# User Manual Pennon 2017



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# What's in the box?

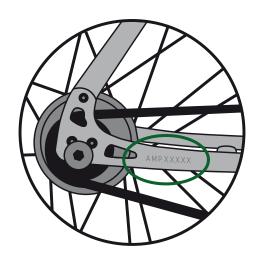
The bike will arrive at your doorstep in a big cardboard box. Inside this you will find:

- The bicycle
- A toolbox with the necessary tools for assembly and maintenance
- Ownership card
- Pedals
- Charger
- \*Optional: ABUS Bordo Lock and the lock keys



# Frame number

The frame number is on the right side of the bike on the chainstay, next to the rear dropout.



# **Assembly**

So why the huge box? To make the final assembly a breeze. Just follow these steps and you will be out and riding in no time.

Unwrap

Unwrap the cardboard and plastic wrap packing. Do not use sharp items as you may damage the paint of the bike.

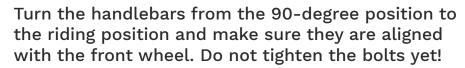
**Tools** 

Open the toolbox and pick up the 6mm and 5mm hex keys.

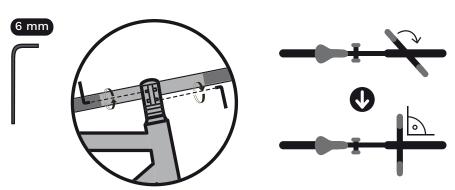
Loosen stem bolts

Use the 6mm hex key which you will find inside the toolbox to loosen the side bolts of the stem.

Turn the handlebars

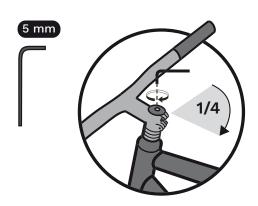






Headset adjustment

Now take the 5mm hex key and lightly tighten the top cap bolt on the handlebar stem. This will make sure the headset will not have any play in it. Careful to not overtighten as this will cause the headset to not spin freely.

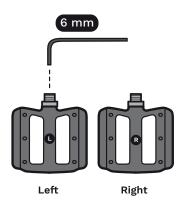


Tighten stem and headset Now take the 6mm allen key once again and tighten the same stem bolts you loosened 2 steps back. These will need to be tight. Turn your handlebars left

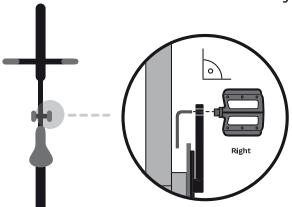
# **Assembly**

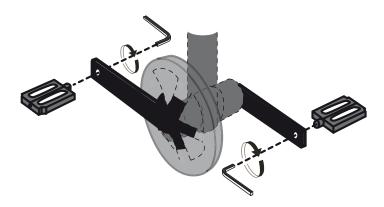
and right and make sure they spin freely. If it feels a bit too tight then loosen the stem bolts and just slightly loosen the top cap. Tighten the stem bolts once again and make sure it feels good.

#### **Pedals**



Unwrap the pedals which you will find in the smaller cardboard box. You can see a **6mm hex** wrench insert in the pedal axle. The pedals will have a **R** and **L** sticker/ marking on the pedal axle. This corresponds to the side the pedal will go to. The R pedal goes on the chainwheel side and the L pedal goes on the non-chainwheel side. By using the hex key tighten the pedals by turning the hex key clockwise (facing towards the bike on the right side) for the right and counter clockwise (facing towards the bike on the left side) for the left side. Pedals need to be tight so make sure you put some force into it.





#### Install front basket

**Note:** this only applies if a front basket is included in the order. Your order should arrive in 2 parcels. One will include the bike and the basket will be in a separate one. Attaching it is easy as we have pre-assembled the hardware and you will just need to attach the basket itself.

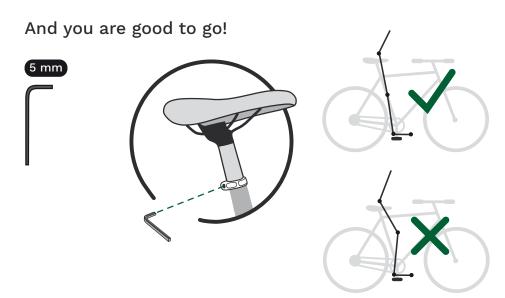
- 1. Unwrap the basket from the cardboard box.
- 2. Take the **4 mm hex key** and unscrew the nuts on the basket attachment plate. 3. Unscrew the bottom basket attachment plate located on the bottom side of the basket.
- 3. **Note:** this only applies if the light set is also ordered.
- 4. Attach the front light mount between the baskets underside and the bottom attaching plate. Plug in the light socket.
- 5. Tighten the 4 bolts and make sure your basket sits secure.

# **Assembly**

Adjust the seat height

Take the 5 mm hex key and adjust the perfect seat height

- 1. Place the bike in a way that allows you to support yourself against a wall when sitting on it.
- 2. Put one pedal in its lowest position.
- 3. Hop on and try to reach the pedal with your heel.
- 4. You have the perfect seat height when you are able to place your heel on the pedal with an almost fully stretched leg.



# Power on the bike

Turning the bike on is simple. Just press the button on the user interface, located on the left side of the bike.

Turning the bike on

Turning the bike on is simple. Just press the button on the user interface, located on the left side of the bike.

Rear light modes

Another cool feature of the rear light is that by pressing the top led you are able to change the light modes from Constant, blinking or "Knight Rider".

Charging

Charging the bike is similar to charging a laptop. Just hook the magnetic charger plug to the charging socket located on the user interface and let it to charge. Once the led on the charger turns from red to green it has been fully charged

## Power on the bike

#### Assist modes

The bike has two assist modes which can be fully customised with the Ampler Bikes app. You can switch between these modes with the app or via the user interface button. Press it down and hold it as for turning on the lights but just a bit longer (for at least 3 seconds) until it turns orange. Now after releasing the button it will blink once if it changes to assist mode 1 or twice if it changes to assist mode 2.

#### Turn the lights on

To turn on the lights press the user interface button and hold it for a second until the button goes green. Now after releasing it the lights will turn on. You can switch between on and off by doing this again. The bike will remember the last setting, so the lights will be on when you leave them on next time you power the bike.

#### State of Charge

The user interface button also acts as a battery charge monitor. The led colours according to the state of charge.

0–10% Blinking red

10-50% Transition from red to yellow

50-75% Transition from yellow to green

75-100% Green

Customise your riding experience with the app In order to fully customise your riding experience please download the Ampler Bikes available for Android and iOS.

# **Ampler Bikes app**

To fully customise your riding experience please download the Ampler Bikes available for Android and iOS.

You can download the app for IOS from the App store, for Android (Android 4.3 onwards) in play store.

Download the app, stay close to your bike, switch on the Bluetooth, pair your handy with your bike and log in. The Ampler smartphone application lets you fully customise your riding experience with the Ampler e-bike. Here's some of the examples you can do:

# To connect the bike with the app

- 1. Download the Ampler app
- 2. Register with your Facebook account or e-mail
- 3. Pair your bike with your phone over a Bluetooth connection





#### Customise

You have the option to change the motor parameters from the smartphone:

- motor power-increase or decrease your acceleration
- max assist speed the speed at which the electric assist stops helping you
- assist level how much the motor assists you in proportion to your input

Or switch the lights on/off or to "lights only" mode.

### Stay informed

- Check your battery range
- Receive updates about your bike's electronics
- Get the latest Firmware
- Contact Ampler for troubleshooting and servicing

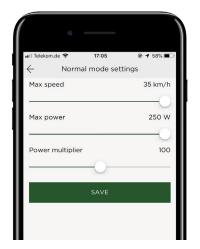
## Navigate and track

- Navigate with built-in maps\*
- Track your speed and power while riding
- Record your trips and share with friends

\*Continued use of GPS running in the background can dramatically decrease your phone's battery life.

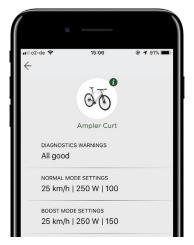
# **Ampler Bikes app**

#### Customise



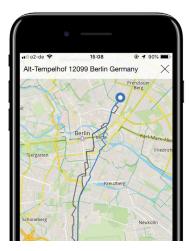
Adjust the motor power and max. assist speed

#### Stay informed



Stay informed about your bike's electronics

#### Navigate and track



Navigate with built-in maps

# **Maintenance**

Bicycles are technical yet sensitive creatures that need a little bit of love, attention and care every now and then. Maintaining your bicycle regularly will keep it riding (and riding well) for a lot longer and will give you more range compared to a bike which has empty tires and running brakes. It's a lot like maintaining a car—you check some things on a daily and you take it to professional service for a check-up and maintenance after a certain number of kilometres.

Take care of your bike and have the bike maintained regularly in every 3000 km or at least once a year. The actual needed maintenance interval can vary depending on your riding habits, road quality and weather conditions.

Maintaining your Ampler bike is just like maintaining a regular bicycle and all professional bike shops can carry out the maintenance of our bikes.

Clean your bike regularly

- Cleaning your bike will help to quality and keep the dirt and dust from getting into the engine and bottom bracket.
- Use soap, water and a variety of sponges and brushes to thoroughly clean the bike

## **Maintenance**

- The power panel of the bike is washable and waterproof. Now and then clean (non-metallic tool) and lubricate the charging port with a multi-purpose oil (for example multi-spray).
- Avoid using pressure washers, as the pressure driven water will get dirt, sand and dust particles inside tiny compartments, causing rust and problems later down the line.

#### Check the tyres

- Check the tyre pressure regularly. You can always check the recommended tires pressure noted on the side walls of the tires.
- Keeping the tires inflated to the recommended pressure will keep the battery range high, protect the rim and tire from damages.
- Look out for tire wear. Depending on how and where you ride your bike, the tyres can wear at a different pace. If you see that the tread looks worn out, change your tyres.
- If it gets icy, get some winter tyres we can give you some suggestions for which ones work best the different models.

#### Check the chain

- Check the chain tension if it has slackened over time (it looks saggy), get it adjusted. If you feel you are not right for the job, you can easily get it done in your local bicycle shop.
- Replace he chain before the wear is reached to 0,75%
- Making sure your chain is lubed will prevent unexpected and premature wear to the drivetrain.
- If the chain feels a little dry, clean it with a rag and then add some chain lubricant. Spin the pedals around a couple of times to spread the lubricant evenly.
- A carbon belt drive does not need any oil, however needs to be cleaned after riding in dirty conditions with water. You can apply a thin coating of dry silicone spray to the tooth side of the belt if necessary.
- Avoid using the lubricant on brake pads, rotors or rims. Spray is not recommended, use liquid oil.

#### Check the brakes

- Check the brakes regularly they should be cleaned and adjusted.
- Over time the disc brakes get less efficient at breaking. To stay safe, get your brakes inspected, serviced and changed if necessary by a professional

## **Maintenance**

workshop.

- Squeezing your brakes down should feel solid and consistent – the lever should not touch the handlebar. If you feel that your brakes aren't effective, get a professional to check them out.
- Take a good look at the brake pads on your bike every few weeks to see how they are holding up.
   There shouldn't be any dirt or oil on the pads. Often times, the brakes will make a howling noise if there's oil on them.
- Check the brake hoses for wear and tear if you can see that the house is crumbling or broken in any place, get it checked immediately by a professional.

#### Keep the bolts tight

- After first couple of weeks check the bolts and nuts.
  If there is too much play in the bolts, tighten them
  up a little bit and see if you can identify the cause
  of the looseness. Don't tighten the bolts too far.
- Re-tighten the bolts on the handlebar if needed.
- Check the crank bolts (8 mm hex key, not included), tighten them if needed.
   Re-tighten the pedals, using the key that came with the bike.
- Re-tighten the bottom bracket eccentric bolts.

# Motor and battery maintenance

- If you're not riding and charging your bike consistently, charge it every five—six week or so to maintain the state of the battery. Due to Bluetooth the bike has a little power consumption even when switched off.
- Do not keep the bike in blazing sun or freezing cold over the extended period if it is not being used.
- Store the bike in a dry place over the winter it doesn't need to be heated, however below 0 is not recommended.
- Charging the battery should take place indoors (above 0 degrees) or/and in dry environment. Do not keep the charger outside.
  Beware that when you bike in the cold, the range and battery capacity will be lower than average. This is completely normal, and it won't affect the battery's overall state or lifespan.
- When you finish cycling in the cold, make sure that the bike has time to warm up a little before you charge it.

### **Maintenance**

# Professional maintenance schedule

Maintaining your Ampler bike is just like maintaining a regular bicycle and all professional bike shops can carry out the maintenance of our bikes. We are working on opening a service station in Berlin for our German customers for the 2018 season.

The first professional check-up should take place after the first 500 kilometres – this will ensure that everything is working as it should.

After that, have the bike service regularly every 3000 km.

If you ride often and don't count the riding distance, make sure to take it to a professional bike shop for maintenance at least twice every season, ideally even three times

- Before the start of the season
- Mid-way through
- · At the end of the season.

This way, all the important aspects like brake oil levels, and the condition of brake pads and tyres get checked, and the internal parts like the crank set and wheel hubs get cleaned thoroughly.

That's it—while it's a long list of things to look out for, it's good to remember that maintaining your bike often is important for both safety and ride experience reasons.

#### **Have fun riding!**

# **Electric system support**

Ampler hardware (the battery, controller and sensors) are inserted into the down tube. This keeps the bike clean, the weight down, and the components safe from outside elements such as the rain and cold temperature.

The hardware doesn't need any special maintenance.

# **Electric system support**

However, we recommend to keep your bike Firmware up to date and calibrate your bike sensors from time to time. This will help to keep your bike in a good shape for longer time.

#### Software restart

Software restart clears up your bikes memory and starts it fresh. It helps to resolve any problems connected to the hardware, and any communication problems between the bike and the mobile app.

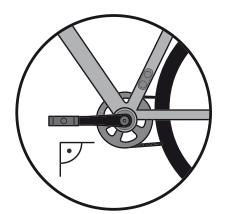
#### To reset your bike

- 1. Hold down the power button for 20 seconds. This will reset and turn off your bike.
- 2. Turn on the bike again from the power button.

### Torque sensor calibration

Ampler bikes are pedelecs and they have sensors regulating the motor, measuring the speed of pedalling and your own input power. Therefore, the bike is easy to use and the motor power is controlled according to your own pedaling force. This creates a safe and smooth riding experience.

We recommend to calibrate your bike's torque sensor **every 3–6 months**, or in case the bike feels over- or underpowered. Torque sensor calibration is done via the Ampler app:



- 1. Adjust the left crank forward, parallel to the ground.
- 2. Connect the Ampler app with your bike via Bluetooth
- 3. Open 'Vehicle' setting from the menu
- 4. Click on 'torque sensor calibration'
- 5. The LED blinks in orange
- 6. The LED will turn green once the calibration is successful

If you ordered your bike in 2016 or beginning of 2017, your bike has an older Firmware. Please follow these steps:

- 1. Adjust the left crank forward, parallel to the ground.
- 2. Switch on the bike
- 3. Hold the button down for 9 seconds (use the stopper if needed) and let go it will change colours

# **Electric system support**

until it will blink dark orange.

4. The LED will blink shortly in orange and then turns green again

Re-adjusting the sensor signal helps to improve your bike's responsiveness and power to its original figures.

#### Firmware update

Every Ampler has a motor controller – the so-called brain of your bike that connects all the elctronics and makes sure everything runs smoothly. The motor controller is managed by Firmware (the software that controls the hardware). To guarantee the best riding experience, we recommend keeping your bike's Firmware up to date.

Firmware update is done via the Ampler mobile app. If your bike is connected to the app, you will get a notification in your app about the new available Firmware. Please go to the **Vehicle settings** to update your Firmware.

Before starting the update, make sure:

- You have the latest Ampler app version
- You have internet connection on your phone
- · Your phone's battery is not running low
- The battery level of the bike is more than 25%
- You have registered and paired the app with your bike

The update is done over Bluetooth in several steps. All the steps are almost identical, and they need to be done in a row. This means that after completing the first update, if there will be a second update still available – you will also need to complete this. The updates should take about a minute to complete.

# Troubleshooting the Firmware update

If you experience any problems with updating the Firmware, please follow troubleshooting instructions below.

#### Flow A

- 1. Turn Bluetooth OFF
- 2. Turn Bluetooth ON
- 3. Wait 10 seconds for connecting

# **Electric system support**

If there is no connection, start flow B. If the connection is established, check if there is another Firmware update available and complete that one as well.

#### Flow B

- 1. Close the Ampler app on the background
- 2. Go to Bluetooth settings
- 3. Find the Ampler Bike Bluetooth ID under your Bluetooth devices and click the "Info" button. Press "Forgot This Device"
- 4. Turn Bluetooth OFF and then back ON under settings
- 5. Open the Ampler app
- 6. Pair your bike with your smartphone
- 7. Check if the update is available and complete the update

If a new firmware version becomes available in the future, you will be notified within the app. Meanwhile you can check the firmware status in the Vehicle view – if the firmware is up to date, you'll see the information in the lower part of the screen in the vehicle view.

# Charger safety manual

For your protection, please read this manual carefully before operating the Ampler battery charger.

The charger is designed for indoor use only. Do not expose it to rain, snow or expose the device to elevated temperatures.

Only use the genuine Ampler charger designated for your Ampler e-bike. Do not use this charger for other batteries. Also, do not use other battery chargers for your Ampler e-bike.

Store the charger in a cool and dry place.

Always check that the magnetic charging plug and connector are clean. Any electrically conducting particles at the connection can damage the charger or the electrical system of the e-bike.

#### **Important**



# Charger safety manual

During charging the charger can become moderately hot. Always place the charger in a well-ventilated place and keep it away from combustible materials.

Children should be supervised by an adult when using the product.

This charger must not be disposed with domestic waste and should be disposed at an authorized place for recycling electrical appliances.

# **Specifications**

Sizes	Small 48 cm, Medium 55 cm, Large 59 cm
Fenders*	Bamboo Aluminium
Headset	Ergotec sealed with steering lock
Stem	Ergotec Pike II
Handlebar	Ergotec city cruiser Mas-Nb ti
Grips	Single-speed 46/16
Seat	Shimano M315 hydraulic disc brakes
Crank set	Double wall 41 mm, 36H
Bottom bracket	Sealed bottom bracket with a torque sensor
Belt	Gates Carbon Drive CDX with Gates sprockets
Kickstand	Stable Pletscher stand
Gear shift	Shimano 3 speed SG-3D55 hub with a shimano 3 speed shifter
Brakes	Shimano BR-T445, silver
Pedals	MKS Sylvan Touring, silver
Rims	Mach1 630 disc, 36-spoke
Tires	Schwalbe Road Cruiser
Max speed	25 km/h (user configurable to 35 km/h)
Range	40–100 km depending on terrain and assist mode
Battery	48 V 5,8 Ah Samsung Li-ion battery hidden within the frametube

# **Specifications**

Motor	48 V 250 W front hub motor (500 W peak)
Control mode	Precise pedal torque sensing motor control system
Connectivity	Smartphone connectivity with option to change motor settings
Charger	2 A battery charger with Rosenberger magnetic plug