LEITNER
Powering Your Freedom

ELECTRIC BICYCLE USER MANUAL

LEITNER ARIA 16" Light-Weight Folding Electric Bike

Important: To provide the best experience this manual is continuously updated. To make sure that you are referring to the most up to date information download the latest version at leitner.com.au/manual

About this manual

- Thank you for purchasing a Leitner electric bike. We take pride in providing electric bikes at outstanding value, delivered to you factory direct. Riding an ebike can be fun, however for safety reasons it is important to only ride the bike after reading and understanding the complete manual.
- The following manual is only a basic guide to assist you and is not a complete or comprehensive manual of all aspects of assembling, maintaining, repairing and using your bicycle. In the interest of safety we recommend that you visit a local electric bike professional to assemble, tune and regularly service the bike.
- This manual makes no representation about the safe use of this bike under all conditions. It is impossible to predict all situations when riding a bike and there are risks associated with riding this bike which cannot be avoided. These risks are at the sole responsibility of the rider.
- This assembly and operation manual shall remain an integral part of the electric bicycle. When you transfer the electric bicycle to others, please enclose this manual as it contains important safety guidance and operation instructions. Anyone riding the electric bike shall carefully read the safety guidance and operation instructions before your first ride.

Meaning of Safety Language.

Riding a bike can cause injury and in extreme cases death, therefore it is important to read and understand the manual before using the bike. The most common cause of injury is falling off the bicycle and reading the manual will help to avoid situations which put you at risk of injury or death.

- **WARNING!** Indicates the possibility of injury or death.
- **Caution!** Indicates the possibility of injury.

As there are different models of eBikes, pictures are for reference only and may show a similar component from another model. Certain instructions of this manual may not apply to your model. All content in this manual is subject to change or withdrawal without notice. We made effort to provide accurate information, however we do not assume responsibility of liability if any errors or inaccuracies appear. If you are unsure about certain parts of this manual, if you have a problem or need repair, please visit the website www.Leitner.com.au and email a customer service representative at sales@Leitner.com.au with a problem description and pictures and videos or call 1300 856 725.

Table of contents:

Assembly and adjustment of…

Guide to safe operation

Mechanical and electrical work performed on your ebike. Safety depends on correct assembly and maintenance. The use of a torque wrench is recommended to tighten bolts correctly. Special tools and skills are necessary to comprehensively service this bike. In the interest of safety we recommend that you visit a local electric bike professional to assemble, tune and regularly service the bike.

WARNING! Any modification of your bike can provide a safety risk.

- Components which are not approved or incorrect assembly can cause accidents and injury. Do not make any modifications including but not limited to installing incompatible forks, drilling, sanding, filing or removing parts.
- Original components can be purchased through your retailer. Consult your retailer for safety and compatibility advice. For example, installing a seat post which is too long may put stress on the frame leading to damage. Another example is installing an incompatible child seat which could lead to injury.
- The electric parts do not need maintenance. Do not open electric parts. Disassembly of the bike beyond the state in which it has been delivered in the retail box voids warranty.

Riding a bike in different conditions

WARNING! Using a bike in conditions beyond its limits and beyond the skills of the rider could lead to damage to bicycle, fork, frame, parts and injury. Do not use your bike on rough trails, trails with obstacles, areas where tyres are momentarily off the ground, jumps, technical areas, speeds over 25 km/h and for aggressive riding. Do not ride down curbs.

- Riding an ebike can be fun for commuting, exercise or recreation if you ride your bike in a manner that is within your ability and within the limits of the bike. Ride carefully and mindful of your environment to avoid dangerous situations. Bikes are limited by use, surface, maintenance and design.
- Leitner ebikes are designed for use on paved surfaces with shallow gradients where the tyres are always on the ground.
- Weight limit of rider (including luggage) 100kg. Do not ride on hills steeper than 15 percent incline.

WARNING! Smooth gravel roads and loose surfaces increase risk of losing control. Your riding style needs to be adjusted. Apply brakes gently, go around turns slowly and be careful not to use motor during turns and do not accelerate quickly.

- Bikes do not protect you in accidents. You may damage the bike, fall and it may cause serious injury or death.

WARNING! Riding a bike after an impact beyond its limits, e.g. accident may cause the bike to break at lower than standard loads. It is recommended to have the bike inspected by an ebike mechanic before riding it again.

Riding instructions

- Use your brakes carefully: if your bike has two brake levers it is recommended to press both brake levers at the same time. Check which brake lever engages which brake. In Australia, normally the right lever engages the front brake. In the USA, normally the right lever engages the rear brake. Over using the front brake lever may cause the rear wheel to lift resulting in loss of control.
- Always keep a safe distance from other vehicles or objects. Get to know your brakes by practicing in a flat, safe location with concrete surface at low speeds. Adjust brakes if they are too powerful or too weak.
- Do not use the electric assistance to begin with. If you are comfortable riding the bike without electric assistance, read all instructions about using electric assistance, then ride bike using low assistance levels.
- Always be prepared to press the brake levers in case you accelerate unexpectedly. Do not switch on your bike on unless you are ready to ride it to prevent accidental acceleration. Also refer to section “Changing gears correctly” in this manual.
- Go around turns carefully, do not pedal around turns, keep your pedal arms horizontal to avoid pedals touching the ground.

WARNING! Incorrect use of brakes, gears and electric controls may cause loss of control and injury.

- When you ride, include a pump, a spare inner tube, puncture repair kit, and tools so you can repair your bicycle if it has a flat tyre or other mechanical problem. It is not recommended to ride at night. If you do ride at night, include a spare light source for emergencies.

WARNING! Prevent toe-overlap. Be aware of situations where your feet which are on the pedal touch the front wheel. In normal riding situations the front wheel is not turned sufficiently to allow contact of your toes with the wheel, however this may occur when going around tight turns at low speeds. Do not pedal when going around turns. Toe overlap is affected by the size of your feet, the pedals, crank arms, mudguards and tyres.

- Carrying cargo will change the way your bike handles, including braking distance, steering, acceleration, balancing, hill climbing ability. Cargo should not protrude too far from your bike and a low centre of gravity is recommended.
- When riding in coastal areas, wipe bike after every ride as salt water and humidity are very corrosive. Apply anti-rust treatment to spokes and other unpainted parts. Do not use anti-rust sprays. It may contaminate unwanted parts such as brake pads. Damage from corrosion is not covered under warranty.

WARNING! Avoid pinch points (squeezing hazard), moving parts, hot parts and sharp points. Examples of parts which can cause injury are turning wheels including spokes, sharp cogs driving the chain, hot brakes, folding frame, folding stem and folding seat posts.

- Frame and forks need to be inspected thoroughly before every ride for any unusual signs of damage or wear. If you experience any unusual noise during riding stop using the bike. After impacts, for example accidents or hitting a object at low speeds or if the bike falls inspect the bike including frame and fork closely as it may have been damaged due to high stress. If there are scratches, use clear nail polish to touch up to avoid corrosion.

Life span of your bicycle

- Bicycle parts will wear with use and may need replacement after some time. If a bike is used more often parts will need to be changed more frequently as compared to a bike which is only used occasionally. Rough riding will reduce the life span of the bike. There are many factors determining the lifespan of a part therefore it is not possible to give an exact timetable for replacement.
- Frequent maintenance will increase the lifespan. If you are in doubt whether a part should be changed please contact customer service. Battery capacity will naturally degrade over time and with use.

WARNING! If the lifespan of any part is exceeded it may break and cause injury therefore it is necessary to inspect all parts of the bike regularly to identify damaged components and replace them before they fail.

Checklist before each ride

To make sure that the most important components are installed correctly and functioning correctly it is necessary to follow this checklist before each ride. Please note this is not a full maintenance program.

WARNING! If a part of your bicycle is not working properly do not ride your bike. Have the part installed correctly using the adjustment instructions in this manual or have the part repaired or replaced by a professional bike mechanic. Contact customer service if in doubt**.**

Checklist:

- **Battery:** Make sure your battery is fully charged, secured and not damaged.
- **Frame and fork:** Are there signs of stress or fatigue? Discoloration, cracks, dents, chips, irregularities in shape, scratches, unusual noises

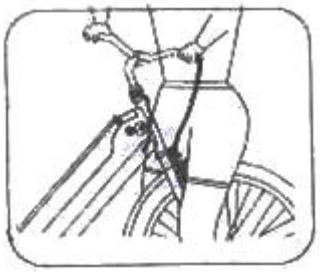


Figure FS2

- **Handle-stem and handle-bar:** Is stem aligned with front wheel? Walk to front of bike, put front wheel between your legs (Figure FS2.) Check if the wheel and stem are aligned straight. Try to twist the handle-bar left and right. The handlebar should not be loose and shouldn't move if moderate force is applied. Make sure that all cables are not stretched and that there is enough slack for all cables when turning handle-bar. Make sure the wheel can be turned freely without entangling wires. The ends of the handle-bars need to be covered, usually by a handle-grip to protect from cuts in a crash. Apply front brake and move bike forward and backwards. Is fork loose? If it is loose the headset needs to be adjusted.
- **Wheels:** Are wheels installed safely? Lift wheel off the ground, hit it by hand from the top and try to move it by hand left and right. The wheel shouldn't move or come loose. Check if the nuts or quick-release system is holding the wheel in place safely. Are tyres inflated to recommended pressure on sidewall of tyre? Tyres with 2 inch width usually require 40psi pressure. Pump tyre using a hand bicycle pump. Do NOT use an automated air compression pump, for example the car tyre pumps at gas stations. Check if wheel is straight. Lift it off the ground and spin it by hand observing any wobbles from side to side where it passes the brake pads.. **WARNING!** Wheels need to be installed safely otherwise they may come loose during a ride and cause injury.
- **Brakes:** Check if all brakes on the bike work well. Pressing the lever should stop bike. Rim brakes: Brake pads should be 1-2mm away from rim. If pressing the brake lever results in touching the handle-bar, adjust brakes. Disc brakes: Brake pads should be 0.25-0.75 mm away from disc. If brake lever moves more than 15mm or less than 7mm to stop your bike, adjust brakes. Also make sure that the brake pads are not rubbing excessively against the rim of the wheel or the disc of a disc brake: Lift the wheel off the ground and spin it. If there are any noises or if wheel stops spinning abruptly it indicates that brakes are rubbing. **Caution!** Do not touch the disc of the disc brake after use as it may be hot. Never touch brakes while wheels are turning. Check that engaging brakes switches off motor.
- **Saddle (seat) and seatpost**: Use both hands to twist seat left and right and push seat up and down and try to tilt seat forwards and backwards. It should not move or be loose. Check that minimum insertion mark on seatpost is NOT visible.
- **Suspension:** Make sure that any suspension installed on the frame or fork cannot be compressed fully.
- **Reflectors, front and rear lights:** Make sure both front and rear lights face the correct direction and that they are clean and working properly. Make sure that all reflectors on front and rear wheel and on pedals are clean and not covered by any accessories. **WARNING!** A bike without properly functioning lights and reflectors may be hard to see by other people increasing the chance of an accident.
- **Pedals and crank-arms:** Check that pedals are fully inserted into crank arms and that they are tightened to specification. The pedals and the crank arm should not be loose. Loose pedals will damage the thread on pedal arms. Damaged pedal arms need to be replaced.

Safeguard your bicycle

- Purchase a strong lock to prevent theft. Always lock your bike.
- Note your frame serial number. It is located at the front on the frame on top of the front fork. If you have problems locating your serial number please contact customer service.
- Park your bike undercover, out of direct sunlight protected from rain, snow, water, sea water and wind in a safe location which does not obstruct traffic and is clear from hazardous conditions including heat and cold. Humidity especially in areas close to the sea can cause corrosion. UV exposure can cause rubber to crack and paint to faint.
- Park your bike in a manner that it doesn't fall. Falling may damage the bike, most commonly on the handlebar, handle grips, gear shifter and rear derailleur.
- If bicycle is stored for an extended time it should be lifted off the ground with tyre pressure at half of the recommended level. Charge battery at least every month as per the respective battery maintenance chapter in this manual.
- Clean your bike every week with moist rag. Any parts which rub against the frame can remove paint or in extreme cases damage to frame. Use protective padding material if needed to protect frame.
- Do not clamp the frame during transportation to prevent accidental damage. Use sturdy adapter bars for transport which attach at seat-post and handle-stem. Always use adapters which are able to carry the weight of the bike. Remove battery for transport if needed to reduce weight of bike.
- Cover bikes which are transported on the outside of a vehicle with a suitable cover to prevent exposure to weather.
- Always make sure that no cables are overstretched and that parts of the bike which touch are separated appropriately for example using rags or other padding material.
- To ship a bike in a box wrap frame parts with padding, for example a foam sheet or bubble wrap. Pack bike in the same manner as it has been received by you if you have received a bike in a box. Keep the original packing material and box in the unlikely case the bike has to be shipped again. Make sure the bottom of fork is protected to prevent it from penetrating the box.
- When parking, lock battery into frame and remove keys or remove battery to prevent theft.
- Check with your local authorities whether it is allowed to transport the bike with public transport.

Maintenance

Regular maintenance ensures that the bike is in good condition to be ridden safely. The recommendations below are for normal use. If your bike is used more frequently it needs to be maintained more often. If any parts need repair, fix or replace them immediately.

Tools for maintenance:
Torque wrench showing Nm or lb/inch units
Allen keys: 2, 4, 5, 6, 8 mm
Open end spanners: 8, 9, 10, 13, 15mm
Phillips head screw driver
Bicycle tyre pump with gauge
Spoke spanner
Bike tyre repair kit including tyre removal levers and spare inner tube
Grease and lubricant
Not all tools are necessary for all bikes.

Important Notice! Having the electric bike assembled, adjusted and serviced by a competent electric bike mechanic is the best practice and it will reduce the risk of injury.

Best practice:
A competent electric bicycle mechanic should perform the following tasks:

- Assembly and full check after assembly, including tuning of spokes.
- After 30 days: Check and re-tuning. After the first days of riding some components may need re-adjustment, for example brake or gear wires may stretch. Disc brakes may need several weeks to “brake-in” until they reach optimum performance.
- Every 600 miles (1000km) or every year, whichever comes first: full service

Maintenance schedule

Before each ride: refer to “Checklist before each ride” section in this manual
Every week: clean with moist rag, check for loose spokes
Monthly check: wheel-bearings, rim wear, Stem bolts, headset-bearing, pedals, chain wear, cable wear, gear levers, derailleur, brakes, stand, accessory bolts, suspension fork bolts, rear suspension bolts, reflectors, lubricate forks, lubricate derailleur. Check battery for signs of damage and anything unusual.
Every three months: Check crank arms and bottom brackets, lubricate brake levers and brake-arm fixing bolts.
Every Year: Lubricate handlebar stem, lubricate seat post, replace grease: on pedal threads, in bottom bracket bearings, in wheel bearings, in headset bearings. Lubricate quick release on wheels and seat-post, and folding pivots (frame, seat post, handle-stem). Inspect motor for any unusual noise.

Before your first ride

Contact a customer service representative to assist you in finding a bike which has the right size for you. Important measurements are the minimum and maximum seat height form the ground to the top of the seat and also the stand-over height.

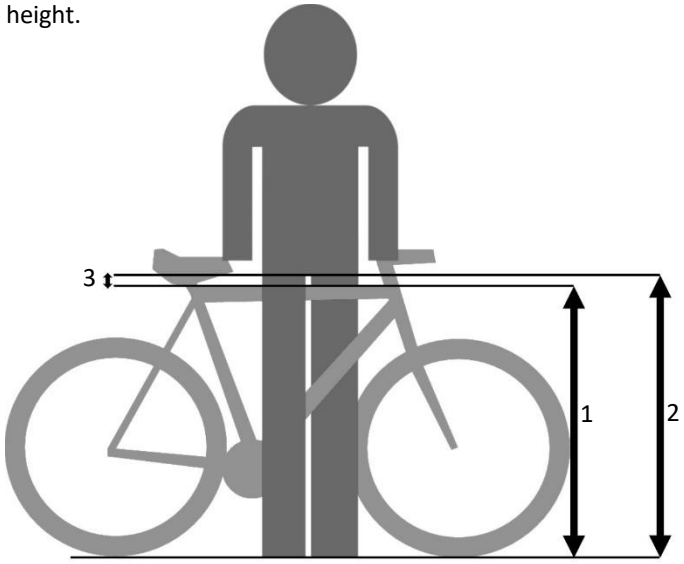


Figure SO1: Stand-over height: To determine the minimum leg-length of the rider refer to the figure on the left.

1: Top tube height of bicycle from ground. A straight top-tube is shown. Step-through frames (sometimes referred to as "Ladies" frames) are specified based on corresponding straight top-tube models.

2: Crotch measurement of rider: Wearing bicycle shoes and having the feet 6 inches apart, measure the inside of the leg from the ground to crotch.

3: **There should be at least 1 inch (25 mm) clearance between the crotch measurement of the rider and the top tube height of the bicycle when straddling the bike**. For mountain bikes at least 2-3 inches clearance is recommended.

- Read and understand the complete manual.
- Adjust seat and handle-bar height and tilt for best comfort. Always make sure that minimum insertion marks on seat post and handle-stem e inserted into frame so that marks are not visible.
- Familiarize yourself with the controls and practise braking and steering at low speeds in a flat, paved, safe environment and always be prepared to apply brakes in case of unexpected acceleration.
- Do not switch on your bike on unless you are ready to ride it to prevent accidental acceleration. Switch bike off while pushing it. If you have any doubts contact customer service.

Rules to ride safely

- Cycling involves risk of injury and damage. By choosing to ride this bicycle you assume the responsibility for that risk.
- This electric bike is intended only for riders 18 years or older who are physically and mentally capable of riding an electric bicycle. Consult your doctor to confirm suitability of riding an ebike as impairments or disabilities may increase the risk of injury or death. Parents and guardians are responsible for the activities and safety of children. This bike is not designed to be used by children.
- Familiarise yourself with your local electric bicycle laws as every state may have different regulations. Consult your local authorities for advice.
- Always ride carefully looking out for other participants in traffic. Bicycles may be hard to see, therefore always ride slowly and defensively always being ready to brake to stop your bike. Use your bell.
- Always avoid obstacles in the road like potholes or curbs. If there are rail or tram tracks cross them at a 90 degree angle to avoid getting caught in the tracks and losing control. Expect opening car doors or cars backing out of driveways. Don't use items which may restrict your hearing.

Always wear a helmet while riding which complies with your local safety standards.

- Do not wear loose clothing which could get caught in the moving parts of the bicycle.
- Do not ride at night, in wet weather, icy conditions, snow or other bad conditions like wind. Your braking power will decrease and you will have less control over the bike since the ground is more slippery.
- Make sure that all your reflectors and lights are working and installed correctly. Front and rear lights may increase your visibility in conditions with low light, however reflectors only increase your visibility if light is pointed at them. Wear high visibility clothing with bright and reflecting materials.

WARNING! Riding in low visibility conditions like night, dusk, dawn or fog will increase your risk of collision as other people may not see you.

Always think safety and apply common sense when riding. Some examples are:

- Do not ride when intoxicated, if you are impacted by medication, extremely tired or if you do not feel well. Always ride carefully and slowly being prepared to stop the bike. Only ride on roads which are bicycle friendly. Try to avoid roads with heavy traffic passing you at a small distance.
- Always keep your hands on the handlebar. If riding in a group, ride in a single file, keep a safe distance from other riders and generally try to avoid riding in a big group as it may increase the risk of accidents.
- Only one person should ride the bike. Do not carry a second person on the bike. Riding off road will increase the risk of damage or injury. Only ride on trails, do not ride through water and avoid all obstacles. Make sure that at no times obstacles hit any parts of your bike including your bike stand. Always make sure that there is enough clearance between the bike and the ground. Do not attach loose objects to your bike.
- Do not jump, do not perform stunts, do not ride over obstacles like curbs, sticks and other obstacles, do not ride in rough terrain, do not ride in an unusual manner.

WARNING! Riding incorrectly can lead to damage and injury.

OPERATION OF YOUR ELECTRIC BIKE

- Your e-bike is driven by a motor embedded in the hub (centre) of the front wheel. The motor is powered by a battery. The amount of power delivered to the motor, and hence the accelerating force on the e-bike, is controlled by you.
- There are two systems to activate the motor: 6km/h button (press and hold **button (3), Figure C2**) and Pedal Assist.
- In Pedal Assist mode, the motor is triggered when you pedal forward, and power assist will stop when you stop pedaling. In other words, power assist happens as long as you pedal. You don't need to pedal hard. All you need is to apply a light force to the pedals continuously to maintain continuous rotation. When you apply one of the brakes, power-assist will automatically stop, allowing the e-bike to slow down or stop. Power assist will turn itself off before the e-bike has reached the maximum speed of approximately 25 km/h
- You should use the gear shifter at the handlebar to set the gears appropriately according to road conditions and pedal as usual. Please refer to relevant section in this manual how to use gears.
- Note that the Battery level indicators on the display (Figure C2, 5) will only show an estimate of the battery charge level when power is not being drawn from the battery (bike standing still). While using motor assistance voltage will decrease.

The LCD display panel (Figure C2) controls a number of features on your ebike.
WARNING! Only switch Pedal assist ON if you intend to ride the bike and if there is enough space in front of the bike. Do not pedal when turning! Always switch bike and Pedal assist OFF when walking next to bike and pushing the bike to prevent accidental acceleration. Always be ready to press the **brake lever** to stop the bike. Do not use pedal assist in tight situations. The bike may leap forward and cause injury.
WARNING! Pushing and holding the **"down" button (3)** will activate the motor to travel at approximately 6 km/h (walking speed).

-Switch bike ON: Push and hold **"POWER" button (2)** on display until LCD screen switches on.
-Switch bike OFF: Push and hold **"POWER" button (2)** until display switches off.
- **Turn on back-light on LCD display :** push and hold **"UP" button (1)**
-**Push the "POWER" button (2)** briefly to cycle through menu:
TM: Trip Time travelled **TTM:** Total Time Travelled **DST:** Trip distance in km **ODO:** Total km travelle **AVS:** Average speed **MXS:** Maximum speed **VOL:** Battery voltage.
-To activate "Pedal Assist" push the **UP button (1)** briefly to increase the power and speed. Push the **"DOWN" button (3)** briefly to decrease the power and speed. "Pedal assist" means that the motor will be activated when you start pedalling and the bike will move forward with motor assistance while you are pedalling. Your **Pedal Assist Level is shown on the LCD screen (4).** Level 0: pedal assist is OFF. At lower assistance levels the motor will accelerate to lower speeds. At maximum assistance level 5 the motor will accelerate to approximately 25 km/h.
-Auto switch off is bike is idle for several minutes to save energy

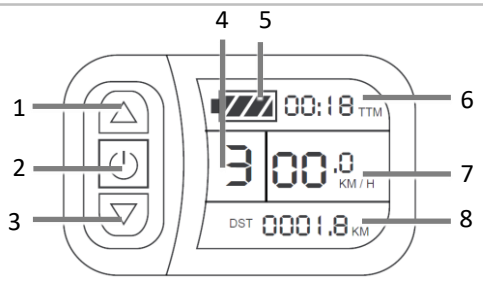


Figure C2 LCD Display panel.
UP button (1), POWER button (2), DOWN button (3), Pedal assist level (4), Battery voltage symbol (5), trip time in minutes (6), Current speed (7), km distance travelled (8). If an error code is displayed stop riding the bike and contact customer service at sales@leitnerdirect.com

-**Setup Menu:** Push and hold "UP" and "DOWN" buttons until screen changes. Use "UP" and "DOWN" button to select correct top speed of 25km/h. Push "POWER" button briefly to confirm. Select correct wheel wheel diameter of 16 in. Push "POWER" button briefly to confirm. Select km or miles. Push "POWER" button briefly to confirm. To save settings Push and hold "POWER" button until screen changes.

WARNING Make sure the top speed with motor assistance is set to 25 km/h. Any higher top speeds will make the bike illegal for use on public roads.

Getting Started

- First, unpack your electric bike carefully making sure that you don't scratch the bike with sharp tools such as paper knifes or scissors.
- Keep all packing material including the carton in the unlikely case the bike has to be re-packed and shipped.
- Locate all parts: battery, keys, front wheel, mudguards, charger, seat and seat post, front light, handle-stem, pedals, tools and any small parts like nuts or screws inside the shipping carton.
- Sometimes small parts like nuts or screws may come loose during shipping so be sure and check the bottom of the carton and protective wrapping carefully. Please note that eBikes are fragile items. Although we are using first class courier services and the bikes are professionally packed it may happen that they get damaged during transit.
- **Please check the bike for damage and any missing parts upon arrival and let us know immediately.** We will then work with you on a solution and ship replacement parts as soon as possible.

Assembly Instructions

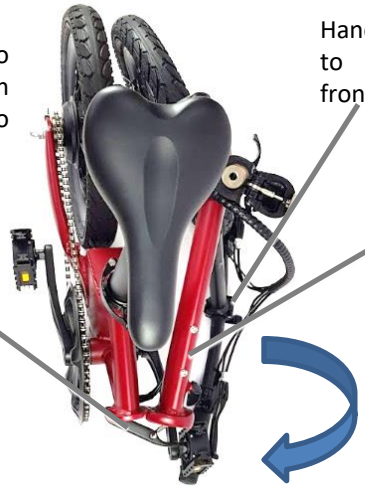
- This bicycle has been disassembled for shipping. To ship the bike, the pedals, bell, front light, mudguards, reflectors may have been loosened or removed.
- Different parts of the bikes such as brakes may need adjustment.
- Check all nuts and bolts on the bike, even if parts have already been assembled by the factory, to make sure that they are installed safely.
- In the interest of safety It is recommended to have the bike assembled and adjusted by a skilled ebike mechanic and serviced regularly.

Straightening the frame

The folding stem should fold to the right side of the bike. The handle-bar should be approximately parallel to the bike frame when fully folded. Fold carefully. Take care not to pinch body parts and not to damage the bike during the folding procedure. Hold on to moving parts and do not drop parts as they may smash into the bike. Make sure to leave enough slack for all wires to avoid damaging wires while folding. During transport, for example inside car, secure bike safely to prevent it from moving. Use padding material like rags or blankets to protect bike parts which are touching from damage during transport.

1) User to stand on this side to straighten folded frame.

Handle-stem folded to right side of front-wheel



Hinge of folding frame

2) To straighten the frame, carefully move the front part of the frame in the direction of the arrow shown.

WARNING! Pinching hazard. Stay clear of area around folding hinge.

Folded bike, view from top

3) The folding frame is now straight. Follow the guide below to lock the frame safely before riding. The handle-bar can be installed/straightened later. First lock the frame.

4) To close the frame first push the long lever to the frame.

5) Then turn the short lever in the direction of the arrow shown to securely lock the long lever into place.

6) Correctly closed folding mechanism.
WARNING: Make sure the frame is secured correctly before riding the bike to avoid injury.

QUICK RELEASE LEVERS

Figure Q1: Lever in closed position

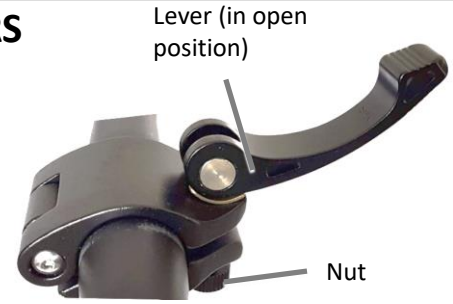


Figure Q2: Quick release parts on a seat clamp. It is the same concept as quick-release parts on the front wheel.

How to operate quick-release levers:

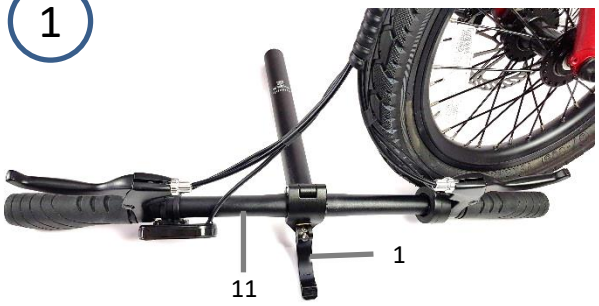
- **Step 1:** Close Lever (figure Q1). If lever closes very easily (less than 12 pounds or 53 Newton) it indicates that it is loose. If lever is very hard to close completely (more than 45 pounds or 200 Newton), don't force it and go to step two.
- **Step 2:** Open lever. **If lever was too loose, tighten nut. If lever was too hard to close, loosen nut**. Close lever again.
- **Step 3**: Repeat step 2 until lever is firmly closed and can't move. Do NOT turn lever like a wing-nut to close as this will not close it firmly.

WARNING! Quick release levers must be closed in such a position so that the lever won't be accidentally hit while riding causing it to open. If quick release lever is not closed safely, components of the bike can loosen while riding causing serious injury or death.

The handle-bar and stem are used to steer the bike. The handle-stem connects to the fork. The stems can be adjusted in height to provide a comfortable riding position. Bolts should be tightened to 9-10 Nm unless specified otherwise. Make sure all bolts are tight and that there is no excess play in the stem.

Installation of the handle-stem and handle-bar

1



Open the **quick-release lever (1)** of the **handle-bar (11)**

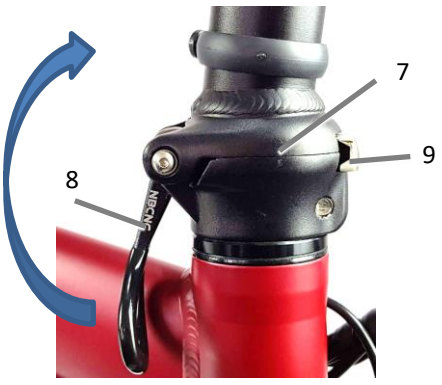
2

To ensure the **cables (2)** are not over-stretched move the **brake levers (3)** up as show in the picture. Open the **quick-release lever (6).** Ensure the **lower stem (5)** is folded all the way down as shown in the picture. Carefully insert the **upper stem (4)** into the **lower stem (5)** all the way without over-stretching the cables, then close lever (6).

3

Fold the stem up until the **hinge (7)** is fully closed. Position handle-bar with brake-levers facing forward and close lever **(1).**

4



Move the **lever (8)** up in the direction of the arrow until the **metal part (9)** is fully retracted.

5

Secure the **lever (8)** with the **latch (10)**. The **metal part (9)** is fully retracted in this picture.

Continue to read important safety information on next page.

Installation of the handle-stem and handle-bar (continued)

Figure FS1

WARNING! The minimum insertion mark (Figure FS1) on the upper handle-stem must NOT be visible when inserted. Failure to do so may result in the stem malfunctioning and can cause you to fall.
CAUTION! Pinching hazard. Keep clear of moving parts.

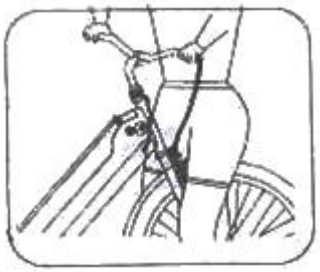


Figure FS2

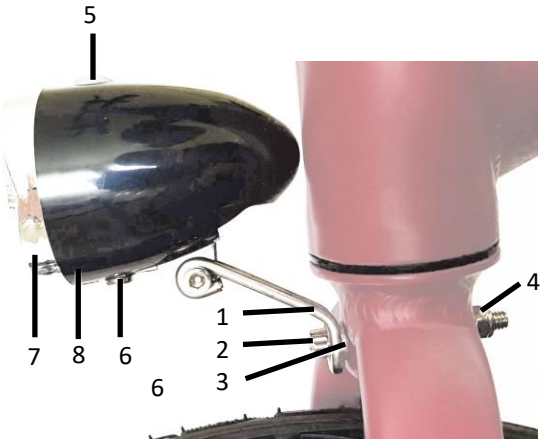
CAUTION! The folding stem should fold to the right side of the bike. The handle-bar should be approximately parallel to the bike frame when fully folded. Fold carefully. Take care not to damage the bike during the folding procedure. Make sure to leave enough slack for all wires to avoid damaging wires while folding.

WARNING! The handle-bar must be installed securely. Test before riding. Refer to section of quick-release levers in this manual for correct operation.

WARNING! Test the installation of the handle-stem before riding as shown in Figure FS2. The stem should not move easily left and right and it should not come loose during riding.

Installation of front lights on front fork

Install front lights on top part of front fork as shown in picture. If you are installing the front mudguard, also insert front mudguard at the back of the fork before nut (4). Refer to images below.
1) Front light arm
2) Bolt
3) Washer
4) Nut
5) ON button
6) To replace the 4x AAA batteries of the light when empty remove **screw (6)** and twist off **lid (7).** To re-install lid look for small metal nut inside the light casing, place it into cradle on inside of light casing at position (8), turn screw (6) into nut just enough so that it is flush with the nut, then twist lid (7) back onto light and fully tighten screw (6).
WARNING! Make sure the light is installed firmly and safely before riding. Tighten all nuts and bolts



Installation of the bell

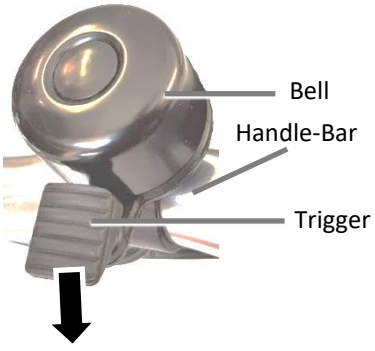


Figure BE1: Bell.
Attach the bell firmly to the handle bar, close to the handle-grip with the supplied bolt. Tighten with a screw driver. The trigger faces the rider. Push the trigger down by tapping it with your finger briefly in the direction of the arrow and release it to ring the bell.

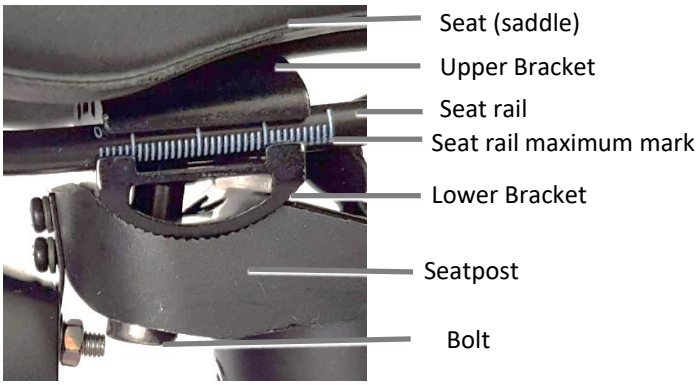
Use the bell to make other people aware of you in traffic, e.g. before passing a pedestrian. Make sure the bell is functional and securely installed.

Reflectors

Reflectors need to be installed at front handle-bar (facing forward, color-less). There are reflectors at rear light of the bike (facing backwards, red) on pedals and on spokes on front and rear wheel. Every 3 months check that all reflectors are clean, installed securely and not covered up by any accessories.

SEAT (SADDLE)

Figure S1: Magnification of seat attachment mechanism



To adjust seat tilt and position on rail loosen the Bolt. Stay between rail maximum marks. Tighten to 22 Nm. **WARNING!** Stay within maximum marks or the rail may brake.

Inspection: Before each ride make sure all nuts bolts and quick releases are safely installed. Use both hands and move seat left and right or up and down. If seat moves easily, tighten bolts. Inspect seat-post every 30 days to make sure it is straight. If it is bent, contact customer service.

WARNING! Adjust height, position on rail and tilt of seat to a comfortable position. Do not continue to ride if you feel pain, discomfort or numbness while riding.

WARNING! If nuts, bolts and quick-releases are not tightened safely the seat position may change unexpectedly during ride and cause injury.

BATTERY and SEATPOST

CAUTION! Pinching hazard. Keep clear of moving parts. When you open the **quick-release (2)** the seat may drop down and present a squeezing hazard. Always hold the seat with one hand to prevent it from dropping and operate quick-release lever with other hand.

Figure B1: Open **quick release lever (2)** to insert the seat post. Close lever (2) at desired position. Minimum Ground Clearance of bottom part of battery to ground: 13 cm. Maximum mark must always be visible. Minimum insertion mark (Figure B2 and B3) must NOT be visible. Connect the **battery cable (4)** to the **battery connection (3)** on the bike. Refer to Figure B4 for details.

Figure B2: Minimum Insertion Mark visible. NOT CORRECT.

Figure B3: Minimum Insertion Mark NOT Visible. CORRECT.

WARNING! The minimum insertion mark (Figure B2) on the seat post must NOT be visible when inserted. Failure to do so may result in the post malfunctioning, frame breakage, and can cause you to fall.

WARNING! Test the installation of the seat-post and seat before riding. It should not not move easily left and right and it should not come loose during riding. Refer to section of quick-release levers in this manual for correct operation.

WARNING! Inserting the seatpost so that the maximum mark is not visible and the ground clearance is less than 13 cm may cause you to hit obstacles while riding resulting in damage and injury. Make sure the terrain the bike is ridden on does not damage the bottom of the battery of the battery power cord.

Figure B4: Line up the **groove (5)** on the battery cable with the **pin (6)** at the bottom of the bike. Location is show in **Figure B1, 3**. Turn the **ring (7)** clockwise until firmly connected. **WARNING!** Never short-circuit the battery terminals (8) e.g. with water or metal parts. It may cause fire or explosion.

Installation of the front mudguard (optional)

Installation of the rear mudguard (optional)

Figure M2: Correctly installed rear mudguard. Read instructions carefully before installing to avoid time-consuming mistakes.
Long part (1) facing forward. **Short part (2)** facing backward.
Short wire (3) at front. Short wire must be on the inside of the **brake cable (7)**. **Long wire (4)** at back.
Short bolts (5) (5 mm thread length) to attach wire to mudguard. **Longer bolts (6)** (10 mm thread length) and washer to attach wire to frame.
CAUTION: If it is feels hard to screw bolts into the frame, stop immediately. Unscrew the bolt and try again, inserting the bolt at a 90 degree angle. Using force may damage the threads on the frame which may not be possible to repair. Threads damaged during installation are not covered under warranty.

Figure M3: Left: Correctly attached wire to mudguard (view from top). Use two **small bolts (5)** with 5mm thread length, **black washer (8)**.
Right: View from bottom. Use **silver washer (9)** at bottom.

Figure M4: Correctly attached wires to frame. Left side of bike). Use **longer bolts (6)** with 10mm thread length and washer. **Front wire (3)** must be underneath **brake cable (7)**.

Figure M5: Correctly attached wires to frame. (Right side of bike).

WARNING! The mudguards must be installed securely. Wheels must not rub on mudguards. Test before riding.

Maintenance. Steel mudguards may corrode. To prevent corrosion, treat with a rust preventative, especially if scratched.

Keep any spare bolts. You will need them for the installation of other optional accessories such as the rear rack.

Installation of the rear rack (optional, sold separately)

The bolts required for the installation of the rear rack have been supplied with the bike.

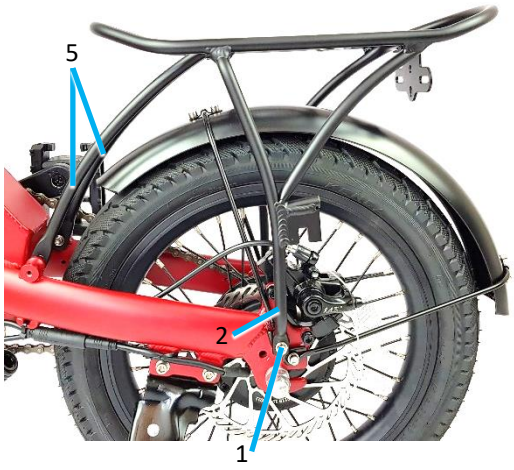


Figure R1: Rear rack, view from the left.

CAUTION: Bolts need to be installed straight, at a 90 degree angle to the frame and it is easy to screw them into the frame. If bolts are inserted at an incorrect angle it will feel hard to screw them in. Stop immediately to avoid damage to the frame thread. Unscrew the bolt and try again. It may not be possible to repair a damaged frame thread.

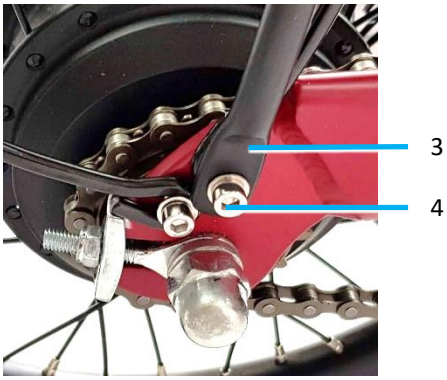


Figure R2: Rear rack, view from the right.

- Attach the **left rear arm (2)** using a washer and **bolt (1).**
- Attach the **right rear arm (3)** using a washer and **bolt (4).**
- To attach **the front arms (5)** use a washer and **bolt (6)** and an **Allan key (7)**. It takes some patience to install the **bolts (6)** as it is a bit tricky to reach. Don't use force to avoid damaging the frame. Make sure the **bolts (6)** are straight, at a 90 degree angle to the frame. Use the **Allan key (7)** at a flat angle as shown in figures R3 and R4. I

WARNING! Make sure that the rear rack is installed securely before use. Tighten all bolts to 16 Nm. The rack must not rub against the chain. Test before riding. Maximum weight limit on rear rack: 20kg. Make sure that your luggage does not affect the bike negatively and that it is not getting caught in spokes which could cause serious injury or damage.

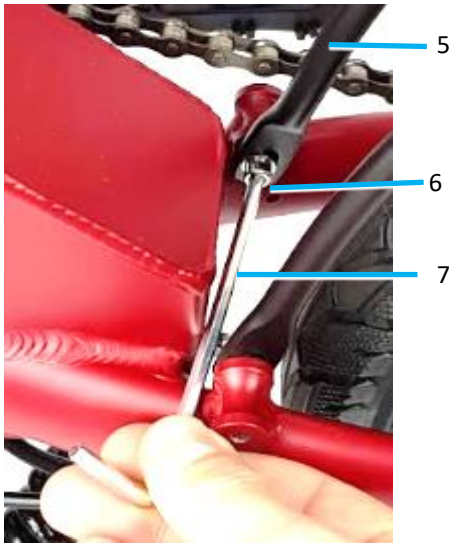


Figure R3: Installation of **front arms (5)** using an **Allan key (7).**

Figure R4

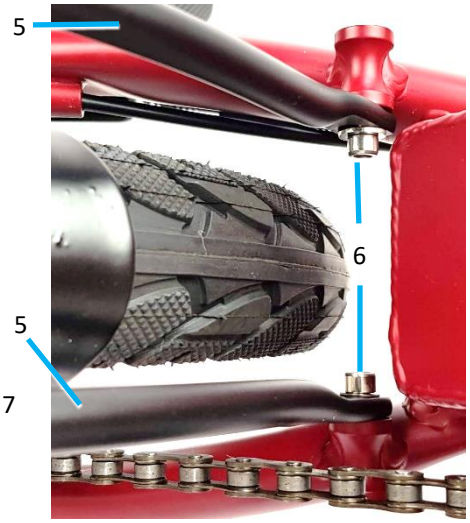
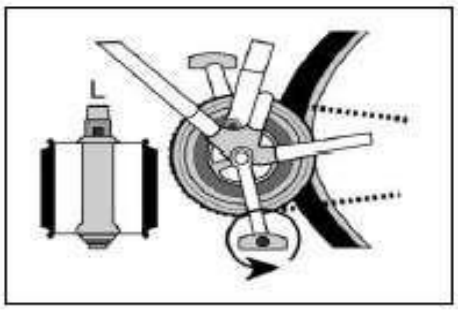
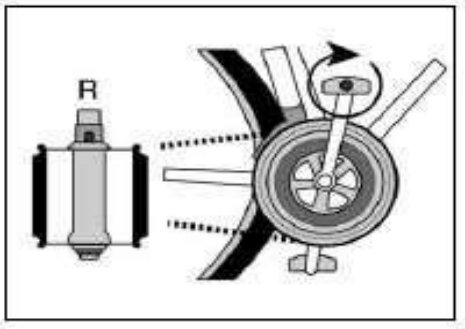


Figure R5: Installed **front arms (5),** view from the top.

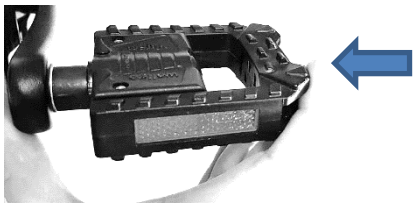
Installation of Pedals



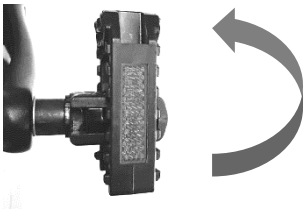


- **Pedals are marked „L" (LEFT) and „R" (RIGHT) on axle end. You need to look carefully to locate the engraving.** Lubricate the thread of the pedal with lubricant (available at bike shops)
- Carefully position the pedal at a 90 degree angle (straight) to the crank arm. Don't insert washers between the pedal and pedal-arm. Use your hands. Don't use a tool. Don't use force!
- **The left pedal needs to be turned anti-clockwise into the crank arm on the LEFT side of the bike**
- **The right pedal needs to be turned clock-wise into the crank arm on the RIGHT side of the bike.**
- The pedal will screw in without resistance if it's placed correctly into the thread. If you feel resistance, don't continue! Un-screw the pedal and start again.
- Use your hands to screw the pedal all the way in, so that the thread is not visible anymore.
- **Once the pedal is all the way in, use a spanner and tighten the pedal up very firmly (40 Nm)** so that it won't come off while riding. Remember : clock-wise for the right pedal and anti-clockwise for the left pedal. It is necessary to check that the pedals are tight before every ride as they may loosen up over time.

WARNING! Incorrect installation and failure to check pedal installation before each ride may cause the thread on the pedal arm and pedal to be damaged, resulting in the pedal to fall off while riding. DO NOT insert washers between the pedal thread and the crank arm as it may prevent pedal from gripping correctly and eventually causing damage to threads.



To fold pedal, push straight in…



…. then tilt pedal carefully. **WARNING: pinching hazard!** To straighten pedal, tilt pedal until it is straight and clicks.

Crank arms and bottom bracket

Check the **allen bolt at the centre** of both crank arms, left and right hand side. (right arm shown in picture). If the arms are loose, tighten the bolt with a 8mm allen key (key not supplied) to 40Nm. Don't overtighten. It is necessary to check the crank arms regularly as they may get loose over time. The bottom bracket is the bearing system which is attached to the pedal arm. Move the crank arm with one hand towards bike frame and hold bike with other hand at seat post. The arm shouldn't move if the bottom bracket is tight. There should be no noise or looseness while riding the bike. If there is excessive movement, have the bike serviced by a bike professional.

Charging the battery

- The battery can be charged while connected to the bike or off the bike.
- Turn OFF the bike before charging.
- Charging temperature between 10 ℃ (50 °F) and 30℃ (86 °F).
- During charging the temperature may increase to about 50 ℃ (122 °F).
- Stop charging battery if it gets unusually hot and contact customer service. Charge undercover in dry area.
- Only use original supplied charger to avoid overheating, bursting or ignition.
- The chargers are smart chargers, which means they will automatically stop charging when the battery is full.
- The battery takes about 5-7 hours to charge if It's completely discharged.
- At first charge, it can take longer since battery pack is balancing.
- If battery does not fully charge within 8 hours, disconnect charger and contact customer service.
- If it's not fully discharged it will take less time to charge.
- It is recommended to switch the battery OFF while charging.
- Disconnect charger after charging. Unplug charger from electricity grid if not in use.

Lights on Charger:

- If there are TWO LIGHTS on the charger. BOTH LIGHTS RED: Charging.

ONE LIGHT GREEN and ONE LIGHT RED: Fully charged or not connected.

- If there is ONE LIGHT on the charger: RED: Charging. GREEN: Fully charged.

WARNING! The charger can get very hot while charging. Always keep it away from material which can catch fire. Do not cover charger. If there are any signs of smell, smoke or melted plastic or unusual noises, immediately disconnect charger from power socket and do not use charger again. Always attend charger during charging. For safety reasons, keep away from water, moisture, children and pets. Keep away from individuals with impaired sensory or mental capabilities, lack of experience and knowledge unless they are supervised by a caretaker. Follow instructions contained on the label of the charger. Do not use if power cord is damaged. Dispose of according to your local laws.

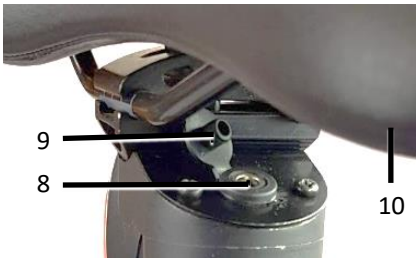


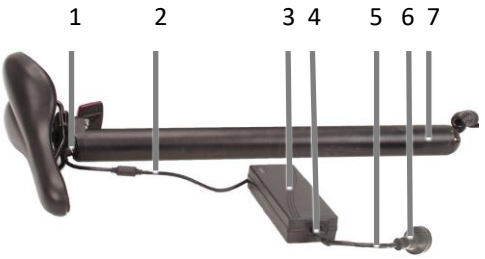
Figure B6: Location of the **battery input socket (8)** underneath the **seat (10).** Use **dust cap (9)** to cover input socket after charging is complete. Refer to Figure B7 for details.

Figure B7: Charging the battery (Illustration)

Connect the **power cord (5) of the charger** firmly to the **power socket on the charger (4).** Remove the **small rubber dust cover (1),** then connect the **charger output cable (2)** to the **battery input socket (1)** on the battery. The LAST step is to connect the **power chord (5)** to with the **wall socket plug (6)** to the power point (AC, 100-224 Volt, 50/60Hz). After charging cover the battery input socket with the rubber dust cover (1). Charger (3), battery (7).

WARNING! To prevent electric shock connect **power cord (5)** to **wall socket (6)** as LAST step. Do not open charger due to risk of high voltage shock. Use indoors only. Only charge original battery. Do not charge other types of batteries. The charger must not be used Voltage is detected automatically. Do not yank cables. Pull on plugs, not on cables.

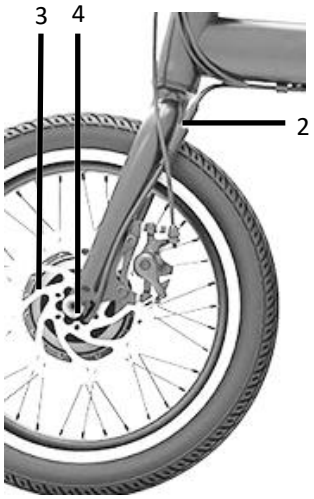
After charging, disconnect **wall socket plug (6)** first.



FRONT WHEEL

The front wheel is installed with a **nut (1)** on each side and washers. If there is a black rubber cap, remove the black rubber cap to expose the nut. The nut needs to be tightened to 30 Nm.

WARNING! Before each ride make sure that the front wheel is installed safely. Lift the wheel and hit it from above with your hand to make sure that it won't move and that it is stably installed into the fork. When trying to move the wheel by hand from left to right, the wheel must not move. Failure to check may result in serious injury or death.



The **motor wire (2)** provides power to the **front wheel hub motor (3).** If the front wheel is removed, carefully disconnect the **male and female connectors (2).**

WARNING! Take care not to damage the motor wire and pins at the end of the connectors. Do not bend wire with force where it enters **front axle (4)**. To replace damaged wires the whole motor needs to be replaced.

WARNING! Ensure **male and female connector (2)** are pushed together all the way and that they are aligned correctly. If the connection is loose, it may lead to heat build-up, melting connections and damage to motor, controller and bike. During first ride after re-installing the front-wheel check connection regularly for heat build-up and push together if necessary.

REAR WHEEL

The rear wheel is installed into the rear fork with two nuts, one on the left and one on the right side of the wheel axle. Tighten **LEFT and RIGHT rear wheel nuts (7 and 10)** to 30 Nm.

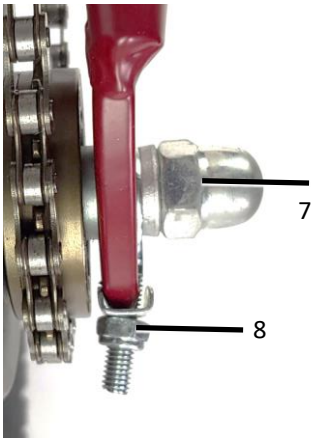


Figure RR1 (RIGHT side of bike, at centre of rear wheel, view from top):
To remove rear wheel use a wrench to loosen the **RIGHT rear wheel nut (7).** Remove the washers and **safety clip (8).** Remember the location and orientation of the parts for the re-installation.

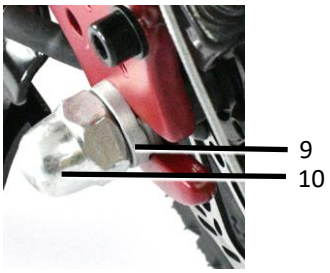


Figure RR2 (LEFT side of bike, at centre of rear wheel):
Use a wrench to loosen **LEFT rear wheel nut (10)**. Remove **washer (10).** Remember the location and orientation of the parts for the re-installation. The wheel can now be removed.

To re-install the rear wheel, place chain into the cog on the rear wheel and follow steps shown in Figure RR2 and RR1 in reverse order. The axle needs to be fully inserted into the fork . Make sure the wheel is installed safely before riding. Tighten nuts (7 and 10) to 30 Nm. Double check by moving the wheel by hand left, right, up and down. The wheel must not move in the fork.

WARNING! Ensure the rear wheel is installed safely before riding. If wheel becomes loose during riding it may cause you to fall.

DISC BRAKES

General information about brakes: The brake system allows you to decrease speed or your bicycle. This operation is very important to your safety. Only use original brake pads. **WARNING!** Brakes needs to be adjusted correctly to avoid injury!

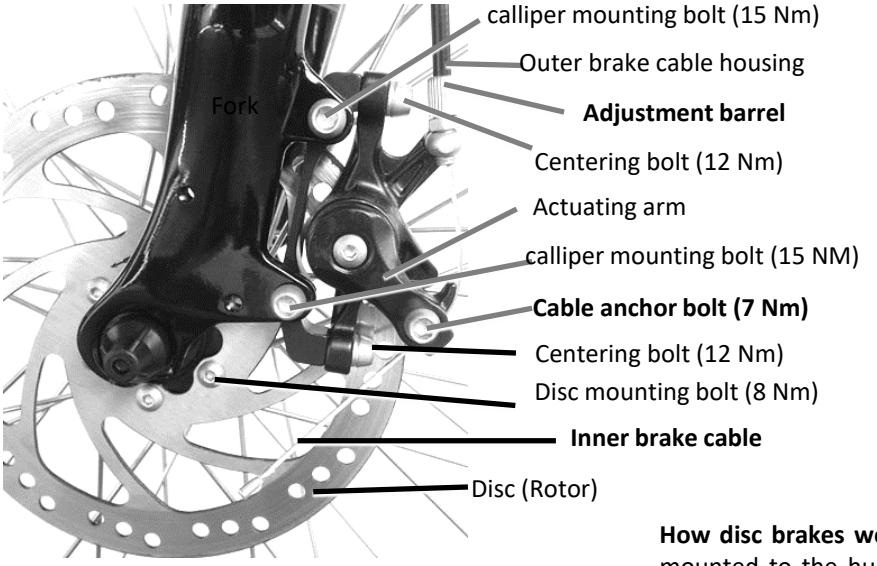


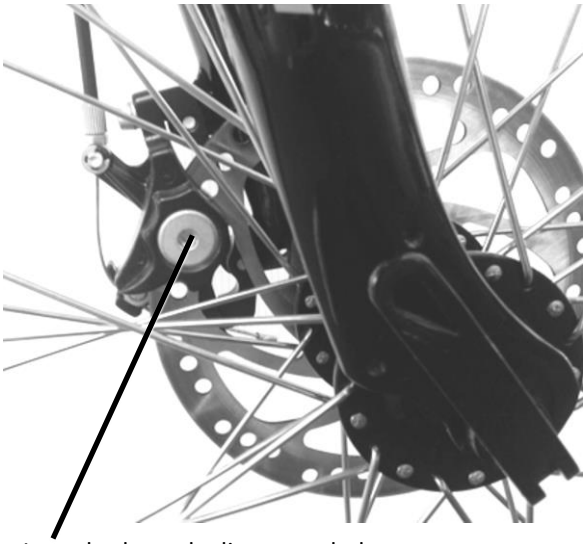
Figure DB1: Disc Brake Assembly: View from left side

Disc Brakes: Braking in period:

- Please note that brand new disc brakes need "braking in". This means it may take a few weeks until they perform optimally. Ride your bike very carefully and allow plenty of time for braking.
- Please find below a guide on how to adjust the disc-brakes. You may have to re-adjust them several times during the brake-in period. Brakes need to be re-adjusted regularly, also after the brake-in period. This is normal as brake pads will wear down. Before each ride, make sure that both front and rear brakes work well and follow the guide below to maintain the brakes.

How disc brakes work: Disc brake pads apply pressure to a disc mounted to the hub of the wheel (Figure DB1). The pressure is controlled with a hand lever on your handle-bar that is connected to the brake by a cable (inner brake cable). Do not press brake lever when wheel is not installed.

Inspection: Every 30 days inspect all bolts for correct tightness and pads for thickness. Replace if disc brake pads are thinner than 1mm. Pushing the brake lever will push the outer pad against the disk and the inner pad. The friction will cause the bike to slow down. (Figure DB3).



Inner brake pad adjustment bolt.

Figure DB2: Disc Brake Assembly: View from right side

Adjusting Disc Brake Clearance:

- The pads need to be adjusted to be as close to the disc as possible without rubbing much. Slight rubbing is normal initially and will get better after the break-in phase. To check if the brakes are rubbing lift the wheel, spin it and listen for rubbing sound. Brake pads can be moved very close to the disc for best performance. This may cause slight rubbing which is normal. If there is a lot of rubbing and the wheel is slowed down without braking, increase the brake pad distance.
- If you position yourself towards the back of the brake pads and look very carefully against a bright background, you will see the brake pads as in figure DB3. If you engage the brake lever, you will see the outer brake pad moving towards the disc. Visual inspection will make it easier to position the brake pads while adjusting.

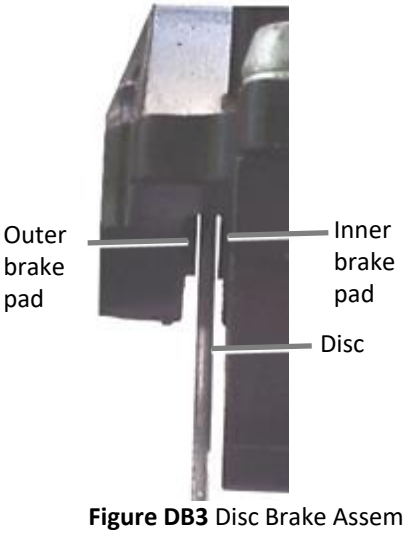


Figure DB3 Disc Brake Assembly: Magnified view from back

1) Before adjusting the brakes, push and release the brake lever on your handle-bar 10 times. This tightens the brake cable. It may loosen up again in time and you may have to repeat this step.

2) Adjust OUTER brake pad **(Figure DB1)**: **Turn adjustment barrel all the way clock-wise.** Loosen **cable anchor bolt.** Adjust **inner brake cable** tension until outer pad is as close as possible to disc without touching disc. Tighten Cable anchor bolt. Turn adjustment barrel to fine-tune.

3) Adjust INNER brake pad **(Figure DB2):** Turn **Inner brake pad adjustment bolt:** Turn clockwise: reduce distance of brake pad to disc. Turn anti-clockwise: increase distance of brake pad to disc.

Aligning brake with disc (Figure DB1): Loosen centering bolts, align brake pads to disc by visual inspection (Figure DB3) or slide a thin object like a business card between outer brake pad and the disc. Pull handlebar lever fully and tighten Centering bolts to 12 Nm.

Changing Brake pads: Remove wheel or remove brake calliper by loosening Calliper centering bolts. Remove pads and replace with new brake pads. Re-install wheel or tighten Calliper centering bolts in correct position.

Headset

The headset is the system of bearings which sits around the handlebar and fork it needs to be checked every 30 days by applying the front brake while moving the bicycle back and forth. To check if steering is smooth, lift front wheel off the ground and steer left and right. If there is excessive movement or if steering is not smooth, the headset needs to be adjusted by a bicycle professional.

Chain

Check chain tension every month. If it is too lose use derailleur to adjust tension. Check all links of the chain. If there are any stiff links, apply lubricant and try to move them carefully by hand or have them replaced at a bike shop.

Bike stand (Kick-stand)

Make sure the stand is fully retracted before riding the bike. The stand is designed to only carry the weight of the bike. When you are on the bike, do not lean against the stand. Do not use the stand if there is any luggage on the bike. Do not use the stand if there is a person on the bike. Make sure that the stand does not hit obstacles while riding. If your stand hits obstacles while riding, adjust riding style or remove stand. Every 30 days check if the stand is attached safely to the bike. Tighten stand attachment if needed. **WARNING!** Always hold onto bike when loading bike to prevent falling. Do not assume that the stand alone supports the bike.

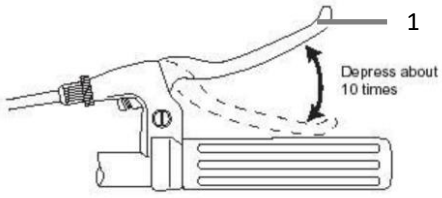


Figure BL1: Brake lever (1)

Brake Levers

The brake wire is attached to the lever and pressing the lever (moving the lever closer to the handlebar using your hand) will pull the wire and activate the brakes. Brake levers are attached with a lever clamp bolt and it should be tightened to 7 Nm. To change which lever controls the front brake open the brakes, detach the brake cable and install cables into opposite levers. Close brakes and re-adjust as described in brake adjustment chapter. On a new bike depress the lever about 10 times before use to reduce future slack in the mechanical inner cable. Adjust cable tension if needed.

To install a brake or gear cable

Locate the ball end of the cable in the brake lever or gear shifter. Memorize cable path along bike, loosen the cable-clamp and remove the old cable. Apply grease to the part of the new cable which is inside the outer brake cable housing. Thread new cable through housing. Check that the end of the cable with the ball is installed correctly in the lever/shifter. Check that the housing is positioned in the housing stop of the lever/shifter. Adjust brakes/derailleur according to the respective section in this manual. Tighten cable-clamp bolt to 7Nm. Cable should be cut at about 1 ½ inches after cable-clamp. Cover the end of the cable with a cable cap to prevent fraying.

Cables and electric wires

Check all cables monthly if there are any bends, cuts, frays or worn areas. Do not ride bike with damaged cables. Have damaged cables replaced.

Rim, Tyres and Tubes

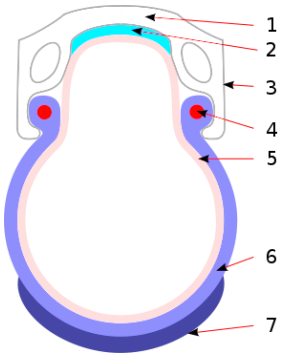


Figure T1: Cross-section of tyre and rim: 1: rim, 2: rim strip, 3: rim braking surface, 4: bead core, 5: inner tube, 6: casing, 7: tread. Image source: Wikipedia, Author Deerwood.

Wheels: When changing a tyre or tube make sure that a rim strip is installed covering all spoke holes and nipples to protect the tube from puncture. Inspect the spokes and make sure the wheel is not wobbly. Clean rims every month with a moist rag and water to allow rim brakes to perform well. Check the rim for wear every month. Replace rim if it is worn or has signs of damage. To check wheel hub bearings lift wheel off ground and spin it by hand. There should be no unusual noise. Try to move wheel left and right. The bearings shouldn't be loose. If there are issues have wheel replaced or repaired by a professional.
WARNING! A worn rim may cause the wheel to malfunction while riding causing you to fall.

Replacing tyres: Standard tyres consist of an outer tyre and a separate inner tube (Figure T1). If the tube is punctured it needs to be replaced or patched. Make sure tube is same size as old tube. To remove tyres use your hands or a suitable tyre lever available at bike shops. Do not use sharp objects like a screwdriver as they may damage the rim, tyre and tube. To remove a wheel follow the instructions in this manual. Rim brakes need to be released first to allow wheel to be removed.
To remove tyre and tube, fully deflate inner tube and move tyre bead to centre of rim. Use tyre levers to lift one bead core across the rim. Start opposite the valve as the valve will be in your way. You may have to use three levers. Take care not to damage tyre or tube. Do this around the whole wheel until one bead is completely outside the rim. Remove tube, then remove second bead from rim.
To install tyres and new tube, first carefully check the rim for any damage, cracks or sharp objects. Make sure rim strip is installed correctly. Inflate tube until it takes shape, however don't fully inflate it. Place it inside tyre, insert valve stem through opening in rim and insert one bead using your hands into the rim around the whole wheel. Take care not to damage the tube. Then, using your hands push the tube into the centre of the rim around the whole wheel. Insert second bead into rim by hand. If it is too difficult, carefully use tyre lever without pinching the tube. Push stem of valve through opening in rim and inflate tyre to half pressure. Check around wheel if tube is correctly on inside and tyre on outside. Adjust if necessary. Deflate tube again to prevent pinching. Finally inflate to pressure recommended on tyre wall.

The frameset (frame and fork)

- The frame is an important part of the bike to which many parts such as the rear wheel, fork and seatpost attach. It is critical to make sure that the frame is in good condition.
- If suspension is installed into the frame refer to the respective section of this manual for suspension maintenance.
- Do not expose frame to heat over 158° Fahrenheit (70° Celcius).
- Only clean with damp, soft rag, mild detergent and water. Only use small amounts of water to make rag damp.
- Avoid water intrusion into electrical components. Do not spray any components with water or immerse into water.
- Do not use corrosive or harsh chemicals. After cleaning wipe damp parts with dry, clean rag.
- Only use original seatposts with correct diameter, length and correct minimum insertion marks. Installation of seatpost with incorrect diameters, excessive length or too short minimum insertion marks can damage the frame.
- When installing parts into threads on the frame make sure the correct parts are used and that the threads on the frame are not damaged, e.g. by over- or under-tightening. Clean all threads before installation, and insert components at correct angle carefully by hand. If there is too much resistance installing a part it may indicate cross-threading. Un-screw part, re-align and then re-insert. Only use tools to tighten part after it has been fully inserted into thread by hand.
- Do not try to adjust frame by bending. Damaged frames and forks should be reported and need to be replaced or repaired.

Inspection: Check of the frame and fork before each ride for scratches, deformation, chips or any other signs of damage. Inspect fork in detail every year during headset service. This should be done by a bike professional.

Accessories

Check your accessories, for example mudguards, lights, kickstand, rack, chainguard every 30 days and adjust attachment and alignment if necessary. The rear rack is not centered however this does not affect the function of the bike.

Battery Care & Storage

- **Charge battery before first ride and after every ride.**
- It is not necessary to fully discharge battery before charging. Lithium-ion batteries do not have any memory effect, so you can charge them at any time.
- Lithium-ion batteries must not be stored if fully discharged. If your battery is fully discharged, charge it immediately. Storing the battery if fully discharged for more than 1 day will damage the battery.
- **Store the batteries fully charged and then charge it at least once a month.** It is not necessary to leave the charger connected to the battery if stored for long periods. Just top the charge up every month. If batteries are not charged at least every month, the battery may be damaged and such damage is not covered under warranty. Disconnect charger after battery is fully charged.
- Store battery between 10 ℃ (50 °F) and 20℃ (68 °F) in a clean, dry place away from sunlight. Do not store with hazardous, corrosive or flammable substances. Do not expose batteries to heat or fire. Store batteries in fire-proof environment.
- Operating temperature range during discharge is 5℃ (41 °F) to 50℃ (122 °F). Do not leave the battery inside car, in direct sunlight or any other hot places. If battery is charged at temperatures lower than 5 ℃ (41 °F), the range of battery will be reduced.
- Do not disassemble, deform or modify battery.
- Do not connect the + and – terminals of battery with metallic objects. Do not store with metallic objects such as hairpins or necklaces as short circuits and burns may occur.
- Do not place into water, salt water and moisture.
- Do not throw battery or subject it to strong shocks.
- Inspect battery and terminals carefully every month for leakage, discoloration, cracks, damage, signs of melting or corrosion.
- If fluid leaks from the battery and gets into contact with your eyes or skin, wash affected area with clean water without rubbing your eyes or skin and visit a doctor immediately to reduce damage to eyes or skin.
- Never handle battery or charger if parts are wet. Dry it thoroughly before usage to avoid electric shock.
- Store out of reach of pets and children.
- Always handle carefully with 2 hands.
- If errors occur, stop using battery, consult manual or contact customer service.
- Discard batteries according to your local battery disposal guidelines.

WARNING! If a battery is stored for longer than 1 month without charging it, it may get damaged.

WARNING! Lithium-ion batteries may leak, ignite and burst if not handled properly!

Battery range

- Battery range is how far you can travel on one full battery charge.
- It depends on a lot of factors including weight of rider, weight of luggage carried on bike, the amount of pedalling, the level of pedal assistance selected on the display, the terrain (hills or flat), tyre pressure, brake adjustment and wheel bearings. It is impossible to provide an exact range for a battery.
- Riding the bike using high pedal assist levels will consume battery faster and the maximum distance per charge will be reduced.
- The more the rider pedals, the longer the distance from one battery charge.
- Battery are a consumable item and range deteriorates naturally over time and with usage. After some time batteries will naturally die and need replacement.
- **A new, fully charged 7Ah 36V battery on a bike with a 250W motor has a typical range between 14 to 35 km. This range estimate is not guaranteed and more or less distance can be travelled, depending on the conditions.**
- It is recommended to ride conservatively in the beginning. Familiarize your self with the range to avoiding running out of battery. Operating the bike without motor assistance requires pedalling with more effort pedalling and since electric bikes are heavier as compared to non-electric bicycles.
- To extend range avoid hills steeper than 15 percent in grade, pedal to assist the motor when going uphill, avoid sudden stops and starts and accelerate slowly.

LIMITED WARRANTY

and Terms and Conditions Summary
P L E A S E KEEP Y O U R PROOF OF PURCHASE

The following parts are warranted to be free from manufacturer's faults for a period of **1 year** (12 months) starting at the date of purchase: battery, motor, fork, headset, seat post, saddle, rims, kickstand, reflectors, wheel hub, controller, brakes, lights, bottom bracket, crank set, pedals, cassette, derailleur, shifter, LCD display, handle-stem, handlebar, charger. **2 years for the frame.**
This limited warranty does not cover normal wear and tear items including but not limited to tires, inner tubes, cables, or any damage, failure, or loss caused by improper assembly, set up, storage, or maintenance. This warranty covers normal use only. It does not cover damage to the the product due to misuse, neglect, accident or improper service. Commercial use, including but not limited to couriers, bike rentals, flyer deliver and food delivery will void the warranty. Any modification of the product without authorization of Leitner will void the warranty. Warranty is for the original purchaser only. Warranty is not transferrable to second hand users. It is the customers' responsibility to service and maintain the products regularly and to make sure that the product is safe to use before each ride. Leitner does not accept claims for repairs which were performed without our written approval. Leitner does not assume any liability to the extent permitted by the law. For full terms and conditions please visit Leitner.com.au. Leitner reserves the right to change warranty terms without notice.

Recommended Torque values in Newton Meter (Nm) unit

Unit conversion: 1Nm = 8.85 Inch-Pounds

- Bolts attaching brake lever to handle-bar: 7 Nm
- Bolts on handle-stem: 10 Nm
- Quick release lever attaching seat post to frame: 15 Nm.
- Brakes: calliper mounting bolts: 15 Nm, Centering bolts: 12 Nm, Cable anchor bolt: 7 Nm, Disc mounting bolt 8 Nm, Figure DB1
- Front wheel quick release: Measurement unit in pounds, not Newton Meter: between 12 pounds and 45 pounds
- Rear wheel nuts: 30-35 Nm, Figure RR1 and RR2.
- Pedals to crank arm: 40 Nm
- Crank arm to bottom bracket: 40 Nm
- Bolts on rear rack: 16 Nm
- Seat Rail clamp nut: 22 Nm, Figure S1.

Lubrication

Please find short instructions for lubrication below. Suitable grease and oil should be purchased from local bike shops. For further information please contact us. Wipe off any excess oil or grease. Make sure no lubricant is present on parts where it doesn't belong.

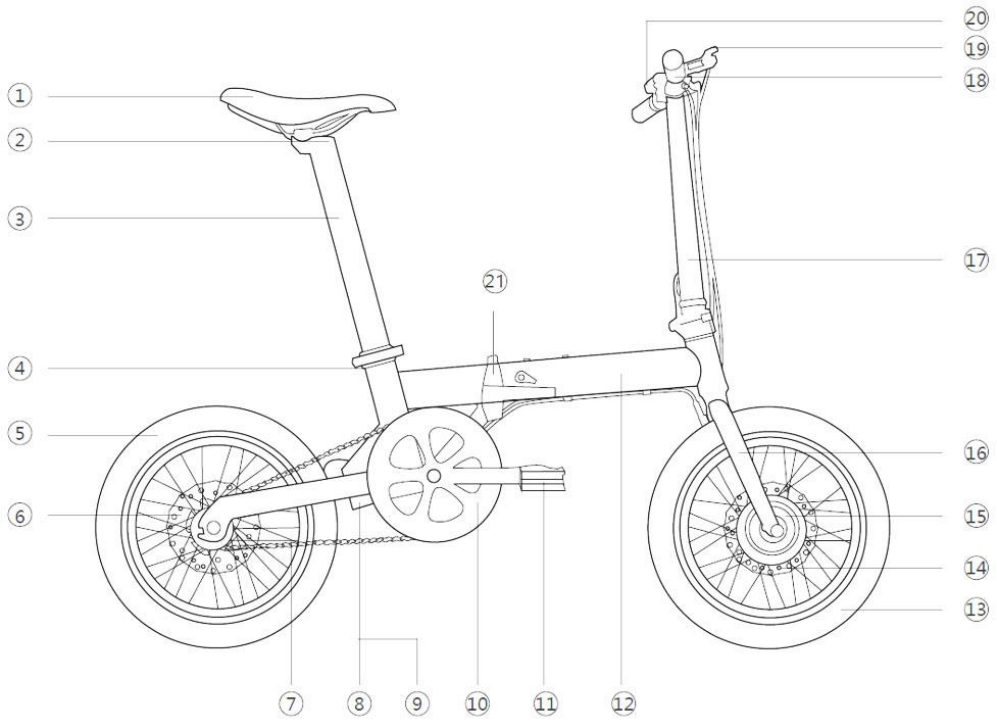
- **Chain: Every month.** Use a rag underneath chain to avoid oil spilling onto other parts and use the rag to wipe off excess chain oil after lubrication.
- **Quill type stem: Every year.** Remove stem then remove grease from wedge. Apply thin layer of grease to wedge and the part of stem which is inside frame. Re-install stem
- **Seatpost: Every year** remove seatpost, then remove grease from seatpost. Apply thin layer of grease to the part of seatpost which is inside frame. Re-install seatpost
- **Pedal threads on pedal axle where they insert into crank arms: Every year**. Refer to pedal installation section of this manual to remove pedals, then remove grease from pedal axle. Apply thin layer of grease to the threads. Re-install pedals according to manual.
- **Derailleur: Every month.** Apply grease to all pivot points including the pulley.
- **Brake lever pivots and brake arm fixing pivots: every 3 months.**
- **Quick release lever: Every year.** Apply light oil to lever where it turns inside the body.
- **Suspension fork: Every month** remove old visible grease and apply a thin layer of grease to visible part of fork where it moves up and down due to suspension.
- **Brake cable and gear cable: Lubricate when installing it**

The following parts should be lubricated by a local bicycle professional

- Bottom bracket bearings: Every year
- Direct connect stem: Every year
- Headset bearings: Every year
- Wheel bearings: Every year
- Oil inside Oil suspension fork: Every year.

DO NOT LUBRICATE: Rear suspension shock or pivots, brake pads, wheel rims, brake discs, pedal surface.

Parts of your electric bike



1 saddle
2 charging port
3 seatpost battery
4 seatpost clamp
5 rear wheel
6 rear disc brake
7 chain
8 controller
9 power interface 10 chain wheel
11 folding pedal
12 frame
13 front wheel
14 front disc brake 15 motor
16 front fork
17 folding head stem
18 handlebar
19 brake lever
20 LCD display
21 frame folding mechanism

Figure B1: Parts of an electric bike. Some parts may not be on your model.

Basic trouble-shooting guide

No	Faults	Possible Causes	Common Solutions
1	Bike does not work although there is power to Display	1)Brakes are engaged 2)Loose motor wire connector 3)Loose wire 4)Broken wire 5)Pedal assist sensor faulty	1)Disengage brakes 2) Check motor wire connector 3) Check all connectors 4) Inspect all wires 5) Replace pedal assist sensor
2	Bike does not work (no power to display)	1)Battery not installed correctly 2)Battery empty 3)Battery not switched on 4)LCD Display not switched on 5)Loose connections 6)Fuse blown	1) Install Battery correctly 2) Charge battery 3) Switch battery on 4) Switch display on 5) Check all wire connections 6) Replace fuse
3	Bike has reduced speed and/or range	1) Low batteries 2)Faulty batteries 3)Low tire pressure 4) Brakes dragging against rim or disc	1)Charge batteries for recommended time 2) Replace batteries 3)Inflate tires to recommended pressure 4) Adjust brakes and/or rim
4	Bicycle has intermittent power	1)Loose connectors 2) Loose fuse 3) Damaged wire	1) Check all connectors 2) Check fuse connector 3) Inspect all wires
5	Charger light does not operate	1)Power outlet faulty 2)Charger is not plugged to wall or battery properly 3)Charger light or charger is faulty	1) Try another outlet 2) Check all plugs 3) Replace charger
6	Charger completes charging in an unusually short amount of time	1) Faulty charger 2) Faulty battery	1) Replace charger 2) Replace battery
7	Strange noise from wheel and motor	1)High-pitched “ticking” noise due to loose spokes which disappears when wheel is off ground and spun by hand 2)Motor internal gears damaged 3)Motor damaged 4)Loose bolts	1) Adjust spoke tension 2) Replace internal motor gears 3) Replace motor 4) Tighten all bolts