













USER MANUAL

DISCO/ DISCO E-BIKE/ DISCO PEDELEC





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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. Take particular note of Section 4.



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 7 *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:

PF mobility ApS
Bjerregårdvej 15, Timring
DK – 7480 Vildbjerg
Tel.: +45 99 92 06 00
Fax: +45 99 92 06 05

Mail: info@pfmobility.dk
www.pfmobility.dk

With reservations for misprints and changes to this User Manual.

| Product details: | |
|-------------------------|--|
| HMI - Number | |
| Frame number | |
| Lock number | |
| Controller keys | |
| Battery number | |
| Delivered on | |

A close-up photograph of a red bicycle frame, specifically the stem area. A black strap is wrapped around the stem. The frame number '875543 1' is visible on the side of the stem. A thin line points from the 'Frame number' row of the table to this specific location on the frame.

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 Danish 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 7 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 separate manual

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 | DISCO | DISCO MEDI | DISCO SMALL |
|---------------------------------------|--------|------------|-------------|
| Data | | | |
| Lenght cm | 185 | 171 | 154 |
| Width cm | 75 | 68 | 68 |
| Weight (w/o accessories) | Ca. 44 | Ca. 29 | Ca. 28 |
| Extra weight E-Bike/ Pedelec | Ca. 11 | Ca. 11 | Ca. 11 |
| Maximum user weight kg | 125 | 125 | 125 kg |
| Maximum load kg | 130 | 130 | 130 kg |
| Inside leg (Min) | 55 | 45 | 40 cm |
| Mounting/Dismounting height | 26 | 25 | 20 cm |
| Wheel size | 20 | 16 | 16 |
| Max speed motor km/t E-bike / Pedelec | 15/ 25 | 15/ 25 | 15/ 25 |



EPAC and Pedelec models

| Steering | | |
|-------------------------|------------------|--|
| Operating voltage | | 36V |
| Max amperage | | Depending on version and use, 10 to 30A |
| Motor | | |
| Nominal voltage | | 22.8 V |
| Motor output | | 250W (DIN EN 60034-1) |
| Nominal/Peak momentum | | 11.8 Nm / up to 60 Nm |
| Battery | | |
| Type | | Lithium-Ion battery |
| Nominal voltage | | 36 V |
| Capacity | | 11 Ah, 396 Wh (standard) 14.6 Ah, 562 Wh (option) |
| Charging period | | Approx. 6-7 hours at charging current of 2 A |
| 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.

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 installed.
- ✓ 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 fitted with the statutory reflectors;
- ✓ 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 tyres. If you see any hair cracks starting to form on the side of the tyre, replace the tyre. New tyres can be ordered from PF mobility or your dealer. We recommend that you always use puncture-proof tyres. The bicycle is delivered by default with tyres 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 clamping lever "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 are in need of 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 5 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.

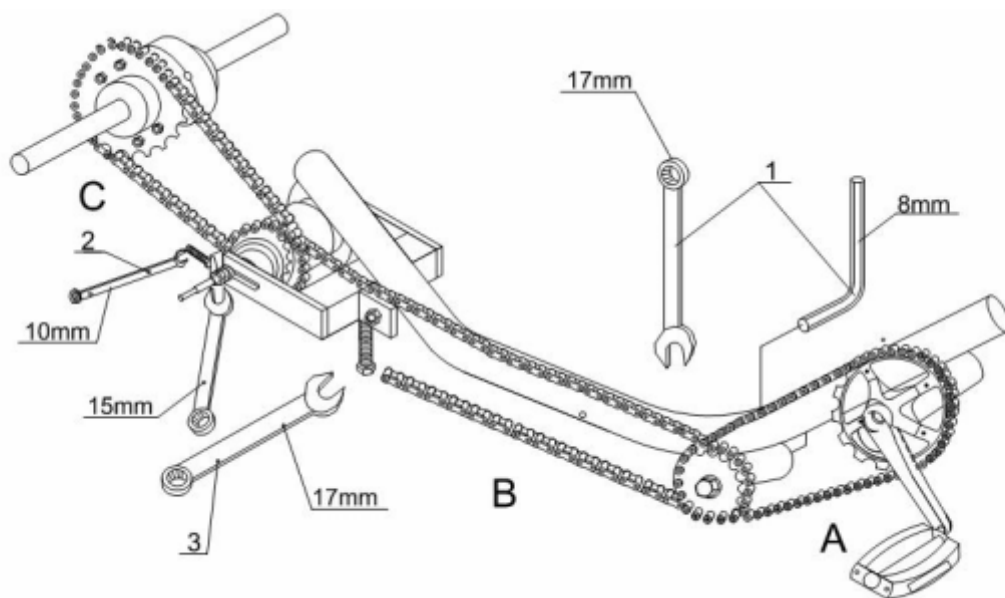


6.5 Adjustment of chains

Front chain (A): Loosen the hex bolt on the left side with the 8-mm hex key (1). Turn the double gearwheel clockwise with the 17-mm combination wrench (1) to tighten the chain. Hold the bolt of the double gearwheel in position with the 17-mm combination wrench (1) to adjust the chain and then tighten the bolt securely to (1).

Middle chain (B) and back chain (C): Loosen the hub nuts and the brake lever's nut and screw. Loosen the counter nut of the adjusting screw using the 17-mm fork spanner (3). You can now adjust the medium and back chain with the adjusting screw and the chain adjusters.

Remember to tighten well after each adjustment!!!





7 ELECTRICAL SYSTEM AND MOTOR

PLEASE SEE SEPARATE MANUAL



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/ strap



Training pedal



Pedal extender

Saddles and belts:



Arm rest



Swivel seat



Seat w/ sliding console



Harness



H-harness w/ holder



H-harness w/ holder and support



Junior seat



Rain cover for seat



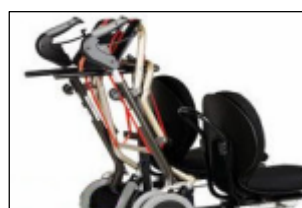
Various accessories:



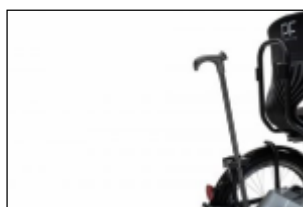
Thread basket at the back



Top box



Holder for walker



Stick holder



Bike cover



Safety vest



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 **Fejl! Henvisningskilde ikke fundet**.

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 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: | <ul style="list-style-type: none">▪ Disco Junior▪ Disco Senior |
| Versions: | Electrically powered (250W) for all models: <ul style="list-style-type: none">▪ Direct power 36V |
| Product description: | 3-wheeled electrically assisted bicycles and 3-wheel pedal-operated 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: | 20.11.2015 |

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, 20.06.2020

Martin Søndergaard
CEO

