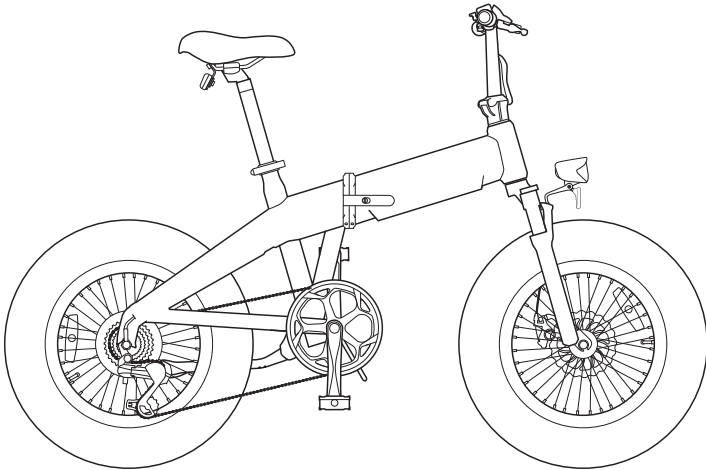


ZB20

Instruction Manual



DESIGN BY

HIMO



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FuseWins

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About the Instruction Manual and manufacturer

This instruction manual is for the purpose of helping you use safely the electric folding bicycle. Unless otherwise being functionally differentiated, this electric bicycle is hereinafter referred to as "bicycle".

This manual is compiled according to the IEC 82079-1 standard (compilation of planning, content and demonstration).

Keep this instruction manual properly

This manual is part of this bicycle.

- Always keep this manual with your bicycle.
- Make sure that this manual is easily accessible to users.
- Provide this manual when selling or distributing bicycles.

Text design features

Various elements of this manual are provided with fixed design features for easy distinction:

- Normal text
- Action steps
- Level 1 list

Picture design features

The pictures may contain numbers indicating the corresponding parts, which are described at the corresponding numbers below the pictures.



Applicable documents

The manufacturer's documents contain additional information and instructions regarding bicycle components. Such documents are also part of this manual. Please keep them with this manual and provide them when selling or distributing bicycles.

The nonobservance of relevant documents and regulations may result in injury.

Please read and observe all other applicable documents before using the bicycle.

Applicable documents include the following type of documents:

Declaration of conformity

Digital rights

The information contained in this manual is protected by copyright. Without the written consent of HIMO, this manual may not be copied, printed, photographed, processed, copied or distributed in any way or form.

HIMO reserves all rights.

Manufacturer's contact information

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Safety cautions

Expected usage

This bicycle is for single-person driving and can be used on auxiliary roads and public roads. The tires must always be in contact with the ground during driving. It is for private use only and not for other purposes. When using, it must be equipped with necessary safety equipment, such as equipments are usually included in the assembly list.

Bicycles are not suitable for:

- jump
- stair riding
- mountain biking
- ice riding
- deep water cycling
- participating in sports events

The use of the bicycle also includes maintenance at the recommended interval, as well as reading and understanding this manual.

Unauthorized modification prohibited

Modifications or improper modifications to the bicycle, especially improper operation and modification of electrical components such as motors and controllers, may cause serious damage and are not covered by the warranty.

Rider's height

Minimum 160 cm

Maximum 190 cm

User and rider's qualifications

The content of this manual is for educated riders.

A rider need to have the following knowledge and experience:

- Use effectively the bicycle described in the seller's manual.
- Realize that improper use of bicycles may cause accidents.
- He is capable to use the bicycle in accordance with the requirements of this manual.
- This appliance is not intended for use by persons (including children) with reduced physical, sensory or mental capabilities, or lack of experience and knowledge, unless they have been given supervision or instruction concerning use of the appliance by a person responsible for their safety.
- Children should be supervised to ensure that they do not play with the appliance.

Personal protective equipment

Serious injuries may occur while riding.

When riding, be sure to wear an approved helmet, and adjust, use and maintain the helmet in accordance with the manufacturer's corresponding instructions.

- Make sure to wear durable shoes with slip resistant soles (such as shaped rubber soles).
- Make sure to wear gloves.
- Be sure to wear tight clothes to avoid being caught by bicycles or objects on the road.
- Be sure to wear (transparent) anti-fouling, dust-proof, and insect-proof glasses.
- When the sun is shining, make sure to wear sunglasses.

Basic safety instructions

Avoid serious or fatal injuries due to mechanical failure and improper use of bicycles.

Due to mechanical failure or improper use, serious injuries or even death may occur during riding.

- Be sure to conduct a safety test before riding.
- Please familiarize yourself with the brakes, pedals and gear positions before riding.
- Be sure to adjust the riding speed according to the riding conditions.

Note: The left brake lever controls the rear wheel disc, the right brake lever controls the front wheel disc

Avoid bicycle damage

Avoid electric shock or explosion due to improper operation of battery and charger

Improper handling of the battery and charger may cause electric shock or explosion, resulting in serious injury or death. When charging, please use the original charger to charge the battery.

- Only use the equipped battery.
- Do not connect the positive and negative terminals of the battery.
- Protect the battery and avoid exposure to direct sunlight.
- Do not disassemble or clean the battery.
- Only use the equipped charger to charge the battery.
- Only use the charger indoors.
- The charger plug is used to disconnect the power supply. Please make sure that the power socket is close to the charger for ease of use.
- The charger can only be used on a 220V grounded socket. Please be sure to avoid contact between the charger and water or any type of liquid.
- Keep the metal contacts clean, and clean them with a soft dry cloth if necessary.
- Do not charge a battery with obvious damage such as a broken case.
- Do not drop the battery.
- Charge the battery in the temperature range of 10°C to 30°C.
- Ensure that only people with no physical, sensory or mental disabilities can use the charger.

Avoid injury to riders and bicycles

Avoid serious injuries and caused by contact between body parts and bicycle parts

While riding, body parts or other objects may come into contact with bicycle sprockets, movable chains, rotating pedals and cranks, and rotating wheels, resulting in serious injury. Be sure to avoid contact of body parts with the above components.

- When riding a bicycle, please make sure that your body parts do not come into contact with the above-mentioned parts of the bicycle. ◦

Avoid accident which causes serious injuries or death in rainy days

Rainy and humid weather can affect the road holding, braking force and visibility of riders and other road users. At this time, your (and other road users) braking force will drop exponentially, tire treads will not work as well as on dry roads, speed control will become more complicated, and the risk of loss of control of the bicycle will increase, which may result in serious injuries.

- Please ride slowly in rainy and humid weather.
- Be sure to brake carefully in rainy and humid weather.
- Turn off the motor or minimize the motor assistance and ride carefully.

Avoid accident which causes serious injuries or death while riding at dusk or night

Riding in dim light at night is more dangerous than riding in daytime, because it is more difficult for the rider to identify other road users, which may result in serious injuries or death.

- Avoid riding in dim light at night.
- Please ride carefully.
- Please be sure to equip with lights and reflectors when riding.
- Please avoid road Section with dusky light and heavy traffic.
- Be sure to avoid obstacles on the road.
- If possible, be sure to ride on a familiar route.

Avoid component damage and serious injury

When riding off-road or on the kerb, the motor, crank, or bottom bracket may be damaged, causing serious injury.

- Ride only on permitted roads.
- In case of obstacles, please get off the bicycle and lift the bicycle to pass.
- If the bicycle is damaged, please visit the dealer for a check.

Avoid serious injuries due to damage or looseness of reflectors and lights

The reflectors of bicycle can capture and reflect light from street lamps, car headlights and other light sources, making it easier for the rider to be identified. Damaged, bent or loose reflectors may cause unclear recognition and cause serious injuries or death.

To avoid this kind of accident, you should:

- Ask the dealer to replace damaged, bent or loose reflectors and lights.
- Check reflectors and lights regularly.

Note: When riding on the road, the lights and reflectors must comply with local regulations

Avoid serious injuries when riding off-road or crossing the kerb

Riding on terrain roads or footways, if the speed is not properly controlled, the bicycle may fall and cause serious injuries or death.

- Be sure to adjust the riding speed according to the riding environment.
- Properly replace parts or add accessories to avoid serious injuries or death.

Many components and accessories are available to improve the comfortability performance and appearance of the bicycle. You will be responsible for the risk cause by adding components or accessories. These components or accessories may not have been tested for compatibility, reliability or safety by the bicycle manufacturer. Unconfirmed compatibility, reliability, or safety, and improper installation, use, and maintenance of bicycle components or accessories can cause serious injuries or death.

- Before installing, using and maintaining components, be sure to consult your dealer.
- Please be sure to read and follow the attached instructions for use.

Avoid serious injury caused by improper maintenance, maintenance and cleaning

Improper maintenance and cleaning can cause serious injuries or death.

- Only carry out the activities listed in the maintenance plan.
- Use only commercially available lubricants and cleaners.
- Other repairs and maintenance work should be performed by qualified dealers

Avoid component damage which may cause serious injuries or death

The bicycle and its components are subjected to wear and tear (scratches, cracks, abrasion and discoloration). Damaged components may suddenly fail, resulting in injuries or death.

- Regularly check the wear and tear of various components (such as brake disc, tire, etc.).
- Damaged bicycle parts should be replaced (if possible) or repaired by qualified dealer/expert.

Avoid difficulties in breathing and asphyxia

New materials (such as paint) and the high temperature of the motor will generate volatile gas. When bicycles are stored indoors, volatile gases accumulate, which may cause difficulties in breathing and asphyxia.

- Please be sure to park your bicycle in a well-ventilated room.

Avoid burns

When riding a bicycle, bicycle parts (brakes, wheels, etc.) may become hot, and touching these parts may cause burns.

- Allow the thermal component to cool down before use, or wear a heat-resistant protective device.

Avoid leg injuries

If the distance between the pedals is too small, it may cause (Q-value related) damage to the legs. The rider may feel uncomfortable with the installed pedals.

- In this case, please visit a professional dealer for checking the bicycle immediately.

Avoid vibration

Improper assembly, wear, and overload (for example, starting the motor when riding on bumpy roads, kerbs), or loose parts may cause abnormal operation of the motor.

- Bicycles can only be used on permitted roads.
- If there are cracks or obvious damage, please consult a dealer/expert for repair.
- Before each ride, check whether the riding device responds correctly (for example, shifting gears on a flat surface) or functions normally.

Avoid injury or discomfort

Sitting on the saddle frequently for a long time may cause prostate disease for men.

- If necessary, install an ergonomic saddle suitable for women/men.
- Take preventive measures when necessary.

Avoid dehydration while riding

Riding is strenuous physical exercise.

- Make sure that there is an adequate supply of liquid.

Avoid frostbite

Riding in cold weather can easily lead to frostbite.

- In cold weather, please be sure to wear suitable clothes, including masks, hats, and gloves.

Avoid falling down due to sudden electric assist

Sudden application of electric assist may cause loss of control and rollover.

- Be sure to test the electric assist function before riding for the first time.
- Be sure to wear personal protective equipment.
- Be sure to check the default speed setting of the bike.
- Be sure to check the brake force and speed function manual carefully before riding.

Environmental issues

Damaged bicycle components (such as batteries, electrical or electronic components) may cause toxic substances or gaseous escape and cause environmental poisoning.

- Discard used batteries and bicycle electrical/electronic components in accordance with the law.
- Please follow the manufacturer's relevant product instructions.



Avoid material damage

Improper battery handling may cause property damage.


- Make sure that the battery is not fully discharged.
- Store the battery only in a dry place.
- Please charge the battery at least once every two months to ensure that it has 80% power.

Important notices, labels and signs for bicycle safety

In this manual, there are the following warnings:

WARNING	
	Warnings with the word "WARNING" are those of potentially dangerous situations, which, if not avoided, may result in death or serious injuries.
WARNING	
	Warnings with the word "Caution" are those of situations that may cause minor injuries or moderate injuries.






Design features for signs of material changes:

WARNING	
	This type of warning is used to warn of conditions that cause material damage.

Warning and information signs

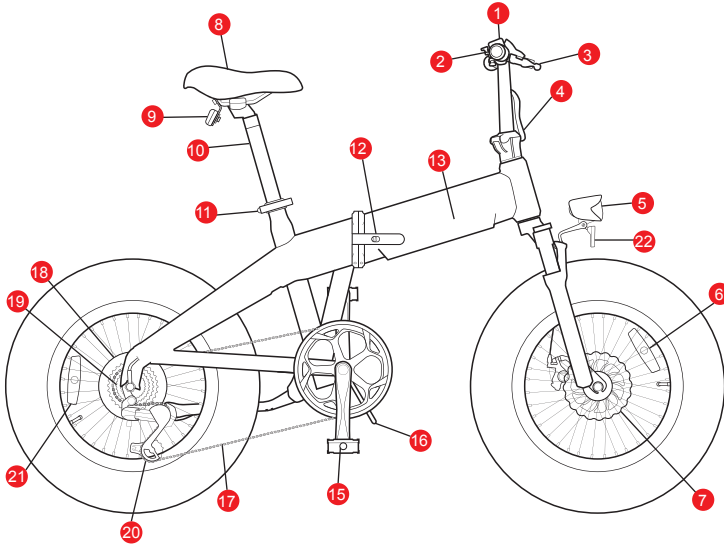
- Ensure that all warning and information signs affixed on the bicycle are always clearly visible and readable.
- Replace damaged or missing warning and information labels immediately.

The following warning and information signs are affixed to the bicycle.

Sign	Description
	General warning sign
	Very hot surface
	Do not use high pressure washer
	Please follow the instructions
	Do not open electrical components such as motors and controllers

Bicycle and its parts

This bicycle is suitable for use on auxiliary roads, public roads and trails. It can be folded with existing joints and hinges in just a few simple steps. The necessary assembly materials are usually included in the assembly list. Before riding for the first time, make sure that the safety equipment is in place and in working condition. The materials need to be assembled by you or the bicycle dealer.



No.	Description	No.	Description
1	Instrument	12	Bicycle body folder
2	Shift lever set	13	Battery compartment
3	Brake lever	14	Controller
4	Folding headset stem	15	Folding pedal
5	Front light	16	Ladder
6	Reflector, front wheel	17	Chain
7	Disc-Brake	18	Rear disc-brake
8	Saddle	19	Motor
9	Tail light	20	Rear derailleur
10	Seat tube	21	Reflector, rear wheel
11	Quick release of seat tube	22	Reflecting plate

Foldable bicycle

The packing list of this folding bicycle includes:

- Pre-installed folding bicycle with battery
- Charger
- Two keys for removing the battery (a spare key)

Power assist

Electric motor

The electric motor of this type of bicycle acts directly on the rear wheel and can provide you with pedaling support. With the existing control system, you can adjust the degree of motor assistance and choose different riding levels. The electric motor can help you reach a maximum speed of 25 km/h.

Battery

Battery Type (Model ZB20): Lithium-Ion Battery, 48 V, 10Ah

The power assist system needs to be equipped with a battery. The battery of this type of bicycle is located in the frame.

The battery can be removed from the frame with equipped key for charging, and it can also be charged through the charging port on the bicycle frame.

Only use the equipped battery charger to charge the battery.

Lithium-ion batteries, like most large batteries, are hazardous substances according to the transportation regulations and are only allowed to be transported when the battery compartment is installed on a bicycle. For air transportation and ocean transportation, the regulations on hazardous substances must be complied with. (Please check the local transportation instructions), a hazard label must be affixed on packing box for the transportation of the batteries.

Controller

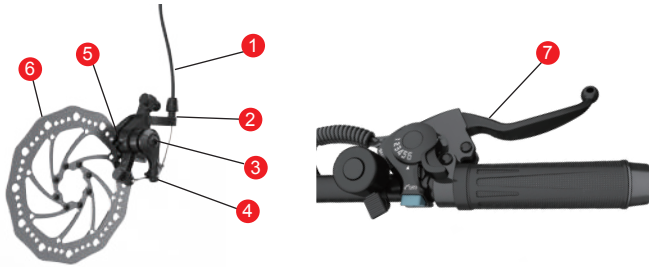
The bicycle is equipped with a controller for adjusting power assist. The controller calculates and completes the power output of the motor based on the preset speed, actual speed and pedal stress. The maximum speed of the bicycle is 25 km/h, and no assistance is provided at higher speed.

Brake system

The brake can control the speed of the bicycle, let the bicycle slow down or stop.

Disc-brake

Disc-brakes are mechanical drive devices installed on the handlebars, front wheel and rear wheel. When braking, by manipulating the brake lever on the handlebar, we realize the friction between the brake and the disc, so as to decelerate. The brake lining will wear out, please check and replace it regularly.



No.	Description	No.	Description
1	Brake cable	5	Brake lining
2	Brake adjusting screw	6	Disc
3	Brake arm	7	Brake lever
4	Brake cable locking screw	8	

Speed change

This bicycle is equipped with derailleur.

The following terms have the following meanings:

- Downshifting means shifting to a lower gear position, making it easier to pedal.
- Upshifting means shifting to a higher and faster gear position, making it more difficult to pedal.

Derailleur

The derailleur consists of the following parts:

- Gear box or threaded sprocket on the rear wheel
- Rear derailleur
- Pallet/chain ring
- Transmission/drive chain
- Shift lever/ gear lever

The prerequisite for a perfect gear shift operation is that the transmission chain moves forward and is at least under tension.

You can use the appropriate gear position according to the riding situation.


For example, you can shift to a high gear before going uphill to accelerate in advance, so as to consume less energy.

Pedal

The pedals are installed at the ends of the two cranks. Stepping on the pedal can turn the chain and drive the sprocket.

This bicycle is equipped with two folding pedals as to facilitate folding and transportation.

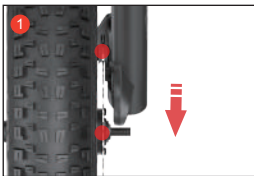
Open the packing box and check the articles in the box

WARNING	
	<p>There is a risk of suffocation when playing with film. Children may wear it on their heads and cause suffocation. Make sure that children do not play with the film. Keep the film out of the reach of children.</p>

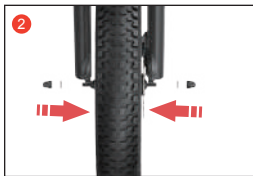
To unpack the bicycle, the steps are as follows:

- Open the box.
- Take the bicycle out of the box.
- Take the battery charger out of the box.
- Take out the two keys used to remove the battery from the box.
- Check the assembly list.
- Don't let children play with the packaging film, in order to avoid suffocation.
- Dispose of packaging materials in accordance with local instructions and regulations.

Install the front wheel



1. After the front wheel is inflated, buckle the claws on both sides of the front fork into the center shaft of the front wheel, and ensure that the disc-brake is inserted into the gap of the brake.



2. Install the gasket and tighten the nut.



3. Turn the front wheel to check the brake system and complete the front wheel assembly.

Install the headset stem



1. Use a wrench to loosen the standpipe screw and take out the washer.



2. Open the folding handle, assemble the standpipe base to the front fork standpipe and tighten the standpipe screws.



3. Close the folding handle, adjust the angle of the handle bar (the handle bar is perpendicular to the front wheel) and tighten the standpipe base screws.

Note: The flexibility of the handlebars can be achieved by adjusting the standpipe screws

Install handle bars



1. Loosen the screw of handle bar



2. Adjust the angle of the handle bar and tighten the adjustment screws.



3. Complete the handlebar

Install lights



1. Remove the headlight bolts and nuts, fix the headlight on the front fork mounting hole and lock it tightly.



2. Adjust the beam angle of the headlight and install the power cord of the light



3. After the instrument is turned on, long press "+" to test whether the front light can be turned on.

Install pedals



1. Pay attention to the letter indicating that the left and right pedals are distinguished. L represents the left pedal, and R represents the right pedal.



2. When installing the pedal, make sure that the end face of the pedal bolt should be perpendicular to the crank installation hole, and the left pedal should be rotated counterclockwise (clockwise for right pedal) and locked.





3. If you need to fold the pedals, press the pedals axially and fold it upwards.

Before the first ride

Proper adjustment of the bicycle is essential for safety, performance and riding comfort. You need to have certain experience and use professional tools to adjust the bike in order to get the correct settings which suit your body and riding conditions. If you don't understand, be sure to have an expert set up your bike. If you have experience, knowledge and tools, please accept an expert's inspection before riding.

Check the dimensions of the bicycle

WARNING	
	Loss of control due to the incorrect size of the bicycle can cause the bicycle to fall over, which may cause serious injuries. Make sure that the size of the bicycle matches your height. Do not ride a bicycle that does not match your height.

WARNING	
	The handlebars, the driver's reaction, steering and braking can have an adverse effect.

Adjust the saddle

Correct adjustment of the saddle is essential to riding safety. You can freely adjust the height of the saddle.

Please verify whether the height of the saddle is adjusted correctly by carrying out the following steps:


- Sit on the saddle.
- Keep sitting.
- Place one of the pedals in downward position.
- Put your feet on the pedal.

When your foot is on the pedals and your legs are nearly but not fully straight, the height is correct. Please adjust the height of the saddle as follows:

- Loosen and open the quick release seat post clamp.

Then you can move the saddle upward and downward to adjust the height.


- Adjust according to your need.

WARNING	
	Damage to the seat post may cause a fall and cause serious injury. Make sure that the minimum insertion limit mark (minimum insertion amount) on the seat post is inside the seat tube and is not visible.

- Reinstall the seat by closing the quick release seat post clamp.
- Check whether the seat height is proper after adjustment.
- If not, repeat the adjustment procedure.

Sitting on the saddle, the rider should be able to correctly manipulate the brake lever and gear lever by tilting the elbow slightly while riding.

Charging the battery

WARNING	
	Using the wrong charger may cause the explosion of battery which will result in serious injuries or death. Only use the equipped charger. Read and follow the instructions in the charger manual.

The battery of this bicycle should be charged with an ambient temperature between 10°C and 30°C. Please follow the steps below to charge the battery:

- Take out the battery.
- Ensure that the battery has no visible damage such as a broken case.
- When charging, place the battery on a non-flammable surface, for example, ceramics.
- Follow and observe the instructions (if included) provided in the charger manual.
- Insert the charger plug into the corresponding socket on the battery.
- Insert the charger plug into a 220V, 50Hz power socket. At this time, the charging indicator on the charger will light up in red. The charging process takes about 4-6 hours. When the charger indicator turns green, it means that the battery has been fully charged.
- Unplug the plug from the socket.
- Unplug the plus in the battery socket.
- Reinstall the battery.
- Do not use modified or damaged batteries.
- Exhausted batteries are to be removed from the appliance and safely disposed of.
- Different types of batteries or new and used batteries are not to be mixed.

Check tire pressure

You can find the allowable inflation pressure range on the side wall of the tire. Test the appropriate tire inflation pressure.

We recommend using a bicycle foot-operated air pump with a pressure gauge/manometer, in order to check and correct the tire pressure.

Bicycle control

Braking

The role of the brake is not only to stop the bicycle, but also to control its speed. The maximum braking force of the wheel refers to the stress when the tire is just "locking-up" (not rotating) and slips. Once the tire slips, most of the braking force will be lost and all control over the bicycle will be lost. Please practice slightly braking and slowly stopping, that is, the technique of gradual braking technique, in order to avoid tire locking-up.

- Push the brake lever toward the handle bar to gradually increase the braking force.
- If you feel that the wheel is locked, please reduce the braking so that the wheel can rotate without being locked.

Change speed

Use the derailleur handle on the right side of the handlebar and + button to shift gears. According to the indicator mark on the handlebar, we can see the current gear position.

Please follow the steps below to control the rear derailleur with the handlebar:

- Step on the pedals forward.
- Turn the derailleur handle (ring 1) counterclockwise by hand to switch to the large gear or larger gear.
- Press the derailleur + button by hand to switch to a smaller sprocket.

Turn on/turn off the front/rear light

The power of the front light is provided by the battery of the bicycle, and the power of the rear light is provided by the dry battery.

When riding at night, make sure that the battery is fully charged. Even during the daytime, we need to use lights to make it easier for other road users to notice.

Please follow the steps below to turn on or off the lights:

- Turn on the power switch of the instrument
- Long press the " + " key for 3s to turn on the lights.
- Long press the " + " key for 3s to turn off the lights.
- Tear off the insulation paper of the tail light.
- Click the tail light switch button to turn on the tail light.
- Click the tail light switch button to turn off the tail light.

Unfold the bicycle


There are hinges in the following places on the bicycle, which can be folded together or one by one.

- Unfold the frame
- Unfold the handlebar
- Unfold the pedals
- Adjust the height of the saddle

Please follow the steps below to expand the bike:

- Unfold the bicycle frame and close the shackle in the middle of the frame.
- Unfold the handle bar of the bicycle and close the shackle on the stem.
- Unfold the left and right pedals of the bicycle.
- Adjust the height of the saddle according to the rider's height.

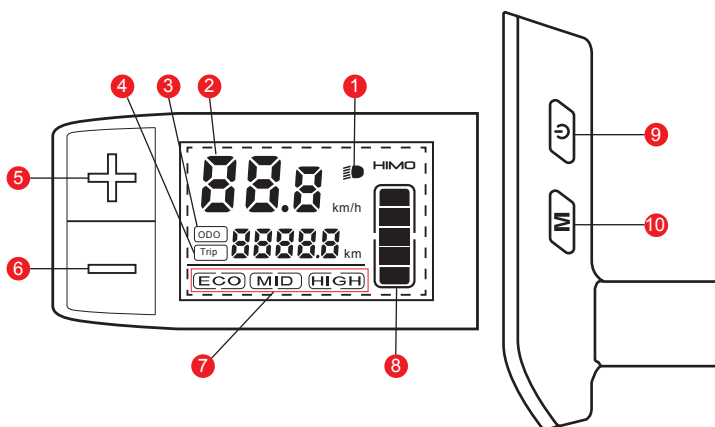
Fold the bicycle

WARNING	
	When folding the bicycle, always make sure that your fingers, hands, and arms are in a safe area, in order to avoid injury.

Please follow the steps below to fold the bicycle:

- Adjust the height of the saddle to the lowest limit.
- Fold the left and right pedals of the bicycle.
- Unfold the shackle on the stem, rotate the handle bar, and fold the bicycle handlebar.
- Unfold the shackle in the middle of the frame and fold the bicycle frame in half to complete the folding of the bicycle.

Instrument manual



No.	Description	No.	Description
1	Front light logo	6	Downshift key
2	Speed per hour	7	Gear indication
3	Accumulated mileage	8	Battery level
4	Single mileage	9	Power button
5	Upshift key	10	Function keys

Turn on/turn off the instrument

Please carry out the step below to turn on the instrument:

- Press the key "⏻" for about 3 seconds.

Please carry out the step below to turn off the instrument:

- Press and hold the key "⏻" again for about 3 seconds.

Choose the assist level

You can choose assist level, assist training can help you apply pedaling force. There are three assist levels to choose:

- ECO
- MID
- HIGH

Please carry out the steps below to select the assist level:

- Press the key "+" once to select a higher assist level.
- Press the key "-" once to select a lower assist level.

Turn on/turn off Headlight

- Long press the key " + " for 3 seconds to turn on the light.
- Long press the key " + " for 3 seconds to turn off the light.

Riding

While riding

While riding, be sure to wear a bicycle helmet that meets the latest certification standards. For the adjustment, use and maintenance of the helmet, please follow the instructions attached by the manufacturer. Most serious injuries while riding are head injuries, which can be prevented by wearing a helmet.

According to the road traffic permit issuance regulations, the following equipments are required for safe cycling on public roads:

- A bell
- Two independent braking systems
- White front light
- White front reflector
- Red rear light
- Red rear reflector
- Install two yellow reflectors on the spokes of each wheel, offset by 180 degrees, or arrange white reflective strip on the tires.
- There are yellow reflectors on the front and back of the pedal.

The headlight need to meet the requirements of the regulations of the country/region where they are located.

Before each riding, make sure that:

- The battery is charged
- The brakes, chain guards, and mudguards are working properly
- The handlebars are firmly connected and properly adjusted
- The saddle is firmly connected and properly adjusted
- Pedals are firmly connected
- Wheels are firmly connected
- Tires are in good condition
- Tire pressure is correct
- Normal lighting and proper debugging
- The circuit is normal and properly debugged
- Quick-release screws, nuts and operating rods are firm

Safe riding tips

- Obey regional traffic laws and bicycle regulations. Observe the regulations related to bicycle registration and riding on the sidewalk, as well as the laws on the use of bicycle lanes, etc. You are responsible for familiarizing yourself with and observing laws and regulations.
- Respect the rights of motor vehicle driver, pedestrians and other riders on the road/bicycle lane.
- Always turn on the lights.
- Be predictable when riding. Be sure to assume that others cannot see you.
- Observe before crossing the road.

You should also pay attention to the following situations:

- The braking or direction change of the preceding car and the approach of the following car.
- The parked vehicles open their doors.
- Pedestrians on the street.
- Children or pets playing on the side of the road.
- Potholes, ravines, railways, expansion joints.
- Road or sidewalk construction, gravel or other obstacles that may force you to use the opposite lane.
- Accident caused by dodging or being caught by a bicycle or loss of control.
- In accordance with regional regulations, or following the direction of traffic, ride on designated bicycle lanes or as close to the side of the road as possible.
- Stop in front of stop signs and traffic lights. Brake at the intersection and look forward, backward, left and right. Remember that riders are always the most vulnerable road users.
- When turning or parking, use conventional gestures.
- The earphones can easily block the sound of the siren, do not wear them when riding.
- Traffic noise and siren may distract the rider from the traffic and may cause the rider to lose control.
- Do not ride with passenger. Toddlers must wear a qualified helmet and use a properly installed child seat or child trailer before they can be transported. For weight restrictions, please follow the manufacturer's recommendations for child seats or child trailers.
- Do not bring anything that will obstruct the rider's vision, affect the rider's control of the bicycle, or be easily jammed by the moving parts of the bicycle.
- When riding, the bicycle can not be dragged by other vehicles.
- Do not perform stunts, unicycle riding or jumping, otherwise the bicycle may be damaged.
- Do not traverse road and perform behaviors which can not be predicted by other road users.
- Ride with foreseeability.
- Do not ride under the influence of alcohol or drugs.
- Try to avoid riding when there is the bad weather, low visibility, dusk. And don't ride at night, or when you are very tired, otherwise it will increase the risk of accidents.

Power assist riding

If you have never ridden a bicycle without power-assisted training, please familiarize yourself with riding a bicycle with power-assisted training in a place where there is no traffic. The power assist device will only be activated when it is turned on and the rider is pedaling. Initially, the power-assist intervention may let you feel a little uncomfortable, but the rider can adapt quickly. Before pedaling, the rider should sit on the saddle.

The ride should start with the lowest level of riding assistance and practice daily riding scenarios, such as:

- Get started
- accelerate
- brake
- make a turn

After stopping pedaling, the power assist system may still provide assistance for a short time.

The distance per charge under power assist depends on following factors:

- Total weight of bicycle, rider and luggage
- Speed adjustment
- Tire pressure
- Battery power level
- Road condition
- The weather
- Tailwind, headwind
- Personal energy

In order to achieve the maximum distance per charge, please follow the steps below:

- Make sure that the battery is fully charged.
- Make sure that the tire pressure is adjusted properly.
- Avoid using or choosing a lower level of power assist on flat ground or downhill sections.
- Choose the appropriate gear according to the riding conditions.
- Please turn off the power assist for short-distance riding, and avoid unnecessary start and stop.

Riding without power assist


You can also use the bicycle without power assistance. Just turn off the power assist system and use it as a bicycle without power assist.

Such as: when the battery is exhausted.

Failure handling

Problem	Possible causes	Solution
The instrument does not work	The battery is exhausted or the bicycle is not connected to the battery.	Make sure the battery is charged and installed correctly Make sure that the battery is locked, so as to avoid the disconnection between the battery and the bicycle while riding.
The green light of the charger is on, but the battery fails to charge.	The battery and charger are not connected correctly.	When charging, be sure to connect the charger to the battery first, and then plug the charger into the wall outlet.

Transportation of bicycles

WARNING	
	<p>During transportation, the bicycle may fall or slip off the carrier, resulting in serious injuries.</p> <p>When transporting bicycles with vehicles or public transportation, take care to prevent the bicycle from overturning, slipping and falling.</p> <p>When transporting bicycles, please use an approved matching bicycle rack.</p> <p>If there is no bicycle rack, you must store the bicycle in the trunk (make sure it is not on the transmission).</p>

Bicycle maintenance

Battery maintenance

The design charge cycle of the battery is about 500 times. After 500 charging cycles, the battery capacity no longer reaches 100% and drops to about 60%.

A charging cycle refers to the battery charging from 0% to 100%. Charging from 99% to 100% is not counted as a complete charging cycle, only represents 1% of a complete charging cycle. 500 charging cycles can generally last for more than two years.

With 75% electricity, the storage time is about three months. With 50% power, it takes about two months.

In order to avoid shortening the service life of the battery, please do the following points:

- After riding, charge the battery only when the power level is between 30%-50%.
- Make sure that the battery is not fully discharged.

After the battery is fully discharged, it takes about 4-6 hours to charge it (1% to 100%).


If you want to store the battery for more than two months, please follow the steps below:

- Take out the battery.
- Ensure that the battery has no visible damage such as a broken case.
- Charge the battery before long-term storage.
- Store the battery in a safe and dry environment.
- Maintain a ambient temperature of 5°C to 20°C.
- Prevent extreme fluctuations of battery temperature.
- Do not expose the battery to direct sunlight or high temperature.

For example: when the battery is stored in a warehouse.


- Make sure to charge the battery at least once every two months.

Motor and controller maintenance

WARNING	
	<p>Moisture, pollution, or mechanical damage can cause a short circuit, which can lead to fire or battery explosion.</p> <p>If these parts are completely immersed in water accidentally, please unplug the plug immediately and disconnect the motor from the battery. Do not restart the motor before you consult the manufacturer.</p>

Clean the motor and control system with a wet sponge from the outside.

Maintenance plan

WARNING	
	<p>As with all mechanical components, EPAC is subjected to wear and high stresses. Different materials and components may react to wear or stress fatigue in different ways. If the design life of a component has been exceeded, it may suddenly fail, possibly causing injuries to the rider. Any form of crack, scratches or change of colouring in highly stressed areas indicate that the life of the component has been reached and it should be replaced.</p>

Bicycle recycling

Please carefully follow the procedures below to recycle used bicycles:

- According to local laws and regulations, dispose of bicycles, batteries, electrical components and other components in a place where related materials and substances are specially collected.
- Follow the battery manufacturer and electrical component manufacturer's instructions for recycling.



Warranty terms and conditions

This bicycle is manufactured by Himo electric technology co., ltd. The company address is Room K50, Floor 1, Building 6, No.4299 Jindu Road, Minhang District, Shanghai, P.R. China

Himo electric technology co., ltd. provides a 2-year legal guarantee for the frame and front fork from the date of purchase, guaranteeing any manufacturing problems or material defects, including fractures or tears caused by normal riding (except for improper use).

The warranty does not cover all wearing parts, such as bicycle chains, pedals, timing belts, tires, rims, hoses, bearings, transmission hangers, brake discs, sprockets, pinions, bottom brackets, outer tube of shifting and brake cables, inner cable of gear shift and brake cable, as well as paint and stickers. All damages caused by non respect of the assembly instructions or improper use (jumping, stunts, tilting wheels, downhill) are not covered by the warranty. This bicycle is for private use only. Damages caused by renting, leasing or participating in the competition are not covered by the warranty at all. Repairs or modifications to this bicycle without the permission of the manufacturer will invalidate the warranty. The non respect of the instructions in this manual for regular maintenance or in-execution of careful inspection of the bicycle at least once or twice a year will invalidate the warranty. In order to protect the warranty application, please keep the original proof of purchase and service manual. After the purchase of product, it will fully cover the approved content within the warranty.

Additional Information

Bicycle recycling

Please carefully follow the procedures below to recycle used bicycles:

According to local laws and regulations, dispose of bicycles, batteries, electrical components and other components in a place where related materials and substances are specially collected.

Follow the battery manufacturer and electrical component manufacturer's instructions for recycling.

This bicycle complies with the following protocols:

The Electric Assisted Bicycle (EPAC) is clearly and persistently marked with the following minimum details:

- Contact information and address of the manufacturer or authorized representative;
- Compliance with the EN 15194 EPAC standard;
- Appropriate mark (CE) required by regulations;
- The year of manufacture, that is, the year when the manufacture was completed (codes cannot be used);
- The power-assisted cut-off speed is 25 km/h;
- Maximum continuous rated power is 0.25 kW;
- Maximum allowable total weight (for example, marked near the seat post or handle bar);
- The name of the series or type;
- Individual serial number (if any);
- Mass (if the electric assisted bicycle has a mass of more than 25 kg);
- In the most common configuration, the mass of the electric assisted bicycle.

For the frame

- On easily visible parts, such as the position near the pedal crank, seat post or handlebar, clearly and persistently mark a complete frame number;
- Obviously and persistently mark the name of the manufacturer or manufacturer's representative of the whole electric-assisted bicycle and the number of this document, namely EN15194.; The durability test method is specified in the "durability test". Where appropriate, if the electric assisted bicycle is equipped with a trailer coupling device, the following values should be provided:
- The total weight of the trailer;
- The vertical load of the coupled system. Note: There are legal requirements for bicycle marking in some countries. For components, there are currently no special requirements, but it is recommended that the following critical safety components be clearly and permanently marked with traceable identities, such as the manufacturer's name and part number:
 - Front fork
 - Handlebars and handle bars
 - Sea post
 - Brake lever, brake shoe and/or brake shoe bracket
 - Brake cable outer tube
 - Hydraulic brake hose
 - Disc brake calipers, brake discs, brake pads
 - Chain
 - Pedal and crank
 - Bottom bracket spindle
 - Rim

Durability test

Requirement

- When testing by the method described in the "Test Method", the mark should be kept clear and easy to read, the label should not be easy to remove, and there should be no signs of curling.

Testing method

Wipe by hand with a cloth soaked in water for 15 seconds, and then wipe with a cloth soaked in petroleum spirit for 15 seconds.

- Warning 1 - Like all mechanical parts, electric assisted bicycles are subject to wear and high stress. Different materials and components may respond differently to wear or stress fatigue. If the design life of the component is exceeded, the component may suddenly fail, causing injury to the rider. Any form of cracks, scratches, or color changes in high-stress areas indicates that the service life of the part has been reached and it should be replaced.
- Warning 2 - For composite parts, the user may not see the impact damage. The manufacturer should explain the situation and consequences of the impact damage; composite parts should be returned to the manufacturer for inspection or destruction and replacement.
- The A-weighted sound pressure level at the rider's ears should be less than 70 dB(A).
- It is strictly prohibited to deliberately refit the bicycle or make unauthorized modifications to this bicycle.
The manufacturer/seller does not assume any responsibility for damage caused by modification by the user, and
- it is recommended that the user seek professional help.
The child seat cannot be installed under the bicycle.
- Never use a high-pressure cleaner to clean the bicycle.
- For instructions on the minimum saddle height and size, please refer to the minimum insertion limit mark on the seat post.

- The total allowable load of this bicycle (including the rider) is 100 kg.
- The net weight of this bicycle is approximately 28 kg.
- This bicycle is not designed to be equipped with a trailer.

Component fixation

Please be sure to check the following items before riding and adjust according to the recommended torque:

- The tightening of the screws/nuts of the bicycle brake system should ensure that all brake cables are smooth. The recommended torque is 8-10N.m.
- The tightening torque of the rear wheel of the bicycle should be no less than 30Nm, and the tightening torque of the front wheel should be no less than 25N.m.
- The seat height can be adjusted by the seat post clamp. Pull off the seat post clamp and insert the seat post at least to the minimum insertion limit marked on the seat post. Tighten the nut by twisting the quick release lever of the seat post clamp, and then push the quick release lever to the closed position.
- The seat angle can be adjusted by the nut at the joint between the seat and the seat rail. Make sure that the nut is tightened so that the seat will not move forward or backward when sitting on it.

Recommended height of rider

- Minimum 160 cm
- Maximum 190 cm



Frame size guide		
Rider's approximate leg length	Road/travel bicycle Recommended frame size	Mountain/Hybrid Bicycle Recommended frame size
61-69 cm/24-27 inches	-	37 cm / 14.5 inches
66-76 cm/26-30 inches	-	43 cm / 17 inches
71-79 cm/28-31 inches	50 cm/19.5 inches	45 cm / 18 inches
76-84 cm/30-33 inches	55 cm/21.5 inches	50 cm/19.5 inches
79-86 cm/31-34 inches	57 cm/22.5 inches	52 cm/20.5 inches
81-89 cm/32-35 inches	60 cm/23.5 inches	53-56 cm/21-22 inches
86-94 cm/34-37 inches	63 cm/25 inches	58-60 cm/23-23.5 inches

Lubrication

Use light engine oil (20W)

Part	Lubrication Plan	Recommended lubrication method
pedal	Every 6 months	Put 4 drops of oil on the connection between the pedal and the pedal shaft
Chain	Every 6 months	Put 1 drop of oil on each roller of the chain
Headset	Every 6 months	Contact professional technicians
Electric motor	Every 6 months	Contact professional technicians

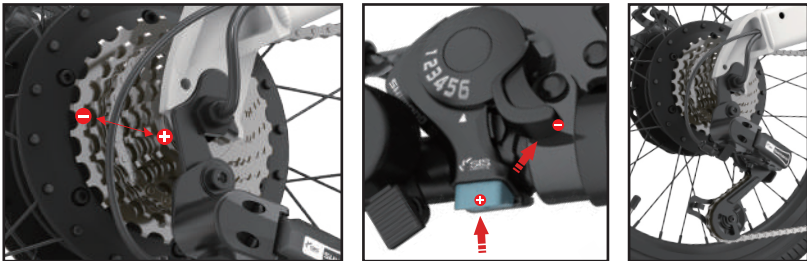
Please remove all dust before lubrication, and put in order all lubricant after lubrication.

Chain tension

Please read the chain tension adjustment manual provided with the bicycle carefully, in order to learn more about how to adjust the chain tension.

- Ensure that the chain is oiled, clean and running smoothly.
- Please go to a qualified technician to adjust the chain tension correctly.
- In humid or dusty environments, extra maintenance is required.
- The chain tightness should be about 15mm.
- When adjusting the chain, loosen the rear axle nut, adjust the chain tightening screw, and tighten the rear axle screw when the tightness is appropriate.

Gear adjustment



Understanding gear positions:

- The working principle of the gear is exactly the same as that of an ordinary bicycle, and has nothing to do with the electric motor.
- The shift lever set is installed on the right side of the handle bar, and the gear can be increased/decreased by turning the “+” “/” “-” handle.
- The lower the gear, the more labor-saving, the higher the gear, the more labor-intensive.
- The gears are preset at the factory and do not need to be adjusted.
- After a period of use (expected after 3 months of riding), the shifting cable will stretch and may need to be adjusted.
- Your local bicycle store or electric bicycle store can provide this service.

Wheel damage and wear

- Make sure that the inflation of the tire is within the recommended limits shown on the sidewall of the tire.
- Make sure that the tires still have tread patterns, no bumps or excessive wear.
- Make sure that the rim is running properly and there is no obvious shaking or bending.
- Make sure that all wheel spokes are tight and not broken.
- Check whether the axle nut is tightened. If your bicycle is equipped with a quick-release axle, make sure that the lock lever is tight and in the closed position.

Inflation pressure

When inflating the tire, be sure to check the tire pressure marked on the tire.

Some notes on battery maintenance and charging

- Please charge the battery for 4-6 hours after 50%-70% of the battery power is consumed, in order to extend the battery life. If the battery is stored with low level of power, the battery is easy to go dormant. Please fully charge the battery after each long-distance ride. Do not charge it for a long time in summer (that is "more than 10 hours") to avoid damage to the battery.
- The battery should be charged once every two months during storage.
- Ambient temperature for charging : 10°C ~ 30°C .
- If the temperature is too low or too high, the battery may not be fully charged.
- When charging, the battery temperature may rise slightly, but normally it will not surpass 45°C. If the indicator light of the charger does not change after the battery is fully charged, or the battery is very hot (over 45°C), please go to the seller for repair immediately.
- After removing the battery from the bicycle, minimize vibration and interference to avoid damage. Keep the charger away from water.
- Each battery has a specially designed charger. Do not use other types of chargers to avoid burning the battery and causing danger.
- Battery storage conditions: the battery should be stored in a clean, cool, dry, ventilated area; If the storage time is less than three months, the ambient temperature should be -10°C ~ 30°C; If storage time is more than three months, the ambient temperature should be -10°C ~ 20°C. The battery should not be used during transportation and storage. It can not be exposed to sunlight, fire, water logging and can not be mixed with corrosive substances.
- Please keep the button on the head of the battery case at "ON" position when charging.
- Please make sure that the wall socket is not short-circuited, so as not to burn the battery and cause danger.
- When riding at high speed, do not remove the power key.
- If the appliance is to be stored unused for a long period, the batteries should be removed.
- Exhausted batteries are to be removed from the appliance and safely disposed of.
- Different types of batteries or new and used batteries are not to be mixed.

WARNING



If liquid leaks onto your skin or clothes, wash well with fresh water immediately.

If liquid leaking from the battery gets into your eyes, do not rub your eyes. Wash them well with clean water and go to see a doctor immediately.

While using, testing or reserving batteries, if you find the battery become hot , distribute smell , change color, deform or any other abnormality, please stop using or testing immediately, and attempt to isolate and keep away from the battery.

Store batteries out of reach of children so that they are not accidentally swallowed.

When the battery is thrown away, be sure it is non-conducting by applying insulating tape to the (+) and (-) terminals.

Call the Fire Department right away

Parts and accessories list

All instruction manuals will be provided with the bicycle.

No.	Equipment name	UnitSet	Quantity	Remarks
1	Installation tool	Set	1	
2	Iron clay board	Set	1	
3	Mud support	Set	1	
4	Pedal	Pc	1	
5	Instruction manual	Pc	1	
6	Warranty Card	Pc	1	
7	Headlight	Pc	1	
8	Charger	Pc	1	
9				
10				

Bicycle card

Full name	
Address	
Post code	
Phone/mobile number	
Fax	
Purchase date	
Bicycle name	
Frame number	
Wheel size	
Colour	
Special features/accessories	

Declaration of Conformity

ZB20 Screw Torque

Unit: N.m

System	Location	Specification	Torque value
Drive system	Right spindle axle-bowl	BC1.37 24T	35-45
	Spindle lock ring	BC1.37 24T	35-45
	Fixed screw for chainwheel and crank	M8	35-45
	Freewheel locking		40
	Central spindle of pedal	9/16"、1/2"	20-25
Steering system	Fixing of the handlebar and stem	M6	12-14
	Upper cover of the stem	M5	10-15
	Fixed screw for stem and front fork	M6	20-25
Wheel	Front hub nut	M10	18-24
	Rear hub nut	M12	30-35
Transmission system	Rear derailleur	M10	8-12
	Derailleur inner cable	M5	4-7
	Transmission protection lever screw	M6	5-8
	Locking screw of transmission handle	M5	4-6
	Frame lug		8-12
Saddle system	Seat cushion and seat cushion rod	M10	20-25
	Quick release of saddle pipe	Pull-out force	>10
Frame assembly part	Quick release of folding handle	Pull-out force	>12
	Fixed screw for folding shaft	M5	3-6
	Fixed screw for folding handle	M5	3-6
Brake system	Brake handle	M6	7-10
	Brake disc	M5	5-8
	Fixing of disc brake and frame/front fork	M6	8-12
	Disc brake adapter	M6	8-10
	Brake inner cable	M5	4-7
Accessories	Fixing of the kickstand and frame	M10	25-30
	Plastic case of controller	Self-tapping screw	2-4
	Headlamp screw	M6	3-5
	Bell		2-5
	Valve nut		2-3



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