

Dynamic Balance Device

Date: 03/01/2026 - 03/07/2026

Client: Mr. Daniel Kutschera

Advisor: Professor Monica Ohnsorg

Team:

Kat Sattel - Team Leader (sattel@wisc.edu)

Therese Kalt- Communicator (tkalt@wisc.edu)

Noor Awad - BSAC (nawad2@wisc.edu)

Freyja Heggeland - BWIG/BPAG (heggeland@wisc.edu)

Problem statement: Patients that have suffered strokes have a 25-30% rate of developing spatial neglect syndrome. Symptoms of spatial neglect syndrome include loss of awareness of the body in space. Our client, Dr. Kutschera, a physical therapist, helps patients to regain strength and balance following a stroke. The client seeks to develop a device that can be used to improve visual scanning and balance training that is an update from the previous yard-stick design. The device should be mutli-functional so as to help patients with varying degrees of need and be effective in the rehabilitation treatment.

Brief status update: This week, the team created a list of materials for the client to order, met with the client, and improved previous CAD sketches.

Difficulties / advice requests: None to report

Current design:

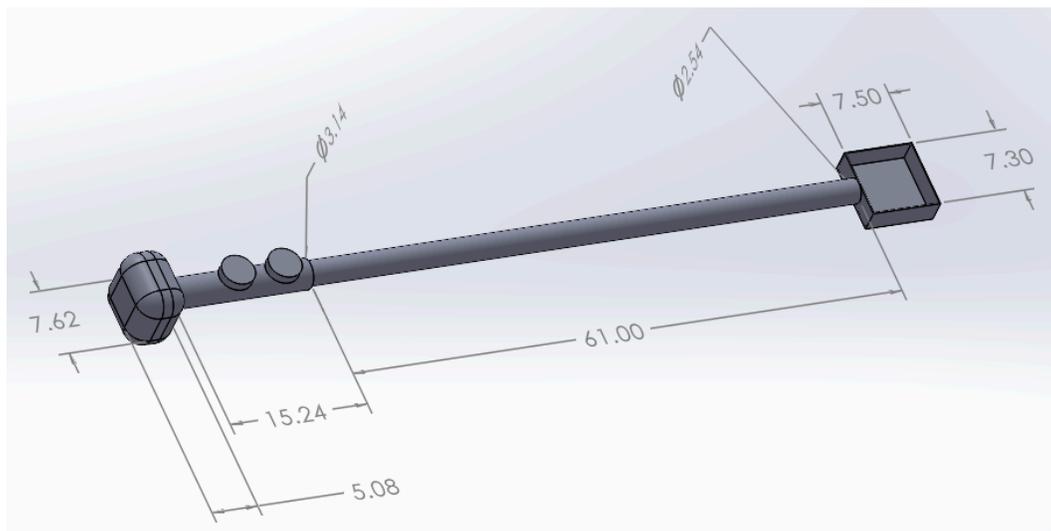


Figure 1: Dimensioned CAD drawing of current design

Materials and expenses

None to report, see table below:

Item	Description	Manufacturer	Mft Pt#	Vendor	Vendor Cat#	Date	#	Cost Each	Total	Link
Category 1										
									\$0.00	
									\$0.00	
Category 2										
									\$0.00	
									\$0.00	
								TOTAL:	\$0.00	

Major team goals for the next week

1. Update CAD with changes suggested by client
2. Once materials arrive, begin assembling circuitry
3. Finalize testing protocols

Next week's individual goals

- Kat Sattel
 - Assemble circuitry
 - Finish writing testing protocols
- Therese Kalt
 - Update CAD by making both individual components
 - Begin assembling circuitry
- Noor Awad
 - Assemble circuitry
 - Ensure materials are ordered
- Freyja Heggeland
 - Order materials
 - Begin drafting physical prototypes with cheaper materials

Timeline

Task	Week				Week					Week				Week	
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
Project R&D															
Empathize	X														
Background...	X	X	X	X	X	X									
Prototyping						X									
Testings															
Deliverables															

Progress Reports	X	X	X	X	X	X									
Prelim presentation				X											
Final Poster															
Meetings															
Client		X		X		X									
Advisor	X	X	X	X	X	X									
Website															
Update	X	X	X	X	X	X									

Filled boxes = projected timeline

X = task was worked on or completed

Previous week’s goals and accomplishments

- Kat Sattel
 - Researched display and speaker options
 - Created Fritzing diagram
 - Created “materials to be ordered” document to ease communication with client
- Therese Kalt
 - Researched filaments for the 3D printed parts
 - Met with client to discuss next steps
- Noor Awad
 - Researched sensor options
 - Met with client
- Freyja Heggeland
 - Researched appropriate material options
 - Assisted in compiling list of materials
 - Met with client

Activities

Name	Date	Activity	Time (h)	Week Total (h)	Sem. Total (h)
Kat Sattel	3/1/2026	- Researched displays and speakers	1	5	25
	3/4/2026	- Created Fritzing diagram - Compiled materials to order - Met with client	2 1 1		
Therese Kalt	3/4/2026	- Met with client	1	2	21
		- Researched filaments for 3D printed parts	1		
Noor Awad	3/4/2026	- Researched sensors	2	3	18

		- Met with client	1		
Freyja Heggeland	3/4/2026	- Carbon fiber weave research and organizing materials order with the rest of the team	2	2	26