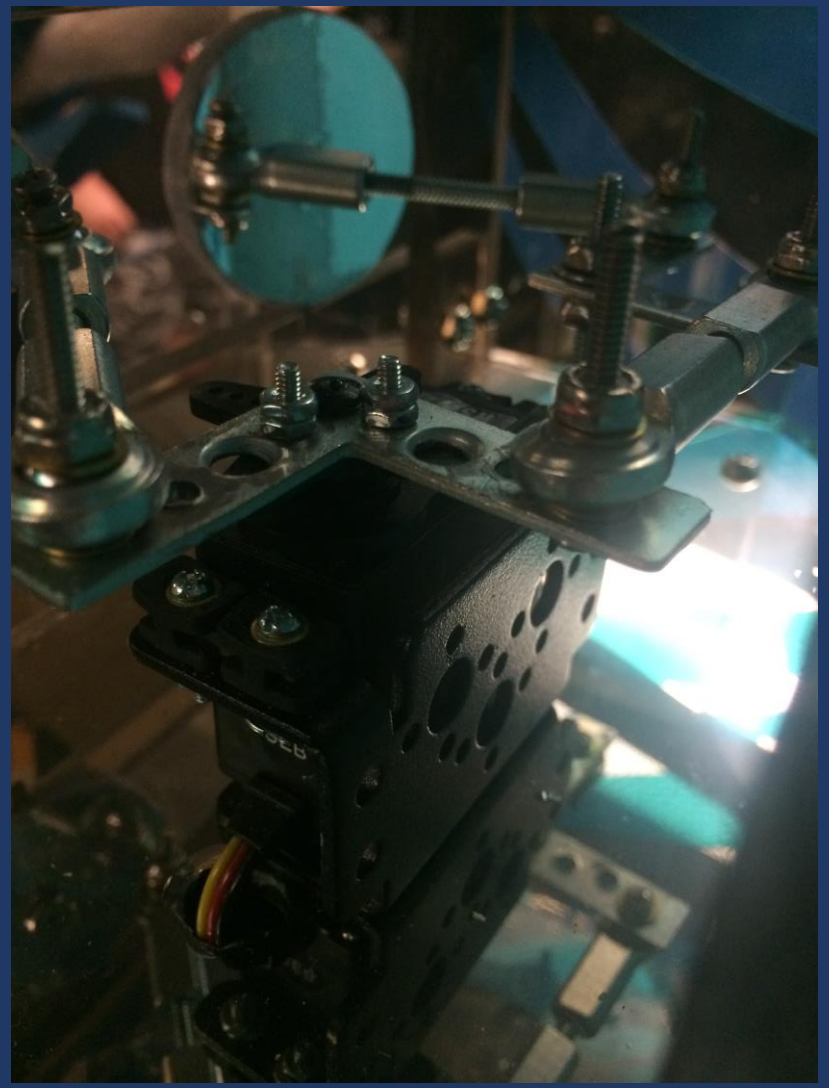

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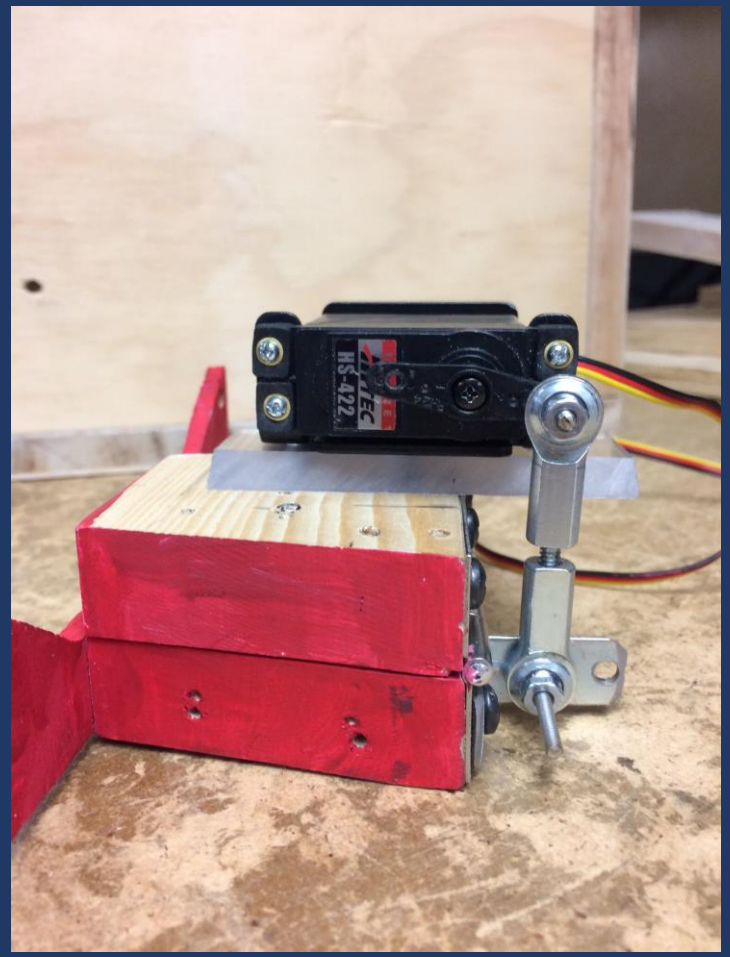

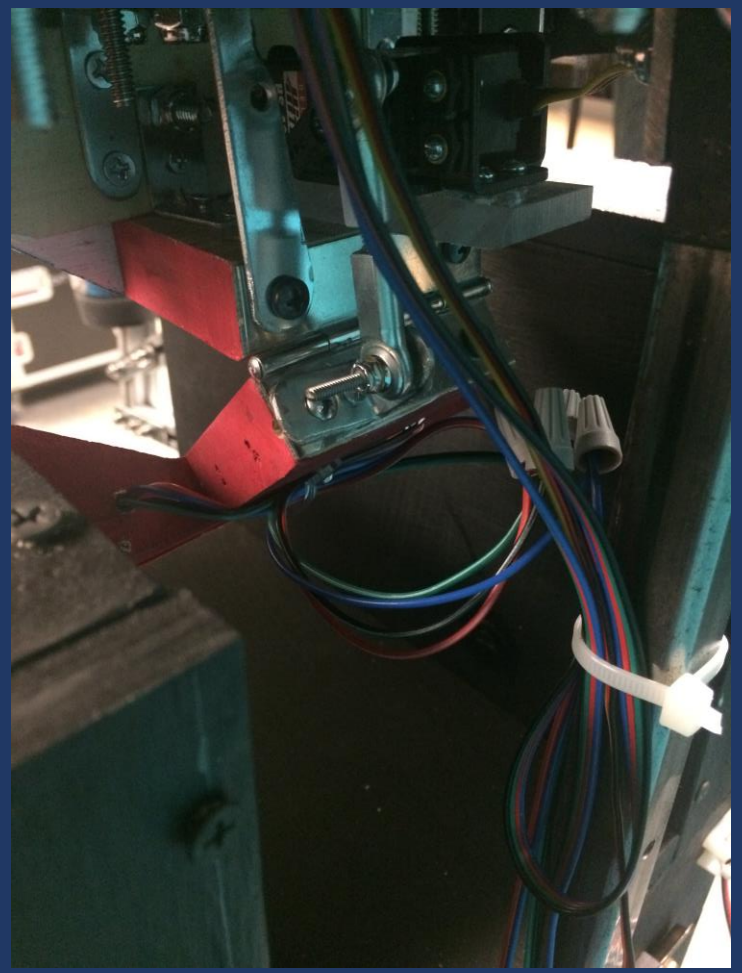

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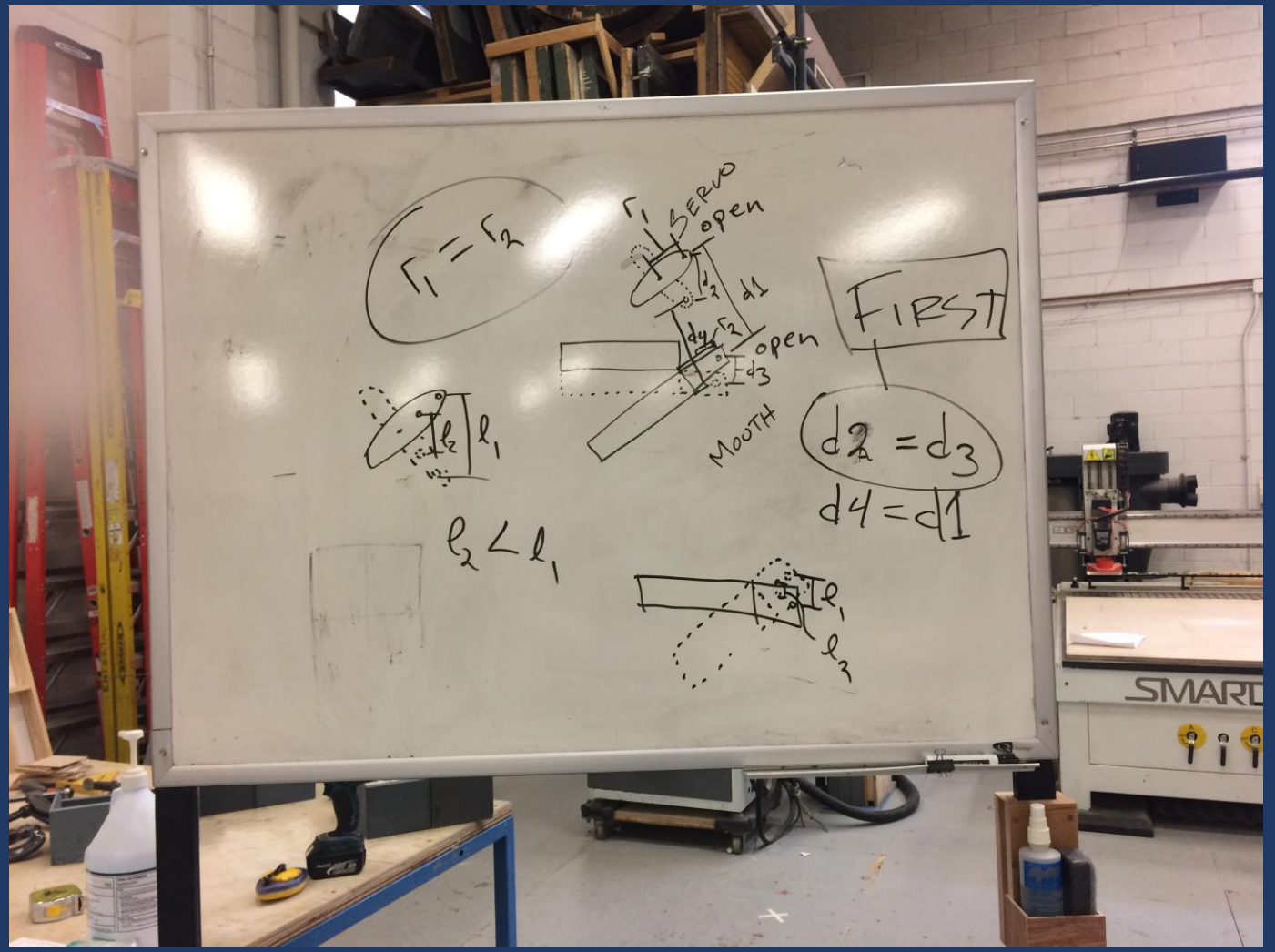

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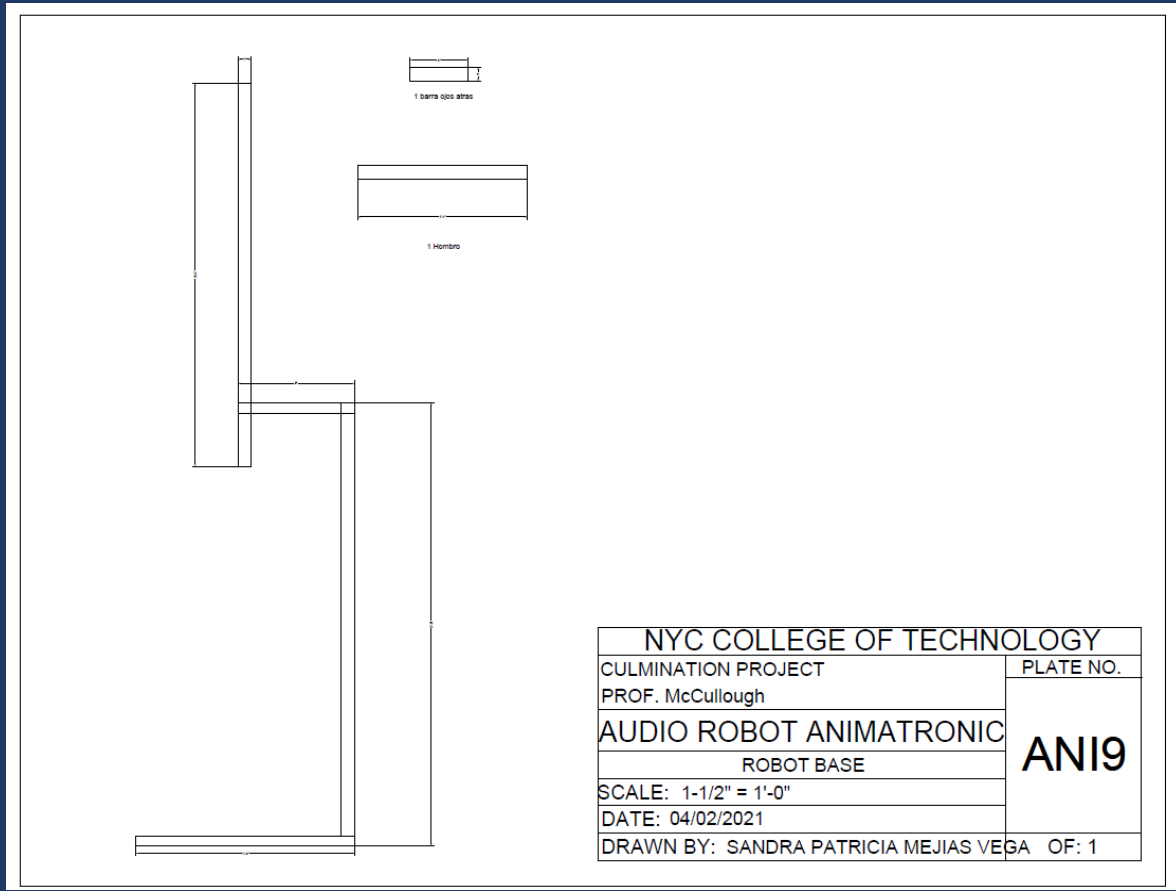

NYC COLLEGE OF TECHNOLOGY	
CULMINATION PROJECT	PLATE NO.
PROF. McCullough	ANI9
AUDIO ROBOT ANIMATRONIC	
ROBOT BASE	
SCALE: 1-1/2" = 1'-0"	
DATE: 04/02/2021	
DRAWN BY: SANDRA PATRICIA MEJIAS VEGA	OF: 1

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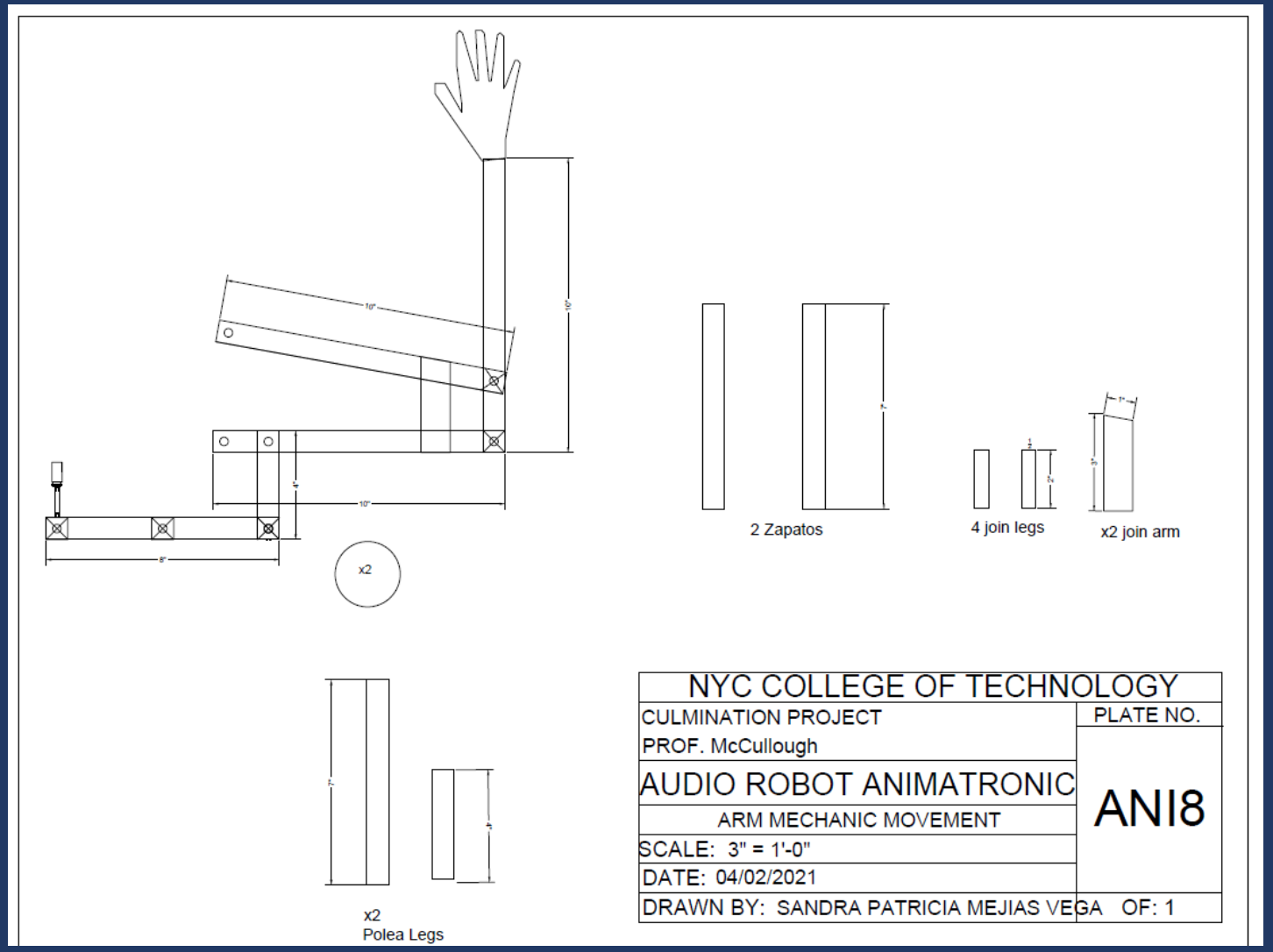

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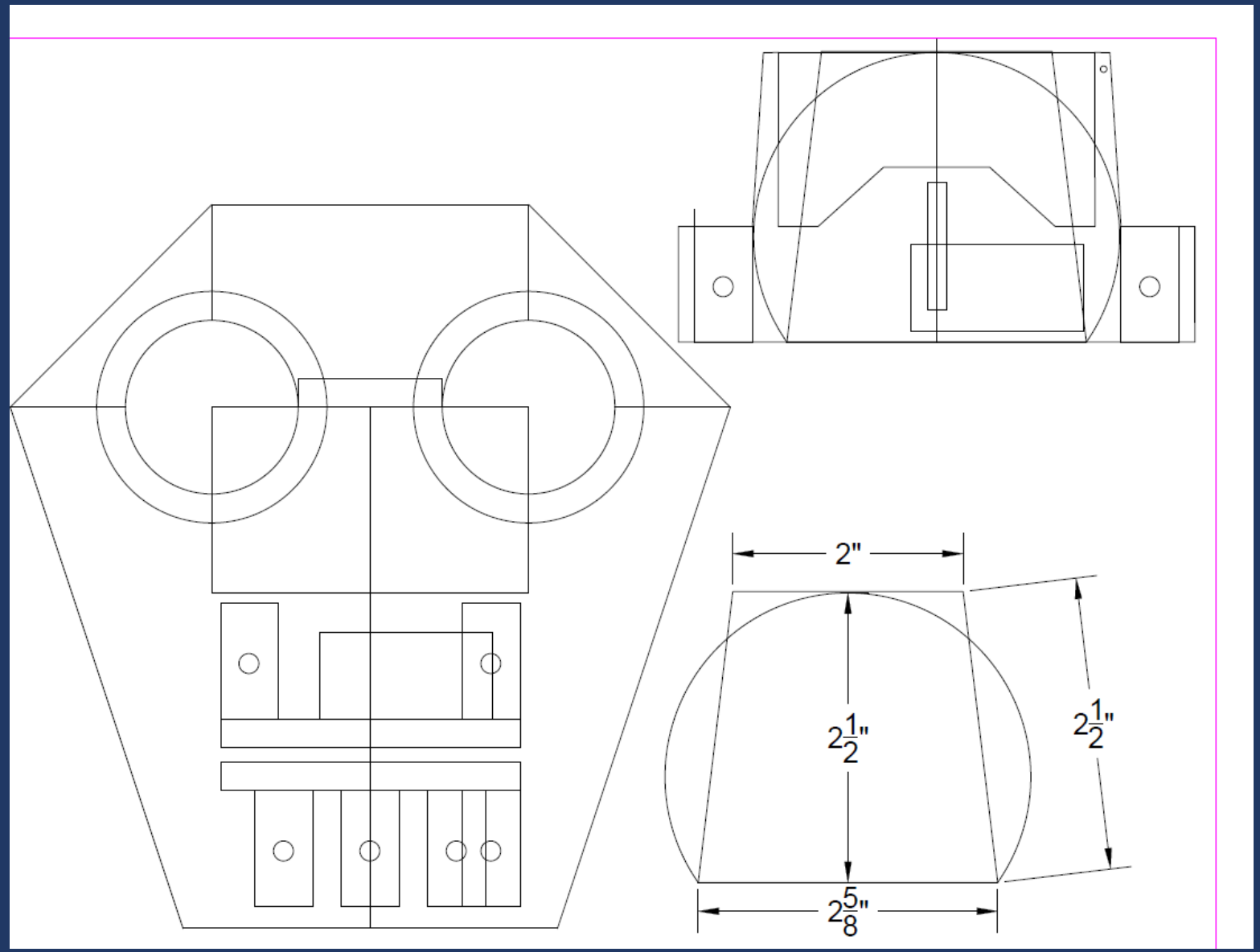

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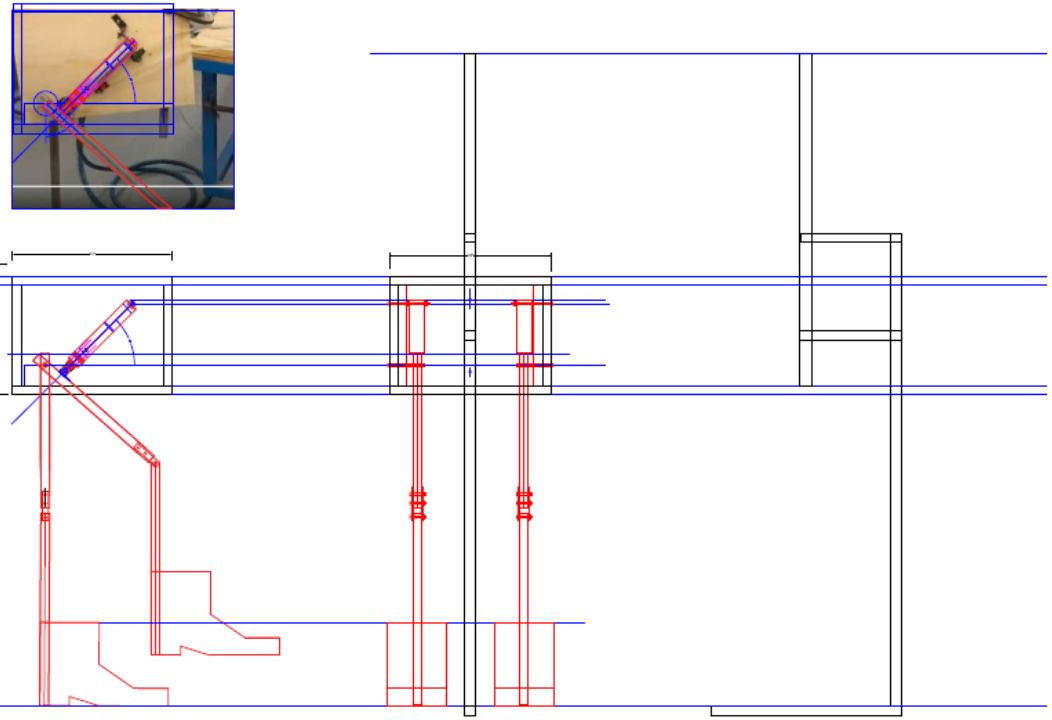

NYC COLLEGE OF TECHNOLOGY	
CULMINATION PROJECT	PLATE NO.
PROF. McCullough	
AUDIO ROBOT ANIMATRONIC	ANI8
ROBOT LEGS 1 - 2 IN CYLINDER	
SCALE: 1" = 1'-0"	
DATE: 04/02/2021	
DRAWN BY: SANDRA PATRICIA MEJIAS VEGA	OF: 1

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Mechanical, electronic custome materials			
Product	Quantity	Price	Total
Scene Shop available hours during this pandemic time.		From the school	
Tools that are in the scene shop like table saw, drill, etc.		From the school	
Wood		From the school	
Steel		From the school	
Bolts			
Nuts			
Speakers		From the school	
Two air cylinders (two inches stroke)		From the school	
Two Valves for air cylinders		From the school	
One air compressor		From the school	
DMX cable adapter from 3 pins to 5 pins		From the school	
DMX cable 5 pins		From the school	
Weigl unit		From the school	
Weigl procomander		From the school	
Two 12 VDC power supply		From the school	
Four 24 VDC ice cube control relay.		From the school	
Four socket mount for relay.		From the school	

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Product	Quantity	Price	Total
5VDC power supply	1	$ 30.00	$ 30.00
2 servo units	2	$ 12.49	$ 24.98
Electrical Actuator	1	$ 38.95	$ 38.95
Servo extension cables	1	$ 9.99	$ 9.99
Electronic cables for Ethernet connection	1	$ 10.59	$ 10.59
Computer	1	$ 762.11	$ 762.11
Printer	1	$ 54.43	$ 54.43
LED strip - 12 VDC	1	$ 13.99	$ 13.99
Decorder	1	$ 19.99	$ 19.99
Welding soldering iron	1	$ 20.97	$ 20.97
4 pin extension cable for LED strips	1	$ 9.97	$ 9.97
Solder wire	1	$ 20.40	$ 20.40
Hot glue gun	1	$ 3.00	$ 3.00
Acrylic glue	1	$ 20.00	$ 20.00
Eyes ball	1	$ 20.00	$ 20.00
Eyes mechanism	1	$ 152.98	$ 152.98
10mm EVA Foam for Shield and Sor	2	$ 14.99	$ 29.98
Low Density Eva Foam 2mm, 5mm, 10mm	4	$ 9.99	$ 39.96
High Density Eva Foam for prop making	1	$ 7.99	$ 7.99
Scissors	1	$ 2.00	$ 2.00
Box Cutter	1	$ 1.00	$ 1.00
Dremel	1	$ 21.37	$ 21.37
Sand paper	1	$ 1.00	$ 1.00
Sewing Machine	1	$ 5.99	$ 5.99
Airbrush	1	$ 15.99	$ 15.99
Safety Glass	1	$ 2.00	$ 2.00
Acrylic paints	5	$ 0.89	$ 4.45
Flexi Filler	1	$ 4.99	$ 4.99
Contact Cement glue	1	$ 13.00	$ 13.00
Primer paint - Plasti Dip	1	$ 4.95	$ 4.95
Totals			$ 1,367.02

Mr. J - Audio - Animatronic Robot

Sandra Patricia Mejias Vega
Department of Entertainment Technology

Project Description

Mr. J is an Audio – Animatronic Robot This is a soldier that is an interactive game for kids where kids will follow the robot movements.

Deliverables:

- Sound Animatronic Robot Soldier – Video of the show.
- Documentation of connecting sensors to the Weigl unit.
- Test program demonstrating Weigl video.
- Production Calendar
- Budget
- Drawings of building the mechanical structure.
- Photos during the construction of the animatronic robot.
- OpenLab Portfolio.

Methods

Story. To build the animatronic robot, I selected the story that is a song by Bear Hug Band named: Armor of God. So, The animatronic robot will follow this music game.

I build a steel structure that is the head and body of the robot. I designed the mechanical movements of the robot. It has five mechanical areas that allow the movement of eyes (left and right direction), mouth, one arm (up and down direction), and two legs (Up and down direction) of the animatronic robot.

Working Areas

Mechanical area. I researched mechanical movements. I made sketches of the robot and mechanical movements.

Electronic area. To connect servos, electrical actuator, two air cylinder, speakers, to the Weigl unit.

Lighting area. To connect LED lights with a decorder and connect it to the Weigl unit.

Props area. Design the robot costumes with EVA foam and fabrics.

Budget

The Entertainment Technology Department provided Weigl unit and software, wood, steel, tools, power supply, etc.

I budget

$1,367.02 for servos, electrical actuator, computer, printer, costume, etc.

Acknowledgements

- City Tech Entertainment Technology Department
- Technical Advisor / mechanical area: Professor John McCullough
- Electronics area. Professor John Huntington
- Scene Shop. Professor Rudy Guerrero
- CLT crew team

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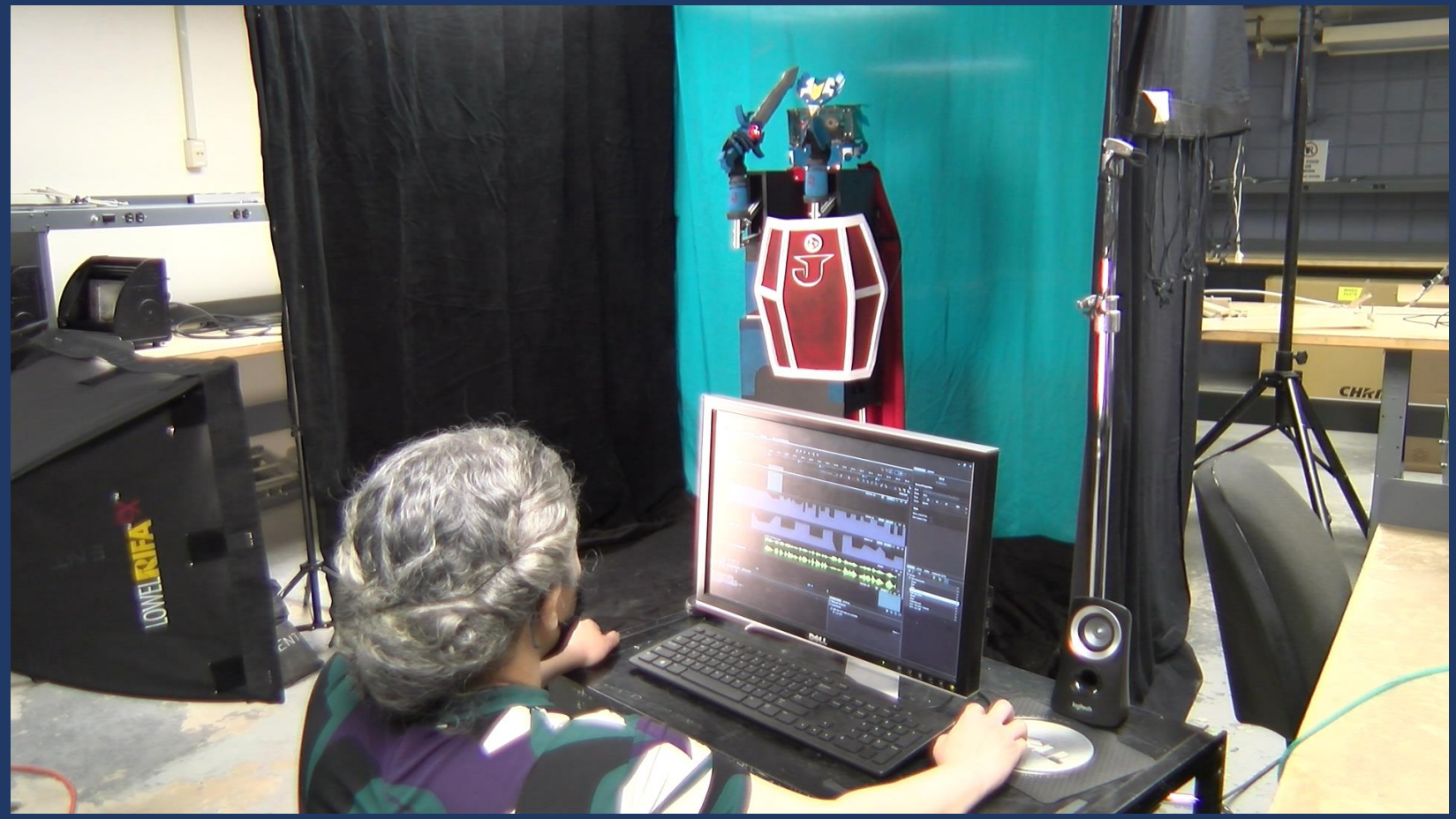

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