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MARTINSON
industrial designer

2014



CALPHALON
SPONSORED
PROJECT

CALPHALON SPONSORED PROJECT: project brief + concept writing



Working with Calphalon's design team, I was asked to use their concept writing technique as a way to develop new ideas and concepts for unmet consumer needs. Variables such as cost, technology, and ease

of manufacturing were removed from this step. Removing these variables allowed for a more open flow of ideas and out-of-the-box thinking. The final concepts were presented to Calphalon's designers.

Calphalon®

Nonstick That Delivers	Nonstick Durability	Prevent Burning	Even Baking	Easy To Clean	Storage	Overall Durability	Brand Skepticism
Current nonstick bakeware still sticks, especially with use over time. This can ruin results, and makes bakeware hard to clean.	I wish non-stick on bakeware were more durable - that it would not flake, chip or peel, especially at high oven temperatures.	Baked goods can easily burn around the edges and I'm not always sure why, but it's probably my mistake or my oven, not the bakeware.	Baked goods sometimes come out under or unevenly cooked, even when baking at the right temperature.	I'd love to be able to use the dishwasher to clean my bakeware, but hand wash because I am afraid of warping, rusting, and discoloration factors.	Over time, I have acquired many specialty bakeware pieces, and now don't have an efficient way of storing everything.	Over time, bakeware isn't as durable as cookware. It warps at high temperature, and rusts in the dishwasher.	Many brands make durability and nonstick performance claims, but none seem to deliver.
New bakeware material that ensures nonstick performance every time.	New nonstick liners for bakeware. Use them once and throw them away.	New bakeware that covers more area on the food to ensure less burning.	Bakeware specifically formed to the shape of the desired baked goods.	A material change in bakeware that would allow food to virtually fall out and clean with ease.	“Over time I have acquired many pieces and now don't have an efficient way of storing everything.”	A new marketing strategy that educates buyers on performance and what to look for when making their purchase.	Packaging will tell buyers what each pan is for and what its advantages are.
Bakeware made entirely out of silicone will allow food to be treated and taken out.	This foil liners that can ensure even baking but be thrown away after each application.	Covered cupcake molds that heat all portion of food at the same heat level.	Consumers can ensure that cookies, cakes, etc. will come out looking just like the picture on the recipe.	Silicone bakeware is durable and nonstick by material property.	Segmented aluminum pieces that collapse into themselves.	Thin pieces that can be used once and then thrown away. Similar to cupcake liners.	

Sharp Blades	Control	Comfort/Ergonomics	The Right Variety	Organization	Durability	Easy To Clean	Style
I'm looking for ways to keep knife edges sharp; I'm not sure when or how to sharpen my knives	I'm looking for the right weight / balance to provide me with both control and comfort in handling	I want knives that are very end comfortable and comfortable.	I want to have only the knives I need for the tasks I do.	I'm looking for ways to keep all my knives well organized so I can quickly and easily find what I need.	I want blades that will last and not rust over time.	I want knives to be dishwasher safe and easy to clean	My knives are often displayed on the kitchen counter, so they have to look good, but must also be practical and functional.
A new knife block that electronically sharpens your knives in seconds.	Individually packaged knives that come in a variety of weights so that the buyer can choose what's right for them.	How about "soft" allow for more comfort	“I'm looking for ways to keep knife edges sharp...I'm not sure how to sharpen my blades.”	Color-coded handles in safety colors to make each knife's use and make easy to find just the right one.	Replaceable blades in a more durable material.	New nonstick knives offer much greater ease of cleaning.	A new more stylish "block" will provide a beautiful way to display your knives as a decorative accessory.
Much like a pencil sharpener, users will just their knives in and the machine will sharpen blades until the process is complete.	Knives with weight in the blade as well as the handle will allow for a personal "fit" for each individual.	Pliable rubber will make handles softer and easier to hold for long periods of time.	Different holding positions will allow a blade to be used in many different ways.	Colored silicone handles will allow for many color options as well as address comfort issues.	Titanium replaceable blades will provide more durability and be lighter than steel blades.	Knives coated in a thin layer of NP will make food and stuck on debris slide right off.	An aesthetically driven knife holder will make buyers want to proudly display their knives as a kitchen focal point.

Safety	Easy To Clean	Even Heating	Nonstick Durability	Handling	Environmental Safety	Optimal Results	Storage
I want the products I use in my kitchen to be safe to use.	Food sticks to some cooking surfaces, making the cookware hard to clean.	I want cookware that doesn't heat too quickly and scorch food.	I prefer nonstick cookware, but I wish the surface were more durable and that I didn't have to worry about it upkeep so much.	I wish serious high-quality cookware products didn't weigh so much.	I'm concerned that some products may be manufactured in a way that is unsafe for the environment.	When I cook, I want whatever I am making to turn out right, every time.	Cookware is bulky, takes up lots of space & lids are hard to match w/ vessels.
Cookware that tells the user when it's hot and when it's okay to touch.	One piece cookware, so no screws or connection points.	Nonstick will bring stove top to ensure even heating.	Food sticks to some cooking surfaces, making the cookware hard to clean.	Pots and pans with less material in the handles.	Environmentally friendly nonstick cookware coatings.	Electronic cookware that wirelessly interacts with cooking and recipe apps.	Collapse handles that can fold flat to allow pans to better stack inside each other.
Outer paint that is heat sensitive will alert users to touch or not touch.	Solid molded aluminum cookware will eliminate areas for food to stick on it.	Magnetic points on bottoms of cookware will attach itself directly in place on stovetop.	Molded silicone cookware including handles, etc. But rigid enough to take abuse.	Holes and cutouts in the handles will limit the overall amount of weight in cookware.	Using NP technology, pans will be nonstick and also environmentally friendly.	Apps will interact with the cookware making sure heating is standardized throughout meal prep.	Segmented handles can be compressed and hidden inside themselves.

Using Calphalon's concept generation technique, ideas could be selected and moved to refinement. "Concept Writing" was applied to cutlery, bakeware, and cookware to target unmet consumer needs. Cutlery and knife sharpening moved to refinement.

CALPHALON SPONSORED PROJECT: research



Traditional stone sharpening is effective, although not easily achieved or understood by household users.



Electric knife sharpeners offer precision and ease for skilled chefs as well as at home users.



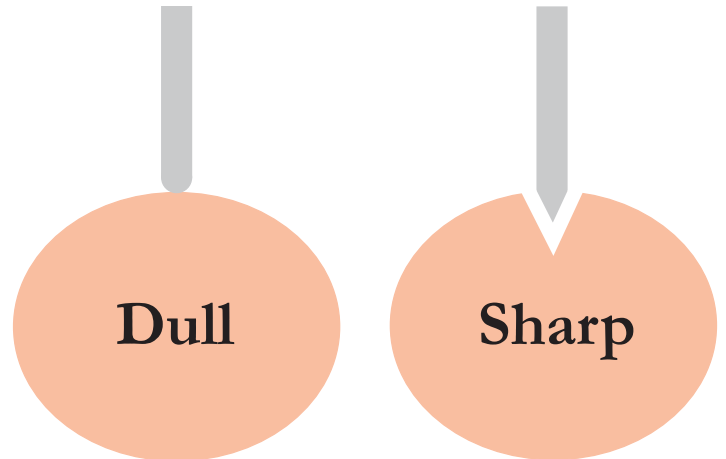
A new material for knife blades would maintain a sharp edge and require less regular sharpening before use.



the tomato test

One of the easiest ways to determine if a knife is sharp is to rest it, blade down, on a tomato. If the knife rests on the tomato it is too dull. If the knife begins to cut when placed on the tomato with no force it is fully sharpened.

***A DULL KNIFE IS A DANGEROUS KNIFE!**



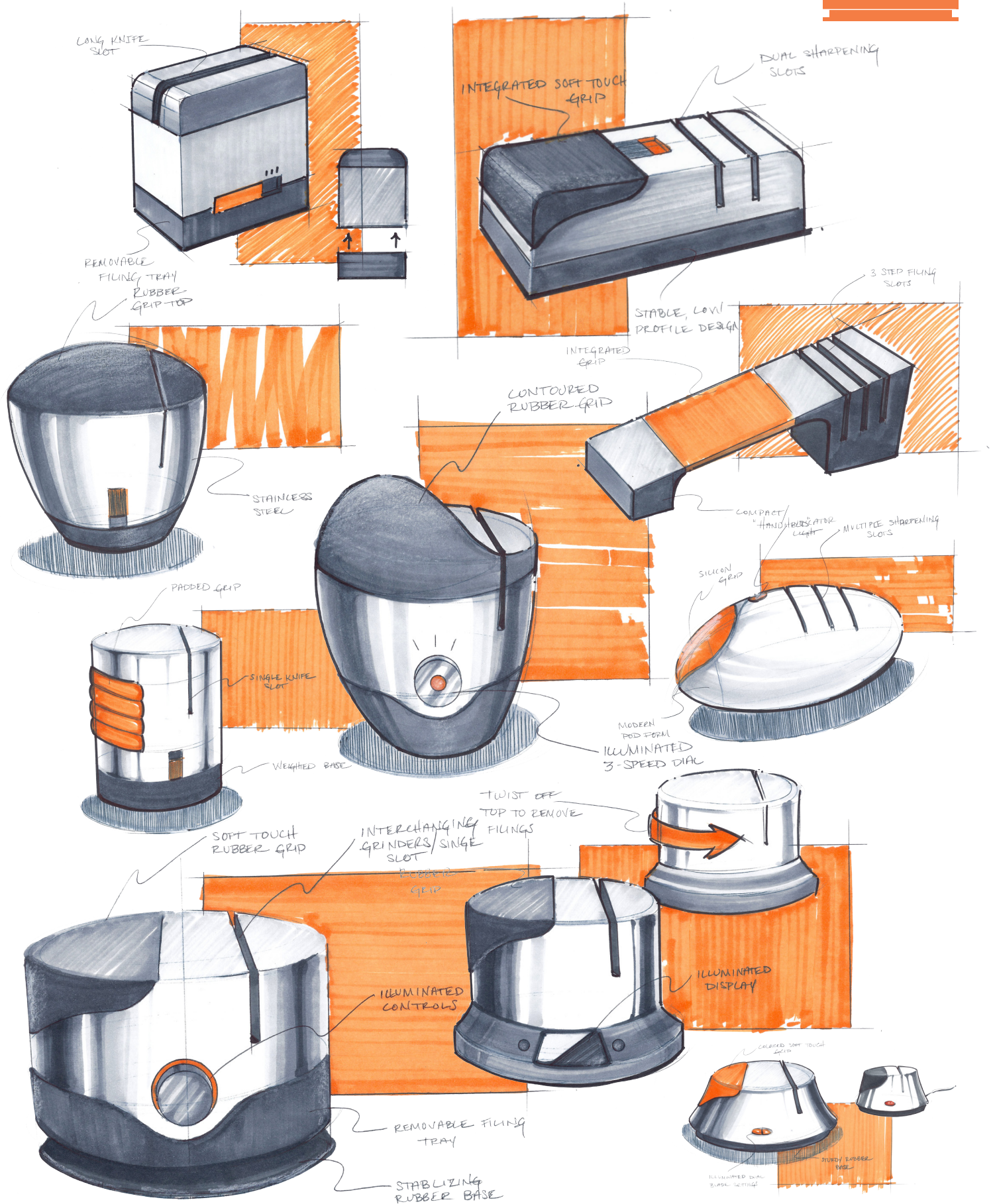
electric sharpeners



Electric powered sharpeners keep the angle on the edge of the knife consistent while sharpening. They remove the majority of user-error.

The sharpener at right demonstrates the benefit of dual grinders as it holds the knife in perfect position.

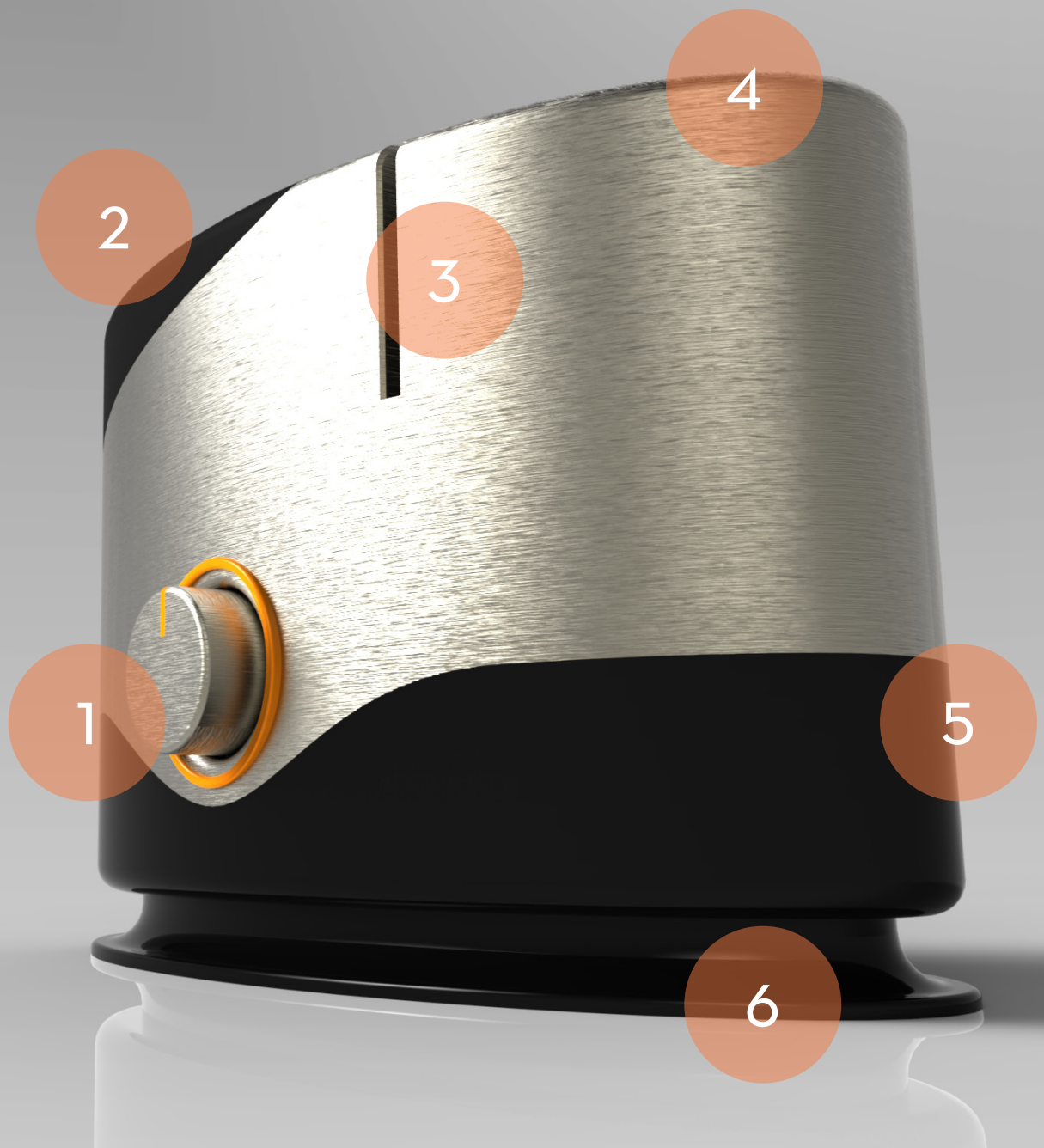
CALPHALON SPONSORED PROJECT: ideation



CALPHALON SPONSORED PROJECT: product features



1. Easy-to-use, illuminated dial adjusts for three different sharpening settings.
2. Non-slip, soft touch rubber grip for added stability when sharpening knives.
3. Single knife slot for added simplicity.
4. Stainless steel shell combines the Calphalon aesthetic with timeless durability.
5. Removable filing tray
6. Weighted base for added stability.

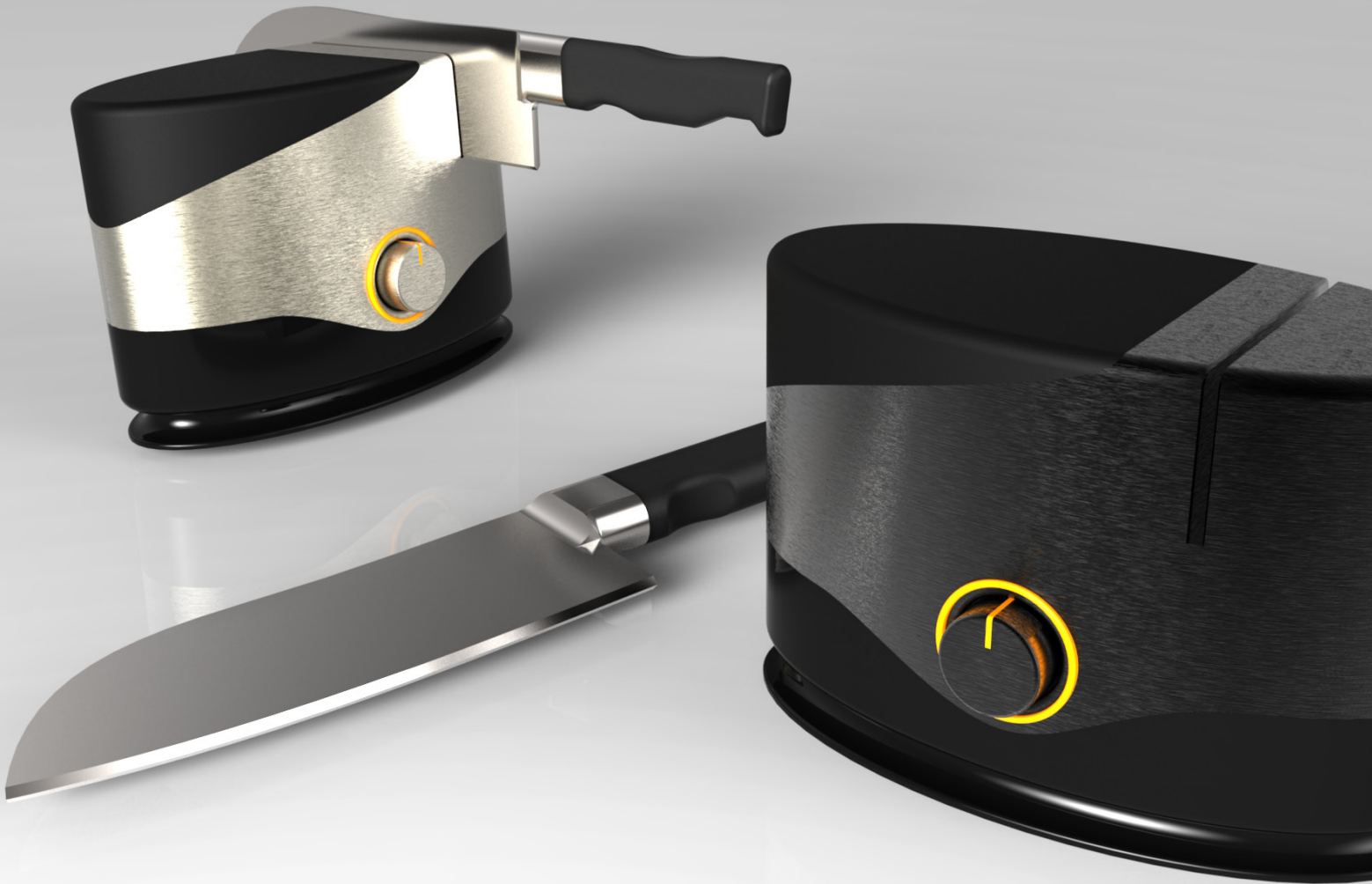


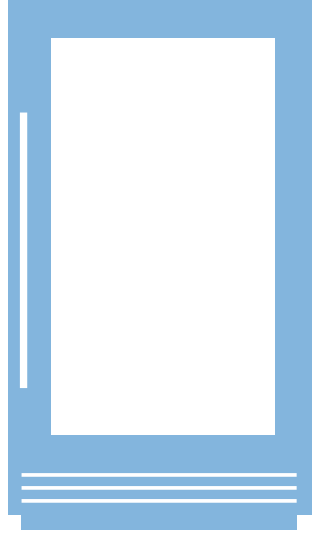
CALPHALON SPONSORED PROJECT: final concept



The final concept for Calphalon's unmet cutlery needs combines both the brand's top of the line knives with their new "Small Electrics" product platform. The new electric knife sharpener presents a modern interpretation of Calphalon's sophisticated

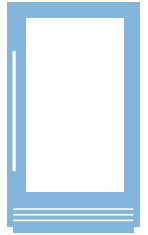
aesthetic and combines ease of use, safety, style, and innovation in one small package. Designed for the everyday home cook, to the professional chef, the Calphalon knife sharpener blends seamlessly into any culinary venue.





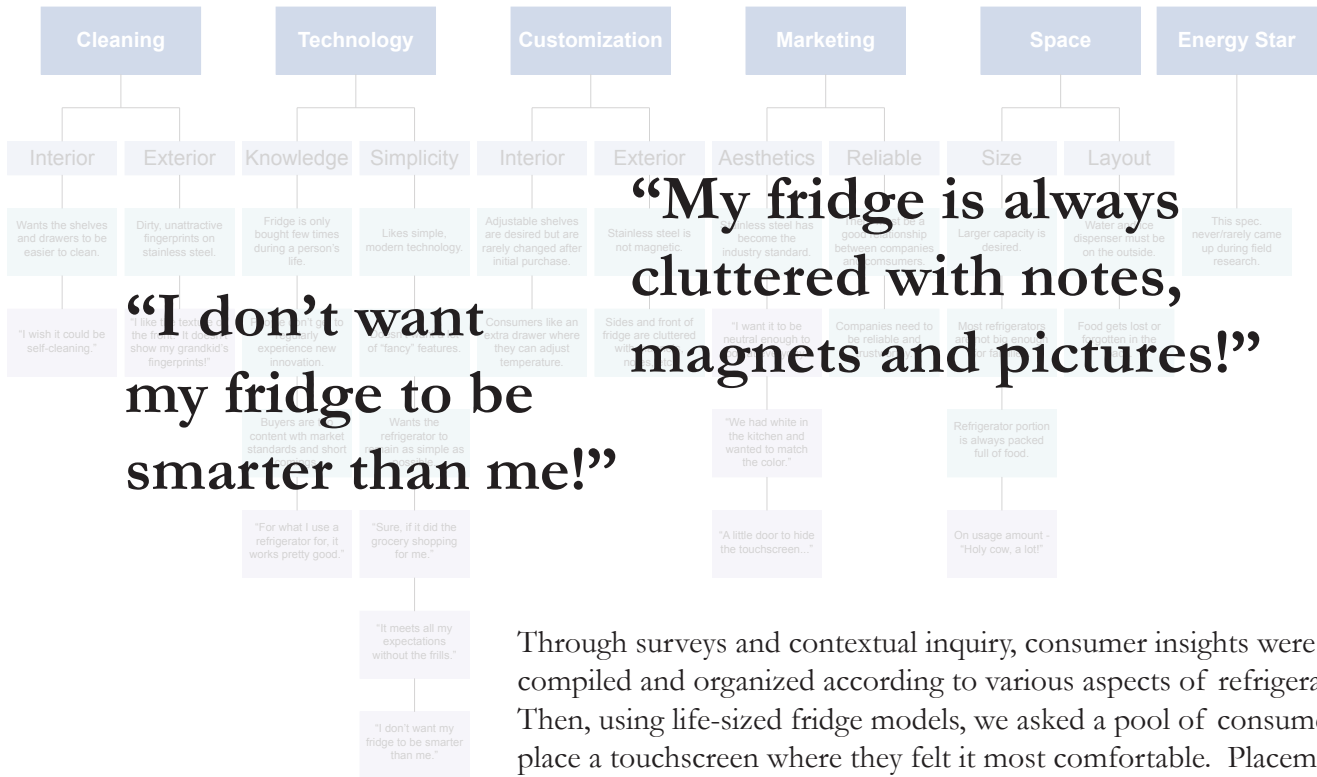
FREESCALE
SPONSORED
PROJECT

FREESCALE SPONSORED PROJECT: project brief and initial research

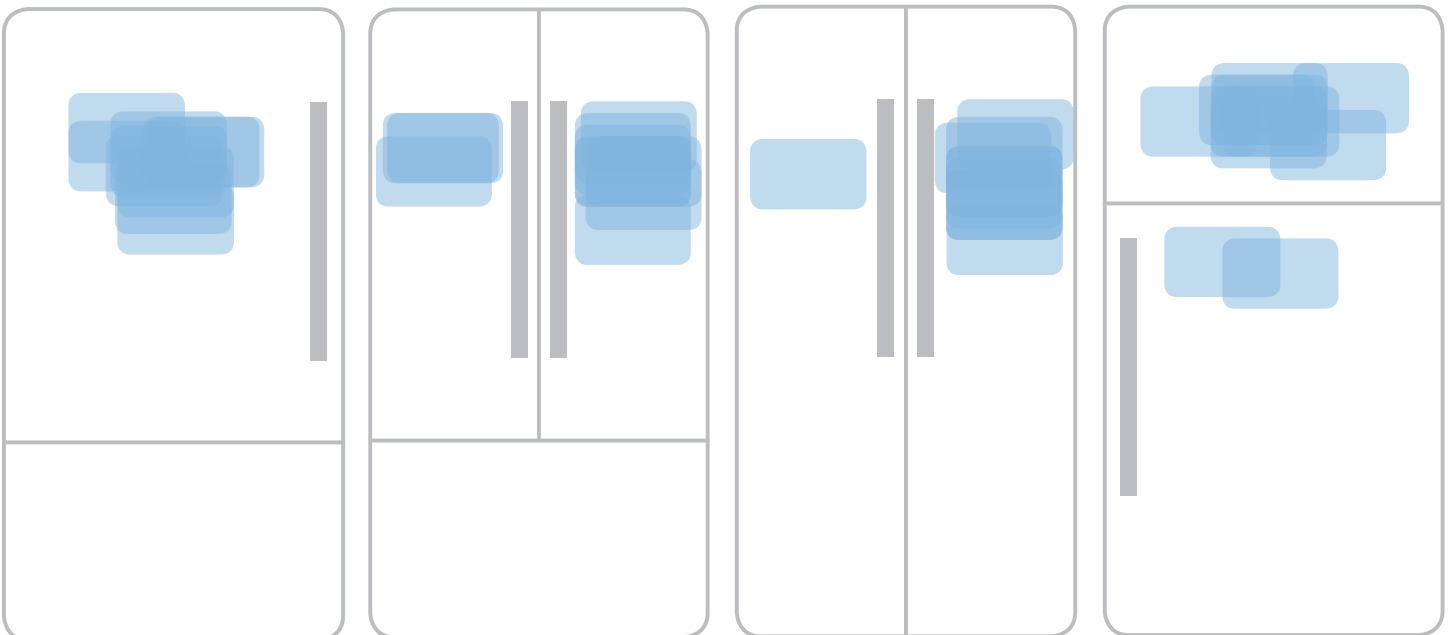


The intent of this project was to inject added value into Freescale Semiconductor by integrating semiconductors into smart appliances, specifically refrigerators, by designing integrated touchscreens and user centered interfaces.

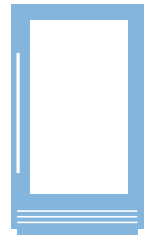
Early stages of the project involved extensive user research including surveys, interviews, contextual inquiry, as well as user testing. The wireframes were also developed with a team early in the project.



Through surveys and contextual inquiry, consumer insights were compiled and organized according to various aspects of refrigerators. Then, using life-sized fridge models, we asked a pool of consumers to place a touchscreen where they felt it most comfortable. Placements were consistent, yet varied slightly from person to person.



FREESCALE SPONSORED PROJECT: touchscreen functions

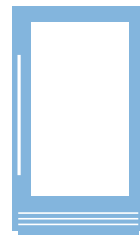


Striving for a more customizable touchscreen refrigerator, I explored liquid crystal glass and incorporated a touchscreen within the glass itself.

Utilizing this technology would allow users to access the touchscreen from anywhere on the fridge door, and see the contents of their fridge without opening the door.



FREESCALE SPONSORED PROJECT: picture function and main menu



USERS

RECIPES

CAMERA

NOTES

CLOCK

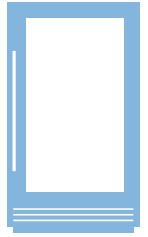
MEDIA

BROWSER

TOOLS



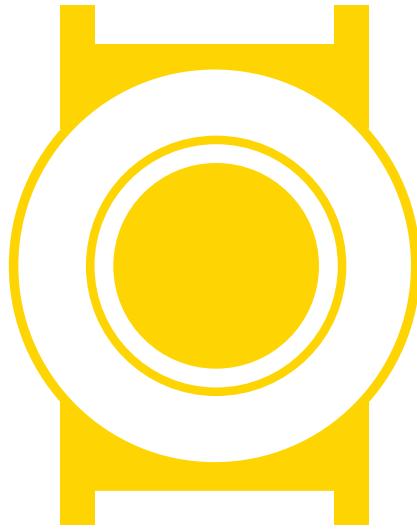
FREESCALE SPONSORED PROJECT: final refrigerator



For the final refrigerator concept I chose a design that abandoned the traditional fridge/freezer combination and focused on the refrigerator alone. This allowed the design to support a full door, liquid crystal glass touchscreen. The final design allows

users to place, size, and interact with the touchscreen literally anywhere on the front of the fridge. Additionally, at the touch of an icon, the fridge door becomes transparent, revealing the contents inside.

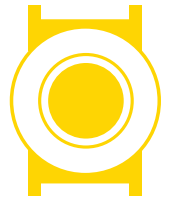




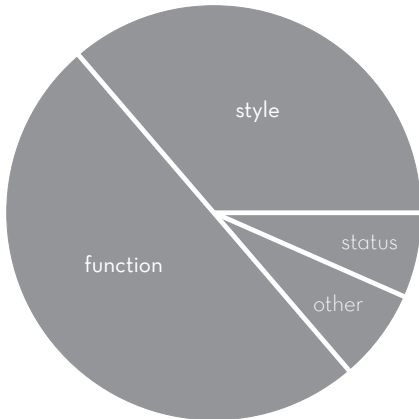
WATCH
DESIGN

WATCH DESIGN:

research



survey



70% surveyed prefer analog over digital

mechanics



trends



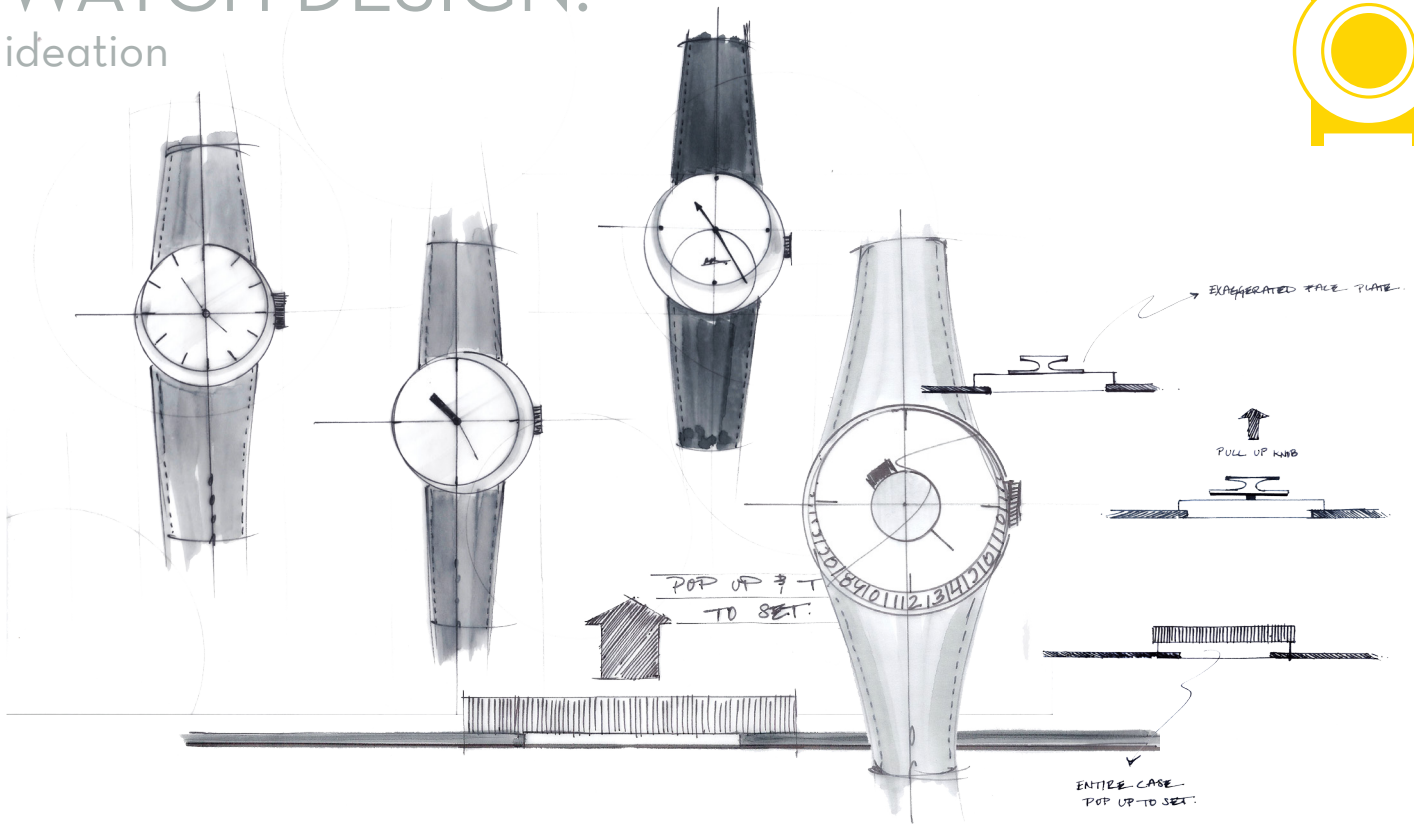
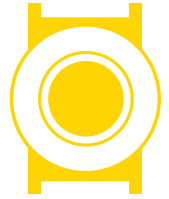
aesthetics

Minimalist forms and configurations as well as a “less is more” aesthetic was researched and applied in the ideation phase. Specific inspirational forms included dials, turntables, and buttons. Several brands and designers’ work was

also studied to gain further insight into a clean, minimal aesthetic. These designers and brands included Braun, Dieter Rams, George Nelson, Bang & Olufsen, and Raymond Loewy, among others.



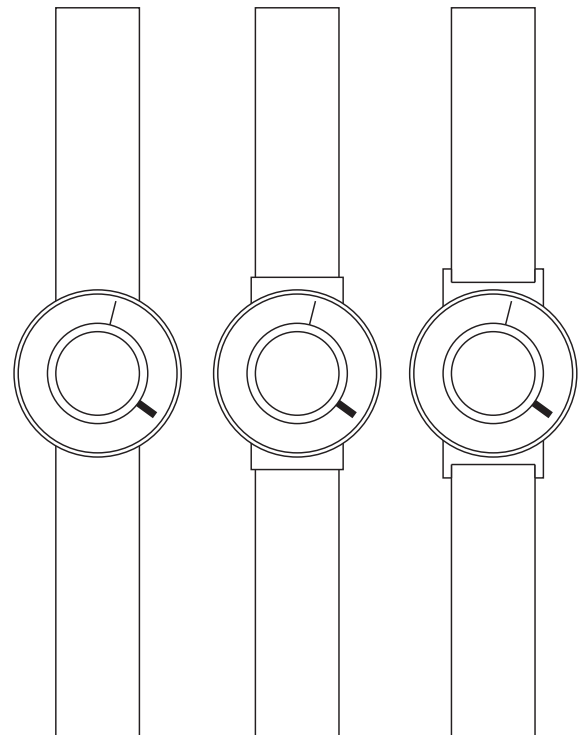
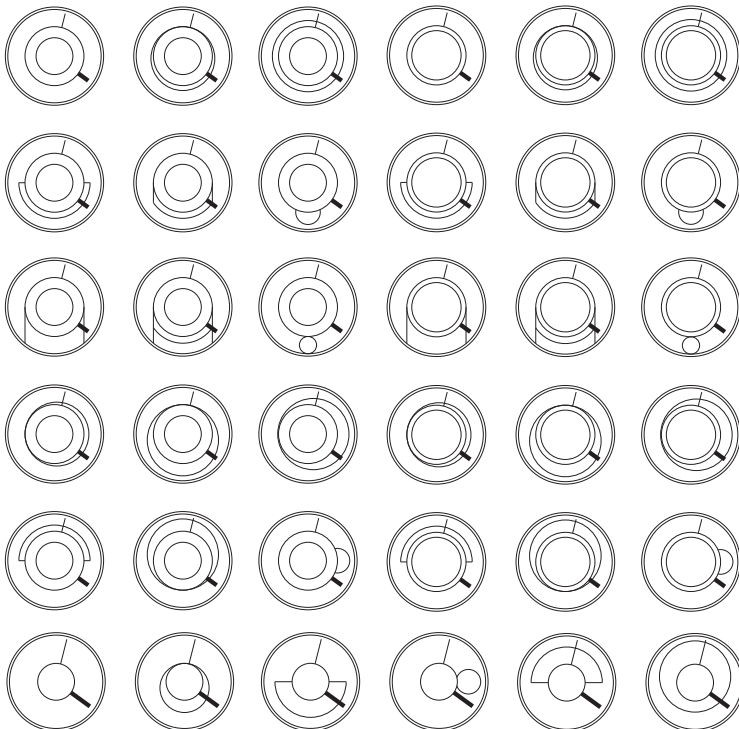
WATCH DESIGN: ideation



concept refinement

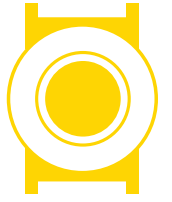
Soon after initial ideation I quickly moved to vector drawings as a way to test a large amount of configurations and proportions.

After a variety of cases/faces were explored, I also experimented with various lug styles and narrowed the forms down to three.



WATCH DESIGN

3D printed model

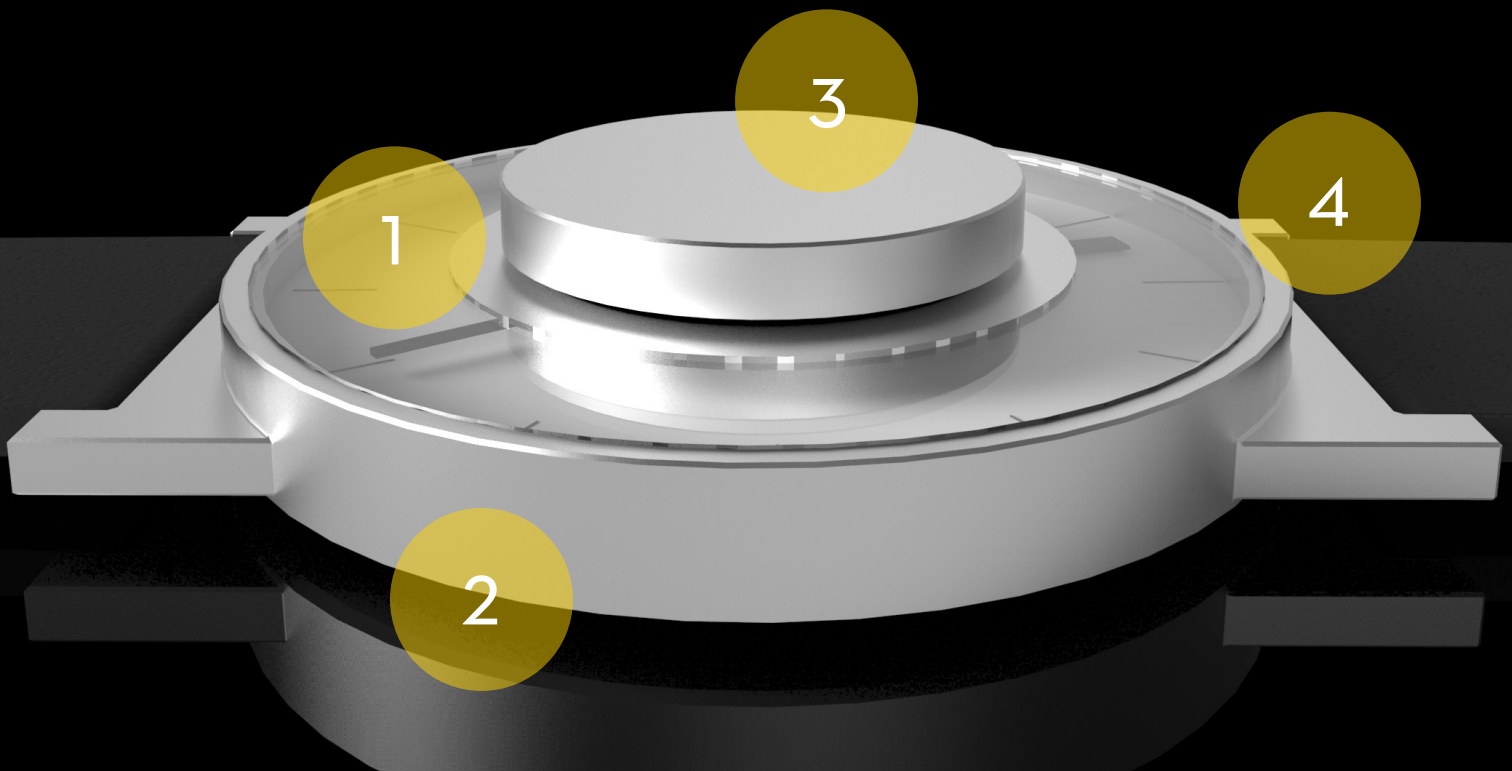


Using solidworks and 3D printing as a form of rapid prototyping, the final design was printed, cleaned, sanded and assembled. Acrylic was then laser cut to simulate the watch crystal, and plastic hands were cut and placed inside the final case.



WATCH DESIGN:

product features



1. Aluminum Scratch Plate

Protects the crystal from fingernail scratches as well as strengthening the overall radial aesthetic.

2. Machined Aluminum Case

Lightweight and durable, while aesthetically adding to the modern, minimalist look of the design.

3. Top Mounted Crown

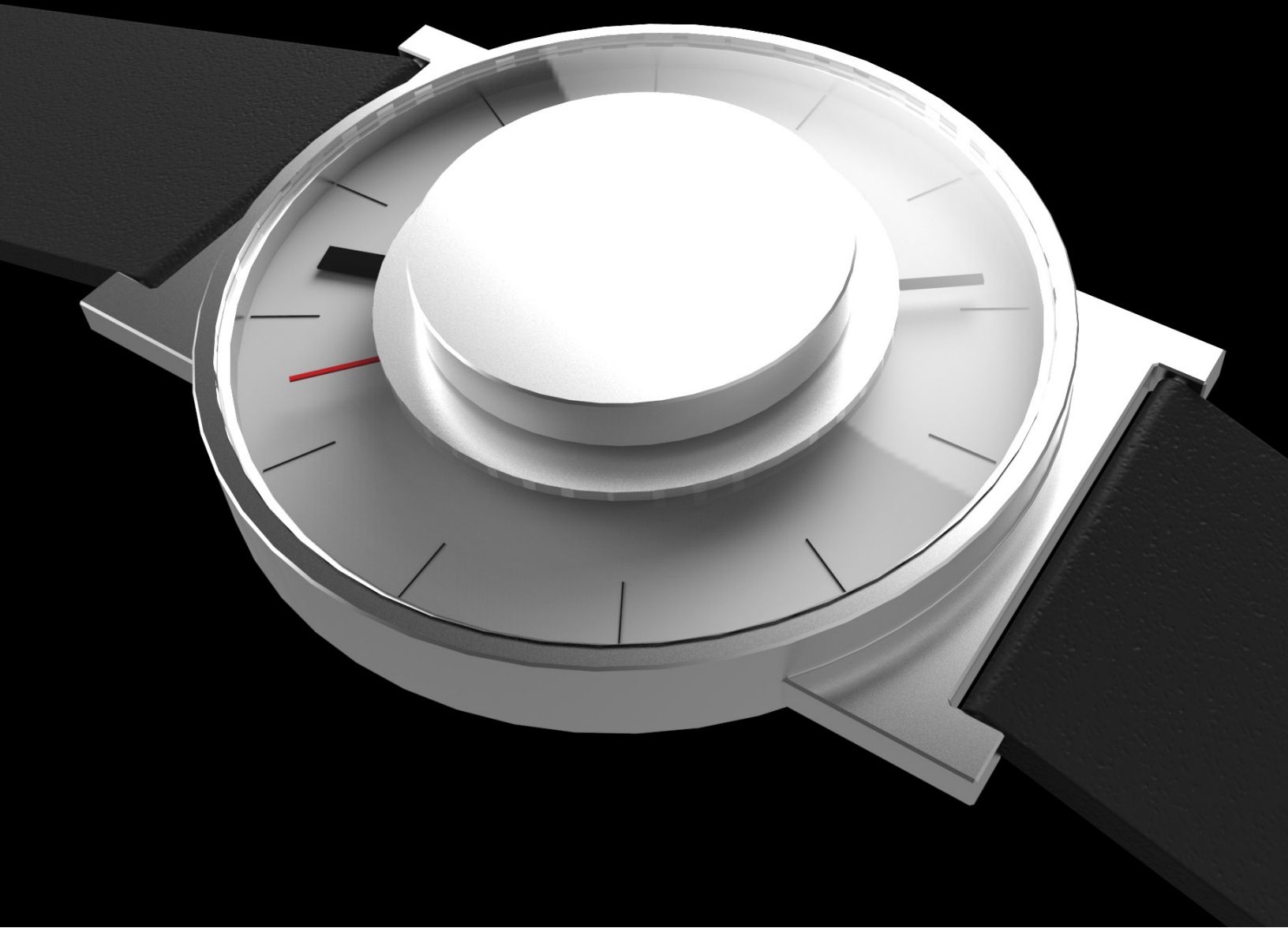
Using a top mounted dial to set the watch allows the user to easily relate the movement of time to the direction they turn the dial.

4. Leather Band

Adds unique character and a level of softness to the otherwise hard look of the crisp aluminum.

WATCH DESIGN:

final concept



about the watch

The final design of the watch aims to better integrate the user and the timepiece by directly associating the time-setting function with the clockwise movement of time.

Aesthetically, the watch concept is minimal, modern, and geometric, and exaggerates the idea of analog timekeeping with one of the most recognized mechanical controls: the dial.