



PANTERA

Use and Maintenance Manual



Thank you for choosing Pantera!

THE E-BIKE DESIGNED TO BE IN THE SPOTLIGHT

Easy to ride and to handle in any condition, Pantera conjugates an attractive, vintage Italian design and the most advanced technological solutions.

This manual has been specially designed to guide you through the functions and features of your e-bike.

Before using your Pantera e-bike, please read carefully the entire manual in order to become thoroughly familiar with its features, peculiarities and capabilities. This guide also includes safety instructions to ensure a safe and proper use of your vehicle.

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1. GENERAL INFORMATION

SYMBOLS KEYS:



INFORMATION

Provides suggestions, tips and additional information.



CAUTION!

Highlights essential information.



DANGER!

Warns about a potential, serious danger. Neglecting this information might lead to severe injuries or death.



TOOLS

Points out the required tools to carry out peculiar interventions on the e-bike

2. 2. GENERAL DISCLAIMER

Riding a bike is a pleasant activity within everyone's reach. It allows to move around the town easily or have a day trip in an eco-friendly way. Riding a bike brings benefit both to the body and the mind. As a matter of fact, a regular cycling helps to keep in shape, has positive effects on the heart and is good for your back and your joints. Furthermore, to practice this outdoor activity has positive effects on your mood and helps reducing the stress level.



Like any other activity, riding a bike involve some risks. Objects along the way, conditions/unevenness of the terrain, collisions with pedestrians, animals, cars or other cyclists may result in a fall. Furthermore, such weather conditions as snow, ice or rain can considerably increase the risk of falling; this case is therefore necessary to ride with utmost caution and to avoid harsh brakings. We recommend you pay close attention to pavements (sidewalks) and to tram and trail tracks, which may be slippery in case of rain or have your e-bike wheel stuck (the use of Fat tyres reduces the danger of getting stuck into a track).

Every cyclist assumes all the potential risks involved with the use of the e-bike. While riding it is essential to always be very careful, wear appropriate clothing and turn the lights on at dusk.

Pantera has been designed for riding on private as well as on public streets, so it is everyone's responsibility to know and respect their own country or region legislation about the use of an e-bike.



The use of radio-telephones or headphones while riding might seriously endanger your safety and/or someone else's and might be sanctioned by local authorities.



We recommend you diligently carry out the pre-ride safety checks and to respect the maintenance schedule specified in this manual.

3. 3. LEGAL REQUIREMENTS

3.1. Compliance and rules for the use of the e-bikes

Pantera e-bike is certified to be in compliance with EN15194 standard. Any use of the e-bike beyond the provisions of standard EN15194 is considered improper.

Before riding your e-bike, we recommend you check your country or regional regulations on electric bikes. Different geographical areas might lay down different rules in terms of / different age limits, speed, motor wattage, street legality etc. Within the EU, biking rules are the same for non-motorized bicycles and e-bikes with assisted speed up to 25 km/h. However, we invite you to check if different regulations apply in your country.

In some European States, riding on public roads is expressly forbidden to e-bikes mounting over 250W engines. It is allowed in private areas not open to the public. It is the responsibility of the buyer to use the e-bike according to the specific country regulations. The responsibility of any penalty or damage resulting from non-compliance with such regulations lies with the e-bike buyer/user.

3.1.1 Rules for spare parts and accessories

The different member States of the European Union have different rules concerning e-bike accessories or parts. Installing some accessories or spare parts may result in limitations to the use of the e-bike on public roads. The use is allowed in private areas not open to the public. When riding on public roads, it is the responsibility of the buyer/user to install only accessories or spare parts complying with the specific country regulations. The responsibility of any penalty or damage resulting from non-compliance with such regulations lies with the e-bike buyer/user.

3.2. Intended purpose

Pantera e-bike is designed for use on paved paths. So it should never be used to perform such dangerous manoeuvres as wheeling or jumping nor to ride down or up the stairs etc.

Pantera e-bike is not designed for off road trails nor for participation in sports competitions.

Its technical features, operation parameters and maintenance guidelines have been developed for road use only. Maximum allowed load is 150kg (including the e-bike).

No warranty or liability damage claim shall be accepted in case of misuse of the e-bike.

Any modification or alteration of the electrical system (Tuning) voids all warranty claims.

Verve CW Srl is relieved of any liability for damages caused by a misuse of Pantera e-bike.



Misuse can damage the e-bike and may result in accidents, serious injuries or death to the user and/or those around them.

4. PARTS IDENTIFICATION DIAGRAM



- 1 FRAME
- 2 BATTERY
- 3 FRONT FORKS
- 4 FRONT WHEEL
- 5 REAR WHEEL
- 6 DISPLAY
- 7 GRIP
- 8 RIGHT BRAKE LEVER
- 9 LEFT BRAKE LEVER
- 10 SADDLE
- 11 HANDLEBAR
- 12 REAR DERAILLEUR
- 13 CHAIN
- 14 CRANKSET
- 15 PEDAL
- 16 FRONT BRAKE CALIPER
- 17 REAR BRAKE CALIPER
- 18 FRONT DISC BRAKE
- 19 REAR DISC BRAKE
- 20 CONTROL BOX
- 21 TYRE
- 22 HEADLIGHT LED
- 23 HEADLIGHT BRACKETS
- 24 REAR LIGHT LED

5. UNPACKAGING

Pantera is shipped to you packed in a box. Both the box and the wrapping material were conceived to prevent any damage during transportation. Some parts are not installed and require proper assembly.

Box content:

- 1x Pantera e-bike
- 1x Saddle
- 1x Front wheel
- 1x Front headlight
- 2x Headlight brackets
- 1x Battery charger 2A
- 2x Pedals
- 2x Battery Keys
- 5x Tools: 2x 15mm wrench key - 1x 10/8mm wrench key
1x 8mm Allen key - 1x 10mm Allen key



You might need such additional tools as:



- * Scissors
- * Cutter
- * Loctite glue – medium strength
- * Rags



Should the packaging be noticeably damaged at the time of delivery, we ask you not to accept the delivery or to accept it under reserve and contact us right after.



Should you detect any damage to one or more parts of the e-bike, while unpackaging, please contact us as soon as possible. Our technical support team can provide you all the necessary information to solve the problem or carry out a repair.

6. ASSEMBLY INSTRUCTIONS

We recommend you read carefully the assembly instructions and/or watch the tutorial before starting to assembly your e-bike.

Should you run into difficulties, please contact us or see your trusted bike mechanic.



If you reckon you cannot properly assembly your e-bike, please see a professional bicycle service.

All the components must be properly assembled, otherwise your e-bike cannot be used.



Riding a not properly assembled e-bike may endanger your safety as well as other people's. In case of doubt or problems we recommend you see a professional bicycle service.



Before operating on your Pantera e-bike, turn off the power switch and remove the battery.

To watch the assembly VIDEO TUTORIAL:

- Scan the QR code with your smartphone camera
- Go:
https://www.youtube.com/watch?v=QG2VdJfYdbs&ab_channel=VerveMoto



Discover the latest news and stay up-to-date with our technical upgrades on our website and social media pages - <https://www.vervebikes.com>.

ASSEMBLY OPERATION INDEX

- 6.1 Opening the box and removing the e-bike and its parts from the box
- 6.2 Removing the battery
- 6.3 Installing the handlebar
- 6.4 Installing the front wheel
- 6.5 Inflating the tyres
- 6.6 Installing the saddle
- 6.7 Installing the pedals
- 6.8 Installing the front headlight



6.1. Opening the box and removing the e-bike and its parts from the box

First of all, make sure the box is placed on the right side. You can easily check the orientation arrows printed on the box sides.



Use a staple remover to open the top box. Before removing the bike, use a wire cutter or a pair of scissors to cut the cable tie connecting the front wheel and the frame.

Remove carefully the front wheel from the box. Pay attention not to damage the disc brake or any other part of the e-bike. A damaged disc may hinder the assembly and provoke serious safety issues.

You can now lift your e-bike out of the box with the same care.



Pantera e-bike weighs about 30kg. So we recommend you carry out this task with the help of another person.

In order to protect the e-bike from possible damages, all the parts have been covered with polyurethan foam.

As soon as the e-bike has been removed from the box, lay it carefully on the ground. The front wheel is not installed yet so to avoid any possible damage place the lower part of the front fork on a soft surface.



You can now remove all the polyurethane foam covering the different parts of the e-bike. Use a wire cutter to cut the cable ties. These ties are quite hard to cut so it is not advisable to use such tools as scissors or knives, which might hurt you or those around you.



We recommend you store the box and the packaging material. In case of return you will be asked to accurately pack the e-bike in order to safely ship it. An improper packaging might provoke serious damages to the e-bike during the transportation.

We recommend you perform the assembly operations on a clean and dry surface. The whole setup requires around 30 minutes.

After removing the e-bike, inside the box you can find the following parts:

- 1x Saddle (including screws)
- 1x Box containing 2 side reflectors, 1 battery charger, 2 keys
- 1x Box containing tools (see section 5 in this manual)
- 1x Box containing 1 front headlight and 2 headlight brackets

6.2. Removing the battery

We recommend you remove the battery from your e-bike, before starting the assembly operations.

In order to remove the battery please follow these simple instructions:

1. Insert one of the included keys in the latch on the left side of the e-bike.
2. Turn the key clockwise and pull the battery towards yourself, use the special stick to help you.
3. After removing the battery, put it carefully on a clean and dry surface.



6.3. **Installing the handlebar**



The handlebar setup is quite easy an operation although it requires the habitual care. An improperly tightened retaining screw might in fact compromise your safety. So make sure all the screws are tightly closed before starting to drive.

Please follow these steps:

1. Use the 5mm Allen key to loosen the bolts of the handlebar clamp (Fig. 1)
2. After removing the clamp, insert the handlebar in the specific slot (Fig. 2)
3. Place back the upper clamp and slightly tighten the bolts with the 5mm Allen key. You can now adjust the angle of the handlebar so as to enjoy a maximum riding comfort (Fig. 3)
4. Cross tighten the bolts of the handlebar clamp. Make sure the clamp is tight and correctly placed on the handlebar (Fig. 4)



6.4. **Installing the front wheel**

To ensure a perfect installation of the front wheel, we recommend you flip the e-bike. We also suggest you place soft protectors under points A and B to protect your e-bike from bumps and/or scratches, as shown in the picture.



Follow the steps below:

1. Pull out the nut and the retaining washer from both sides of the wheel while keeping the spacer in place.
First of all, remove the plastic clip between the brake pads inside the brake caliper. Use the provided tools to loosen and remove both M6 Allen screws from the caliper mount. Memorize the right position of the parts you are removing from the caliper mount, taking specific care about the emplacement of washers, of the spacer on the retaining screws and of the caliper mount.
- 2.



3. Slide the wheel inside the fork. The front wheel has 2 washers, 2 spacers and 2 nuts. Keep the nut and slide it in the axle, placing 1 spacer on each side (Fig. 3)



Take care not to scratch the fork paint while performing this operation.

4. Place the washer and the sealing nut on both sides of the front wheel axle (Fig. 4)
5. Use the provided 2x 15mm wrench key to tighten the front wheel nuts (Fig. 5)
6. Go back to step 2 and perform the reverse procedure in order to reinstall the brake caliper.



Required tools to perform these operations: 1 5mm Allen key and 2 15mm wrench keys

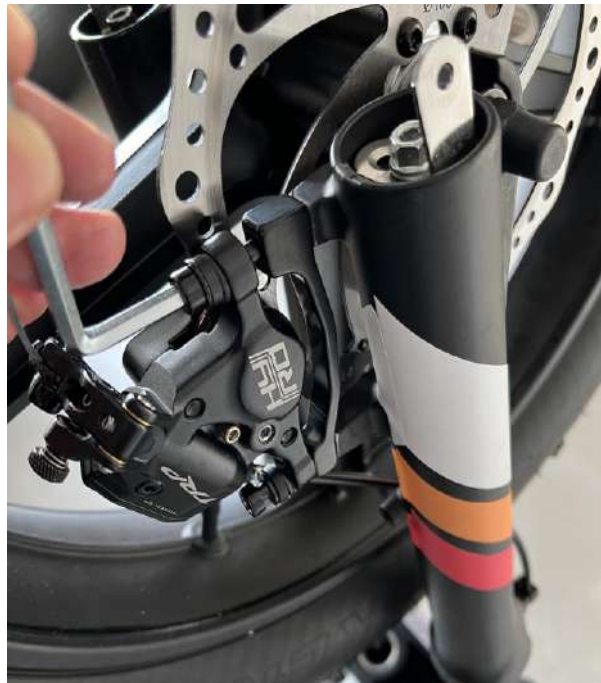


Retrace all the instructions step by step to verify you haven't missed any key passage. Finally check you have firmly tightened the front wheel.

After following all the steps above, check the functioning of the braking system. Shouldn't the braking be effective or in case you perceive an annoying rubbing, verify the wheel dishing. Check that all parts are correctly set and the screws are firmly tightened. Spin the wheel: if it comes and goes from the brake pad, it is necessary to install it again until when the alignment is perfect.



If you reckon you cannot correctly perform these operations, please see a professional bicycle service.



6.5. **Inflating the tyres**

For transport purposes, your e-bike tyres are only partially inflated.

After installing the front wheel, proceed to inflate the tyres. First of all, place the e-bike on the wheels.

- Pantera e-bike feature Schrader valves (also called American valves). In this kind of valve the main stem is externally wrapped in a threaded pipe. To press the central core, you need such a thin tool as a pen cap or a fingernail.
- Unscrew the rubber cap on the top of the valve (protection) and lay it caring not to lose it.
- Connect the pump to the valve. In case there is a stick close to the regulator, check it is open (parallel to the nozzle). Close the stick by snapping it downwards (so that it is perpendicular to the nozzle).
- The recommended pressure value is 20-25 PSI (1,3-1,7 bar). Monitor the pressure gauge while inflating the tyre. The ideal tyre pressure depends on the rider weight and on the type of terrain.
- To release the regulator, lift the stick and quickly screw the cap on the valve.
- To deflate an air chamber Schrader valve you can simply press the inner stem with a fingernail or a thin tool to let all the air out.



Never inflate the tyres above 35 PSI (2,4 bar). The air chamber might burst in case of overpressure.



A correct tyre pressure preserves the rims, the air chambers and the tyre themselves from possible damages. Furthermore, a perfectly inflated tyre extends the life and duration of the battery.



The tyres pressure affects the bike manoeuvrability and saddle comfort. A higher pressure lowers rolling resistance and perfectly conforms to smooth and dry surfaces. A lower pressure, on the contrary, allows a smooth driving and increases grip, so it conforms to bumpy roads or to rough and slippery surfaces.

6.6. **Installing the saddle**

To perform all next operations we recommend you have the e-bike standing on the wheels.

The saddle must be attached to the frame with the supplied 7 Allen screws:



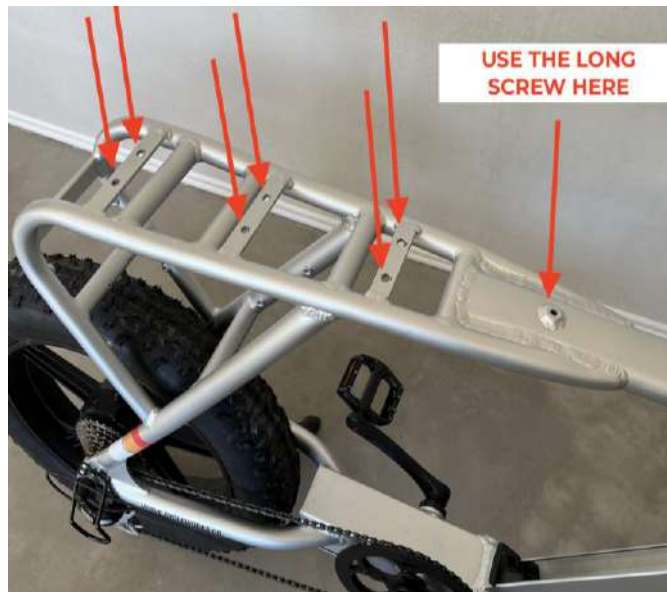
1x 5x50mm front screw

6x 5x30mm screws



Follow the steps below:

- Place the saddle on top of the frame so that it is aligned with the corresponding fixing slots.
- Screw all the 7 Allen screws without tightening them.
- When all the screws are in place, tighten them firmly and make sure the saddle is fully stabilized.



6.7. **Installing the pedals**

The pedals setup is quite easy an operation requiring the supplied 15mm wrench key.

The pedals are stamped “L” and “R” for left and right. Place the left pedal on the left crank and the right pedal on the right crank.



All pedals can be installed and removed the same way. The right pedal has a right-hand thread (installs clockwise, removes counterclockwise). The left pedal has a left-hand thread (installs counterclockwise, removes clockwise).

After correctly placing the pedals, you can hand tighten the crank taking care of the thread direction. Pay attention not to force the movement because that may result in a damage to the pedal thread. After that we suggest you tighten the pedals with a 15mm wrench key. The recommended torque is 29-34Nm, use a torque wrench to verify that.



Before starting the installation, we suggest you grease the pedal threads with white anti-seize paste. This will prevent any oxidation which might hinder the removal in the future.



6.8. **Installing the front headlight**

To install the front headlight you need the following supplied tools:



- 1 x 2x8mm Allen key
- 1 x 2x10mm Allen key
- 1 x 10mm wrench key

Follow the steps below:

- Drop the headlight brackets in the right and left fork stem (of your e-bike).
- Tighten both brackets with the supplied Allen screws.
- Verify the brackets are installed at the same height.
- To attach the headlight and the grid, place the headlight between the two support brackets and use the 2x10mm Allen key.
- Use the specific connectors to wire the headlight to the electrical system of your e-bike.





7. OPERATING THE E-BIKE

In a pedal assistance bicycle the rider effort is reduced by the electric motor located on the rear wheel freehub. You can configure gear, power and driving mode on the handy multifunction display installed on the handlebar. The electric motor will deliver more or less power to support the selected pedal assistance. It is up to you to choose, anytime, the driving mode according to your pedaling feeling.



In Europe the maximum allowed speed is limited by law to 25 km/h. Beyond this speed, the electric motor stops operating.



You can drive the electric bicycle also without pedal assistance, just remember your e-bike is sensitively heavier than a normal bike due to the motor, to the battery and to the Fat tyres.



Pantera is equipped with an innovative dual sensor system of pedal assistance, allowing you to change your driving experience anytime.

Pantera features a Shimano 8 speed cassette sprocket. In order to make the most of your electric bike in plain, we suggest you configure a longer gear, so that the gear ratio is consistent with your physical form. The electric motor will assist your pedaling by reducing the effort up to a speed of 25 km/h. If you wish to save battery power, you can select the minimum level of pedal assistance.

The electric bicycle is particularly helpful in reducing the effort while going uphill. It helps even an untrained cyclist to easily overcome climbs. When going uphill we suggest you configure a shorter gear so that in spite of a reduced metric development, you can ride with a minor effort. While ascending, you can select the assistance level which allows you get your favourite driving feeling. You will notice how combining a shorter gear with the maximum level of assistance allows you not to force on the pedals. You can simply maintain a circular, regular pedaling to trigger the motor, reduce the effort and ascend smoothly.

Due to the legal speed limit, basically you won't need any pedal assistance when going downhill. Therefore we suggest you lower the pedal assistance to the minimum level, configure a good metric development gear and

simply focus on riding your e-bike. The weight of the battery (located on the downtube) and of the motor (located on the freehub) affects the barycentre of the bicycle. So we recommend you ride carefully and remember that, in spite of being accurately designed, the e-bike has a different manoeuvrability than a normal bicycle.

8. E-BIKE COMPONENTS

8.1. Braking system

Pantera as standard features mechanical disc brakes, also called threaded brakes, which combine the typical disc brakes structure with the functionality of traditional brakes. Pads are activated by a wire (1,6mm stainless steel) which triggers some leverages drawing the pads themselves to the rotor (commonly called a disc).

The braking system includes the following elements:

- Brake lever: located on the handlebar, it activates the wire.
- Plastic sleeves with an anti-seize PTFE internal coating.
- Brake caliper: it is installed on the frame and requires specific mounts and adapters to be set. In the case of mechanical systems, a series of leverages converts the wire action into the horizontal translation of the pads.

Disc brakes have several benefits: they provide a better heat dissipation; they are more adjustable so as to reduce the risks of losing grip; they are more powerful than traditional brakes; they maintain a very good level of braking performance even in case of adverse weather conditions; they are easier to set.



Disc brakes require bedding to ensure an optimal breaking performance and it is possible for the braking power to be lower during the break-in. So we recommend you ride carefully during this time.



The disc brake can reach high temperature while riding. After a ride, always wait a few minutes before touching the rotors because you might get burnt.

8.2. **Battery and battery charger**

Pantera is equipped with a latest-generation battery which is sheltered by a special waterproof protective cover. The battery is available in two power variants, 500wh and 840wh

In order to recharge your e-bike battery, use only the supplied battery charger. We suggest you connect the charger to the battery before plugging it into the power outlet (220V). Charging will start automatically. When fully charged, the charger gauge will switch from RED to GREEN. You can now unplug the charger from the power outlet and from the battery right after.



First of all, verify if the battery is correctly inserted into its specific emplacement. On delivery of the e-bike, the battery is not set in position so we recommend you push it until when you hear a “click” noise.



The battery must be charged in a dry place, humidity should not exceed 15-30%.



Extreme temperatures may affect the life and duration of the battery.



Pantera’s lithium battery features a BMS (Battery Management System) preserving it from overloading when charging and avoiding the risk of a full depletion. BMS prevents short-circuits or other significant damages which might jeopardize the duration of the battery.



Always recharge the battery before storing your e-bike for a long time. This will avoid the self-discharge phenomenon, an electro-chemical reaction provoking a loss of charge without any power consumption. Even if lithium batteries are designed to limit this phenomenon, we recommend you fully charge the battery before storing it to avoid any potential damage.



At the end of its life cycle, the battery must be processed as a hazardous waste and properly disposed, according to the local or regional legislation.

8.2.1. **Duration of the battery**

The autonomy of the battery cannot be accurately determined because it is affected by several factors: battery power and age, rider's weight, speed and riding style, external temperature, tyre pressure, type of terrain and road slope.



Your e-bike autonomy can be significantly reduced by extreme temperatures. This phenomenon is provoked by a normal physical process not damaging the battery which will recover its full capacity as climate conditions change.

The battery has an estimated 900 full charge cycles. This capacity is progressively reduced by the battery ageing. Lithium batteries do not require to be fully discharged before charging. So charging a partially charged battery will result in no harm.

Recharging time depends on the battery capacity and on the kind of charger (standard or fast). Generally speaking, the higher the battery capacity, the longer the recharging time. Indicatively, a full charge can take 3 up to 5 hours.



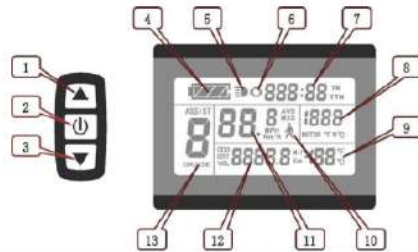
8.3. Display and switches

Main switch function and multifunction display (explanation tables)

KT-LCD3 e-Bike Display User Manual

Functions and Display

Instruments using the structure form of instrument body portion and the operation buttons are designed separately.



1		UP button	10		6KM/H push power assist
2		SW button	11		KM/H Riding speed(metric)
3		DOWN button			MPH Riding speed (imperial)
4		Battery capacity indicator	12		MXS MAX speed
5		Backlight and headlights			AVS Average speed
6		The brake display			Km Distance(metric)
7		Single trip time	13		Mil Distance (imperial)
		Total trip time			DST Trip distance
8		Power display	13		ODO Total distance
		Motor temperature			VOL Battery voltage
		Motor Fahrenheit			ASSIST Pas level
9		Environment temperature	13		CRUISE Cruise function
		Environment Fahrenheit			

Operation

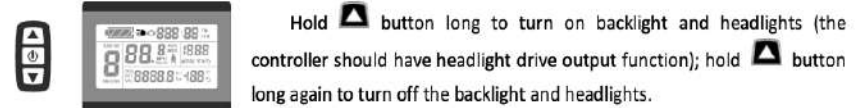
1. ON/OFF

Hold button long to turn on the power, and hold button long for a second time to turn off the power. When the motor stops driving and when the e-bike is not used for a consecutive 5 minutes, it will automatically shut down and turn off the motor power supply.

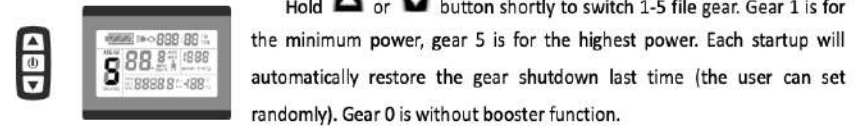
2. Display 1



2.1 Turn on backlight and headlights



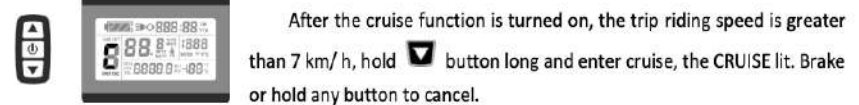
2.2 Assist ratio gear (ASSIST) switch



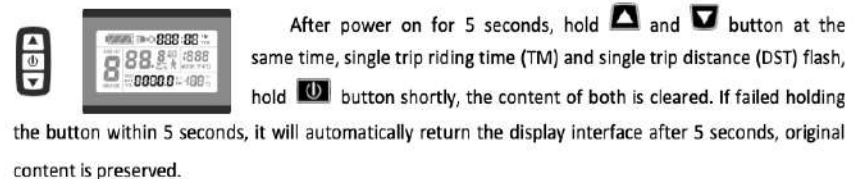
2.3 6KM/H assist promotion function



2.4 Cruise function



2.5 Display and delete of single data



3. Display 2



In the riding mode after 5 seconds, display 2 automatically returns to display 1, and the original motor power (MOTOR W) display is replaced with motor operating temperature display (MOTOR °C)

display (the internal motor should be equipped with the temperature sensor and the output of temperature detection signal).

4. Display 3



Hold button shortly in display 2 to enter display 3.

In the riding condition, five seconds later, a single maximum speed (MXS) display automatically returns to the real riding speed (KM/H).

5. In display 3, hold button shortly (SW), and the display will re-enter display 1.

6. Hold button to turn off the display and the power supply of controller.

7. Automatically prompt interface

7.1 Error Code Display



Error Code	Definition
01_info	Throttle Abnormality
03_info	Motor hall signal Abnormality
04_info	Torque sensor signal Abnormality
05_info	Axis speed sensor Abnormality(only applied to torque sensor)
06_info	Motor or controller has short circuit Abnormality

Electronic control system failure will display (flashing) fault code. Once the fault was removed, it automatically exits from the fault code display interface.

7.2 Motor temperature alarm

When the motor temperature (the internal motor should be equipped with the temperature sensor and the output of temperature detection signal) is over the warning value, MOTOR °C (°F) flashes to alarm at any display, meanwhile the motor controller will offer the appropriate protection to motor.

General Project Setting

1. Set maximum riding speed



After power on for 5 seconds, hold and button at the same time, maximum riding speed KM/H and MXS flash, hold or button shortly to set the maximum riding speed (default 25KM/H).

Hold button shortly and go to the next parameter settings.

2. Wheel diameter setting

The wheel diameter will be set after finishing setting the maximum riding speed, wheel diameter specifications flashes. Hold or button shortly to set the specifications of wheel diameter.



Select the range 6,8,10,12,14,16,18,20,22,24,26,700c and 28 inches. Hold button shortly and go to the next parameter settings.

3. Set the metric units



The metric units will be set after finishing setting wheel diameter, KM/H and Km flash. Hold or button shortly and select the three metric units of speed, mileage, and ambient temperature in synchronization.

Display	Metric	Imperial
Riding speed	KM/H	MPH
Total distance	Km	Mil
Environment temperature	°C Temperature	°F Fahrenheit

4. KM/H and Km stop flash after metric unit setting is completed. Hold button shortly again to re-enter the maximum riding speed setting interface; or hold button long to exit from setting environment of routine projects and save the setting values, returning to display 1.

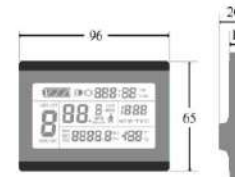
5. Exit from routine project setting

All three routine project settings can exit from the setting environment and return to the display if hold button long after each setting is completed, meanwhile the setting values are saved.

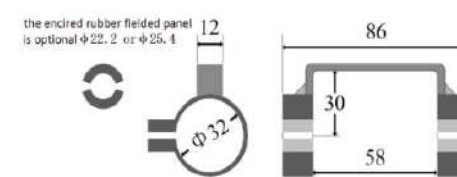
Under each setting interface, if the button failed holding for more than 1 minute, it will automatically return to display 1, and the setting value is invalid.

Outline Drawings and Dimensions

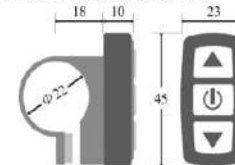
1. Dimensions of main instrument body



2. Mounting dimensions of double brackets













3. Dimensions of button box



4. Wiring diagram



8.3.1. Pedal assistance setup (Cadence sensor – Torque sensor)

1. Hold  button to turn on the power.
2. Hold  and  button at the same time for a few seconds, until when the speed indicator starts flashing.
3. Push 3 times the  button, all the writings should stop flashing.
4. Hold  and  button at the same time for a few seconds, until when the writing P1 pops up.
5. Push repeatedly  button until when the writing P3 pops up.
6. Use the arrow keys   to select the cadence sensor (P3 0) or the torque sensor (P3 1).
7. Hold  button to save the new settings and end the operation.



If you encounter any problem, scan the QR code! A simple video tutorial will guide you through all operations.



8.4. Front fork

In order to ensure maximum safety and riding comfort, Pantera is equipped with a suspension adjustable both in preload and in compression.

A suspension is a mechanical component which can compress or extend to absorb the shock provoked by positive obstacles (bumps, roots, rocks) or negative unevenness (holes) with a maximum width called excursion.

There are two main components in the suspension fork: the spring and the shock absorber. The spring is filled with pressurized air and allows to absorb the shocks on every terrain, without damaging the bicycle or the cyclist. The shock absorber stops the rebound effect induced by the spring as a result of the shock.

8.4.1. Suspension setup

When setting the suspension, a very important parameter is SAG, that is the compression rate generated by the static weight of the cyclist. A poorly calibrated SAG may have the cyclist severely bounce on the saddle, when riding on a rough terrain. Its ideal value is 15-20%.

Your e-bike suspension can be adjusted:

a) In preload (left side)

Preload is the pressure exerted on the spring in static conditions. This pressure affects the excursion, that is the stroke length of the suspension. A higher spring rate is suitable to heavier cyclists and/or people who prefer a responsive and agile bike. A lower preload is suitable to lightweight cyclists and allows a more comfortable riding experience. The preload will reduce the Sag percentage, because of a higher resistance.

b) In compression (right side)

It is the parameter controlling the speed compressing the fork spring. To increase the compression speed, turn the knob clockwise; this will stiffen the suspension. To reduce the compression, slightly loosen the knob by turning it counterclockwise: this will soften the suspension.

Extension

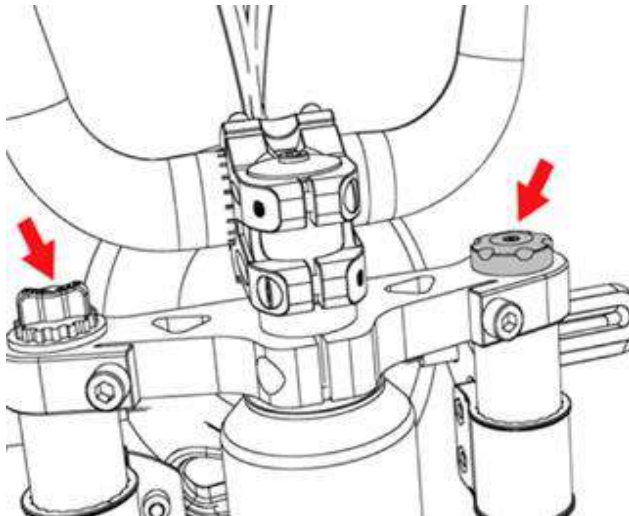
After being compressed, the spring must return to its original emplacement. The shock absorber adjusts the speed of this spring extension movement. A faster damping is suitable to paved roads and/or to deal with lights unevenness, a slower damping fits in with rough roads. In Pantera the ideal extension has been configured already. It is non-adjustable.



With a high-speed compression and extension, the suspension will absorb less the terrain unevenness shocks and transmit more vibrations to the cyclist; however, the bike will be more responsive and agile because of a lower energy waste. Choosing a low-speed compression and extension will result in a softer suspension which absorbs most asperities shocks. This means a more comfortable ride but entails more energy waste.



Pantera suspension is preset to ensure you an optimal rideability. Adjusting the suspension presetting may modify your e-bike manoeuvrability and braking characteristics. Should you decide to change the settings, we recommend you run a test ride in a safe area before riding your e-bike again. If you reckon you cannot properly perform these operations, please see a professional bicycle service.



8.5. **Lighting System**

In order to ensure you maximum safety, Pantera is equipped with a 5 ¾ Full LED headlight and a LED rear light which will always ensure you a perfect visibility in all conditions.

To turn on/off the lights, hold for a few seconds the upper button on the keypad located on the handlebar.



9. **MAINTENANCE**

An accurate and constant maintenance is essential to preserve your e-bike performance and ensure you a maximum riding safety. Many maintenance operations require specialist knowledge. When improperly executed, maintenance works may provoke damages to the e-bike and serious injuries to the rider and/or to others. If you reckon you cannot properly perform one or more maintenance operations, please see a professional bicycle service.

We recommend you use only original Verve components.

Always remove the battery before performing any repair or maintenance operation.

Perform only the maintenance operations you are sure you can properly complete.

Take care of your e-bike cables and connectors, avoid to damage them.



e-bikes are heavier and faster than normal bicycles, that is why they require more maintenance. So we invite you follow the instructions in this chapter.

9.1. Braking system maintenance

The braking system is essential to your safety riding, that is why it is very important to keep it perfectly working.

You can check the braking efficiency by pulling both brake levers. Should you observe an increase in the brake lever stroke so that it almost reaches the handlebar, then an intervention is necessary. A reduced braking efficiency might be due to an advanced brake pads wear; this case pads need replacing.

Brake pads perform by friction. A mix of components called brake lining presses against the rotor thus braking its rotation. Every contact between the brake lining and the rotor wears out both components surface, even if at different times and in different ways. Pads must be replaced when the brake lining is less than 0,5mm thick.



Replacing the pads or the rotor and aligning the rotor on the brake caliper are some complex operations, so we recommend you see a professional bicycle service in order to perform them. Improper performance of such operations may result in accidents, serious injuries or death to the user and/or those around them.



Necessary tools to adjust or replace the pads: latex gloves, needle nose pliers (to extract the safety pin), 1.5mm Allen key (to remove the retaining screw), 1 cotton rug and isopropyl alcohol or disc cleaner.

If you notice an uneven consumption of the pads or if the pads start showing some wear signs, then it is necessary to carry out an adjustment. You can tighten or loosen the retaining screws to remove or bring the pads closer to the rotor.

How to align the brake pads:

- a) Right side of the caliper: use the supplied 5mm Allen key and turn clockwise the screw located in the rear part of the caliper to bring the pad closer to the rotor.
Left side of the caliper: use the 5mm Allen key to loosen the retaining screw of the cable located on the brake arm.
- b) Use the needle nose pliers to hold the cable while pulling upwards the brake arm until when the pad is perfectly aligned to the rotor. After that tighten the retaining screw again.



After performing the operations described above, try to spin the wheel without touching the brake levers. The wheel should spin without friction. If you hear a friction noise, this means that the rotor is touching the brake lining of a pad. This case you have to repeat the operation.



The brake lever must not be for a long time or the pads will tend to vitrify. In fact, the thermal shock would harden the chemical composition of the brake lining, so the braking would not be ensured. This case the pads need replacing.



Dirty brake pads and rotor can dramatically reduce the braking power. Rotors, caliper bodies and pumps can be cleaned only with isopropyl alcohol or specific products. Do not use compressed air. Brake linings are very sensitive to the action of oils and greasy substances, pads need replacing in the event of contamination with such substances.

9.2. **Wheels and tyres maintenance**

Pantera e-bike is equipped with 20"x4" FAT tyres inner tube mounted on 5 spokes aluminium alloy rims.

Make the following checks:

- Verify that both tyres show no cracks, punctures and deformations.
- Check that the tyres pressure does not to exceed the 20-25 PSI (1,3-1,7 bar) recommended value. For a correct tyres inflation see section 6.5 in this manual.
- Make sure the wheels clamping nuts are properly tightened.
- Verify that the wheels are perfectly centred and that the derailleur is perfectly set.
- Should a tyre look noticeably worn out, we recommend you replace it without delay.



One of the most common problems in cycling is puncture. We suggest you get equipped with a kit to repair or replace a damaged inner tube and always bring it with you, especially when planning a long hike.

A common replacement kit should include:



tyre levers (to take the tyre off the rim), 1 spare inner tube, 1 can of compressed air and a suitable coupling, 1 keys set

A common repairing kit should include:



2 tyre levers (to take the tyre off the rim), 1 inner tube patch kit, 1 quick setting mastic tube, 1 can of compressed air (or 1 mechanical pump) and a suitable coupling, 1 coupling for can of compressed air, 1 keys set.



If you reckon you cannot properly perform the operations described above, please see a professional bicycle service.

9.3. Chain, cassette and derailleur maintenance

Pantera features a Shimano RD M360 8 speed cassette sprocket. Equipped with 126 links chain.

For more information: <https://si.shimano.com/api/publish/storage/pdf/en/dm/GN0001/DM-GN0001-25-ENG.pdf>

The cassette internal gear has several benefits: it allows to change gear even when stationing, which is great when you stop without downshifting for the next restart; it grants greater cleanliness; the [maintenance] intervals are longer.

In order to ensure a high performance, it is essential to constantly monitor your e-bike chain and derailleur.

9.3.1. Checking the chain conditions

To check the chain conditions and its possible stretch, we suggest you use a “chain wear indicator” caliber.

On one end this caliber has a hook to be inserted into a chain link, on the other end there are two tips. The first tip (0,75mm) measures if the chain wear is equal to or higher than 75%. The second tip (1mm), located on the opposite side, measures if the chain wear has reached 100%.

- Shift gears until triggering the lowest gear so as to get the maximum chain backlash
- If the 0,75mm tip does not drop into the chain link, then the chain is not stretched so it is not worn out.
- If the 0,75mm tip drops through the chain link, then the chain is stretched and should be replaced without delay to prevent premature sprocket wear.
- If also the 1mm tip drops through, then it might be too late for a mere chain replacement. This chain stretch level might mean that cogs and chainrings have been damaged. This case we recommend you see a professional bicycle service to check it out.

9.3.2. Chain lubrication

No matter how often you ride your e-bike, it is important to regularly lubricate the chain. When not properly lubricated, the chain may go bad and compromise your e-bike performance.

To properly lubricate the chain, follow the steps below:

- Turn off the battery power.
- Switch gears so as to use the lowest gear.
- Use a rag to spread the lube all over the chain, between the chain links and in the inner part. Then switch the gears while you manually operate the crankset. The chain will roll from one cog to another and spread the lube all over the drivetrain system, including the derailleur.
- When done with the lubrication, let the chain “rest” for a few minutes before spinning the crankset again in order to uniformly spread the lube all over. After that remove excess lube and dirt from the chain.



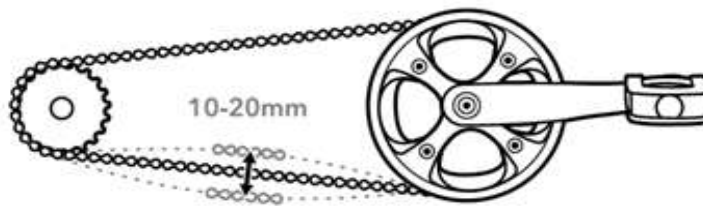
To clean the chain, the derailleur and the cassette, you can use rags or a used or an old toothbrush. We recommend you always use specific lubes and detergents.



When properly and regularly attended, the duration of the chain is between 1.500 and 3.000 km



Before riding on busy roads again, check all the gears and make sure that the chain and the derailleur are perfectly working. In case the rear derailleur is not properly working, do not use bigger or smaller gears and see immediately a professional bicycle service instead.



9.4. Lights maintenance

In order to ensure you maximum safety. Pantera is equipped with a 5 ¾ Full LED headlight and a LED rear light which will always ensure you a perfect visibility in all conditions.



Lights must always be visible; keep them clean and avoid carrying objects which may partially or entirely cover them.



LED lights do not require any specific maintenance and have no replaceable components (such as bulbs). Should the lights stop working properly (partially or entirely), the whole light need replacing.

9.5. Cleaning the e-bike

Many components of your e-bike are subject to wear, especially when affected by dust, rust, humidity, mud etc. A clean bike will allow you ride without useless frictions and will reduce the battery drain. That is why we suggest you regularly clean your e-bike.

Cleaning an e-bike requires more specific care than a normal bicycle. First of all, remove the battery and cover the display before any washing. Use specific detergents only. Rinse thoroughly to avoid any contact with chemical residues and always dry the e-bike after washing to prevent humidity or possible rust from spoiling the components.

In case of a simple, ordinary cleaning – meaning there are no mud nor salt – you can just clean your e-bike with a dry rug and a paintbrush to reach the most hidden parts.

If your e-bike is very dirty, we suggest you get equipped with the following tools:



A low pressure hose or a cold water dispenser. Avoid too strong waterjets which may damage the e-bike components.

A specific bicycle detergents kit: a degreaser for the tougher parts, a less aggressive cleansing soap for the most sensitive parts such as the frame, a lube to lubricate the chain when done with washing.



A bucket in which you can dilute the cleansing soap.

A soft sponge, 2 paintbrushes (a medium and a small one, you can also use an old toothbrush), a stiff bristle brush for rims and tyres, a dry microfibre cloth.

A chain cleaning kit or a toothbrush.

Place your e-bike upright. Soak it by dropping water from above, almost with no pressure; spray the detergent and let it work during a few minutes, to loosen the dirt. Meanwhile clean the drivetrain system. Spray a specific degreaser making sure it reaches every spot in order to remove all oil, dust and dirt residues. Let it work for a while, then clean the chain.

Use a brush to remove the stubborn dirt. Rinse the e-bike to remove the first layer of grime. Repeat the operation with a soapy sponge. The electric motor can be cleaned with some water taking care not to soak it. Use a soft microfibre cloth to dry the e-bike.



Use low pressure water only. Pressure washers have way too strong a waterjet which might damage the most sensitive parts (pads, electrical components).



Aggressive detergents may spoil the paint and corrode the most sensitive components. Using aggressive detergents voids the warranty.



Remember to lubricate the chain after washing and to lubricate the suspensions and the cassette sprocket, when necessary. At the end of the washing, always make sure these components are properly lubricated.



Make sure all components are perfectly dry before riding your e-bike again.



If you reckon you cannot properly and safely perform the washing operations, please see a professional in the field.

9.6. Storing the e-bike

Always place your e-bike on a flat, stable surface. In case you store your e-bike for a long time (one month or more), remove the battery and make sure to store both of them indoors, sheltered from humidity, direct solar light, heat sources or dangerous gases.

Fully charge the battery before storing it for a long time in order to keep it efficient and check periodically that the charge stays above 50%.

Fully charge the battery before riding your e-bike again.

10. MAINTENANCE SCHEDULE

We recommend you follow this maintenance schedule in order to keep your e-bike efficient and to always ride safely.

The frequency of maintenance considerably depends on how the e-bike is used and on the weather conditions. Cold temperatures, rain, unpaved roads etc. can require more frequent maintenance interventions.

To do before every ride

Always accurately perform the “Pre-ride safety checks” specified in section 11.1 in this manual.

To do every month

Inspect the suspension components and make adjustments, when necessary.

Lubricate the chain and check its tension and wear.

Verify the proper functioning of the braking system: discs, pads, cables.

Check the tyres condition and pressure.

Verify the proper functioning of the handlebar. In particular, inspect a possible unsteadiness.

To do every six months

Inspect with utmost care the whole frame and the front fork to verify the presence of cracks, even small-sized.

Check all the screws and nuts of your e-bike and tighten them, when necessary.

Verify that the wheel hub, the handlebar and all the parts subjected to friction are properly lubricated.



Removed self-locking nuts must be replaced. If you remove screws and nuts tightened with thread sealant paste, they must be reinstalled and tightened the same way.



Oils, lubes, detergents, brake fluids etc. must be properly disposed of according to the specific national legislation. We recommend you respect the safety regulations, when using these substances. Waste oil must no way be dispersed in pipes or in the environment.

11. SAFETY



We recommend you pay the utmost attention to the safety instructions reported hereafter. Improper behavior or neglecting regularly doing safety checks may provoke damages to the e-bike and may result in accidents, serious injuries or death to the cyclist and/or those around them.

11.1. **Pre-ride safety checks**

It is essential to do a safety inspection before riding your e-bike, following the steps below.



After turning on the e-bike, the assistance will supply energy as soon as you place your feet on the pedals. There are no lag-times thanks to the advanced dual-sensor system which combines torque sensor and cadence sensor, granting a unique driving experience.

Battery

- Verify that the battery is correctly inserted into its specific emplacement on the frame.
- Check the battery charge on the Led indicator or your e-bike display.

Lights

- Check if the headlight and the rear light are properly working. Lights must always be visible; keep them clean and avoid carrying objects which may partially or entirely cover them.

Display

- Verify that the display turns on and works properly.

Handlebar

- Verify that the handlebar is firmly in place. If not, tighten all the four retaining screws.

Cabling

- Turn the handlebar from left to right to ensure the movement is free and there are no tensions in the cables.
- Check if any cable is damaged, disconnected or loosened.

Wheels

- Verify that both tyres show no cracks, punctures and deformations.
- Check that the tyres pressure does not to exceed the 20-25 PSI (1,3-1,7 bar) recommended value.
- Make sure the wheels clamping nuts are properly tightened.
- Verify that the wheels are perfectly centred and that the derailleur is perfectly set.

Braking system

- • Check the braking efficiency by pulling both brake levers. Should you observe an increase in the brake lever stroke so that it almost reaches the handlebar, then an intervention is necessary. A reduced braking efficiency might be due to an advanced brake pads wear. If you have installed a hydraulic system, then a brake bleeding intervention might be necessary. To perform these operations we recommend you see a professional bicycle service.

Gear

- Make sure the derailleur works properly. The gear must work precisely, without any chain skipping.

Kickstand

- Make sure that the kickstand screws are properly tightened and that the kickstand does not touch the ground nor the tyre while riding.

Frame and front fork

- It is important to inspect carefully these components before every ride. Verify the possible presence of cracks, even small-sized. A damaged or cracked frame and/or fork may result in accidents. In particular, time or intensive use can provoke damages to your e-bike frame and fork.

11.2. Battery and charger safety instructions

1. Pantera is equipped with a latest-generation battery which is sheltered by a special waterproof protective cover. Do not open the cover under any circumstances.

Do not perform any intervention on the battery or on the charger for any reason. All the operations on the battery are potentially dangerous. In case of a battery malfunction, always see a professional bicycle service. Tampering with the battery may provoke damages to the cells and/or to the BMS [Battery Management System] and may result in serious injuries or death to the user and/or those around them.
- 2.
3. Always charge the battery in a dry place, humidity should not exceed 15-30%. When fully charged, remove the battery from the charger. Keep the battery sheltered from heat sources or dangerous gases.
4. To charge the battery, use the supplied charger. Using unsuitable chargers may provoke damages, fires and explosions.
5. Prevent the battery and the charger from shocks or falls.
6. Never immerse the battery or the charger in water or in other fluids and do not touch them with wet hands. If the connectors are wet, do not connect the battery or the charger under any circumstances.
7. Store both the battery and the charger in a dry place, sheltered from [direct] solar light and other heat sources.
8. Faulty connections may provoke arc flashes and/or electric shocks. Keep the connectors dry and clean and make sure they are perfectly working. Never insert any metal object into the connectors and do not try to tamper with them in any way.
9. Do not try to charge a defective battery and never use damaged cables.
10. Remove immediately the battery from the e-bike if you spot any damage in the electrical system.
11. Use utmost care to connect the charger to the battery and to the power outlet, without stretching or tangling the cables. An inappropriate connection may provoke overheating or fires.
12. Do not put any item on the charger when charging, this may provoke overheating or fires.

13. Do not use Pantera charger to charge other devices.
14. Do not use multi plug adapters or not homologated extension cables. This may provoke fires.
15. Keep the battery and the charger away from children.

11.3. *E-bike riding safety instructions*

1. Try your e-bike in a safe place, away from traffic, in order to get acquainted with its specific characteristics, with the pedal assistance and the gear use. Please consider that after turning on the e-bike, the assistance will supply energy as soon as you place your feet on the pedals
2. Always perform the display settings when stationing and away from traffic.
3. Never use radio-telephones or headphones while riding.
4. Do an accurate safety inspection before riding your e-bike (see section 11.1).
5. We recommend the use of a homologated bicycle helmet. Wear appropriate clothing.
6. Any modification or alteration of mechanical or electrical parts may result in a serious impairment of your e-bike safety and rideability.
7. The reflectors mounted on the e-bike have been designed to increase drive safety and have been placed according to EU regulations. Removing them may compromise your safety and result in fines.
8. In case of an accident, have a professional bicycle service thoroughly inspect your e-bike before riding it again.

12. WARRANTY TERMS AND CONDITIONS

The owner is committed to follow the maintenance instructions in this manual and its possible amendments directly published on the website www.vervebikes.com, under penalty of forfeiture.

When directly bought from Verve CW Srl or from an authorized dealer, all Verve e-bikes are guaranteed to the original owner free of technical or manufacturing defects. Warranty conditions, terms and limitations are specified hereafter.

12.1. Warranty period

The warranty period starts from the date of first purchase of the e-bike.

The seller is liable for the shortfall that become apparent within the period established by decree law 206/20d05 on guarantees for sale of consumer goods from the delivery of the vehicle and in accordance with Directive 1999/44/EC for the rest of Member States of the European Community. For those countries not belonging to the European Union, the warranty period will be adjusted according to the existing regulations in those countries.

If during the first 10 days after delivery of the motorcycle were established defects or non-compliance, these will be considered as already existing at the time of delivery; after 10 days, the buyer will have to demonstrate that the defects were already in existence at delivery time.

Verve e-bikes are guaranteed according to the following terms:

- 5 years warranty from the date of purchase on the frame in case of natural breakdown
- 2 years warranty from the date of purchase on mechanical parts: pedals, handlebar, leverages.
- 1 year warranty from the date of purchase on electrical parts: motor, battery, charger, torque and cadence sensors, other sensors, display, lights.



The warranty does not cover all consumables parts: disc brakes, brake pads, tyres, inner tubes, chain, handle grips.



The warranty entitles to repair or replacement of possible defective parts. The labor cost is not covered by the warranty.

12.2. Warranty conditions

Verve CW Srl reserves the right to refuse fulfillment of warranty claims in the following cases:

- The e-bike has not been maintained, has suffered an accident and/or has been improperly used (see chapter 7).
- Inspection, maintenance and repair operations have been carried out by an unqualified mechanic or they have not been performed in compliance with Verve CW Srl technical requirements and standards or using aftermarket parts.
- The e-bike or its components have been somehow altered, modified or replaced with non-original Verve spare parts.
- Using batteries and chargers other than the ones supplied by Verve may provoke power fluctuations or malfunctioning.
- The e-bike has been improperly carried or stored in unsuitable way; or it has been kept in poor hygienic conditions and/or exposed to chemical agents or to bad weather.
- The e-bike has been damaged by water or by other fluids due to neglect or incompetence during the cleaning operations.
- The frame number has been partially or entirely manipulated or altered
- The e-bike firmware has been tampered with.



Any tamper with the e-bike or alteration, to the motor or to other parts, aiming to increase the power and/or the maximum speed, will void the warranty. Such alterations are against the law. Alterations resulting in a surge of power and/or maximum speed of the vehicle forces the owner to proceed with a new certification and registration.

12.3. Owner's responsibility

- The owner is responsible for proper use and maintenance of the e-bike.
- Verve CW Srl does not accept liability to the owner for injuries or damages due to their non-compliance with the laws and regulations in force or with the traffic code.

- The owner has to bear the costs of regular maintenance interventions as well as the costs for the replacement of parts subject to natural wear and tear.
- The owner has to bear the direct and indirect costs of damages and failures due to improper use of the vehicle, to accident or negligence.

12.4. Exclusion of warranty

The warranty does not cover:

- Cracks, breaks or damage due to overheating, freezing, rust or corrosion, to external causes such as impact of rocks, snow clearing salts, industrial waste gases and other environmental influences, or to improper cleaning or use of unsuitable cleaning products.
- Signs of aging, such as parts discoloration.
- Any possible aesthetic or acoustic problem slightly or not at all affecting the usability of the vehicle.
- Failures, replacements and/or adjustments due to normal wear or deterioration.
- Such parts subject to natural wear and tear as disc brakes, brake pads, bearings, tyres, inner tubes, cabling, chain, seals and other rubber parts.
- Such consumables as hydraulic fluids, grease and lubricants
- Spare parts non-original or not endorsed by Verve.
- All damage resulting from a defect and all expenses directly and/or indirectly provoked by a problem covered by the warranty (telephone calls, rental vehicles, public transportation, recovery costs, accommodation costs, etc.) and other economic disadvantages (loss of use, loss of profit, loss of time or similar).
- All damage to persons or property caused by force majeure, fire, accident, collision, both road-related or of another nature and origin, or otherwise resulting from damages covered by this warranty.

12.5. Additional warranty conditions

The warranty shall be granted exclusively to the original owner and is non-transferable. It is valid only upon

- presentation of a valid proof of purchase. Verve CW Srl refuses the right to reject the coverage provided by this warranty in case the accompanying documentation is inaccurate or incomplete.
- Verve CW Srl decides at its discretion if repairing or replacing possible defective parts. Replaced parts become the property of Verve CW Srl, without any right to compensation. Verve CW reserves the right to inspect and/or require the return of the defective parts, within 6 months after the procedure has been closed.
- The Verve dealer appointed to perform a repair is not entitled to issue any legally binding statement on behalf of Verve CW Srl.
- Verve CW reserves the right to accept or reject a complaint filed during the warranty period and, when necessary, to require additional photo and/or video documentation.

When in doubt about a flaw or when it is necessary a visual inspection of the components, Verve CW Srl has the right

- to request to be sent the parts at issue or to appoint an expert who will verify the flaw. Verve CW Srl reserves the right to evaluate the parts at issue and to accept the request or provide a reason in case of reject.
- The shipping of any component sent for repair to Verve CW Srl is at the customer's expense. Verve will pay the shipping costs to return the fixed component(s).
- No material return will be accepted unless formerly agreed with Verve CW Srl spares and warranty management.
- There is no additional warranty obligation for parts replaced for free. For components that have been replaced within the warranty period, the warranty ends when your vehicle warranty expires.
- Verve CW Srl does not recognize other guarantee arrangements established with a dealer.
- This warranty does not apply to rental or commercial use of the e-bike.

12.6. *Intervention request*

In the occurrence of an e-bike failure, get in touch with a Verve authorized dealer or send a report to the Verve CW Srl spares and warranty management via email – support@vervebikes.com – before the warranty period expires.

No service under warranty will be provided unless formerly agreed by Verve CW Srl.

12.7. *Warranty activation*

It is the owner's responsibility to activate the e-bike warranty within 14 days from the date of purchase by filling in the form in the dedicated section on the website <https://www.vervebikes.com>



For safety reasons the e-bike may be recalled by an authorized dealer for technical checks and/or upgrades. This will be notified, when necessary, via mail or email.



All the technical information, the pictures and maintenance instructions in this manual are the latest version before publishing. Instructions and disclaimer can be amended and updated without prior notice.

Follow us on www.vervebikes.com to stay informed about our latest news and technical upgrades.

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The logo for Verve, featuring three slanted parallel bars in red, orange, and yellow to the left of the word "Verve" in a bold, white, sans-serif font.

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