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“ Welcome!  
You are the owner of  
‘Mando Footloose’,  
the city’s latest  
transport system that will  
change your lifestyle.”

This manual is prepared for you to use Mando Footloose properly and give helpful tips for adjusting and maintaining the product. It is very important to read this manual before using Mando Footloose, so you can fully understand the product.

Please notice the safety information and warnings shown throughout the manual. This will prevent injury or problems during the operation of Mando Footloose.

If you need more information or have any additional inquiry, please contact the store.

Thank you for purchasing Mando Footloose and congratulations on your wise choice.

If there is any discrepancy between this manual and “parts information from the manufacturer”, it is recommended to follow “parts information from the manufacturer”.

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### Advantages of Mando Footloose

- Compact and refined design
- New generation of transport
- Comfortable ride

# Symbol Description



**SAFETY**

**Safety:** It represents safety warnings that may affect safety.



**WARNING**

**Warning:** It represents cases which may cause death or serious injury / injury due to inappropriate handling.



**CAUTION**

**Caution:** It represents cases which may cause damage to the product due to inappropriate handling.



**POINT**

**Point:** It represents key points for proper operation and maintenance.



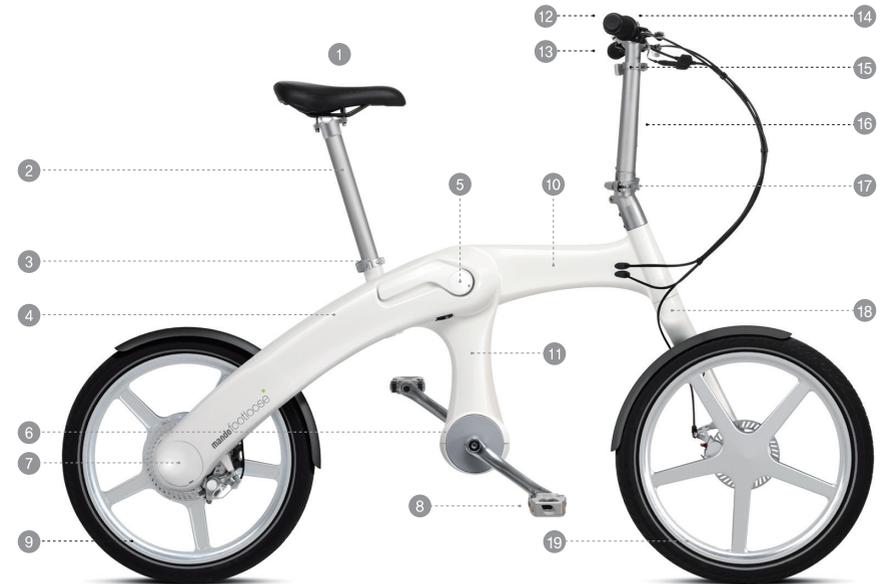
**DON'T**

**Don't:** It represents actions that should be avoided for safety.

# Introduction

# A-1

## Mando Footloose parts identification



- |                  |                             |                             |
|------------------|-----------------------------|-----------------------------|
| 1 Seat           | 7 Motor                     | 14 Handle grip              |
| 2 Seatpost       | 8 Pedal                     | 15 Handlepost height clamp  |
| 3 Seatpost clamp | 9 Rear wheel                | 16 Handlepost               |
| 4 Rear frame     | 10 Front frame              | 17 Handlepost folding clamp |
| 5 Folding lever  | 11 Center frame             | 18 Fork                     |
| 6 Alternator     | 12 HMI(Information Display) | 19 Front wheel              |
|                  | 13 Throttle lever           |                             |

# Introduction

## A-2

### Checking the components

Before riding, check the components included in the box.

#### Mando Footloose body



Light



Rear reflector



HMI (Information display)



Bell



General battery charger



High speed battery charger (sold separately)



\*A user manual and warranty are included.

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

# Items to be checked before riding

## B

Before every ride, it is important to carry out a safety checks to avoid any problems

### 1. Tire pressure

MAX 70psi / Use a proper pump when pumping air into the tires. (The number is based on the original tire installed to the product. Air pressure may vary with the type of tire)

- Excessive air pressure -> Uncomfortable riding quality
- Insufficient air pressure -> May cause a flat tire, inflexible handling.

### 2. Battery energy check

- The remaining amount of energy in the battery can be checked on the HMI screen.

(For more information about charging the battery, please refer to 'F. Battery and Charging')

### 3. Brakes

- Check that front and rear brakes work properly. (Front brake -> left lever, rear brake -> right lever)
- Practice using the brakes by gripping the brake levers gently. (Abrupt use of the brakes may cause injuries)

### 4. Seat height and handle height / adjustment and locking

- Incorrect seat height and handle height may cause uncomfortable riding and handling and reduce a rider's coordination of the bike which may potentially cause injuries.

(For more information about adjusting seat height and handle height, please refer to 'C. Adjustment of the Product')

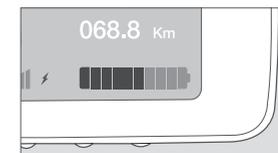
- When the handlepost clamp / handlepost folding lever is not fixed tightly the steering might be affected. (The rider may lose balance and get injured.)

### 5. Changing operating modes

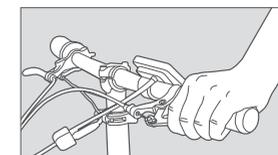
- To understand: Practice changing operating modes before riding. (For more information about HMI setting including switching operating modes, please refer to 'D. Riding Instructions')

### 6. Other safety checklist

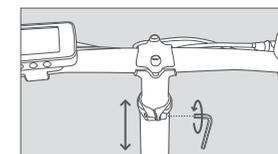
- During night riding, ensure that the front / rear reflectors are fixed, clean and work properly for identification and safety. Additional lighting is essential in most countries by law.
- Ensure that shoe laces are secure. (Untied shoe laces may be caught up by a pedal or crankshaft)
- Ensure that each part of the bike is fastened properly for operation. (Check tightness and operation of all parts including the brake cable and pedals) Loosely fixed screws or bolts may cause injury and excessively tight screws or bolts may affect operation and cause damage to the product.
- Ensure that the front / rear wheels are correctly aligned.
  - > Bounce the front / rear wheels by lifting it up 2~3 inches off the ground.
  - > Rock the front / rear wheels side to side. If any movement or wobbles are detected, do not operate the product.



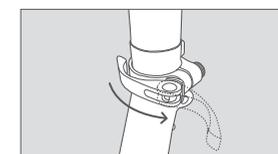
HMI-battery



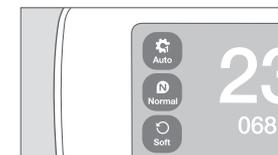
Manipulating the brake lever



Handlepost clamp



Handlepost folding lever



HMI-Operatingmode

 If any defect listed in the checklist is found, please contact the store.

# Adjustment of the product

## Adjustment of seat height

For riding Mando Footloose, it is important to place the seat properly and adjust the height. When adjusting the seat, adjust (1) the height first and then (2) the front and back part of the seat.

### 1. Adjusting the seat up and down

How to check the seat height

- 1) Sit on the seat.
- 2) Put one heel on the pedal.
- 3) Adjust the seat height so that your heel is parallel to the axis of pedal and you can almost straighten your leg (However, it is not recommended to straighten your leg completely).
- 4) Get into and off from the seat when the product is standing.

Enquire at the store to learn how to adjust the optimum seat height. If you would like to adjust the seat height by yourself, you have to ensure the following.

- 5) Ensure that the seatpost clamp is tightened properly.
- 6) Ensure that the seat post is not above the 'minimum insertion' line

**WARNING** If you pull the seat post too far out of the seat tube, then the clamp can no longer secure the seat post sufficiently. The seat post could come loose or break during the riding. There is a risk of accident and injury. Do not pull out the seat post beyond the minimum insertion depth.

- 7) Ensure that the seat is not twisted to one side.
- 8) Ensure that the seat is properly clamped to the seatpost

### 2. Adjusting the seat forward and backward

As the seat is adjustable in forward and backward directions, it enables an optimal seat position.

For proper operation and better charging efficiency when pedaling with Mando Footloose, it is recommended to set the pedal position so it can rotate continuously. Adjust the seat forward and backward by aligning the imaginary line vertically drawn from knee cap with the axis of pedal. Within this range, find the most comfortable position.

### 3. Adjusting the seat angle

Most riders prefer the seat parallel to the ground. However, some prefer to raise or lower the front part of the seat. If you have pain while sitting on a seat, lowering the front part of the seat may help reduce it (however, the center of gravity may move to the front).

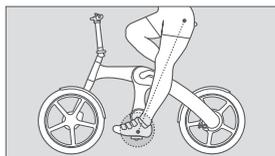
The seat fastening clamp of Mando Footloose is in the form of 2 bolts, 1 at the front and 1 at the back. Adjust the seat to ensure that the seat lies horizontally or at a preferred angle by screwing the front and back bolts in turns. A little difference gives a large effect on the performance and comfort of Mando Footloose.

Nevertheless the seat height has been properly adjusted, if the slope and front/back position of the seat is not balanced, you may feel uncomfortable while riding. Also, the seat provided with the product may not fit to your body. In this case, it is encouraged to ask assistance of a specialist at the store.

## C-1

**POINT** The first point to consider before a ride is to adjust Mando Footloose to your body. Proper adjustment allows comfortable riding and safety. Should you have any difficulty with the adjustment, please contact the store. Even though you have completed the fitting (adjustment of Mando Footloose to your body) with proper skills and tools, it is encouraged to confirm your adjustment with the store.

**WARNING** If Mando Footloose is improperly fitted, you may lose control or get injured such as joint injury during a ride.



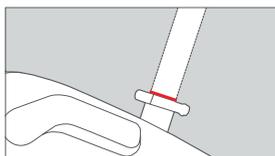
Adjustment of the seat

**CAUTION** Tighten clamp bolts properly. Loosely screwed bolts may cause wobbling and fatigue during a ride, or may cause you to fall off from the bike.

**WARNING** After seat adjustment ensure that it is secured properly before riding. Loosely placed seat clamp or seatpost clamp may cause damage to the seatpost. Due to this damage, you may lose control and fall off the bike.

**POINT** The seat is designed for general sizes; therefore, it does not correspond to every rider's pelvic shape and sitting habits. If you are unable to find a comfortable position, and it causes consistent pain even after seat adjustment, it is encouraged to replace it with another type of seat.

**WARNING** In some cases, riding with an improperly positioned seat may cause minor or severe injury (e.g. it may chafe skin and cause prostate pain/numbness, knee pain, etc) Should you feel uncomfortable or have pain, stop riding and visit the store for specialist assistance.



Minimum insertion line

# Adjustment of the product

## Adjustment of the handlebar

Mando Footloose has a foldable handle system for which you can adjust the angle of the handlebar and its height.

### 1. Setting the handle height

The height at which a rider feels comfortable when going up and down a slope or cornering

- If the handle is too low you may experience backache, neck pain or wrist pain during a ride.
- If the handle is too high you may find the handling is unsteady during a ride.

### 2. How to adjust the handle height

- Loosen the lever of the handlepost clamp located under the handlebar.
- Adjust the handle to the desired height.
- After ensuring the alignment of the handle, tighten the clamp lever
- Note : the tightness of the lever may be adjusted with the adjustment screw - on the other side of the clamp to the lever

### 3. Finding the right angle of the handlebars

While holding the handlebars, with the clamp bolts loose set the angle of the handle at which you can perform throttling and braking comfortably. Then re-tighten the clamp bolts.

- If the angle of handle is not properly set, it may cause finger or wrist pain.
- Place fingers on the brake levers and adjust the angles so they lie parallel to the extension line of the arm.
- Setting the angle of brake lever: adjust it with the brake lever clamp bolts.
- Setting the angle of the throttle lever: adjust it with the throttle bolts.

### 4. Adjustment of the brake lever

If it is hard to grab the handle due to your hand size, it is encouraged to contact the store or a specialist to adjust the lever reach. There is a small screw inside of the lever, but adjustment also needs the cable end stop adjusting to match

### 5. How to adjust seat post



1) There is a clamp below the seat.



2) Open the seat clamp lever completely.



3) Grab the fore part of the seat to measure adequate height.



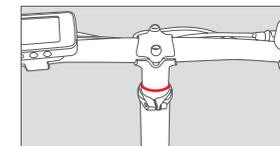
4) Adjust to the height that fits the user.  
(Do not pull out seat post beyond the minimum insertion depth.)



5) Close the lever.

## C-2

**WARNING** If you pull the handle post too far out of the head tube, then the clamp can no longer secure the handle post sufficiently. The handle post could come loose or break during the riding. There is a risk of accident and injury. Do not pull out the handle post beyond the minimum insertion depth.



Minimum insertion line

**WARNING** Warning: it is important to adjust the brake properly so you can easily reach the brake lever. It is recommended to set the brake at which produces the best braking power within the adjustment range of the brake lever reach.

- If the brake lever reach is too short: you may find it too stiff or hand pain.
- If the brake lever reach is too long: it may not produce the best braking power.

### Note



1) Check whether the sit front is on the straight line with the handle post.



2) If the sit moves or goes down with the lever closed, turn the nut beside the clamp to clockwise

# Riding instructions

## How to ride

Mando Footloose allows two ways of riding.

### 1. Riding Mando Footloose by pedaling

Start Mando Footloose off by pedaling as if so for general bikes. Mando Footloose accelerates proportionally to the number of pedal rotations.

### 2. Riding Mando Footloose by throttling

Start Mando Footloose off by pushing the throttle lever slowly with your thumb. Mando Footloose accelerates proportionally to the degree of pushing the throttle lever.

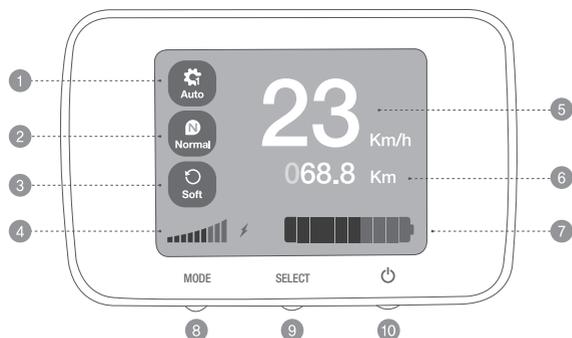
(Each country has a different regulation for the maximum speed in electric mode. It is limited to 6 km/h in some of EU countries, 32 km/h in the USA and 25 km/h in the Republic of Korea.)



- 1) Insert HMI to HMI mount
- 2) Push HMI down completely until to hear "click" sound.

## Description of the HMI screen

### HMI Main Screen



**POINT** the function of the automatic transmission may be affected by the body weight of a rider, road condition, slope of the road and / or wind.

# D-1

- CAUTION** Ensure that the number of pedal rotations does not exceed 90 rpm (rotations per minute). Excessive number of rotations may reduce the lifetime and cause breakdown of the product due to overload.
- POINT** The optimal range of the number of pedal rotations is 30-60 rpm (charging information appears on the screen when the number of pedal rotations is more than 30 rpm).
- CAUTION** Check the degree of acceleration force by operating the throttle lever. In judicious operation of the throttle may cause an accident. Do not operate the throttle in situations other than riding (e.g. when rolling Mando Footloose or standing).
- POINT** The maximum speed does not exceed the maximum speed regulated by each country even when the throttle lever is pushed to its deepest point (when it is accelerating to its maximum, the maximum speed may vary with slope of the road, a head wind, the body weight of a rider and/or charging status).

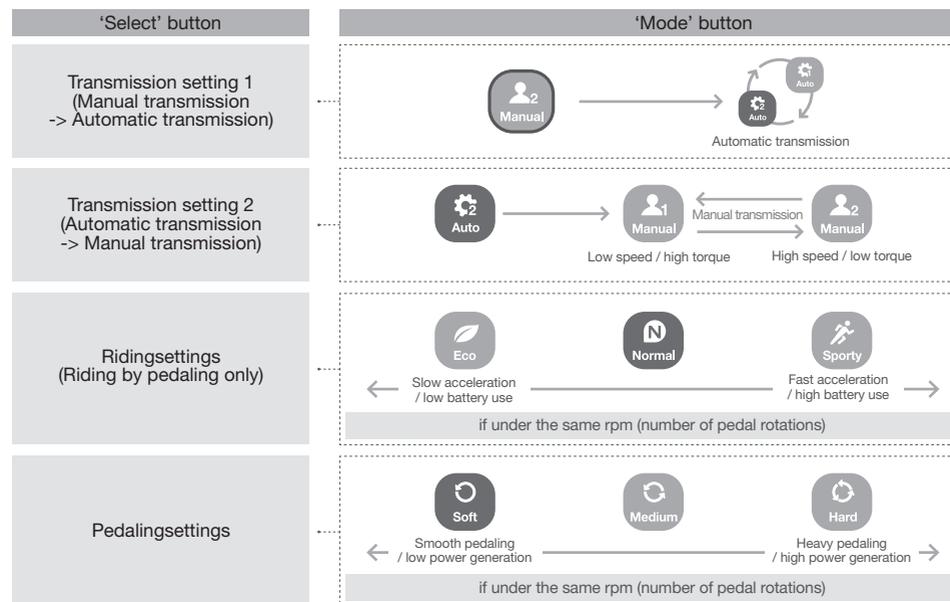
# D-2

1. **Transmission settings**  
Auto: automatic transmission  
Manual: manual transmission
2. **Riding settings (applicable only when pedaling)**  
Eco: slow acceleration / low battery use  
Normal: average acceleration / average battery use  
Hard: fast acceleration / high battery use
3. **Pedaling settings**  
Soft: smooth pedaling / low power generation  
Medium: normal pedaling / normal power generation  
Hard: heavy pedaling / high power generation
4. **Independent power generation**  
Power generated from the alternator by pedaling
5. **Current speed**  
Current riding speed (km/h)
6. **Trip distance Mileage (km)**  
\*Initializing the mileage: Push the 'Select' button for more than 2 seconds.
7. **Remaining amount of battery**  
Current remaining amount of battery
8. **'Mode' button**  
Use to change between modes
9. **'Select' button**  
Search the menu to select one of the following:  
Automatic transmission set 1 -> auto transmission set 2 -> setting Riding mode -> Pedaling mode (repeated)
10. **'Power On / Off' button**  
Power On / Off (turning the bike on/off). Push the button for more than a second to turn it on / off.
11. **Total cumulative mileage**  
Total cumulative mileage

# Riding instructions

# D-3

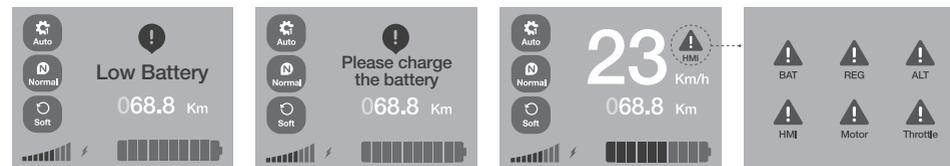
## Setting the HMI Modes



**POINT** - When the product is turned on, it is automatically set to 'Auto' for transmission setting, 'Normal' for riding settings and 'Soft' for pedaling settings.  
- The 'Auto' mode of the transmission setting allows for automatic transmission, and it is automatically set to Auto 2 when turned on and as Auto 1 when going down a slope.

### Alarm: Mando Footloose has an alarm function that shows a critical status of the product.

1. Alarm for the remaining battery capacity.
2. When the product has a problem (may be self-detected)



Charge the battery as soon as possible if the screen in the picture above appears.

When the product has a problem, a red warning sign will appear in the top right area as shown in the picture above. If the warning sign does not disappear after turning the HMI on / off (more than once), stop using the product and contact the store.

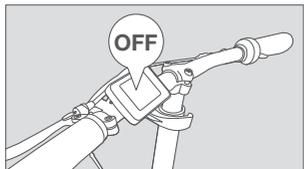
# Folding instructions

E

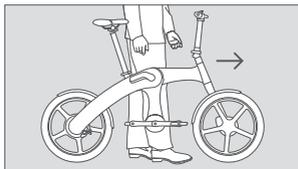
## How to fold/ tips for folding

Mando Footloose is designed to be foldable so the volume of the product can be reduced to allow easier storage and transport. Folding can be done by operating the folding lever located in the center.

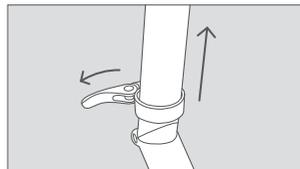
### 1. How to fold Mando Footloose



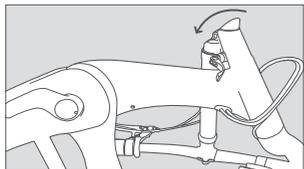
1) Ensure that the power is off.



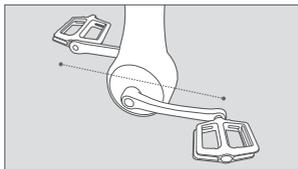
2) It is recommended to stand on the left side of Mando Footloose with the front wheel heading forward.



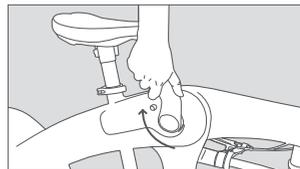
3) To fold the handlepost, loosen the handlepost clamp folding lever and lift the whole clamp upward.



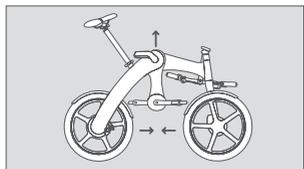
4) When the handlepost clamp is lifted, the whole handlepost can be folded backward to its left side.



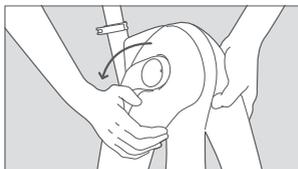
5) Check that the right pedal is forward the cranks horizontal (incorrectly aligned pedals may damage the frame).



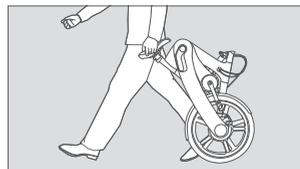
6) Unlock the folding lever located in the center frame by pulling it up (hold the upper part of the front frame with your left hand and lift the folding lever with your right hand).



7) Hold the position of rear wheel with your right foot against the tire so Mando Footloose does not move during folding, fold Mando Footloose by lifting the seat or centre frame up.



8) Hold the seat or frame with your left hand and push down the folding lever to the 'fixed position' with your right hand.



9) Use the handlebar alignment grip to lock the steering with the wheels parallel.

2. Unfolding Mando Footloose: Reverse the steps above.

### 3. Tips for folding / unfolding

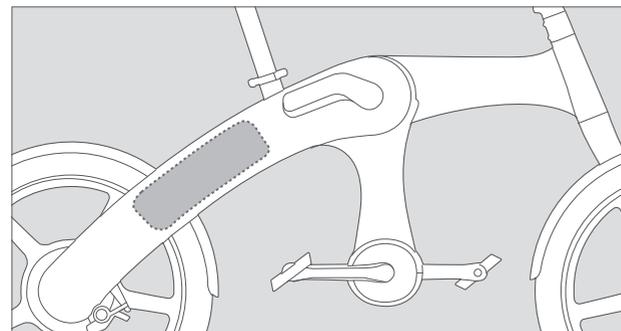
1. Ensure that the power is off before folding / unfolding.
2. Do not turn the power on during folding.
3. After unfolding, lock the folding lever so it is closed properly. If the folding lever is not fixed completely, it may cause a problem during a ride.

# Battery and charging

F-1

## About maintaining the battery

The battery is located inside the rear frame.



- ⚠ WARNING**
- ① If you find any unusual circumstance such as a smell or deformation of the frame around the battery, stop operating the product.
    - If the product is operated under such conditions, it may generate heat, cause a rupture or a fire. If you find any such problems, do not operate the product and contact the store.
  - ② Do not disassemble the product. Do not deform or disassemble the battery.
    - It may generate heat, cause a rupture or a fire.
  - ③ Do not store the product with a completely discharged battery for a long period of time (over 3 months).
    - This may be the cause deterioration of the battery.



- ⚠ CAUTION**
- ① Do not leave the product in hot areas such as inside a car or beside a heater.
    - If it is stored in hot areas, the capacity of the battery may be reduced which may shorten the range, and an internal safety switch may be activated to disable the battery for a time.
  - ② Before storing the product for a long period of time, ensure that the battery is fully charged to ensure a longer battery lifetime.
  - ③ Do not operate the product at a temperature below -10°C.
    - It may reduce the lifetime of the battery.
  - ④ Do not operate the product at a temperature higher than 40°C.
    - It may reduce the lifetime of the battery.

## About replacing the battery

F-2

If battery replacement is required (battery replacement is a paid service). The replacement schedule varies with the operating environment, temperature or charging habits. However, the battery has to be replaced if the range per battery charge becomes too short, the battery does not recover and the performance of the product deteriorates. (In the winter, the range per battery charge reduces due to low temperatures. It recovers as the temperature goes up, so battery replacement is not required).

# Battery and charging

## F-3

### Description of the battery

#### 1. About the lithium-ion battery equipped in Mando Footloose

The battery equipped in Mando Footloose is a lithium-ion battery which produces a high output, leading to high capacity and performance. Compared to the conventional nickel-cadmium cell or nickel-hydrogen cell, it can store a high amount of electricity within a small-sized / light-weight battery.

#### 2. Features of the battery

- 1) Batteries are susceptible to hot or cold temperatures. In a battery, charging and discharging occurs by chemical reactions. The chemical reactions are affected by the temperature and the performance of a battery is highly influenced by hot climate in the summer and cold climate in the winter (avoid operating the product at a temperature below - 10°C or above 40°C. It may reduce the lifetime of the battery).
- 2) A battery naturally discharges. The discharged amount is recovered after charging before use.
- 3) A new battery may not show the best performance at first use. It will be maximized after 2~3 times of use (if you don't see any improvement, contact the store).

#### 3. Degradation during winters

The range may shorten or speed may decrease due to the low output in cold temperature eg below - 10°C. However, it recovers as the temperature gets warmer (when it is at the optimal temperature). Therefore, it is recommended to keep the battery at room temperature before use.

#### 4. How to maintain the battery when it is hot

Avoid charging the battery directly after a ride or charging in a hot place such as near a heater. It may shorten the life or range. If the temperature of the battery is too high, it may not function.

- 1) A lithium ion battery discharges slowly compared to the conventional batteries, but completely discharging it may reduce the lifetime of the battery. If you need to keep the battery for a long period of time (more than 1 month), keep it in a cool, dry place after fully charging it.
- 2) A lithium-ion battery is susceptible to high temperatures.
  - Do not keep the battery in hot places such as inside a car under the sun or beside a heater in winter time.
  - Do not recharge a fully charged battery.

#### 5. Factors that affect the lifetime of the battery

- 1) A lithium ion battery discharges slowly compared to the conventional batteries, but completely discharging it may reduce the lifetime of the battery. If you need to keep the battery for a long period of time (more than 1 month), keep it in a dry place after fully charging it.
- 2) A lithium-ion battery is susceptible to high temperatures.
  - Do not keep the battery in hot places such as inside a car under the sun or beside a heater in winter time.
  - Do not recharge a fully charged battery.



Even though the battery has a high quality its capacity decreases as it is charged and discharged repeatedly; thus, a replacement is necessary (as with any other battery).

# Battery and charging

## F-4

### Before charging the battery

#### Cautions when charging the battery:

- 1) If a charging plug gets unplugged while charging, do not plug it back in right away in order to prevent any possible false operation. Plug it back in after 5~10 seconds.
- 2) Do not keep the Mando Footloose charger in a place where children or pets can reach it.
  - It may be dangerous or cause a fire due to their unexpected behavior.
- 3) Do not touch the power plug of the Mando Footloose charger or charging socket with wet hands.
  - The socket may be contaminated with foreign substances.
- 4) Always use the Mando Footloose(original) charger.
  - If you use a charger other than Mando Footloose charger, it may generate heat, cause a rupture or a fire. Do not use other types of chargers.
- 5) Do not use Mando Footloose charger for other electronic appliances.
  - The Mando Footloose charger is designed only for Mando Footloose. Even with the same type of socket, do not use the Mando Footloose charger to charge other products. It may cause a fire or damage.
- 6) To maintain the Mando Footloose charger, keep the following in mind:
  - Do not bind or roll the power cord when using it for charging. Do not damage or make an alteration to the power cord. Do not bend or twist the power cord by force.
  - Do not put a heavy object on the power cord or do not fix the power cord with a nail.
  - Do not use a damaged power cord (a power cord with disconnected or exposed wires). It is very dangerous as it may cause a fire or electric shock. If you find any defect, do not use it and contact the store.
- 7) Do not disassemble or rebuild the Mando Footloose charger.
  - It may cause a fire or electric shock.
- 8) Do not place the Mando Footloose charger on a high surface such as a table.
  - It may fall off the table and cause injury.
- 9) Do not leave the Mando Footloose charger connected to house hold current.
  - Dust accumulated on the electrical outlet may cause a fire. When the Mando Footloose is not in use, keep the power cord unplugged from the electrical outlet for safety.
- 10) Do not immerse the Mando Footloose charger in water or do not leave it in rain.
  - Using a charger that is wet is very dangerous as it may cause a fire. If it is wet, unplug the power cord from the electrical outlet and have it checked at the store.
- 11) Do not charge near inflammable vapours.
  - It may cause a fire.
- 12) If Mando Footloose is not in use for more than 10 days, "Deep sleep mode" would be activated to protect the battery. It can be awoken by charging the battery 1~2 times for 1 minute each



- 1) Ensure that the Mando Footloose charger is placed on an even and stable place.
  - The power cord may be pulled by an object, or it may fall off from a height, and become malfunctioned.
- 2) Do not drop the Mando Footloose charger from a height or hit it.
  - It may not work properly or may get damaged.
- 3) Do not put a cover or an object on the Mando Footloose charger. Also, do not use multiple Mando Footloose chargers stacked or attached to each other.
  - The interior of the chargers may become hot and may not work properly.
- 4) Do not step on the Mando Footloose charger.
  - It may cause a failure or damage.
- 5) Ensure that the sockets on the Mando Footloose charger and the main body are not wet or dusty.
  - It may cause a failure in charging the battery or damage. Always keep the sockets clean.
- 6) Do not attach metal to the sockets.
  - It may cause a failure.
- 7) Do not use the AC power of a car.
  - Always use the household current to charge the product.
- 8) Do not leave the Mando Footloose charger connected to household current after fully charged.
  - It may cause a failure due to lightning or other factors. When the Mando Footloose charger is not in use, keep the power cord unplugged from the electrical outlet for safety.

# Battery and charging

## Appropriate places for charging the battery

### 1. Appropriate places for charging the battery

Charge the battery at a place where the following conditions exist:

- A flat and stable place
- A place away from water or rain
- A place not exposed to direct sunlight
- A well ventilated dry place
- A place which children or pets cannot reach
- A place with a room temperature between 0~30°C.

However, during hot summer or cold winter time, charging may begin, but may be discontinued. Try to charge the battery at a room temperature between 15~25°C, which is optimal for the battery.

#### 1) Examples of appropriate places for charging the battery

- Summer: a shady and well-ventilated place (optimal temperature 15~25°C)
- Winter: a warm place where the temperature is kept above 0°C at night (optimal temperature 15~25°C) Charging is possible at a temperature between 0~30°C. However, if the interior temperature of the battery is out of the range of possible charging temperature directly after a ride, then it will enter a 'standby state' until the interior temperature of the battery reaches the possible charging temperature.

### 2. Inappropriate places or ways for charging the battery

- Summer: charging at a place exposed to the direct sunlight and charging the battery directly after a ride. Even though charging may begin normally, it may be discontinued when the temperature of the battery exceeds the possible charging temperature in order to protect the battery. In this case, cool down the battery and charge the battery again at a cooler place.
- Winter: charging outdoor, at a cold place such as a warehouse, or near a heater. Even though charging may begin normally, it may be discontinued when the temperature reaches below 0°C in order to protect the battery. In this case, charge the battery at a warmer place.



Despite the battery charging temperature is between 0~30°C, when the battery is stored at a place exposed to the direct sunlight or directly after a ride, charging cannot be initiated as the interior temperature of the battery is out of the range of possible charging temperature. It may take up to 3 hours to reach the possible charging temperature in a place with a room temperature of 30°C.



Occasionally, charging the battery near electric appliances like TV or radio may cause noise in the radio or may distort the image on TV. In this case, charge the battery in a place away from the electric appliances.

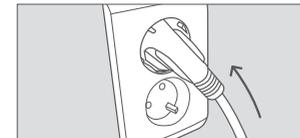
# F-5

# Battery and charging

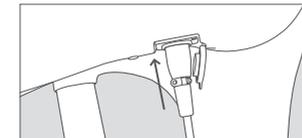
# F-6

## Charging Instructions

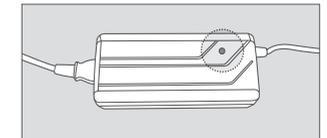
### 1. 2A General Charger



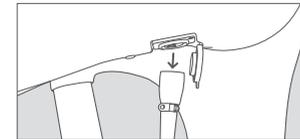
1) Plug the power cord into an electric outlet.



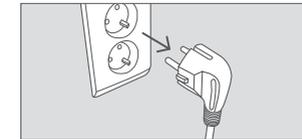
2) Connect the charging plug to Mando Footloose.



3) Charge (the red lamp of the charger means ON).



4) When charging is completed (the green lamp of the charger means ON), disconnect the charging plug from Mando Footloose.

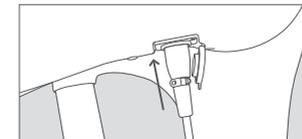


5) Unplug the power cord from the electric outlet.

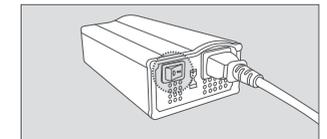
### 2. 4A High-speed Charger



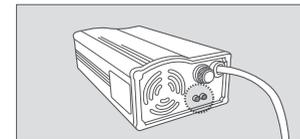
1) Ensure that the power of the charger is 'OFF'. Plug the power cord into an electric outlet.



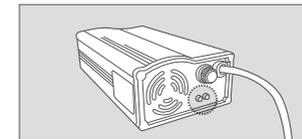
2) Connect the charging plug to Mando Footloose.



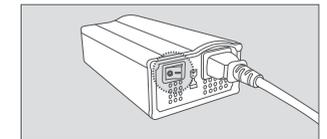
3) Turn on the power of the charger.



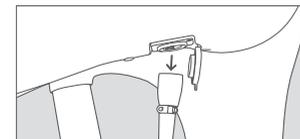
4) Charge (the red lamp of the charger is ON).



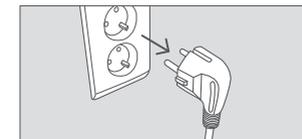
5) Charging completed (the green lamp of the charger is ON).



6) Turn off the power of the charger.



7) Disconnect the charging plug from Mando Footloose.



8) Unplug the power cord from the electric outlet.

**CAUTION** do not disconnect the charging plug from Mando Footloose while charging. It may cause false operation or a failure.

**POINT** if charging does not begin properly, turn off the power of the charger and retry charging.

# Battery and charging

## How to check the charging status

### 1. How to check the charging status

1) Indication by the charging lamp

	2A General Charger	4A High-speed charger	
		Left Lamp	Right Lamp
Power Off	Off	Off	Off
Standby	Red	Red	Off
In Progress	Red	Red	Red
Completed	Green	Red	Green

### 2. Troubleshooting

- Power LED is not ON
  - Check if AC power is ON and if the power cord is plugged properly.
- Red LED is not ON while charging the battery
  - Check if the charger port is properly plugged.
- Red LED does not change to green LED while charging the battery
  - Check whether the room temperature is at the optimal temperature. If red LED is still ON at the optimal temperature, it indicates that the battery has a failure - contact the store.
- Red LED changes to green instantly
  - It indicates that the battery is fully charged. Otherwise, it indicates that the battery has a failure - contact the store.
- Green LED is ON even though the battery is not fully charged
  - Repeat recharging the battery after completely discharging 2~3 times. If you still have the same problem, contact the store.

## Time to Charge

Using a general charger, it usually takes about 5.5 hours when the battery icon on the HMI screen is completely empty (it takes about 3 hours when using a high-speed charger, sold separately).

\* The time to fully charge a battery varies with the condition of the battery and the room temperature.

## F-7



Even though charging may begin normally, it may be discontinued when the battery temperature exceeds the possible charging temperature in order to protect the battery. In this case, cool down the battery and charge the battery again at a cooler place



Despite the battery is at between 0~30°C, if the battery is charged at a place exposed to direct sunlight or directly after a ride, charging cannot be initiated because the interior temperature of the battery is out of the possible charging temperature range.

## F-8



If you find any problem while charging a battery, turn off the power of the charger immediately, disconnect the charging plug of the charger from the product, and unplug the power cord from an electric outlet.

\* Charging a battery that has not been used for a long period of time may take longer and as long as the red LED is ON, you may consider it as working properly.

# How to use the product properly

## For the proper use of the product

### 1. Safety tips: for safe riding, safety equipments required. Be aware of the safety requirements (including the NATIONAL TRAFFIC LAWS) and follow them.

Carrying lighting devices and reflective material on your Mando Footloose vehicle is important for your safety. Seeing and to be seen while participating in traffic conditions is key. All member states of the EU have their own dedicated local national regulations with regards to lighting and reflection, the way how these should be carried and the conditions and timing when these should be carried. Please make sure you are fully aware of the national regulations which apply to your personal situation and please make sure your vehicle is equipped with the proper lighting and reflective material in conformity with these national regulations.

- Wear a helmet that meets the safety code. Follow the steps, instructions and suggestions stated in the user manual.
- Conduct a safety inspection with a specialist regularly.
- Practice the operation of the product including pedaling, handling, braking and throttling in advance.
- Wear a pair of comfortable shoes. A loose cloth might get caught by the product. Do not wear sandals or pedal with bare feet when riding the product.
- Use lights and wear bright colors so pedestrians or car drivers can notice you when riding Mando Footloose at night.
- Protect your eyes by wearing sunglasses when the sunlight is strong.
- Wear safety equipment and use lights to meet local traffic laws.
- Do not perform any stunts while riding. Stunts and dangerous actions can bring instant excitement, but it may harm the product or cause injuries.
- Operate the product at the appropriate speed depending on the circumstances. Higher speeds may increase danger.
- The maximum weight of a rider for this product is 100 kg (including personal belongings).

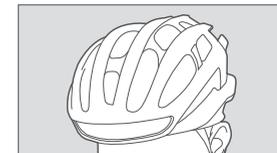
### 2. Motor and Alternator

- Ensure that the number of pedal rotations do not exceed 90 times per minute (Excessive rotations may cause a damage due to overheat).
- Do not use high pressure washers to clean the product. Use a soft sponge.
- The motor and alternator shouldn't be submerged in water. => It is waterproof but only at the normal level for daily living.
- Do not disassemble the motor or alternator. If you disassemble the motor or alternator warranty will be void.
- Do not operate the product in reverse direction at a speed higher than 5 km/h. (avoid reverse rotations. It may damage the product due to abnormal voltages)

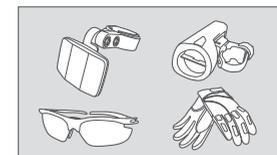
### 3. Regular Maintenance

For safe use of Mando Footloose, have a maintenance service every 6 months at the store. Perform the first maintenance service within 2 months of date of purchase.

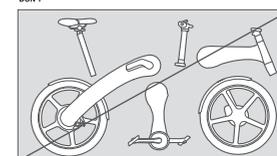
## G



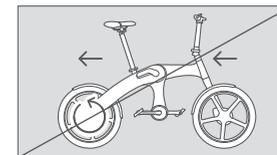
Wear a helmet that meets the safety code



Safety equipment



Do not disassemble



Avoid reverse rotations

# How to use the product properly

G

## For the proper use of the product

### 4. Safety Tips for Riding

- 1) Follow the road regulations and traffic rules in the local area.
- 2) Assume that others cannot see you during a ride.
- 3) Mind the cars that are moving slowly, turning and following, opening of doors of parked cars, children and pets on the road.
- 4) Secure a clear view and mind obstacles on the road such as a construction site, railroad or uneven road.
- 5) Before passing an intersection, stop temporarily at the intersection and look at both directions.
- 6) Always follow the traffic regulations when turning or crossing a street.
- 7) Do not wear earphones during a ride.
- 8) Do not carry someone on your back during a ride. Do not link the product with a towing device such as a trailer.
- 9) Do not install any equipment that may block the view or interrupt the operation of Mando Footloose.
- 10) Do not obstruct pedestrians or cause fear by jumping out, driving dangerously or swerving intentionally.
- 11) Do not ride Mando Footloose after drinking alcohol.
- 12) Avoid riding Mando Footloose in bad weather.
- 13) Do not press the throttle lever while rolling Mando Footloose.
- 14) This product is designed to be operated on paved road. It is not appropriate for riding on uneven roads, off road, racing, jumping or stunts. Inappropriate use may damage the frame.
- 15) If too much pedaling speed is used (over 90 rpm) the internal circuit protection may be over ridden.
- 16) For braking, always use the right brake (rear brake) first and then the left brake (front brake).
- 17) Depending on the repeated use of the brakes, the disk brakes may produce a noise. When it produces a noise, contact the store to adjust the gap between the brakes.
- 18) Ensure that the folding lever is completely locked after unfolding Mando Footloose. If the folding lever is not completely fixed, it may cause a problem during the ride.
- 19) Do not operate the motor while braking.
- 20) Do not hit the HMI or detach it from the product while riding.
- 21) Do not turn the power off while riding.
- 22) Do not turn the power on while throttling.
- 23) If the distance going up a hill is too short, the gear may not shift to the 'hill mode (the first gear)' during a ride under the automatic transmission mode.
- 24) If the frame of Mando Footloose is deformed, the automatic transmission mode may not operate properly.
- 25) If Mando Footloose is hit by something during a ride, the automatic transmission mode may not operate properly.
- 26) After shifting to 'hill mode' (the first gear), the riding speed is limited (low-speed and high-torque mode).
- 27) When riding up a hill at a low speed, the automatic transmission may not operate properly.
- 28) Do not operate the product if it was disassembled and rebuilt by the user.

# How to use the product properly

G

## For the proper use of the product

**CAUTION** Cautions in rainy weather:  
In rainy weather, it is hard for a tire to grip the road. Also, it is hard to secure the safety of the rider and other car drivers due to low braking power and unclear visibility. Wet roads increase the risk of accidents. Ensure the product is only used at low speeds and learn how to stop safely on a wet road, by braking gently.

**CAUTION** Suggestions for a night ride:  
riding Mando Footloose at night is more dangerous than riding it during day time. Try to avoid riding at night or in early mornings since a rider cannot be seen by other car drivers or pedestrians. For a ride at night or in early mornings, use lights and wear safety accessories.

**WARNING** Use a light during a night ride.

**CAUTION** Check regularly if the rear reflector is well attached to the product.

**CAUTION** Do not remove the rear reflector. It is necessary for safety. Without the rear reflector, an accident may be caused because a rider cannot be seen by car drivers or pedestrians. If you collide with a car, you may be critically injured and even die. For a night ride, keep the following suggestions in mind:

- Wear a helmet that has reflective stripes on it. Attach a safety light to your body and Mando Footloose.
- Install a brightly colored light so you can easily be seen by car drivers or pedestrians.
- Ensure that the light and reflector is not blocked by any object.
- Ensure that the rear reflecting plate is installed properly.
- Ride at a slow speed for your safety.
- Avoid riding in a dark area or crowded place.
- Avoid riding off road or on uneven roads.
- Ride on a familiar routes and protect yourself with defensive riding.

**CAUTION** Replacement of parts, installation of accessories:  
There are many kinds of parts and accessories that can improve the riding quality, performance and design. However, you should be cautious when you replace parts or install accessories. The safety is not ensured when parts are replaced and accessories are installed to Mando Footloose because the manufacturer of Mando Footloose has not tested the compatibility between Mando Footloose and these parts / accessories. Before installing any part, accessory or tire on Mando Footloose, contact the store to check the compatibility. Read the manual of the part / accessory to check the compatibility between Mando Footloose and the part / accessory.

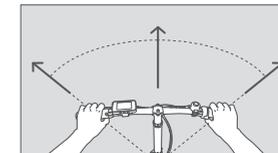
**WARNING** If the parts / accessories are not compatible with Mando Footloose, do not install it. In appropriate use of parts / accessories may cause a critical injury .

**WARNING** For replacement of parts, for safety and warranty service it is recommended to use the genuine parts. Contact the store before replacing any part / accessory.

### 5. Tightening torques

**WARNING** Bolts or nuts which have been tightened using the incorrect torque:  
- may come loose if the torque is too low  
- may be overstretched if the torque is too high and consequently break off  
A torque that is too high may also damage the components. There is a risk of an accident. Always tighten the bolts and nuts to the specified torque. If you do not own a torque wrench, have this work carried out at a qualified specialist workshop.

Parts	Tightening torque
Handlebar clamp	8Nm
Handle grip	3Nm
Handle post	6Nm
Saddle	6Nm



Securing a clear view

# How to use the product properly

## For the proper use of the product

### 6. Brake settings

#### 1) How to use the break



1) Right lever (Rear brake, grip, throttle lever, brake lever)



2) For stable use, it is recommended to use throttle with your thumb, and grab the grip with forefinger and middle finger.



3) Left lever(front brake) - use your forefinger and middle finger to operate the brake.

#### Brake reach control



1) Use 2mm hex wrench.



2) Initial position.



3) Adjusted reach position.

#### 2) PAD REPLACEMENT (BB5 ONLY)

A pad should be replaced when its total thickness (backing plate and friction material) is less than 3mm.

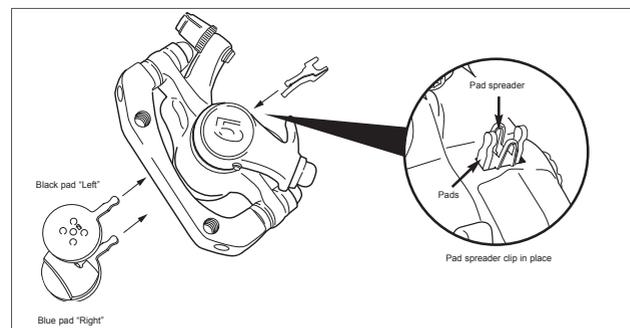
##### ① REMOVE THE OLD PADS

Back the inner adjustment knob all the way out (counterclockwise). Pull the pad spreader clip from between the pads, then pull the pads out of the caliper one at a time.

##### ② INSTALL THE NEW PADS AND SPRING

Insert the new pads one at a time into the caliper.

VERY IMPORTANT: MAKE SURE YOU PLACE THE BLACK PAD ON THE INNER SIDE (TOWARDS THE WHEEL) AND THE BLUE PAD ON THE OUTSIDE (AWAY FROM THE WHEEL). ONCE THE PADS ARE IN THE CALIPER YOU CAN SLIDE THE SPREADER CLIP BACK INTO POSITION - BETWEEN THE PADS.



# G

# Guarantee of Quality

# H-1

## Application and limitation of the warranty

### 1. Warranty Promises

This warranty applies to the product that has defects in material or workmanship excluding consumable parts. The product will be repaired or replaced free of charge according to the conditions specified below ("warranty"):

### 2. Warranty period

Warranty period-2 years from the date of purchase

Parts applied for warranty-all parts of the product, excluding consumable parts

### 3. Items not covered by the warranty

1) The warranty does not cover the defect/damage specified below or resulted from any of the the following circumstances:

- ① small defects (sound, vibration etc) which do not affect the quality or function of the product
- ② a flat tire or cut made by nails or broken glass
- ③ when the user did not follow "the user's responsibility" as stated below
- ④ having inappropriate maintenance or service
- ⑤ using a part that is not genuine or not approved by the manufacturer
- ⑥ rebuilding the product or installation of parts that are not approved by the manufacturer and legislation
- ⑦ accidents caused by collisions, falling off, rolling into a ditch or any other actions caused by the user's careless riding
- ⑧ unintended use of the product such as racing, or off road use.
- ⑨ operating the product in unusual circumstance such as on stairs where Mando Footloose cannot be operated properly
- ⑩ damage of parts due to prolonged use and 'normal wear and tear' (heating of the battery due to its life time, natural discoloration of the painted or plated surface, heating of used parts)
- ⑪ external factors including vehicle exhaust, chemicals, bird droppings or damage from sea wind / water
- ⑫ natural disasters such as an earthquake, typhoon, flooding or a fire

2) The manufacturer does not cover the following expenses or loss:

- ① replacement, repair or additional cost of consumable parts (such as: tire, tube, wire, grip, brake shoe, pedal, fuse, gasket, bolts and nuts, light bulbs, springs or similar parts)
- ② expenses for maintenance, cleaning and repair
- ③ repair costs at a store that is not approved by Mando Footloose
- ④ expenses accompanied with the repair such as a telephone charge, shipping fee or car rental
- ⑤ compensation for loss of business revenue or loss resulting from a malfunctioning product

### 4. Users Responsibility

In order to ensure proper functioning of Mando Footloose and operate it safely, the user must meet the responsibilities stated below while bearing the expenses associated with the responsibilities.

1) The proper operation of Mando Footloose

The proper operation based on the information about maintaining the product and requirements (the maximum weight capacity(100kg) of a user) stated in this manual.

2) Checking the product before a ride (refer to 'B. Items to be checked before riding')

3) Receiving a regular maintenance service or additional repair service approved by the manufacturer

### 5. Start of Warranty

This warranty is started by the registration of a genuine product at a shop where Mando Footloose is purchased.

# Guarantee of Quality

## Application and limitation of the warranty

### 6. How to repair the product during the warranty period

In order to repair the product during the warranty period, visit the store with your Mando Footloose and its warranty certificate and apply for the warranty repair. The certificate is required for the warranty repair.

### 7. The area covered by the warranty

This warranty applies only to the products purchased and used within the country where Mando Footloose is bought. Therefore, the warranty expires when it is transferred to another country.

### 8. Other

The warranty is a written guarantee, promising to repair or replace the product if necessary within a specified period of time. Therefore, in principle, repair for the damage occurred after the warranty period is chargeable. However, for damages resulted from the manufacturer the manufacturer will repair the product at a fair cost based on the conditions stated in the warranty and the degree of the manufacturer's responsibility. In such case, contact the store.

## Registration of a genuine product

To apply for the warranty, a genuine product must be registered.

### How to register a genuine product

- 1) Enter the information in Certificate of Authenticity on page 22
- 2) Please hand in Certificate of Authenticity to a shop.
- 3) Registration of a genuine product is now completed.

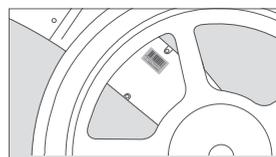
## Specification

Driving System	Series Hybrid System	Wheel Size	20"
Maximum Speed	25 km/h	Display	Detachable HMI Display (2.4" Color LCD)
Range	Max. 35~45 km*	Frame	Aluminum
Motor	Dual winding motor, 250W	Fork	Carbon fiber
Battery	36V 8.2Ah	Weight	21.7 kg

\* Based on a ride by pedaling. Subject to change according to the conditions of operating environment including the intensity of pedaling, the weight of the rider and the road condition.

# H-1

# H-2



Location of the serial number

# Accessories

# I-1

## Light



Components ( Light unit, Bracket, Battery X2 )



- 1) Slide the cover backward, while pressing down the dot section on the top of the unit.



- 2) Install batteries.



- 3) Replace the cover.



- 4) Wind the bracket strap around the handlebar.



- 5) Put the strap through the opening.



- 6) Screw the dial into the bracket to secure it temporarily.



- 7) Insert the light unit to the bracket until it clicks, and adjust the beam angle. Securely tighten the dial, and cut off any excess bracket strap.



- 8) Press for 2~3 seconds to turn on and off.

# Accessories

## Bell



How to mount the bell



1) Components ( Bell, Bolt , Nut )



2) Check how where to insert the bolt and nut.



3) Decide where to place the bell.



4) Open the bracket and place it on the handle bar.



5) Make it place on the position you want.



6) Fasten the bolt with a screw driver.



7) Finished.

# Accessories

## Reflector



How to mount a rear reflector



1) Prepare a screwdriver.



2) Loosen the bolt so the ring bracket can be open.



3) Place on the sit post to face back ward.



4) Fasten the bolt with a screw driver.



5) Adjust the angle.



6) Finished.

# Accessories

# I-4

## Anti folding strap



How to use the anti folding lever strap



1) Pull up the lever and fit the strap on it.



2) Push the lever down.



3) Wind the strap around the frame.



4) Pass the strap tail into the silver ring.



5) Wind the remaining strap gain.



6) Move the strap around.



7) Attach the velcro.



8) Finished.

# Certificate of authenticity

# J

## Seller Information

Date of Purchase	_____
Period of Warranty	_____
Seller	_____
Phone Number	_____

## Customer Information

Name	_____
Address	_____
Phone Number	_____
E-mail	_____

\* For more details about the warranty, please read the user manual provided with the product.

\* Please hand in this page to a shop when you purchase Mando Footloose.

S/N :