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## 2012 Industrial Design Final Year Studio

Never Stand Still

Faculty of Built Environment

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Alumni Profile

I congratulate all the students who have completed their degree program and now become our alumni.

This catalogue conveys through selected study themes and projects from our final year studios something about the unique student experience offered at UNSW Built Environment along with the outstanding skills of our students and academic staff.

UNSW Built Environment has a developing reputation as a knowledge leader in the design, delivery and management of the C21st city and its elements.

Our research is directly relevant to the development of knowledge within built environment professions and underpins a process of continuous improvement to curriculum material. Embedded in the curriculum are core values centered on the thinking and practices required to deliver sustainable urban environments of deep cultural value. Design education in all of its many forms, including understanding evidence-based design processes is at the centre of all UNSW BE degree programs. This is complemented by the development of discipline knowledge with interdisciplinary design and research orientated projects aligned with advanced contemporary practices in industry.



This year has been busy at UNSW BE. We have continued the review and development of our curriculum including the introduction of two new interdisciplinary streams for first and third year bachelor degree programs and are introducing a new post professional degree program in urban policy and strategy. We have also added Design Research to our four funded research clusters (Emergent Digital Technologies, People and Places, Sustainable Design and Development and Urban Typologies). Finally, the CRC Low Carbon Living international research project led by our faculty commenced its work this year in collaboration with partners in industry and other universities.

I wish every graduate a successful and satisfying career. In many respects, our relationship is just beginning. As you travel the world through your work you will meet many alumni and make special bonds of lasting value. We look forward to your ongoing participation in the life of our university and the mutual benefits this brings.

**Professor Alec Tzannes**  
Dean UNSW Built Environment

Built Environment and its 2012 graduating students thank LuminoCITY's supporters for their generous contributions.

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Industrial Design Bronze Supporters



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Andre Biet  
Industrial Design Raffle Donors and Supporters  
JSB Lighting

Lend Lease is proud to continue its long-time relationship with UNSW Faculty of Built Environment through the sponsorship of LuminoCITY. In creating an event like this, the Faculty delivers a forum to challenge the boundaries of the modern landscape and allows our leaders of the future to showcase how 21st century communities can live sustainably and meet the demands of the modern world.

Lend Lease's aspiration to be a sustainable organisation and an industry leader means we constantly search for ideas that will help us to deliver the improved social, environmental and economic performance of our businesses and of our industry more broadly.

In sponsoring LuminoCITY, we are supporting the Faculty of the Built Environment to achieve their vision to create a forum to imagine, test and debate ideas about the 21st century city.

Throughout this event and graduating student exhibition, I encourage the thought leadership and vigorous debate that is required to deliver on the vision that LuminoCITY seeks to achieve. Knowledge knows no boundaries and it is our universities and their students that provide a mechanism to allow communities to grow and prosper through improved solutions, products and services. Continued knowledge investment in our universities is vital to equip society to creatively respond to challenges that are impacting all our lives at an ever increasing rate.

Anticipating the thought provoking research and exhibitions of all the contributors, but in particular that of the graduating class, I would like to congratulate all participants who will undoubtedly assist in shaping the cities of tomorrow.

Lend Lease looks forward to the continued relationship with UNSW Built Environment and LuminoCITY to create new ideas that deliver our vision in delivering the best places.



**Murray Coleman OAM**  
Managing Director, Australia  
Project Management and Construction  
Lend Lease

The 2012 Industrial Design end of year exhibition is a combined Faculty event taking place in the large historic Pier 2/3 at Walsh Bay. The scale of the exhibition and breadth of student work on show is impressive. This ambitious and audacious undertaking is reflective of the qualities that many of our students have embraced. Pushing boundaries, experimenting with materials, form, process and technology within their own design work and with the very display system specifically developed for the exhibition. Guided by course convener and the exhibition designer Andrew Fowkes, the work on display offers a glimpse of the talent and skills our students have accomplished during their time studying Industrial Design at UNSW.

This catalogue offers a profile of each student's work. This includes a focus upon their final year major project, as well as selected design work from other years. It offers an opportunity to capture, beyond the graduate exhibition, the knowledge and skills of our graduating students as emergent Industrial Designers and demonstrates the maturity at the culmination of four years of undergraduate study at UNSW.

I wish to thank my many colleagues, full and part-time academic and professional staff, and our visiting 'sessional' staff for their contribution over the past year. In addition, a big thank you and congratulations is due to the exhibiting students who have shown great resolve and enthusiasm in giving their best.



**Dr Miles Park**  
Program Director | Industrial Design

"THE SCALE OF  
THE EXHIBITION AND  
BREADTH OF STUDENT  
WORK ON SHOW IS  
IMPRESSIONING."

The industrial design program has over the last two decades carefully designed a teaching structure that delivers, a well-rounded and demanding course that enables the students to address the rapidly changing technology boundaries of the twenty-first century.

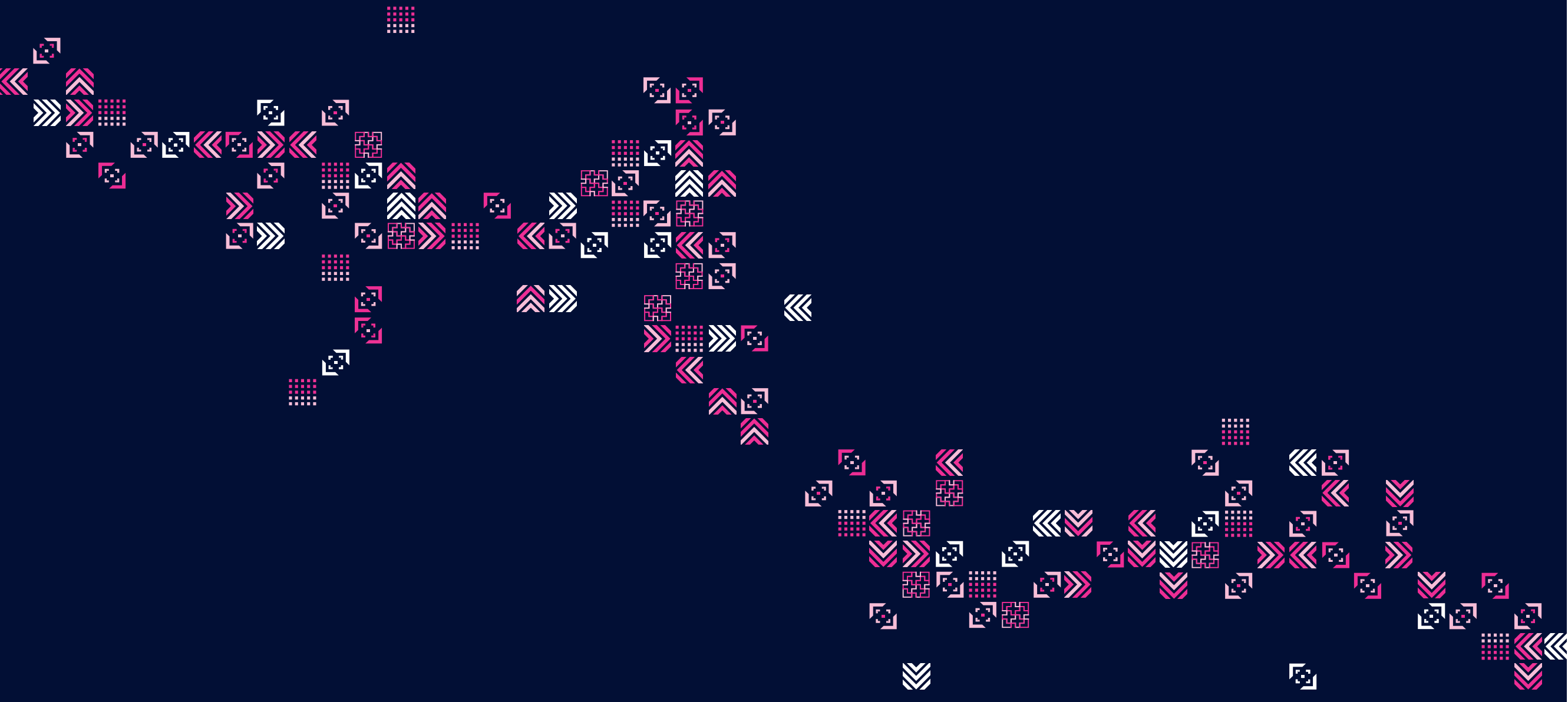
The program takes the students on a steady but steep learning curve about everyday mass-produced items. The year one projects address domestic objects and explore their design function, design history, communication and the basic fundamentals of design. The student in take onboard ergonomics, environmental considerations and marketing which assists in developing more user friendly and appropriate outcomes. In the third year, students are developing an understanding of consumer behavior, material and technology and are applying these new skills to more international issues in studio.

Year four is considered to be the bridging year whereby the career direction and anticipated step into the 'real world' can be shaped by a chosen project topic. The students are required to focus on a project territory that becomes the basis of their final major project, their portfolio piece. The research topics range from Metropolitan, Domestic, Office, Medical, Transport through to Sport. Within these fields the student must identify an unmet need or insight that can be addressed with a feasible degree of design intervention.

All final projects are anticipated to be inherently well rounded, visceral and present a solution that suit the ever-changing sophistication of the users needs and aspirations. All of the skills and abilities mastered in previous years teaching are delivered to a professional standard that assists the young graduate in achieving a transition towards their chosen design careers. The students exhibiting in this year's catalogue are the final culmination of this teaching journey. As studio convener I would like to congratulate the graduates on successfully completing the Program. I wish them well in their future career and look forward to their contribution to Australian design culture.



**Andrew Fowkes**  
Year 4 Convener & Lecturer



**EVEN. Electric Solar Car.**

This concept car is inspired by the UNSW's Solar Car for The World Solar Challenge. The World Solar Challenge is a race for solar cars across Australia, from Darwin to Adelaide. EVEN has taken features from the race-car and turned it in to something that would be interesting for the general public.

My focus in this project was the visual language of the car and the user in interaction with the car. The car should adapt to the user, rather than the user adapting to the car.

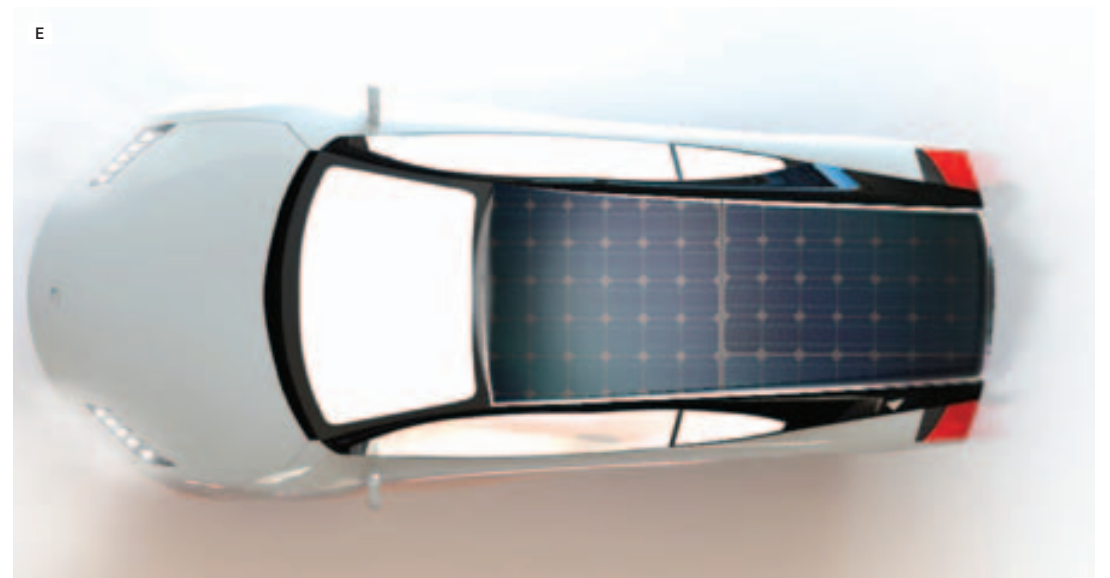
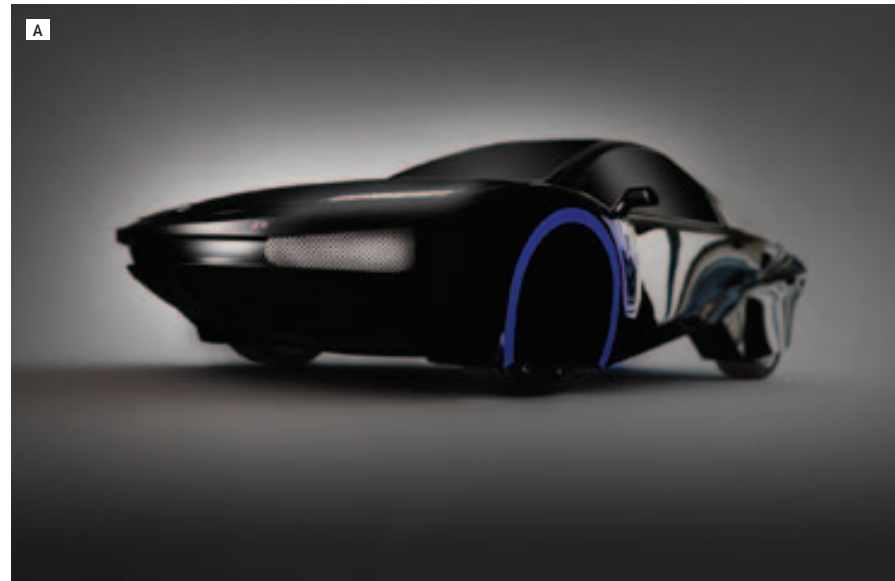
There are a lot of electrical cars on the market, but most of them have a visual language that says friendly and convenient. EVEN is inspired by a race car, so I have kept the sporty, aerodynamic look, with a little bit of an attitude. EVEN is the car for the person that wants to have a cool car, even if they care about the environment.

**Overall Dimensions**

- 4500mm(L) x 1650mm(W) x 1300mm(H)

**Material**

- Carbon fibre chassis re-enforced with Kevlar in some places, Lithium Ion batteries, in-wheel electric DC motor, regenerative braking system, brake by wire





Anne Karen Aanonli

- A. Ergonomic Toilet
- B. Wheel Chair for Guatemala
- C. Electric Car for 2020 (group project)
- D. Dish Brush
- E. E: Hand Held Grass Shear



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## Lumina Apparel

*"Our clothes are an essential part of how we express ourselves. There should be no need to compromise".*

Lumina is a jacket for females who enjoy the convenience of riding the scooter as well as being fashion conscious and safety oriented. In contrast to classic motorcycle jackets, Lumina looks and feels just like a normal jacket.

Lumina has integrated LEDs to increase the rider's conspicuity. Studies have found that the majority of riders' collisions are the result of other vehicles violating the riders' right of way. Drivers tend to look, but fail to see, so-called LBFTS accidents.

Lumina has D3O protectors which provide better flexibility and movement unlike conventional motorcycle apparel.

The outer layer of the jacket has a wind and waterproof membrane from Schoeller. The membrane reacts to changes in temperature and creates a more pleasant body climate. Lumina is also treated with a naturally self-cleaning finish by means of nanotechnology, which

allows the user to wash the garment less frequently. The second layer is a nylon 600 denier abrasion resistant fabric.

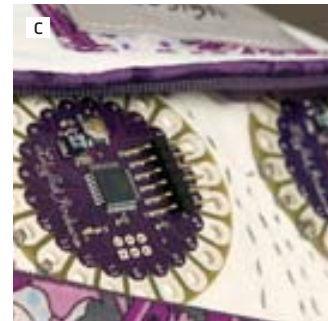
Lumina is the first jacket that embraces the importance of primary safety as well as secondary safety by merging the up-and-coming development of e-wearables with intelligent textile technology and fashion consciousness.

### Sizes

- XS to 3XL

### Material

- Water and windproof membrane
- Naturally self-cleaning finish
- D3O technology
- Manufacture: Laser cutter
- Computer controlled assembly line
- Injection moulding



- A. Front  
 B. D3O protectors for shoulders, elbows and back.  
 C. Lilypad microcontroller for wearables  
 D. Riding at night  
 E. Red in the back, white in the front.

- A. Bathroom tap with touch control
- B. Bathroom tap in environment
- C. Portable grill
- D. Waste disposal container  
(group project of 6 students)
- E. Handheld vacuum cleaner



## S.LED - Safety LED

S.LED is a portable, battery and/or mains powered LED safety bollard and message board/traffic light system. S.LED is easily deployed by a single person in hazardous situations which warns drivers of an incident or changed traffic conditions ahead.

Small enough to be carried in the boot of any car, S.LED is the new standard in portable traffic messaging and signaling equipment.

When visibility is key, S.LED provides security and safety.

### Approx. dim

- 1400H x 750W

### Material

- Injection moulded glass reinforced PBT





- A. USB drive with cork and acrylic packaging
- B. Robot USB drive
- C. Plywood and steel lamp with upcycled industrial globe
- D. Plywood and steel lamp



**Forcite**

Forcite offers motorcycle Police officers a personalised, lightweight and integrated communication helmet. The helmet enables live communication to other emergency services for the officer on and off the bike.

This helmet includes completely new features, such as a rapid response heads up display with alert categories for car registration infringements based upon a micro AMPR system, an automatic radio channel and frequency tuner, and GPS integration and the first semi modular visor system that increases vision and impact safety by over 56%.

The external design of the helmet expresses a non-threatening impression. This allows for an authoritative but friendly form which was created by expressing human features of the head in the outer shell. For example the ears forms become dominant on the sides as a gesture to show that the officer is attentive and listening. This is complemented by a voice amplifier/speaker to ensure

clear communication. Furthermore the large visor reveals more of the officer's face in a non-threatening manner.

The engineering of this helmet ensures it is super lightweight and balanced. The outer shell is constructed out of AIM+ Grade Kevlar Composite. The inner is a Kevlar composite gel that moulds to the riders head over time. Overall this helmet will make policing our roads safer and ultimately safer.

**Overall Dimensions**

- 287mm x 387mm

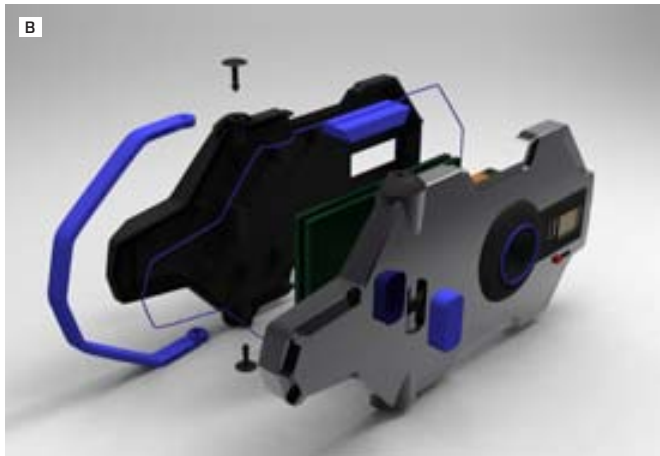
**Material**

- Composite Kevlar AIM+



A. Forcite visor  
 B. Forcite exploded view  
 C. Forcite in context  
 D. Forcite hero shot

- A. Solo iron frypans
- B. Storm disposable camera
- C. Suave shave brush
- D. Leaflet shower ( Reece finalist )
- E. 3m Series 2 Gas mask





## Musia

Musia is a wearable sensory stimulation device that provides the user with an enriched musical experience through the use of vibrotactile stimulation. Aimed for those with impaired hearing, Musia aims to provide users with the ability to experience the emotions and memories associated with music without the need for hearing.

Musia works by receiving audio input (by means of 1/4" jack input or inbuilt microphone unit inputs) and processing and transmitting this input as vibrotactile output through the use of a system of frequency-mapped vibrating motors placed along the user's shoulder and back neural pathways. This transmission provides a tactile map of the audio input, sending treble across the top of the unit and bass through the bottom, allowing the user to feel the music and it's respective parts, providing an enhanced musical enjoyment experience.

Wiring is sealed between two layers of neoprene, which acts to pin the vibration units close to the skin and allow maximum contact. The wiring is water-sealed and capped, and all electronic componentry is easily removed from the vest, allowing the vest to be completely washable when necessary.

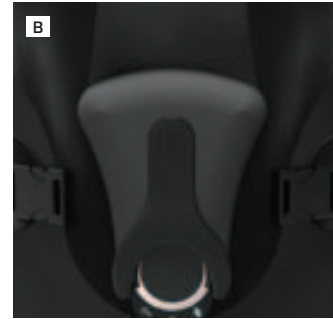
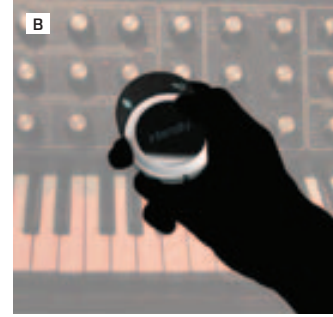
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**Overall Dimensions**

- 1080mm(H) x 620mm(W) x 2mm(D)

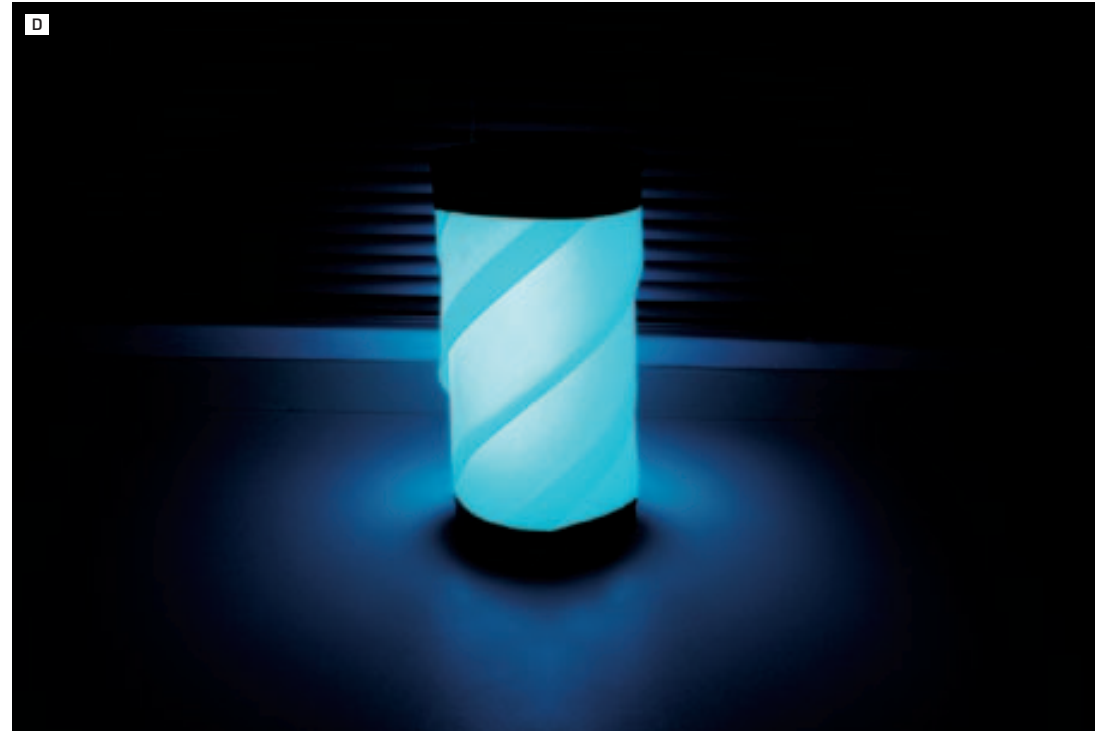
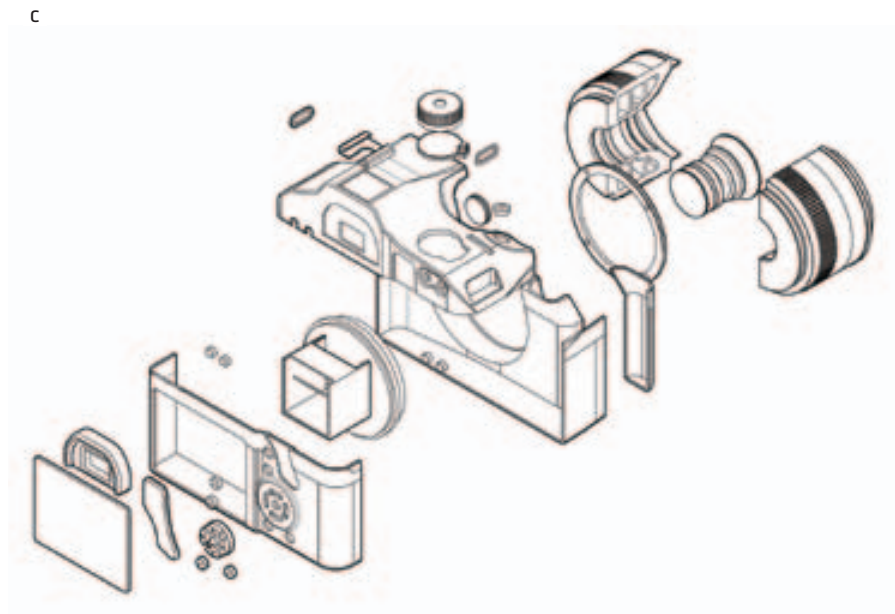
**Material**

- neoprene vest with vibrotactile sensory stimulation system (silicone sealed vibration motors) and removable electronic control unit (polycarbonate/thermoplastic elastomer controller unit).
- 



- 
- A. Musia vibrotactile devices.  
 B. Vest componentry including removable microphone.  
 C. Removable battery and processor units.  
 D. Handheld vest controller unit with ergonomic grip.  
 E. Controller dock with retractable controller unit.

- A. Uno Shower
- B. Stak Shelves
- C. Exploded Drawing
- D. Molded Lamp
- E. Omega Bartool



ArthroDoc is a self-operated domestic pain relief system designed for patients suffering from arthritic pain or forms of musculoskeletal pain. The unit incorporates therapeutic technologies of Low-level laser therapy (LLLT) and Extracorporeal shockwave therapy (ESWT) to deliver temporary pain relief and condition retardation to the patient, as well as providing remote supervision and safe operation guidance.

To ensure each individual patient receives the correct machine outputs for treatment, the unit relies on an Internet connection via a computing device such as a personal computer or smart tablet. The computing device is then synchronized to their doctor, practitioner or caretaker's eHealth cloud server and the patient's treatment schedules and prescriptions are all controlled and updated remotely by the assigned professional. While using ArthroDoc a patient is guided by instructional videos synched from the unit to the computer or tablet. The user then

applies the assigned preset treatment dosage with the handheld applicator and will experience pain relief in the affected skeletal area. The patient once again will regain pain free mobility temporarily and perform daily tasks again. By allowing patients to treat themselves in their own home, ArthroDoc will help ease the congestion of patient flow in clinics as well as lowering expenditure on the health system.

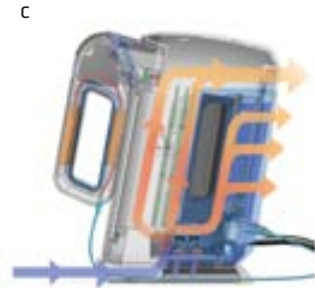
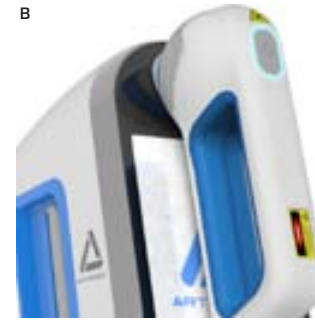
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#### Overall Dimensions

- 272mm(H) x 118mm(W) x 218mm(D)

#### Material

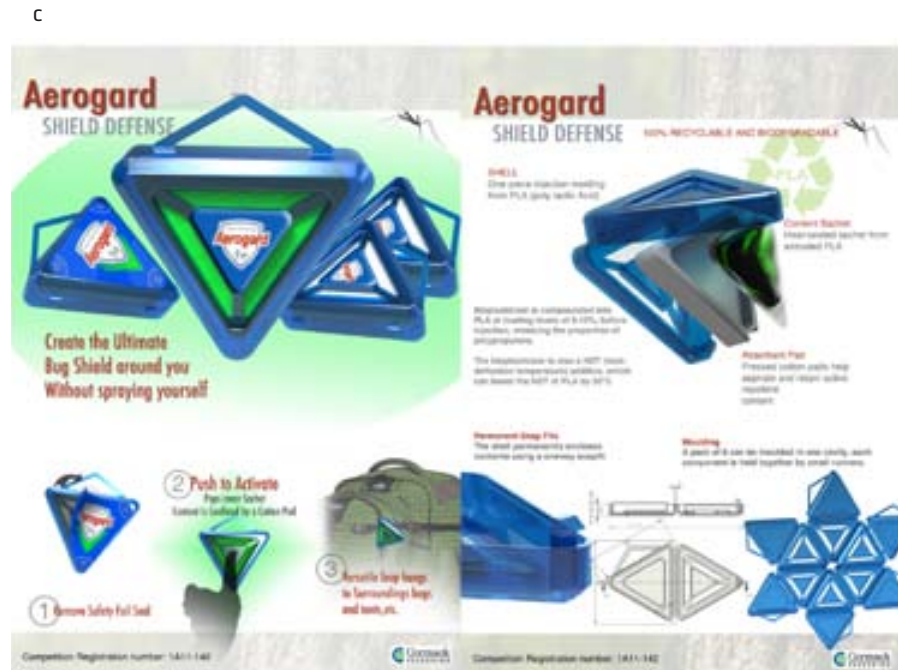
- ABS, PC, Silicone
- 



- 
- A. Undocking the handheld applicator
  - B. Unit in standby
  - C. Cooling system and chassis design
  - D. Connectivity with computing devices
  - E. Patient using Arthrodoc



- A. Form studies for Modular tress device
- B. Visual Identity, IEA 2015 concept
- C. Cormack Innovation award 2011, Highly commended
- D. Shock, Extreme Snowboarding camera
- E. Eclipse, Microbubbles shower system



Email: jchow16880@gmail.com  
 Phone: 04222 491 323  
 URL: http://www.coroflot.com/ignitestudios



## Scoot2go

Scoot2go is a system that frees the user from the long waits for assistance as well as providing them the independence of travelling through the airport in their own time. This gives the user a sense of relief, knowing that they do not have to walk the long distances from check-in to gate. It is an easy to use product that does not carry the “disability” stigma, and is in line with current bicycle and car share trends.

It is also beneficial to airlines, as this product frees up their already stretched staff, and allows them to focus on users with more serious conditions, who are often competing for help with users that could potentially use Scoot2go.

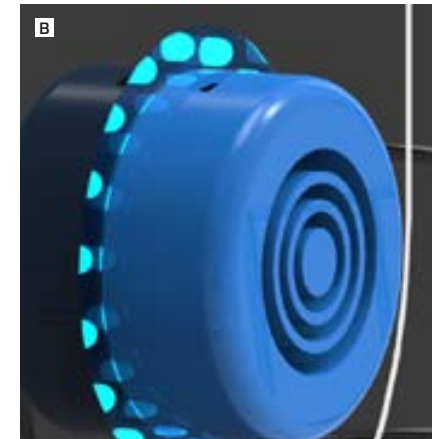
Scoot2go can also be adapted to other areas, including hospitals, shopping malls, museums and even universities.

### Overall Dimensions

- 1885mm(H) x 5.5mm(W) x 120mm(D)

### Material

- stainless steel, polycarbonate, ABS



A. Scoot2go  
 B. Charger  
 C. Interface  
 D. Scoot2go  
 E. Scoot2go in context



- A. Sheet metal lights- model
- B. "Stack"
- C. Miele inspired Range hood
- D. "Mirage" bathroom unit
- E. "RollEzy" ergonomic pool chlorine bottle





## Ox Hot Box

The Ox Hot Box is a portable heat controlled food canteen designed for people who work in various locations that have access to electricity but not kitchen facilities such as builders, plumbers and electricians. The Ox has two 650mL food containers, a sandwich press that can fit two sandwiches and an insulated section to house cool beverages and food.

The Ox diversifies the lunch market by enabling food to be kept cool and heated in one portable product. This expands the possibilities of food that can be taken for lunch. With the Ox Hot Box users are able to expand their lunch repertoire to toasted sandwiches, leftovers, pastas and soups etc.

The two removable containers are warmed via silicone heaters that are housed in between the container walls. These containers can be filled the previous night and kept in the fridge. Before leaving for work the containers are placed in the Ox base.

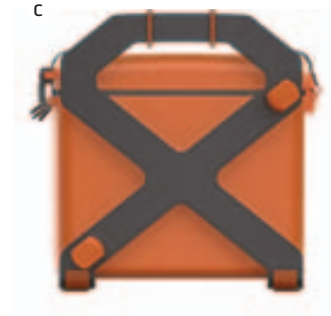
The sandwich press can also be pre-packed with sandwiches the night before and place in the Ox container the next day before work.

The Ox Hot Box fills the market need by expanding on the possibilities of lunch brought from home while making it convenient for the user.

### Overall Dimensions

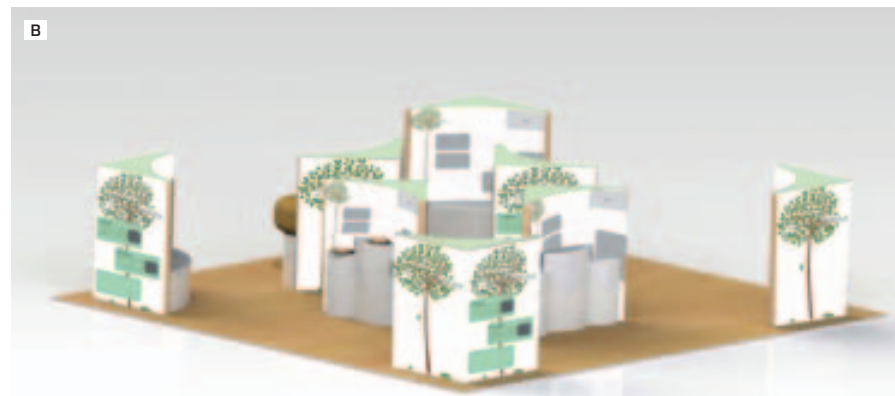
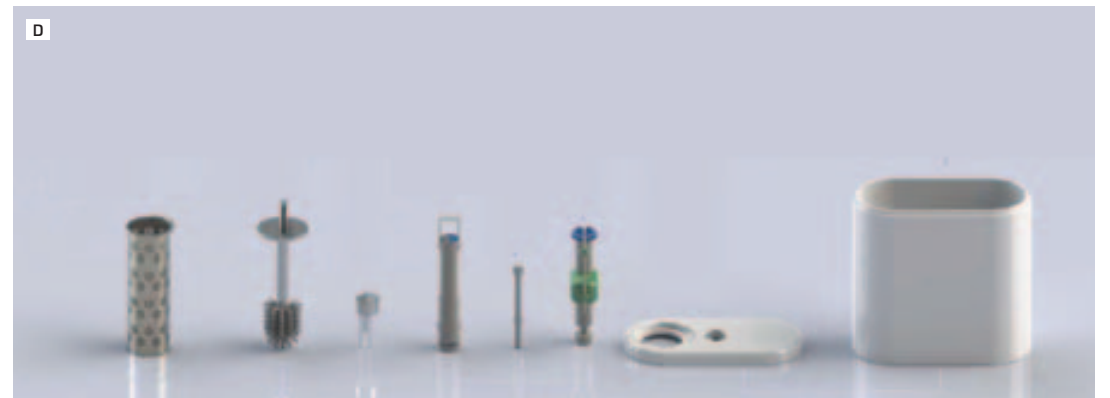
- 240mm x 400mm x 200mm

Email [pip.connolly@gmail.com](mailto:pip.connolly@gmail.com)



- A. Ox Hot Box Front Elevation  
 B. Clip detail  
 C. Side elevation  
 D. Container Exploded View  
 E. Ox in Use

- A. Akta-Vite Packaging Redesign
- B. Smart Stuff Exhibition
- C. Concealium – Integrated Toilet Brush
- D. Concealium – Exploded View
- E. Lonely Planet Exhibition Stand



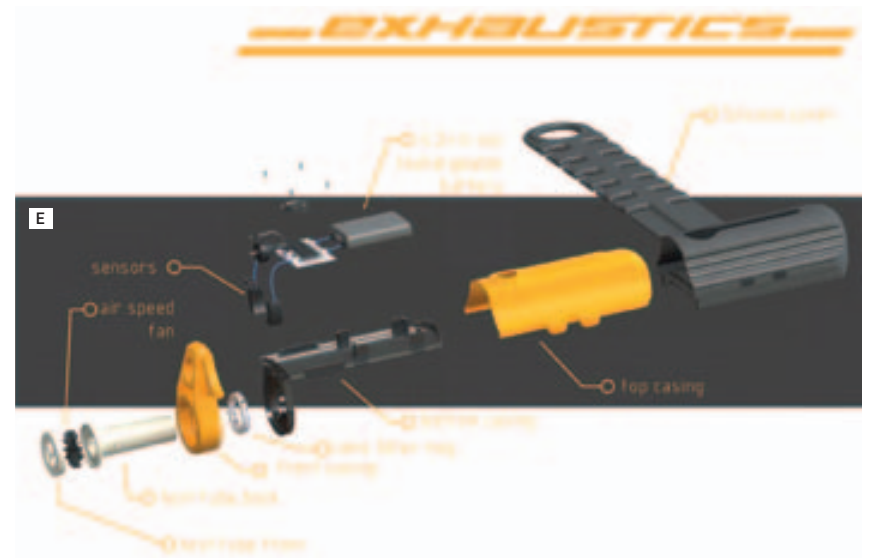
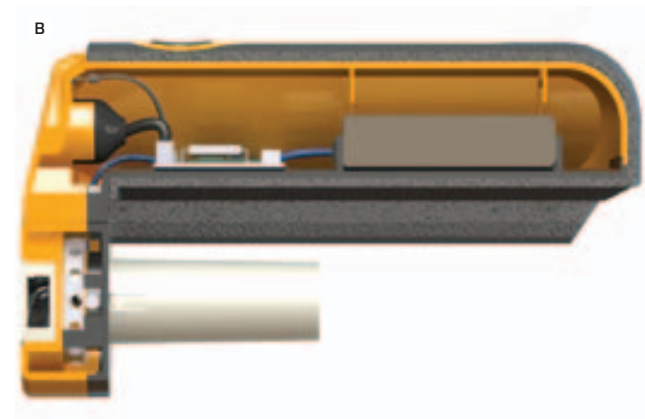
**Exhaustics**

Exhaustics is a two part analysis and diagnostics system for cars. You could say it is a health check for your car. It comprises of an On Board Diagnostics (OBD) scanner and an Exhaust Gas Analyser (EGA). The OBD scanner retrieves all the data from a vehicle's on board computer systems which includes things like trouble codes, Air/Fuel ratios, oxygen sensors, fuel trim, basically any information from all the systems of a vehicle. The EGA unit is the first real world (on road) analyser unit and also one of the few with government certification making mandatory emissions checks possible. It takes readings of the five exhaust gases; Carbon Monoxide, Carbon Dioxide, Oxygen, Nitrous Oxides and Carbon Particulates.

Designed to be used by mechanics and industry professionals the Exhaustics system offers high performance, comprehensive analysis of a vehicle. A lot of a mechanic's time is spent interpreting results from different tools coupled with the fact the tools themselves weren't synced. Exhaustics uses a software system to combine results from both products and the mechanic is able to customise how and what the software interprets.

**Overall Dimensions**

- 400mm x 142mm x 80mm



- A. Product Scenario
- B. Sectioned View
- C. In use – EGA strapped to exhaust
- D. Final Product
- E. Exploded Part View



- A. Miele combi-set design
- B. Miele – Touch dial detail
- C. Zephyr Body Dryer for Reece Bathroom Innovation Award
- D. Community Garden project – 1:1 working model
- E. Community Garden project - Renderings



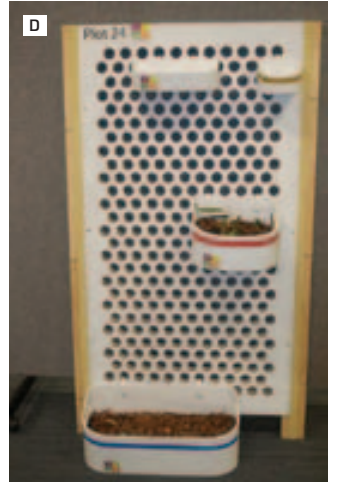
A



B



C



D



E

## Pacer Night Track

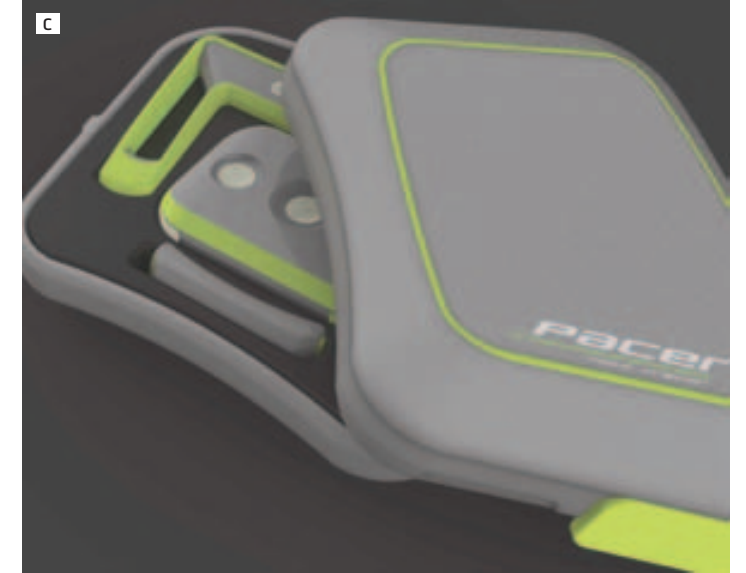
The Pacer night track is a fitness running product designed for the night time environment. Its primary purpose is to deliver optimal safety and awareness for night time runners. There is a growing interest in this fitness trend due to the overriding working conditions of many individuals. The pacer night track delivers the ideal experience for night time running. The product features focus on visibility, location, personal security, real time coaching, and an alternative safe approach to listening to music whilst running. The product includes a myriad of emerging technologies such as electroluminescent fabrics and bone conduction audio which work together to create a beneficial outcome in delivering the ideal experience within the activity. The Pacer features a GPS tracking device along with a MP3 player which communicates through to your headphones via background audible cues. The Pacer includes a carry case where all the components are left for charging with use of induction charging technology.

### Overall Dimensions

- Carry induction case  
147mm x 112mm x 55mm
- Performance monitor  
75mm x 50 mm x 20 mm
- Bone Conduction Bluetooth Headphones  
65mmx 55mm x 11mm

### Material

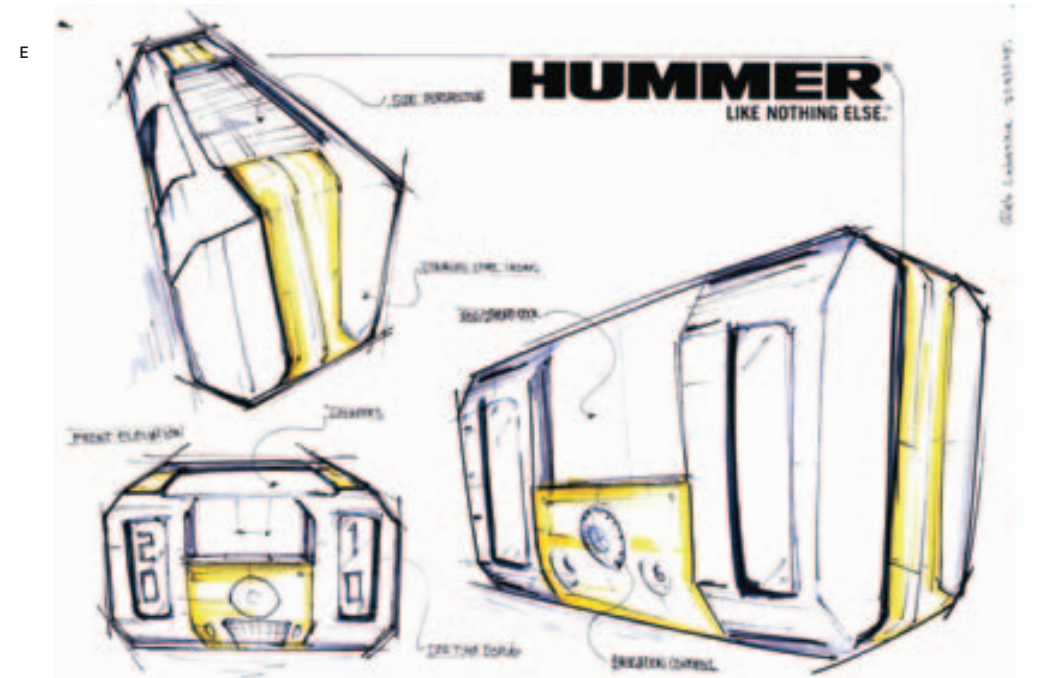
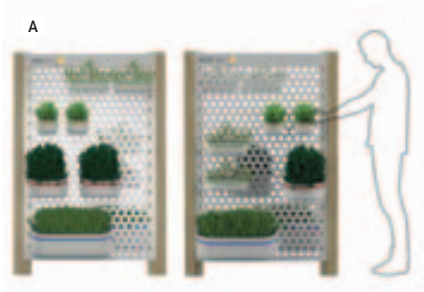
- Carry induction case,  
ABS, Injection Moulded
- Performance monitor,  
PC, Injection Moulded
- Bone Conduction  
Bluetooth Headphones  
PC, Injection moulded



- A. Headband with slip in Bluetooth bone conduction Headphones.  
 B. Performance Monitor connected to performance singlet  
 C. Induction charging carry case  
 D. Exploded view of Bone Conduction headphone.



- A. Community Gardens PSS: Vertical Garden
- B. Solid works product modelling: Nixon Headphones
- C. Miele client range hood concept
- D. Cormack Packaging: Balsamic vinegar bottle
- E. Concept sketching exercise : Hummer Speakers





## SONIM / Active Sound Cancellation Ambience

SONIM is a full-range miniature noise cancelling speaker system, which utilizes Active Sound Cancellation technology to mute the specific sound frequencies.

It accomplishes this by listening into the sounds that travels through wall and window surfaces. It processes this sound information and reproduces an out of phase 'negative' signal effectively muting the original sound. Environmental noise pollution such as road noise, or by neighbours can be attenuated

Long term exposure to environmental noise at night at levels greater than 35db can lead to health impacts. SONIM provides psychological and well-being health benefits.

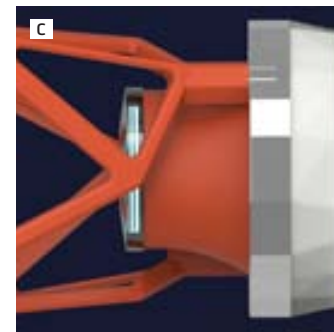
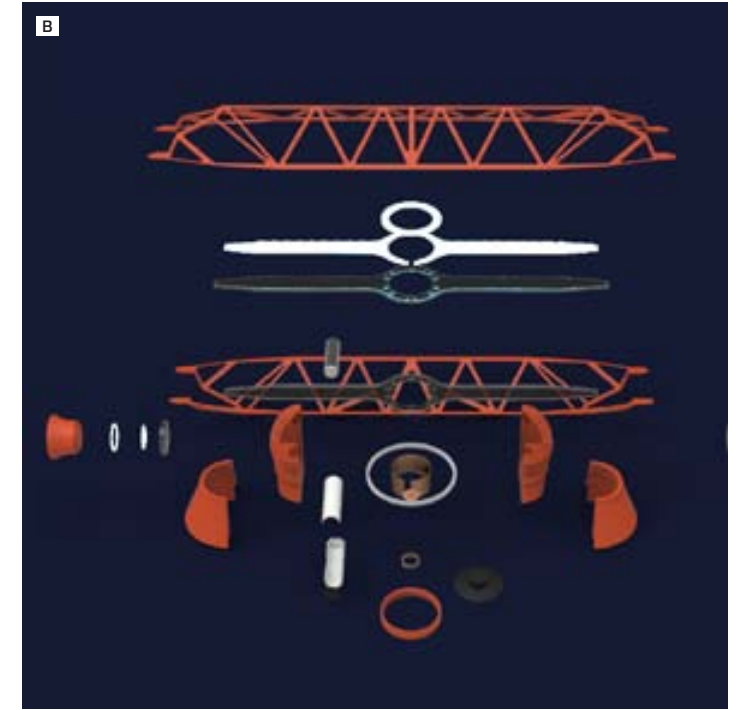
SONIM is divided into two main sub-assemblies, a vertical surface mounted speaker unit, and a remote/dock system that serves as the primary interface. SONIM bears a particular visual language derived from progressive design trends of taking its place amongst other outstanding interior accessories.

## Overall Dimensions

- 580mm x 450mm

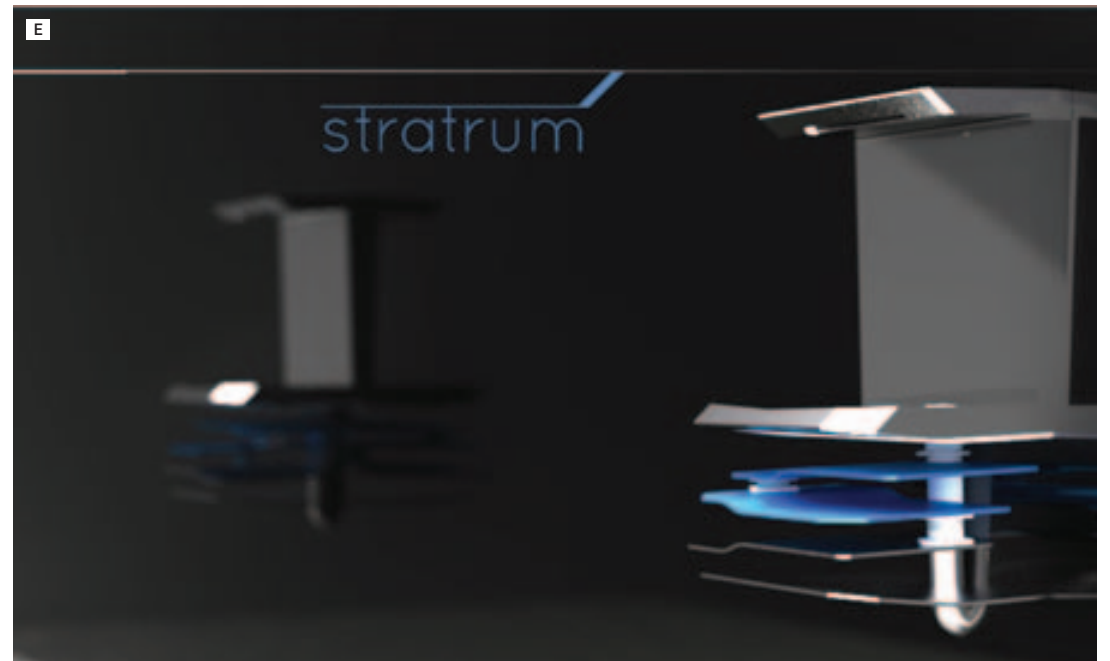
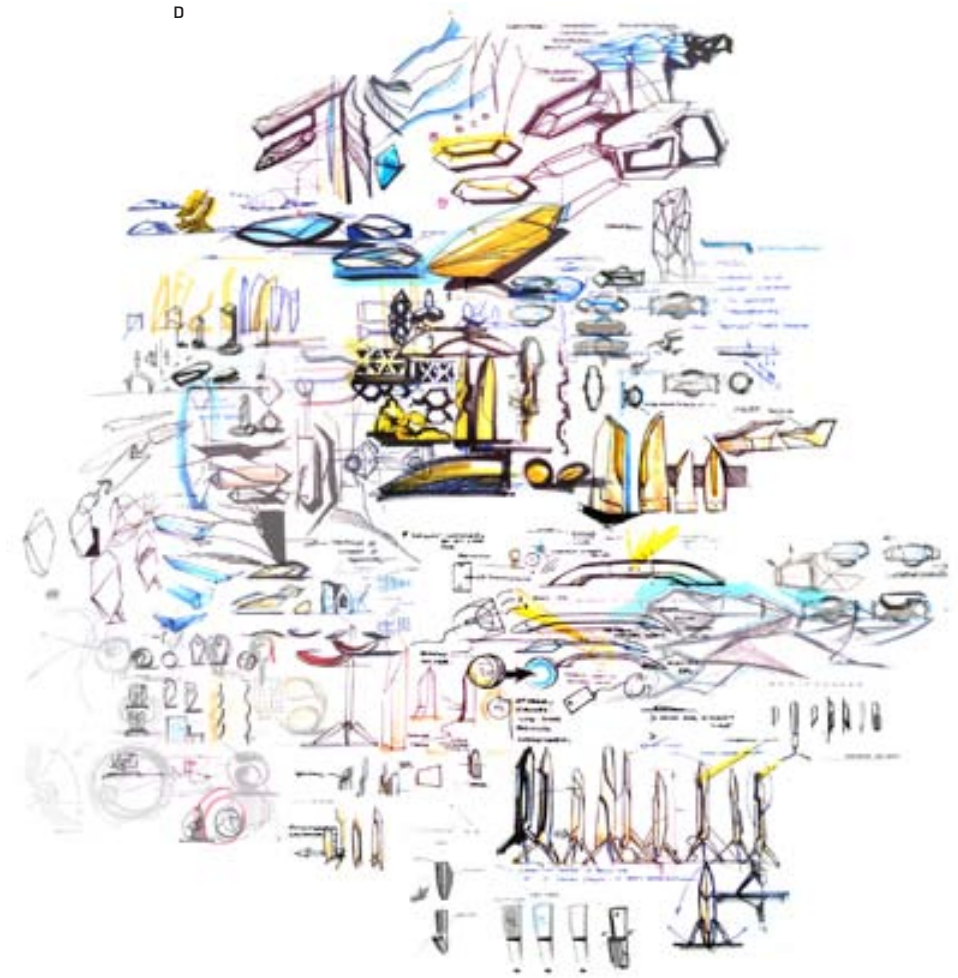
## Material

- ABS, TPE, AL



A. Active Sound Cancelling & Ambience.  
 B. Technical Components  
 C. Speaker Details in a white-cream TPE.  
 D. Frame & Chassis Detailing.

- A. Olive Oil Series Packaging
- B. Bathroom Accessory Unit Concept
- C. High-Range Oven Interface Project
- D. Development Sketch Compilation (Major Project)
- E. Stratum



## PawseyWalsy

"PawseyWalsy" means intimate friends with an animal with paws, such as dogs, in a hearty way. It is a device to entertain and calm dogs while the owners are away from home. The device allows dog owners to use their smart phones to interact with their dogs.

The automatic balls will roll around in the apartment automatically to stimulate dogs to play with them. Durable rubber is used, and is safe when dogs chew on it.

Other than that, the device contains an electronic heating diffuser. Owners can choose between an aroma diffuser or a dog pheromone diffuser depending on their needs. Aroma diffuser can rid undesirable smells of dogs, and help sustain a pleasing home environment. Dog pheromone diffuser can create a calming environment for dogs living in apartments, thus preventing them from developing

undesirable behaviours due to separation.

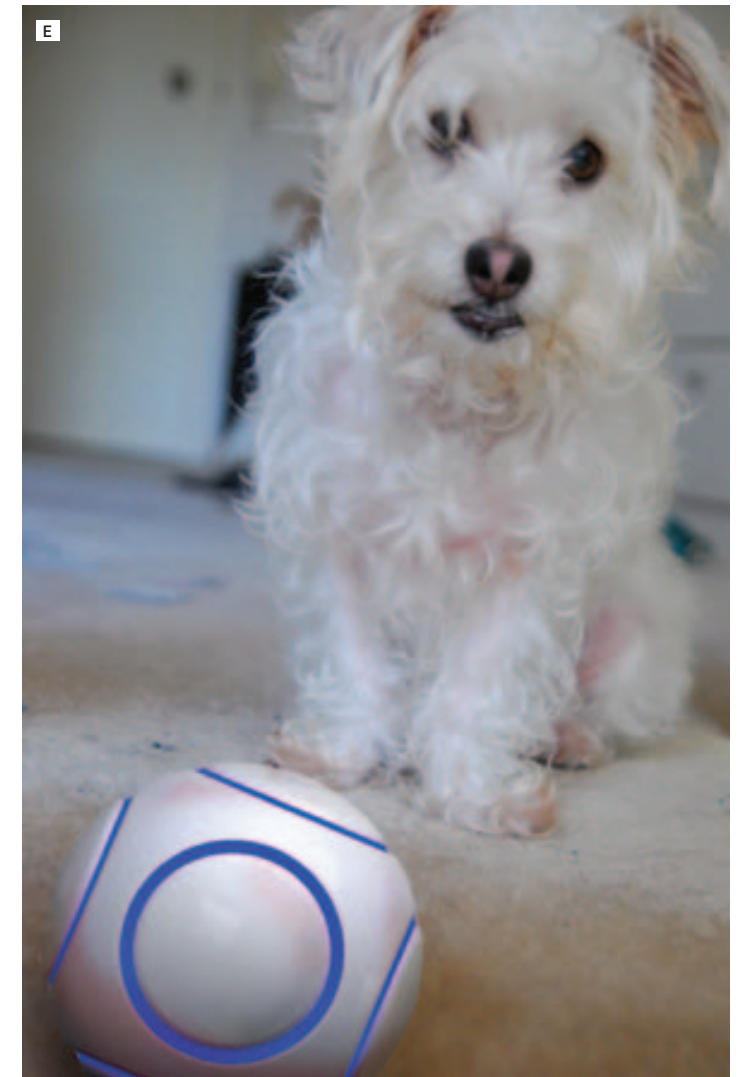
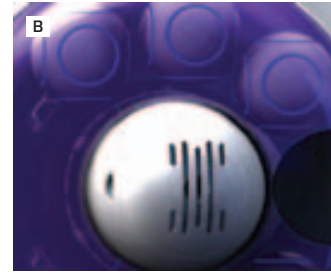
Owners can also video call their dogs from work using their smart phones. There is a camera at the front of the device, and a speaker at the back. The speaker can also be used to play the radio or music to dogs. Human voice from the radio is a great soothing tool to reduce stress from dogs when they are left alone at home.

### Overall Dimensions

- 270mm x 366mm

### Material

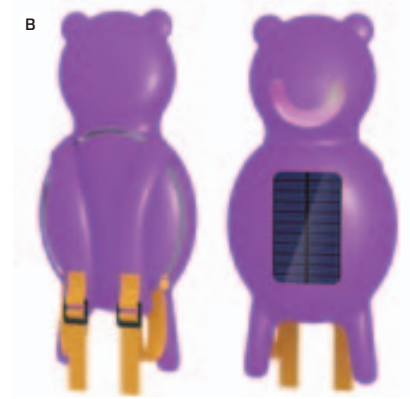
- ABS, rubber



A. Hero shot of PawseyWalsy  
 B. Top view  
 C. Back view  
 D. Close up of the diffuser  
 E. A dog playing with the moving ball



- A. A packaging design for 100s and 1000s  
 B. Solar powered backpack for kids after earthquakes  
 C. A bathtub designed to suit everyone for Reece  
 D. A flat pack colander  
 E. Speakers design for a luxury brand



## Danger Zone Indicator

Industrial and manual workers are exposed to high risks of physiological and psychological injuries caused by strenuous activities, chemical exposure and pollution. However safety devices are designed for skilled inspectors and supervisors only. The Guard Danger Zone Indicator identifies the short-term exposure limits (STEL) and the time-weighted average (TWA) of dangerous exposures in the industrial and mining work environment. It is the world's first multifunctional personal safety device for blue collar workers.

It integrates noise, vibration, ultra-violet, temperature and gas sensors (CO, CO<sub>2</sub>, O<sub>2</sub>, dust & fumes) to detect and alert the permissible exposure for the user. The device is built with necessary functions only and includes optional gas sensors, making it cost-efficient and affordable.

### Overall Dimensions

- 99mm x 37mm

### Material

- TPE & ABS, Injection Mold



- A. GUARD: Danger Zone Indicator  
 B. Attached to harness with Velcro strap  
 C. Glove-friendly buttons  
 D. Optional gas sensors  
 E. Exploded view

- A. Anti-drip condiment dispenser
- B. Anti-drip cap
- C. Rebirth: Heat-sensitive teacups
- D. 3-in-1 multi peeler
- E. Ageing ring basin





## SARCOMM

SARCOMM is an emergency communications support unit designed to be used in land based search and rescue (SAR) operations.

SAR operations occur in remote locations not covered by telecommunication networks and this limits the capacity of SAR teams to communicate. Communication is recognised as one of the most important tools used in SAR, with greater communications SAR teams conduct operations with greater consistency, performance and speed culminating in the safe recovery of the target person/s.

SARCOMM is deployed to support current communication tools (two-way radios) as well as new tools (smartphones and tablets).

Supporting two-way radios SARCOMM provides a radio repeater to overcome line-of-sight propagation issues, this is where radio waves are absorbed and stopped by obstructions (hills, mountains or buildings) between users, creating communication blind spots. Repeaters

receive radio signals and retransmit at greater signal strengths allowing them to pass over obstructions (abolishing blind spots) and travel greater distances.

Incorporating wireless internet, SARCOMM creates a wireless internet network allowing SAR teams to utilise visual technologies such as smartphones, tablets or laptops. By having an internet network SAR teams are able to communicate using visual information such as maps, photos and videos providing far greater amounts of information than audible.

### Overall Dimensions

- 335mm x 760mm

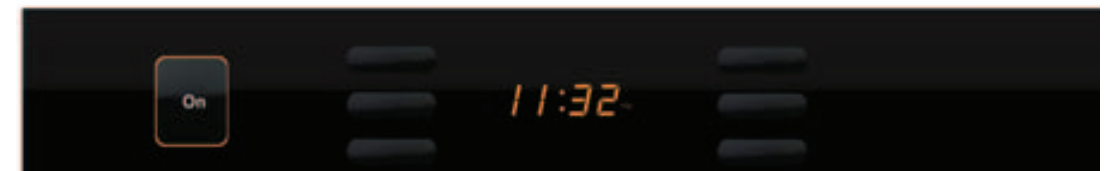
### Material

- Polypropylene Copolymer



A. SARCOMM  
 B. Side Elevation  
 C. Back Elevation  
 D. Front Elevation  
 E. Exploded Parts View

- A. Postal Presents: Wallet made from laminated recycled Magazines.
- B. UpCycling: Backpack constructed from recycled inner bike tubes.
- C. Rejuvenate: Natural & wood bathroom basin
- D. Communicar: Car pooling service system – Meeting point
- E. Miele Oven: Product range interface



## Head-worn Assisted Response + Communications System (HARC)

HARC is a lightweight communications and monitoring system aimed primarily at police and security personnel. The headset provides users with a live and direct link to secure VHF/UHF radio networks, audio-visual recording capabilities, A-GPS positioning and a 'life-support' system in the form of contactless EEG (Electroencephalography) sensor that monitors stress and fatigue levels.

Moldings of military grade glass-reinforced nylon, overshot with silicone, contain the technical package in an IP55 waterproof rated ergonomic housing. A bladder of medical grade silicone acts as the sole contact point between user and product, aiding in absorption of impact and offering adjustability for optimal positioning and comfort.

While the benefits of the system for policing are numerous, incorporated recording and centralized monitoring in a secure communications system would provide a valuable resource for any occupation where individuals or organizations face potential liability. From mining to medicine, the system's potential applications are both broad and diverse.

### Overall Dimensions

- 180mm x 90.5mm x 114mm

### Material

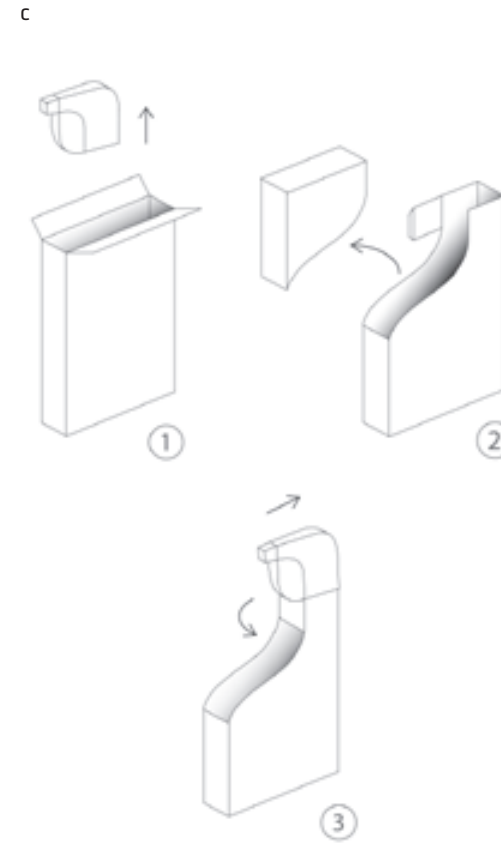
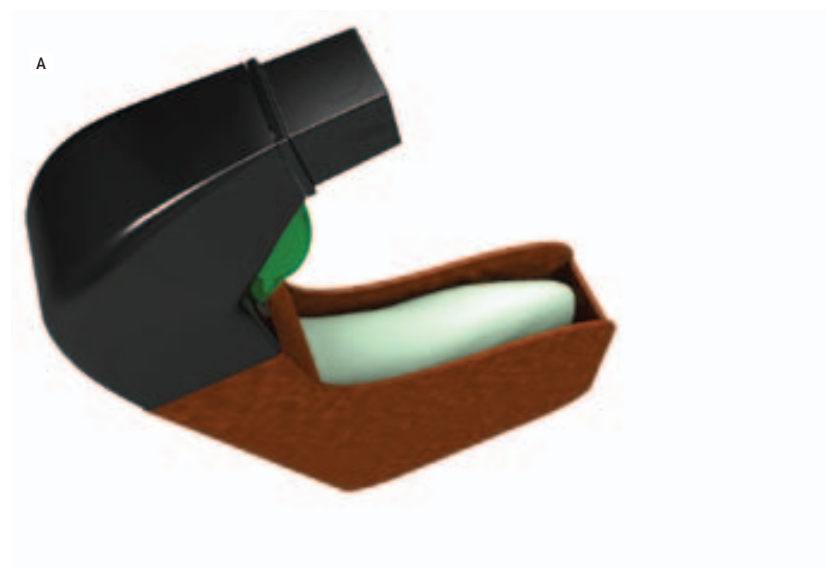
- Injection Moulded Etralon GF-30 + Stamped Aluminium



- A. Earpiece and button details  
 B. Elastomeric bladder - intake valve  
 C. Micro USB slot with silicone plug  
 D. Exploded view of the product assembly  
 E. Ergonomic form embraces the head



- A. Packaging – sprayer concept  
 B. Multi-use kitchenware concept  
 C. Packaging – sprayer instructional diagram  
 D. Lighting – recycled bulb chandelier concept  
 E. Kitchen mixer concept



## Pulse+ - Heart Monitor

Also known as a Holter Monitor, Pulse+ helps cardiologists in screening certain cardiovascular diseases by detecting the electrical impulses produced by the heart. Cardiovascular disease is the biggest burden on the Australian health system with 1 in 4 Australians to be diagnosed with long term CVD. Designed to harmonise the experience of the examination, Pulse+ helps alleviate the patient's emotional burden while accommodating convenience to the practitioner's administration duties of cleaning, data transfer and packaging in minimising time and financial strain that already exist within the health system.

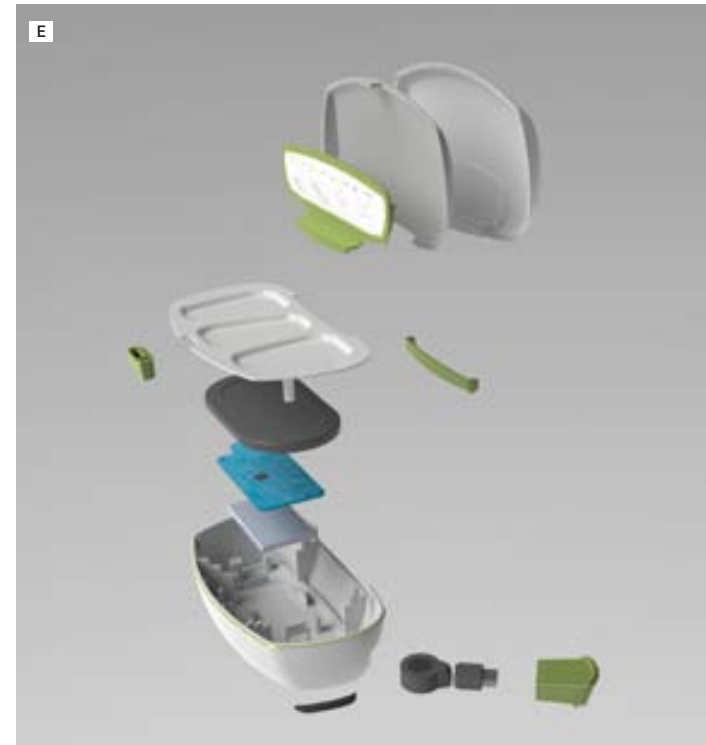
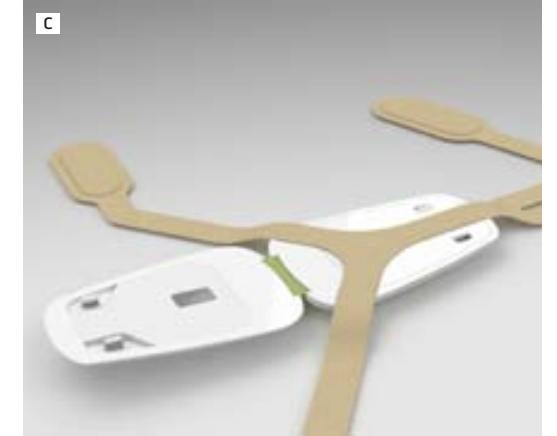
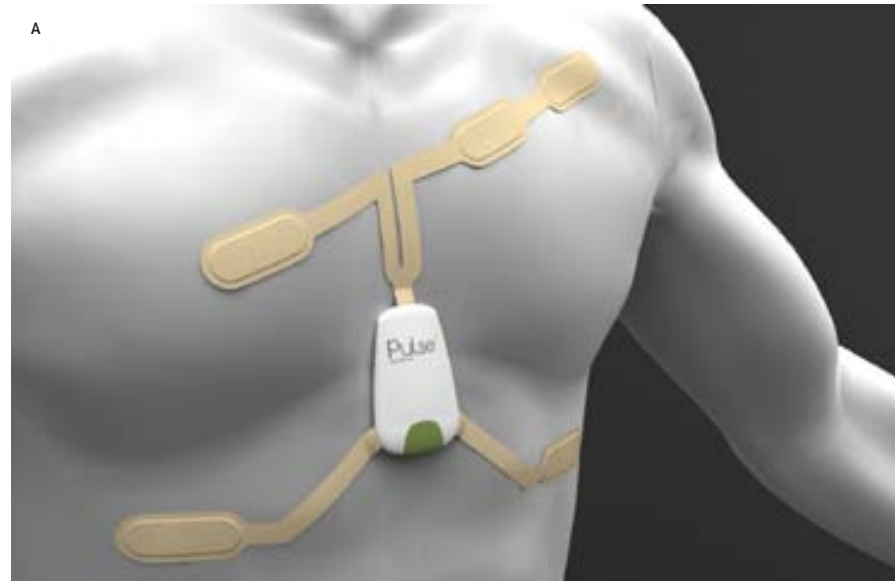
Using state of the art technology, Pulse+ features printable, flexible textile circuitry that incorporates an innovative electrode design enabling a convenient attachment system. By doing so, a patient comfort and mobility increases as compared to the traditional singular electrode pads, which have the tendency to detach. Pulse+ comprises of three Holter's that are encased within a sleek, modern housing unit that can be stored and wirelessly transmit recorded data to the cardiologist's computer.

### Overall Dimensions

- 190mm x 95mm x 60mm

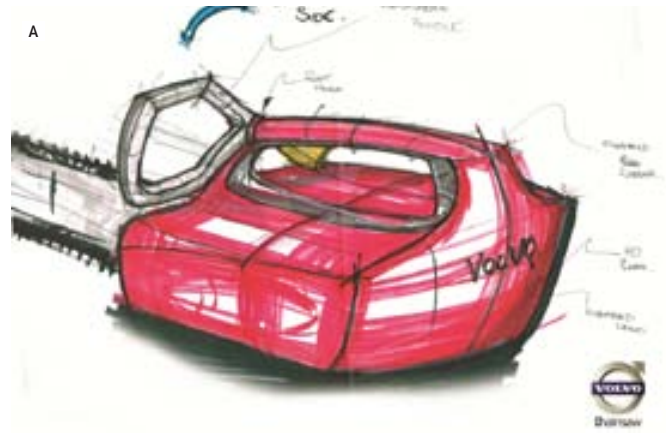
### Material

- ABS and TPE over mould



A. Pulse+ Heart Monitor  
 B. Pulse+ Housing Unit  
 C. Pulse+ Electrode placement  
 D. Pulse+ Environment  
 E. Pulse+ Exploded View

- A. Sketch Development
- B. Exhibition Design
- C. Vanità Vanity Unit
- D. Miele Range-hood Glass Touch Controls
- E. Miele Range-hood





## Ro2am. Lightweight Respiratory Unit

Ro2am is a humanised oxygen cylinder designed for ease and travel mobility. Existing oxygen cylinders are large and heavy. They are machine-made and speak the language of function. These industrialised cylinders are difficult to use and maintain for an average user, and especially trying for young children. Generally, the underlying cost to purchase a lightweight and easy to use solution has outweighed the benefits. Roam aims to correct this problem.

Utilising the latest in material and digital technology, Roam oxygen cylinder contains a liquid oxygen cylinder refill encased in a linerless epoxy carbon fibre vessel. This provides Ro2am with a stable and safe outer casing that enables the internal liquid oxygen cylinders to be replaced, extending the life of the product and allowing users to safely change their own oxygen cylinder when required. Its digitalised interface allows Ro2am to be self-intuitive. Ro2am is able to maintain its own conditional state and vent when necessary. This reduces the need for constant maintenance. Ro2am is designed with the end user in mind, it incorporates a self-contained heat exchange allowing a liquid to oxygen transfer at an

efficient rate, whilst providing the necessary humidity to the oxygen required for the user.

Ergonomically tested, Ro2am also includes a gas injection mold silicone nasal mask. Designed with children in mind, this innovative nasal mask gently rests on the users face as he/she breathes in oxygen. The nasal mask is designed for long-term use and creates a self-contained vacuum environment to prevent any external germs or infections from entering.

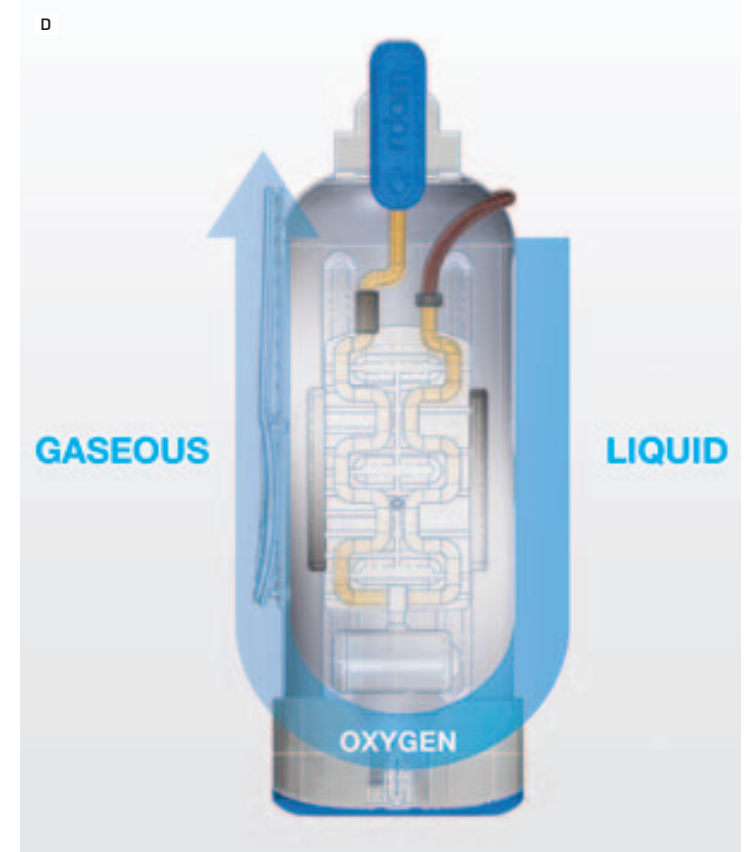
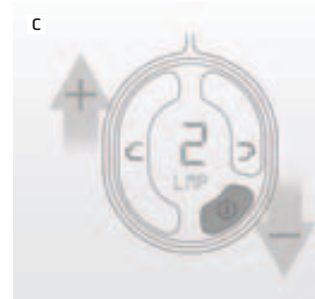
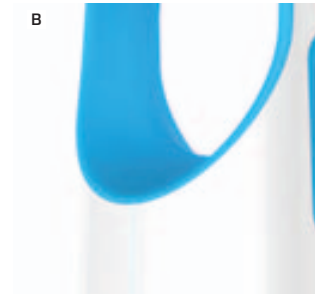
Ro2am is the ideal companion for young children who suffer from a respiratory impairment. It is the only all-in-one product that aims to give a child full mobility in their daily life without the consequences of feeling socially misplaced or psychologically hampered.

### Overall Dimensions

- 254mm x 100mm x 70mm (HxWxL)

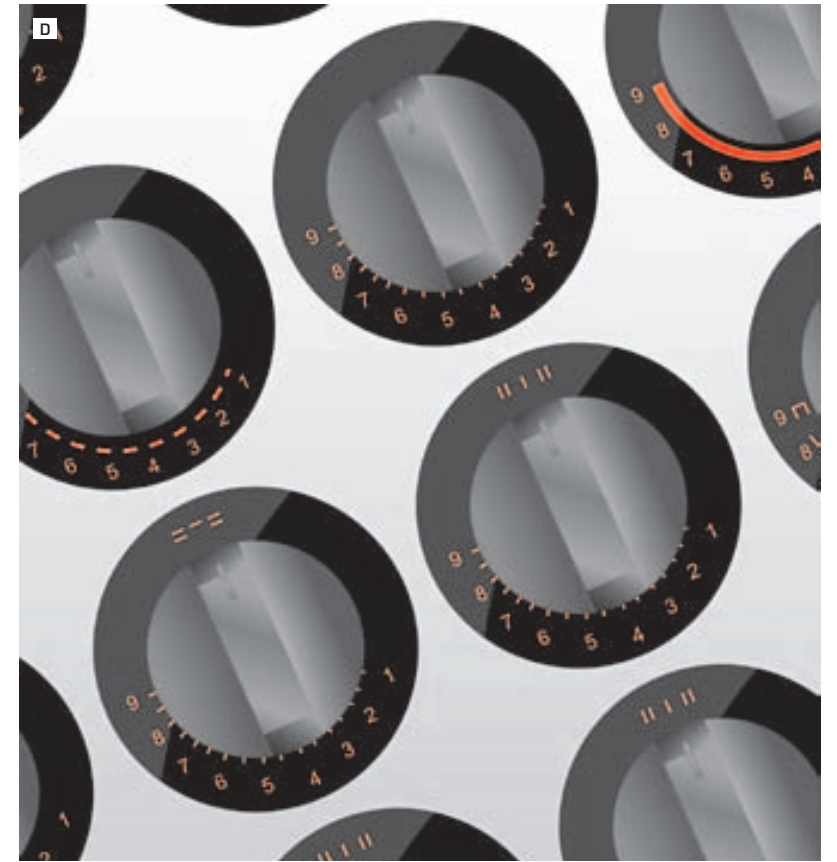
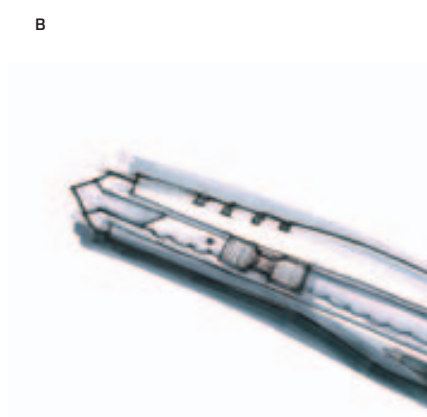
### Material

- ABS and TPE Overmold



- A. Roam. Lightweight Respiratory Unit.  
 B. Close up on nozzle button.  
 C. Interface  
 D. Self-Heat Exchange. Liquid Oxygen to Gaseous Oxygen  
 E. Context & Use.

- A. Form development.  
 B. Free-hand Render  
 C. Hand-Held Vacuum Cleaner. 1.5mm Injection Mold  
 D. Miele. Illustrator Knob Concepts  
 E. Reece BIA 2012. Winner: Koeda- Intuitive Mixer Tap





## GlucO Diabetes Management System

GlucO is a wirelessly connected diabetes management device that incorporates smartphone connectivity for greater functionality.

Designed for a younger demographic consisting of those under the age of 25, GlucO helps people with Type 1 Diabetes better understand and manage their condition in order to improve future habits.

GlucO is a portable, discrete and easy to use device that is self sufficient for an extended period of time and can test blood glucose levels in a matter of seconds.

Users of GlucO can perform a test with one hand and no interruption to their daily routine. An upward sliding motion prepares both the lancet and dispenses a test strip and within 5 seconds a reading is displayed on the LCD screen.

Diabetes doesn't affect just one person. It affects parents, siblings, partners and doctors. The results collected from testing with GlucO are wirelessly transmitted via Bluetooth to the users smartphone where they are stored for viewing and sharing. The application can then be used to enter carbohydrate and medication dosages for enhanced monitoring and the planning of more personalised medical attention.

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### Overall Dimensions

- 100mm x 50mm x 13.5mm

### Material

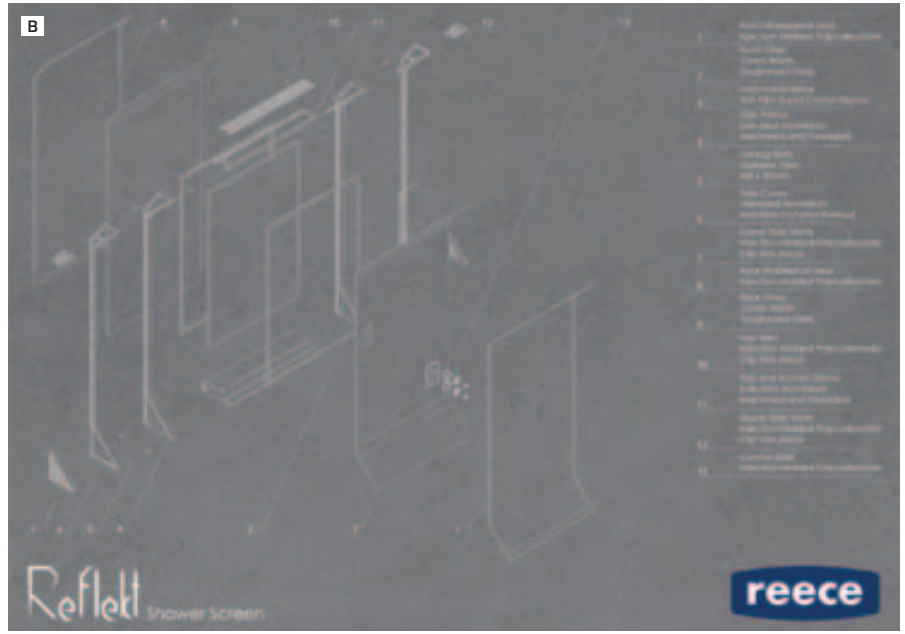
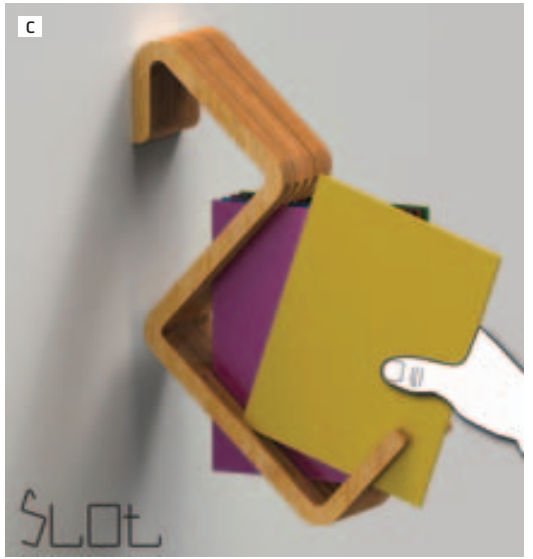
- Polycarbonate
- 



- 
- A. GlucO Diabetes Management Device
  - B. iOS Application – Displaying Blood Glucose Reading
  - C. iOS Application – Tracking Carbohydrate Intake
  - D. Smartphone Connectivity
  - E. GlucO Product Landscape



- A. Omega Solo Multipurpose Pizza Tool
- B. Reflekt Shower Screen - Exploded
- C. Slot Magazine Rack
- D. Flyer Outdoor Chair
- E. Bag-It Rewarding Dog Waste Disposal System



Email samwhipp@gmail.com  
 Phone 04224 452 335  
 URL www.samwhipp.com

## Bike Volt

With 64% of bicycles stolen from residences and rising bicycle theft in Sydney there is a noted lax attitude to bicycle security at home.

Bike Volt provides a storage and security solution for cyclists to keep their bicycles secure around the home. It allows the user to quickly and easily store their bicycle in unused overhead spaces. This encourages cycling as many people cannot keep a bicycle in their smaller dwellings. In storing the bicycle, it is locked secure and out of reach from opportunistic thieves.

The Bike Volt can accommodate nearly all sizes and shapes of bicycles, interfacing only with the top tube of the bicycle; the frame rests on silicone inserts. The locking mechanism allows the user to swing the frame out of the way, where it rests open, and lift the bike in place. Then the user can lower and push the frame closed. There is also the option to store 2 bicycles with the addition of another locking frame. Front-to-back the bicycles can be stored in minimal space. Once locked the user simply uses their key in an electronic lock to raise the frame to a secure height.

### Overall Dimensions

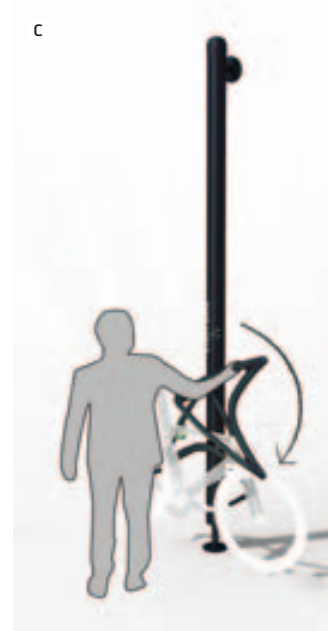
- 753mm x 750mm x 3280mm

### Material

- Glass-reinforced Polypropylene and aluminium

### Manufacture:

- injection moulding and extrusion



- A. Bike Volt with expansion frame
- B. Interface
- C. Closing Action
- D. Context of Use
- E. Open Frame

- A. Sydney Cycle Hub – Maintenance Kiosk - Model
- B. USB
- C. Precision Sander
- D. USB LED Light
- E. Fish Oil Packaging







**Dr Miles Park**  
Program Director



**Andrew Fowkes**  
Course Convener



**Craig Burke**  
Studio Tutor



**Rina Bernabei**



**Dr Mario Ramirez**



**Oya Demirbilek**  
Associate Professor



**Stephen Ward**

"UNSW appealed to me partly because of its reputation and also its ability to offer industrial design in a faculty that brought together all disciplines of the built environment. I was attracted to the course because it provided me with the foundations to pursue a career continuing to do what I already enjoyed doing.

"The lecturers at BE are from a broad range of industries, careers and experiences. The group based nature of industrial design study helped me to nurture teamwork and communications skills, attributes that are vital to the application of design method and success within the industry.

"My degree has helped me to develop an analytical approach when undertaking the development of designs within my current role. It has given me a solid understanding of the factors and processes that can control, direct and influence the design of products and their relevance within our society. I particularly enjoyed taking part in the Cormack packaging design competition as well as my final year project, these briefs allowed me to bring together all aspects of the industrial program into one consolidated proposal.

"My advice to anyone considering the course would be to look at all aspects of the program and think of how they may relate to your reasons for choosing Industrial Design. Every part of the program has an influence and relevance in successful product design".



**Thomas Marlay**  
 BlindDes 2006:  
 Design Development &  
 Special Projects Manager,  
 Botton+Gardiner

"MY DEGREE HAS  
 HELPED ME  
 TO DEVELOP AN  
 ANALYTICAL  
 APPROACH  
 WHEN UNDERTAKING  
 THE DEVELOPMENT  
 OF DESIGNS WITHIN  
 MY CURRENT ROLE."





