

Handleiding

Avalon

E-Lite en E-Flow

You have decided to purchase an electric bicycle from our Avalon (E-Lite) brand.

This bicycle is equipped with some of the most modern technical innovations and complies with the EN 15194 standard.

Welcome to the exciting and revolutionary world of alternative transportation.

Your Avalon bicycle offers new possibilities for environmentally friendly transport and recreational use.

You can be as active as you wish, or comfortably reach your destination without breaking a sweat or running out of breath.

This manual contains useful tips and important information regarding safety, performance, and maintenance, allowing you to fully enjoy everything the bike has to offer for a successful riding experience.

IMPORTANT:

Please read this manual carefully before riding the bike for the first time. It is essential to familiarize yourself thoroughly with the product to make optimal use of its performance capabilities while ensuring your safety and riding pleasure.

We also recommend keeping this manual in a safe place for future reference.

Please note:

This manual is not a complete user, repair, or maintenance manual. For all maintenance, repairs, and adjustments, please contact your local dealer.

ABOUT THIS MANUAL:

This manual has been primarily written to ensure your safety when using this product.

We advise you to record the frame number and the store where you purchased the product.

The frame number can be found on the front of the frame, on the head tube.

Additionally, there is a sticker with model-specific information located on the top tube.

Please remove this sticker and attach it to the underside of the frame.

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1. Safety

1.1 Symbols

The information displayed alongside one of the following symbols is important for your personal safety:

Warning!

This symbol indicates that incorrect use poses a risk to health and safety.

Caution

This symbol indicates that incorrect use may cause damage to the component and may void the warranty.

Tip

Refers to useful advice.

1.2 General Safety Instructions

1.2.1 Always wear a helmet

Helmets significantly reduce the number and severity of head injuries.

Always wear a helmet that complies with your country's regulations when riding an electric bike.

Check with your local police for applicable regulations in your area.

Do not wear loose clothing that can get caught in moving parts of the e-bike.

Wear sturdy footwear and eye protection.

Also check if other protective gear is mandatory when using an electric bike.

1.2.2 Get to know your E-bike

Your new electric bicycle has features and characteristics that are not present on a regular bicycle.

Read this manual carefully to understand how these features enhance your riding experience and safety.

1.2.3 Ride defensively

One of the most common bicycle accidents happens when a driver of a parked car suddenly opens their door.

Another common situation is when a car or another cyclist unexpectedly crosses your

path.

Always stay alert to other vehicles around you.

Do not assume that other road users can see you.

Be prepared to brake or swerve suddenly.

1.2.4 Make sure you are visible!

Increase your visibility by wearing brightly colored and reflective clothing.

Keep your reflectors clean and properly aligned.

Use your front and rear lights at dusk or in the dark.

1.2.5 Stay within your limits!

Ride calmly until you are familiar with the riding conditions you may encounter.

Be extra cautious in wet weather, as grip can be significantly reduced and braking may become less effective.

Never ride faster than conditions allow or beyond your own riding skills. Keep in mind that alcohol, drugs, fatigue, and inattentiveness can seriously impair your judgment and riding safety.

1.2.6 Keep your e-bike in safe condition (see also Chapter 5.2)

If the battery is not used for an extended period, make sure it remains sufficiently charged.

If the battery is stored for more than a month, it should be recharged periodically.

Never dispose of old batteries yourself; have them recycled by certified authorities to protect the environment.

Avoid pollution by never throwing them in with regular household waste.

1.2.7 Safe use of the charger – warnings (see also Chapter 5.3)

Only use the charger specified by the manufacturer.

Place the battery and charger on a stable surface during charging.

Do not cover them with other objects; this blocks heat dissipation.

Ensure proper ventilation. When replacing the charger, make sure it is suitable for the battery type in use.

1.2.8 Keep your e-bike in safe condition

Follow the inspection and maintenance instructions provided in this manual.

Before each ride, check all essential safety components.

1.2.9 Know the laws

Cyclists are required to obey applicable traffic regulations.

1.2.10 Make sure you are visible!

Wear bright and reflective clothing.

Keep reflectors clean and properly aligned.

Use your front and rear lights at dusk or in the dark.

Clearly signal your intentions so that other road users can anticipate your actions.

Use your bicycle bell when necessary to make others aware of your presence.

1.3 Remarks

Before departure, check whether all functions of the e-bike are working correctly. In case of any irregularities, immediately have repairs carried out or consult a specialist. Check, among other things:

- The wiring and lighting system
- The function of the front and rear brakes
- The stability of the handlebars and front wheel, and the steering responsiveness
- The condition of the tire tread and tire pressure (which must be at least the value indicated on the tire)
- Whether the safety markings on the rim brakes are clearly visible

Be aware of the following conditions that can affect battery life:

- Frequent braking or accelerating
- Riding uphill or against the wind
- Muddy roads or overloading

These situations increase energy consumption and reduce the range of the battery. Try to avoid them as much as possible.

Prohibited actions (will void warranty):

- Modifying or reprogramming the controller
- Opening the battery yourself
- Replacing the motor, controller, display, cables, sensors, charger or other components yourself
- Replacing the brake system

The company is not liable for any damage or consequences resulting from such actions. Always switch off the power and remove the battery before performing any maintenance.

Regularly check:

The stability of the motor and rear fork. If any parts are loose, action must be taken immediately.

Use the pedals during start-up or on steep slopes to reduce the starting current. This will extend battery life and increase range.

Be cautious in rainy weather:

If the water level exceeds the center of the wheels, water can enter the motor, potentially causing malfunctions.

Only use the original charger.

Remove the battery and charger with care.

Do not place objects on or around the battery or charger, as this may block heat dissipation.

Ensure adequate ventilation.

Only use original parts or parts recommended by the manufacturer.

Using other components may cause damage for which the company is not liable.

Make sure you have appropriate spare parts such as tires, inner tubes, and brake pads.

Maintain correct tire pressure

This prevents excessive rolling resistance or deformation of the tire and rim.

Maximum load:

The total weight of the rider, luggage, and bike may not exceed 130 kg.

The maximum load of the luggage carrier depends on the rating indicated on the carrier.

The company is not liable for damage caused by overloading.

2. Overview of Specific Components

- 1. Saddle**
- 2. Seat post**
- 3. Handlebar**
- 4. Stem**
- 5. Front light**
- 6. Front fork**
- 7. Front brakes**
- 8. Mudguards**
- 9. Frame**

10. Pedals

11. Drive belt

12. Tires

13. Motor

14. Battery

15. Rear light

16. Left brake lever

17. Left grip

18. Display

19. Bicycle bell

20. Right brake lever

21. Right grip



3. Technical Specifications

- Motor assistance up to 25 km/h
- Walk assist up to 6 km/h
- Range per charge cycle: 60–80 km
- Recommended maximum load: 120 kg (rider and luggage)
- Noise level while riding: <55 dB

- Motor type: Brushless rear hub motor
- Nominal power: 250 W
- Nominal voltage: 36 V
- Motor weight: approx. 2.3 kg
- Battery type: Lithium-ion battery 36V 10Ah
- Controller type: Bafang torque sensor
- Charger input voltage: AC 100–240 V
- Charger output voltage: 42 V
- Charger output current: 2 A
- Charging time: 4–6 hours

Let op: De hierboven genoemde onderdelen van de e-bike mogen op geen enkel moment worden gedemonteerd

4. Montage-instructies

4.1 Unboxing

You will see a toolbox and a saddle. Remove the e-bike from the box and cut the cable ties.

Detach the front wheel from the frame and set it aside. Keep the bike box in case you need it in the future.

Make sure to have the toolbox within reach. It contains everything you need to make the



bike road-ready.

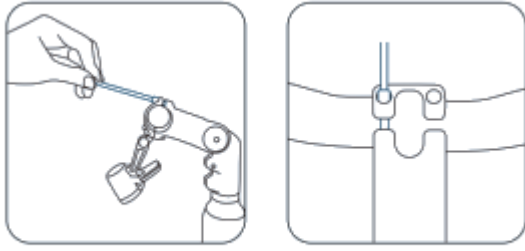
4.2 Installing the Stem

Use an Allen key to remove the four mounting bolts from the handlebar.

Next, remove the foam packaging material from the handlebar.

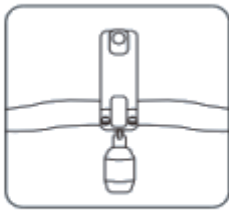
Place the handlebar into the stem and reinsert the four bolts into the stem using the Allen key to secure the handlebar.

Note: Do not fully tighten the bolts at this stage.



4.3 Installing the Front Light

Tilt the front light upwards, hold it in place, and firmly tighten the inner side of the screw.



4.4 Installing the Front Wheel

Open the quick-release lever and loosen the axle on the opposite side by turning it counterclockwise.

Remove the plastic protective caps from the wheel.

Remove the plastic insert from the brake caliper – this is no longer needed.

Place the front wheel into the frame as shown. The brake disc must fit neatly between the brake pads inside the caliper.

Insert the axle through the hub and tighten the screw. Then fold the quick-release lever inward.

Tip: Loosen the quick-release lever slightly if it feels too tight.



4.5 Installing the Pedals

Take the left pedal. If you're unsure, look for the letter L on the pedal.

Screw this pedal onto the left crank counterclockwise by hand. Then tighten it securely using a wrench.

The right pedal is marked with the letter R. Screw this pedal onto the right crank clockwise and also tighten it firmly with the wrench.



4.6 Installing the Saddle

Open the quick-release lever on the seat post and adjust the saddle to your preferred riding height.

Close the quick-release lever again to secure the saddle in place.

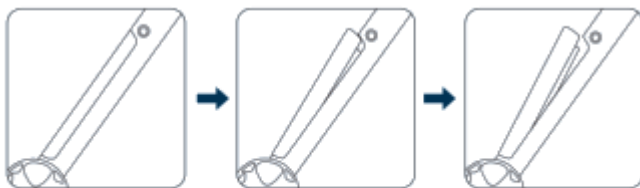


4.7 Battery Installation Instructions

Inserting the battery: Slide the battery into the frame along the guide rails.

Once the battery is fully inserted, turn the key to lock it in place.

Removing the battery: First, turn the key to unlock the battery. Hold the battery firmly and pull it out of the frame.



5. Operating Instructions

5.1 Using the Display



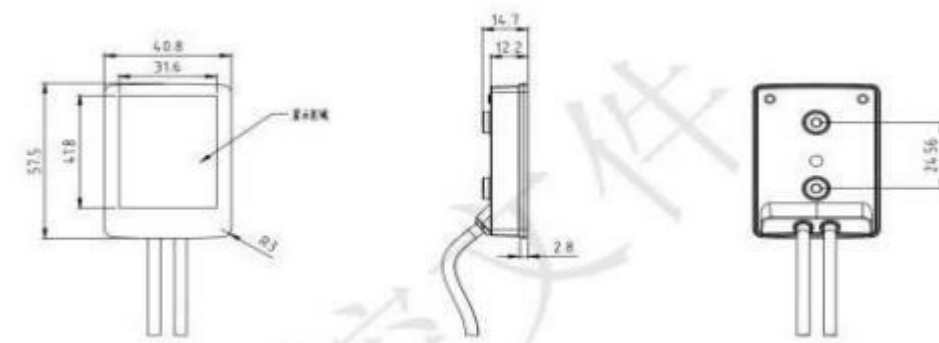
Intelligent TFT Display for E-bike; Model: CM13

5.1.1 Specifications

- Power supply: 48V
- Rated operating current: 50mA
- Maximum operating current: 200mA
- Leakage current when powered off: $<1\mu\text{A}$
- Operating temperature: $-20\sim 60^{\circ}\text{C}$
- Storage temperature: $-30\sim 70^{\circ}\text{C}$

5.1.2 Appearance and Dimensions

Display of the appearance and dimensions of the display (unit: mm)



5.1.3 Function Overview

The CM13 offers various functions to meet your needs. The displayed information includes:

- Battery indicator
- Motor power indicator
- PAS level adjustment and display
- Speed indicator (including current speed, max speed, and average speed)
- Distance (Trip and ODO)
- 6 km/h walk assist
- Travel time
- Backlight
- Error code
- Various parameter settings (such as wheel diameter, speed limit, battery capacity, assist level, etc.)

5.1.4 General Operation

The CM13 display works with the K43 button module and has 4 buttons: power, i-button, plus/headlight button, and minus/walk-assist button.

In this manual, the following terms are used:

ON/OFF: power button

i: information button

◆ Power On/Off

Press and hold the "ON/OFF" button for 2 seconds to switch on the display and the system.

While the system is on: press and hold the "ON/OFF" button again to switch it off.

The system will shut down automatically after 5 minutes of inactivity.

◆ Display Interface

After powering on, the display shows the current speed and ODO (total kilometers) by default.

Briefly press the "i" button to cycle through the following information:

- Trip (km)
- Maximum speed (km/h)
- Average speed (km/h)
- Travel time
- MOTOR POWER: current, average, and maximum power output (watts)
- RIDING MODE USAGE: percentage of time spent in each assist level

◆ 6 km/h Walk Assist

Press and hold the "DOWN" button for 2 seconds to activate the walk assist mode. The bike will then move at a constant speed of 6 km/h. Once you release the button, the assistance will stop immediately.

◆ Headlight

Press and hold the "UP" button for 2 seconds to switch on the headlights. The brightness of the backlight will be reduced. Press and hold the "UP" button again for 2 seconds to switch off the headlights and restore the



normal backlight brightness.

5. Bedieningsinstructies – PAS-niveau en Motorvermogen

5. Operating Instructions – PAS Level and Motor Power

◆ PAS Level

Short press the "UP" or "DOWN" button to change the assist level of the e-bike and adjust the motor's output power.

The default output range on the display is PAS level 0–5.

- PAS level 0 disables motor assistance
- PAS level 1 provides the minimum support
- PAS level 5 provides the maximum support

As shown in the image, the current assist level is PAS 2

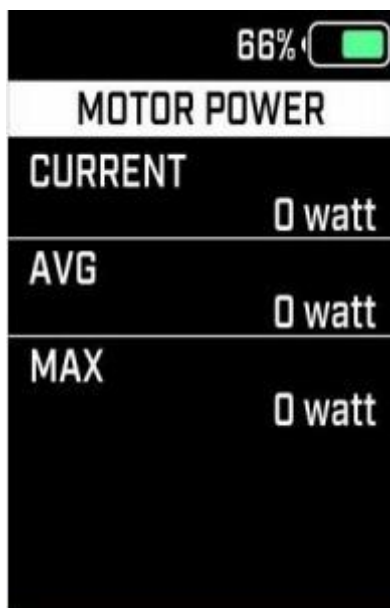


Motor Power

Short press the "i" button to display the **MOTOR POWER** information interface.
The screen will show:

- **Current power** (Watt)
- **Average power (AVG)** (Watt)
- **Maximum power (MAX)** (Watt)

as illustrated in the image below.



Error Codes

When the electronic control system detects a malfunction, an error code is automatically displayed.

Refer to Appendix 1 for the complete list of error codes.

- If an error code appears, resolve the issue immediately. Otherwise, the e-bike will not function properly.



Setting Parameters

Hold the "ON/OFF" button to turn on the display. When the e-bike is stationary, press and hold the "i" button for more than 2 seconds to open the settings menu. Here, you can adjust Display Settings, Advanced Settings, and Information (software data).

- All settings must only be adjusted while the e-bike is stationary.



Trip reset

Briefly press "i" to confirm, and use "UP" or "DOWN" to select between "NO" (do not reset) and "YES" (reset). The data to be reset includes maximum speed, average speed, trip distance, and trip duration Press "i" again to save and exit.

Advanced Setting	
TRIP Reset	Yes
Unit	Metric
Brightness	60%
SOC View	Percent
Auto Off	5Min
Set Voltage	48V
Password	>
BACK	



Advanced Setting	
TRIP Reset	NO
Unit	Metric
Brightness	60%
SOC View	Percent
Auto Off	5Min
Set Voltage	48V
Password	>
BACK	

Units

Press "UP" or "DOWN" to select 'Unit', then press "i" to enter the setting. Choose between the metric system (kilometers) and the imperial system (miles). Confirm with "i".

Advanced Setting	
TRIP Reset	NO
Unit	Metric
Brightness	60%
SOC View	Percent
Auto Off	5Min
Set Voltage	48V
Password	>
BACK	



Advanced Setting	
TRIP Reset	NO
Unit	Imperial
Brightness	60%
SOC View	Percent
Auto Off	5Min
Set Voltage	48V
Password	>
BACK	

Setting Battery Voltage

'Voltage' refers to the battery voltage. The value can be either 48V or 36V, depending on the battery. Select the appropriate value and confirm with "i".

Advanced Setting		Advanced Setting	
TRIP Reset	NO	TRIP Reset	NO
Unit	Imperial	Unit	Imperial
Brightness	60%	Brightness	60%
SOC View	Percent	SOC View	Percent
Auto Off	5Min	Auto Off	5Min
Set Voltage	48V	Set Voltage	36V
Password	>	Password	>
BACK		BACK	

Backlight Brightness

Adjust the brightness between 100% and 10% using the following options: 100% – 75% – 50% – 30% – 10%.

Advanced Setting		Advanced Setting	
TRIP Reset	NO	TRIP Reset	NO
Unit	Metric	Unit	Metric
Brightness	100%	Brightness	60%
SOC View	Percent	SOC View	Percent
Auto Off	5Min	Auto Off	5Min
Set Voltage	48V	Set Voltage	48V
Password	>	Password	>
BACK		BACK	

SOC Display


The "SOC Display" shows two methods for indicating the remaining battery capacity:

- As a percentage
- Or as a voltage value

Select the desired display mode by briefly pressing the "UP" or "DOWN" button. Short presses on "UP" or "DOWN" will switch between the "Voltage" and "Percent" modes.

Press the "i" button briefly to save and return to the main SOC display screen

Advanced Setting	
TRIP Reset	NO
Unit	Imperial
Brightness	60%
SOC View	Percent
Auto Off	5Min
Set Voltage	36V
Password	>
BACK	



Advanced Setting	
TRIP Reset	NO
Unit	Imperial
Brightness	60%
SOC View	voltage
Auto Off	5Min
Set Voltage	36V
Password	>
BACK	

Auto Power-Off

"Auto Power-Off" sets the time after which the display will automatically shut off.

- Press "UP" or "DOWN" briefly to select "Auto off".
- Press the "i" button briefly to enter the settings.
- Use short presses on "UP" or "DOWN" to select the desired auto power-off time.

The available time range is: 9 – 8 – 7 – 6 – 5 – 4 – 3 – 2 – 1 – OFF (in minutes).

Advanced Setting	
TRIP Reset	NO
Unit	Imperial
Brightness	60%
SOC View	voltage
Auto Off	5Min
Set Voltage	36V
Password	>
BACK	



Advanced Setting	
TRIP Reset	NO
Unit	Imperial
Brightness	60%
SOC View	voltage
Auto Off	8Min
Set Voltage	36V
Password	>
BACK	

Wheel Diameter Setting

"Wheel" refers to the wheel diameter setting.

- Short press the "i" button to open the wheel diameter setting menu.
- Use the "UP" or "DOWN" buttons to switch between the values:
"16" / "18" / "20" / "22" / "24" / "26" / "27.5c" / "28".
- Select the desired size and press "i" again to save and return to the "Wheel" menu.

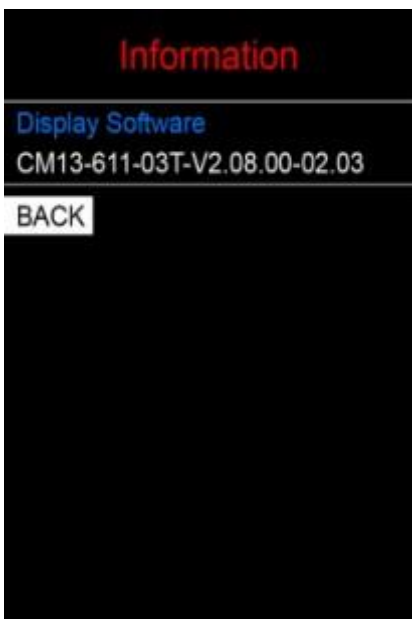


Information (Software Information)

Short press the "i" button to open "Information" and view the software information.

Press and hold the "i" button to return to the settings menu, or press "BACK" to exit this menu.

Note: The software version number is intended solely for internal traceability by KDS.



Quality Assurance and Warranty Conditions

I Warranty

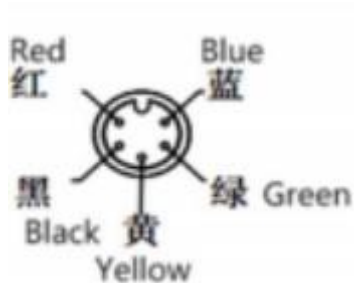
1. The warranty is valid only for products used under normal conditions and usage.
2. The warranty period is 24 months from the date of shipment or delivery to the customer.

II Other Provisions

The following situations are not covered by the warranty:

3. The display has been disassembled.
4. Damage to the display was caused by incorrect installation or usage.
5. The display housing was damaged while still in the factory.
6. The display cable is broken.
7. Defects or damage caused by force majeure (e.g. fire, earthquake, etc.).
8. The warranty period has expired.
- No warranty applies in cases of damage due to misuse, disassembly, fire/water damage, or if outside the warranty period.
-

Wiring Diagram



Wiring Colors and Functions:

1. Red = VCC
 2. Blue = K
 3. Black = GND
 4. Green = RX
 5. Yellow = TX
- (Not all cables are visible due to waterproof connectors.)

Usage Precautions

- Never disconnect the connector while the battery is connected
- Avoid shocks and impacts
- Do not change system parameters
- Always have faults inspected by a specialist
- After 1 minute of inactivity, the display automatically exits the settings menu

Error Codes:

- 21 – Current deviation
- 22 – Throttle issue
- 23 – Motor phase error
- 24 – Hall sensor error
- 25 – Brake problem
- 30 – Communication error

5.2 Battery Usage**5.2.1 Important Safety Instructions Regarding the Battery**

Before using your new e-bike for the first time, please read the following instructions carefully to ensure optimal use of the battery:

- Although the battery is delivered at approximately 50% charge, it must be charged for at least 24 hours before the first use of the bicycle.
- The battery will reach its full capacity only after about 4–5 charging cycles (i.e., fully discharging and fully charging the battery 4–5 times).
- Before connecting the battery, make sure that the input voltage matches the value indicated on the charger (100–240 V).
- The battery is designed to last more than 1000 cycles, but its service life is optimized when stored at room temperatures between +10°C and +30°C.
 - Make sure the battery is well protected and never exposed to moisture.
 - The battery and charger are matched. Always use the original charger provided with the bike. Never use a different charger!
 - Keep the battery out of reach of children.
 - Never attempt to open the battery. This is not only dangerous but will also void the warranty.
 - Avoid short circuits with metal objects.
 - Never immerse the battery in water or other liquids.
 - Do not store the battery near heat sources or open flames.
 - Batteries must be recycled after use. Never throw the battery into fire—risk of explosion!
 - If the battery is damaged—e.g., from a bicycle accident or being dropped—electrolyte may leak, which can cause burns.
 - o **Warning:** Only handle the battery with a cloth or gloves and avoid any contact of the acid with your eyes!
 - Never use a damaged battery under any circumstances.

5.2.2 Discharging the Battery

Always check that the battery is switched on before charging.

Always remove the battery during maintenance work.

The battery can be charged while mounted on the bike or separately, away from the bike.

5.2.2 Battery Range

The battery range is influenced by various factors, including:

- Headwind
- Hilly terrain
- Soft surfaces
- Low tire pressure
- High assistance level
- High speed
- Lack of or insufficient maintenance
- Low temperatures*
- Low gear
- Low pedaling force by the rider
- High total weight / heavily loaded bike

All values are valid at a temperature of 25°C.

As a general rule: with each degree of temperature drop, the battery charge decreases by approximately 1%.

5.2.4 Additional Information and Usage Tips

To maximize battery lifespan, the following guidelines should be observed:

- The battery cannot be charged at temperatures below 0°C or above 60°C.

It is therefore recommended to bring the battery to room temperature before charging.

- The charger operates using a microcomputer system with automatic control.

Once the battery is fully charged, the charging process stops automatically.

This means the battery cannot be overcharged.

However, we recommend unplugging the charger from the power outlet after charging.

- For long-term storage (e.g., in winter), the fully charged battery should be stored flat in a dry place.

- An unused battery must be recharged every three months.

If not, the battery may become completely discharged, which will void the warranty.

The battery discharges due to a chemical process inside the battery cells.

The degree of discharge depends on how long the battery remains unused and the temperatures it is exposed to.

Therefore, charging the battery every three months is essential for prolonging its lifespan.

5.3 Use of the Charger

Only use the original charger supplied with the bike!

5.3.1 Important Safety Instructions for the Charger

Before using the charger for the first time, carefully read the following safety instructions:

- Keep the charger out of reach of children!
- To prevent possible injuries, use the charger exclusively for the original lithium battery supplied with your bike.

Other batteries may be incompatible and could explode during charging, causing

damage to the device and serious personal injury.

- If a charger other than the one supplied with the bike is used, there is a risk of fire, electric shock, and/or serious injury.

Always ensure the charger remains dry.

Keep water or other liquids away from the charger.

- If the charger comes into contact with water or other liquid, unplug it immediately and have it inspected by an authorized dealer.
- Always place the charger on a flat surface during use.
- Always unplug the charger from the socket when not in use.
- Before use, always check that the plug and cables are undamaged. Never plug a damaged plug or cable into a power outlet!
- Never attempt to disassemble the charger yourself. Incorrect reassembly may lead to electric shock and serious injury.
- Always unplug the charger before cleaning.
- Clean the charger only with a dry cloth. Never use a damp cloth, oil, or other liquids.
- Do not use extension cords. Use only the original cable supplied with the charger.

5.3.2 Charger Function

This charger is specifically designed for charging the lithium polymer battery (LiPo9).

The LED (1) indicates the battery's charge status as shown in the following table:

LED MODE Meaning

Green The battery is not connected

Red Battery is charging

Green Battery is fully charged; charger stops automatically

5.3.2 Troubleshooting During Charging

If you experience issues while charging, please check the following:

- Is the power cable properly connected?
- Is the charger plug or the battery charging port damaged?
- Does the battery show any visible external damage?
- Is the power outlet working and supplying the correct voltage?

(You may test this by connecting another device)

If the issue persists, contact the dealer from whom the e-bike was purchased.

Note:

- ***Do not use the bike during heavy rain or storms, as this may cause damage.***
- ***Regularly check that the bolts on both sides of the rear hub are tightly secured.***
- ***Ensure that the motor cables are firmly connected.***
- ***Never attempt to repair the motor yourself.***

5.5 Pedal Assist

- The bicycle is equipped with electric pedal assist. The motor supports your pedaling effort.

The faster you pedal, the stronger the assistance—up to a maximum of 25 km/h.

- If you do not pedal while the system is active, the motor remains inactive. As soon as you start pedaling, the support starts automatically, enabling a smooth and easy launch.
- When electrical assistance is enabled, starting the bike feels different from a regular bike. Starting from a standstill is easier. This might take some getting used to, so practice first before riding on public roads. For starting from a standstill, we recommend the support level "Low".
- When the electric assist is turned off, the bike offers almost no additional resistance. You can always use it like a regular bike (with or without the battery).
- Pedal assist is legally limited to a speed of 25 km/h. This means that support decreases as this speed is approached and stops completely at 25 km/h.

5.6 Braking System

- The braking system is a vital component of any bicycle and plays a crucial role in your safety. Before riding, you must understand the braking system and ensure it is properly adjusted.
- A common mistake is assuming that you can come to a complete stop within a very short distance. During an emergency stop, the bike may skid if the wheels are suddenly locked by the brake pads. This is not only dangerous, but it also increases the stopping distance.
- Therefore, it's important to understand that the braking system is primarily designed to help control your speed. The braking system typically consists of brake levers, disc brakes, and brake cables.

5.6.1 Brakelever



- The construction of the brake lever is shown in the illustration (not included in this text). Depending on local practices in different countries, variations in operation exist.
- In the configuration shown, the left lever operates the front brake and the right lever operates the rear brake.
- The adjustment screw allows you to fine-tune the distance between the brake pads and the rim. The electronic clearance of the brake cable is approximately half the distance between the brake lever and the handlebar grip.
- When the brake lever is pulled, the electrical cable tension corresponds to that

distance. If the brake lever nearly touches the handlebar and the gap between the brake pads and the rim is too large, it must be readjusted.

5.6.2 Discbrake

Components:

1. Adjustment screw for travel
2. Brake pads
3. Mounting bolts of the disc brake
4. Brake arm
5. Mounting plate of the disc brake
6. Adjustment screw for brake pads

Method for adjusting the brake pads:

- First, secure and tighten the front brake.
- Then loosen screw no. 2 (see image), but do not remove it completely, allowing the brake mechanism to move slightly. Tighten the brake again and re-tighten screw no. 2.
- Loosen the screw and spin the wheel to check the distance.

If the gap between the brake pads is too small, adjust it using screw no. 6.

If there is friction, identify the point of contact and fine-tune it using screw no. 2.

If the brakes become loose over time, screw no. 1 can be used to retighten the brake cable.

5.6.3 Brake Cables

- Avoid fraying of the inner cables. It is therefore advisable to place an end cap at the cable end.
- Brake cables should be regularly lubricated to prevent excessive friction due to rust.
- Straight (linear) brake cables offer the best performance. If a bend is necessary, avoid sharp angles as much as possible.
- The brake cable length should allow free movement when the handlebars are turned fully left or right without pinching.

5.6.4 General information on using the brake system

- If the distance between brake pads and the rim is too large, adjust it using the adjustment screw on the brake lever or brake plate.

5.6.5 Additional brake system information

- It is recommended to replace brake pads after 5000 km of use.

If brake pads are heavily worn (remaining thickness less than 1 mm), they must be replaced to ensure road safety.

- If the bike is not used for an extended period, release the brake pads to avoid

mechanical fatigue. Make sure the brake pads are properly adjusted before riding again.

- In rainy conditions, braking performance may be reduced. Maintain a greater safety distance and reduce speed when braking.
- Disc brakes and pads must not come into contact with oil, as this could lead to serious injury.
- A broken brake cable can lead to dangerous failure of the braking system. Replace it immediately.

6 / System Check Before Riding

Always check the condition of the bike before each ride, especially:

- Tire pressure – check correct pressure according to value indicated on the tire.
- Check tire condition for deformation, cracks, and whether the tire sits properly on the rim and is not protruding.
- If the safety groove on the side of the rim is no longer visible, the rim must be replaced.
- Check spoke tension.
- Check wheel bolts and quick-releases.
- Check handlebar and stem (ensure they are not twisted or loose).
- Secure the seatpost correctly.
- Check saddle bolts (saddle must not rotate or sink under weight).
- Check the condition of pedal assist.
- Test the functionality of the bell.
- Check the proper functioning of front and rear brakes.
 - Inspect brake pads for wear.
 - Adjust cable tension.
 - Check braking performance.
- Ensure brake surfaces are clean.
 - Clean and lubricate the chain with appropriate lubricant.
 - Check that gear shifting is smooth and adjust if needed.
 - Check all cables.
 - Verify that front and rear lights are working properly.
 - Test riding behavior in the dark.
- Ensure reflectors are clean.
 - Charge the battery.
 - Check whether the electronic components are functioning properly.
 - Clean the pedal sensor with a sponge and lukewarm water.
 - Clean the bike regularly.
 - Have regular maintenance performed.
- Perform a full service annually at a location of your choice.

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