

mandofootloose

www.mandofootloose.com

Mando

"The global leader of auto parts
distribution and service"

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mandofootloose

smart simple stylish



smart simple stylish

- Generate your own power
- Move by pedaling or using throttle
(not applicable in some countries according to the national regulations)
- Convenient, clean, and efficient
- Freedom to travel wherever whenever
- Roll when folded - no need to carry



RIGHT BIND

ABOUT THE BRAND

- Concept
- Design



LEFT BIND

ABOUT THE PRODUCT

- Specification
- Human Focus
- Advanced Automotive technologies
- User experience

* This catalog contains some contents which may differ from the final product.



We want to establish
a new “mobility lifestyle”
not just another vehicle!



An automotive company dreaming of something other than just cars

Mando is a global automotive parts manufacturer in South Korea, established in 1962. As the leading automotive supplier based in Korea, Mando produces cutting-edge safety systems, such as ABS, ESP, ECS, and EPS for the global automotive market. Using this experience, we envisioned creating a new “mobility lifestyle” not just another vehicle.

Mando Footloose creates a new “Mobility Lifestyle”

Mando Footloose is a chainless e-bike featuring the latest automotive technologies. More freedom than a car, more convenient than a bicycle, easier than a motorbike; Mando Footloose is the city's new transportation option. It can be enjoyed by all demographics. It breaks the limitations of dense traffic, narrow parking spaces, and the time, space, and energy these all use. Experience freedom as part of an intelligent lifestyle, with this human focused design and innovative technology.

The world's 1st chainless series hybrid technology for e-bikes



The world's first technology teams up with a unique design

Mando Footloose, offers freedom that can be enjoyed by all demographics. Using throttle or pedaling, you can cruise up 21% hills effortlessly with a powerful, automatic dual winding motor. Pedaling also charges the battery, generating your own power. Depending on the market, the technology can be used for dual riding mode (pedal and throttle). A deliberately simple human focused design, avoiding truss frames, sharp edges AND chains! It rolls-when-folded, so can be taken indoors, or used with car or train. Its series hybrid technology offers stylish fitness as well as fun, and freedom.

Naming this new creation...

The automotive system brand name "Mando" embodies the idea of man - do or man - can - do. The product name "Footloose" is derived from the meaning "free to go" and means a new type of transportation without a chain.

Designer introduction, Mark Sanders

“I love the word ‘elegant’ because it makes sense both technically and artistically.”

Mark Sanders trained as a Mechanical Engineer at Imperial College, London and Rolls-Royce. After working in the engineering industry for several years, he also trained as a Designer at the Royal College of Art in London. Mark specializes in integrating engineering and industrial design. He lectures at universities and industry events worldwide.

Philosophy of design

This combination of “science” and “art” can give efficient, elegant product solutions (engineering), which are also appealing and straightforward for all users (design). Mark has combined these professions for 25 years as an engineer, inventor, and design consultant. He loves the word “elegance,” because it has equal meaning in both engineering and design professions. His product portfolio includes a wide range of award-winning patented products from kitchen tools to operating tables, industrial valves to folding bicycles (including iF-Mode and Strida), which are exhibited and sold worldwide (some in tens of millions).

Q&A

Q1. As an engineer, inventor, and design consultant, what is your philosophy of design?

I am driven by a constant quest to make the world a better place in the areas of both design and engineering. I believe products should have long term appeal, and usefulness to delight and give their users new real benefits. Products should be beautiful, useful and designed for humans, but I am much more interested in inventing new solutions than doing ‘me-too’ re-designs. This is where engineering skills are really useful.

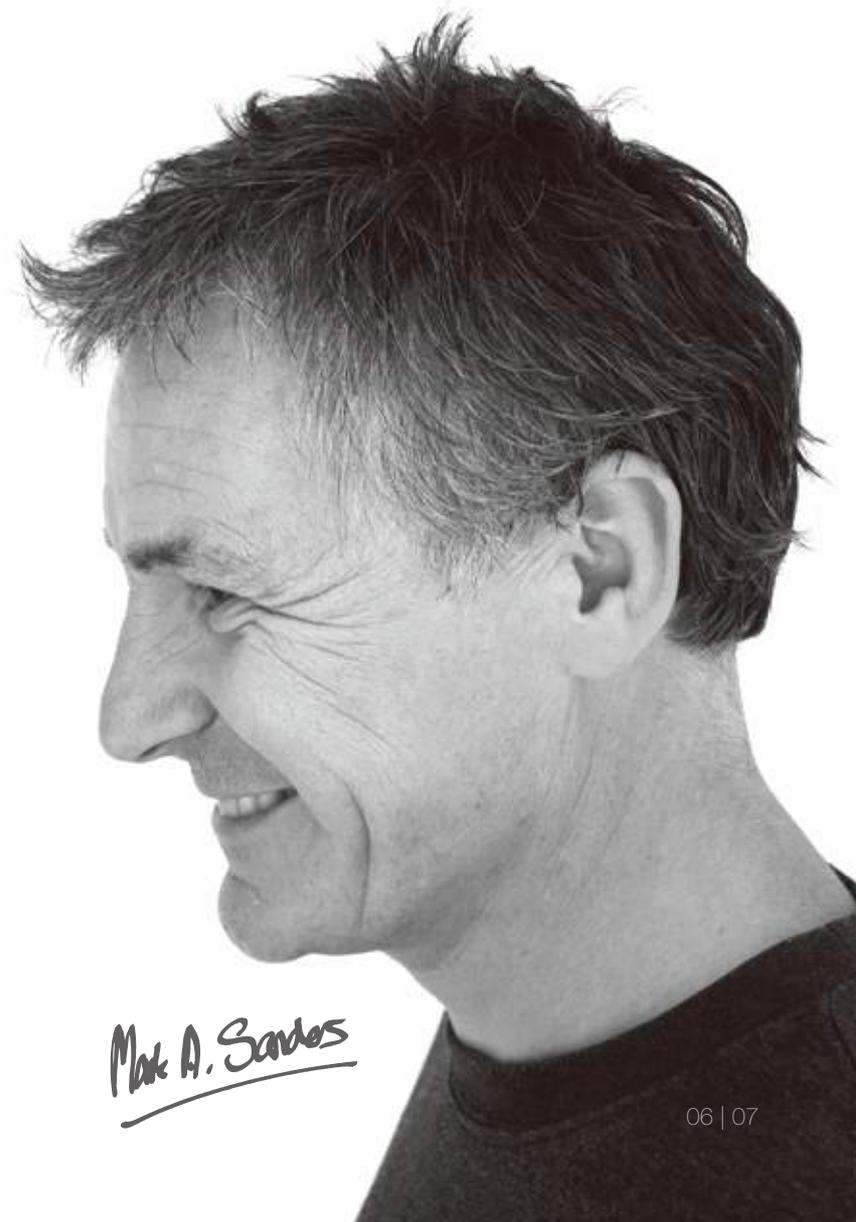
This philosophy is reflected in everything I create, from kitchen tools and medical equipment to folding bikes such as Strida, (which celebrates its 25th anniversary this year).

Q2. You must get calls from many bicycle brands. Why did you decide to work on the Mando Footloose project?

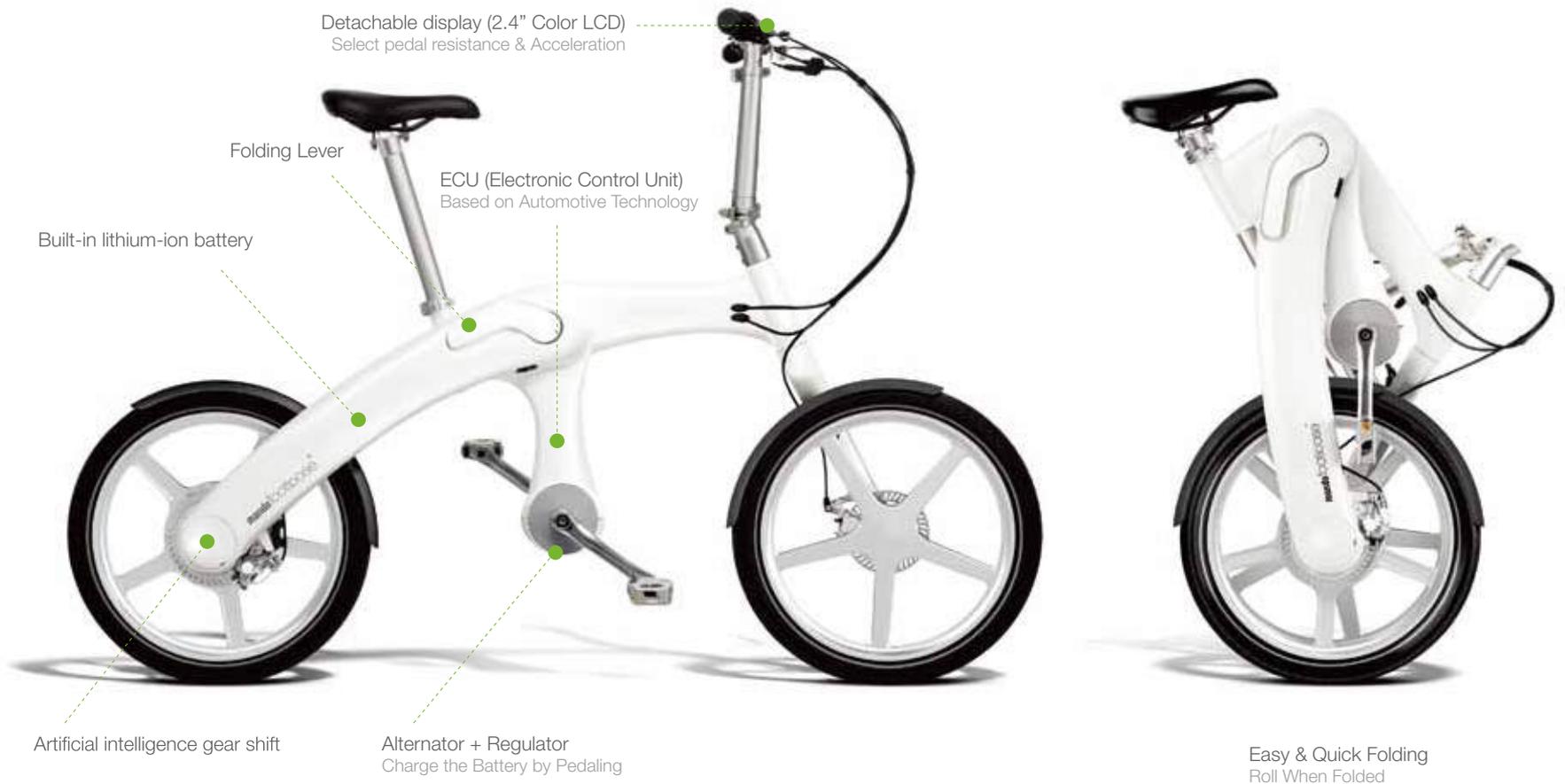
In fact, most existing bike brands prefer to stick with their traditional designs. It takes bold, forward looking companies who are willing to really innovate to move the ‘state of art’ forward. I realised that the concept of personal transportation from Mando’s world-class innovative technologies was a result of not only great ideas but also a passion to make them happen. I was enticed by the benefits of a hybrid e-bike; because the electronic link between alternator / battery / motor is completely programmable so the ‘feel’ is infinitely adjustable, the fly-by-wire instead of a chain can also be used as a speed/ power control. This step-jump in technology is what made the project so fascinating and I joined without hesitation as the designer for Mando Footloose.

Q3. What was the most important for you when defining the design concept for Mando Footloose?

Mando Footloose has a unique visual identity. It is bold design which reflects Mando’s aim of making personal transport more accessible, and follows a different approach to the design of most bicycles which tend to target enthusiasts and sports fans. Footloose is designed for regular humans; smooth and clean like the latest smart phones, with powerful technology hidden inside.



Specification



Components of this product may be changed, without prior notice, to improve the function of the product.

Features			
Drive System	Series Hybrid	Wheel	20"
Top Speed	25 km/h	Weight	21.7 kg
Range	Max. 35-45 km*	Display	Detachable 2.4" Color LCD display
Motor	Dual winding motor	Frame	Aluminium
Battery	36V 8.2 Ah	Fork	Carbon Fiber

* The range may vary depending on pedaling power, driver's weight, road condition, and any other driving conditions.
* The maximum range is measured under the condition of an adult who weighs less than 70kg riding flatland with a speed of 15km/h (9.3mi/h).

Colors



Human focused design



Minimal & Contemporary



Unique organic form



Ergonomic & Friendly



reddot design award
best of the best 2013



product
design award

2013



Minimal & Contemporary

By installing major components such as the ECU, battery, alternator, and motor inside, sophisticated minimalism is achieved, and only the simple lines of the frame are accentuated.

Unique organic form

A unique and advanced design unseen on other folding or electric bicycles.

Ergonomic & Friendly

Entirely made of smooth lines avoiding sharp edges, so whether open or folded, the clean design allows easy transport.

Advanced automotive technologies



Alternator & Regulator



Artificial intelligence gear shift



Charge the Battery by Pedaling



Built-in Lithium-ion Battery

Chainless series hybrid system

By getting rid of the chain, a symbolic element of the bicycle, Mando Footloose has completed the world's first system that allows you to operate your bicycle as comfortably as your car. Series hybrid system is a drive system that powers the wheels by an internal motor, without the chain that connects the pedals to the wheels.

Generating power with an Alternator

Mando Footloose can power itself as the mechanical energy generated by pedaling is transformed into electrical energy to charge the battery. The range increases by simultaneous battery power and self generated power.

Artificial intelligence gear shift

Mando Footloose automatically changes gear by detecting slopes, so you can cruise up to 21% hills effortlessly and comfortably without sweating. You are free from the constraints of having to adjust your speed or the timing of shifting gear with the Mando Footloose.

* The Mando Footloose can also be operated in the full manual mode.

ECU(Electronic control unit)

Reliability is maximized because the specification of ECU is based on stringent automotive standards. It self-diagnoses its condition, and immediately reports any irregularities.



New experience



Folding Lever



Detachable Display

Dual riding mode

Riding uphill is as easy as riding on flat land. The choice between using the throttle or pedals lets you travel the way you want - whether you want to pedal yourself or ride around more comfortably. Mando Footloose gives a unique experience where the rider gets to choose how energy is used.

Easy & Quick folding & Rolling

An easy-to-operate folding system makes the Mando Footloose compact enough to roll around and store anywhere, from subways to offices, cafes and home.

HMI with anti-theft system

Through the Human Machine Interface (HMI) mounted on the handle bar, you can check a wide range of information from range, distance, speed, battery and self-generated power status. It also monitors and self-diagnoses any irregularities. The drive and gear modes can be set to manual or automatic. The HMI is also portable, like an automobile smart key, and prevents theft as the Mando Footloose is immobilised when the HMI is removed from the handle bar.

