Lochlin Recht

Industrial

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Design

in

Portfolio

About Me

Originally from Camden Maine, Lochlin found his passion for design and business watching his parents found their own companies. As he explored beyond his close knit community, he discovered that many of the world's problems could be solved through thoughtful innovation in the products that surround us.

Education

SAVANNAH COLLEGE OF ART & DESIGN
Savannah, GA / Graduating Spring 2026
Bachelors of Industrial Design, Service Design

UNIVERSITY OF SOUTHERN MAINE
Portland, ME / Enrolled 2020-2023
Pursued Business & Entrepreneurial Studies

MID-COAST SCHOOL OF TECHNOLOGY
Rockland, ME / 2017-2018
Studied Marine Technologies & 3D Design

With a focus on Mobility, Emerging Technologies, & Sustainability.
I specialize in new product ideation & leading teams through problem identification all the way to design implementation.

Experience

POOL PROTECTION TECHNOLOGIES, Green Startup
Savannah, GA / Sept. 2024 - Present
Internship

- Contributing to the design of innovative, eco-friendly pool maintenance technology through hands-on product development and the creation of impactful marketing strategies. Generating & rendering high-quality 3D CAD models.
- Offered design based insights to re-evaluate touchpoints on the ultrasonic device, improving quality, and increasing sales.
- Assisted in the development of compelling ad campaigns to effectively promote the company's sustainable ultrasonic algae elimination technology.

NORTH ATLANTIC GYMNASTICS ACADEMY
Rockport, ME / Feb. 2016 - Aug. 2024
Gym & Camp Manager / Team Coach

- Managed procurement for the gymnasium facility, providing quality and cost-efficient supplies, ensuing day-to-day business activities ran proficiently
- Led B2B vendor communications, undergoing sourcing negotiations and agreements, administrating sourcing contracts with chosen vendors

EASY ERRANDS DELIVERY
Rockport, ME / 2020-2021
Founder & Owner

- Provided crucial support to the local community by founding and managing a successful business during the COVID-19 pandemic, providing essential & accessible services such as food & prescription delivery, property transport, & pet care, promoting health & safety during a time of critical need
- Demonstrated entrepreneurial initiative by building the business from the ground up, including website development, print & digital marketing strategy execution, graphic design, & financial management

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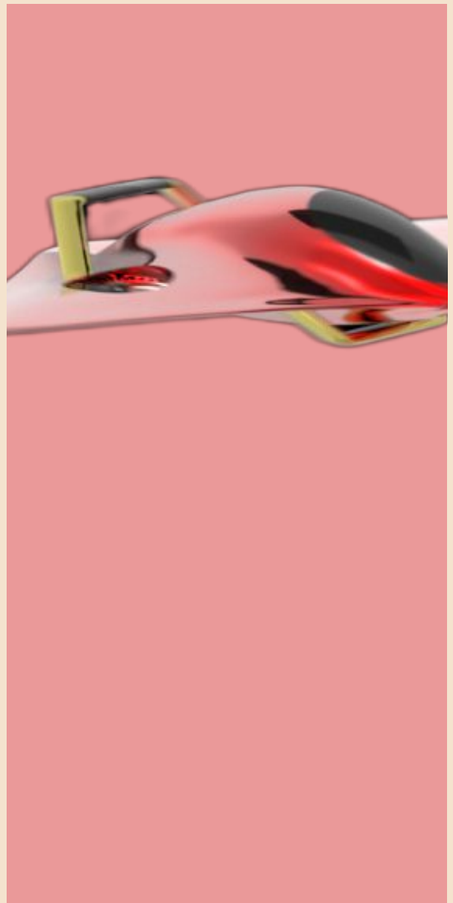
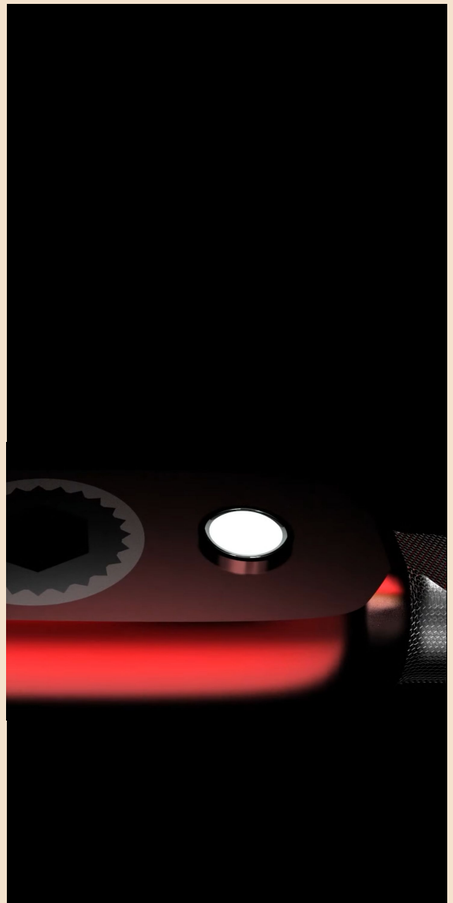
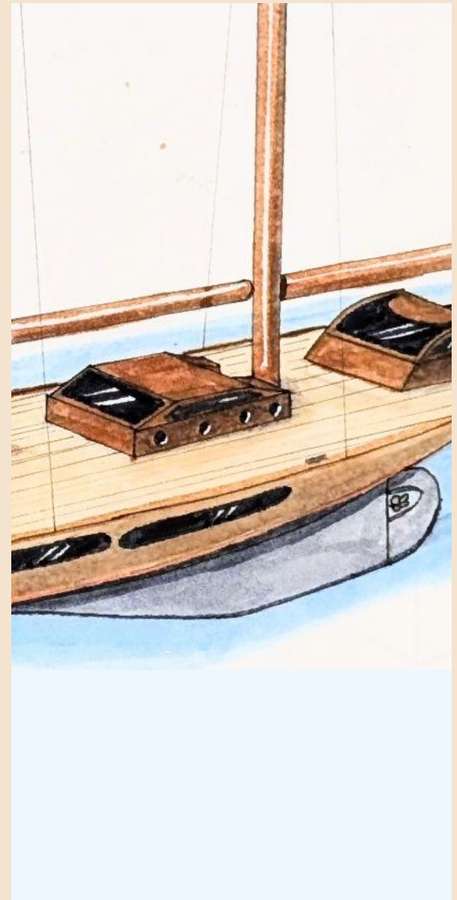
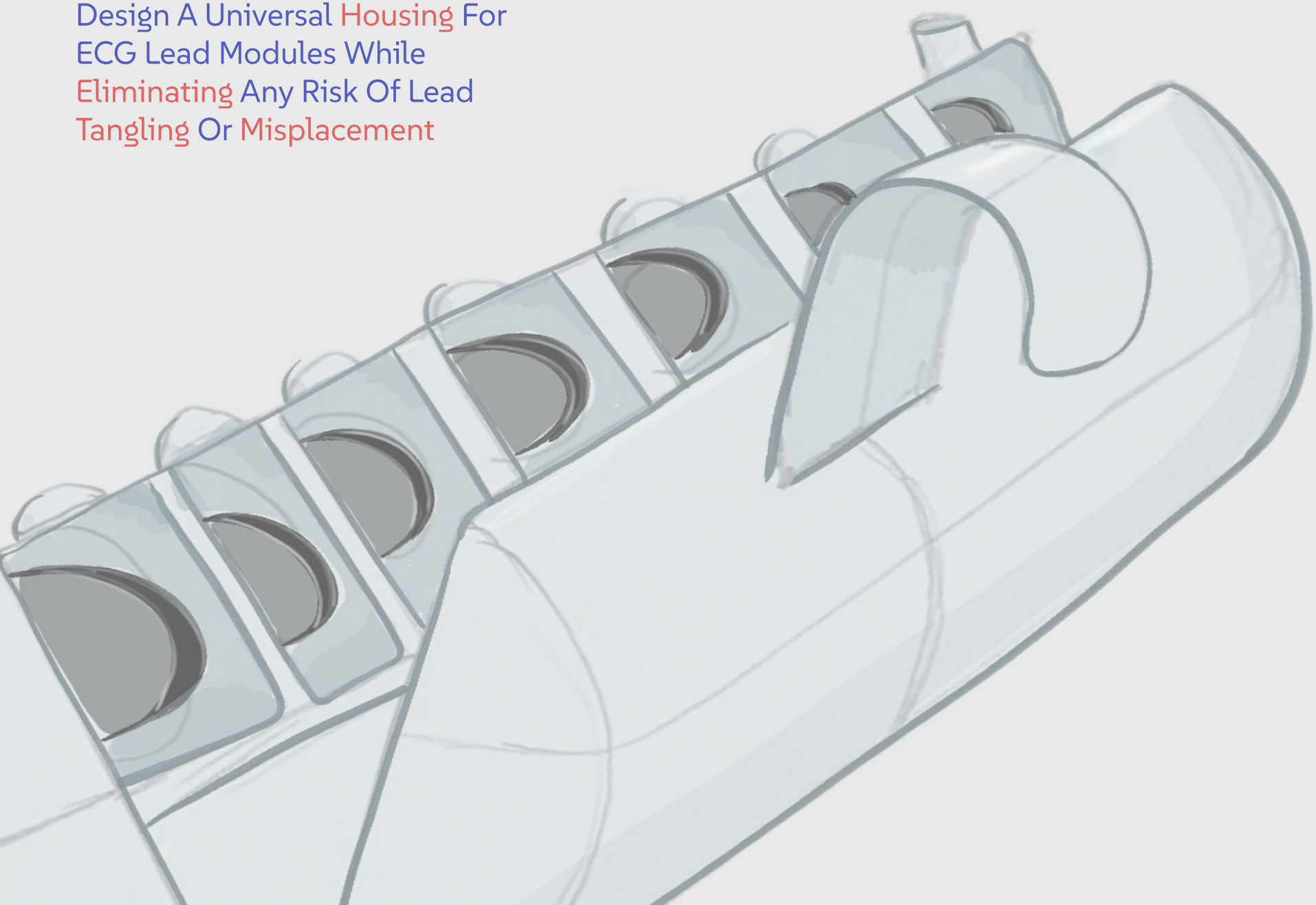






Taking The Tangle Out Of ECGs

Design A Universal Housing For ECG Lead Modules While Eliminating Any Risk Of Lead Tangling Or Misplacement



Healthcare professionals need to move quickly around hospitals. There is no time for organizing cables when a life is on the line. ECGs Have Cables.

Task Analysis

1: Lead locations must be checked & prepped

2: Conductive stickers are placed

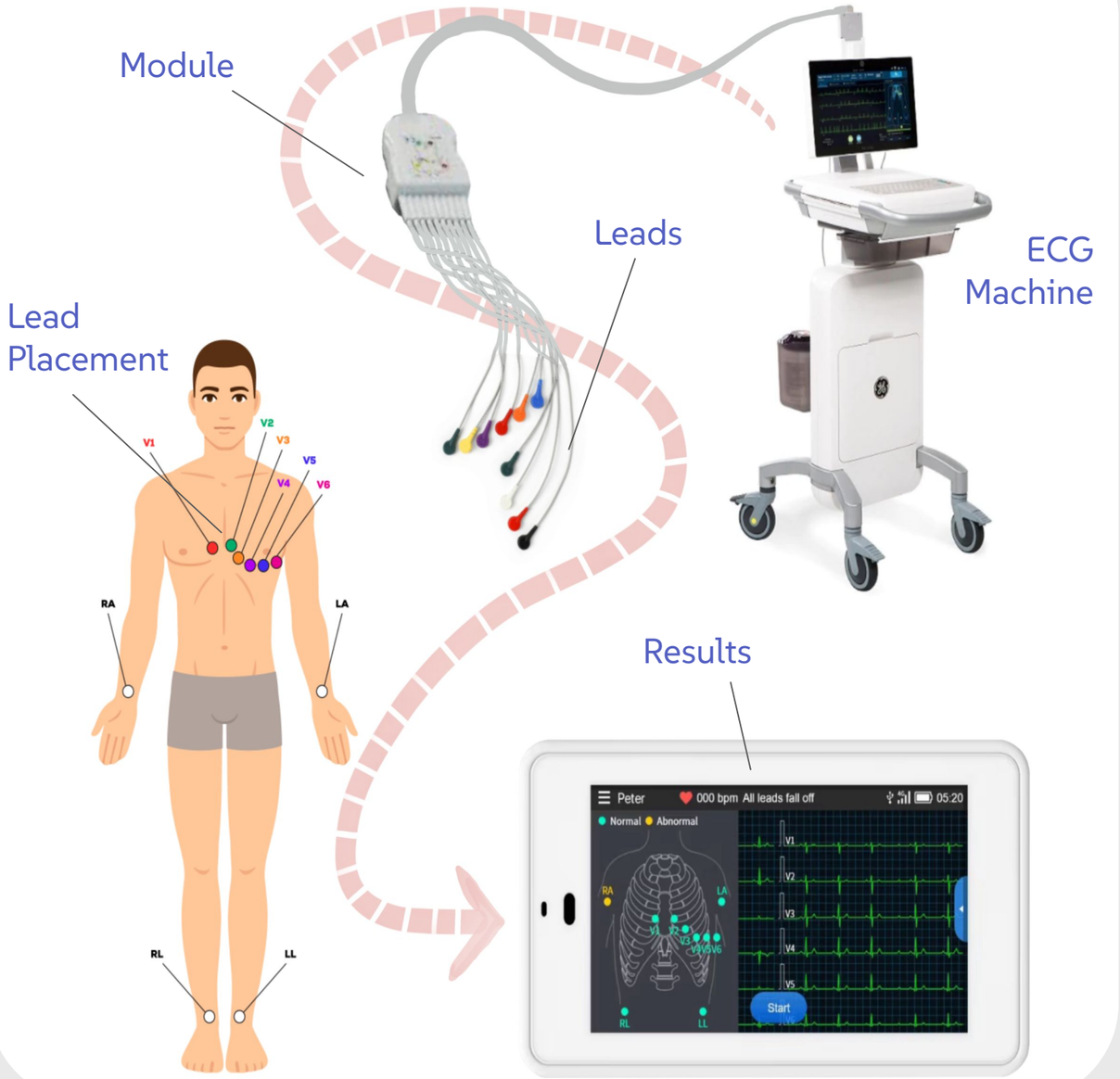
3: Color coded leads are sorted & connected to stickers

4: Patients stay still as professionals start ECG machine

5: Heart Activity Is recorded & Leads Are Removed

6: Leads are clumped together and tossed in a pile for quick cleanup

What Are ECGs



- ECGs are used to rule out or corroborate evidence of heart related issues in a patient.
- ECGs work by reading electrical signals produced by the heart at different points on the body to map regular or irregular activity.
- Leads of an ECG are cables connected to specific points on the body to create complete circuits. These locations include: Shoulders/forearm, lower extremities (calf/shin/ foot), & six leads spread across rib cage.

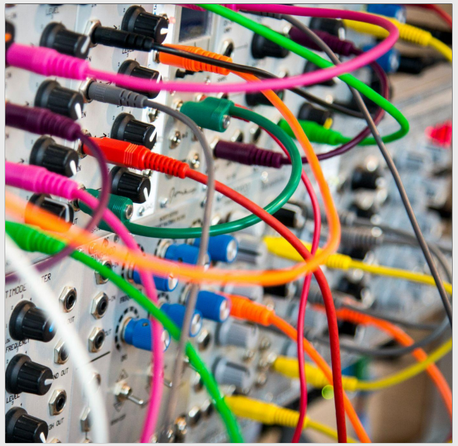
Demographics

Healthcare
Professionals

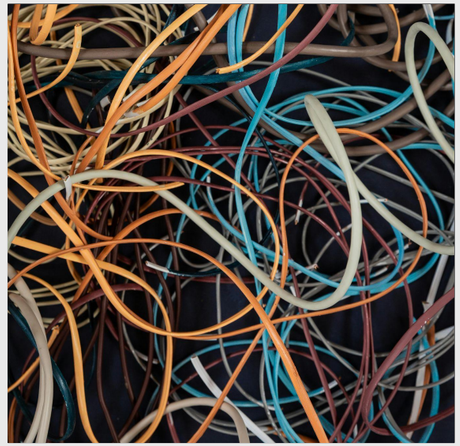
In Hospitals
& Doctors Offices

All Around
The World

ECG Pain Points



Each lead is location specific and difficult to identify



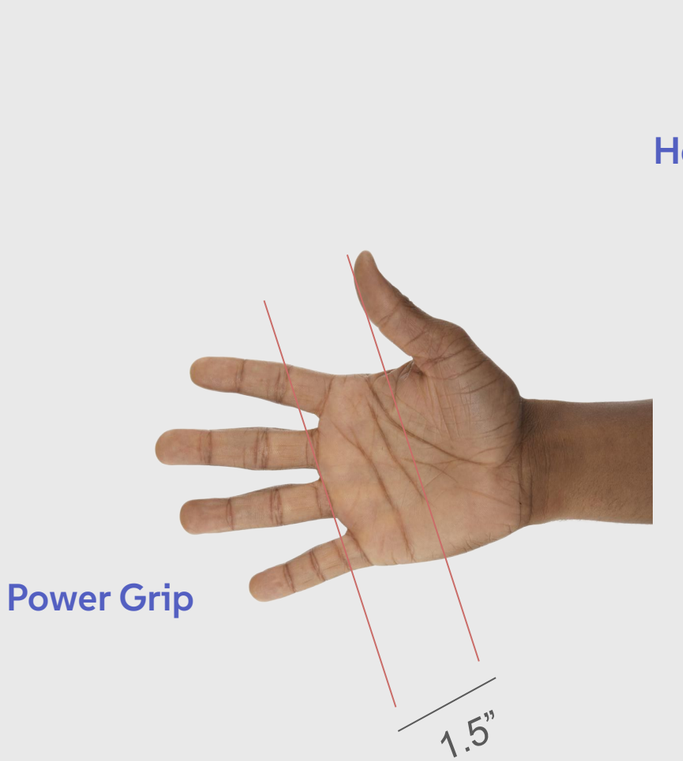
Due to tangling, leads can be too short to reach contact points

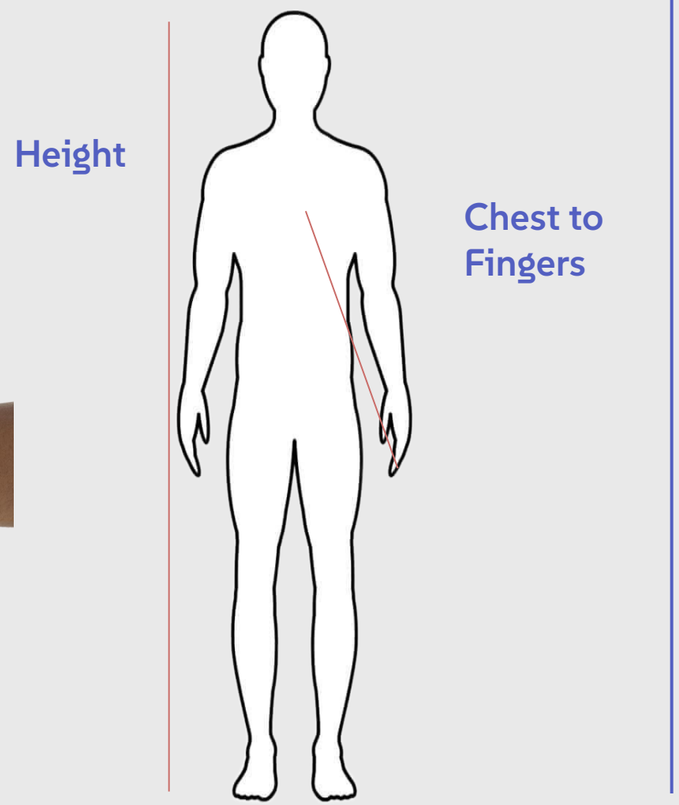
Sweat build up over time can cause weak signals

ECG machines are limited, can require waiting or running around to find one

Anthropometrics

Men	Height	163.8 cm	188.4 cm
Women	Height	152.2 cm	172.4 cm
Men	Chest Center to fingertips	82.4 cm	92.7 cm
Women	Chest Center to fingertips	76.6 cm	84.7 cm





Key Insights

Solutions Needed

- ECG leads/cables are easily tangled
- Sweat can weaken signal over time
- Inexperienced healthcare professionals can get confused by which lead goes where

User Emotional Needs

- Confident, in control

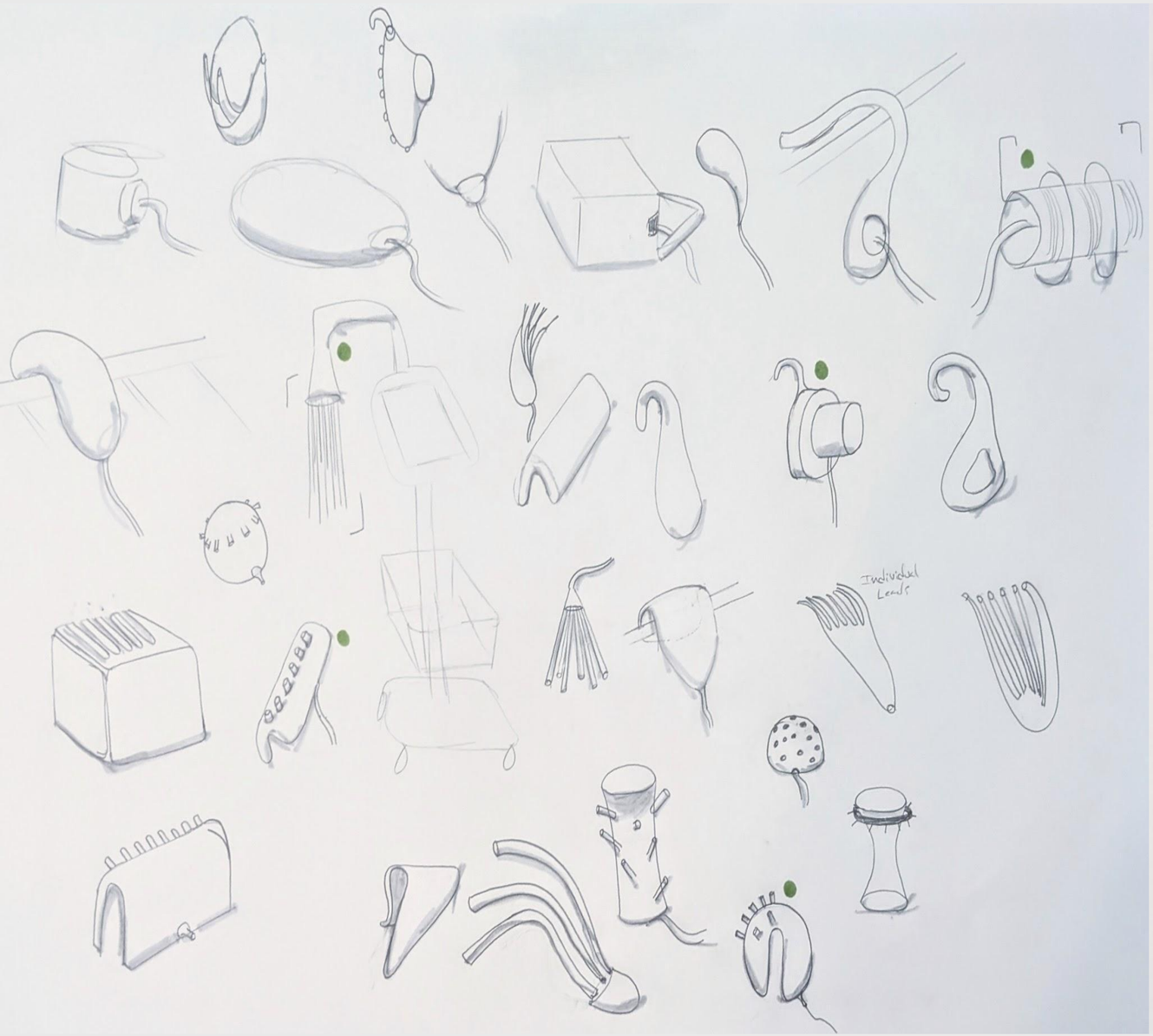
Design Guides

- Lightweight
- Simplicity
- Low cost
- Intuitive

What features must be included

- Grippy handle
- Tensioned spool for compact lead storage
- Separated lead ports / pull locations
- Hook for hanging on side of ECG machine or bed
- Minimal parts to reduce possible malfunction

Initial Sketches



Radar Diagrams

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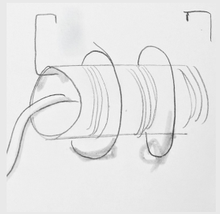

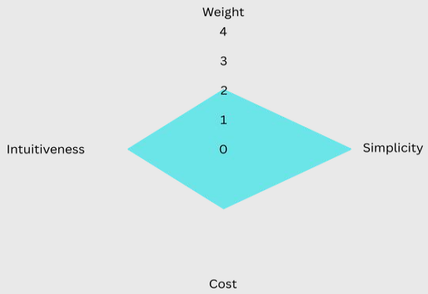

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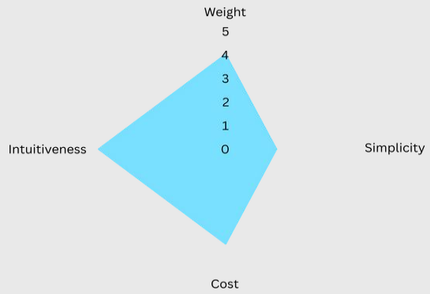

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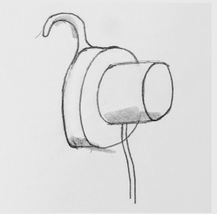

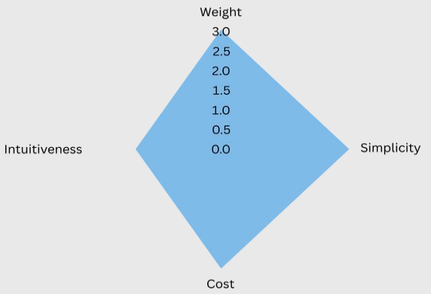

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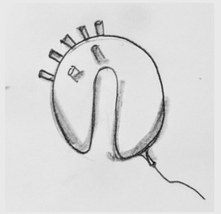

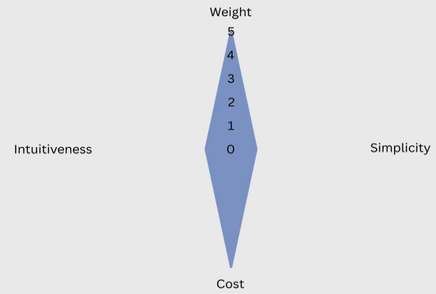

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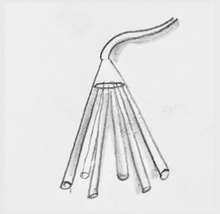

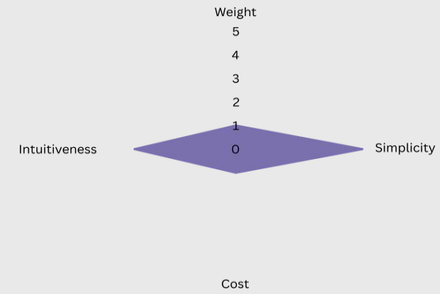

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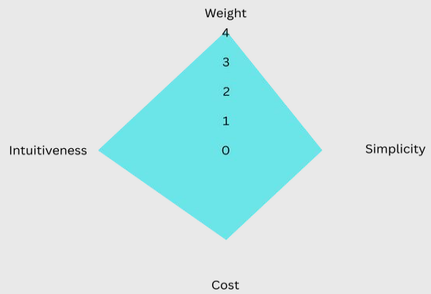

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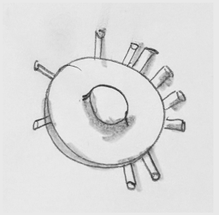

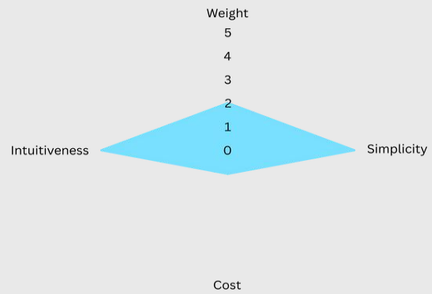

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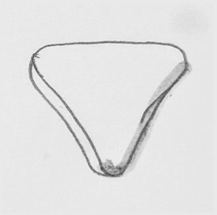

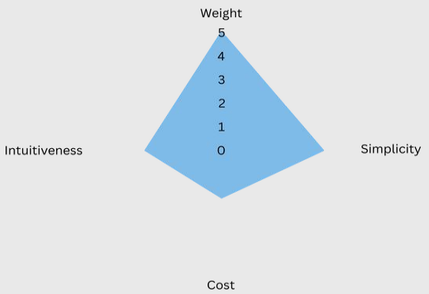

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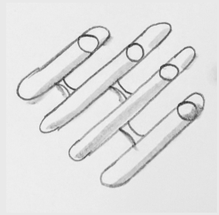

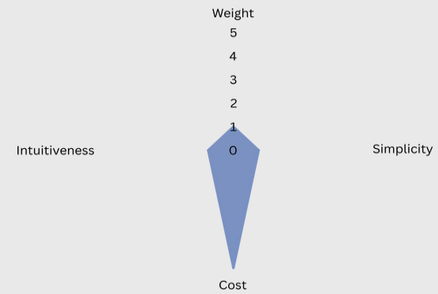

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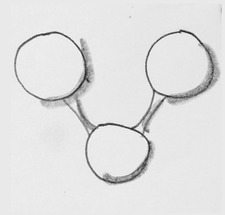
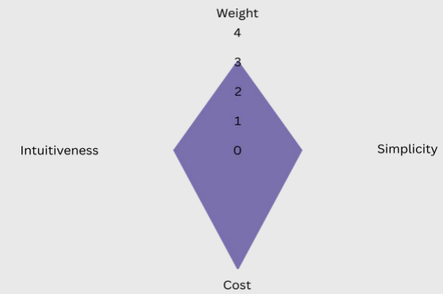
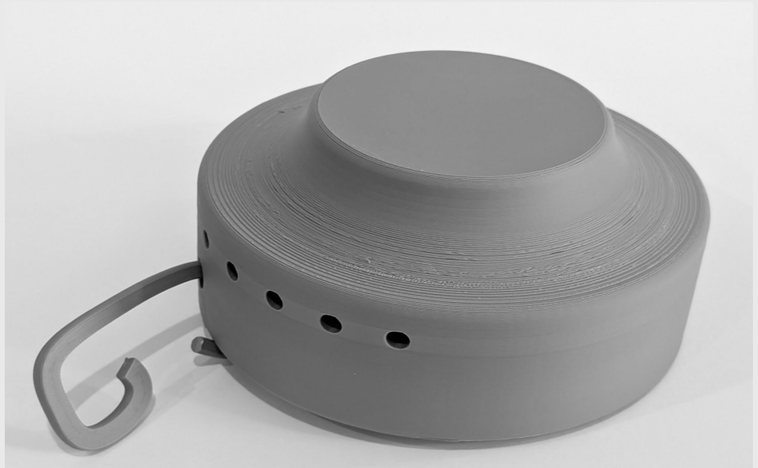




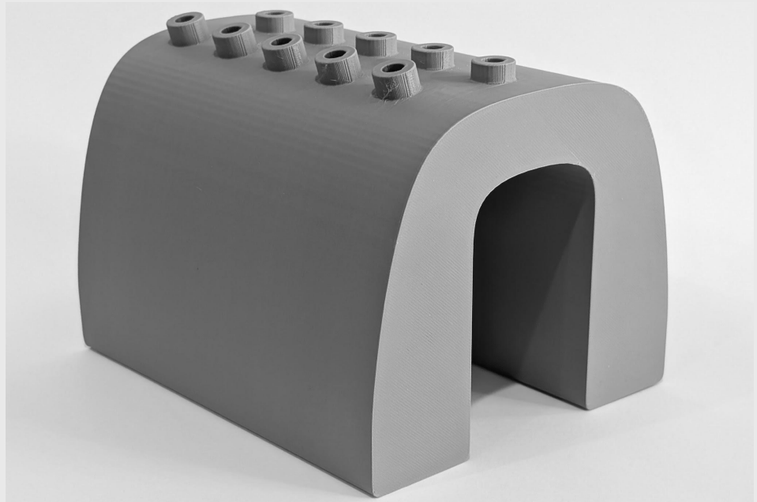
Prototyping - Round 1



Likes: Portable, hook is practical

Dislikes: Too large, hook not cohesive

Insights: People felt that this was the most effective design, but a little too big simple.



Likes: Non-invasive, thick sides feel sturdy

Dislikes: Sharp edges, thick sides

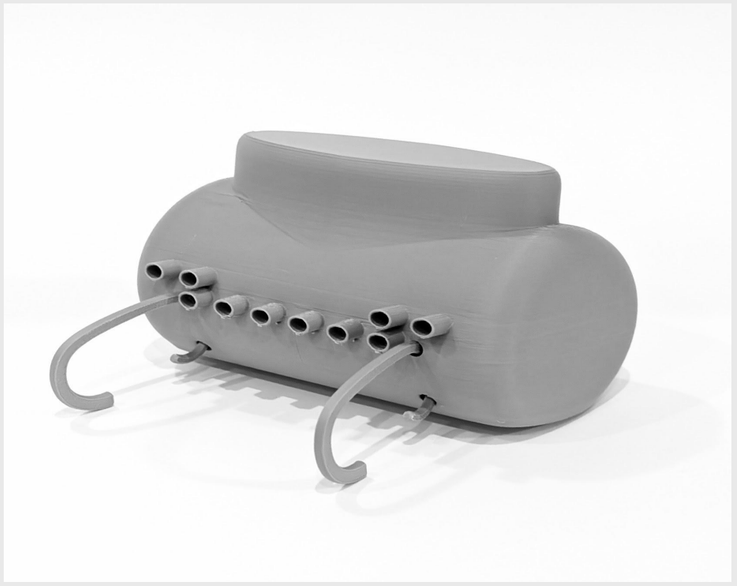
Insights: This design was most easy to understand, but it was less useful due to requiring a bed railing.

Likes: Smooth, organic

Dislikes: Asymmetrical contact points, difficult to hold left vs right handed

Insights: The organic shape was preferred, but users felt uncomfortable by the idea of the device being placed on them.

Prototyping - Round 2



Likes: Intuitive, extruded leads

Dislikes: Module housing bump stands out too much and placement feels random, hooks are flimsy

Insights: Intuitive design, users felt this was the most realistic model. Users wanted some leads grouped in one port (arms & legs).

Likes: Minimalist, Compact, Many use cases

Dislikes: Lead ports flush with body are less intuitive

Insights: Users liked multiple hanging points, but wanted a more sturdy hanger. This design was the least controversial and incites a feeling of stability.

Likes: Organic & slim profile

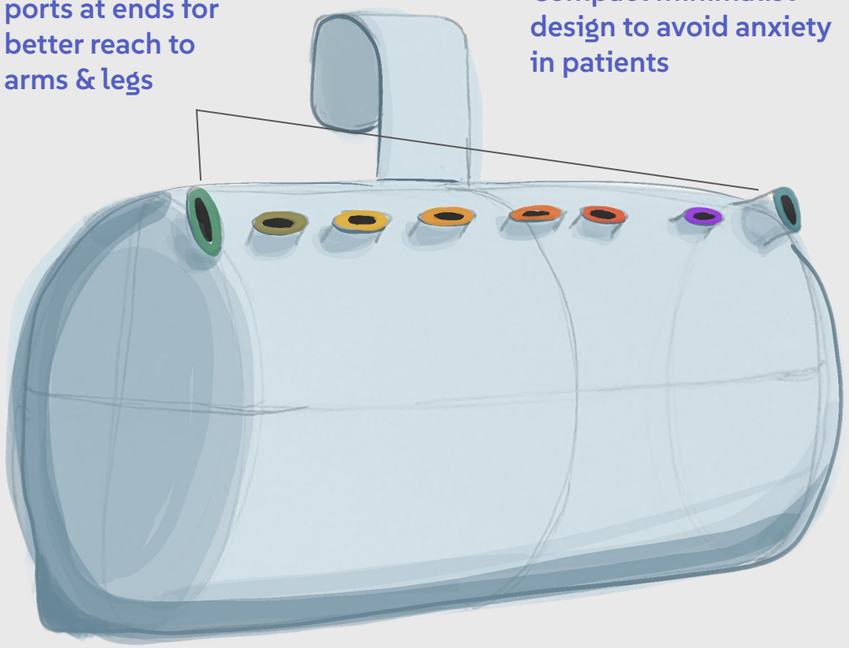
Dislikes: The shape felt random, not enough space for module housing

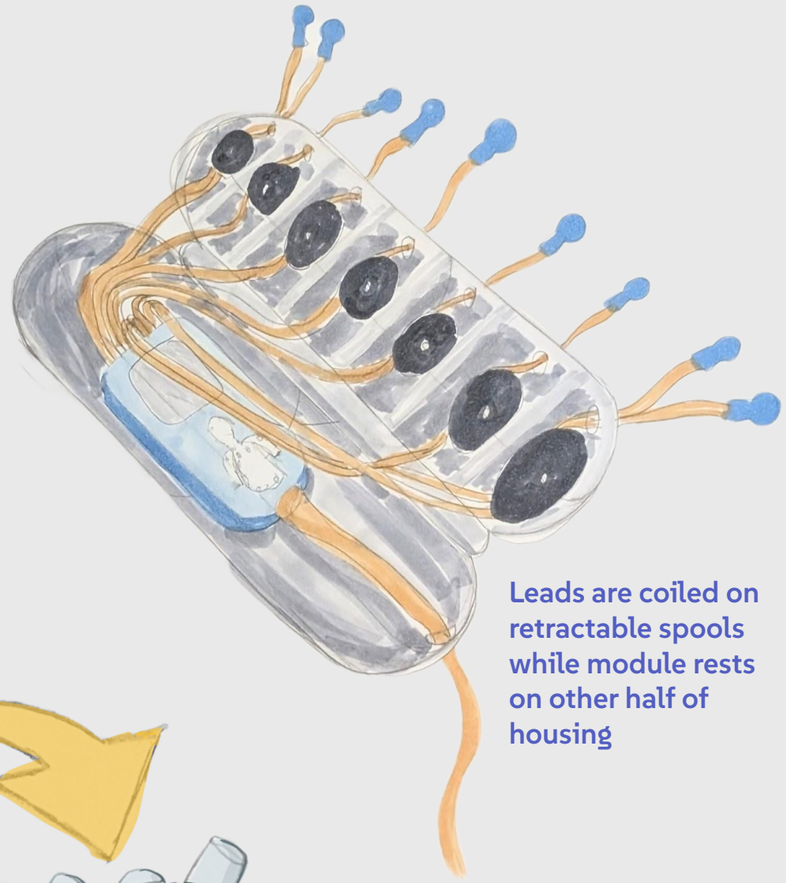
Insights: Users felt that the form of this design didn't instil enough confidence for the medical field. It felt too much like a toy. The built in hook would feel more intentional.

Refined Sketches

Larger angled ports at ends for better reach to arms & legs

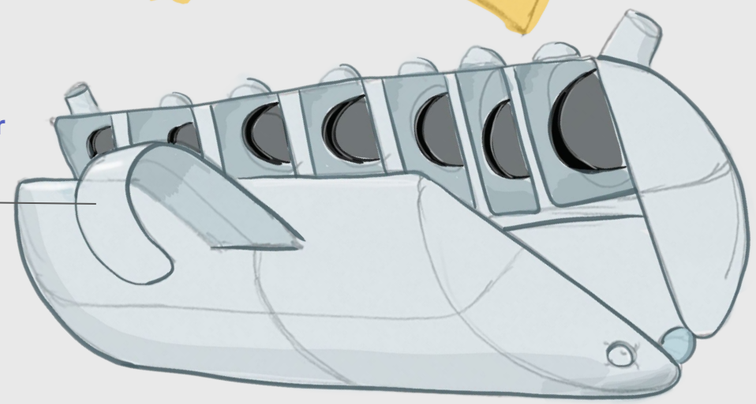
Compact minimalist design to avoid anxiety in patients



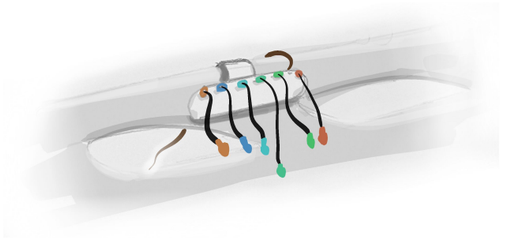


Leads are coiled on retractable spools while module rests on other half of housing

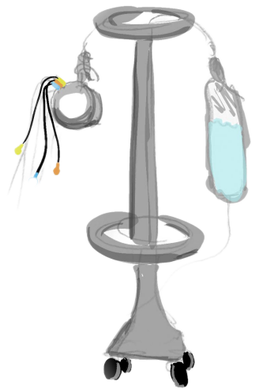
Built in hook for storage and versatility



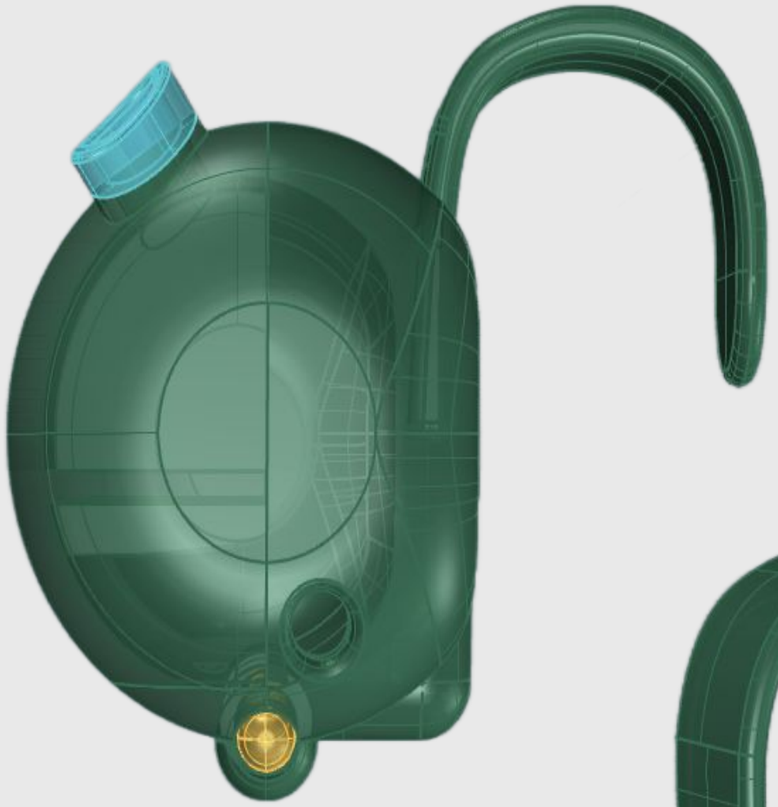
Color Coded Ports For Clarity

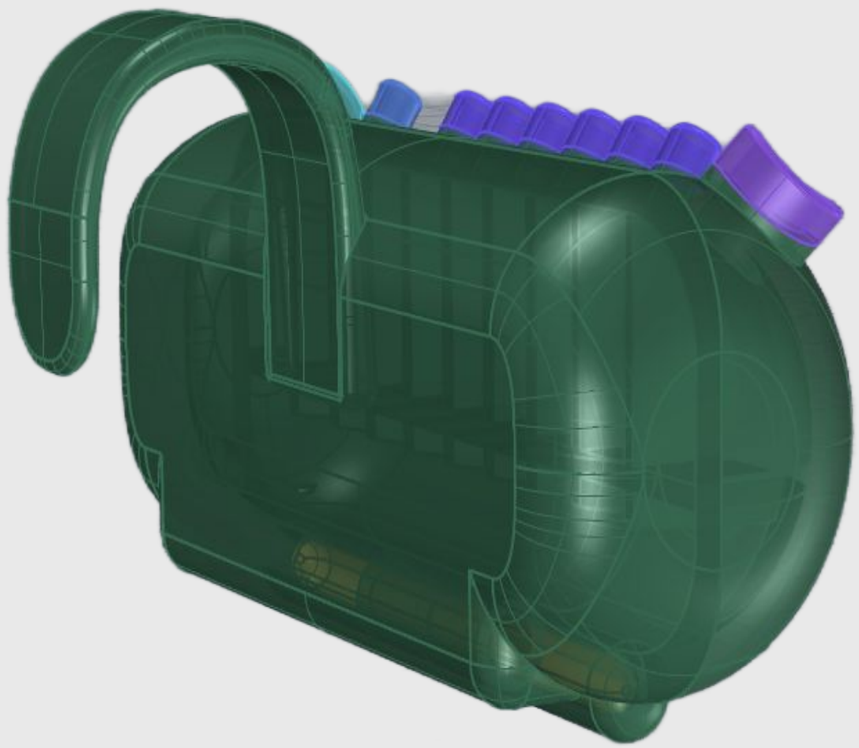


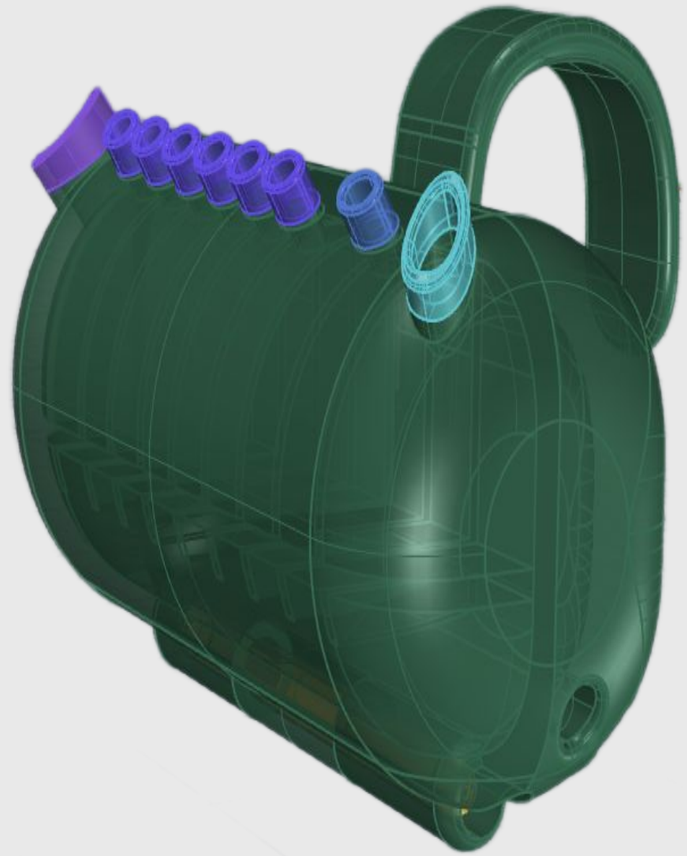
Can Be Hung On Bed Or IV



Final Design







Innovating The Bona Mop

Introduction & Project Goal

Since its inception in 1919, Bona has worked relentlessly to honor its Swedish Heritage and core values. This means a continued emphasis on sustainable practices, dedication to premium quality, and a focus on innovation and improvement.

Goal:

Test current Bona Mop with **real world users.**

Collect data and discover the **emotional needs** that must be met through the mops design.

Ideate easy to implement **design improvements** for the current Bona Mop.

Data Collection Strategy

INTERVIEWEE 1
Female
50 years old
Mother & Business Owner

INTERVIEWEE 2
Male
18 years old
College Student

INTERVIEWEE 3
Female
20 years old
College Student

INTERVIEWEE 4
Female
22 years old
College Student

PHASE 1
Record transcriptions of interviews with subject.
Finding out what it is that they are currently doing in terms of their cleaning routine, get a sense of their current cleaning experience.

PHASE 2
The “ideal” cleaning experience.
Finding out their dream and ideal experience;
Emotions > Situations > Incarnate.

PHASE 3
Follow-up interview.
How did it match their “ideal” cleaning experience?
Figure out how it differs to their “ideal” experience.

PHASE 4
Conclude the interview.
Show images and possible features that can bring this mop closer to the ideal experience. Include images of the subjects.

Interview Results

INTERVIEWEE 1

The primary appeal of this mop for Interviewee 1 was its environmental benefits. She values sustainability and appreciated the reusable solution and washable fabric. Interviewee 1 also valued the ergonomics and material quality.
One pain point found was that she struggled with disconnecting the solution from the handle and at a certain angle the mop got stuck.

INTERVIEWEE 2

Interviewee 2 is not keen on cleaning and was resistant to feedback. He noted caring about the environment, but mentioned he would rather use chemicals because it seems cleaner.
He felt like the mop was rigid and sturdy. He did not like the cloth pad because he prefers throwing it away and grabbing a new one.

INTERVIEWEE 3

Overall, Interviewee 3 found benefits from the product but wouldn't purchase it over Bona's competitor and their current mop of choice; the Swiffer Duster.
Looking at the positives, Interviewee 3 enjoyed the design language, spray handle feature, and re-usable aspects of the mop. However, they felt that the mop itself was very clunky and inconvenient.

INTERVIEWEE 4

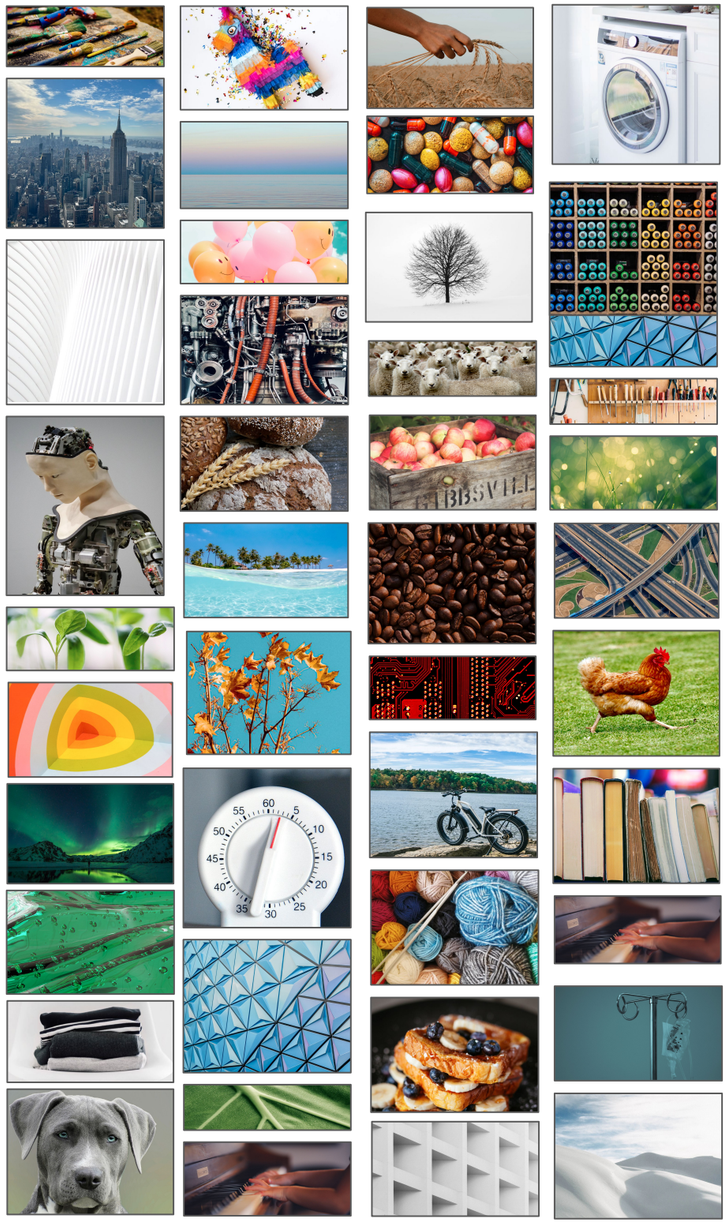
Interviewee 4's biggest concern with the mop was its inability to incorporate hot water; an integral part of her process. Additionally, we found that Interviewee 4 uses a broad range of products like brooms, vacuums, and different cleaning solutions. She tends to avoid of single-use products, as they feel wasteful to her.

Emotions & Benefits Canvas

Through mapping user word associations for cleaning with visual stimuli, we can then extrapolate out the emotions users want to feel while cleaning. This provides clear insight as to what design needs must be met for the optimal emotional experience.

Effective
Earthy
Natural
Motivated
Tidy
Unperturbed
Productive
Fulfilled
Happy
Glad
Relieved
Put together
Proficient
Rewarded
Healthy
Relaxed
At ease
Pride
Organized
Confident

+



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Word:
Earthy

Benefits:
Being in nature

Evoking Factors:
Mountain Bike

Word:
Fulfilled

Benefits:
Appreciating Life

Evoking Factors:
Sunrise

Word:
Happy

Benefits:
With loved ones

Evoking Factors:
Dogs

Word:
Proficient

Benefits:
Getting work done

Evoking Factors:
Knit scarf

Word:
Relaxed

Benefits:
Meditation

Evoking Factors:
Beach

Word:
Organized

Benefits:
Clean house

Evoking Factors:
Vacuum

Data Organization

THE YELLOW PHASE - 66

Individual data points, transcribed directly from the interviews.
Including all thoughts, perspectives, feelings, and associations.

THE BLUE PHASE - 35

Groups from The Yellow Phase. Grouping and identifying what matters most to the user. Finding precisely what users value.

THE PINK PHASE - 9

Groups from The Blue Phase. Identifying the key issues and general takeaways from all interviews.

THE GREEN PHASE - 3

Groups from The Pink Phase. Generalizing the core stories from each interviewee, using these stories to identify their ideal cleaning experience.

Visualizing Data Points

Associations

I associate stress with a dirty space

I feel accomplished when I am done cleaning and have a clean space.

I feel efficient when I am done cleaning and have a clean space.

I associate productivity and fulfillment with creating music.

I associate cleaning with peace and tranquility.

Cleaning Time

I like to clean with other people as a group.

I would rather clean by myself, I like to clean alone.

I deep clean depending on how dirty the environment is.

I know I am done cleaning when it looks visually clean.

Product Functions

I like the sprayer mechanism it is innovative and works well.

I don't like the design of the handle, I think that it is awkward and too tall.

I care about the reusability aspect, I care about the environment.

I like the cleaning solution mechanism and the container.

I wish that the mop could be foldable, it would fit in many places.

Shape and Color

I associate cleanliness with the color green, rather than blue.

I associate cleanliness with the color blue, rather than green.

I associate the mop brand, Swiffer, with being cheap and flimsy.

I don't have positive associations with the name of the brand.

Product Selection

I like to have a single tool for all the cleaning I have to do.

I have a designated area where I store all of my cleaning products.

In terms of brands and cleaning solutions, I like and use Swiffer.

I like to have an array of products to clean different areas.

Schedule

I have a cleaning routine and I strictly abide by it.

I like to clean in the morning time, rather than any other time.

I like to clean in the afternoon and at varying times of the day.

Accomplishment

I feel happy and content when my space is clean

I think cleaning is something that needs to be done, this makes me feel good.

I clean to escape dirtiness, not to achieve cleanliness.

I clean to achieve cleanliness, not to escape dirtiness.

Chemical Use

I would rather use natural soaps and cleaning products.

I would rather use a chemical soap and cleaning products.

Tactile Feelings

I think that the design is sleek, it is comfortable and works well.

I think that the Bona is solid and reliable, it looks sturdy to me.

I like the weight of the mop, it symbolizes high quality, not flimsy at all.

I like the handle and the design, I think that it is comfortable.

Visualizing Data Points

Cleaning Habits

I have a established a designated cleaning schedule that I follow.

I have created a specific approach to my own cleaning.

I prefer using chemical ingredients in the cleaning products I purchase.

I am very particular about choosing my cleaning products.

Psychology

I consider color and shapes associations with the brand identity.

I have positive associations towards cleaning.

I feel happy and accomplished whenever my space is clean and tidy.

Design

I enjoy the handle, the tactile feeling and dynamic looks of the mop.

I like the multifunctional aspect of the product, it is diverse.

Cleaning habits:
Cleaning every other week, chemical solutions, like the use of multiple tools.

Psychology:
Interviewees felt exponentially better with a clean space, they feel productive and good overall.

Design:
Enjoy the heavy weight, like that sprayer has good range, reusability, foldable.

User Habits


Cleaning every other week, chemical solutions, use of multiple tools.
I prefer using chemical ingredients
I have a designated cleaning schedule
I am very particular about choosing my cleaning product
I have a specific approach to my own cleaning
I like to clean in morning
I like to clean in the afternoon, and at varying times
I have a cleaning routine and abide by it
I have a designated area where I store all of my cleaning products
I know I am done cleaning when it looks visually clean
I deep clean depending on how dirty the environment is
I like to clean with other people as a group
I would rather use natural soaps and cleaning products
I have a designated area where I store all of my cleaning products
I would rather use a chemical soap and cleaning products
I like to have a single tool for cleaning
I like to have a single tool for cleaning
I like to clean alone
I like to have an array of products to clean different areas
I prefer the Swiffer brand

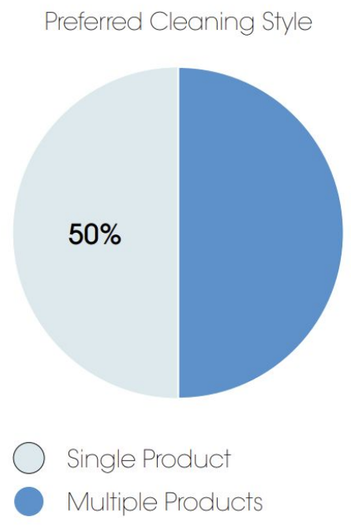
Psychology

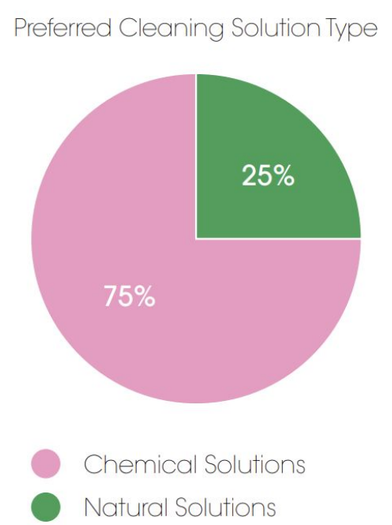

Interviewees felt exponentially better with a cleaner space, makes them feel productive and good about themselves.
I consider color and shapes associations with the brand identity
I have good associations towards cleaning
I feel happy and accomplished whenever my space is clean and tidy
I associate cleanliness with the color green, rather than blue
I associate the mop brand, Swiffer, with being cheap and flimsy
I don't have positive associations with the name of the brand
I clean to escape dirtiness, not to achieve cleanliness
I associate cleanliness with the color blue, rather than green
I associate cleaning with peace and tranquility
I associate stress with a dirty space
I associate productivity and fulfillment with creating music
I clean to achieve cleanliness, not to escape dirtiness
I feel efficient when I am done cleaning and have a clean space
I feel happy and content when my space is clean
I think that cleaning is something that needs to be done, this makes me feel good

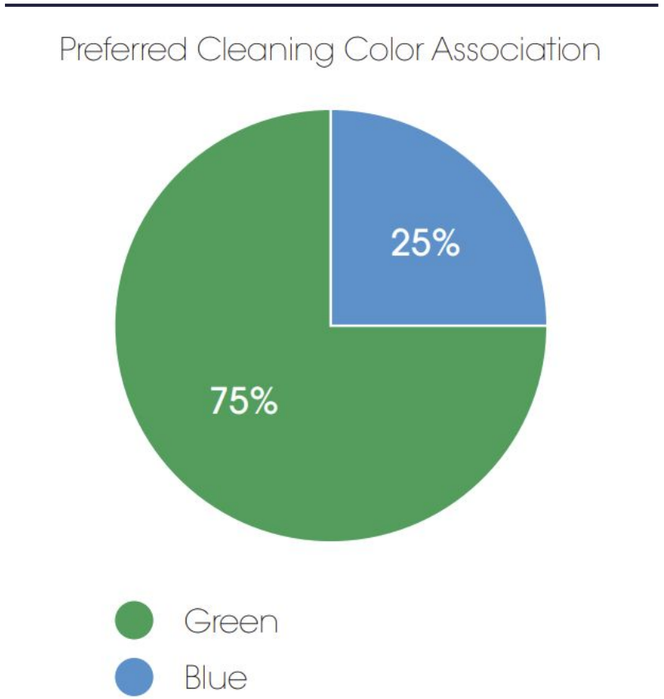
Design Needs

Key Findings

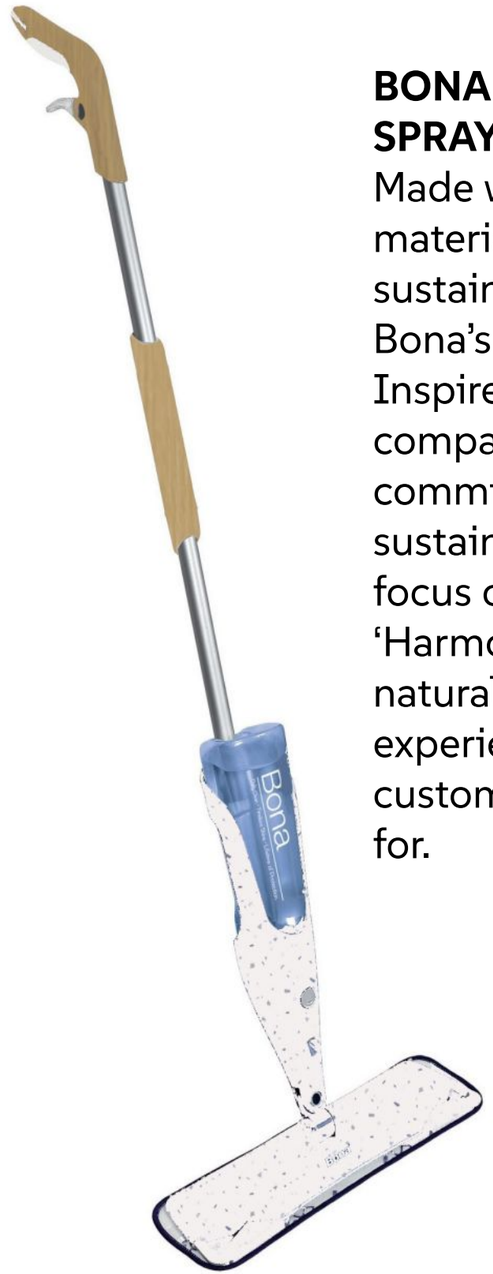
- Many interviewees had **negative thoughts** on the **height** and **angle** of the mop.
- Users need to be able to **store** a mop **in tight spaces**.
- Each of our **users** are unique and **clean in different ways**.
- Designs need to offer **many use cases** in a **single product**.
- Users **associate chemicals** with a deeper **clean** but **prefer** a **natural & sustainable aesthetic**.
- The Bona Mops heavier **weight** and **build quality** are key characteristics **differentiate** it **from competitors**.







Recommended Design Direction



BONA 'HARMONY' SPRAY MOP
Made with recycled materials, Harmony is a sustainable addition to Bona's spray mop line. Inspired by the company's steadfast commitment to sustainable practices and focus on innovation. 'Harmony' provides the natural and high quality experience our customers are looking for.

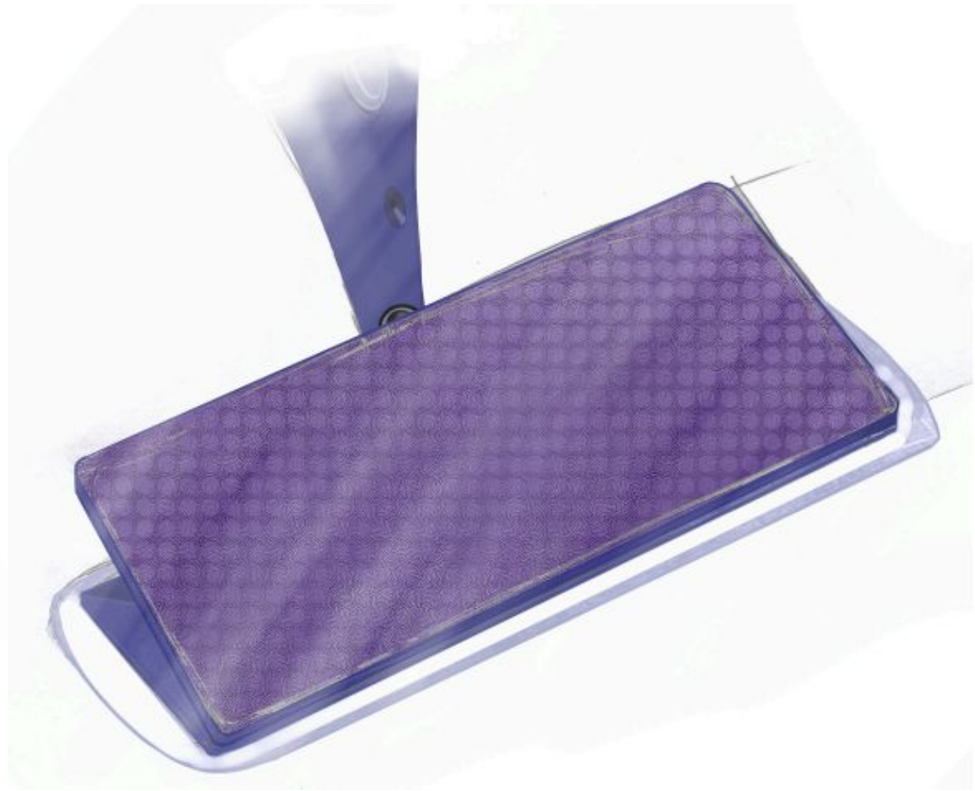
FOLDABLE FRAME
Heavy duty folding locking hinges in the middle of stem for storage

TELESCOPIC HANDLE
Telescoping section (research shows many people believe it's too tall)

Recommended Design Direction Cont.

INSPIRATIONAL GRAPHICS
Inspirational quotes at certain increments along the solution bottle, as a means to provoke the feeling of achievement once finished cleaning.

DUAL-USE MOP PAD
Option 1: Different texture on front and back of mop pad. This allows for different cleaning style when pushing vs pulling.



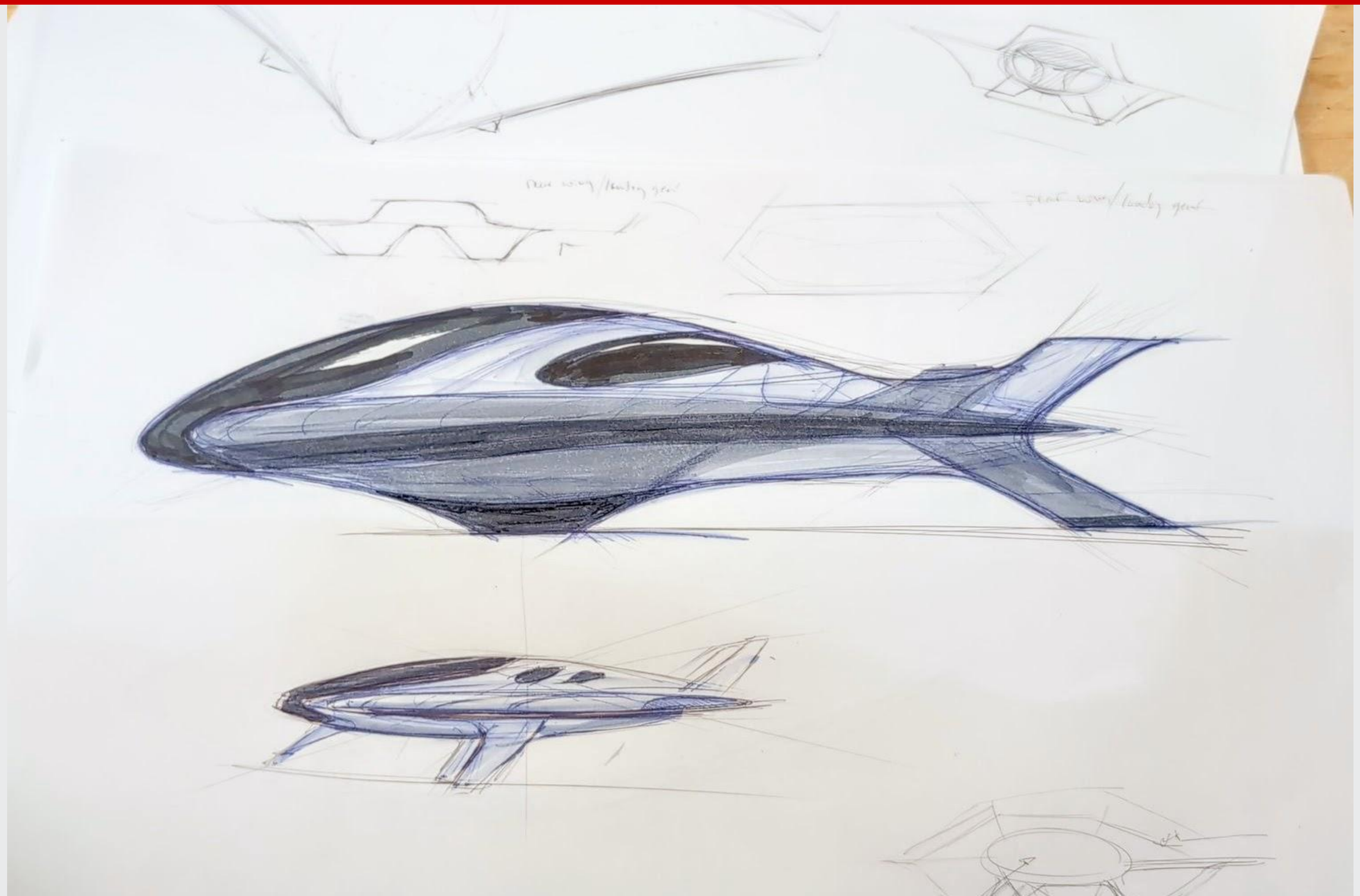
DUAL-USE MOP HEAD
Option 2: Mop face like a V with a different type of pad on each side. Just lift the mop and flip to use the other mop type. One for scrubbing and one for dry pushing.

Sephira

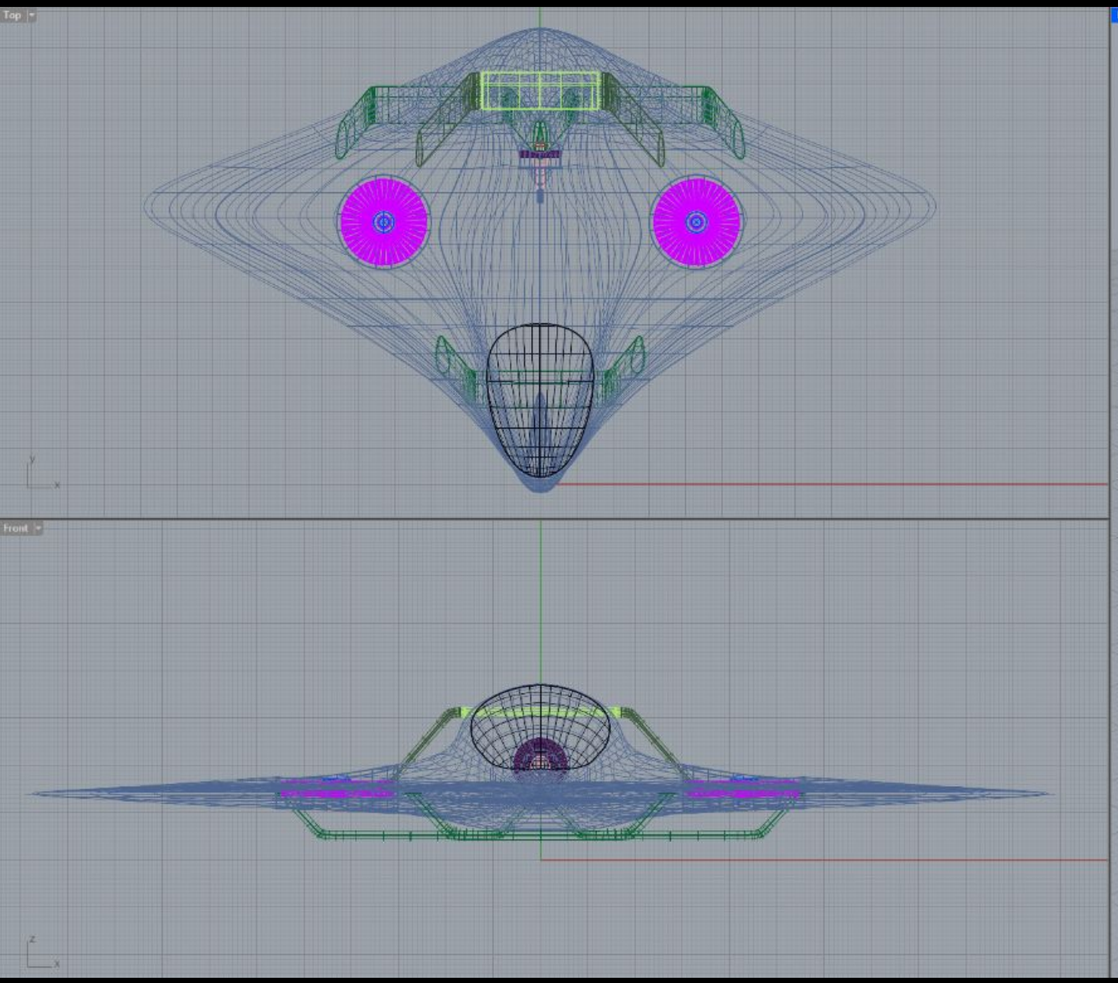
Designing A Fully Electric VTOL Aircraft

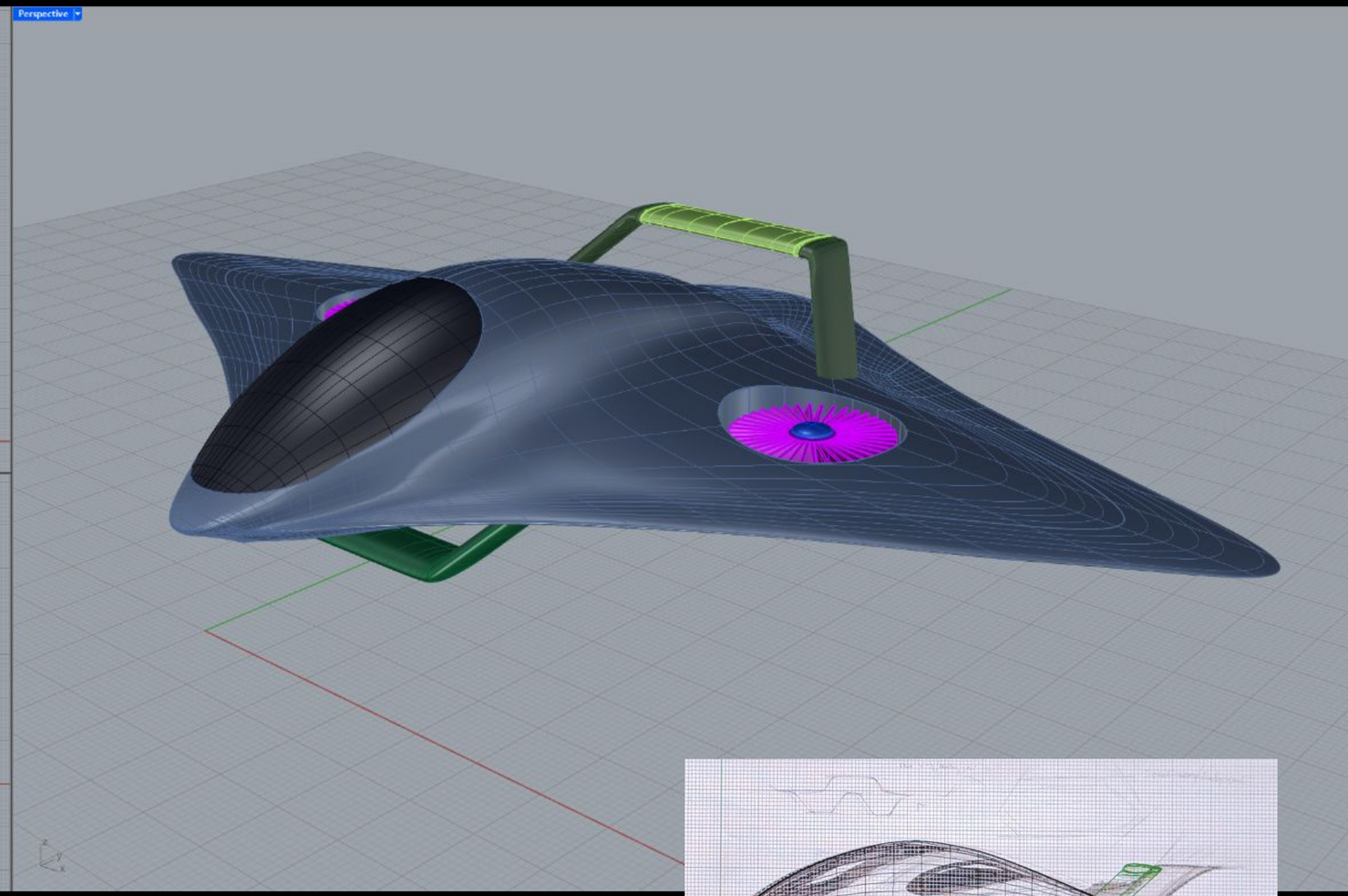
Sephira is an aircraft that pushes sustainable transportation to new heights in urban areas. With VTOLs, flying taxis will no longer be a dream of the future. Through biomimicry of the eagle ray, Saphira optimizes aerodynamic efficiency with smooth organic lines and the use of newly developed composite materials. The fuselage blends seamlessly into the wings. Wing embedded rotors create lift for the aircraft during takeoff and landing. A smaller, more powerful turbine is mounted at the rear of the fuselage, providing thrust during flight.

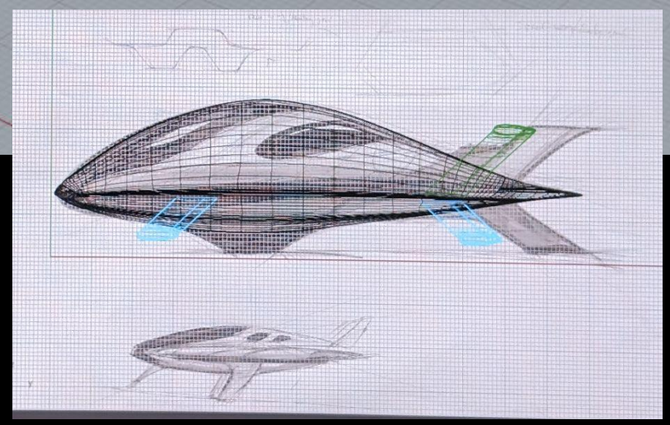
Sketches



CAD Modeling



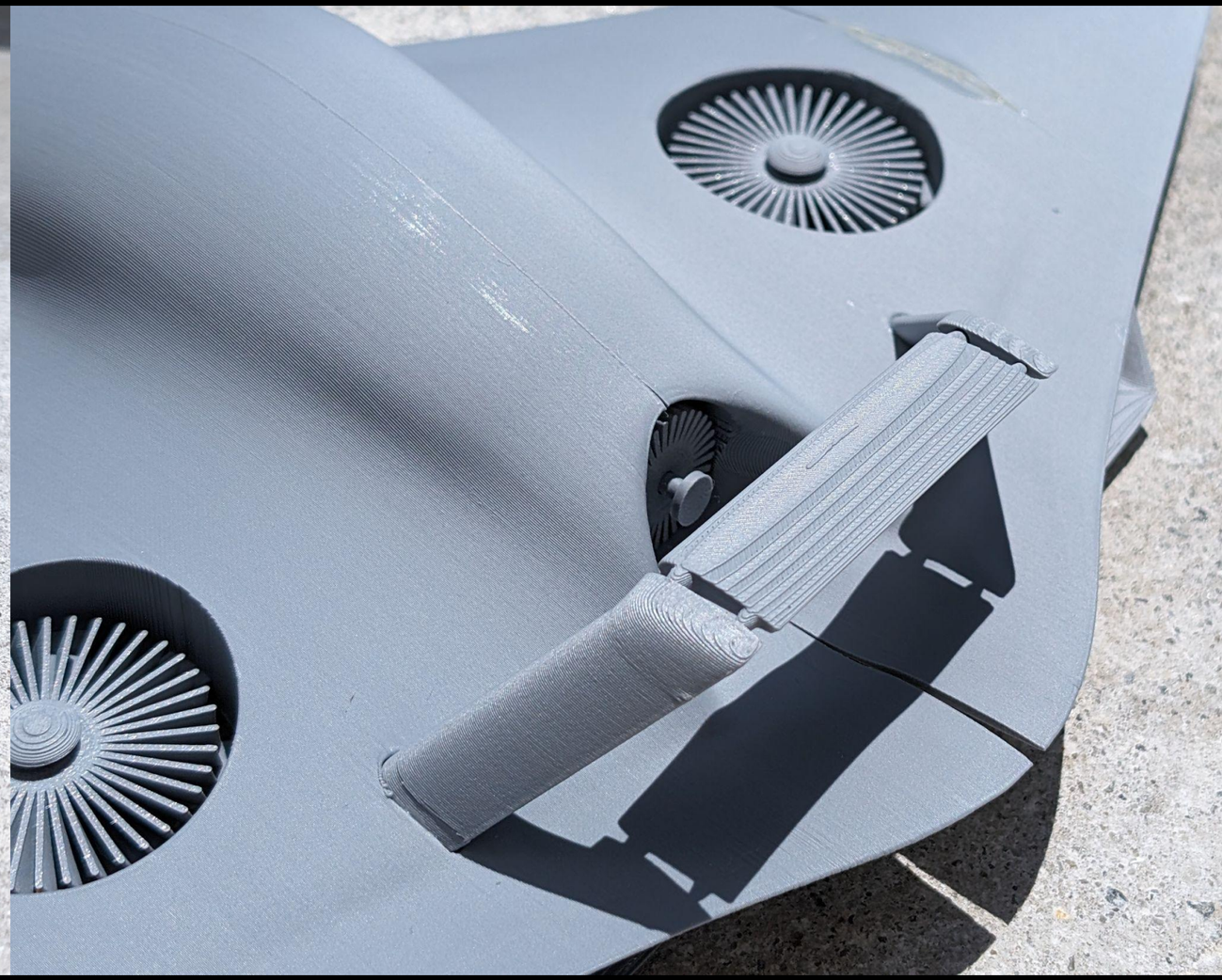


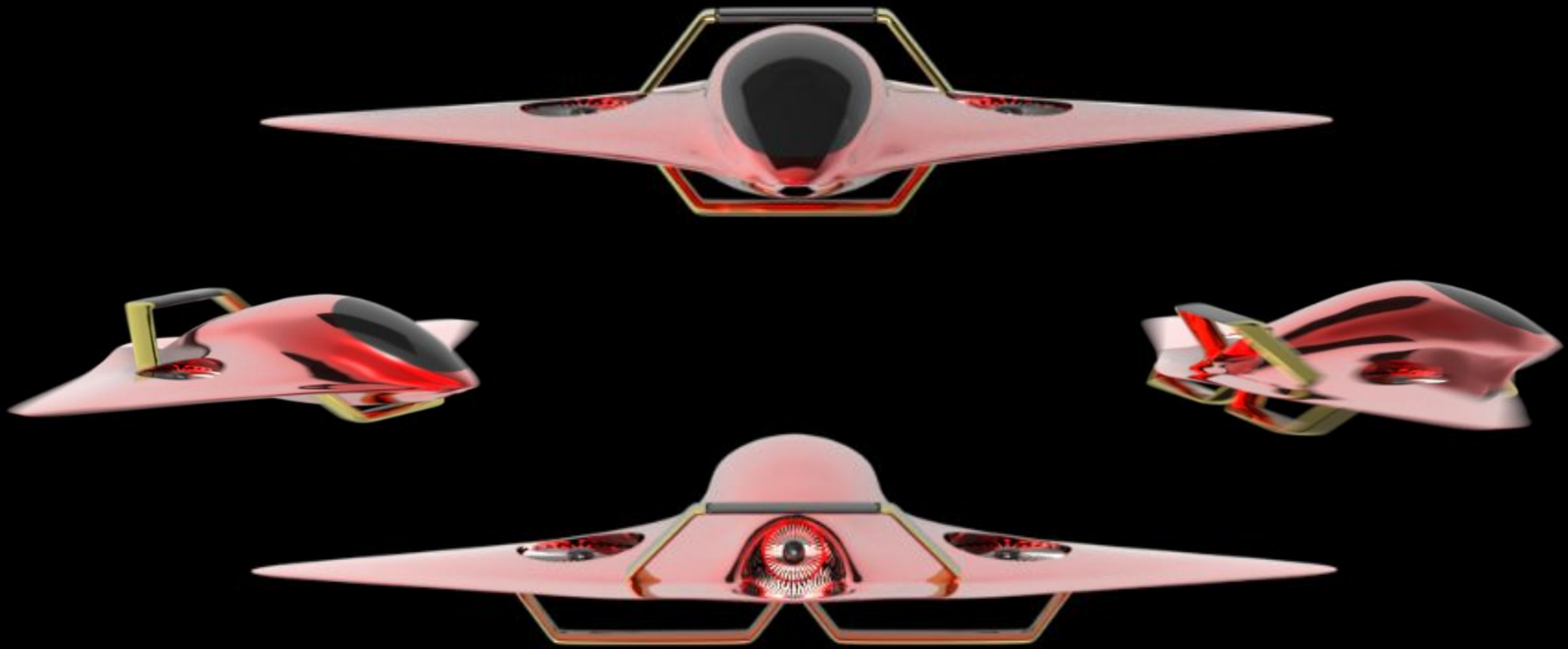


Sephira’s rudder and elevator tabs are built into the top stabilizer wing.

The bottom stabilizer wings provide lift in flight and double as stationary landing gear.

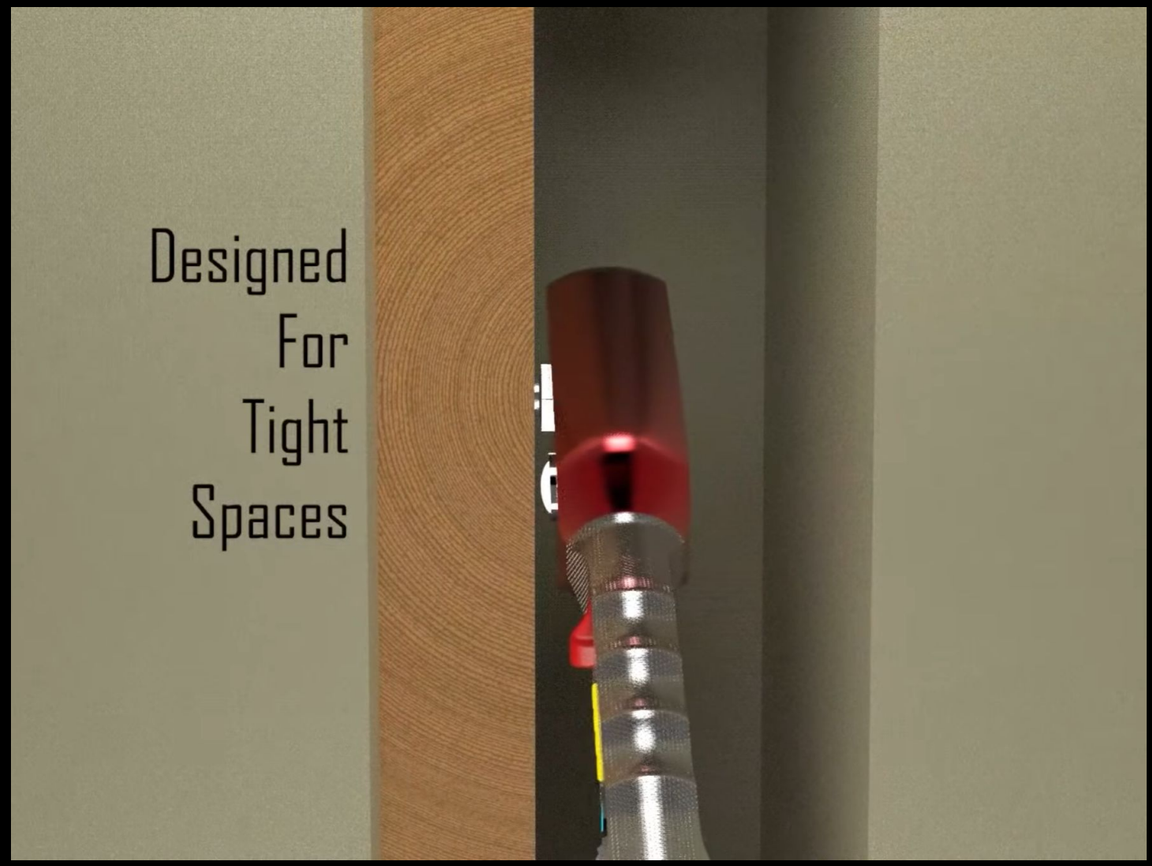
Prototyping



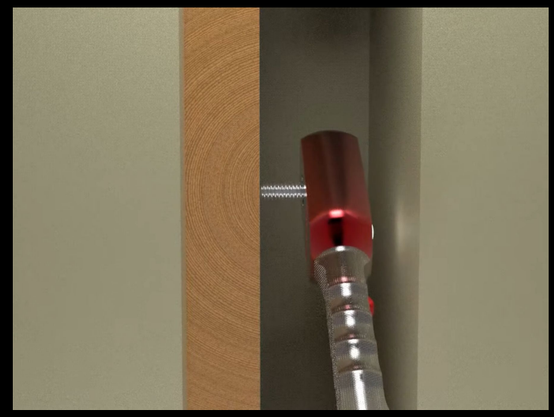


Electric Wrench

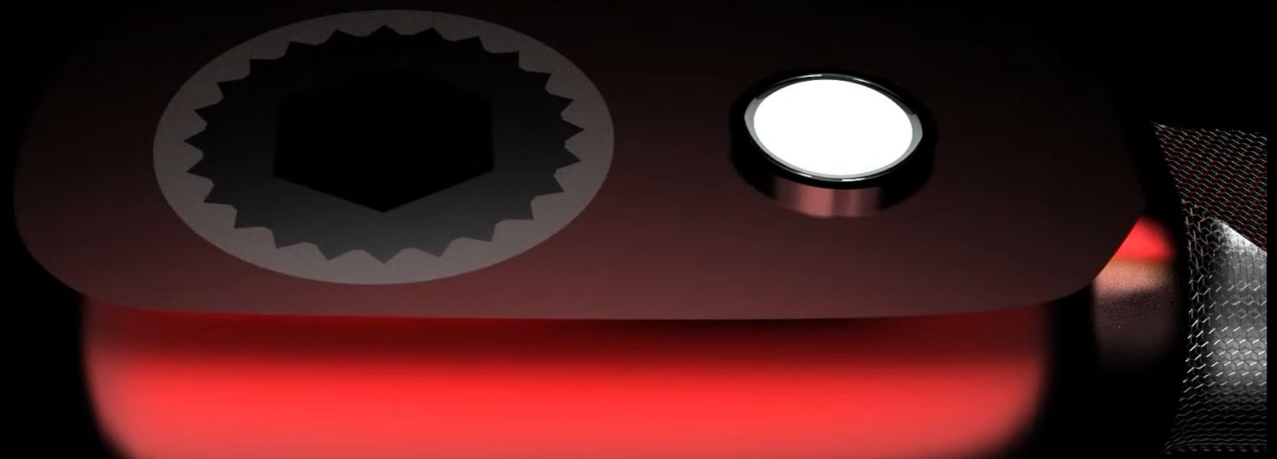
Electric Wrench



The Electric Wrench by Recht Tools changes the game in the automotive and marine industry. Without the need of a reverse gear the Electric Wrench allows technicians to reach bolts in extremely tight spaces. Utilizing a vertical mounted anvil inside the handle, the wrench has full pass through. Simply flip the wrench around and pull the trigger. The proprietary sockets use a series of magnets to hold the socket in the head of the wrench. Sockets can be swapped with a firm push to release the magnets and a new socket can be slid in its place.

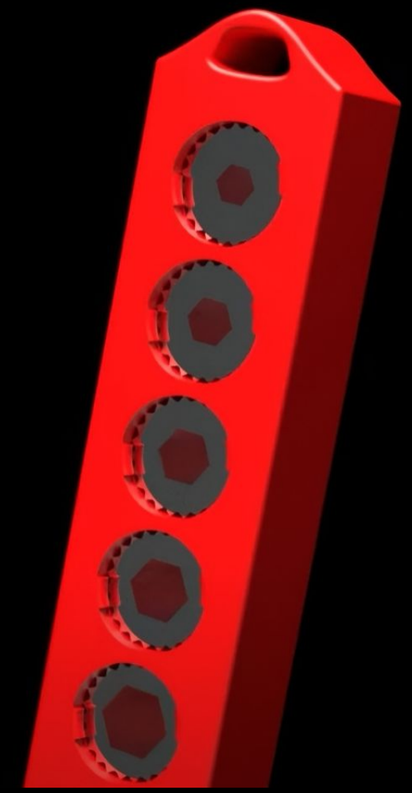


Full Pass-through Head

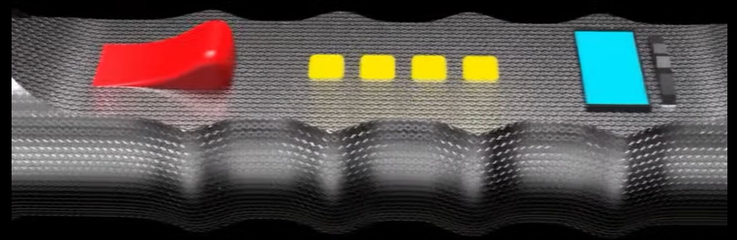


Proprietary

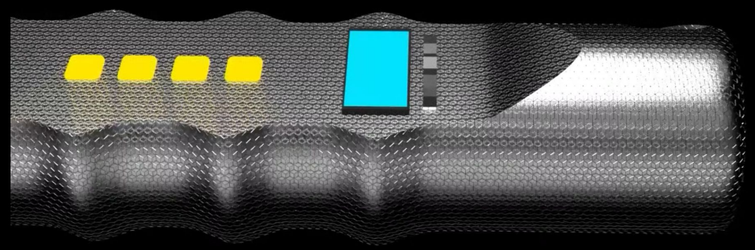
Steel Sockets



Battery Indicator



Multi Mode Adjustment With Display



Additional

Design - Design - Design - Design - Design - Design - Design - Design - Design - Design - Design - Design - Design - Design - Design - Design - Design - Design - Design

Projects

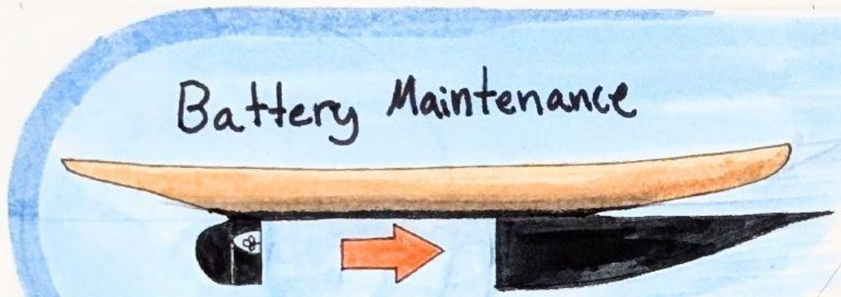
F1 Expo

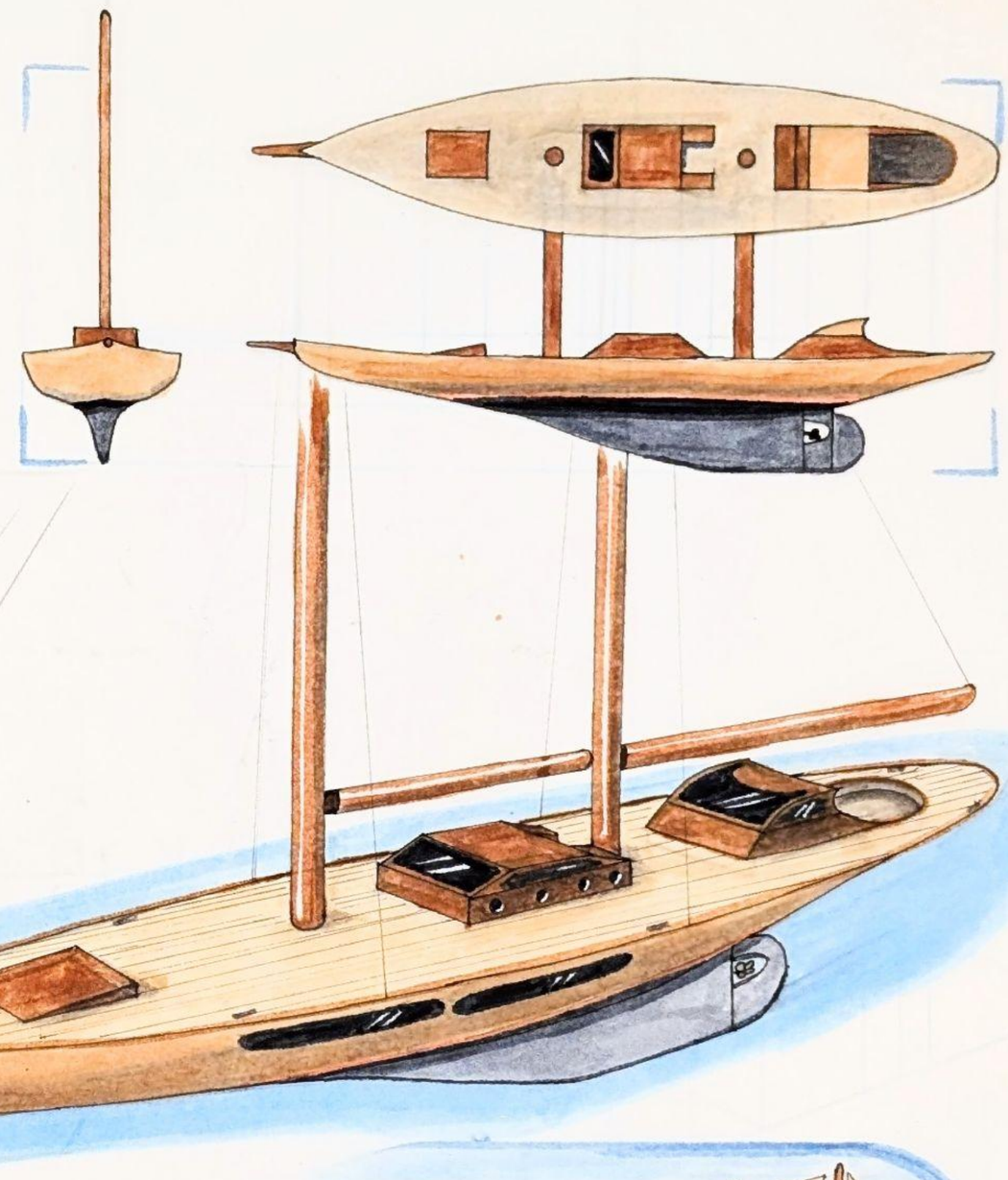
F1 Expo

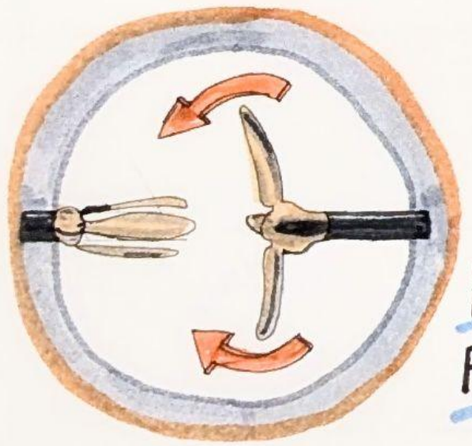
This Formula 1 Expo perfectly encapsulates the spirit of F1. Visitors are guided through the space as if they are on of the racecars. Cruising through the chicanes of the track on the floor, exploring elevation changes...users feel like they are really inside the wild and exciting universe of F1. The space includes various memorabilia for onlookers to examine as well as an rc track to bring out everyone's competitive nature.

Jubilee II

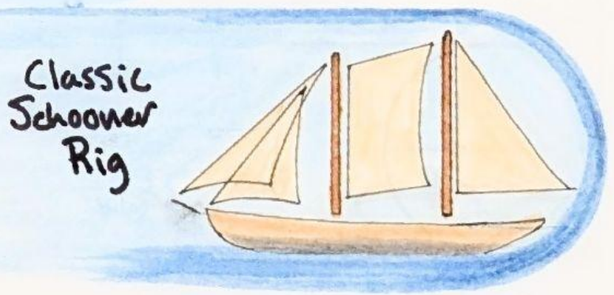
Jubilee II is both classical and high-tech. Our specialized design takes the beautiful lines and style of a 1930s J-Class yacht and blends them with today's knowledge of hydrodynamics and battery technology. Today most full keel sailboats use ballast to stabilize the vessel. Generally, that ballast is solid metal. With our design, that dead weight is now lithium-ion. This change maintains the required ballast while taking an old diesel boat years into the future. Our rig builds on the classic Schooner configuration, but uses a Marconi mainsail and gaff foresail. This gives Jubilee II the quintessential setup for go-anywhere sailing.





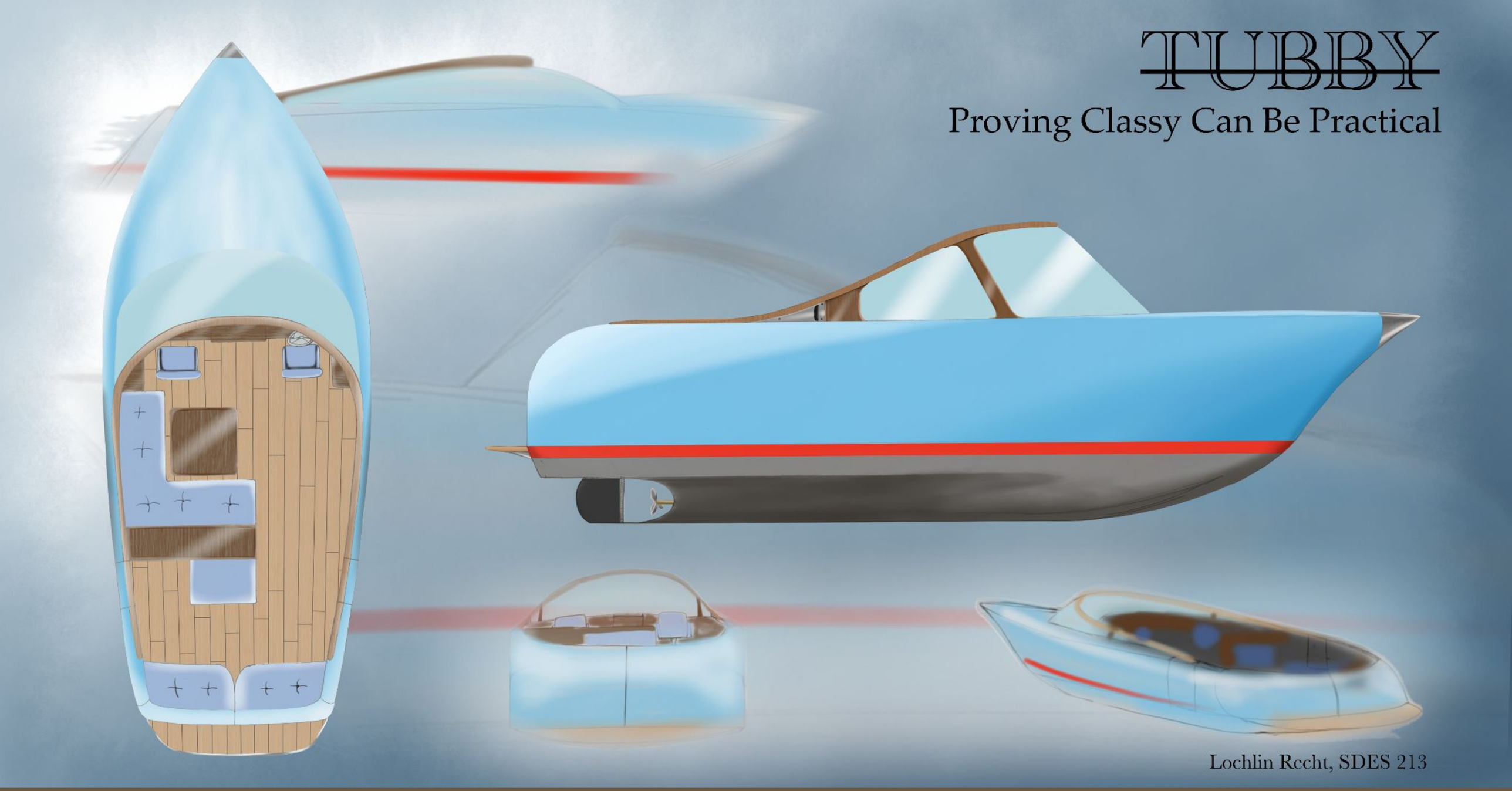


Folding Prop
For Efficiency



TUBBY

Proving Classy Can Be Practical



Tubby's targeted customer base wants comfort and class. Cruising with accents of varnished wood and polished steel across it's spacious deck and cabin, Tubby oozes elegance.
Based on classic italian runabouts in conjunction with the hull of a lobster boat, this day cruiser has no theoretical hull speed.

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Thank You

Design - Design - Design - Design - Design - Design - Design

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