



F O N G E R S<sup>®</sup>

*Distributed by Matrabike*

CARGO BIKES

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# INTRODUCTION:

## THANK YOU VERY MUCH FOR CHOOSING A FONGERS ELECTRIC BIKE.

*This manual serves as a guide to the enjoyable and safe use of your electric bike.*

*This manual applies to multiple Fongers models. It is possible that you will come across information that is not relevant to your specific bike. As you go through the manual, you will be able to determine for yourself which parts do or do not apply to your chosen Fongers model. If you do not immediately see what does or does not apply to you, you can always contact customer service.*

*We advise you to read the manual carefully before using the bike for the first time. Also, for your own safety, check that all parts are in good condition and securely mounted. During your first test drive, we recommend that you get used to the operation of the brakes, as the braking force may vary depending on the model. Braking too hard can lead to a skid and fall; It is therefore wise to thoroughly test the braking power before hitting the road.*

*Reduce your speed on slippery surfaces, such as rain, snow, sleet or mud. In addition, take into account a greater distance from the vehicle in front, as your braking distance may be significantly longer. Although this bike functions well in wet conditions, do not allow water to enter the motor or controller, as this can cause serious damage to the electronic circuitry. Therefore, avoid driving through puddles.*

*If you need to remove, open, replace or adjust parts, we advise you to contact a specialist or our customer service team who has the appropriate knowledge, skills, tools and parts.*

*Do not allow anyone to ride this bicycle if they are not familiar with the operation of the bicycle.*

*We wish you a lot of cycling fun and hope that your Fongers bike contributes to this.*

*Sincerely,  
Team Fongers*

## ENGINES

With our Fongers bikes we use mid-wheel and rear-wheel motors.

A rear-wheel motor (usually) uses a rotation sensor. You only get support when you turn the pedals. With these types of motors, each assist mode supports up to a maximum number of kilometers per hour up to a maximum of 25 kilometers per hour when the highest assistance mode is engaged.

A mid-motor model uses a force and rotation sensor. This means that with a mid-drive motor, you get support when you put force on the pedals (and thus turn the pedals). The level of assistance also depends on the assist mode you have selected on the display.

All Fongers electric bikes are so-called “pedelec” bicycles, which means that the motor is only switched on when you are cycling yourself (in accordance with the European EN-15194).

Only the walk-assist can function without having to pedal itself, but up to a maximum of 6 km/h.



# TECHNICAL DATA

<b>General Technical Specifications</b>	
Weight of the bike incl. battery	+/- 60 to 80 KG (varies by model)
Maximum speed	25km/hour
Maximum load 3-wheel cargo bike	Max. 100 KG for the driver. Max. loading weight for the box is 60 KG distributed over the box
Maximum load 2-wheel cargo bike	Max. 100 KG for the driver. Max. loading weight for the box is 50 KG distributed over the box
Average range with full battery	The range depends on the type of battery, with a range of 50 to 150 kilometers
These values apply to: <ul style="list-style-type: none"><li>• New battery</li><li>• Normal load</li><li>• No external weather influences</li><li>• 20 degrees Celsius ambient temperature</li><li>• Dry and flat road</li></ul>	
<b>Technical specifications 2A charger</b>	<b>ONLY USE THE ORIGINAL CHARGER WITH THE E-BIKE!</b>
Low battery charging time	Circa 10 hours per 2Ah
Connection voltage	230V/50Hz
Maximum Payload	84W per hour
Red light	Load
Green light	Charger not connected to the battery or fully charged

Technical specifications front wheel and rear wheel motor	
Engine type	Brushless hub motor
Continuous Rated Power	250 W
Nominal Voltage	36 V
Nominal/Maximum Output Torque	22 Nm / 45 Nm
Motorefficiency	78% (+/- 5%)

Technical specifications mid-drive motor	
Engine type	Brushless mid-drive motor, low in noise
Continuous Rated Power	250 W
Nominal Voltage	36 V
Nominal/Maximum Output Torque	65 Nm / 80 Nm
Motorefficiency	81% (+-5%)

## KEEP YOUR BATTERY IN TOP CONDITION!

The maximum speed at which the motor is engaged is 25 km/h, fully complying with the EN-15194-2017 standard, which describes the requirements for electric bicycles. This guarantees the safety of the users of our bikes.

Lithium-ion batteries are used in Fongers e-bikes. These batteries are designed for sustainable use and are environmentally friendly.

The bike is made up of a lightweight aluminum frame that is both handy and strong, which contributes to a long lifespan.

Range on a full battery depends on several factors, such as load, road conditions, number of start-ups and slowdowns, tire pressure, the level of assistance set on the bike computer, and the user's maintenance and charging of the battery.

- Drain your e-bike's battery as far as it will go for the first 3 times and then charge it all the way back up
- Always store the battery in a dry place (above 10°C)
- Never store the battery completely empty and recharge it as soon as possible if it is empty, the advice is within 12 hours.
- Do not leave your battery on the charger for more than 12 hours
- Use only an original charger
- Do not charge your battery after every short ride
- Always remove the battery from your bike during transport and transport it safely and dry

### **Tips for the winter period:**

- Be aware that due to the cold, the range of your battery may be lower than in summer
- Charge your battery at least 1 time per month
- Do not insert the battery until cold temperatures for a short time
- before departure in your e-bike
- Always charge a Li-ion battery above 10 °C.

## BATTERY RELATED TIPS

- Make sure you have a fully charged battery if you are going on a long trip.
- Rugged terrain, difficult terrain and hilly or mountainous roads result in significantly higher energy consumption.
- The frequent change of driving speed results in higher energy consumption
- The more weight on the bike, the higher the energy consumption
- Proper maintenance, a clean bike, well-inflated tires and regular lubrication (as stated later in this manual) ensure lower energy consumption
- Regularly check that the front and rear wheels are completely free when the brakes are not applied. Adjust the brakes regularly
- A lower assist setting produces less motor power and therefore requires less energy from the battery and thus provides a longer range
- As the battery becomes more and more drained, the voltage of the battery also drops and with it the power that is available. You may notice that the battery becomes emptier while cycling, especially because the motor loses power
- Warranties on a battery expire immediately and unconditionally as soon as it is deep-discharged.

Batteries in general can't handle that. Make sure this NEVER happens. If you are not going to use the bike for an extended period of time, never leave your battery in the bike without recharging it in the meantime. Also, charge your battery at least 1 time a month.

- It is dangerous and strongly discouraged from placing the charger and battery near heat sources  
Battery life depends on how it is handled. Follow the instructions in this manual for charging. In addition, never drop, shake or tap the battery
- In the case of a battery, the indication on the battery display is always leading. With a battery in the frame, there are 3 LED lights on the battery, green, blue and red. ed = almost empty
- Under warranty conditions, it is not permitted to open the battery and separate the internal battery segments from each other

*An open battery is never covered by warranty conditions*





# PUTTING BATTERY IN AND OUT OF THE BIKE



1. Turn the key counter-clockwise, the battery is now detached from the carriage.



2. Press with your hand by pressing the outside of your hand against the wall of the bin and your fingers on the battery pack the battery from the cradle.



# BATTERY CHARGING

- When charging, neither the battery nor the charger should be placed close to highly flammable (liquid) substances. Always make sure that children cannot reach the charger when it is charging the battery.
- As mentioned earlier, the charging time of the battery depends on the amount of residual energy left in the battery, what the capacity of the battery is and what the capacity of the charger is. When the battery is full, the LED will switch from red (charging) to green (ready), then unplug and unplug the battery.
- Do not leave the charger connected to the battery for longer than necessary.
- It is not strange that the battery and the charger can become warm to hot during a charging session. Make sure the battery is fully charged (until the light on the charger turns green)
- When charging, place the battery on a hard, preferably stone, surface and not on flammable material such as carpet, paper, or a sofa.
- Never open the charger casing by yourself. In case

this is necessary, have it taken care of by a specialized e-bike mechanic.

- Make sure that the contacts of the battery are not touched with your hand or other tools or materials.

Make sure that no materials and/or liquids can penetrate the charger. If this happens, we advise you not to use the charger until it has been inspected by a specialist e-bike mechanic.

- Make sure the charger always has adequate cooling when it is charging. The charger should always be 200mm clear on all sides for cooling.

# USE, MAINTENANCE AND INSPECTION BEFORE EACH DRIVE

Your Fongers electric bike is designed for use by one person under normal road conditions. Using this bike in extreme situations, such as riding off-road, jumping, or carrying heavy loads, can cause serious damage to the bike and even lead to injuries. The bike is not designed for such loads.

- Never use a pressure washer when cleaning the bike. This can bring moisture to sensitive areas, which can lead to malfunctions in the electrical system and rust. Clean the bike with a clean, damp cloth and avoid harsh or acidic cleaning agents, as they may damage the finish. If necessary, you can use shine & protect to preserve the paint of the bike.
- Try to avoid using the bike in rain and snow. If this is not possible, make sure to clean and dry the bike after use.

An over-lubricated chain can splash oil in unwanted areas, such as the pedals, brakes, and rims. If there is oil on the rims, tires, brakes, or pedals, clean it with hot water and liquid soap. Then rinse everything with clean water and dry the bike.

Use light machine oil (W20) and follow the instructions below for lubricating the different parts:

- Pedals: Every six months, 4 drops per pedal in the bearing
- Chain: Every six months, 1 drop per link

Before each ride, it is important to perform the following safety checks:

## 1. Brakes

- Check that the front and rear brakes are functioning properly.
- Check that the brake shoes are pressing properly against the rim (only for rim brakes).
- Check the brake cables; These should move smoothly and should not be damaged.
- Check that the brake levers move smoothly and are securely attached.

## 2. Wheels and tyres

- Check the tire pressure; It must correspond to the values indicated on the tyre.
- Check that the tyres have sufficient tread and are not damaged.
- Check the rims and that they rotate freely without rubbing against the brakes (only with rim brakes),

and run sufficiently freely. This also affects the range.

- Check that all spokes are properly tensioned and not damaged.
- Make sure the wheel bolts are securely tightened. For quick-release fasteners, check that they are properly fastened and in the closed position.

### 3. Steering wheel

- Check that the handlebars are properly adjusted and sturdy so that they cannot move while cycling.
- Make sure the handlebars are in line with the front wheel.
- Check that the handlebar clasp is properly pressed.

### 4. Chain

- Check that the chain is properly lubricated, clean, and runs smoothly.
- Extra control is needed in wet or dusty conditions.

### 5. Bearings

- Check that the bearings are well lubricated, rotate smoothly, and do not show any play or rattling noises.
- In particular, check the bearings of the handlebars, pedals, bottom bracket and wheels.

### 6. Bottom bracket and pedals

- Check that the pedals are securely mounted.
- Check that the bottom bracket is properly mounted and has no play.

### 7. Seatpost / Seatpost Bolt

- If you want to change the position of the saddle, make sure that you tighten the seatpost bolt according to the guidelines below, failure to comply with the tightening torques below can lead to dangerous situations.

Allen bolt	Crushing torque (KGF = kilogram-force)	Indication
M6	90-100 KGF	9-10 Nm
M7	110-120 KGF	11-12 Nm
M8 – M10	180-200 KGF	18-20 Nm

- Make sure that the maximum stripes indicated on the seatpost are never visible in relation to the seatpost tube (frame).

### 8. Luggage carrier

- The maximum loadable weight of the luggage carrier is indicated on each luggage carrier. The luggage rack is never suitable for transporting people without having the correct bicycle seat or supports fitted.

#### Service

We recommend that you have your Fongers bike serviced annually or within 500 kilometres. Of course, this also depends on your driving habits. Maintenance contributes to the lifespan of your bike and ensures that it continues to function optimally.



**DISPLAY TYPE 1**

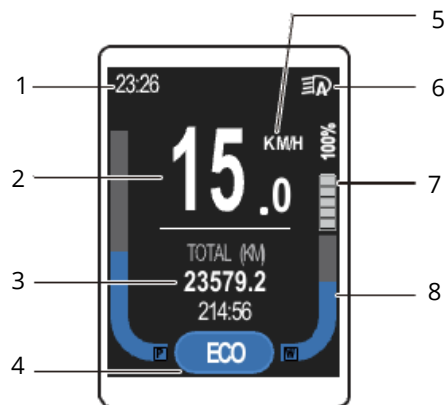
The indicators indicated as shown in the photo are as follows:

1. Battery indication (top right)
2. Speed display (centre, displayed in km/h)
3. Distance including Trip (one-way distance, resettable) and ODO (total travel distance)
4. Assist Mode Level
5. Lighting (front and rear)
6. Loop support mode

**Functions:**

1. Display On/Off: Press and hold the power button for 3 seconds
2. Headlight ON/OFF: Press and hold (+) key for 3 sec.
3. Walk Assist: Press and hold button (-) for 3 sec. (remains active until button is released).
4. Change speed display (current, average speed, maximum speed): Press the power/mode & (-) buttons at the same time at the same time, this allows you to change the display on the display.
5. Reset trip meter: Press (+) & (-) buttons at the same time and adjust the N flashing with the + button to Y and then press and hold the power button. The trip meter (TRIP) has now been reset.

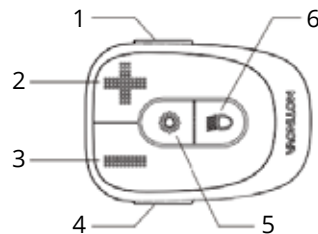
## DISPLAY TYPE 2



The indicators indicated as shown in the photo are as follows:

1. Time
2. Speed
3. Mileage information
4. Support Mode
5. Kilometers per hour
6. Lighting (front + rear)
7. Battery Capacity
8. Power level

## Control unit



The indicators indicated as shown in the photo are as follows:

1. On/off button
2. + button
3. - button
4. Walk-assist knob
5. Settings / Adjustment Knob
6. Lighting button

Functions:

### Switch on

Long press the "Power" button for 1.5 seconds

### Eliminate

Short press the "Power" button



### Changing the support mode

There are 5 different assist modes OFF, ECO, NORM, SPORT, TURBO and SMART.

- Note: Press and hold the “+” button for more than 1.5 seconds to enter SMART mode; Short press the “+” or “-” button to exit SMART mode.

### Changing the mileage information

In the main interface, short press the “Setting” button to change the mileage information, you can view different modes and information.

The order is the total mileage (TOTAL) and total driving time → the subtotal mileage (TRIP) and the subtotal driving time → the maximum mileage speed (MAX) and the average speed of the subtotal mileage (AVG)

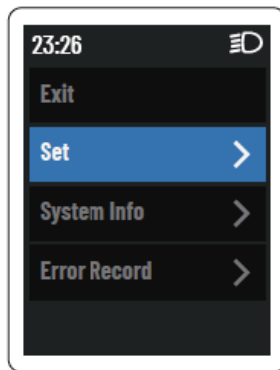
### Loop mode



In walk mode, the system provides 6Km/h of assistance within the power limit.

Turn on the loop support by clicking on the “WALK” button on the remote and then holding down the plus. When you stop pressing the + button, the walking assistance stops.

### Settings menu



To access the settings menu, press the settings button for 1.5 seconds.

To navigate through the settings menu you can press the (+) and (-) button, to select a setting item short press the settings button.

The most important settings can be found under (SET) and then briefly press the settings button.

This allows you to adjust the most important settings:

21. **CLEAR:** Trip stand resetten
22. **Brightness:** Adjust brightness

- 23. **Time:** Adjust time
- 24. **Date:** Change date

driving time → the maximum mileage speed (MAX) and the average speed of the subtotal mileage (AVG)

You can confirm the settings you want to adjust by briefly pressing the settings button.

### **Switch on**

Long press the "Power" button for 1.5 seconds

### **Eliminate**

Short press the "Power" button

### **Changing the support mode**

There are 5 different assist modes OFF, ECO, NORM, SPORT, TURBO and SMART.

- Note: Press and hold the "+" button for more than 1.5 seconds to enter SMART mode; Short press the "+" or "-" button to exit SMART mode.

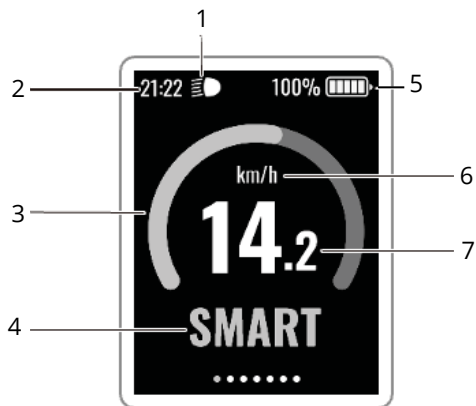
### **Changing the mileage information**

In the main interface, short press the "Setting" button to change the mileage information, you can view different modes and information.

The order is the total mileage (TOTAL) and total driving time → the subtotal mileage (TRIP) and the subtotal



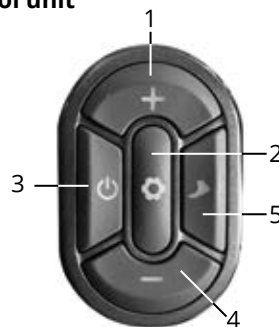
### DISPLAY TYPE 3



The indicators indicated as shown in the photo are as follows:

1. Lighting (front and rear)
2. Time indication
3. Power level
4. Support Mode
5. Battery Capacity
6. Kilometers per hour
7. Speed

### Control unit



The indicators indicated as shown in the photo are as follows:

1. + button
2. Settings / Adjustment Knob
3. On/off button
4. - button
5. Walk-assist knob

### Functions:

#### Switch on

Long press the "Power" button for 1.5 s.

#### Eliminate

Short press the "Power" button

### Changing the support mode

There are 5 different support modes OFF, ECO, NORM, SPORT, TURBO and SMART.

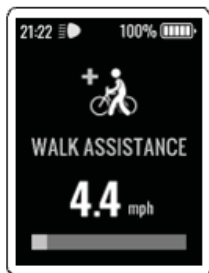
- *Note: Press and hold the "+" button a few times to enter SMART mode; Short press the "-" button to exit the SMART mode.*

### Changing the mileage information

In the main interface, short press the "Setting" button to change the mileage information, you can view different modes and information.

The order is the total mileage (TOTAL) and total driving time, → the subtotal mileage (TRIP) and the subtotal driving time, → the maximum speed of the mileage (MAX), and the average speed of the subtotal mileage (AVG)

### Loop mode



In walk mode, the system provides 6Km/h of assistance within the power limit.

Turn on the loop support by clicking on the "WALK" button on the remote and then holding down the plus.

When you stop pressing the + button, the walking assistance stops.

### Settings menu

To access the settings menu, press the settings button for 1.5 seconds.



To navigate through the settings menu you can press the (+) and (-) button, to select a setting item short press the settings button. The most important settings can be found under (SET) and then briefly press the settings button.

This allows you to adjust the most important settings:

**CLEAR:** Trip stand resetten

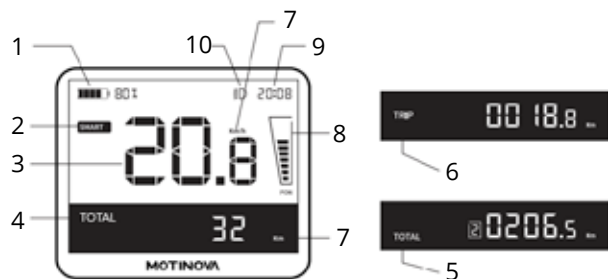
**Brightness:** Adjust brightness

**Time:** Adjust time

**Date:** Change date

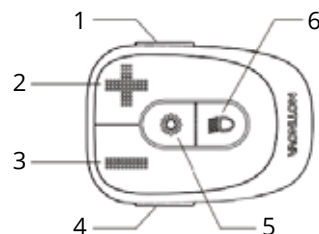
You can confirm the settings you want to adjust by briefly pressing the settings button.

## DISPLAY TYPE 4



1. Battery Capacity
2. Power Mode
3. Speed
4. Total mileage
5. Trip (kilometers driven per trip)
6. Mileage indication
7. Power level
8. Time
9. Lighting indication (front + rear)

The indicators indicated as shown in the photo are as follows:



1. On/off button
2. + button
3. - button
4. Walk-assist knop
5. Settings / Adjustment Knob
6. Lighting button

## Switch on

Long press the "Power" button for 1.5 s.

## Eliminate

Short press the "Power" button

### Changing the support mode

There are 5 different assist modes OFF, ECO, NORM, SPORT, TURBO and SMART.

- *Note: Press and hold the "+" button for more than 1.5 seconds to enter SMART mode; Short press the "+" or "-" button to exit SMART mode.*

### Changing the mileage information

In the main interface, short press the "Setting" button to change the mileage information, you can view different modes and information.

The order is the total mileage (TOTAL) and total driving time → the subtotal mileage (TRIP) and the subtotal driving time → the maximum mileage speed (MAX) and the average speed of the subtotal mileage (AVG)

### Time Setting:

Operations as below:

Press and hold the "Setting" button for more than 1.5 seconds to enter the setting interface.

After entering the setting interface, click the "+" button or the "-" button to select "hour" or "minute", and then press the "Setting" button to confirm, the value of "hour" or "minute" flashes.

Press the "+" or "-" button to adjust the value, click the "Setting" button to save. After the adjustment is complete, short press the "Setting" button to save, or press and hold the "Setting" button for more than 1.5 seconds to save and exit the setting interface.

### Reset trip mode:

Operations as below:

Press and hold the "Setting" button for more than 1.5 seconds to enter the setting interface.

After entering the setting interface, click the "+" button or the "-" button to go to the "trip". After that, short click on the settings button so that the trip starts flashing, then press and hold the (-) button. The trip mode is now at 0 KM.

## DISPLAY TYPE 5



The indicators indicated as shown in the photo are as follows:

1. Accu percentage
2. Switch on the light indication (front and rear light) by briefly pressing the on/off button
3. Km/h
4. Speed indicator (limited to 25 km/h)
5. Real-time engine output power

6. Time: Indicates the travel time of a single trip
7. Trip: Displays the user's mileage (can be deleted)
8. ODO: Displays the total number of kilometers ridden with the e-bike (cannot be cleared)
9. Three different modes for support: Power, Normal, Eco each with a matching interface color.
10. Assist mode / when the walk assist mode is on, keep (-) on for 3 seconds and hold the (-) for the walk mode.

## Settings menu

Press and hold set for 2 seconds to enter the settings menu.





Only in the General setup settings will have to be changed to promote the use of the e-bike.



### Trip clear

To reset the trip mode, click on set and then with (+) to go from N to Y. Then navigate with (-) to the bottom of the menu to go to Exit and then to Save & Exit in the general settings menu. The trip mode is now at 0 KM.

### Brightness

This allows you to adjust the brightness of the screen by pressing set, turning it up or down with the (+)/ (-) buttons to save the settings, click on set and navigate from the menu to exit and then to Save & Exit

### Fashion

This can be adjusted by pressing set in combination with the (+)/ (-) buttons, and can be saved by pressing set and navigating to exit and then selecting Save & Exit.



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