

# CLASSIC. MID DRIVE



mid.  
city



x-city

Congratulations for purchasing a Smartmotion ebike!  
Please read this guide fully BEFORE using your electric bike.

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In the box you will find the following items:

1. Smartmotion electric bicycle
2. Battery charger
3. Bottle cage
4. 2X Pedals
5. Front mudguard
6. 2X keys for battery lock (2 frame lock keys Mid City)
7. Front light
8. Front wheel quick release axle
9. Elastic strap



Your electric bike is shipped 85% assembled. Follow these steps to get it ready and safe for you to ride.

### To Prepare

We recommend that you familiarise yourself with the bike parts before assembling. Gather all required tools. Be sure to work in a clean, dry space with plenty of room. You might wish to lay down a tarpaulin or old blanket to protect the bike during assembly. Please watch the balance when installing wheels.



**Do not activate the brakes until the bike is fully assembled. Squeezing brake levers while calipers have no disc rotor between them can damage the brakes.**

### 1. Unpack

- a.** Carefully lift the electric bike out from the carton (two people recommended for this task). Cut the nylon zip ties with suitable scissors and remove the foam protection from the bike.
- b.** Remove the front wheel and mudguard from the bike and put them aside. Carefully stand the bike upright, resting on its forks when installing wheels.



## 2. Assembly Instructions

### 2. Fork

**a.** Turn handlebar to align it with the forks correctly, then fasten the centre screw using the 5mm allen key to 5-8N.m. Tighten stem pinch bolts with 4mm allen key 9 to 10N.m.



**b.** Remove all four stem bolts, insert handle bars and re-insert bolts. Adjust bars to ideal angle and tighten to 5-6N.m.

To adjust the stem angle, loosen the 5mm bolt on the side of the stem. Adjust the angle and fasten the angle adjusting bolt to 17 to 18N.m.



### 3. Mudguard

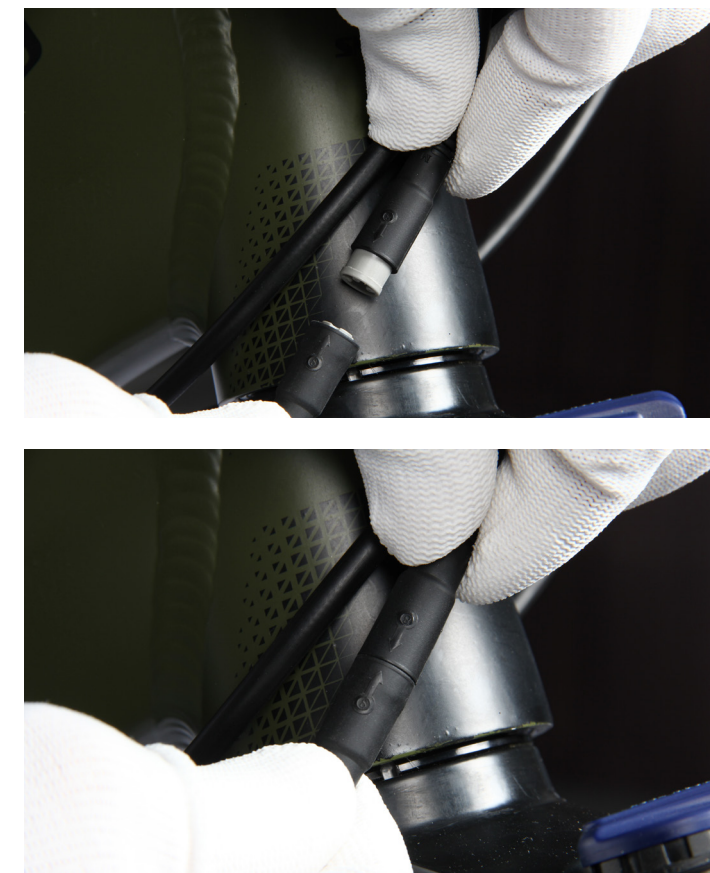
The front mudguard and front light should be intalled onto the fork. Remove the nut and washer from the bolt leaving the bolt in the fork. Slide the front mudguard mount over the bolt on the inside of the fork then slide the front light bracket and washer over. Screw the nut on the bolt and tighten. Then fasten the two mudguard stays to the forks. Finally connect the light cable.



## 2. Assembly Instructions

### 4. Power Connection

Finally connect the main cable exiting the frame near the headtube to the handlebar components cable, making sure the arrows align before pushing the connectors together.





## 2. Assembly Instructions

### 5. Seat

Release the seat post clamp lever and set the seat post height to the position which is suitable for you to comfortably reach the ground when you are sitting on the bike, then refasten the seat post clamp. The maximum height should be within the max height markings on the seatpost.



### 6. Pedals

Attach the pedals to the cranks, paying attention to the "L" or "R" marked on the pedal axles. Note: the pedals have opposing threads – screw in the left pedal counterclockwise and screw in the right pedal clockwise.



### 7. Front wheel

Assemble the front wheel quick release axle by pushing it through the hollow hub, making sure that one spring is on each side of the hub. Then screw on the end nut several turns. Next, carefully lift the bike front forks off the ground and lower the forks onto the wheel axle, being careful the disc rotor fits correctly into the disc calipers (this job is best with 2 people). Tighten the non-rotor side nut finger tight and try to close the quick release lever. Loosen or tighten the nut until it takes the correct amount of force to close the lever. It should be hard to close, but not so hard you cannot fully close it. It must fully close otherwise the wheel may come loose, causing serious injury. Note: if you are not well trained in cycle assembly, this procedure must be checked by a cycle technician.



3. Safe Riding Recommendations

- 1. Please observe traffic regulations, and don't lend your bicycle to anyone who is unfamiliar with it. The bicycle can legally only be used on the road by a person aged 14 years or over.
- 2. If you are in a country where wearing a cycle helmet is not compulsory, we still strongly advise you to always wear one. If you are unfamiliar with cycling, we also advise you to attend a cycle proficiency course prior to using it, or gain advice from your local Smartmotion dealer. Your ebike is not a toy and should be considered a serious mode of transport.
- 3. As with all bicycles it is important that you stay within safe limits. If you feel you are traveling too quickly for the road conditions you probably are, so slow down! High speed will increase forces in the case of an accident and increase the possibility of injury.
- 4. Test your brakes prior to using the bike every time you use it and remember the bike will not stop as quickly in wet or icy conditions as it would on a dry road.
- 5. Check the tyres, rims, pedals, stem, cables, chain, etc for general condition regularly.
- 6. A rider is very difficult for motorists and pedestrians to see at dusk, at night, or at other times of poor visibility. If you must ride under these conditions, check and be sure you comply with all local laws about night riding; follow the rules of the road. Take the following additional precautions: make sure that your bicycle is equipped with correctly positioned and securely

- mounted reflectors, wear light-colored, reflective clothing and or accessories (any reflective device or light source that moves will help you get the attention of approaching motorists, pedestrians and other traffic). Make sure your clothing or anything else you are carrying on your bicycle doesn't obstruct a reflector or light. Ride slowly when conditions demand you to do so.
- 7. If a rear child seat is fitted, before putting your child in, read the full safety instructions of the seat manual to check seat is installed correctly and child is fastened properly.
  - 8. You must not leave the bike unattended or use the kickstand to stand the bike without your support when a child is in the rear seat as the bike could tip over and cause serious injury.
  - 9. Make sure the rear suspension underside of your seat is out of reach of your child to avoid finger injury.
  - 10. Your bicycle must be returned to your servicing dealer or bicycle/motorcycle mechanic after one month or 200km of riding (which ever comes first) to re-tension the spokes. Then every six months or 1000km (which ever comes first) for a general service and thorough inspection. Failure to do this can void your warranty due to unnecessary wear.**

Pre-ride Checklist

- ☐ Please make sure the brake lever sequence is correct for your country before riding. In UK, NZ and Australia the left brake lever is for rear brake and the right brake is for the front brake. In all other countries it is the other way: left for front, right for rear.
- ☐ Check the tyres for any visible damage.
- ☐ Check tyre pressures are 40-60psi, and adjust if necessary.
- ☐ Check for any loose nuts, bolts, or fixings.
- ☐ Check brake functions, cable tension, pad clearance, etc.
- ☐ Check all electronic functions are ok (functions detailed later in this manual).
- ☐ Check the reflectors are in place and the lights are working (detailed later in manual).

Torque Settings

Check bolts are tightened according to the following recommendations before you set off for the first time.

- a. Seat pillar clamp nut/bolt 5N.M-8N.M
- b. Brake cable anchor bolt 5N.M

3. Safe Riding Recommendations

- c. Brake centre bolt 11N.M
  - d. Seat angle clamp bolt 24N.M
  - e. Crank bolts 46N.M
  - f. Gear shifter nuts 4N.M
  - g. Rear carrier nuts 8N.M
  - h. Mudguard bracket nuts 8N.M
  - i. Stem angle clamp nut 17-20N.M
  - j. Handle bar clamp nuts 5-6N.M
  - k. Seat tube clamp nut 4-7N.M
  - l. Rear wheel axle nuts 40-45N.M
  - m. Quick release front axle. Measured torque not typically used. Common industry practice is resistance at lever half way through swing from open to fully closed.
- For all other nuts, the torque depends on the nut diameter:
- |    |            |
|----|------------|
| M4 | 2.5-4.0N.M |
| M5 | 4.0-6.0N.M |
| M6 | 6.0-7.5N.M |

**Note: make sure axle nuts are always done up tight on both wheels as connections to the motor and the dropouts can be damaged due to the axle spinning.**

### 1. Gear Adjustment

It is natural for the gear cable to stretch when the bike is new and cause the gears to not change when you would expect.

To compensate for the cable stretch turn the adjustment barrel on the shifter half a turn in an anticlockwise direction.

Test the bike is shifting well or repeat the adjustment.

### 2. Lubrication

**1.1** Once a month lubricate all pivot points on your derailleur and the derailleur pulleys with suitable chain lube.

**1.2** Every three months lubricate the brake lever pivots, gears and chain with suitable oil.

### 3. Cleaning your electric bike

Warm soapy water and a cloth can be used to clean the frame of your bike, but care must be taken not to immerse any of the electrical components; they are rainproof but cannot be immersed in water. The motor can be cleaned with a soapy cloth, but also must not be immersed in water. The battery can be cleaned with a damp cloth, then dried afterwards. Note: in salty conditions it is essential to clean and lube your bike regularly.

### 4. Other Maintenance


















Your bicycle must be returned to your servicing dealer or bicycle/motorcycle mechanic after one month or 200km of riding (which ever comes first) to re-tension the spokes. Then every six months or 1000km (which ever comes first) for a general service and thorough inspection. Failure to do this can void your warranty due to unnecessary wear and tear.

Excluding the electric drive side of things, your Smartmotion bicycle is a normal bicycle, with normal components. Your dealer will be able to explain to you the general care and maintenance of the normal bicycle components. You should pop your bike in for a check-up after about a month's use as new gear and brake cables will stretch, then every 6 months after that.


















The electric drive system is maintenance free and has self-diagnostic codes that will be displayed on the LCD console (detailed later in this user guide) should anything go wrong. Again, speak to your dealer should any issues arise.



5. Main Specifications  
Mid City

 BATTERY	Rear rack mounted 36v15.6ah USB charge port.
 RACK	Heavy duty rear rack, with elastic for luggage.
 BRAKE	Tektro hydraulic disc e-brakes, with 180mm rotors.
 SECURITY	Integrated frame C-lock for easy security (locks the rear wheel).
 GEARS	Shimano 8 speed cassette 11-34 gear set, with Altus derailleur & shifter.
 FRAME	Aluminium low step, intergrated cable routing Centre mount stand.
 HANDLE BAR	Aluminium semi 'cowhorn' handle bars. Adjustable stem.
 FORK	SR Suntour XCM 80mm alloy suspension forks, tapered headtube.
 MUDGUARD	Polypropylene guards with heavy duty stays.
 TYRE	Schwalbe 27.5x2.0 Big Ben with reflective strip.
 RIM	27.5" double wall.
 DISPLAY PANEL	LCD console with 5 level Pedal assist. Active throttle in all modes. EU/AU 6KPH, NZ unrestricted.
 LIGHT	Integrated front and rear light powered from the main battery.
 SEAT	Selle-Royal comfort seat. Suspension Seatpost.
 CABLES	Marine-rated cable plugs on all components for simple and quick servicing/replacement.
 MOTOR	High torque mid-motor, 40T narrow-wide direct mount. Torque sensor
 WARRANTY	2 year warranty on battery and motor, 6 years on frame, 12 months other parts.

5. Main Specifications  
X-City

 BATTERY	Rear rack mounted 36v15.6ah USB charge port.
 RACK	Heavy duty rear rack, with elastic for luggage.
 BRAKE	Tektro hydraulic disc e-brakes, with 180mm rotors.
 SECURITY	N/A
 GEARS	Shimano 10 speed cassette 11-36 with Deore derailleur & shifter.
 FRAME	Aluminium low step, intergrated cable routing. Reinforced for offroad use.
 HANDLE BAR	Aluminium semi 'cowhorn' handle bars. Adjustable stem.
 FORK	SR Suntour XCM 100mm alloy suspension forks, tapered headtube.
 MUDGUARD	Polypropylene guards with heavy duty stays.
 TYRE	Schwalbe 27.5x2.35 Nobby Nic.
 RIM	27.5" with eyelets.
 DISPLAY PANEL	LCD console with 5 level Pedal assist. Active throttle in all modes. EU/AU 6KPH, NZ unrestricted.
 LIGHT	Integrated front and rear light powered from the main battery.
 SEAT	Selle-Royal comfort seat. Suspension Seatpost.
 CABLES	Marine-rated cable plugs on all components for simple and quick servicing/replacement.
 MOTOR	High torque mid-motor, 40T narrow-wide direct mount. Torque sensor
 WARRANTY	2 year warranty on battery and motor, 6 years on frame, 12 months other parts.

## 6. Do's and Don'ts

✓ **Do** treat your ebike like any bicycle you would want to last well... keep it stored somewhere secure and away from the elements.

✗ **Don't** treat your ebike as a dirt-bike! The motor and battery are weather proof, but not water-tight. It is ok in rain, but not to ford streams, etc!

✗ **Never** take your ebike on the beach as salt water and sand will drastically shorten the lifespan of many of the ebike's components (motor, gears, wiring connections, etc).

*Note: Your warranty is void if evidence of salt, sand, or water damage are present within the components. Important: If you live very close to the sea you must keep your bike indoors when not in use. This will save you \$\$\$ as your components will last longer.*

✗ **Don't** power up the throttle while the ebike is held stationary. Motor operation for more than a few seconds while the wheel is locked/stationary can damage the motor and controller.

**Important:** Your bike will arrive with the battery partially charged. You need to give it a full charge before ANY use. Smartmotion batteries have been precondition-cycled, so no need to do 3 full deep discharges as for some other brands. Just charge and go... then just top your battery up after each use (lithium batteries prefer shallow discharge). Then give your battery a complete discharge and full charge every 3 months or so to keep the cells well balanced.

*Note: The LCD battery display bars will dip under full load (on hills, etc). This is normal as running voltage drops under high load. To get an accurate battery reading, wait about 10 sec after the motor is not in use. The 8 step capacity lights on the battery will give you a more accurate idea (button on top rear of battery – more info later in manual).*

✓ **Do** take extra care on the road as you will be travelling faster than you normally do on a bike and your bike is now power-assisted, so will behave differently.

✗ **Don't** let others ride your ebike unless you have properly explained safe and appropriate use to them.

✗ **Don't** attempt to open the motor or battery should your system malfunction. This will void the warranty. Return it to the store you purchased it from. Do make sure your charger has free air movement around it as it will get quite warm.

✗ **Don't** use your charger outdoors. It is for indoor use only.

✓ **Do** top up your battery whenever possible. Lithium batteries actually prefer shallow discharge (the exact opposite of older types of batteries that have memory effects). Keeping your battery topped up between rides will prolong the life of your battery and give you more power too, as a full battery is better on the hills.

✓ **Do** disconnect your battery from the charger when it is charged. Leaving it connected permanently when not in use will shorten cell life.

✗ **Never** leave a fully discharged battery uncharged for more than a week... you will shorten the lifespan of your battery the longer you leave it in a fully

discharged state.

✗ **Don't** leave your battery for more than 3 months without top-up charging it.

*Note: A battery left for more than 3 months at a low voltage may suffer cell damage. This will not be covered under your warranty. It is to your advantage to properly look after your battery as it is the most expensive part of your ebike!*

**Important:** Though the risk of battery fire with charging Samsung or Panasonic 18650 cells is considerably lower than cheaper, unbranded cells (online data suggests about one in 40 million for the cells we use - i.e., you are more likely to get struck by lightening), it is still possible. Treat any charging lithium battery (including Smartmotion) as a potential fire risk (yes, this includes cellphones, computers too). If charging your battery while it is still docked into the bike simply make sure the bike (includes charger) is not on or leaning against a flammable surface. Same for charging battery off the bike, make sure the battery and charger is placed on a fire-rated surface (concrete floor, steel bench or shelf, etc).



**Lights**

When the lights are off the bike icon remains black.

**Power Meter**

Shows a scale of the amount of power your bike is consuming

**Torque/candence Mode**

If the tick is next to POWER this means it is in Cadence mode, if it is next to NORMAL it is in Torque mode.

**Odometer**

Displays the total distance the bike has travelled.

**Time**

Displays the time the bike has been running for the current ride.

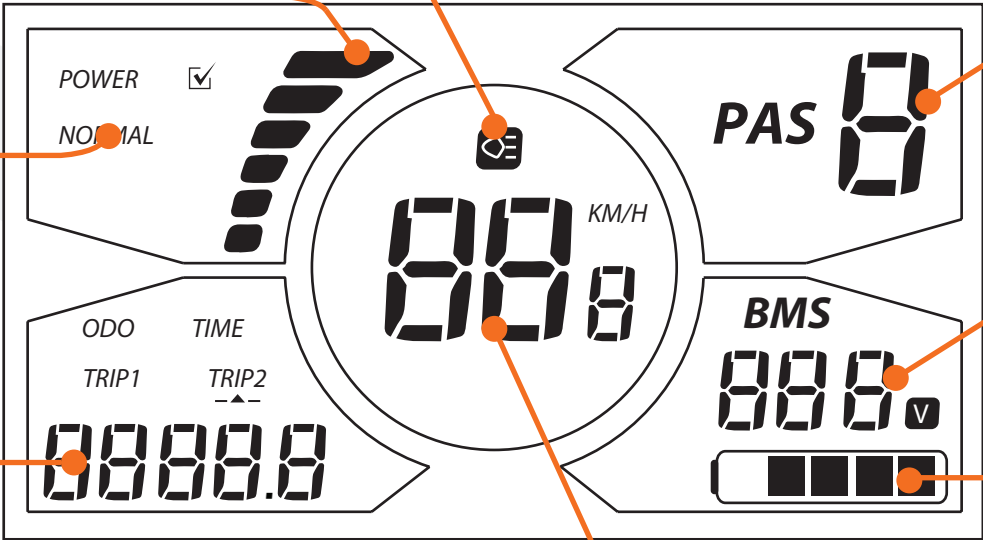
**Trip 1**

Displays the distance since the user last reset the meter.

**Trip 2**

Displays the distance since the bike has travelled since being turned on for the current ride.

*Note: The arrow indicates which meter is being displayed*



**Pedal Assist**

Displays the pedal assist level. Depending what country you are in, your throttle will have different functionalities.

**Battery Voltage**

The battery's running voltage is displayed on the screen. The voltage will drop while the battery is under load (motor running).

**Battery Indicator**

When the battery is full all five battery segments show. When the battery is very low, no segments will show and the outside edge of the battery frame will flash.

**Speedometer**

Large display of your speed.

## 8. Display Panel Controls

Your display is easily controlled with 4 buttons located on your handlebars.    





### Power On/Off

Press  to start the display and power up the bike.

To turn off, press and hold the ON/OFF for 3 seconds

*Note: the display will power off after 5 minutes without use.*



### Pedal Assist

Pedal Assist is controlled with the   buttons. Touch  to turn the assist up, and touch  to turn it down.

The power ranges from 0~5. You will notice that within one turn of the pedals the motor will start working, assisting you to ride the bike by adding


power to the rear wheel. This is the standard or pedelec mode. To continue using the pedelec mode you must keep turning the pedals; if you stop the motor will stop and the bike will slow to a halt. If you start pedalling again the motor will start again. Depending what country you are in, your throttle will have different functionalities. In EU and Australasia, it will work to 6kph unassisted, then only function above that if you are pedalling. In other countries it will be fully active whether you are pedalling or not. If the bike is turned on, always be careful when mounting the bike that you do not twist the throttle, as the bike can accelerate away from you and cause injury. Note: your brake levers have sensors that will automatically cut motor power when you use the brakes and restore it when you release the brake levers.

### Turning Lights On/Off


With the display on, press  to turn on the bicycle lights (and the lcd backlight). The light symbol also shows on screen. Press  again to turn off the bicycle lights.

*Note: do not hold  as the display will turn off.*

### Information Display


Press  to switch the display information. The order is: Riding time, ODO, Trip

### Walk Mode

Press and hold down  for 3 seconds to enter into the mode of power assist walk. The bike will go on at a uniform speed of 6km/h and display **6km** on the screen.

## 8. Display Panel Controls



### Torque and Candence Mode

Toggle between Torque and Candence modes by pushing  twice quickly.

### Set Operations

Hold  for 4 seconds to enter setting interface.

Press (don't hold)  to scroll through menu options.

Press  or  to adjust the parameters.

Hold  for 2 second to save and quit.

### 1. Reset Trip Meter

Hold  for 4 seconds to enter settings interface.

Choose option 1, click  to reset the trip meter.

Hold  for 2 seconds to save and exit.

## 8. Display Panel Controls

### 2. Wheel Size

Select the suitable value to ensure the accuracy of display about speed and mileage.

Press **+** or **-** to select parameter, hold **SET** for 1 second to save and exit.

27.5" Big Ben (Mid City) = 2133

27.5" Nobby Nic (Xcity) = 2224

### 3. KPH and MPH

Select MPH or KMH for the speed and mileage, display will be the currently selected units display.

Press **+** or **-** to select parameter, hold **SET** for 1 second to save and exit.

### 4. Speed

To set a maximum assist speed.

Press **+** or **-** to select parameter, hold **SET** for 1 second to save and exit.

### Error Code Display

If there is something wrong with the electronic control system, the display will show the error code automatically (see below for codes). Should you receive an error code, contact your local dealer for advice.

- 2 CONTROLLER FAILURE
- 3 MOTOR STALLED
- 4 LOW VOLTAGE
- 5 BRAKE SIGNAL INCORRECT
- 6 MOTOR HALL SENSOR ERROR
- 7 THROTTLE SIGNAL INCORRECT
- 8 MICROPROCESSOR ERROR
- 9 OVER VOLTAGE- WRONG BATTERY
- A. COMMUNICATION ERROR
- F. DISPLAY COMMUNICATION ERROR

**Before contacting service center check all plugs for loose connections.**

### Suspension Seatpost

The bike comes with a suspension seatpost.

For optimum performance you need to set the preload so when your weight is fully on the seat the spring is depressed about 30-40%. Test the travel, then, if you need to adjust, remove the seatpost and, with a 5mm allen key, screw the shock up into the seatpost to increase spring pressure, or back down to reduce it.

Your dealer can also set this up for you.

The bike has been fitted with a quick release seatpost collar to facilitate changing the riding position.

It is important that the nut on the collar is tightened so the post will not move in the bike frame.

Make this adjustment with the quick release lever in the open position.

Adjust the seat to the correct height and close the lever. When you sit on the saddle there should be no vertical movement at all in the seat post below the suspension.

## 9. Frame lock and Seatpost



### Frame Lock

The Mid City has an integrated frame lock. Your new bike will come with a set of keys for the battery lock and a set of keys for the frame lock. Make sure you keep a master key from each in a safe place so you can always get more copies made.





## 10. Battery Instructions Mid City & XCity

### Charging your Battery

You can charge the battery on or off the bike. The charge terminal is on the front of the battery. Plug the charger into the wall and switch on. Turn on the battery then lift the rubber cap and plug in your charger. The charge light on the charger will show red, and turn green when the battery is fully charged.

**⚠ Plugging a live charger into the battery while it is turned off can create a spark.**

*Note: be careful to properly reinstall the rubber cap before re-using your bike.*



### Battery Removal

To remove the battery, insert the key into the lock on the front left side of battery rack and turn the key, then pull the battery (using the underside finger groove) to slide it out the back of the rack.

*Note: the lock is not automatic, so key is required to reload the battery... simply slide it back in until it locks, making sure you are correctly on the slide rail first.*



### Power On/Off

On the centre rear of the battery is the power on/off switch. When pushed in, the led inside the button will light, indicating the battery output power is live. It is good practice to turn the battery off when leaving your bike (press the button so it clicks out, and the red led fades). This also makes your bike safer as cannot be turned on from the handlebar console.

*Note: if you leave the battery on, but do not use the bike, it will enter sleep mode after several hours and power down (red light will go out). To reactivate the battery, push the button to 'click it out', then push again to click it back in again, and the led will light up, indicating the battery is live again. Note: when charging the battery off the bike, always turn the power off before redocking to the bike (if battery power is on there will be a spark as the terminal reconnects to the bike, which causes damage to the battery socket and reduces conductivity).*



### Connections

All ebike components (throttle, brake sensors, controller, etc) on the Smartmotion bikes have isolating marine-rated plugs, so, should you damage a component, replacement is easy. Take the bike to your local dealer and they will order a replacement pair

# 10. Battery Instructions

## USB Charging Port

The Smartmotion battery has been updated with a USB 2.0 charging port. Use this to charge your phones and other USB devices. It has a 1.0 amp max output. Important: the rubber cap for the USB 2.0 terminal MUST be properly reinstalled after USB charging, otherwise moisture can get inside the battery and damage the inner components. Warranty is void if evidence of water ingress via USB port is present.



## Capacity

You can check the capacity of your battery by pushing the capacity button on the top rear of the battery.  
*Precondition: The power button was already turned on ( Red LED was lit as the picture shows ).*



# 11. Warranty

## Warranty

Your Smartmotion bike is covered by the following extensive Warranty

### Battery

2 years (warranted to still supply at least 60% of rated capacity after 2 years)

### Motor

2 years

### Frame

6 years (frame structural integrity – not including general wear and tear)

### Other Components

1 year (not including consumables; cables, tyres, hand-grips)  
Only use genuine replacement parts available through your local dealer.

## Exceptions to Warranty

1. Damage resulting from misuse, not maintaining the bicycle, or not following the guidelines within this user guide. Accidental or deliberate damage.
2. Failure to charge the battery within a 90 day period.
3. Damage due to private repair or alteration by user or unauthorized service centre.
4. Failure to produce invoice or proof of purchase.
5. Failure to meet the six-monthly/1000km service schedule.

12. Service Checklist

Check for damage

- ☐ Frame & Fork
- ☐ Rims
- ☐ Cables & Connections

Lubricate

- ☐ Chain
- ☐ Derailleur
- ☐ Seatpost

Adjust and Tension

- ☐ Spokes\*
- ☐ Gears
- ☐ Seat
- ☐ Reflectors & Lights
- ☐ Handlebars, Stem, Grips
- ☐ Brakes
- ☐ Cranks
- ☐ Wheel Axles
- ☐ All Fasteners

\*Spokes to be tensioned to 130Nm

Model: \_\_\_\_\_ Dealer: \_\_\_\_\_

Serial Numbers: \_\_\_\_\_ Purchase Date: \_\_\_\_\_

6 Weeks/200km

Date: \_\_\_\_\_

Shop: \_\_\_\_\_

Mechanic: \_\_\_\_\_

6 Months

Date: \_\_\_\_\_

Shop: \_\_\_\_\_

Mechanic: \_\_\_\_\_

13. Service Record

12 Months

Date: \_\_\_\_\_

Shop: \_\_\_\_\_

Mechanic: \_\_\_\_\_

24 Months

Date: \_\_\_\_\_

Shop: \_\_\_\_\_

Mechanic: \_\_\_\_\_



# REASON

# TO RIDE