

Original instruction manual



made by **ecobike**



Wrocław, 01.04.2021

Declaration of conformity

The manufacturer: **ecobike** sp. z o.o , ul. Osiniecka 108,
54-530 Wrocław, Poland

Hereby declares that the following products:

Product description: **ecobike**

Model designation:

- Electric bike ecobike LX500 ; EAN - 5903317862680
- Electric bike ecobike MX500 ; EAN - 5903317862697

Year of manufacture: **2021**

Comply with all of the relevant requirements of the Machinery Directive (2006/42/EC).

Comply with all of the relevant requirements of RD 339/2014, de 9 de Mayo.

Furthermore, the machine complies with all of the requirements of the Electromagnetic Compatibility Directive (2014/30/EU).

The following harmonized standards have been applied:
DIN EN 15194 Cycles - Electrically power assisted cycles EPAC bicycles;
DIN EN 14764 City and trekking bicycles - Safety requirements and test methods.

Technical documentation filed at:

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ecobike

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1. INTRODUCE

First of all, we would like to thank you for purchasing our electric bike, which has been carefully designed and manufactured in accordance with the requirements of the highest international standards. We wish your new bike to be a new way of your life.

Please read the following instructions carefully before proceeding with the bicycle. The manual contains important information related to the safety, operation and assembly of the bicycle. The bike has electrical parts which, according to the Act, are considered dangerous, which means the obligation to dispose of - it cannot be disposed of in standard garbage. Please remember that it's offence.

2. SAFETY

- We suggest using the appropriate helmet in accordance with the European standards.
- Observe the traffic regulations.
- We recommend that you take extra care when moving with crowded traffic.
- Perform a bicycle service only at bicycle service points.
- Regular service will provide you with a greater safety of bicycle use and prolong its life.
- Carry out regular maintenance according to the instructions.
- Do not make any repairs to electrical parts yourself, only at designated service points.
- Never ride a bicycle if you have drunk or taken other intoxicants.
- The user should have front and rear lights and reflectors on the wheels.
- When cleaning the bicycle, always use soft wiper.
- Hold the steering wheel with both hands while ridding.
- Do not catch or other vehicles.
- Avoid sudden braking.
- Do not wear loose clothing for cycling.
- Only use original spare parts for components.
- When installing bicycle accessories, it is recommended that you use these accessories for assembly instructions.
- Parents should pay special attention to the safety of children while they are being transported.
- Children should be transported in special chairs permanently attached to the bicycle.

2.1 FOR PARENTS / GUARDIANS

Parents / guardians are responsible for the conduct and safety of their child. Before ridding by a child, they should instruct them about the proper use of the bicycle. Before allowing a child to ride, parents are required to:

- ✓ Read the entire manual, and to familiarize the child with the warnings and functions and principles of the bicycle.
- ✓ Make sure that the child has an approved bicycle helmet when driving, and that he understands all safety rules.

3. USE ACCORDING TO THE INTENDING

Improper use of the bike or use contrary to its intended use may involve danger and expose you to loss of health or life. If you have any doubts whether the purpose of the bike matches your riding style - ask the seller.

3.1 TREKKING BICYCLE

This type of bicycle work well on paved surfaces and paths. They combine comfort and driving dynamics. It has a sturdy frame and large, 28-inch wheels. The user's position on the bike is very comfortable and allows hours of riding. These types of bicycles, and in particular their braking system, have been designed for a maximum load of 125 kg (bicycle + cyclist + luggage), the weight of the cyclist with luggage may not exceed 100 kg.

3.2 CENTRAL MOTOR

An electric bicycle equipped with a central motor allows you to ride on the same terrain as a hub motor, with the difference that it allows you to move smoothly on slopes, using the minimum force of the user. When driving uphill, it is natural that the speed drops. Depending on the slope of the climb and the force of pedaling by the user, the engine will minimize the overload, allowing you to achieve a speed proportional to these conditions.

4. STORAGE AND USING

- The bicycle is not intended for long-term outdoor storage (max 12 hours a day).
- The bicycle should be stored in a dry place at room temperature.
- The bicycle should be stored away from corrosive products and places.

5. BEFORE RIDDING

Always check the technical condition of the bicycle before every ride, especially:

- ✓ Air pressure in the wheels, remember to observe the pressure range specified by the manufacturer on the tire.
- ✓ Check the tire condition for deformation, cracks and whether the tire adheres to the rim and does not stick out beyond the rim.
- ✓ Checking wheel screws.
- ✓ Checking the handlebar and stem (whether it does not rotate or is not loose).
- ✓ Checking the screws of saddle (does not rotate or fall under the weight).
- ✓ Check if the bicycle lighting (front and rear) works well.
- ✓ Checking the beep (bell).
- ✓ If there is no visible safety groove on the side surfaces of the rim, the rim should be replaced.

6. TECHNICAL INFORMATION

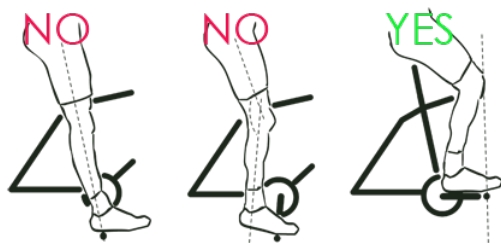
6.1 RIMS

Before using your bike, always check that the wheels are centered and that the rims are undamaged. During operation of the bicycle, and especially in any collisions, cracks and cracks may appear. When you see a damaged rim, immediately contact an authorized

service center for replacement with a new one. A damaged rim may damage the tire, for example, which may involve danger and expose you to health or life.

6.2 SADDLE

The saddle should be tightened after setting the correct and most comfortable height for the user. When setting the saddle, pay attention to the maximum extension of the saddle post. The seatpost must be inserted in the frame in such a way that the safety indicator (see picture) on the seat post is invisible, if the indicator is visible, there is a possibility of the saddle post breaking through its low load.



The final adjustment of the saddle position is carried out by moving the saddle in the saddle clamping bracket forward or backward. Please remember not to go out of the scale placed on the saddle, otherwise the saddle may be damaged, due to excessive load.

Please remember to set the saddle correctly (according to the figure below), it is important for the user because the incorrectly positioned saddle causes the cyclist to tire more quickly, pain in the legs and back.



6.3 BEARINGS OF HANDLEBAR



The handlebar, when placed in the most comfortable position for the user, must be tightened so that it does not loosen during riding. In an a-head type, the clearance should be removed by loosening the Allen screws on the handlebar bracket and tightening the rudder bolt (until the clearance is fully removed). After adjusting the bearings, tighten the Allen screws on the bracket - figure below.

6.4 WHEELS

Properly adjusted wheels should rotate slightly and smoothly, without jerks, perceptible slack. In the case of loosening in the wheel hub, it must be eliminated by adjusting. In order to adjust the wheel, you must have specialist tools, therefore, if a fault is found, please go to an authorized service point.

6.5 TIRES

For tires, the pressure range specified by the manufacturer must be observed on the side of the tire (pressure unit indicated on the tires 1000 kPa = 14.22 P.S.I = 1 bar = 1 at). The tire should be placed in the direction indicated on its side (the arrow shows the direction of rotation). The tire should not have any deformations or cracks and should adhere to the rim in parallel. After finding out that the tire has any of the defects, immediately go to an authorized service point.

6.6 SPOKES

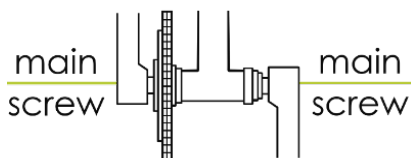
Spokes in wheels should be evenly stretched. The spokes loosened during the bicycle's operation may cause radial and axial runout of the wheels or rupture of the spokes, which affects the service life of the rim and hub bearings, as well as negatively affects the braking performance. These irregularities should be removed at service points.

6.7 BRAKES

Hydraulic brakes do not require intensive maintenance and do not cause rim wear. Unfortunately, there may sometimes be a problem with the distance between the brake pads and the disc in this case, please contact an authorized service because the adjustment requires specialized tools.

Check the lines and connections regularly for leaks when the lever is engaged. If hydraulic oil or brake fluid is leaking, immediately report to an authorized service point, as a leaky seat may cause the brakes to stop. With hydraulic brakes, the right handle activates the rear brake, while the left handle activates the front brake.

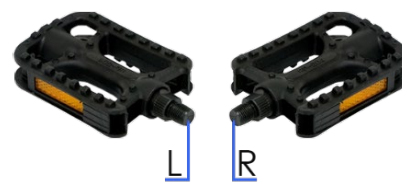
6.8 CRANKSET



The crank mechanism with cranks mounted on the axis with the screw requires systematic control. The contribution of the crank mechanism together with the screw-in bowls, showing excessive clearance, is regulated by tightening the main screw with an Allen wrench. Using a bicycle with a loose crankset causes indentation of the crank seat and its destruction.

6.9 PEDALS

The axles of the pedals should be sufficiently tightened to the crank arm. Incorrect tightening will loosen the threaded connection, which will consequently destroy the thread of the pedal and crank! The right pedal axis has a right-hand thread marked "R". The left pedal axis has a left-hand thread marked "L".



6.10 DERAILLEUR

The gear shift mechanism in the rear hub is controlled by a lever on the right side of the steering wheel. Adjustment of multi-speed hubs consists in aligning two markers located on the right side of the rear hub (viewed from above). For 3-speed hubs, the marker must be positioned between the two lines. The adjustment is started by setting the gear lever in the appropriate position - it is marked on the lever. Then, by turning the adjuster on the hub adapter, set the markers in the correct position.

6.11 CHAIN

Depending on the conditions and frequency of travel, the chain is worn and lengthened, destroying the sprockets at the same time. To check the correct chain tension, set the gears so that the chain is on the largest chainring in the front. Then try to pull the chain away from the dial. If it sticks out more than 3 mm, it can be replaced and should be reported to an authorized service center. Too strong strain can increase the effort put in pedaling and reduce the chain's strength. Too little tension can cause the chain to fall. Regularly it should be cleaned of dirt (sand, mud etc.) and treated with a special grease.

6.12 TROLLEY

Do not exceed the maximum capacity marked on the trolley by its manufacturer.

6.13 RACK (OPTION)

Before riding, check that the rack is correctly attached to your bike. Regularly check that the fasteners are properly tightened. Do not exceed the maximum capacity marked on the luggage compartment (25 kg). The luggage compartment is not designed to tow a bicycle trailer. If you plan to mount a child seat on the rack, make sure that its load does not exceed the maximum load capacity of the rack and bicycle specified by the manufacturer.

6.14 LIGHTING

Lighting is a basic element of the user's safety. If the bicycle is used on public roads and it is not equipped with lighting and reflections, it should be additionally equipped with the bicycle in accordance with the provisions of the traffic regulations.

7. ASSMBLY

7.1 PREPARING

Pull the bike out of the carton with all the elements in it. Be careful not to scratch the bike and at the same time be careful not to damage any cable or other components. Make sure that there is no missing item in the bike and report any comments to the seller.

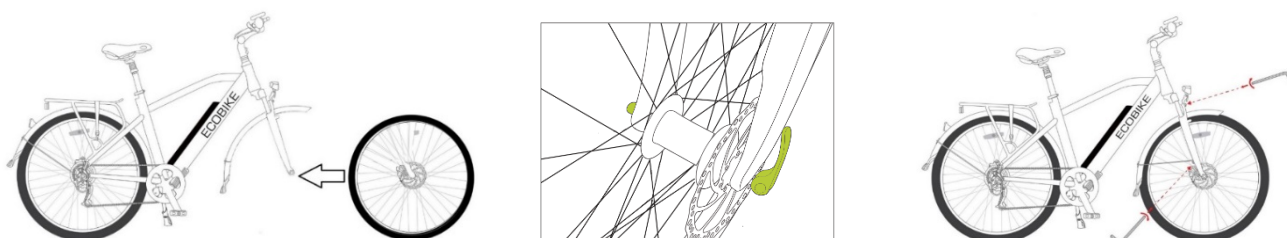
7.2 FOLD THE FRAME

The front wheel is dismantled, therefore after opening the cartoon it is necessary to remove the protective foils and mount it on the front fork.

Picture 1 – Put front wheel into the fork.

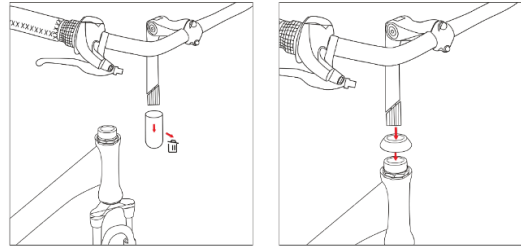
Picture 2 – insert the "pin" through the wheel, tighten the nut on the left side so that the quick-release closure is tightened with the appropriate resistance.

Picture 3 - Put the fender together with the lamp on the wheel and tighten the screws.



7.3 HANDLEBAR ASSEMBLY

1. Put the handlebar in the most comfortable position for you and tighten all screws according to the picture below.
2. The handlebar should be mounted so that there are no clearances.

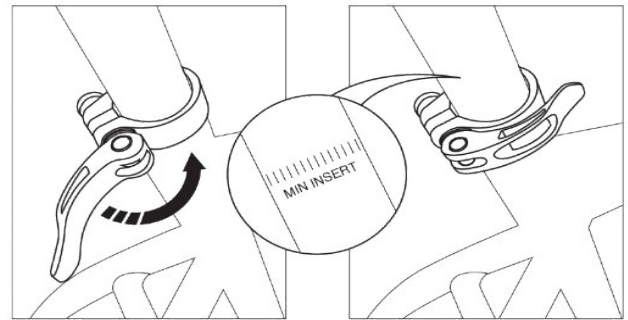


7.4 PEDALS ASSEMBLY

- Tighten the pedal with the letter "R" on the right side clockwise,
- Tighten the pedal with the letter "L" on the left hand side clockwise.

7.5 SADDLE ASSEMBLY

1. Loosen the quick-release nut on the bicycle frame and insert the saddle post.
2. Tighten the clamps of the seatpost clamp in such a way that the quick coupling clamps with the appropriate resistance.



8. GREASE

Lubricated elements must be clean. Before lubricating the bearing, after dismantling it should be thoroughly cleaned and wiped dry with a clean cloth. Then apply a quantity of grease to the balls of the balls to fill all the gaps.

Excess grease adversely affects the work of the ball bearing - its heating occurs. We lubricate ball bearings with a grease at the following time intervals:

- ✓ Every 6 months, the bearings of the front wheel hub of the rear hub bearing.
- ✓ Every 12 months the steering bearings.

We lubricate the following moving parts of the bicycle every six months:

- ✓ brake lever axles,
- ✓ brake lining axles,
- ✓ brakes,
- ✓ gears,
- ✓ moving parts of gears

Special oils and greases should be used to lubricate the shock absorbers. Do not use lithium-containing greases - they may damage some internal components. In the case of more complex activities, such as dismantling the fork, replacement of silencers, etc., we recommend that you consult a professional bicycle service.

9. USING BATTERY AND CHARGER

9.1 BATTERY

ECOBIKE uses high-quality lithium-ion batteries in its bicycles, which are light and do not cause environmental pollution. It's a typical source of so-called green energy.

In addition, they are characterized by:

- ✓ No memory effect when charging.
- ✓ Large energy capacity at low volume.
- ✓ Long lifetime.
- ✓ A wide operating temperature range: -10°C to $+40^{\circ}\text{C}$.

9.2 IMPORTANT INFORMATION ABOUT BATTERIES

- If you do not intend to use the bicycle for a long period of time, recharge the batteries to 80% and set aside at room temperature, repeat the operation after approx. 3 months.
- The lithium-ion battery should be used at -10°C to $+40^{\circ}\text{C}$, humidity $65 \pm 20\%$; stored at room temperature.
- Never place the battery near a fire or hot element.
- Never shake, hit or drop the battery.
- Keep the battery out of the bicycle and keep it away from children.
- Never use any metal tools to connect the rechargeable battery as it may cause an electric short circuit and damage the battery.

9.3 INSERTION AND REMOVAL THE BATTERY

To remove the battery, turn and hold the key, then pull the lever on the side of the battery towards you. To insert the battery, turn the key and hold it in, then insert it from the bottom, finally release the turned key.



10. CHARGING THE BATTERY

The battery charge level indicates segments on the display located on the handlebar. Charge the battery at ambient temperature, on a non-flammable and dry surface, away from heat, moisture or flammable materials. In addition, it cannot be covered. When charging the battery, please observe the following steps:

- A.** Insert the charger plug into the socket in the battery, and then connect the charger cable to the power socket.
- B.** When the charger light is red, the battery is charging. When the red light turns green it means that the battery is fully charged (Fig.1).
- C.** After charging is complete, disconnect the cable from the wall outlet first and then from the battery.
- D.** Never leave the rechargeable battery unattended.

11. USER MANUAL LCD C900 USB

11.1 DISPLAY APPEARANCE



11.2 TURNING ON / OFF THE DISPLAY



Press and hold the ON / OFF button for 3 seconds to turn the LCD on or off.

When the display is off, there is no battery consumption. The current flow is not more than 2 μ A.

The panel will revert to sleep mode when the speed is 5 minutes level 0 km / h.

11.3 MOTOR POWER INDICATION



Indicates the power with which the motor works, when the entire power bar is displayed, this means that the motor works at full power. The battery is discharged faster then.

11.4 BATTERY SOC INDICATOR



The battery level is indicated by symbol located in the battery symbol in the upper left corner of the display. Each missed part of the symbol corresponds to 20% battery charge.

Remember to give more attention to the BMS (voltage), than to battery indicator.

11.5 WALK ASSISTANCE



Press and hold the "MINUS" button to start the motor that will go at 6km / h without pedaling. The display will show the icon as in the picture beside. When the user releases the button, the engine will automatically shut down.

11.6 BACKLIGHT AND LIGHT INDICATION



With the turned on display, click on / off at once the lights button to turn on the display backlight and the front and rear lights. Click the button again to turn off the backlight and lights. When the light is on, you can see the icon on the screen as in the picture beside.

11.7 MOTOR ASSISTANCE LEVEL SELECTION



The level of electric assistance can be adjusted using the display. Adjustments can always be made while driving. The electric system has 6 levels, depending on them the speed to which the bike will accelerate. The default assistance level after turning the display on is "1". To change the assistance level, use the "PLUS" buttons to increase the assistance level or "MINUS" to decrease the assistance level, respectively.

11.8 ERROR INDICATION



If an error code appears on the display, contact your dealer immediately to resolve the problem. Each code is matched to a different type of error, more detailed information can be found in the table below.

The display cannot return to normal until the problem is resolved. The e-bike will not work until the problem is resolved.

Error code	Description
21	Current flow fault / Communication fault
22	Throttle fault
23	Motor fault
24	Hall sensor fault
25	Brake levers fault
30	Display connection fault

11.9 CURRENT DISPLAY



When the electrical system is turned on, the display will show the speed and distance as defaults.

Pressing the "i" button switches between the following information: Trip distance (km) → ODO (km) → Max. Speed (km / h) → Avg. Speed (km / h) → Time (min.).

12. MAIN MENU – USER SETTINGS

12.1 ENTER THE SETTINGS MENU

To enter the display menu, press and hold the "PLUS" and "MINUS" buttons for 3 seconds. Then select "User setting" and press the "I" button.



12.2 RESETTING THE TRIP DISTANCE



Trip Reset means resetting the trip distance. To reset the trip distance, press the "+" button or the "-" button to select Yes / No. YES means resetting trip distance. NO means no cleaning trip distance. To save the changed setting, press the "I" button. The default value is NO.

12.3 UNIT SETTING



Toggle Unit means setting the measuring unit. To change the unit, press the "+" button or the "-" button to select the desired unit, and then press the "I" button to confirm. To save the changed setting, press the "I" button. The default unit is "Metric (km)".

12.4 WHEEL SIZE SETTING

Wheel indicates the wheel diameter setting. To change the basic settings, press the "+" or "-" button to increase or decrease until the desired value is displayed. To save the changed setting, press the "I" button. The default value is 28 inches (28 inches). Changing the wheel size will result in incorrect driving data being displayed, including speed, distance travelled and total distance.



12.5 LCD LUMINANCE



LCD luminance indicates the brightness of the display backlight. To change the brightness of the backlight, press the "+" or "-" button to select the desired value. To save the changed setting, press the "I" button - The default value is 100%.

12.6 ACCELERATION POWER

MODE is the setting of the motor power, the higher mode, the faster the motor accelerates. The default motor power setting is POWER. To change the motor power, use the "+" or "-" button to select the required value. Press the "I" button to save the changed setting.



13. MAIN MENU – ADVANCED SETTINGS

13.1 ENTER THE ADVANCED SETTINGS MENU

To enter the advanced settings of the display press and hold the "PLUS" and "MINUS" buttons for 3 seconds. Then select "Advanced Settings" and press the "i" button. Then enter the correct password to enter the advanced settings interface. The default password is **1212**.



13.2 ELECTRIC ASSISTANCE LEVEL RANGE

Assist Levels indicates the settings for the range of assist modes. There are 8 modes to choose from: 0-2, 1-2, 0-4, 1-4, 0-6, 1-6, 0-8, 1-8. The default value is 0-6. To change the range of assist level modes, press the "+" or "-" button to select the desired range of modes, and then press the "i" button to confirm.



13.3 VOLTAGE SETTING



Set Voltage indicates the battery voltage bar (battery level) settings. Enter 5 voltage values one after the other. For example, VOL 1 is the first stage voltage value. The default value is 41.5 V.

To set the battery voltage bar, press the "+" or "-" button to increase or decrease the value. To save the changed setting and access the second bar, press the "i" button.

After entering 5 voltage values, press the "i" button to confirm and save the settings.

If no operation is performed for one minute, the display will close the settings menu automatically.

14. WARRANTY CARD

MODEL:

FRAME:

BATTERY:

MOTOR:

DATE OF PURCHASE:

SIGNATURE AND STAMP OF SELLER

.....

REPAIRS PERFORMED

DATE OF COMPLAIN	DATE OF SERVICE	DOINGS	STAMP	SIGNATURE

COMPULSORY "ZERO" REVIEW AFTER 70-120 KM (the review is subject to a fee)

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