



# PERFECTLY STABLE FOR ALL YOUR NEARBY TRAVELS The most friendly vehicle its motion follows your intuition

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# 2. Videos, photos



YouTube Playlist: <u>www.solowheel.eu/videos</u>

HD videos downloads: www.solowheel.eu/dl

HD pictures downloads: <a href="https://www.solowheel.fr/photos-solowheel">www.solowheel.fr/photos-solowheel</a>

# 3. Solowheel: Overview

100% electrical. 1 hour charging. 4 times faster than a pedestrian. Intuitive: lean forward to go forward, backward to brake, rotate your shoulders to turn.

#### Solowheel is:

- Pedestrian's freedom
- Scooter's mobility
- Bike's stability
- Pleasure of skiing
- Fluid movement
- Relaxing
- Sporty

#### Solowheel features

- Stable
- Has powerful brakes
- Ideally suits all your nearby travels (80% of travels in big cities)
- Slips through pedestrians and maneuvers with accuracy
- Fun
- Goes up the steep slopes (30%)
- Ultra-fast charging (1hour)
- Sharp, soft and clear acceleration
- Allows you to ride it with several people side by side
- Increases in 7 times the radius of your movements (5km thither + 5km back on Solowheel, versus 800m thither + 800m back by foot)
- Categorized as «pedestrians' accessories » like rollers, skateboards, kick scooters, Segway
- Free hands: give pedestrian's freedom: allows you to make a phone call, carry a handbag, drink, hold an umbrella
- Allows you to ride it over pavements
- Allows you to ride it on wet roads without worrying the splashing water
- Allows you to ride it with an umbrella under the rain

#### Best words to describe Solowheel...

Freedom - Singularity - Comfort - Delight - Sprint - Focus - Trend - High-tech - Excellence - Fearlessness - Nature - Addiction - Love

## 4. Solowheel: Presentation

#### Solowheel, what is it?

Solowheel is the only motorized transport with a patented gyro-stabilized wheel. As a result, Solowheel is the less heavy (only 11 kg) and the most compact motor vehicle in the world. Solowheel can be transported and stored in anywhere.

Solowheel provides you a convenient and fun transportation experience, giving the feeling of « gliding on the ground », something like the sensation conveyed by Hoverboard in the movie « Back to the future ».

#### Solowheel, what is it for?

With its flexibility, maneuverability and small size, Solowheel is the only vehicle that actually meets the expectations of citizens to travel nearby.

Solowheel meets the need for moving between 1km and 6km, i.e. 85% of travels in the big cities. We talk about

micro mobility. No other automobile vehicle is provided for these distances. Today, we can only find those manually operated dangerous vehicles: rollers, skateboard and kick scooters.

With its lightness, comfort and security, Solowheel is also much better than those electric skateboards or electric kick scooters, it is also the most adapted vehicle for us to make a short distance travels, just like an elevator, but horizontally.

Hergé have thought about this concept, but at that time, he could only imagine it with a gasoline engine and the small wheels: unstable under acceleration, braking, without wheels' adhesion because of their small size, and without possibility to pass the barriers. Solowheel has resolved all the points mentioned above.

#### Solowheel, how does it work?

Solowheel moves thanks to the electric engine, the battery and the gyro-stabilized system. Highly accurate gyro sensors are integrated in the motherboard. They detect the forward tilt and instruct the engine to compensate for the balance by rotating the wheel and by keeping this tilt stable. When braking, they reciprocally detect the backward tilt and order the engine to decelerate.



## Does it require special acrobatic skills?

Solowheel does not require any acrobatic skills. Solowheel is an electric unicycle, which is totally different from the unicycle used in circus. Solowheel can be used by everyone as the bicycle is. The only difference with a bicycle is that you will not be looking for the lateral balance by your hips leaning against the saddle, but, by your calves leaning on the middle of the red leg pads.

Do we feel safe on Solowheel?

In fact, Solowheel is provided with:



Carte électronique de gestion de la charge et décharge des batteries Batteries Partie mobile (rotor) Preu Aimants permanents Jante Partle fixe (stator) Electro aimants. Carte diectronique de gestion de l'équilibre (capteurs) Ave Cale-pied Coque plastique

- A wheel, which will provide you with comfort and adherence, unequaled for a motorized vehicle of this weight;
- A stabilized wheel system, much more maneuverable than long skis;
- A speed, limited to 20 km/h, that helps to prevent falls or collisions, while riding too fast. At the same time, it provides you an excellent sensation of acceleration/deceleration.

So, Solowheel is much safer than the other vehicles, for examples:

- A kick scooter with its rigid wheels (with poor wheel adhesion, could get stuck in the ground gap)
- A skateboard (does not have brakes)
- The rollers and skateboards (in case of emergency, the use of brake is complicated)
- The skis (they do not have integrated brakes)
- A bicycle, which you often ride on the roads in the absence of the bicycle paths, close to buses and cars

# Attention! The Chinese copies, which look like Solowheel, have a very poor quality (very low power, hazardous gyro calculators) and you may fall down just after riding it for 100 meters.

#### Without a handle bar, is it dangerous?

In fact, the reality is completely the opposite. When a kick scooter or a Segway hits the pavement, the vehicle will topple down, and the handle bar may tangle in your feet, and you may fall down with your hands and your head. On Solowheel, you are projected vertically on your feet, and then you go on to bring back your inertia.



#### Weight? Autonomy? Charging time?

Solowheel is the lightest motor vehicle in the world and weighs 11kg. About 20 km of autonomy, in accordance with the use (weight of the user, terrain, temperature, tire pressure, speed), what equals to ride during 1 to 2 hours. Full charging of the battery lasts 1 hour.



Conditions for riding 20 km: user of 75kg weight / smooth and flat ground / 20°C / 2.7 pressure bars / constant speed.

#### Why should you invest in Solowheel today?

Solowheel is a very simple engine in terms of mechanics. It will become one of the inevitable means of transportation in the future, thanks to its very low price/weight/size and its great reliability/durability. The initiation can start right now. Being initiated and familiar with this new transport, you could even teach practicing Solowheel.

## 5. Solowheel, the only motorized vehicle dedicated to short-distance travels

Apart some heavy and bulky electric kick scooters, no other vehicle can offer you today the freedom as being a pedestrian, but with an engine, allowing you to go faster and farther. For all the travels from 1 to 5km, citizens are required today to alternate scooters, walking, bicycles, rollers, skateboards and kick scooters.



#### Why should you take Solowheel instead of a scooter or a car?

Solowheel is an electric micro-mobility. You become a « super pedestrian », wearing the « super shoes ». You leave directly from your apartment and ride to your office, from your office to a restaurant, from a restaurant to the cinema, from the cinema back to your home. This product allows you to avoid this kind of headaches: « red light » «road up» « traffic jam » « parking » « padlock » « contraventions » « insurance » « helmet » « disheveled hair » « damage » « theft » « appeal» « technical control » « fuel costs » « motorcycle jacket » « fluorescent gilet » « security belt» « breathalyzer » « maintenance » « waiting a taxi ».

Even in case of a long distance travel, Solowheel will drive you to your destination. For example, you can use the underground as intermediary. Supposing that the underground station is at about 3km distance from your home, you may ride on Solowheel to the station and then take a rest in the train. Between the underground and your office, you would have spent 5 minutes by riding Solowheel in complete safety on the sidewalk, in the open air.



#### Why should you take Solowheel instead of walking?

A pedestrian can easily walk from 1km to 5 km/h on average, without being tired, while a Solowheel user, i.e. a « Solowheeler » can easily travel from 5km to 16km/h on average, without being tired during the same period of time. By increasing the radius of your travels in 5 times, you exponentially multiply your accessible territory. The expression « in two steps » includes ten shops in surroundings, the others are beyond 1km. From now on, hundreds shops will become available to you within the radius of 5km. You will diversify your habits, enlarge your area of activity. For example, in Paris, you could be living in five districts instead of one or two today, if you were using Solowheel in your daily life.

In addition, you are travelling in the open air, having fun, turning, accelerating and decelerating smoothly, and the passengers will gaze at you with an astonished and amazed look.



#### Why should you take Solowheel instead of an electric bicycle?

Solowheel can be carried everywhere since it is not heavy. You have no longer to abandon your bicycle at your downstairs, with the risk of finding it damaged or stolen. Furthermore, you will be able to charge your Solowheel in your office, which is not the case with your electric bicycle.



## Why should you take Solowheel instead of Segway?

Segway cannot be seen as an urban or public transportation tool, because of its high price, i.e. 7000€. Besides, it weighs 50kg. Its size shows that it cannot be carried with you and easily used in most of European cities, where sidewalks are often narrow (Segway could hamper). Neither we could store it at our apartment, nor in narrow elevators (where Segway simply do not fit). However, it plays very well its role for being used by professionals (police, tourist visiting, street marketing). Also note that the Segway motors are noisy compared to Solowheel that pigeons do not even hear coming.



#### Why should you take Solowheel instead of an electric unicycle (for example SBUV3)?

As regards the mechanization, these electric unicycles are based on the same principle as Solowheel. However, they are very complicated to operate, just as if you were skiing on a monoski, seating on a seat attached to the monoski: your freedom of movement would be considerably reduced. Therefore, it is difficult to make the narrow turns, and to break it quickly. Sitting posture also gives a feeling of a « wheelchair », away from the fun and cool attitude on Solowheel. In addition, the saddle adds obstruction and weight. Irregularities of the ground cannot be amortized by our legs; as a result, our back will absorb all the shocks. Finally, the current version of SBUV3 has these very small foot platforms, which are not comfortable, and has no fenders, so you will get splashed while passing on the wet ground.



#### Why should you take Solowheel instead of rollers?

Sport side is much more pronounced on the rollers, but for daily travels, Solowheel resolves all the problems inherent to rollers:

- Solowheel does not require to put on shoes, take off shoes
- Solowheel brakes very effectively and simply
- Solowheel is noiseless
- Solowheel is very comfortable, even on the pavement
- Solowheel goes without slipping under the rain



#### Why should you choose Solowheel instead of an electric stand up scooter?

Solowheel is to some extent an alternative to the electric kick scooter. It is much lighter, more compact, with better shock absorption wheel, more fun and leave your hands free, allowing you to carry your briefcase, your telephone, an umbrella, shopping bags... For a daily use, it's very simple to catch Solowheel and carry for upstairs or downstairs. About electric stand up scooter, you have to follow five steps to fold, then you carry it, then you unfold it.

#### Is Solowheel expensive?

We have to analyze all the possession cost. For 10000km of driven distance, the total cost for Solowheel will be:  $2000 \notin +20 \notin$  electricity =  $2020 \notin$ .

A scooter will cost you between 4000€ - 8000€ for 10 000km of driven distance (insurance, fuel, technical maintenance, helmet...).

For electronic vehicles with lithium batteries: Segway costs more than 7000€; the price for a reliable electric bicycle is between 1300€ and 4000€.

Kick scooters cost about 500€ (SXT Scooter, Raycool, Mach1): those large kick scooters weigh 40kg and with a leadacid battery you will drive 5km, and then, a year later, it will be enough for only 1km.

1900€ for a vehicle to be constantly used, Solowheel is at a very affordable price.

# 6. Solowheel in daily use

#### Where to ride Solowheel?

Like all sidewalk accessories (kick scooters, rollers, skateboards, Segway), Solowheel should be used on the sidewalks. Practicing it, you will notice that pedestrians wonderfully perceive Solowheel with a smile, while it is not always the case for other vehicles.

#### How to pass through the edge of the sidewalks?

Solowheel easily overcomes small obstacles up to 6 cm height and descends from obstacles up to 12 cm height. That is excellent for using Solowheel in large and medium-sized cities, which are to date equipped to kick scooters, wheelchairs, baby prams, shopping trolleys, rollers and skateboards. Thus, the sidewalks' edges are almost always lowered on the crosswalks, which enable you to cross the road with an unrivalled comfort and ease. Without half-must sidewalks, you just need to put one foot on the ground, and use another foot to bring Solowheel aside the edge. With practice, a Solowheeler can easily give an upward boost and overcome obstacles up to 10 cm height or even higher.







On the descent, as well as on the rise, Solowheel maintains the balance and its power allows you to maintain your speed constant. During the rise, Solowheel reminds an elevator, and it seems as if it were defying the law of gravity. During the descent, it automatically adjusts itself and you can keep the speed you want.

#### How to use Solowheel in everyday life?

If you go to work with Solowheel, remind yourself to have a charger at your office, at home, or with you. In order to be able to face all unexpected travels, have the same reflexes as with your Smartphone: you charge it when you arrive at home or at the office.

When you encounter the stairs, you take it, and you keep it on your feet for the rest of the time. With one foot above and one foot one the ground, you can use by stepping.

On the escalators, you keep it with your foot.

During the rain, you can take an umbrella, or simply embark it on another transport mode (bus, underground, taxi, Autolib...). You can also put it into the basket of Vélib (public bicycle in France).



On plane, you can put it into the luggage hold or in cabin.

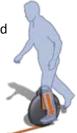
Doing sport on Solowheel, is it possible? It is a gliding tool completely assisted. Solowheel is very fun and not tiring. While riding Solowheel, the same muscles are working as if you were skiing, in the less intensive way but more constant (without aches). In fact, you flex your legs to fit a terrain, an imperfect ground and the sidewalks.

#### How to adjust the speed of Solowheel?

The speed is adjustable from 0 to 20 km/h by a simple body inclination. After a few days of practice, you will be able to regulate Solowheel without even realizing it. Solowheel's maximum speed is 20 km/h. If you tempt to exceed this limit, Solowheel will topple backward the foot platforms and slow you down.

#### How to start with Solowheel?

Probably, during the first three travels, you will need a rod or a wall to help you to position your second foot. After that, you will automatically keep your foot on the foot platform with your calf against the antiskid leg pads. Once you lean your foot, Solowheel begins to move. The motion keeps your balance, and so, you have all the time to position your second foot (same as on a bicycle).





#### How to maneuver on Solowheel?

You need just to turn your shoulders in the direction you want to go. This will create a slight tilt toward the side and the front. That will enable you to turn. The wheel will always follow you, as its purpose is to catch you up and to stay under your feet.

#### How to brake and stop on Solowheel?

You just need to lean backward when you want to stop, put one foot on the ground (it is exactly like a bicycle, and you do not even question yourself anymore).





#### How do I know the battery is done?

Just look at the power light:

• Green light: battery is charged between 100% to 25%

- Orange light: 25% of battery left, which equals to a distance you will be able to ride on Solowheel of 2,5km
- Red light: 5% of battery left, which equals to a distance you will be able to ride on Solowheel of 500m
- The foot platforms tilted backward: 1% of battery left, which equals to a distance you will be able to ride on Solowheel of 100m
- Blinking Red light + front-rear vibrations: only 0.5% of battery left, it is absolutely necessary to stop.
- Solowheel's engine will stop when the battery is fully discharged and the power light continues to blink: you cannot ride Solowheel at all in this condition.

#### How to charge Solowheel?

Solowheel is charging thanks to a simple charger put in the AC outlet supporting 110-230V.



#### Does Solowheel have a front and a rear?

Solowheel can be used in any orientation. However, we advise you to put the power light side in front, which corresponds to the rotational direction of the tire indicated by an arrow on its side.



#### What is the minimum age for practicing Solowheel?

Although, there is no legal limit age to ride Solowheel, we do not suggest children under 15 years old to ride it without adult supervision nearby.



#### What are weight limits for practicing Solowheel?

To function correctly, the weight of the user should be in the range of 30kg - 100 kg.

#### What happens if Solowheel falls sideways?

Solowheel detects falls and automatically stops its engine. Just after it has fallen, you need to switch it off and then to switch it on again.

#### What happens if you lose control of Solowheel?

It continues to run slower and slower letting you to catch it up.

#### What are the parts subject to wear?

This is the motorized vehicle that needs the less maintenance. The tire may blow out 5000 km of use. The battery will probably need to be changed after 1000 cycles of use (10,000km).

#### How long does it take to deliver Solowheel?

Available in stocks, Solowheel can be delivered within 2 days in France and 5 days in the neighboring countries.

#### How to secure Solowheel against theft?

You will rarely need to leave your Solowheel far from you. If needed, Solowheel can be attached with a lock around the handle. When you switch on Solowheel in vertical position, it automatically balances and stays straight. In this mode it consumes very little. For more safety, you should attach your Solowheel in horizontal position; switched on, it will automatically start in inactive mode (flashing light and the engine will not start).

#### Minimal maintenance of Solowheel

Solowheel has no chain, or gears, or brushes for the engine (Brushless), or braking friction parts. That is why, it does not require greasing, nor the change of consumable.

Developed at MIT, the battery is extremely reliable and we had never to change. The oldest batteries are in use for two years now, and have been in charge for more than 1,000 cycles. Current public price of the battery: € 599 tax incl. We therefore consider that the battery can be changed between 1,000 and 1,500 cycles, or after 10,000 km.

As for the tire, it brakes with progressivity (ABS), so the wear is very low. Only in case of puncture it will need to be changed.

#### Practical advices

Escalators: maintain your Solowheel with one foot perpendicularly to the escalator in order to prevent it from falling.

Phone: use an anti-wind headset, as the one that comes with the iPhone.

Pigeons: slow down to 10 km/h, to avoid to crush them, because they do not hear Solowheel approaching.

# 7. Solowheel, a brilliant invention

# Why is Solowheel the greenest motor vehicle in the world?

Because Solowheel is composed of:

- The brushless engine without frictions
- A single wheel with friction on the ground (the only one friction)
- The lightest weight than other motor vehicles
- Energy recovery during braking and downgrades
- An extremely simplified mechanic, without any part entering in friction which are present on many electric vehicles: transmission chains, gear system...

So, it has the best energetic efficiency compared to all the other engine vehicles.

#### Where does Solowheel come from?

Solowheel has been created in the USA by Inventist, it is produced in China and is distributed in many European countries by Solowheel Europe.

Inventist was founded in 2006 by experienced inventor and business owner, Shane Chen. Chen is constantly inventing, testing new products and making adjustments through trial and error. Chen is an avid athlete, partaking in speed skating, scuba diving, wind surfing, snowboarding, skiing, swimming and more. Many of his products center around his affinity for fluid movement in sports and fitness with a large emphasis on green energy technology.



He noticed that we can skate on one leg while steering. He then created a wheel with foot platforms. With the wheel between the feet the ride can still steer and balance very easily and comfortably.

Shane Chen has invented many concepts before Solowheel, including <u>AquaSkipper</u>. Chen's most ubiquitous product, the <u>Powerwing</u> was licensed to RAZOR Scooter. But Solowheel remains the most popular invention of Shane Chen, simply because short travel is a need that we all share.

# 8. Learning Solowheel, in fact it is very easy!

#### Why lose your time to learn it?

In order to take advantage of the urban transportation tool best suited to nearby travels. Lets compare the time it takes to learn practicing Solowheel as compared to other transportation tools:

- Ski schools provide 20 hours' learning program, to practice a discipline of pleasure 10 days per year
- Driving school provide on average 30 hours' learning program (except traffic regulation courses), for a car used occasionally by citizens and only 100 days per year on average
- **Combining fun, usefulness and sociability**, to practice Solowheel you need between 1 and 3 hours and you will be able to use it **300 days per year**

#### How much time does it take to master it?

If you have already practiced gliding sports: 1-hour practice will be enough for you. Solowheel can be learned faster than rollers, skateboards, skiing, and ice-skating. **IMPORTANT**: Solowheel has a real brake, contrary to the other gliding tools.

If you start practicing vehicles without handlebars (you have never practiced skiing, neither ice skating, nor rollers...), the maximum time you will spend to learn Solowheel: 6 hours allocated on several sessions.

#### Learning

- With an auto-balancing front/back system, you need only to find lateral balance, just like on the bike
- At the beginning, you may regret not having the handlebars to help you. However, during the 4<sup>th</sup> session, the users seem no more having interest in handlebars
- Learning of Solowheel is much easier and it is less dangerous than learning of a classic unicycle (as Solowheel has an auto-balancing front/rear system, as opposed to the unicycle in circus)
- Everyone can learn it. Learning is as simple as biking
- We recommend you to use protective pads for knees, elbows and shins during the training

At the beginning, a simple rod helps to start.

We advise you to wear gloves, mountain shoes, elbow pads, knee pads, and take your time for learning.



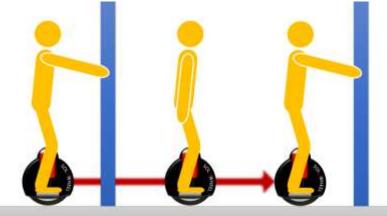


#### Exercise #1: To feel acceleration/deceleration

- Work alongside with a ramp to hold you
- Put your foot at the middle of the foot platform (each foot should stay on the whole platform in the same manner)
- Bend your leg in order to have calf leaned on the top of the red pad
- Put your second foot on Solowheel
- The 1st time, squeeze well the red pad with your calves in order not to lose Solowheel
- Stand up straight, bend your legs slightly, look straight ahead
- Make front/rear movements by slightly tilting your whole body

#### Exercise #2: To move forward/slow down

- Put two feet on Solowheel
- Let yourself to tilt forward, look straight ahead
- Try to reach a wall or a ramp in a few meters from you
- When you want to stop, tilt your body backward to trigger the brake
- If you capsize on the way, start it again
- Repeat the operation several times
- Gradually, you will be able to ride 1 meter, 2 meters, 4 meters, 8 meters without putting your foot on the ground.



#### Exercise #3: to start

- Put one foot on Solowheel well ensconced
- Fold down the other foot platform
- Trot with the tip of the second foot, keep Solowheel perpendicular to the ground and in a straight path; for this last maneuver, let yourself tilt forward slightly, thus you will find a balance.

#### Exercise #4: to turn

- You need to turn your shoulders slightly, with your head looking at the direction where you want to go
- Gradually, you will be able to pivot harder to turn

Allow you a 30 minutes' pause. This will let your neurons to shape and to print the information in your brain. After have been practicing Solowheel for 1 hour per day, for 3 days, you will be able to start with one foot without holding anything.

After have been practicing Solowheel for 1 hour per day, for one week, you will be able to perfectly turn and slalom.

# Remark! These are maximum limits for totally uninitiated users of vehicles without handlebar; initiation on average is much faster than one hour per day during a week.

# 9. Solowheel's characteristics

Solowheel is the lightest (11 kg), the most compact, the most reliable and the most fun personal transportation tool (Personal Mover) ever invented. It is the lightest motorized vehicle for adults. This new electric patented unicycle is gyro stabilized. Solowheel is more compact and fun to ride as compare to an electric bicycle. Solowheel gives you the ski sensation in complete safety. Solowheel is made of one motorized wheel, two foldable foot platforms, gyro sensors, a controller and a battery.

#### Solowheel's inventions

- The lightest motor vehicle in the world (except vehicles for children)
- The most compact motor vehicle in the world
- The unique motor vehicle in the world allowing to ride it with free hand
- The most energy efficient motor vehicle in the world
- The fastest to charge electric vehicle in the world
- The most reliable in the category of motor vehicles (<30kg)

#### Practicing Solowheel

- Lean forward slightly to move and tilt back slightly to slow down or stop
- Start: put one foot on the foot platform and your calf lean against the red pad
- Ride it on a wet ground or under the rain without any difficulty

#### Stability

- The platform is always horizontal, slightly tilted according to your speed
- As compared to the ground, the tilt does not change, would you go upwards or downwards

#### Unmatched reliability

Solowheel's composition and manufacturing quality make from it the most reliable engine ever created. No parts subjects to friction compared to bicycle or kick scooters (brake pads, drum brakes), only two joints with magnets to lock the closed foot platforms, plastic and extremely solid pads and brake screws. If it works at 1<sup>st</sup> start, it will work without any interruption during 10 000 km after what you will probably need to change the battery.

#### Experience feedbacks

- 50,000 people in the world are currently using Solowheel
- The first one came out in October 2011
- None of them have received an after-sale service so far
- Some of them have been used to ride 3000 km, others safely passed 5000 km
- Since 2013, Solowheel has experienced some technical internal improvements, which have strengthened its reliability and robustness:
  - motherboard updates
  - o firmware updates
  - batteries updates
  - tire was changed
  - o on/off switch was changed

#### Practical use

- For all your short-distance travels on the sidewalks: it lets your hands free, so you can make a phone call, carry a hand bag or hold an umbrella
- It is an intermodal transportation tool with the existing transports: bus, subway, tramway, train, taxi, Autolib (public automobile car, exists only in France), flight
- For tourist visiting
- For street marketing for companies
- For travelling shot in the cinema

# 1: Serial number XXXX-XXX (7 digits) 36V: never sold by Solowheel Europe

1000W motor / 36V LiFePO4 battery / board V1 (blink red/green\*) / red plastic switch button / charger 36V compact with 1 LED green & red

# 2: Serial number XXXX-XXX (7 digits)

1000W motor / **52.8V LiFePO4 battery** / board V1 / red plastic switch button / **Kenda tire** / **notch for the tire inflation** / **charger 58.4V 1.5A compact fanless with 4 green LED** 

# 3: Serial number XXXX-XXXX (8 digits)

1000W motor / **52.8V 2.3Ah 122Wh A123 LiFePO4 battery (+25% extra capacity) / board V2 (blink red/blank\*)** / Kenda tire / notch for the tire inflation /aluminum switch button / black or white color / charger 58.4V 1.5A compact fanless with 1 green LED (not charging) or red (charging)

# 4: Serial number XX-XXXXXXX (10 digits) and 2014XXXXX (9 digits)

**1500W motor** / 52.8V 2.3Ah 122Wh A123 LiFePO4 battery / board V2 / Kenda tire / notch for the tire inflation / aluminum switch button / black or white color / charger 58.4V 1.5A compact fanless with 1 green LED (not charging) or red (charging)

# 5: Model S300: Push button instead Switch button

1500W motor / **51.8V 4Ah Sony VC3 Li–lon battery (+60% extra capacity)** / board V2 / Kenda tire / notch for the tire inflation / **aluminum push button** / black or white color **(optional printed figure)** / **charger 58V 2A compact fanless with 2 LED: 1 red LED (power) and 1 green (not charging) or red LED (charging)** / **2 built–in driving modes: soft or hard** \*blink when Solowheel is turned ON while it's lying on the ground







#### Solowheel's technical specifications Weight: 11 kg Dimensions:

- Height: 48,3 cm
- Length: 43,2 cm
- Width (folded foot platform): 20,3 cm
- Width (opened foot platform): 35,6 cm

Maximum charge: 100 kg Tire size: 16" x 2,125" Top speed: 20 km/h Range:

• 20 km



#### • Recharge during braking and the decent

Sealing:

- May be used on a wet ground or under the rain, norm IP65
- Do not splash water on the driver thanks to its fender
- Brakes: engine brake by induction (dynamo effect)

Scope's capacity:

- 15° = 30% uphill or downhill
- Upward obstacles of 6cm height (all lowered sidewalks for baby prams' paths in the cities)
- Downward obstacles of 12cm height

Engine:

- Brushless 1500W
- Noiseless
- No gears, directly plugged on the wheel, no friction

Battery:

- Lithium-Ion 1000 cycles
- 52.8V x 4Ah
- Sony VC3 cells
- 45 min to 90 min to fully charge

Charger 1.5A:

- 100 to 240VAC, 50-60Hz
- Flat EU plug, 2 pins

Charger 2A:

- 100 to 240VAC, 50-60Hz
- Round EU plug, 2 pins + ground hole

Temperature ranges:

- Operating (charging and discharging): -10 to 55°C (14 to 131°F)
- Storage: -20 to 60°C (-4 to 144°F)

#### Cardboard package:

- Dimensions: 51 x 24 x 57 cm
- Weight: 15.5kg
- Barcode UPC-A (USA) : 6 10370 68636 2



• Barcode EAN 13 (international) : 0 610370 686362



Included in the box:

• Battery charger

- User's manual / DVD for instruction
- Training belt (to hold it)
- EU charger jack

CE (European Community): Solowheel has CE conformity Guarantees:

• 2 years Solowheel, charger / 1 year battery Serial number:

- Engraved on the rim and printed on the cardboard Conception / Manufactory:
  - Designed in USA
  - Assembled in China
  - Patents USD673081 S1, ZL201110089122.9
  - US trademark 4121815 from April 3<sup>rd</sup>, 2012

# 10. Solowheel warranty, aftersales service

#### Upon receipt of Solowheel

- Keep the box: it will be useful in case you will need to ship it back
- Check it works: hold Solowheel vertically, then switch it on: it should remain horizontal, with front/rear slight tilts
- Charge it

#### In case of breakdown

Just send back your Solowheel in our servicing center. We will send it back to you within one week.



#### Flat tire

In case of flat tire, you have three possibilities:

- Change your tire yourself, following this video this video
- Go to the nearest certified retailer
- Send your Solowheel to our certified servicing center

#### Tire pressure

Ignore the inscriptions on the tire, which are designed for flexible bicycle rims. Here are some indications for Solowheel:

Bar pressure	40 – 59 kg	60 – 79 kg	80 – 100 kg
Beginner	2.4	2.5	2.6
Expert	2.3	2.4	2.5

11. WARNING: Chinese counterfeits are dangerous and illegal



#### The safety is everything

Contrary to bicycle, rollers, skateboards or kick scooter, Solowheel is like Segway and maintains front/rear balancing by electronics. In general, the smallest failure during the operation can cause the collapse of the device and this may result in a serious injury to the user, even while riding it on a flat ground with a slow speed. Segway is more complicated than Solowheel, which remains at a high price to ensure high safety. The same goes for Solowheel with a unique auto-balancing wheel. Each component is very reliable and is provided by the supplier who carefully controls the quality. Tempt to acquire this kind of cheap product, totally compromises the user's security. The diagram below well illustrates the high implication of Solowheel's components in its stability, the security of its user contrary to a bicycle, the rollers or a kick scooter.



# The Chinese copies counterfeit the original patented Solowheel, and their factories will be closed soon. They are called « IPS », « Mobbo », « Airwheel », « Super Wheel »

We tested these Chinese copies and can assure you that they have very bad quality. You are maintained at the beginning, a few meters after, suddenly, the machine topples over without warning and you fall down.

Tests in videos:

IPS model 101: <u>http://youtu.be/IO1Imq-zv6g</u>

IPS model 102, same as Mobbo: http://youtu.be/Ipn9BugftcU

You should notice that the model 103 is much less powerful, the same for Airwheel.

The turnover of these machines is related to a very low engine power and the batteries cannot deliver necessary amperage during vigorous restarts.

Moreover, the capacity when going upward is very low: under the theoretical 800W mentioned by the Chinese copies. Solowheel's capacity is of 1500W, as mentioned.

Finally, the batteries are dangerous because they are completely flammable; recharging IPS at the 1st time started the fire accident showed as below.









Be aware of the online sellers (eBay, Priceminister, Alibaba, Amazon...)

Be aware of those unscrupulous sellers, they are easily recognizable:

- They call their product as « solo wheel » or « air wheel » or « magic wheel », as if they sell a ridiculous generic product with one logo brand
- They post old photos of Solowheel rolling in Oregon (the State where the American company's headquarter is, patent's holder of Solowheel) which does not correspond to what they sell in reality
- They even hardly leave their phone number
- They sell a « magic wheel » among totally different objects « sun glasses» « blenders »
- They do not offer any spare parts or accessories for sale
- They do not have any After-Sale service system
- They do not have any official website
- They sell these Chinese counterfeits by chance and even do not try them before selling (the engines are unstable and dangerous)
- Their unique goal is to sell them quickly, in order to make profit. They totally ignore what they are selling.

# 12. Solowheel's price

#### The public price

• The public price for Solowheel: 1999€ incl. tax.

#### The cheapest price in Europe excl. VAT

The VAT (Value Added Tax) in France is 20% against 19%, 15% or 9% in other European countries, Solowheel Europe has the cheapest tax excluded price in Europe for the same retail price (all taxes included).

#### Reactive after-sales service in Europe

Solowheel Europe provides an after-sale service and the spare parts for the old component. Flexible and reactive, as if it were operating in the USA.

#### And if I ordered directly from the USA?

Solowheel is sold in the USA for 1995\$. Why does it cost 1999€ (all taxes included) in Europe? The table below helps to understand this:

Cost	An	nount 🔽
Solowheel	\$	1 995,00
European tax applied as electric cycle (6%)	\$	119,70
VAT applied at european customs (19,6%)	\$	391,02
Air shipping cost considering battery inside	\$	220,00
Landed cost (USD)	\$	2 725,72
Landed cost (EUR) considering 1€ = \$1.3		2 096,71 €

In order to distribute Solowheel safely in different regions, the company Inventist provides only the exclusive distribution rights, as it is the case for Solowheel Europe.

#### Link to check the European custom tax

	TAXATION AND CUSTOMS UNION					
European Commission						
European Commission > Taxation and Customs Union > Databases > TARIC > TARIC Measures Information						
	The TARIC site has been upgraded . The following document is a guide to this upgrade : : [User Guide] (6.7 Mb)					
TARIC measure information [Show all information]						
Goods nomenclate	ure code: 8711900000					
	1 - 2 / 2					
SECTION XVII	VEHICLES, AIRCRAFT, VESSELS AND ASSOCIATED TRANSPORT EQUIPMENT					
CHAPTER 87	VEHICLES OTHER THAN RAILWAY OR TRAMWAY ROLLING STOCK, AND PARTS AND ACCESSORIES THEREOF					
8711	Motorcycles (including mopeds) and cycles fitted with an auxiliary motor, with or without side-cars; side-cars					
8711 10	- With reciprocating internal combustion piston engine of a cylinder capacity not exceeding 50 cm <sup>3</sup>					
8711 20	- With reciprocating internal combustion piston engine of a cylinder capacity exceeding 50 cm <sup>3</sup> but not exceeding 250 cm <sup>3</sup>					
8711 30	8711 30 - With reciprocating internal combustion piston engine of a cylinder capacity exceeding 250 cm <sup>3</sup> but not exceeding 500 cm <sup>3</sup>					
8711 40	8711 40 - With reciprocating internal combustion piston engine of a cylinder capacity exceeding 500 cm <sup>3</sup> but not exceeding 800 cm <sup>3</sup>					
8711 50	8711 50 - With reciprocating internal combustion piston engine of a cylinder capacity exceeding 800 cm <sup>3</sup>					
8711 90	- Other					
8711 90 10 🔻	Cycles, with an auxiliary electric motor with a continuous rated power not exceeding 250 watts					
8711 90 90 🔻	Other					
ERGA OMNES	5 (ERGA OMNES)					
→ Third	Third country duty (01-01-1999 - ) : 6.00 %					

# 13. Solowheel Europe partners

#### Retailers, test centers

The list of our partners is available on www.solowheel.eu

#### Renting

Solowheel strongly requires to be rented; clients prefer to practice it before purchasing. Courses' prices: 30€ to 50€/day or 150€ to 250€/week.

#### **Retail selling**

Retail selling is very interesting, because our partners (merchants, retailers) do not provide any after-sale services, which are fully supported by the exclusive distributor Solowheel Europe.

#### Officially approved price

Solowheel Europe maintains the public retail price; no discounter shops can operate with lower price through the whole territories. Solowheel Europe is in contact with the other worldwide distributors and always check to align price.

#### Service

The partners can also offer a package for tire's change in case of puncturing: the cost between 20 and 50€.

#### Training

Training is very important, and you this activity may provide you a very good income: individual training, group training, and company training. Suggestion price: 50€/hour.

#### Street marketing

Solowheel is also a great solution for the Street Marketing of your local business. In fact, pedestrians cannot turn their eyes from this extraordinary wheel, especially, if you put on the promotional T-shirts and the advertisement flags.



# 14. Contact Solowheel Europe

#### About the company

VINTIVE (Solowheel Europe) has its exclusive distribution right in France (including Monaco and oversea territories), Belgium, Luxembourg, Switzerland and distribute to all others European countries excepted Germany since March 2013.

Earlier, VINTIVE was known as UltraMobility. VINTIVE was the first distributor in the world, who created a network of retailers, specialized in the portable electric vehicles (less than 15kg), by distributing in Europe compact stand up electric scooters: MYWAY Quick, EGRET One.

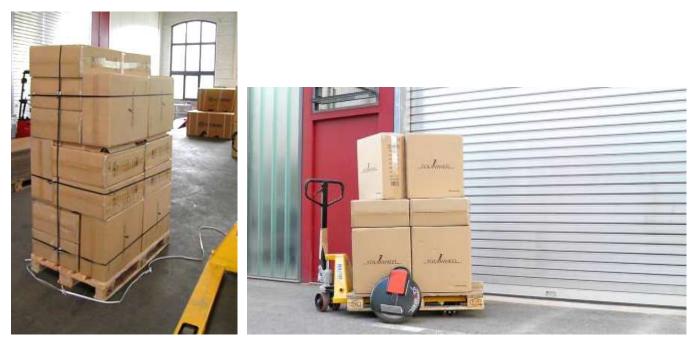
#### Address

VINTIVE 12-14 rue Glaciere, 75013 Paris, France SIRET: 504 486 457 00014 Skype: vintive www.solowheel.eu

Vincent Bourdeau, +33 6 62 41 52 42, vincent@solowheel.eu

#### Delivery

Our warehouses are located in France. Solowheel can be packaged in EUPAL pallets of 20 units:



The product is cleared through customs, in stock in France and available for all the Europe. Delivery time is 3 days on.

#### Documents

We have all these documents:

- EC Conformity
- EC Tests
- EC- ATTESTATION CERTIFICATE OF MACHINE SAFETY & LVD
- SAFETY DATA SHEET SDS
- RoHS and REACH Compliance

## 15. Customers reviews

#### Do It!, December 14, 2013

If you are are reading this, you are wondering if you should get a Solowheel. If you are wondering if you should get a Solowheel, please believe me, the answer is YES!!!

Here's my story. I was in Paris, and saw a guy zipping down a crowded street, in the rain, on some weird wheel thing that was between his feet! I stood mesmerized for a good ten minutes. Then immediately found Wi-Fi, and discovered what that thing was.

Ordered one immediately! It is easy to ride (it really is!) and so much fun. It is wonderful. One of the best things I've ever done for myself is buying this fantastic contraption!

Andrea, Sherman Oaks, CA

#### I am falling in love with the Solowheel!, November 17, 2013

Yes, there's a learning curve. I'm on Day 4 but was able to drive it around a parking lot pretty well within 2 days. Yes my inner calves do hurt, but not when I'm not riding. The pain is going down already, and my skill is increasing. The hardest thing is mounting it and U-turning in small spaces. It took the width of my neighborhood street at first and I was very unsure and wobbly. But now I can do it in under 1/2 the street width... about 8' Anyhow, I love the thing and it's a lot of fun... Makes me want to get a turbo version that can go faster, the real skill comes in driving it slow. Anyhow, I didn't buy the knock off version because we need to support inventors (Inventist), not the Chinese manufacturers. (Yes I know the real ones are unfortunately still made there, but at least they are made to the Inventors specs!) Thanks Solowheel, I see us building a great long term relationship!

#### This thing is AWESOME!!!, September 6, 2013

I've had my Solowheel for about a week and a half now. It is awesome!

I live just outside of town, in a one-bedroom condo. I had been looking for some sort of "personal transportation" device for a couple of years now and the leading contender had been the electric scooter. I'm just looking to be able to zip into and around town. A bike/moped is a prevalent response, but my storage options at home are limited. The Segway is cool, but pricey and way too bulky for my purpose. Having to secure the vehicle at the destination is also a negative, in my opinion. Additionally, while getting into town is a breeze - it's a downhill slope, getting home is a bit more of a challenge - I was looking for a powered option. Then, I saw the Solowheel.

The most compelling feature of the Solowheel, for me, is its relative compactness/portability (bear in mind that it is between 20-25 pounds). It is pricey, but you could pay a similar amount for a moped, electric bike or high-end bicycle.

You need to learn to ride it and will need to invest in learning/practice time. The closest overall experience/effort that I can relate it to is its like learning to ride a bicycle all over again. If you are reasonably capable at things like riding a bicycle, skateboard, skates, skis, or snowboard, I would think that you can learn to ride the Solowheel.

I've had six sessions so far. Each one lasted 1-2 hours - this is not continuous riding time. I've gone through two full battery charges. Total elapsed time must have been between 8 and 10 hours. Total run time has probably been a little over two hours. I can basically ride and maneuver the Solowheel, but am not comfortable/confident enough to "take it to the streets" yet. I am confident that I will get there. My sessions have been in an empty parking lot. Learning it has been fun and you can feel the incremental improvement between sessions.

I am very happy with my decision to purchase and learn the Solowheel.

nice ride, very stable and very robust machine, August 5, 2013

The motor feels very torquy, it has no problems carrying me (~185 lbs) up and down steep roads, overpasses and parking structure ramps.

The top speed limiting mechanism takes effect once my GPS registers about 8.5mph. The pedals tilt backwards making it difficult to lean further forward. Though one can reach ~10mph momentarily by continuing to lean forward

even with the pedals tilted uncomfortably backward. Caution when going down steep roads, try to avoid triggering the speed limiting tilt. This is because with the speed limiting backward-tilt engaged on steep hills, the back of the wheel cover can make contact with the ground and make the ride not so pleasant.

In summary, this is an extremely convenient and extremely fun mode of transportation.

#### Truly innovative and fun!, August 4, 2013

I don't write that many reviews, but this is one of the greatest new products to come along in quite some time so I'm going to try my hand writing one for the Solowheel. I often benefit from the highly informative reviews of others on Amazon, so as one of the initial Solowheel owners I'm contributing here in the hope that it will benefit others and get the word out on the Solowheel. If you're like me, you are doing research and have questions -- especially given that the Solowheel is not especially cheap. My experiences and comments will partly overlap what other reviewers have written, but I'll give you my own take just to reinforce what they've said (or in a few minor cases disagree) and hopefully add some new observations of my own.

I took delivery of my Solowheel almost a year ago now, and have been riding for that long. I use it a lot when I'm at my boat on weekends. It's great for zipping around the docks, to the clubhouse, and back and forth between my boat and car. It's also great for going almost anywhere in a walking community like around a harbor. I use it to go to restaurants, the bank, chandleries, barber shops, and lots of other places around the harbor. The Solowheel is a real vehicle that you can use for practical transportation. And unlike a bike, you can easily take it inside with you and just stow it near your seat. It's also great in combination with your car, since it easily fits in the trunk or on the floor inside.

As you can gather from the other reviews, expect lots of admiring comments and questions from onlookers whenever you're out riding a Solowheel. They're still very new and most people have never seen one. Pretty much every time I ride the Solowheel, I stop to answer questions from a curious pedestrian or motorist, so I'll frame this review around how I typically answer their questions.

What is it? The Solowheel is kind of like a motorcycle version of a Segway, but smaller, lighter, easier to transport and a lot more fun to ride. It's also a lot cheaper than a Segway. It actively balances forward and back (I encourage people to grip the handle and waggle it forward and backward at this point to feel the active balancing). Side to side, you steer it like a motorcycle. The controls are simple: Lean forward to go forward, and backward to slow down or stop. There are no hand controls, leaving hands free. The Solowheel uses active braking: Going downhill and braking charges the batteries and recovers energy.

What's the range and how long does it take to charge? I estimate a twelve mile range and a bit over an hour charging time if the batteries are fully depleted, though your actual range in practice will depend on the terrain, rider weight, and probably riding style. It's an engineering marvel to pack so much energy density into a case this small and light, and it surely wouldn't have been possible without recent advances in battery technology. The trip to my nearest post office has a big hill that's pretty respectably steep and over half a mile long. The Solowheel hauls my 180 pound body up that hill at full speed with ease. I'm not sure what the actual elevation gain is, but I do know that takes an impressive amount of energy.

Is it comfortable? Before I bought my Solowheel, I read a review saying that your legs and feet would get tired after an hour of riding. That hasn't been my personal experience. If your riding posture is standing straight up like you should be, it's quite comfortable. I have often ridden until the batteries needed recharging, but I wasn't tired and could have ridden farther.

How safe is it? Quite safe. Though it might look like a precarious balancing act on one wheel, remember that the Solowheel actively balances forward and back. If you do hit an uneven spot in the pavement, you just step off and take a few steps to recover. You're not going that fast, and your feet are only a few inches off the ground, so you just have to step off the foot platforms. Though I have lost my balance and had to step off hundreds of times -- mostly while I was learning -- I have never wrecked or fallen down. Of course you COULD fall down, but then you could trip and fall while walking or running, too.

Does it go fast enough? Before I bought the Solowheel, I thought I would want more speed, but the speed it is set for is about right -- very fast compared to walking and fast enough to be quite fun to ride, but not so fast that it's dangerous. I don't feel the need to wear any protective pads or a helmet, though I hasten to add that Inventist does recommend wearing a helmet.

Is it hard to ride? As every other reviewer who has commented on this point has emphasized, do NOT expect to just hop on the Solowheel and be able to ride it right out of the box. It does take a bit of practice. I have let many people try mine out, including some who surf, windsurf, ride unicycles, and so on -- and not one of them was ever able to just ride it the first time. That being said, the learning time is pretty short and it doesn't take a great amount of skill to ride after a little practice.

How long does it take to learn? Depends, but I would say that after several daily sessions of an hour or so you can learn the basics and be able to start, stop, and steer. I have some tips below on learning to ride, which should hopefully make your experience easier.

How sturdy is it? The Solowheel is very well built and durable. There are nice touches like a notch cut out in one of the foot platforms to accomodate the (provided) tire valve extension. One reviewer wrote that you have to take the Solowheel apart to add air, but that is not the case with mine. The valve extender fits nicely in the notch and you just put an air pump on the other end of the extender. I have not had to replace a tire yet, but I've heard it's a chore like the other reviewers have said. Fortunately the tire is pretty hefty so it won't get flats easily.

I also want to say a word about Inventist's customer service: It's fantastic. I had a minor intermittent problem with the on/off switch on mine that developed after several months of use. Inventist was very responsive and helpful, and they fixed the problem promptly under warranty at no charge.

So in conclusion, this is a wonderful little transportation device. It's innovative and very fun to ride. It is a little expensive in an absolute sense, but considering all of the technology that's packed into the small housing, I'm amazed they can build and offer them as inexpensively as they do.

And a final warning on unauthorized knockoffs. Due to the popularity of the Solowheel, there are now several knocksoffs on the market that look almost identical to Inventist's Solowheel, but are much cheaper. I strongly advise you to avoid these. Besides the pure principle of the thing, do some research and you will see that these are inferior to real Solowheels -- not unexpectedly, considering the cut-rate prices. Solowheels rely on a lot of technology, and it has to work properly or you're going to have a bad experience at best, and possible injuries at worst. Not worth it. Get a real one.

That's the end of my review, but below I'll offer some tips on learning to ride that might prove useful once you decide to buy one.

Tips on learning to ride:

Biggest tip: Pad your ankles! Once you learn to ride, you won't need any padding and you will feel completely comfortable just hopping on and taking off, but while you're learning your ankles will get bruised if you don't wear thick padding. A good start would be a double layer of thick hiking socks, but that won't be enough by itself. You can even just wrap some towels or T-shirts around your ankles and hold them in place with velcro straps under your pants. It's only temporary. But wear some kind of thick ankle padding. You'll have a much more pleasant experience that way.

The basics are: Start, stop, and steer. Starting is probably the hardest.

Begin by just balancing on the Solowheel near a wall and using your hands for balance. You might find it convenient to start in an office building that has short firm carpet. That will keep your Solowheel from getting scratched as you're learning. Your feet and legs need to be in proper riding position, but this probably won't feel natural at first. When you place your foot on most footpegs or foot pads on something other than a Solowheel, you center the ball of your foot on the pad. The foot position for the Solowheel is different. Your legs should fit right into the indentations molded into the red vertical pads that rise from the Solowheel's axle. That way your center of gravity is right above the axle. But your ankles attach much closer to your heels than to the balls of your feet. This means that

when your feet are properly positioned on the foot pads, it will probably feel at first like your feet are too far forward. Use the indentations in the red ankle pads as your guide. Your ankles should fit comfortably in them.

Now try gently moving forward while balancing with your hands along the wall. When you lose your balance, just step off. Use the training strap to keep the Solowheel from falling over when you lose your balance. You will tense every muscle and probably break a sweat, but try to feel the balance. You won't be having fun yet. Don't lose patience.

Next, find an open space like a parking lot. You need some speed in order to balance, just like a bicycle. Your goal is to get on the Solowheel, start off and just stay on for several feet or yards. Don't worry too much about steering or going in a straight line. You just want enough speed to begin to feel the balance.

Start by bracing one leg against the Solowheel with that leg's foot on the pad. Your other leg should be on the ground. If you are right handed, then you probably want to brace with your left leg and push off from the ground with your right, but do whatever feels most comfortable. You give a little forward push with your leg that is on the ground, and then quickly raise that foot onto its pad. As you do this, you also need to lean a little forward to get the Solowheel to accelerate. It has to be all one smooth motion. It might help to think of the pad you're placing your foot onto as the accelerator pedal of your car. Push it down a bit as you take off (that's equivalent to angling it forward, which causes the Solowheel to accelerate).

Hopefully you will quickly be able to start making some short forward runs, though they probably won't be very straight. That's OK -- feel the balance. Stay on for as long as you can. It's important to grip the Solowheel firmly between your legs. If you just stand on the foot pads with the Solowheel loose between your ankles, you won't have any control. At first you will probably grip the Solowheel too tightly with your legs, causing bruises if you don't wear any padding (later on when you're comfortable riding, you will still grip the solowheel firmly between your lower legs, but with only light pressure so you won't need any pads). When you lose your balance, use the training strap to keep the Solowheel upright so it won't get scratched. You will lose your balance and have to step off a lot, but you won't fall. You will now be having fun.

As your runs get longer, you'll start to feel how to steer. It's not that going straight is the default and you have to do something special to initiate a turn -- it's more like just going straight requires a lot of active steering effort. It's hard to describe but it's not important that I do so because you'll feel it. I suspect that at anything above a very slow speed you actually countersteer (look it up on Wikipedia since Amazon seems to delete the link I put here), but I have no accurate way to confirm that. In any case it feels natural and there's no need to understand the theoretical details.

With longer runs you'll also easily master stopping. Stopping is probably the easiest and won't take any special practice on its own: just lean back to slow down and then step off. It feels really natural.

So now you can start, stop, and steer. From there it's all just refinement. You probably don't want to continue using the big orange training strap after you feel comfortable riding, but you may want to rig a thin tether that you can loop around your wrist, just so you don't have to stoop down and grab the handle when you stop. Have fun!

#### I love my Solowheel, June 2, 2013

Not cheap, but worth every penny.

On day 1, about all I could do was ride back and forth along a fence trying not to fall over.

On day 2, I could ride pretty well, as long as I went in a straight line.

On day 3, I started to really feel it. I spent hours (several recharges) zooming all over my neighborhood, huge smile plastered on my face.

I'm still far from an expert rider, but I am LOVING my Solowheel. It feels a little like skiing down a gentle, smooth slope. Or skateboarding over glass-smooth pavement. My kids love it too, because we're now spending at least an hour a day riding around the neighborhood. Them on their bikes or scooters, and me on my Solowheel.

While learning to ride, I'd recommend wrapping an ace bandage around each calf to pad the spot where your leg touches the solowheel. Otherwise, this spot can get pretty tender until you figure out for yourself exactly how to stand on the platforms.

Extremely frustrating at first, but lots of fun once mastered, October 16, 2012

I watched many videos and read many reviews before ordering this toy, for I knew that, living in the suburbs, it would never be a real source of transportation for me. But I've ridden a Segway several times, and was intrigued by the concept of a similar device with half the wheels.

It took an awful long time from order to shipping because of some backlog or overseas delay. It came packaged well, and at first glance the quality of the device looked like what I would expect from a somewhat expensive mass produced item. I couldn't wait to try it out, but I let it charge fully first.

Then there was that first try while leaning against a wall and tentatively learning to move it forward and back gently. I was very impressed with how stable it felt going forward and back.

After that, it was pure frustration for hours of practice, and sore shins, even after taping two layers of knee pads to the device. I couldn't go more than a few feet before losing my balance to one side or the other and having to step off. I knew I'd have to learn to turn in order to keep the thing under my center of gravity as I fell to the side, but it wasn't easy to get the hang of it. In the videos, they make it seem like you have to twist your upper body one way to get the wheel turning the other way, but I found that very awkward and jerky.

Then, by accident, or trial and error, I began tilting the thing between my feet, leaning it left or right even more than I was tilting my whole body, and I found that the tire would carve a turn, kind of like when I'm skiing. That's the best analogy I can think of. Soon I was able to control the device precisely, and at very low speeds. I could turn completely in the width of a sidewalk. Another benefit of not putting a death grip on the pads with my shins is that my bruises disappeared, and I was much more relaxed. I took off the extra pads, and now my shins only make gentle contact with the device. It's almost as if I'm barely touching the thing with my shins. Most of the control is through the bottom of my feet.

It took me many hours of practice to get to this point of being as comfortable on the SoloWheel as I am on a bike. Persevere and you will get there too.

A few things I've found so far in the couple months I've been riding it;

The bottoms of my feet cramp up when I ride for a long time. It may be because I have large feet, and my heels, toes, and outside edges of my feet extend over the footpads, putting a lot of pressure on just my arches. I found that the stiffer the soul, the less cramping there is.

I read the recommended tire pressure on the side of the tire, and inflated it to that pressure. It was as if it was a totally different device. I couldn't stay on the thing, it was so hard to control. Maybe it was just very different to control. The pressure was initially very low, around 15 psi if I remember correctly. I let the pressure down to 17 and tried again, and it was back to the way I could ride it again. I've gradually built up the pressure to about 22. Just know that a little change in tire pressure can make a huge difference in control and feel. I recommend 15 to 17 psi when first learning, and gradually increasing it by a couple psi at a time, which I venture to guess lengthens the life of the tire.

This is a tough device. I've dumped it on the pavement many times, and aside from getting scuffed up a bit, I haven't had an operational problem with it yet. I have no qualms about letting people try it. I offer them the training strap so they don't have to constantly pick it up and reset it, but I don't cringe if they crash it.

Don't ride a SoloWheel if you don't like attention. I almost caused an accident, riding on the sidewalk, as a car driver concentrated on me and not the road. Kids point and exclaim to their parents, cars slow down to look, people can't seem to help but smile. Be ready to stop and answer questions, and maybe offer a ride.

I don't think this thing goes quite the 10MPH advertised. I find it difficult to get a consistently accurate GPS speed when I'm riding it, but I'm guessing it goes about 9. That feels pretty fast when you're essentially skimming several

inches above the pavement with nothing in sight around you, or even under you, unless you're looking down. I rarely find myself wishing for more speed. I actually have more fun going slow. I find that the better I get, the slower I can go. Now it's more fun to do figure eights in a very confined space than to go as fast as I can on a wide street. My next goal is to stay in control going backwards.

I haven't tested the endurance of the device. I've traveled a little over three miles at a time. I notice that the light turns amber when I'm going up hill or accelerating. I haven't ever come to the point where I've gotten a consistent warning light or run out of power. I do top up the battery even after a short ride, and if I don't use it for days, I'll charge it every so often.

I'd recommend this device to anyone fairly coordinated and active. If you can ride a bike, ski, snowboard, skateboard, rollerblade, etc., I believe you can master the SoloWheel. Just know that it's going to take several frustrating hours and lots of shin bruising before you feel that first bit of control. Learn how to turn the device as early as possible. That's really the key to staying on this thing. I thought at first that going straight was necessary before turning, but it's really the other way around. Like a bike, you are constantly falling over. The trick is to steer the device back under you to catch yourself. At first, these are gross movements, but after a while they become so subtle they aren't noticeable, and you stop thinking about it. It becomes like..... riding a bike.

#### Good luck.

(I consider four stars an above average rating, exceeding expectations, and five stars exceptional. This is a wonderful device that I'm impressed with and recommend, so it gets four stars. Exceptional, five star, ratings should be rare and hard to earn, in my opinion.)

#### UPDATE:

I used a dedicated GPS device, and I think I got a more accurate speed reading, plus the device records maximum speed. I was very close to 10MPH when glancing at it occasionally, and the maximum reading said 10. Going downhill I was even able to reach almost 11MPH. So it does seem to go as fast as advertised.

#### perfect show-off urban commuter, September 25, 2012

I bought this for my 40 years old boyfriend and he is amazed by it. He rides it daily around the city. Taking it to bus, tram, hoping on, of, perfect, simple.

It takes practice, a lot of practice at first. It took us at least 3 days to be more or less confident to ride it. But now after one month? Second nature, it's like breathing or walking. It's simple, fast, efficient. We love it totally.

Yeah and it's a perfect conversation starter... no it's actually a conversation magnet, attracting all the people around, getting questions and comments all the time... :)

Got to buy myself one, or keep hoping to get one in return :D

#### Makes it fun to run errands, September 14, 2012

The Solowheel is great. I live near downtown and so there are many places I go that are within a 4 to 20 minute walk. The Solowheel cuts off many of those minutes. Running errands is quicker than walking, and it's less of a hassle than using a bicycle and helmet. It's a little quicker than pulling the bike out of the house, and instead of needing a backpack, I can carry a bag (with practice...a heavy bag can add some instability). Taking a backpack is an option if I plan on buying more stuff like groceries. With a combination backpack/bag, I can carry more than I can carry on my bike (I have no panniers). I lock the Solowheel to parking meters using a standard U-lock through the handle because it's too heavy to carry around inside stores. (Update: After months of riding it, I now carry a bag of groceries in each hand on a regular basis.)

I can carry an umbrella on rainy days, which you can't do on a bike. It needs to be a small umbrella, and don't try it on a windy day.

I've had it for a couple months now. It took me about 20 minutes of fumbling in the parking lot before I was finally able to balance well enough to stay on and make some wide sweeping circles. Here is what I teach people: before

trying to move forward, practice standing just on one foot (the Solowheel must be tilted to the side slightly). Pick up the other foot, but don't try to place it on the Solowheel yet. Once you can lift he other foot smoothly and hold it in the air for a second, then you're ready to try putting it down on the other foot platform and try leaning forward. It's pointless trying to put the second foot down on the Solowheel's foot platform if you can't do it smoothly.

As you come to a stop, you'll want to do the same thing in reverse: put all the weight onto one foot, tipping the Solowheel slightly to the side. Then, as you rotate backwards slightly to bring the Solowheel to a stop, place the free foot on the ground. I can stop and restart without grabbing the Solowheel with one hand. This is what I do when I have to wait at a crosswalk.

It can be a bit painful on the inside of the shin and ankle, while you're learning. Try wearing a volleyball kneepad around your ankle, turned to the inside. It's not totally necessary though.

It's not very good on the busiest of city sidewalks because you just have to go real slow and hope that people go around you, and don't stop right in front of you. But when you take off it's great to see how much faster you're going, and how much time you're saving compared to walking.

When I bought it in the summer of 2012, it took a couple months because they were being shipped (manufactured in China). Shipping by boat is not like FedEx; I guess there's no way to know exactly when it will arrive.

I live on a hill, and if I try to go downhill immediately after charging the battery, it will give me the "shake warning" because the battery is getting over-charged (because it recharges the battery whenever you slow down, particularly going downhill). So what I have to do is go down a flat street for a half a block, then back. Then I can go down the hill without the shake warning. This would be a serious problem only if you lived at the top of a long downhill driveway, for instance, without any possibility of riding on a flat road for half a block before going down the hill.

#### Learning curve but AWESOME when you figure it out!, July 29, 2012

It's REALLY important to understand and accept that you will NOT be able to just hop on and scoot around on this when you first get it. It's like learning to ride a bike - impossible at first but with practice and perseverance you'll be zipping around in no time. After several aborted macho-man attempts at trying to use it in the middle of a parking lot I decided to take it slow, do it right, and headed over to a brick wall. I leaned against the wall and just went back and forth, back and forth, for about 3 hours until I started to establish a sense of balance. Then I started trying to go forward without the wall, which graduated into slow and unsteady turns, which graduated into actual driving and obstacle avoidance.

Now I can ride it with just one foot, hop on and off with ease, zigzag to avoid people on sidewalks, and do all sorts of fun stuff. Trust me, when you figure it out and get some practice in it is AWESOME!

Here are some key bullet points that I believe are most important when considering buying one of these:

1) It's built like a TANK! Seriously, when it wipes out or you fall off it'll rev up and precess and bounce all over the place until it times out. It'll scuff and scratch but it doesn't break. I have no qualms letting people try it because it just isn't fragile.

2) 2 hour charge for 2 hour ride is pretty accurate. I haven't measured my mph but it's definitely faster than walking and maybe a bit faster than jogging.

3) I was afraid that people would make fun of me when I rode it around Boston or Cambridge but the exact opposite turned out to be true. I have had at least three cars pull over and ask if they could try it. Pulled over and with hazards on I've demoed this sucker and let people try it. Rolling around Gillette Stadium is a similar experience, everybody stops and asks what it is and says it's awesome and wants to try it. It was SO NICE when I visited Washington DC, it got me around to all the monuments and I charged it in coffee shops or my hotel. You will hear every single little kid you drive by go "WOAH! LOOK AT THAT MOM/DAD!"

4) It has some heft to it. You don't want to roll around, run out of batteries, and have to carry it for more than 20 minutes back. It's meant to be ridden, not hauled.

5) The insides of my legs were definitely bruised for about a week after I began using this sucker. It was not a permanent thing and it doesn't hurt at all to use now, but your legs aren't used to being pushed on there and they will get sore. It goes away.

6) I get asked a lot if it's easier if you know how to unicycle. I had several unicyclists try it the other day and the results were mixed. Three hopped on and within 5-10 minutes were riding (a bit shaky, but stable) around all over the place. One fell flat on her face :) The center of gravity is different and you don't have the peddling rhythm to help stabilize you. They faked the peddling rhythm by weaving back and forth a bit, which eventually straightened out.

7) It's GREAT for the trunk of your car. I park wherever I want now in Boston because I can just wheel the remaining distance. I've saved tons of \$ by using free spots that are farther away instead of metered spots close by.

8) I have had TWO cars full of girls drive by whistling and waving and cheering. No joke.

9) I got a flat tire and had to replace it. It was moderately easy but not entirely pleasant. The wheel is NOT designed to come apart, meaning instead of clips or latches you are unscrewing screws and bolts) and you expose some electronics and wires when you open it to access the tire. Other than that, it's just like replacing a bike tire.

10) Customer service is awesome! They worked closely with me while I was buying it AND have been super helpful during my calls since then.

11) I've ridden by police officers, security guards, and other law enforcement types and I've never run into any trouble using it on the sidewalk. I've let probably 4 try it. The only times I've been asked to NOT ride it were in outdoor malls (Patriot Place and a mall in Dedham, MA).

#### CONCLUSION:

It's spendy BUT I don't regret buying it at all. It lives in the trunk of my car with its power cable and I charge it whenever it gets low on battery. I use it almost every day and, honesty, have zero buyer's remorse. It was a \$1,800 well-spent and I'll be using it for years to come.

#### I'm having lots of fun with this Solowheel, June 21, 2012

I bought this because it's cool. Learning how to ride it does not take long if you've been on a skateboard. We did it this way. Put one foot on the solowheel and kick off. As soon as you can put the other foot on and stand up straight. Just lean a little forward, don't go leaning so far you fall over. You should wear a helmet and other protection if you're not very coordinated. I'm 42 years young, not over weight and average height and build. When you're riding it pay close attention to the area in front of you. You'll be fine. Have fun. You can see me ride it on the video link above the review. Just copy the link into your search bar. Thanks and Happy solowheeling!

#### Expensive but a great option if you live near subways, May 23, 2012

If you decide the buy one, I cannot stress enough...buy some shin guards for soccer and turn them inward to protect the inside of your shins. Otherwise, you will be bruised. That red pad you see in the photo is not thick, nor is it soft.

Tip #2...when first using the included orange practice strap, hold it as loosely as you can. I had the tendency to pull up in a pathetic attempt to keep my balance and all it does is make it worse to stay on. Make sure your center of gravity is directly over the middle of the foot pegs.

Final tip: Whichever foot you decide to use first to step on, step down at a 45 degree angle. That way, as soon as you place your other foot you are propelling forward instead of teetering and falling over.

Took me about 30 min for 2 weeks before I got good. I do think the website lies a bit. 15-20 mile range...I don't think so. More like 10 max. Max speed of 10 miles an hour? I weigh 155 and I average about 7mph on city streets.

#### This is a great product!, May 18, 2012

I am still learning to ride this "bike" but it is a fantastic experience.

I am over 50 and a bit overweight so it's a little difficult.

However, it is fun. It is good exercise. And it is green!

To start I just tried balancing on it indoors while holding a doorframe.

Now I am slowly venturing outside :)

I soon hope to be powering my way along as I commute to work in Europe.

It is not cheap but it is so portable and such fun.

I love it and give it 5 stars!

#### Fun Fun Fun, This is ultamate green transporting, May 7, 2012

I was amazed at how the solowheel was used, key point when thinking about buying: make your you have a use.

Took me 1 day to learn to ride, because my lower leg muscle had to get use to it. key point: do not point toes and lean forward so much, I had wipped out many times falling face first. now I that i have learned what not to do, I can ride my solowheel like its apart of me now, it takes a lot of time and bonding with the solowheel to understand the movements, feels like flying when your ridding.

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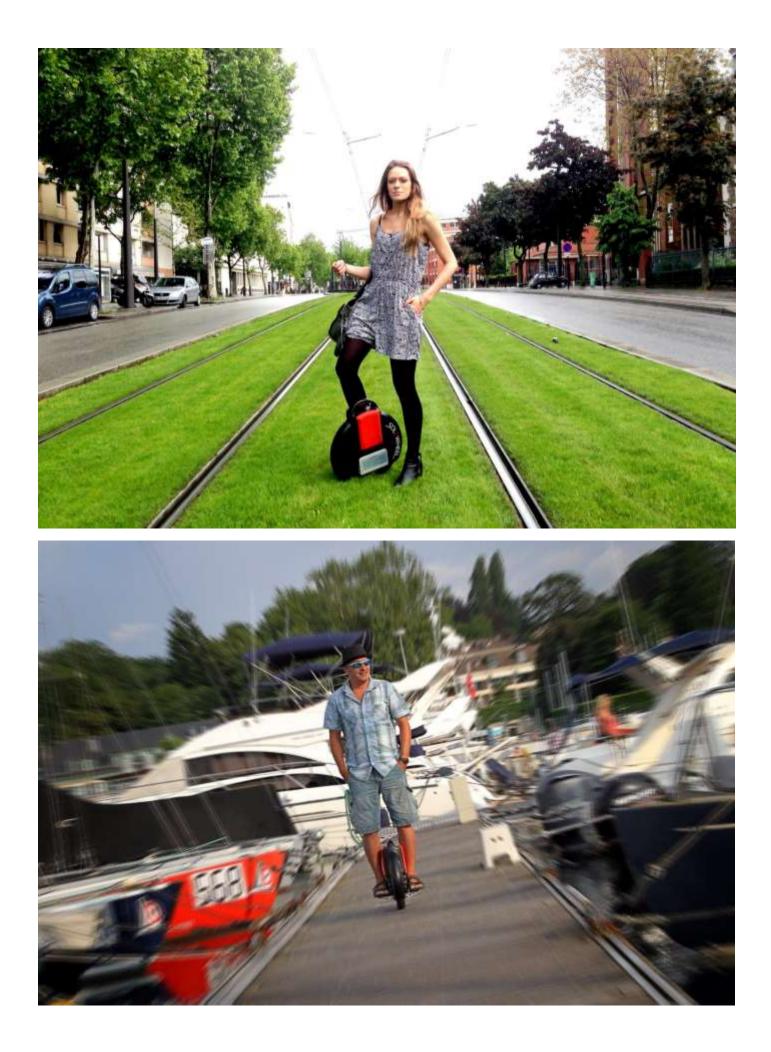
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# **V**ie pratique

44

# Devenez un superpiéton

Vous avez aimé les rollers et la trottinette? Vous allez adorer le Solowheel, un monocycle électrique destiné aux piétons pressés.

près la trottinette, les rollers ou encore le Segway, vollà qu'un surprenant engin tail-pour les « microdeplace-ments » en ville fait ses premiers tours de roues à Paris. Le Solowheel, Inventé par la société américaine Inventist, et commercialisé en France depuis quelques jours à 1899 €\*, permet aux piétons que nous sommes de passer en mode « superplé-tons » pour arpenter les rues trois fois plus rapidement qu'à pleds et presque sans efforts (ltre ct-contre).

Dépourvu de guidon mais bourré d'électronique, il fonctionne sur le même principe que le Segway, ce véhicule personnel apparu au tout début des années 2000 utilisant la technologie gyroscopique pour tenir debout tout seul. Comme son nom l'indique, le Solowheel n'a qu'une seule roue, sur laquelle on se hisse sur deux cale-pieds. A premiè-re vue, rien ne permet à ce véhicule personnel de tenir en équilibre. Et pourtant ! « Il s'apprivoise de la même manière qu'un vélo ou que des skis pour un débutant, et de-vient rapidement une extension naturelle de ses pleds », s'enthouslasme Vincent Bourdeau, dirigeant de la société Ultramobility, importatrice du Solowheel.

#### Pas d'efforts à fournir

L'apparell, emmené par un moteur électrique alimenté via une batterle qui se recharge en une heure sur une prise classique, multiplie les avantages par rapport à ses concur-rents naturels. Pas d'efforts à four-nir comme à vélo ou en rollers, et donc pas de risque d'arriver au bu-reau avec des auréoles de transpiration sous les bras. Pas de souci de parking ou de vol, puisque pesant seulement 12 kg, 11 se transporte n'importe où à bout de bras. Seuls deux inconvénients viennent ternir la promesse du Solowheel : une autonomie limitée à 20 km qui le can-tonne à de toutes petites distances, et cet apprentissage qu'il exige avant de le piloter avec aisance et sans risquer une collision avec d'autres usagers pédestres rencontrés sur un trottoir. « Cela fait longtemps que les gens attendent un véhicule simple de ce type », se rassure toute-fois Vincent Bourdeau. Certes, mais à près de 2 000 € l'engin, les parti-culiers, qui n'ont jamais cassé leur tirelire pour passer à la mode du Segway, seront-ils séduits? AYMERIC RENOU ET FRÉDÊRIC DUGIT

\*Liste des boutiques sur www.ultramobility.net.



# **On a testé le Solowheel**

I faut d'abord poser un pied, bien caler son mollet contre l'engin avant de poser le deuxième en s'élançant et, surtout, ne pas oublier de se tenir à n'importe quel point fixe pour éviter la chute. Les premiers tours de roues en Solowheel sont souvent acrobatiques, mais, à la différence du roller ou du vélo, très rarement douloureux. On se retrouve un peu crispé, comme un skieur niveau « piou-piou » prêt à dévaler sa première piste verte, les genoux collés l'un à l'autre et l'équilibre incertain.

Pas un passant ne reste de marbre Les premières appréhensions naturelles passées - pas de guidon comme sur un Segway -, on se retrouve au final pas si mauvais que ça. Il ne faut que quelques dizalnes de se-condes pour comprendre la gestion de l'asslette qu'offre le Solowheel. Impossible de basculer d'avant en ar-rière, l'électronique gère à merveille. Toute l'astuce consiste à doser la pression latérale exercée par ses mollets sur l'appareil pour, une fois lan-cé, s'orienter vers la droite ou à gau-che. Un léger mouvement du corps vers l'avant et, à quelque 5 petits km/ h, nous vollà dans la peau d'un « So-lowheeler ». En un quart d'heure, on réussit tout de même à parcourir en-tre 4 et 8 m sur le bitume bien lisse d'un trottoir. Seules les premières douleurs musculaires dans l'inté-rieur des cuisses, et l'appui prolongé

de l'appareil sur des mollets un peu tétanisés, nous font rendre les armes, navré tout de même d'avoir à stop-per une expérience si prometteuse.

« Il faut quand même une bonne heure, Idéalement sectionnée en quatre parts égales, pour commencer à se sentir à l'alse et assurer une bon-ne ligne droite », explique Vincent Bourdeau, l'importateur de l'engin en France. Lui, après un millier de kilomètres parcourus, se montre

d'une alsance déconcertante. Dans les allées du jardin du Luxembourg, qu'il a choisi pour une courte démonstration, il file et vire-volte les mains dans les poches sur son monocycle. Pas un passant ne reste de marbre. Tous, bouche en-trouverte et sourclis levés, s'interrogent sur la magle qui permet à ce drôle d'engin d'évoluer aussi facilement. Contrairement à une trottinette, la roue à pneu du Solowheel n'a aucun mal à rouler sur un chemin terreux, mais butte par contre sur la marche un peu haute d'un trottolr. Mats, là encore, un peu d'entraînement permet de s'affranchir de ce genre d'obstacle. D'un geste leste, il suffit d'attraper la poignée, de soule-ver l'engin pour s'y réinstaller et re-prendre sa route... Magique ! A.R.

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#### Science & Vie (juin 2013 page 134) EN PRATIQUE

TECHNOFOLIES SPÉCIAL FÊTE DES PÈRES

# **Un monocycle** électrique pour se faufiler en ville

Léger, peu encombrant, facile à marier : le Solowheel a tout pour détrôner les ou whicules électriques personnels. Le principe 7 Une roue équipée de capteurs, drigée par les macements du corps. Idéal pour les (jeunes) papes citadins et prossés !

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sible do router indiffinclosure in more name inent au passing de ori éroai-nant monocycle éleminique, haptilé Sokrachent, qui vient d'arriver un Francia. Pour le pièrer et avancer, sou mill-satour activit dobost de part et d'artre de la more pais

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of corrigont on permanance son inclination pour le faire Is estible antituine Inven-tist. Shine Chen, a créé ost tenir debost et armaner (veir Flufographie). COMME SUR DES SKIST

engén alternatif qui avance trois foie plus vite qu'un piè-ton (propa 's 20 km/h), tont en étant moine encombrant Saul qu'ici, l'équilitimgo se fait à la fois pour ne pue hasqu'uns trottinette, Solourheet est malque en son genre car il est dépenareu de selle. Son casher tex ave culor on avant ou an arriles - comme sur le Segteny inuis atasi, dans une moindre mesure, sur les côtés. L'ati-lianeur deit tout de mirne Inventeur, passionué de patirapp de viteues, tranvait les trouver un certain équilibre prate not pass posser annu ar-idit la pisat à tarre. Et c'est it que les choses se correct.

## Us Harr da corps vers l'iwant et l'engin scollères Mone chose vors l'arrière pour freiner. Et pour tourner, il faut orietter correctement

sos pinda, un pou comme sur des skis. L'apprentisage dure se moyenne une henre, selou le constructeur. Et, au départ, l'utilitation peut s'alder d'une saugle pour se tenir ou même installer das roulettes [an option], comme sur un vélic d'unitant.



d'Ultranshility, gal iniperte

rechargent en une heure sur sectour et hit gemitteent une autonomie de 15 km insufficient, quand los mul-teurse trottigettes électriques atteignent 20 à 30 km, et le Seguray 40 km? Peut-être, mais augmenter sa capacité se lendt au détriment de son poids, et deux de un porta-tidité. Attention. "ce type de Indintis o l'inconvelopert de perdite un peu d'autonomie-quand de fompérature ort

de gestion de la charge et décharge des battern

Batteries

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le Solowheel en France. Les batteries m decsilere généra time (LiFoPO<sub>Q</sub>) the Detegtin sethe particular mansion – et any batase significative de son pris – avant que ce mode de transport proise être arlopté...mais la Scherchael s'antionce d'ores et déjà commo un carboar original et pretique pour los papar tituline Laes Basard

#### Comment ca marche?

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socycles traditionnels difficiles à manine. Il avait on outro romacqué qu'il était possible de patiner eur une

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