















# USER MANUAL

## SIDE-BY-SIDE/SIDE-BY-SIDE P20













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## 1 FOREWORD:

Congratulations on your new PF bicycle. We hope that you will enjoy riding it for many years to come! Please read carefully this User and Operating Manual. To be able to take maximum advantage of your bicycle, it is important that you adjust it properly and that you follow the advice we have for you in this User and Operating Manual.



### *Riding your PF bicycle*

**IMPORTANT:** For safety reasons, it is important that the bicycle be serviced at all times by a person with professional training and insight into bicycle technology and function. Take particular note of Section 9 *Maintaining your bicycle*.

PF mobility has an extensive range of accessories that can contribute to improving the use and experience of your PF bicycle. Our accessories are listed on our website, but a selection of them is also presented under Section 8 *Accessories*.


If you have any further questions about the use of your PF bicycle or this Manual, you are more than welcome to contact us at:

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DK – 7480 Vildbjerg  
Tel.: +45 99 92 06 00  
Fax: +45 99 92 06 05

Mail: [info@pfmobility.dk](mailto:info@pfmobility.dk)  
[www.pfmobility.dk](http://www.pfmobility.dk)

With reservations for misprints and changes to this User Manual.

<b>Product details:</b>	
HMI - Number	
Frame number	
Lock number	
Controller keys	
Battery number	
Delivered on	



Fill in this table as per the specifications in your invoice.

The frame number is also the bicycle's unique ID number. The frame number is placed on the side of the stem – see image.



## 2 INTRODUCTORY INFORMATION:

### 2.1 Use

Your PF bicycle has been designed for people with functional disabilities – whether physical or mental.

These include problems with balance in the muscular system, etc.

The bicycle is designed for use on the common public roads and bicycle paths. Always ride the bicycle on an even solid surface and adapt your speed to the conditions at hand.

Comply with the provisions of the Road Traffic Act. PF mobility may not be held liable for accidents resulting from improper use or for damage resulting from lack of maintenance.

### 2.2 Accessibility

We recommend that people with cognitive functional disabilities, visual impairments or reading disabilities, who cannot read and understand this Manual, turn to the dealer where they bought their PF bicycle. The dealer will review the manual and reply to any questions they may have.



### 2.3 Adjustments

To benefit fully from your new PF bicycle, we ask you to carefully peruse this Manual. Take note of the sections regarding settings and adjustments. Your dealer will help you with any questions about specific settings. Even if the bicycle is made of quality components, it still needs maintenance. You can easily make many of the minor adjustments yourself. This will both extend the service life of the bicycle and make the bicycle ride true enjoyment.

### 2.4 Equipment

There is a large range of accessories designed for your bicycle. See Section 8 regarding accessories or visit our website.

### 2.5 Transportation

Fasten the bicycle securely if you need to transport it in a car or in a trailer. When you use hose clamps and similar, make sure that they do not jam any chains, wires and cables. During transportation, your bicycle may be exposed to moisture, dirt and other aggressive substances. This can affect the electrical system, which is why you must cover the bicycle with plastic or tarpaulin when you transport it in an open trailer.

#### **During transportation in a car or trailer:**



- Remove the battery and store it in a cool and dry place.
- In humid weather, protect the bicycle by covering it with plastic or tarpaulin.



Note: Do NOT ship the Li-Ion battery as an ordinary package. Li-Ion batteries are considered hazardous goods and should be marked in accordance with the instructions in the ADR convention (UN3840).



## 2.6 Cleaning and maintenance

Your bicycle needs day-to-day maintenance.

We recommend that you have an annual maintenance check performed by a bicycle professional or PF mobility. A review of maintenance checkpoints and methods of cleaning is available under Section 9 *Maintaining your bicycle*.





## 2.7 Auxiliary electric motor

For bicycles equipped with an electric motor, kindly refer to the *E-Bike and Pedelec* section. Sections containing important information for you as an owner of an e-bike are marked in

the heading with  

These sections contain warnings you should have a special focus on. Make sure you abide by these.

The following symbols are used in this Manual:

	Warning: This symbol warns about a hazard to your health and points at a potential risk of injuries.
	Note: Indicates possible material damage
	Important: Contains general instructions for safe use and special technical features or directions.
	Information: This symbol refers to tips or special information.

## 2.8 Technical specifications

Model: Side-by-Side P20	Data
Length – cm	190
Width – cm	100
Weight (w/o accessories) - kg	64
Maximum user weight – kg	2 x 125
Maximum load – kg	275
Extra weight w/ motor – kg	11
Inside leg (min.) – cm	55
Access height – cm	17
Wheel size – “	20
Max speed – km/h	25



## EPAC and Pedelec models

<b>Controller</b>		
Operating voltage	36V	
Max amperage	Depending on version and use, 10 to 14A	
<b>Motor</b>		
Rated voltage	36 V	
Motor output	250W (DIN EN 60034-1)	
Peak momentum	Up to 48 Nm	
<b>Battery</b>		
Type	Lithium-Ion battery	
Nominal voltage	36 V	
Capacity	11 Ah, 396 Wh – standard 15,6 Ah, 562 Wh – option	
Charging period (empty battery)	Approx. 6 hours for the 396 Wh version Approx. 8 hours for the 562 Wh version	
Temperature limitations	Normal operation	-10 to 45 °C
	Charging	10 to 35 °C
	Storage	-10 to 45 °C

## 3 BEFORE USING THE BICYCLE FOR THE FIRST TIME:

### 3.1 Statutory provisions

The bicycle is equipped from the factory with statutory equipment pursuant to the Danish Executive Order regarding Design and Equipment, etc. of Bicycles:

We recommend that the bicycle is always fitted with lights as per the applicable legislation. Consult PF mobility or your dealer.

Even if riding with a bicycle helmet is not compulsory by law, we strongly recommend that you always wear a helmet.

It is your responsibility to make sure that defective parts are replaced so that the bicycle remains in lawful condition and thereby safe to ride at all times. PF mobility recommends that you only use original spare parts that ensure that the bicycle meets the applicable legislation.





### 3.2 Preparing the bicycle

The bicycle is delivered assembled from the factory. If the bicycle has been received from a carrier/forwarding agent, it may be necessary to adjust and fasten properly the handlebars and the seat. See Section 2.3 *Adjustments*.

If your bicycle has been delivered by a consultant from PF mobility, they will review all necessary adjustments together with you. You are subsequently always welcome to contact your dealer or PF mobility for any additional help or instructions.

## 4 RIDING YOUR PF BICYCLE

To get as much riding joy and benefit as much as possible from your PF bicycle for many years, it is important that you use the bicycle properly.



You can ride the bicycle on different surfaces. PF mobility recommends that you ride on even solid surfaces (preferably asphalt or slabs).

The bicycle is not designed for riding in rough terrain or on a soft surface as this can overload the structure and the frame or the electrical system.

### 4.1 Riding instructions

#### Avoid:

- engaging the brakes at a high speed as this involves a risk of skidding and overturning;
- passing over holes and tracks as this can cause you to lose your balance and overturn with the bicycle;
- forcing kerbs – use the ramps instead. If this, nevertheless, is necessary, get off the bicycle and pull the bicycle up or down over the edge. If you have a motorized version you can use the auxiliary motor's help function. See "Use of the throttle " page 20.

#### Adapt your speed:

- when riding in rough terrain. The bicycle will behave differently in such conditions, which is why you should adjust your speed to avoid unpleasant and outright dangerous situations;
- in bends. If you go around a bend at too high a speed, you risk overturning;
- to the weather and other conditions. Riding on wet and slippery roads poses a particularly high risk, which is why you should ride carefully and at a reduced speed – in particular in curves and bends as well as when riding downhill.

#### Note that:

- the bicycle is wide – watch out for kerbstones, roadsides, chicanes, people and other obstacles;



- the bicycle can make undesired movements while you mount or dismount it. ALWAYS use the parking brake when you park the bicycle and, in particular, when you mount or dismount the bicycle.

If you are also carrying luggage / wheelchair / walker, make sure that it is securely fastened. You can find the right accessory to ensure secure transportation and fastening of your bicycle in the section about accessories.

## 4.2 Before taking your bicycle out for a ride

Check daily, before each ride:

- That the bicycle is in a perfect condition;
- The tyre pressure;
- That the light and statutory reflectors are in order
- The following brakes: Handbrake in front, handbrake at the back as well as foot brake (assuming the model has a foot brake);
- Parking brake
- That the handlebars are properly fastened;
- That the seat is properly fastened;
- That there is no gap in the wheels;
- That the chains are lubricated and adjusted;
- That the bicycle is fully charged (if it is an E-Bike / Pedelec).



## 5 SAFETY INSTRUCTIONS

### 5.1 Wear and tear of wheels and tyres

You should perform regular (weekly) checks of the bicycle's tires. If you see any hair cracks starting to form on the side of the tire, replace the tire. New tires can be ordered from PF mobility or your dealer. We recommend that you always use puncture-proof tires. The bicycle is delivered by default with tires with high puncture protection and reflective edges.

Also check the wheel rims for cracks or ruptures. Bicycles that ride on very rough / uneven terrain are more receptive to wear and tear.



Defective wheel rims can lead to accidents and should therefore be replaced immediately!!!

### 5.2 Warnings

Take off any loosely hanging clothes and put on something that fits snugly and cannot get caught in rotating parts such as wheels and chains before you mount your PF bicycle.

Do not use your PF bicycle if any of its safety guards, e.g. wheel guards, chain guards or the guard over the rear axle are defective or missing.



Take extra care when adjusting the seat or armrests as inattention may cause you to jam your fingers. Only make adjustments when the bicycle is completely still.

## 6 SETTINGS AND ADJUSTMENT:

The following pages contain instructions for the daily adjustment options of the PF bicycle. Wherever you need to use tools, it is important after the adjustment to tighten all bolts, etc. you have loosened.

### 6.1 Handlebars:

Adjust the angle of the handlebars by loosening bolts "1" and then place the handlebars in the desired position. Tighten up bolts "1" with a torque of 10 N.m.

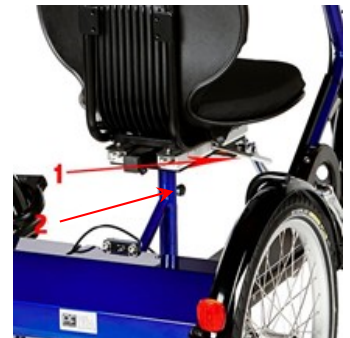
Adjust the height of the handlebars by loosening bolt "2" until the little plate lets loose of the cogs. Then you can change the height. Tighten back the bolt until the plate locks into the cogs.



### 6.2 Seat:

You can regulate the distance from the seat to the pedals. by lifting release arm "1" underneath the seat frame.

You will need to loosen the nut "2" if you need to dismantle or adjust the seat vertically. When raising the seat height, you **MUST** fit the original spacer pipe to ensure that the seat remains at the required height (optional equipment).



There is a screw on the opposite side of the release arm that makes sure that the seat cannot slide off the rails. Check regularly that this screw is tight.



#### **Do not raise the seat above the marking.**

- use special spacer / extension pipe for the seat if you need to raise the seat (optional equipment – see list).

### 6.3 Brakes

All of our bicycles are fitted with at least 2 brakes.



The left handbrake handle operates the V-brake on the front wheel, whereas the right handbrake handle operates the brake disc fitted to the differential gear on the rear side of the bicycle. The bicycle can also be fitted with a foot brake (gear hub) or a freewheel wherever a foot brake is not an option.

The parking brake is fitted to the handlebars. Turn it up to activate the brake. To disengage the brake, give the handle a gentle pull until the lever falls down the low mark.

The brakes need continuous adjustments. Turn the long adjusting screw marked in the picture counter-clockwise and fix the check nut farthest in towards the brake handle. Extensive adjustments of the V-brake should only be conducted by a professional.



## 6.4 Gear

Your PF bicycle is delivered by default with 7 gears made by Shimano. Twist the rotating handle "1" with the thumb and index finger to switch gear. Keep the pedals still when you change gear while riding.

It is necessary to make subsequent adjustments of the gear. You can do this, as follows: set the rotating handle "1" to gear 4. Then adjust the gear with the adjusting screw "2" until the yellow dots "3" on the gear hub are parallel.



## 6.5 Chain adjustment

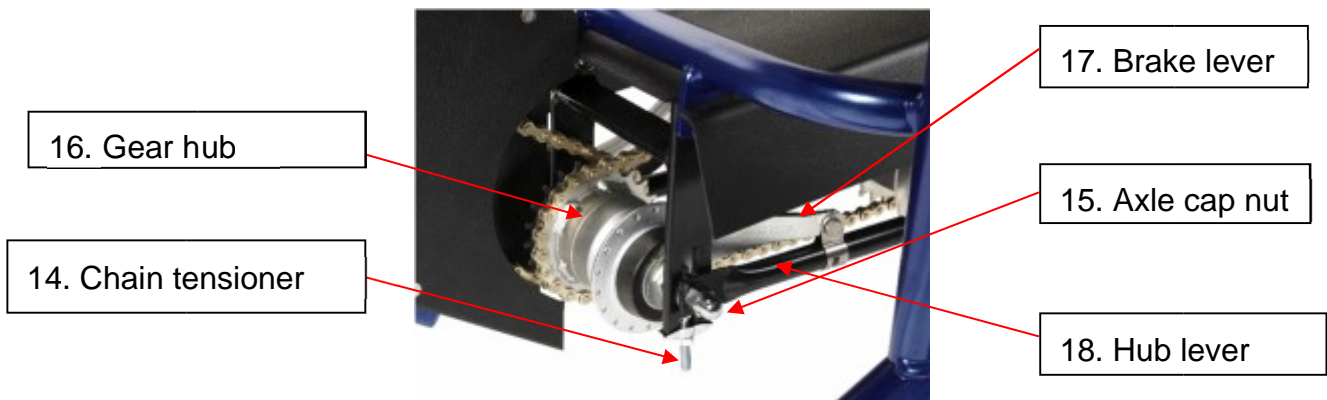
The tricycle is equipped with 4 sets of chains:

1. Chain from crank to front axle on pilot side.
2. Chain from crank to front axle on passenger side.
3. Chain from axle to gear hub.
4. Chain from gear hub to rear axle.



13. Chain sprocket

**Chain from crank to front axle:** Unscrew the nut on the chain sprocket (13.) by turning it counter clockwise. Push the chain sprocket (13.) to the left or right to loosen or tighten the chain and then fasten the nut to keep the chain sprocket (13.) in this position.



16. Gear hub

14. Chain tensioner

17. Brake lever

15. Axle cap nut

18. Hub lever

**Chain from front axle to gear hub:** Unscrew the hex domed nut (15.) and remove the clickbox for the gear shifter on the other side of the gear hub (16.). Then unscrew the nut on the threaded rod equivalent to (15.) on the same side as the clickbox. Loosen or tighten the nuts on both chain tensioners (14.) to the requested position. Then tighten both nuts (15.) and put back the clickbox.

**Chain from gear hub to rear axle:** It is normally not necessary to tighten this chain as it is adjusted when adjusting the chain from crank to gear hub. If it needs adjustment, it can be done by unscrewing the axle cap nut (15.) and the nut on the brake lever (17.). Remove the hub lever (18.) from the axle and twist it clockwise to tighten the chain and counter-clockwise to loosen the chain.



When it is adjusted put the hub lever (18.) back on the axle and tighten the axle cap nut (15.). NB! There is a hub lever (18.) on both sides of the gear hub (16.) and both must be adjusted to keep the chain running smooth..



## 7 ELECTRICAL SYSTEM AND MOTOR

Peruse this chapter carefully if your bicycle is equipped with an auxiliary electric motor. Save these instructions and remember to bring them if you take the bicycles to other repairmen.

Non-compliance with these instructions can lead to personal injuries or damage to the bicycle or its components.

PF mobility may not be held liable for any damage or loss resulting from failure to comply with these instructions.

### 7.1 Electric bicycle and the concept “pedelec”?

Electric bicycles from PF mobility are equipped with the so-called pedelec system. On a pedelec, the electric auxiliary motor is only activated when the pedals are pushed. A 'speed sensor' at the pedals detects when the pedals are pushed. The bicycle may now be started and the speed and force with which the bicycle is pushed is regulated in five auxiliary levels. Alternatively, the bicycle may be pushed forward by turning the throttle while simultaneously pedalling. See the more detailed description of both principles below.

The auxiliary motor of the bicycle is only active at speeds up to a maximum of 25 km/hour. However, your bicycle may be set to disconnect the auxiliary motor at a lower speed - see your order confirmation. The programmed “max” speed also appears from the programming label of your bicycle, which you can find on the control housing.



The throttle also works as start assistance or “walk assist”. This means that the bicycle may be started - without simultaneously pedaling – by turning the throttle, after which the bicycle starts and increases up to a maximum of 6 km/hour, after which the pedals must be pushed. This is a useful feature if, when starting, the pedal position is less optimal and/or if you need to push the bicycle while walking beside it. The current speed, both during the use of the walk assist function and, of course, during normal cycling, is displayed in large numbers in the middle of the screen:







## 7.2 Safety instruction



### **Risk of breakdown of load-bearing parts.**

A defective motor can cause damage to load-bearing parts and bearings.

In turn, this can cause you to crash or fall.



- Stop using the bicycle at once and contact without delay PF mobility or a bicycle expert in order to replace the defective motor.



### **Hazard of fault or fire**

Defective electrical connections or cables can cause short circuits. This can cause electric faults or, in the worst case scenario, fire!



- Replace any ruined or defective electrical connections and components.



**Hazard of unintended operation of the motor and other rotating parts** The motor can be activated inadvertently if the electrical system remains "on" while your bicycle is undergoing maintenance. Clothes can get caught into the rotating parts and cause personal injuries.



- Always remove the battery from the bicycle before you start any work on the bicycle.

## 7.3 Hazards for special user groups

Children and adolescents are allowed to use electric bicycles on the public road network, but only under the supervision of an adult.

The bicycle should be parked out of the reach of children or persons who are not capable of handling the specified risks.

Riding an electric bicycle is different than riding an ordinary bicycle. This is why we recommend that you practise in a place without traffic before you ride in traffic.

## 7.4 Battery

A Li-Ion battery combines a low weight with a very high current capacity. This makes it rather compact and contributes to keeping the weight of the bicycle low.

Your PF bicycle comes with a "rear-rack" battery with 396Wh capacity as standard, but you can choose to purchase a larger battery with a capacity of 562Wh.



"Rear rack" battery

Only charge lithium-ion batteries using the provided charger. You can significantly increase the service life of the battery by ensuring proper recharging and preventing the battery from discharging completely. To prevent depletion and help you as owner of the bicycle, we have taken these factors into account in the enclosed charger. For the same reason, you may only use the charger to charge the battery of your bicycle.





### Fire hazard

Incorrect recharging of the Li-Ion battery may cause the battery or charger to heat substantially. This can cause a fire!

- Always use the accompanying charger when recharging the battery. The charger is NOT suited for outdoor use.
- Before you connect your charger to the mains, you must ensure that the mains voltage corresponds to the permitted voltage of the charger. The voltage is stated on the rating plate of the charger.
- Only charge the Li-Ion battery in a dry, non-flammable environment.

Mechanical damage to the Li-Ion battery or the charger can cause malfunction and short-circuit. In turn, this can cause fire.

- Any form of manipulation of the battery or charger is strictly forbidden.
- **Immediately** replace the battery if ruined and dispose of it safely, e.g. by handing it over to a municipal receiving station.



### Risk of electric shock

Chargers with defective cords or connectors can cause an electric shock.

- Never plug defective connectors or cables to the mains. • Immediately replace any defective components and cables.
- Protect the charger against penetration of water and moisture. If water has penetrated into the charger, pull out the connector and have the charger inspected by a professional.
- Condensation can form if the charger has been exposed to a sudden temperature increase. If this happens, you must wait until the charger has the same temperature as its surroundings before you connect the charger to the mains. Always store the charger wherever it is used.
- Only use the charger to charge the supplied Li-Ion battery. Other use is not permitted.

## 7.5 Charging the battery

Be sure to fully charge the battery before you use your bicycle for the first time. The battery can be charged while it is installed to the bicycle. The battery can also be detached and charged in a more appropriate location.

1. Open the dust cap and insert the charging plug.

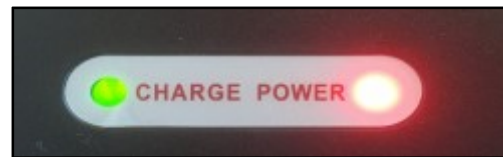


The plug on the charging cable is a 3-pin plug and marked with the numbers 1, 2 and 3 – corresponding to the same numbers on the battery. As such, the charge and the battery cannot be incorrectly connected. However, always be careful and never use force when connecting the two.

2. Connect the charger to an electrical outlet.
3. While charging, both LEDs are illuminated in red. When charging is complete, the LED on the left turns green and the power may be switched off.



*While charging, both LEDs are illuminated in red.*



*When charging is complete, the LED on the left turns green.*

If you remove the battery to charge it, then please observe the procedure:



1) The battery is locked onto the slide bar. The key is in horizontal position.

4) Turn the key through approx. 1/8 counter-clockwise revolution and the key may be removed. The battery is still locked onto the rail.

2) To remove the battery, turn the key further counter-clockwise, while pushing in the movable locking pawl.

When the key can no longer be turned counter-clockwise, the locking pawl is disengaged and the battery may be removed. Remember to use the handle!



**In order not to risk breaking the slide part of the battery holder, make sure that the battery is completely free of this before you lift it up!**



The charging time is approx. 6 hours for full charging of an empty 396 Wh battery and approx. 8 hours for the 562 Wh version. The charger then switches to maintenance charging, which ensures that the battery does not discharge. If the battery is not fully charged, the bicycle's range will be reduced.

Do not charge the battery at temperatures below 10 °C or over 35°C, in direct sunlight, next to radiators and similar. When the temperature outside is below 0°C, we recommend that you charge your battery in a heated room.

If you do not use the bicycle for long periods of time, you should remove and store the battery in a dry, frost-proof place. Make sure to fully charge the battery before storage and again before you are about to use the bicycle.



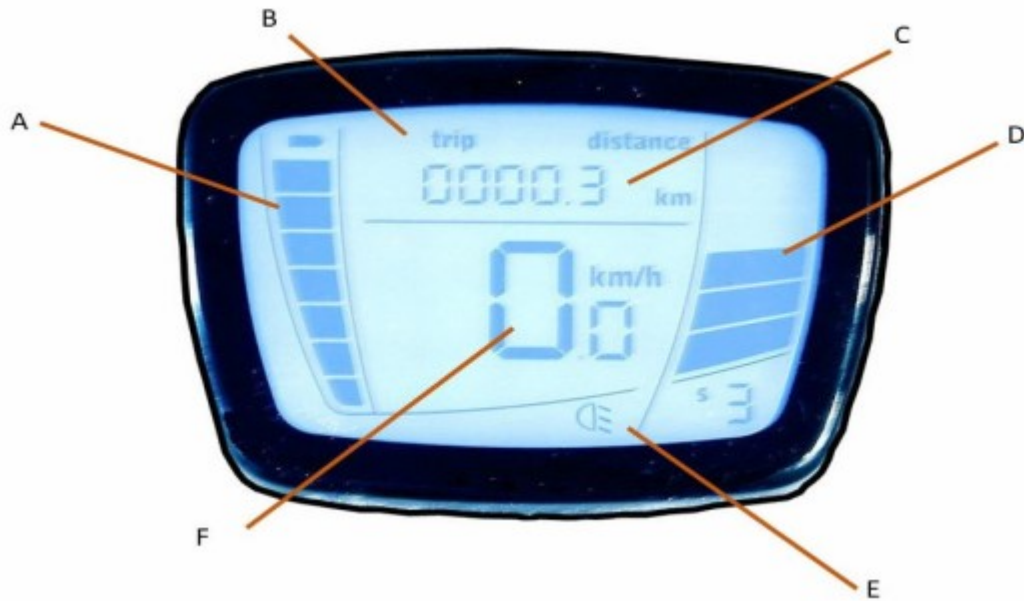
Every time you install the battery on the bicycle, make sure that the casing is locked.

## 7.6 Using the electric bicycle

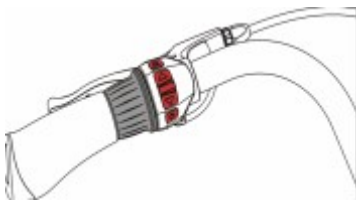
### 7.6.1 Instructions for use

#### Operating the electric bicycle

Your electric bicycle is equipped with a display and an operating switch.



- A. Battery level – indicates the remaining charge.
- B. Trip counter. Shows the number of kilometres since the last reset. To reset the trip counter: See section 7.6.7.
- C. Cyclometer – shows the total distance cycled.
- D. 5-step assist level ("assist level"). This setting determines the current output level of the electric motor.
- E. Indicator for lights on mudguards and – if purchased – the integral light system.
- F. Speedometer.

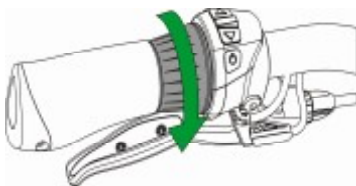


On the handlebars, you find the operating switch with five buttons:

**Light, Arrow up, Menu, Arrow down, On/off**



All operation of the functions is performed through the use of these buttons.



The throttle is worked by turning the innermost section of the handle.



### On the use of the throttle:

The throttle has a so-called “booster effect“. This means that, when the throttle is activated, the throttle takes over the assist function. Once the throttle is release again, you will automatically return to the starting position (the assist level).

When you do not push the pedals, the throttle may be used to activate the walk assist function thereby assisting in pushing the electric bicycle, e.g. up an incline.

When you push the pedals while simultaneously activating the throttle, you can variably adjust the speed up to the max. speed.

The throttle is suitable for e.g. cycling in dense traffic where you want to be able to react quickly as well as for brief accelerations such as when overtaking slow-moving cyclists.

The motor shuts off at a speed of max. 25 km/hour.

#### 7.6.2 Switch the electrical system of the bicycle on and off



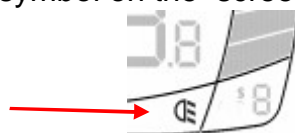
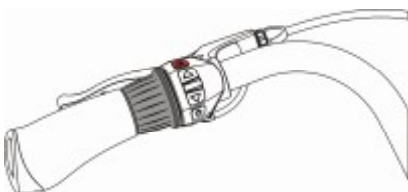
Briefly press the on/off button to switch on the screen. To turn off the system, press and hold the same key for two to three seconds.



**Note!** It is **ONLY** possible to start the bicycle with the **battery key in horizontal position in the battery lock!** (must not be turned).

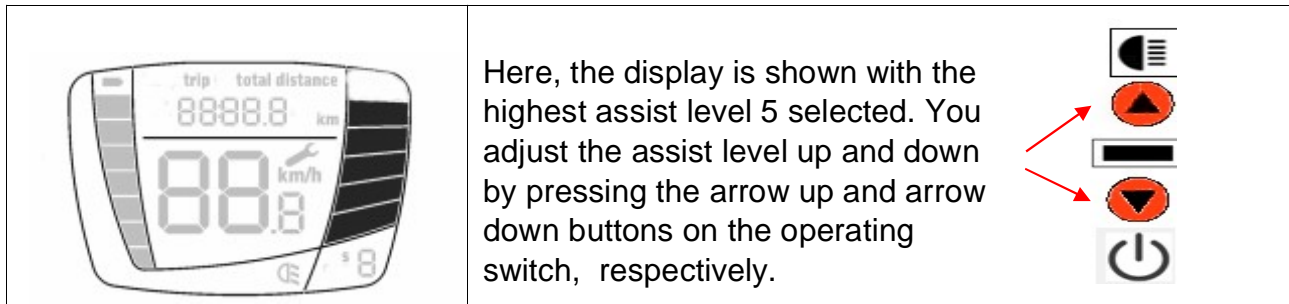
#### 7.6.3 Lights

If the bicycle is supplied with the integral light system, this is switched on by pressing the topmost light button on the operating switch. By continuously pressing the light button, you are also able to adjust the brightness of the display. Note that, when you press the button to turn on the integral light (if supplied), the display will automatically switch to a dimmer setting which is comfortable when cycling in the dark. Note that the small light symbol on the screen appears when the light is on:



#### 7.6.4 Adjusting the assist level

The electrical system may be adapted and adjusted to five different assist/output levels – depending on your needs. These levels will make the motor perform more, the higher the output level you select. You can see the selected and current output level in the right-hand side of the display:



Regardless of the assist/output level selected, the pre-programmed max. speed of the auxiliary motor stays the same – see section *7.1 Electric bicycle and the concept “pedelec”*?

#### 7.6.5 Battery level indicator

In the left-hand side of the display, you can always see how much battery charge is left. The scale has seven levels or “blocks”. Seven solid-coloured blocks, as indicated below, tell you that the battery is fully charged and a single block indicates that the battery is



almost depleted.

If there are no blocks in the display, the battery is depleted and the system will soon shut down. After that, you will not be able to use any of the electrical functions of the bicycle. You will only be able to use the electrical functions of the bicycle once you have recharged the battery. Lack of battery power may cause error code “08” to be displayed.

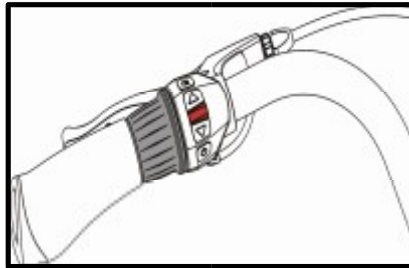


#### **WARNING:**

Make sure that the battery is sufficiently charged to ensure that you also have enough power for your home trip.

### 7.6.6 The menu button

When pressing the menu button on the operating switch:



... you can change the cyclometer display. One illustration shows the current distance cycled (trip counter) and by pressing the menu button, the total distance cycled is displayed.



### 7.6.7 Resetting the trip counter

The trip counter may be reset by pressing down the menu button for approx.. three to four seconds.





## 8 ACCESSORIES

You can buy additional accessories and equipment for your PF bicycle. Get in touch with your dealer or PF mobility if you want to know more about your options.

### Foot supports:



Foot plate 5 sizes



Pedal w/ toe clip



Pedal w/ toe clip and side support



Foot plate w/ calf support



Pedal w/ straps



Training pedal



Pedal extender

### Seats and belts:



Arm rest



Swivel seat



Seat w/ inclination



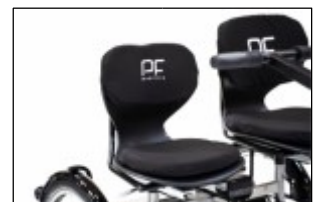
Harness



H-harness w/ holder



H-harness w/ holder and neck support



Junior seat



Seat cover / rain cover





Other accessories:



Extra thread basket at the back



Top box



Holder for walker



Holder for walking stick



Bike cover



Foot pump

## 9 MAINTAINING YOUR BICYCLE

### 9.1 Important

**WARNING – Risk of malfunction in the event of incorrect or missing maintenance.**



Incorrect or missing maintenance of an electrically operated bicycle can cause faults and damage to electrical and mechanical components! In this worst case scenario, this can cause you to crash and suffer a personal injury.

- The electrical system may only be maintained by a professional.



**Hazard of unintended operation of the motor and other rotating parts**

The motor can be activated inadvertently if the electrical system remains "on" while your bicycle is undergoing maintenance. Clothes, etc. can get caught into the rotating parts and cause personal injuries.

Always remove the battery from the bicycle before you start any work on the bicycle.

Provided that they are both used as described and intended in this Manual, the electric motor and the battery are maintenance-free.

Have a professional conduct a safety check of the following items every 1,000 km:

- Intact and secure fastening of cables and components
- Review and testing of the complete electrical system.
- Safe use of the battery

### 9.2 Daily check

As mentioned above in Section 4.2 *Before taking your bicycle out for a ride*, you should check:

- Brakes and parking brake
- Chains
- Tyres and wheel rims
- Light and reflectors
- Battery condition

Your bicycle is equipped with a **parking brake** that is designed to prevent the bicycle from making any undesired movements during parking. This is particularly important when you mount or dismount the bicycle. You should test the parking brake and make sure that it operates adequately every day. We recommend that you always use the parking brake when you get off the bicycle. Adjust the brake when it does not operate adequately or





as intended. For adjustments, see Section 2.3

### *Adjustments.*

Test the **foot brake and handbrakes** daily to ensure that you can bring the bicycle to a halt quickly and safely.

Note that you can experience longer braking distance in humid weather.

### **Chain**

To be able to use your bicycle safely and without any risk, you must check that the chain is properly adjusted and lubricated.

For the proper adjustment of brakes or chains, refer to a professional – see also Section 2.3 *Adjustments*.

### **Tyres and wheel rims**




We recommend that you check daily – or at least weekly – that the tyres are properly inflated and not worn. The correct tyre pressure is 4-5 bar.

Since the bicycle uses rim brakes, you should also check the wheel rim of the front wheel for wear and tear and cracks. For more information, refer to Section 5.1.

### **Light and reflectors**

Check that the bicycle's reflectors are whole and clean and that all statutory reflectors are fitted to the bicycle. White in front, red at the back, yellow on the pedals and white again on the tyres (standard equipment) or yellow on the spokes.

If you ride the bicycle at night, before you mount, you must check that the **light** of your bicycle works.

 Before you leave home, you must also check that the **battery** is charged – see Section 7.5

### **9.3 Periodic maintenance – and first service check!**



In order to be in a good and safe mechanical condition, your bicycle is in need of periodic maintenance. The maintenance inspection should cover, as a minimum:

- Brakes
- Tyres and wheel rims
- All moving parts and bearings, crank, pedals, etc. (clearance and mobility)
- Chain
- Gear
- Electrical system and battery
- Frame
- Tightening of bolts, screws and nuts



The inspection should be conducted by a professional. We recommend a maintenance inspection every 1,000 km or at least once a year. You can buy an inspection from PF mobility through your sales consultant.



### Service check

**A service check must be carried out two months after the purchase of each new bicycle, cf. Section 9.3.**

The gear, wires, bolts, chains, spokes, etc. of each new bicycle need some time to "settle", which is why it is necessary to check carefully and tighten / adjust individual parts.

This inspection must be conducted by a professional!

Lack of maintenance / service inspection can cause hazardous incidents and void the warranty.

## 9.4 Cleaning

### Important information for electric bicycles.



- Remove the battery before you start cleaning your bicycle.

You can clean the bicycle with a moist – but not wet – soft cloth and water with a bit of detergent added, e.g. bicycle shampoo or similar.



### Never use high-pressure cleaner or water jet.



Do not use a hot water or steam cleaner, a high-pressure cleaner or strong water jet / spray to clean your bicycle. If water penetrates inside, it can ruin the electrical components, motor bearings and other moving parts of your bicycle.

## 9.5 Lubrication



Clean and lubricate the chain of your bicycle, as needed. The more often you use the bicycle, the more often the chain will be in need of lubrication. Riding in humid and wet weather increases the need for lubrication. We recommend that the chain be lubricated at least once a month and more often in the winter season. You can buy a suitable detergent and lubricant from your bicycle professional. As a rule, none of the other moving parts is in need of regular lubrication, but should only be inspected periodically by a professional and lubricated, as needed.

## 9.6 Tightening of bolts, etc.



It is important to ensure that all critical components of the bicycle are attached properly. These parts need to be tightened with the proper torque. The required tightening force is stated in the following table:



Component:	Torque (+/- 5 Nm)
Wheel nut, front	45 Nm
Wheel nut, back	45 Nm
Stem – height	Indicated on the stem
Exocentric disc (front sprocket)	70 Nm
Rear beam	35 Nm
Rear axle – bearing	20 Nm
Saddle	40 Nm

## 9.7 Repair and replacement

To guarantee your safety, PF mobility recommends that you only use original spare parts. This will also allow you to benefit the most from the use of the bicycle. PF mobility has spare parts on stock and can deliver parts from one day to another. Contact your dealer or PF mobility for assistance and delivery of parts as well as replacement, if relevant.

## 10 DISPOSAL



Do not dispose of electronic and electrical components as ordinary household waste as this is prohibited by law. You as a user should therefore make sure that all electronic and electrical components are disposed of via an approved public waste management scheme, through a dealer or by PF mobility.

By complying with this and recycling or using an approved return scheme, you will contribute to making a real difference and help protect the environment.



Dispose of electrical components in accordance with the applicable national legislation.

For advice about disposal, you can contact the local authorities or your

dealer.

## 11 WARRANTY AND OBLIGATIONS

All of PF's bicycles sold to individuals come with 2 years of warranty; cf. the provisions of the Danish Sale of Goods Act. In addition, there is 5-year warranty for the frame provided that the product has been used as described in this Manual.

Assuming ordinary use and periodic service, the expected service life of this bicycle is 5 to 10 years.



PF mobility may not be held liable for any damage to the bicycle itself or other objects or for injuries to people:


- caused by the abnormal use of the bicycle, **e.g.** in races or for riding in rugged terrain, etc.;
- if the user has disregarded or failed to comply with the instructions in this Manual;
- caused by inadvertent use of the PF bicycle;
- if there are any alterations to the structure of the bicycle without the producer's written consent;
- if the bicycle has been exposed to abnormal wear and tear or an overload; • if the bicycle is not maintained normally or is exposed to extreme corrosion.



## 12 ERROR CODES AND TROUBLESHOOTING

In the event of problems or faults in the electrical system of your electric bicycle with the Cargo P20 system, instead of displaying the speed, the display will display the word "Error" together with an error code.  
The various error codes are described in the table below together with a description of the possible causes and a likely solution.



Error code	Description of error and suggested solution
	<p>Most errors should be resolved by restarting the system: Switch off the system, wait a minute and then switch the system back on.</p> <p>If the error persists after trying the suggested solution, or occurs periodically, contact your vendor or PF Mobility.</p>
<b>02</b> <i>Error</i> Solution	<i>Indicates an error in the power consumption.</i> Contact your vendor.
<b>03</b> <i>Error</i> Solution	<i>Indicates an error in the controller.</i> Contact your vendor.
<b>04</b> <i>Error</i> Solution	<i>Indicates an error in the throttle</i> Put the throttle in position 0. Check the throttle.
<b>05</b> <i>Error</i> Solution	<i>Indicates an error in the brake</i> Put the handbrake in the starting position.
<b>08</b> <i>Error</i> Solution	<i>Low battery voltage.</i> Charge the battery.
<b>09</b> <i>Error</i> Solution	<i>High battery voltage.</i> Contact your vendor.



## 13 EC DECLARATION OF CONFORMITY

Issued in accordance with EC Directive 93/42/EEC, as amended by Directive 2007/47/EC.

Manufacturer: PF mobility aps, Bjerregårdvej 15, Timring, DK-7480 Vildbjerg  
Tel. +45 99 92 06 00  
CVR No. 25059026

Models: 

- PF Side-by-Side
- PF Side-by-Side P20

Versions: Electrically powered (250W) for all models:  

- Direct power 36V

Product description: 3-wheeled electrically assisted bicycles and 3-wheel pedaloperated bicycles for users with special needs and handicaps.

Directives used: Directive 93/42/EEC concerning medical devices  
and  
Directive 2004/108/EC relating to electromagnetic compatibility

Equipment classification: Class I

Harmonised standards used: EN 12182 – Assistive products for persons with disability – General requirements and test methods.  
EN 15194 – Electrically power assisted cycles  
EN 61000-3-2, EN 61000-3-3, EN 61000-4-3, EN 61000-4-8  
Electromagnetic compatibility.  
EN 55014-1 + -2: Electromagnetic compatibility

Date of issue: 20.11.2020

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PF mobility aps hereby declares that the products above meet all relevant provisions of Council Directive 93/43/EEC. The product is safe to use under conditions that can reasonably be expected, as described in the instruction manual.

This declaration is considered void for products that have undergone any kind of alteration without a prior written agreement with PF mobility aps.

PF mobility aps is obliged to set up procedures for continuous market monitoring and risk management in order to ensure corrective actions in the event of undesired events and risks.

Technical documentation for the products is kept by PF mobility aps at the address above.

Timring, 20.11.2020

Martin Søndergaard  
CEO

