

USER MANUAL AND WARRANTY

**LEGEND**  
EBIKES

milano

Congratulations on the purchase of your new **LEGEND MILANO SMART EBIKE 2018**. In this manual you will find the information you need to enjoy your electric bicycle safely. If you have any questions, please do not hesitate to contact us via your nearest point of sale or directly at [www.legendebikes.com](http://www.legendebikes.com)

Bicycles bearing the **LEGEND EBIKES** trademark and their components meet the following legal conditions, according to the European standard **EN 15194:2017** for **EPAC** (Electrically Power Assisted Cycles):

1. Motor assist is provided only when pedalling.
2. Pedal assist is limited to **25 km/h**.
3. The nominal power provided by the assist is **250 W\***, maximum.

If these conditions are met, **there is no need for any kind of licence or registration** to drive this vehicle on public roads. **LEGEND EBIKES** also comply with the legislation in force both nationally and at European level:

- Royal Decree 2822/1998
- Directive 2002/24/EC
- Directive 2004/108/EC
- Directive 2006/42/EC



This manual contains warning messages and recommendations.



Attention! Messages written in this format contain instructions critical to safety and proper use.

Disregarding them may cause harm and damage. The manual and its contents are current at the time of writing and printing. **LEGEND EBIKES** reserves the right to modify it without notice.

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## SAFETY

**Read this manual completely** and familiarise yourself with it before using your LEGEND MILANO 2018 electric bicycle for the first time.

Like any outdoor activity, cycling involves a **risk of injury and accidents**. In addition, as the vehicle has an electrical component, this risk may be higher.

When you choose to drive an electric bike, you assume responsibility for that risk.

Therefore, **you need to know the rules of safe and responsible driving**, as well as proper use and maintenance. Clearly, this will reduce the risk of accidents.

This electric bicycle is only **intended for use by adults**. As a parent or guardian, **you are responsible for the activities and safety of minors** in your care. This includes making sure that the minor can use and control all functions of the bicycle and, of course, fully understands all parts of this manual.

## PRELIMINARY CHECKS

**Check the condition of your bicycle before each use.**

- 1. Nuts and bolts:** Make sure nothing is loose.
- 2. Tyres and wheels:** Make sure that the tyres are inflated to the proper pressure (the correct pressure is indicated on the sidewall of the tyre) and in good condition. Turn each wheel slowly searching for cuts in the tyre.
- 3. Brakes:** Make sure the brakes are working properly, that there are no mismatches in their movements and that the pads are not worn or incorrectly positioned. Check that the cables are lubricated, tight and are not damaged. The brake levers must be firmly attached to the handlebars.
- 4. Fittings:** Make sure that the seat post is securely fastened and adjusted as well as the lockouts on the folding hinges, if necessary.
- 5. Alignment of saddle and handlebars:** Make sure the saddle and handlebars base are parallel to the centreline of the bike frame.
- 6. Handlebars grips:** Make sure the grips are in good condition.
- 7. Rack:** Make sure it is securely attached to the bike.
- 8. Charger:** Use only the original charger to charge the battery. If the battery is not used for a long period of time, store it in a cool, dry place and charge it at least once every two months.

## PRELIMINARY CHECKS

**9. Battery:** For your own safety, never place the battery near a heat source nor incinerate it. Do not place it near explosive or flammable materials during charging.

**10. Electrical components:** Never disassemble the battery, motor, control unit or other component yourself. If a component needs to be replaced, contact the point of sale where you purchased your Legend ebikes and, if possible, our technical service. Never tamper with the warranty seal of the components, or it will be voided.



If you purchased your LEGEND electric bicycle in an online store, the bike will be sent semi-assembled. We recommend that you go to a bike shop or professional workshop where they can adjust the derailleurs and the brakes (if they have not been previously) and ensure correct assembly of the parts with the minimum safety guarantees.

# ROAD SAFETY

- 1. Always wear an approved helmet.**
- 2. Try to keep body parts and other objects away from the links of the chain, pedals, cranks and wheels in motion.**
- 3. Always wear:**
  - Correctly fitting shoes that grip the pedal well. Never use your bike barefoot or in sandals.
  - Clear and visible clothes that are not loose-fitting since they could become entangled in the bicycle or snagged by objects at the side of the road.
  - It is highly recommended to wear goggles to protect your eyes. Tinted when the sun is shining, clear when not.
- 4. Always drive at a speed appropriate to the conditions. As you know, increasing the speed increases the risk.**
- 5. Observe the rules of the road. Remember you must also know all the rules and regulations governing the use of electric bicycles. The laws and ordinances usually vary from one municipality to another. It is your responsibility to know and comply with local restrictions.**
- 6. Never use headphones. They mask traffic sounds and emergency vehicle sirens, distracting you from concentrating on what is happening around you. In addition, the wires can become entangled in moving parts of the bicycle, which can cause loss of control.**
- 7. Never carry anything which obstructs your view or could affect control of the bike.**
- 8. Never hold on to another vehicle to go faster.**
- 9. Do not exceed the maximum weight limit of the bicycle or its components may be damaged or even broken.**
- 10. Replace any damaged component or element before using the bike again. Proper bicycle maintenance and repairs should be assigned to an authorised point of sale.**
- 11. Do not attempt to jump or perform “wheelies” as it can cause accidents and damage the bike.**
- 12. Never drive your bicycle while under the influence of alcohol or drugs.**
- 13. Avoid using the bicycle partially or completely submerged in water. Otherwise, the electronic components and elements may be damaged.**
- 14. If possible, avoid driving on rainy days, when visibility is limited, at dusk and at night, or when experiencing extreme tiredness. These conditions increase the risk of accident.**

## USE IN RAIN

In rain, the effectiveness of your brakes (as with the brakes of other vehicles) is dramatically reduced and your tyres **do not have such good traction as when dry**. To ensure that you can reduce speed and stop safely in the rain, drive more slowly and use your brakes earlier and more gradually than if it were dry.



Rain affects traction, braking and the visibility of the cyclist and other road users who share the road. The risk of accident increases dramatically in these conditions. Be especially careful when driving your bicycle in extreme rain. Note that damage that occurs to the electrical system due to contact with water shall be considered as damage due to misuse, and therefore will not be covered by warranty.

## NIGHT USE

Driving a bicycle **at night is much more dangerous** than during the day. A cyclist is not easily seen by other drivers and pedestrians. Therefore, minors should never drive at dawn, dusk or late at night. Adults should do so only if necessary.

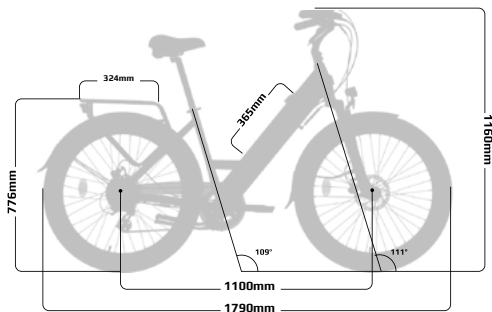


Make sure that the front and rear lights are working properly. Reflectors and retro-reflectors are installed to reflect light from the street and cars so that you will be recognised as a moving cyclist. Please note that reflective devices are not a substitute for lights.

## BICYCLE PARTS



- |                    |                |                           |
|--------------------|----------------|---------------------------|
| 1. Iwoc®           | 8. Pedal       | 15. Rear mudguard         |
| 2. Handlebars      | 9. Chainwheel  | 16. Rear light            |
| 3. Brake levers    | 10. Kickstand  | 17. Rear rack             |
| 4. Front light     | 11. Chain      | 18. Controller (Internal) |
| 5. Suspension fork | 12. Derailleur | 19. Saddle                |
| 6. Hidraulic disc  | 13. Rear wheel | 20. Adjustable power      |
| 7. Front wheel     | 14. Motor      | 21. Battery               |





# TECHNICAL SPECIFICATIONS SHEET



|                   |                                       |
|-------------------|---------------------------------------|
| <b>MOTOR</b>      | 250W GEARED 1:4.5 Ratio 40Nm          |
| <b>SPEED</b>      | 25 Kph                                |
| <b>BATTERY</b>    | 36V 10.4Ah Sanyo-Panasonic            |
| <b>BATTERY</b>    | 36V 14Ah Panasonic                    |
| <b>SENSOR</b>     | 32 pulses BB integrated speed sensor  |
| <b>SENSOR</b>     | Real time BB integrated torque sensor |
| <b>JOYSTICK</b>   | Iwoc®Bluetooth SCI* by Ebikemotion    |
| <b>CONNECTORS</b> | HIGO IP67 Waterproof                  |
| <b>RANGE</b>      | 80 - 100 Km**                         |
| <b>CONTROLLER</b> | SCU* by Ebikemotion                   |
| <b>FRAME</b>      | AL 6061 T6 Reforzado                  |
| <b>BRAKES</b>     | Hydraulic disc TEKTRÖ T285            |
| <b>DERAILLEUR</b> | Shimano Altus 7 Velocidades           |
| <b>LIGHTS</b>     | Spanninga Kendo+ 30 LUX               |
| <b>FRONT SUS.</b> | Suntour Nex                           |
| <b>TYRES</b>      | Schwalbe 26" 2.15 BIG BEN             |
| <b>SADDLE</b>     | Velo VL-6123 (Gel)                    |
| <b>WEIGHT</b>     | 24.0 Kgs                              |
| <b>COLOURS</b>    | Onyx Black / Arctic White             |

\*SCU (Smart Control Unit) SCI (Smart Control Interface). \*\*Range according to battery amperage.

▀ Available options.

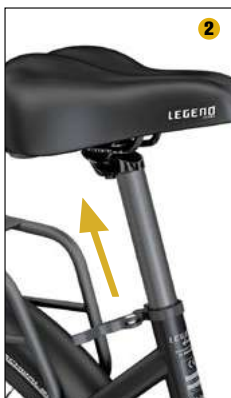
## SETTING THE SADDLE HEIGHT

The height of the seat post can be easily adjusted by manual clamping and set to the desired height. The quick release system allows this operation to be carried out as many times as necessary without any effort. **The fixation must be firmly closed.**

Loosen the quick release



Set the saddle to the desired height



Tighten the quick release



It is important to ensure that the stem does not extend beyond the minimum insertion mark.

## ASSEMBLING THE PEDALS

The pedals have a special adjustment system. When assembling them, **you should make sure you have selected the right pedal for its crank**: we place the right pedal on the right crank, indicated with the **letter R** (right); and the left pedal on the left crank, indicated with the **letter L** (left).

Check that the holes are free of obstacles and, if possible, add some grease. **Always** screw the pedals onto the crank **in the direction of pedaling**. Try not to force the screw as it could damage the threads and make them unusable.

Use a 6mm Allen key or 15mm wrench to screw the pedals onto the cranks.



Recommended tightening torque: 35 Nm



## CHARGING THE BATTERY

Before using your bike for the first time, you should charge the battery for 4 to 6 hours using the included charger.

1. Connect the charger to the socket. You will notice that the charger light turns green, meaning that the unit is working properly.
2. Connect the charger to the battery. The charger light turns red while the battery is charging. Remember that you can charge your battery while it is inside the bicycle through the connector on the left side of the frame, or charge it off the bike if you prefer.
3. When the battery is fully charged, the charger light will return to the initial green colour.
4. To disconnect the charger, it is recommended first to disconnect the battery and then the power socket.
5. With the battery fully charged, the charging time is between 6 to 8 hours and will always be dependent on the use given to the bicycle.
6. Electricity consumption in each battery charge is from 374 to 504Wh depending on battery model.
7. Do not cover the charger or the battery during the charging process.

Location of charging



Open the cover



Connect the charger



Use only the original charger to charge the battery, otherwise the battery and electronic devices will not be covered under warranty.

## TURNING ON THE BIKE

To start the electrical system of your bicycle, turn it on with the left middle button of the iWoc. To do this, press the power button for 2 seconds.



You can check the battery charge by pressing the battery power button.



Download and consult the Ebikemotion system manuals for detailed information on how they work. You can find them on our website [www.legendebikes.com](http://www.legendebikes.com)

## HANDLEBARS FOLDING

Raise the lever to loosen the assembly by sliding the side lock.



Adjust the handlebars to your preference.



Lower the lever again to secure the assembly.



## BATTERY REMOVAL

Unfold the frame by following the steps above



Turn the key 180°



You can now remove the battery



## FIRST USE

Using an electric bicycle is similar to a non-electric one but with some notable differences. An electric bicycle is heavier and **takes longer to stop**. To use it, place yourself in a balanced position on the bike. Once you have **put on your helmet** and begin to make your first journey on your new bicycle, be sure to pick a controlled environment, away from cars, other cyclists, obstacles and unforeseen situations. Take advantage of these circumstances to become familiar with the controls and operation of your new eBike:



Make sure the battery is keylocked in the frame. Otherwise there is a risk that it will fall, and damage will not be covered under warranty.

1. Familiarise yourself with the brakes of the bicycle. Try them at low speed, putting your weight toward the rear and squeezing the brake levers gently. Excessive application of the front brake can throw you over the handlebars.
2. Braking too hard can lock the wheel, causing a loss of control or even a fall.
3. If your bike has suspension, familiarise yourself with its response when applying the brakes and weight changes.
4. Check the handling and response of the bike in general and also check the comfort.
5. Control the speed of the bicycle by using the brakes.



The bike can accelerate quickly from the stop position and catch you by surprise. Make sure you always have enough space.



## GENERAL MAINTENANCE

Clean, adjust, inflate and grease. This is the basic maintenance protocol of a conventional bike, and **fully applicable to the case of an electric bicycle**. It is very important to **check the bicycle after use to extend the life of the components**. We recommend that you carefully follow the following points:

1. Clean all areas of the bike with rags or paper moistened with soap and water, but not with abrasive products such as alcohol or turpentine. An air compressor can be of great help.
2. Check the condition of the tyres to ensure that they have no cuts, cracks or embedded objects such as rocks, glass or sticks.
3. Brake pads must be close to the disk but not touching it; when activating the brake lever with little force, the brake must act instantly. The pads must be perfectly adjusted to avoid uneven braking and noise.
4. Cables should not be too rigid because material might expand due to temperature variation and usage conditions and, if forced, it can weaken until breaking point.
5. Make sure the chain runs without friction from elements external to its mechanism.
6. Due to the vibrations received during use, we must periodically check the fit of nuts and bolts; mainly on the wheels, the saddle and the handlebars stem.
7. Grease the bottom bracket bearings and wheel hubs.
8. Do not carry passengers or heavy objects (rear rack load capacity: maximum 27 kg), they can damage the battery and motor.



Do not use pressurized water.

## BATTERY MAINTENANCE

All LEGEND EBIKES are powered by **Lithium batteries**. To recharge the battery, connect the transformer to the current and the output jack to the battery in its sole position. The charge indicators notify that charging is complete when the transformer has a green light. Besides recharging, these batteries **do not require any other maintenance**. To prolong battery life, do not store the bike in areas where the temperature will drop below **zero degrees or exceed 50°C**. To optimise the life of your battery, try to recharge it while respecting the following rules:

1. Do not wait until the battery is fully discharged to recharge it. Note that the more frequently you recharge your battery the better the performance you will get from it.
2. Store at 50% level of charge.

3. Store in a cool, dry place and charge at least once every two months.
4. Try not to store the battery fully discharged or fully charged for long periods of time.
5. Store it at half level of load if it is not going to be used for a long period of time.
6. Due to the natural self-discharge rate in the Lithium-Ion cells, you should check the charge level approximately every 2 months and, if necessary, charge for 30 minutes.

## MOTOR MAINTENANCE

To optimise its performance follow these guidelines:

1. When used against a headwind or on a slope, try to help the motor by applying more force on pedalling. This will prevent the motor and/or battery from heating up.
2. In rainy conditions, the bicycle should not be used on land where the water level covers the motor or controller.

## ELECTRICAL MAINTENANCE

The controller is installed inside the frame, near the folding area. It is very important to consider the following points:

1. Do not immerse in water.
2. Do not hit or open it.



**NOTE:** In the event that the controller box is filled with water, turn off the general power immediately and pedal without electrical assistance until you are sure it is dry. Then, you can turn the assisted pedaling system back on.



Do not attempt to open the controller box. Any attempt to modify or adjust it will not be covered under warranty. Ask for assistance at your local Legend dealer or technical service.

# WARRANTY CONDITIONS



**LEGEND** electric bikes are guaranteed according to Law 23/2003 of 10 July, on Guarantees in the Sale of Consumer Goods, in accordance with European Directive 1999/44/EC.

## 1. WARRANTY COVERAGE AND TERMS

**1.1 All LEGEND products are guaranteed for 2 years, excluding consumables, and provided that normal conditions are met.**

**1.2 The batteries sold by LEGEND also have a 2 year warranty. However, after the first 6 months the customer must prove that the fault corresponds to a manufacturing defect. In the event the point of sale or end customer assigns this proof/examination to the manufacturer (which has the analysis equipment necessary for that purpose) and it is determined that the guarantee does not apply, the latter should bear the costs incurred for performing this test, and the shipping costs, if applicable. The loss of battery life as a result of the wear of the battery itself is not a manufacturing defect, since this is a behaviour as it is inherent to the properties of the compound. Therefore, the guarantee only applies if the loss of autonomy is below 80%.**

**1.3 The 2-year warranty does not, in any case, cover the normal wear and tear of the perishable parts of the product. These elements, subject to wear and tear, are the following (this list is merely illustrative and is not restrictive in any case):**

- Tyres -O-rings -Lamps -Chain -Air Chambers -Brake Blocks
- Bearing Cup Races -Cables and covers -Seals -Bearings -Threads -Pinions -Bolts
- Disk Brake Rotors -Spokes and Nipples- Damper Joints
- Hub -Saddle Cover -Rubber Components -Dust Cover -Grips and Straps

**1.4 LEGEND's coverage includes:**

- Repair or replacement of defective parts for others in good condition.
- The labour required for the installation or repair of the parts and components.
- The cost of shipping (if applicable) of parts or materials to customers/distributors in order to enforce the effectiveness of the guarantee.

**In the event that shipments occur during the processing of a warranty, and it is verified that the problem is excluded from coverage, it will be the customer/distributor that must bear the costs of such shipments, notwithstanding that LEGEND EBIKES may offer the possibility of quoting an out-of-warranty repair.**

## 2. WARRANTY APPLICATION

**2.1 The request for warranty is non-transferable and may only be made by the original purchaser.**

**2.2 Warranty claims must be processed through the sales channel associated with the product covered by the warranty:**

- Official point of sale
- Customer Service from [sat@legendebikes.com](mailto:sat@legendebikes.com)

**2.3 To make the guarantee effective, the customer must always provide the purchase invoice.**

**2.4 The guarantee only covers the repair or replacement of defective components and does not cover under any circumstances personal injury or material damage that may derive directly or indirectly from the failure of the components during use.**

**2.5 In all cases, the effective application of the warranty shall be subject to evaluation by LEGEND's Technical Department, who may determine the exclusion thereof as long as it provides a reasoned justification of the nature of the malfunction or breakage.**

## 3. WARRANTY EXCLUSION

**3.1 The application of the guarantee is excluded in the event that the failure of the defective part(s) results from improper and/or negligent use of the product.**

**3.2 Improper and/or negligent use shall be understood to mean:**

- Any use other than that which is proper to the nature of the product and/or that recommended in the instruction manual.
- Do not carry out the maintenance operations recommended in the instruction manual, or any other operation other than those mentioned above, which may compromise the quality of the product.
- Any problem that is the result of a bad adjustment. The user shall be deemed to be responsible for the current state of adjustment of the bicycle after 10 days have elapsed since the bicycle was delivered to him/her. Therefore, this is the period in which you must claim any defects in the adjustment to be covered under warranty.
- Make modifications outside the point of sale and/or replace non-original or non-approved parts.

**3.3 The guarantee does not apply if the nature of the request is such that a third party is involved or is the result of an intentional error.**

**3.4 In the event of an accident, LEGEND's warranty is completely voided.**

SMART EBIKES  
**LEGEND**  
EBIKES

C/Industria 60 Nº5  
Ripollet, BARCELONA 08041  
Phone: +34 93 141 33 86  
[www.legendebikes.com](http://www.legendebikes.com)  
[info@legendebikes.com](mailto:info@legendebikes.com)