Description:
The “Smart Opt” is a fully adjustable soldering base station.

Design: “Smart Opt”
"Smart Opt" Soldering Station

Soldering Station: Soldering Iron Design

To Activate the interchangeable tips, push tool down into compartment, quarter twist of tool disengages the tip and leaves it in the compartment for next use.

Evolution of the Tool Soldering Iron

Pull tool out of compartment. Tip cools down and the tool is free to grab next tool tip.

Evolution of Desoldering Iron

Vacuum pump hooks up into the back of the Soldering tool. Electrical cord runs on the side of the vacuum pump. Both cords run back into the station.

Desoldering tips

Push clamps back and the end pops up and ejects the container. With metal/glass to be removed and insert new.

Evolution of Tool Hot-Tweezers

Hot-Tweezers Tips are exchanged by flipping tool downward in compartment which pushes a spring down releasing a clip that grabs the tips and holds them in place.

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Concepts: Drawings Soldering Tools
“Smart Opt” Soldering Station

SOLDERING STATION: SILICONE TEMPLATE

High heat resistance silicone that holds the components needed to be soldered by having impressions of the final product formed into the pad to act as a template. Or the pad could have standard holes that were punched into the pad, then the user could remove punched holes in configurations that was best for them - this way templates could be mass produced.

Removing silicone template is switched with another.

Pad can rotate to allow the user the best position to solder components. Tip impressions molded into pad.

Bails point with a clamp that holds the single, double, or triple lead. Paddle buttons are not activated by the user.

Rube buttons (adjustment) allow usage to the solder station. 360 degrees to allow use of the best angle to work.
Normal Working Area:
This diagram is from Bodyspace, which demonstrates the normal.

Humanscale percentile.

Field Study: Normal Working Area
“Smart Opt” Soldering Station

Concepts: Rough Models
"SmartOpt" Soldering Station

Removable "Silicone Template Pad"
Holds the components to act as a template.

User Interface
Programmed according to individual users.

Soldering Tip Exchange System
The tip snaps in place and is ready for use.

Vents
The patterns of the vents help direct the flow of heat away from the user.

Tools
The set comes with three tools, a soldering iron, desoldering iron, and a hot tweezers.
WAHL® | PHASE.three 05.07
FINAL PRESENTATION
Ethan Martinez. Matthew Wiegand. Natalie Schraufnagel
Milwaukee Institute of Art and Design
Primary Research: Hair Cutting Experience

Ethan Martinez. Matthew Wiegand. Natalie Schraufnagel
Milwaukee Institute of Art and Design
Concept Roughs Foam Studies

Ethan Martinez. Matthew Wiegand. Natalie Schraufnagel
Milwaukee Institute of Art and Design
Armadillo

Ergonomic grip
Counter weight
Oil reservoir

Innovation

Front mounted oil reservoir oils blades with the push of a button.
Arched body conforms to a wide range of hand sizes.
Rear casing houses extra weight providing a balanced grip.

Rendering Final Direction

Ethan Martinez. Matthew Wiegand. Natalie Schraufnagel
Milwaukee Institute of Art and Design

WAHL® PHASE.three 05.07
CONCEPT DEVELOPMENT
Modern day survival kit.

Problem statement:
Expensive gadgets and other valuable possessions warrant a higher level of security than velcro and zippers provide.
Case features

- **Rubber sealing strip**: Ensures a water tight closure
- **LED lights**: Adjustable intensity
- **Elastic band and mesh pocket**: Removable for added storage height
- **Retractable cord housing**: Additional locking feature
Master Lock TRANSIT

MIAD/MasterLock Storage security concept challenge

Retracting cable

Step 1: Pull Cable Tab
Step 2: Wrap Around Stationary Object
Step 3: Connect to Lock

Ethan Martinez. Natalie Schraunagel. MIAD 2008
Sculptural Designer
Joined a 5 member team to produce a 2012 Chevrolet concept vehicle for General Motors.

Internship: 2012 General Motors Concept Vehicle
First Presentation: 2012 General Motors Concept Vehicle
2012 General Motors Concept Vehicle

Evolution
- Muscular car to family car

Exterior
- Fast hatch vehicle concept.
- Sliding rear passenger door.

Interior
- Gradient of color
- Retracting center console

Environment
- Embracing Nature
  - Open with no B-pillar
  - Moving IP

Second Presentation: 2012 General Motors Concept Vehicle
Tire Development: 2012 General Motors Concept Vehicle
Color and Trim: 2012 General Motors Concept Vehicle
2012 General Motors Concept Vehicle

- Recessed Lights
- Panoramic Roof
- B-Pillar/Sliding
- Rolling Trunk
- Bold Heritage
- Glass Rocker
- Recessed Exhaust

Model: 2012 General Motors Concept Vehicle
Auto Show: 2012 General Motors Concept Vehicle
FAMILY FOOD PYRAMID
SENIOR PROJECT

Grains
Bread, Cereal
Rice & Pasta Group
6-11 SERVINGS

Vegetables

Fruits

Dairy

Proteins

Sweets

Fats, Oils, Treats & Sweets Group
USE SPARINGLY
Sweets Group is connected to Physical Activity

Vegetable Group
3-5 SERVINGS

Fruit Group
2-4 SERVINGS

Milk, Yogurt & Cheese Group
2-3 SERVINGS

Meat, Poultry, Fish, Dry Beans, Eggs & Nuts Group
2-3 SERVINGS

Source: Roger's New Millennium™ Thesaurus, First Edition (v 1.3.1)
CHARGER PLATE

REALIZING THAT I BROKE IT

OH WELL,
I NEED EIGHT MORE NOW
THANK YOU MJAD IDSA