CONGRATULATIONS

on the purchase of your Bunch cargo bike with pedal assist.

We recommend that you read this manual thoroughly before you take your bike on the road. This manual provides information on the proper use and operation of the pedal assist, automatic stepless gearbox, brakes, and battery. In addition, we will provide recommendations and tips for cycling on your Bunch cargo bike and explanations of the warranty and maintenance.

*The Bunch Bikes team wishes you many happy Miles of cycling!*

**Serial number**
The serial number (frame number) is located on the information placard, on the main frame, just below the battery.

Your frame number: ....................

For more information and the latest news and product updates, please visit our website or follow us on social media.


www.bunchbike.com
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1. Bicycles with pedal assist

1.1 What is the difference between "electrically pedal-assisted" and "electrically powered"?

Your Bunch cargo bike is electrically pedal-assisted; that is completely different from electrically powered. Electrically pedal-assisted means that you will only be assisted by the electric motor if you yourself apply (sufficient) pedaling force to the pedals. If you stop pedaling, the motor will also stop "helping" you. In an electrically powered vehicle, you only have to keep a button pressed in or operate a lever, and the vehicle will drive without you applying your own pedaling force.

1.2 Cycling with pedal assist

Cycling with pedal assist gives you the feeling that you are always "riding with the wind behind you," and the experience is quite different from cycling without assist: it makes it easy to start from a stationary position or on a hill, or to ride against a headwind, and of course you can reach higher speeds comfortably. Our advice is first to try out The Coupe on a quiet bike path, for instance, without children in the cargo box and also with limited assist (see Display and operation). Note that the rear frame will tilt slightly to the left or the right on curves; this is completely normal and is specially designed to optimize riding behavior on curves and make it feel more natural.

Set the pedal assist to a higher level once you feel like you have the bike "under control." The maximum speed that may be reached with the assist is legally specified at 20mph; this means that if you cycle faster than 20mph, the motor will stop providing assistance.

Note: We recommend greatly reducing the speed on curves to prevent the risk of tipping over. Please keep in mind that 20mph is quite fast for a cargo bike; not everyone in traffic is ready for that yet!
2. Display and operation

2.1 Specifications
- Rated voltage: 36 V/43 V/48 V
- Rated power: 10 mA
- Maximum operating power: 30 mA
- When turned off, the leakage current is: ≤1 uA
- Working current delivered to regulator: 50 mA
- Operating temperature: -4°F~113°F
- Storage temperature: -22°F~158°F
- IP level: IP65
- Storage humidity: 30%-70%

2.2 Overview of functions
- Speed indicator: Screen showing current speed (SPEED), maximum speed (MAXS) and average speed (AVG).
- Speed displayed in kilometers or miles: You can switch between kilometers or miles on the display.
- Intelligent charge indicator: Stable display of the battery status is guaranteed by an optimization algorithm. This avoids the problem, common to many displays, of fluctuating display of the battery level.
- Operation of lights: The headlight, taillight and screen display illumination switch on and off automatically, depending on the light conditions.
- Screen illumination: Choose between different lighting levels, from level 1 (dim) to level 5 (bright).
- Assist level indicator: This indicates the current assist mode (level 0 to 5).
- Trip distance indicator: The maximum distance is reached when 99999 appears on the screen. You can display the distance for a single trip (TRIP) or the total distance (TOTAL).
- Error indicator
- Pedal assist
- The service lights will appear depending on the charge status and the total distance traveled. The display automatically estimates battery life and issues a warning if the set number of battery charges is exceeded. A warning is also issued when the total distance traveled exceeds the set value. This function can be turned off.
2.3 Normal range indicator

A - Service notification:
SERVICE appears on the display when your E-bike is ready for maintenance. This warning sign appears when the distance traveled or the number of battery charges is exceeded. This function can be turned off. Contact Bunch Bikes or a trained E-bike service shop.

B - Menu:
You can switch between different display modes.

C - Speed indicator:
Choose km/h or mile/h.

D - Speed mode:
Displays the selected average speed (AVG) and the maximum speed (MAXS).

E - Error code prompt:
This symbol is displayed if a problem is detected.

F - Trip distance indicator:
This shows the distance traveled during a single trip or the total distance traveled. (Depending on the setting selected)

G - Assist level:
This shows the level of motor assist selected (1-5).

H - Pedal assist:
This shows that pedal assist is activated for support. When cycle assist is activated to pedal the bike forward, the WALK symbol appears.

I - Lighting:
The characters will light up as soon as the headlight and taillights are turned on.

J - Distance mode:
You can display either the distance for a single trip (TRIP) or the total distance (TOTAL). The maximum distance is reached when 99999 appears on the screen.

K - Battery charge status:
The charge status is indicated by 10 bars. The battery is fully charged when all the bars on the display are lit.
2.4 Definitions of buttons

A - "+" button: Switch to a higher level of motor assist.
B - "−" button: Switch to a lower assist level. Hold down for walk assist.
C - Lights on/off button: Pressing the button once turns the bike lights on. Pressing twice turns the lights off again.
D - On/off button: Switches the electric system on and then off again.
E - Display mode: Switching between the different displays and functions.

2.5 Normal operation

2.5.1 POWER ON/OFF
Press "D" and hold for 2 seconds: Turns on the display and the system.
Press "D" again and hold down for 2 seconds: Turns off the display and the system. The system is switched off automatically after 5 minutes without activity.

2.5.2 Selecting the motor assist level
Press the "A" or "B" button to switch between the different assist levels. The lowest level is level 1; the highest is level 5. The default level at power on is level 1. If no number is displayed, the motor is not providing assistance (see examples below).
2.5.3 Switching display outputs
Press the "E" button to switch between trip distance and speed on the display. First the single-trip distance is displayed (TRIP km) → then the total distance traveled (TOTAL km) → the maximum speed reached (MAXS km/h) → and then the average speed (AVG km/h).

2.5.4 Turning the bike lights and display illumination on and off
Press "C" and hold for 2 seconds: The display illumination and your lights will turn on. Press "C" again and hold for 2 seconds: The display illumination and your lights will turn off. When you use the display in the dark, the illumination of your system is turned on automatically.
Exception: If you turned on the light manually, you must also turn it off manually.
The display offers five intensity levels.
2.5.5 WALK assist
Your E-bike has a walk assist feature that moves your bike forward at a speed of 3.5mph without you having to pedal it. This is intended to help you get the bike up steep hills if you are walking the bike.

The models with walk assist are not intended to help you when riding or starting to ride your bike! If used in this way the motor may overheat. Use walk assist only if you are walking alongside the bike. The wheels must be in contact with the ground. There is a risk of injury if you do not follow these instructions.

Press and hold the "B" button on the control panel for 2 seconds. Walk assist is turned on. "WALK" appears on the display. As soon as you release the button, walk assist mode is turned off.

Switching between pedal assist and walk assist modes.

Press and hold the "B" button on the control panel for 2 seconds. Walk assist is turned on. "WALK" appears on the display. As soon as you release the button, walk assist mode is turned off.

2.5.6 Charge status indicator
To ensure optimal performance of your E-bike, check your battery charge status before each trip. When the display is on, the 10 LEDs will indicate the charge level. The number of bars in the LCD battery display indicates the current charge status (see diagram). If all 10 bars are off and the digital screen is blinking, that means you must charge your battery immediately.

Charge status display

<table>
<thead>
<tr>
<th>Number of bars</th>
<th>Charge status</th>
</tr>
</thead>
<tbody>
<tr>
<td>10</td>
<td>≥ 90%</td>
</tr>
<tr>
<td>9</td>
<td>75% ≤ C &lt; 90%</td>
</tr>
<tr>
<td>8</td>
<td>60% ≤ C &lt; 75%</td>
</tr>
<tr>
<td>7</td>
<td>50% ≤ C &lt; 60%</td>
</tr>
<tr>
<td>6</td>
<td>40% ≤ C &lt; 50%</td>
</tr>
<tr>
<td>5</td>
<td>30% ≤ C &lt; 40%</td>
</tr>
<tr>
<td>4</td>
<td>20% ≤ C &lt; 30%</td>
</tr>
<tr>
<td>3</td>
<td>10% ≤ C &lt; 20%</td>
</tr>
<tr>
<td>2</td>
<td>8% ≤ C &lt; 10%</td>
</tr>
<tr>
<td>1</td>
<td>5% &lt; C &lt; 8%</td>
</tr>
<tr>
<td></td>
<td>The digital display is blinking ≤ 5%</td>
</tr>
</tbody>
</table>
2.6 User settings
Do NOT change the settings while riding the E-bike.

2.6.1 General rules for operating your E-bike
- To activate the mode for entering parameter settings, turn on the display and then press and hold the "E" button TWICE for more than 0.3 seconds each.
- You are now in the menu for entering parameter settings. Your settings can be changed.
- Press the "E" button briefly to confirm the settings. When you do this, the next setting will be displayed immediately and you can scroll through your settings.
- To switch between the various settings, press the "E" button briefly.
- When the setting you selected begins to blink, press the "A" button to increase the parameter value or the "B" button to decrease the parameter value.
- Once you have selected your setting, you can return to the main menu by pressing the "E" button TWICE for more than 0.3 seconds.
- If no changes in the settings have been made within 10 seconds, the display will return to the normal operating settings.

![Normal operating settings](image1)
![Parameter entry setting mode](image2)

2.6.2 Resetting the data from a single trip
For this setting mode, "tC" appears on the display.

- To delete the data from your last single trip (TRIP), the maximum speed (MAXS) and the average speed (AVG), press the "A" button ("y" will appear on the display).
- If you do not reset the data from a single trip manually, it will be automatically reset once you have traveled more than 99 hours and 59 minutes.
2.6.3 Distance shown in kilometers/miles

For this setting mode, "S7" appears on the display. Press the "A" or "B" button to switch between km/h and mile/h.

6.4 Bike lighting sensor, setting the light sensitivity

For this setting mode, "bL0" appears on the display.

Select a parameter value between 0 and 5 using "A" or "B". If you select "0," the sensor function will be turned off. The lower the number, the darker it must be before the sensor turns the bike lighting on automatically.

2.6.5 Light brightness display

For this setting mode, "bL1" appears on the display.

Select a parameter value between 1 and 5 using "A" or "B." 1 is the dimmest background lighting, 5 the brightest.
2.6.6 Automatic shut-off
For this setting mode, "OFF" appears on the display.

Select a parameter value between 1 and 9 using "A" or "B". The numbers indicate the minutes remaining before the electrical system shuts down automatically.

![Automatic shut-off settings](image)

1 minute (shortest) 9 minutes (longest)

2.6.7 Maintenance indicator
For this setting mode, "nnA" appears on the display.

Press the "A" or "B" button to choose the number "0" or "1." With "0" the function is turned off. With "1" the function is activated and you will receive a maintenance warning for your E-bike.

The maintenance indicator appears when you have reached a certain number of charging cycles (100 charges) and/or you have traveled a certain distance (5,000 kilometers). Each time you turn on the display, the word "SERVICE" will appear and continue to blink for 4 seconds. The time intervals can be individually adjusted by a supplier. They can also be changed later by a supplier or manufacturer with a USB connection on a computer.

![Maintenance indicator settings](image)

Turned off  Turned on  Service

2.6.8 Information on battery status
For this setting mode, "b01" appears on the display.

In this mode you can see all relevant information about your battery. For this, press the "E" button and hold for more than 3 seconds. The following information will be brought up in the following order:
### Error code definition

Do not work on your own bike. You need special skills, experience, and tools to work on a bike! Take your E-bike to a bicycle repair shop to have the error fixed.

The display will indicate when a malfunction is detected in your E-bike. If a defect is noted, a picture of a wrench will appear on the display. One of the following defects will be displayed in the area where speed is indicated:

<table>
<thead>
<tr>
<th>Error Code</th>
<th>Description</th>
<th>Resolution</th>
</tr>
</thead>
<tbody>
<tr>
<td>03</td>
<td>Braking action</td>
<td>Check whether a brake is stuck or locked on.</td>
</tr>
<tr>
<td>07</td>
<td>Protection from high voltage</td>
<td>Take your electric bike to your dealer or to a</td>
</tr>
<tr>
<td></td>
<td></td>
<td>specialist to have the problem repaired.</td>
</tr>
<tr>
<td>08</td>
<td>Error in the Hall sensor of the motor</td>
<td>Take your electric bike to your dealer or to a</td>
</tr>
<tr>
<td></td>
<td></td>
<td>specialist to have the problem repaired.</td>
</tr>
<tr>
<td>10</td>
<td>The temperature of the motor is reaching</td>
<td>Stop the eBike for a while.</td>
</tr>
<tr>
<td></td>
<td>the maximum protection value</td>
<td></td>
</tr>
<tr>
<td>12</td>
<td>Problem with the sensor in the regulator</td>
<td>Take your electric bike to your dealer or to a</td>
</tr>
<tr>
<td></td>
<td></td>
<td>specialist to have the problem repaired.</td>
</tr>
<tr>
<td>13</td>
<td>Problem with the temperature sensor in</td>
<td>Take your electric bike to your dealer or to a</td>
</tr>
<tr>
<td></td>
<td>the battery</td>
<td>specialist to have the problem repaired.</td>
</tr>
<tr>
<td>21</td>
<td>Problem with the wheel speed detection</td>
<td>Take your electric bike to your dealer or to a</td>
</tr>
<tr>
<td></td>
<td>sensor</td>
<td>specialist to have the problem repaired.</td>
</tr>
<tr>
<td>22</td>
<td>BMS communication error</td>
<td>Take your electric bike to your dealer or to a</td>
</tr>
<tr>
<td></td>
<td></td>
<td>specialist to have the problem repaired.</td>
</tr>
<tr>
<td>Error Code</td>
<td>Description</td>
<td>Action</td>
</tr>
<tr>
<td>------------</td>
<td>-----------------------------------------</td>
<td>---------------------------------------------</td>
</tr>
<tr>
<td>25</td>
<td>Torsion sensor, torsion signaling error</td>
<td>Take your electric bike to your dealer or to a specialist to have the problem repaired.</td>
</tr>
<tr>
<td>26</td>
<td>Torsion sensor, speed signaling error</td>
<td>Take your electric bike to your dealer or to a specialist to have the problem repaired.</td>
</tr>
<tr>
<td>30</td>
<td>Communication error</td>
<td>Take your electric bike to your dealer or to a specialist to have the problem repaired.</td>
</tr>
</tbody>
</table>

**Explanation of Error Resolution**

*Note: Error code 10 will probably appear on the display when the eBike climbs for a long, continuous period. This indicates that the temperature of the motor has reached the maximum protection value. If this occurs, the user must stop the eBike and wait. If the user lets the eBike continue to run, the motor will automatically stop the supply of power.*
3. Automatic acceleration (the Enviolo Automatic + system)

3.1. System Functionality

Integrated

The Automatic+ system is integrated in the eBike drive system and ensures automatic shifting at all times. It can be operated with the display of the drive system, which usually offers fully automatic as well as manual shifting options. If assisted by the drive system, the rider has the ability to shift between "manual" and "automatic" modes. See the manual of the specific system for more information, since the integration is different for each type of drive system.

Enviolo controller or app

It is also possible to use an enviolo AUTOMATiQ controller or to use the enviolo app on a smartphone. See the article "Quick Start - AUTOMATiQ with Controller," for the functionality of the different types of controllers offered by enviolo. Or check the article "AUTOMATiQ App download & installation" and get started with the app!

NOTE: The hub can be shifted over ~50% of the range without pedaling. The AUTOMATiQ system will wait until a pedaling motion takes place or the wheel turns before shifting over a broader range while stationary.

3.2. Calibration

During the initial installation, following system maintenance, or in the case of malfunctioning, the system must be calibrated. Switch on the system. Start the calibration process via the drive system menu. For more information, consult the manual of the eBike system or our manual.

Lift up the rear wheel or hang the bike up while the system switches from "low" to "high" and back again several times and this completes the calibration.

Enviolo controller or app

If you are using an enviolo AUTOMATiQ controller, see the article on calibration with the AUTOMATiQ controllers. When you use the enviolo app, you can also complete the calibration via the app in the "configuration" submenu. For this, see the video: Calibration of the AUTOMATiQ hub interface with the enviolo app.

3.3. Setup

Automatic mode

In automatic mode, the system automatically adjusts the transmission to maintain the desired pedaling cadence of the rider. Riders can set their ideal pedaling cadence by a selection in the eBike drive system menu, and they also have the option to do this via the enviolo controller or the enviolo app.

Setting personal preferences

NOTE: Setting the appropriate cadence can also be done via integration into the eBike drive system; the ratio at the start of a trip and the ride mode can only be set using the enviolo app. Check the video: setting enviolo AUTOMATiQ settings using the app.

Start by finding the right cadence: Start at 50 and increase (or decrease) in steps of 5 to 10, until you find the best setting.
Then set the ride mode: Comfort/Eco/Sport (these are only available when using an SP or TR hub interface). To discover which gear ratio you like for starting a ride: start at 0.5 and increase (or decrease) in steps of 0.1 until you find the best setting.

NOTE: Make sure you test ride the bike after every change in settings, so you can experience the differences immediately!

**Manual mode**

In manual mode, riders can shift on their own electronically. The eBike drive system has usually integrated this function by simulating gears. This can also be done via the enviolo app in the "Dashboard" submenu.

**1. System functionality**

The AUTOMATIQ SYSTEM ensures a continuous automatically shifting system. It can be combined with both the CO and the CA controller, making shifting as easy as choosing the desired pedaling cadence by pressing the button.

**2. Setup**

[A] ENVIOLO CO CONTROLLER

Set the desired pedaling cadence using the enviolo CO controller. The buttons on the enviolo CO controller are set to provide a lower pedaling cadence when shifting up (UP) and a lighter pedaling cadence when shifting down (DOWN), while the center button (CENTER) is for system calibration. To change the shifting function stepwise from 1 to 5 rpm, press and hold the lower and upper buttons simultaneously.
App Download & installation

- You can download the app in the Google play store or Apple store.
- Search for "enviolo AUTOMATiQ."
- Click on "install." The app should now install automatically.
- Switch on the motor system.
- Activate BLE (Bluetooth) on your mobile telephone.

Activate the wireless pairing mode of your hub interface by pressing the button for 5 seconds until a blue light shows.

- The app will now search for available devices.

Select the correct device, recognizable using the SN# that is also on the underside of the hub interface.
System installation - Step 1

Here you will see various options for configuring the AUTOMATiQ hub interface:

**Option A** (for manufacturers only):
Use the back end on AUTOMATiQ.enviolo.com and select the correct system parameters. Save the settings and generate the QR code. Print the QR code so it can be used, for example for the assembly line.

- You will see Scan QR Code in the configuration tab of the app. Once the QR code is scanned, the settings are transcribed onto the hub interface and the system is ready for use.

**Option B:**
On the Configuration tab page you can adjust all system settings using the sliders. The settings are saved in real time. You do not have to confirm anything.

System Configuration - Step 2

- The app offers a few additional, optional functions:
  1. System configuration in the Configuration tab
  2. System data analysis in the Diagnosis tab
  3. System data in the Logistics tab
  4. Riders settings in the Dashboard tab

The most interesting setting is probably the gear ratio at start, where you set the transmission to the system it will switch to when you come to a stop, and the ride mode, which determines how aggressively and accurately the system switches while you are riding.
4. Brakes

The three-wheel Bunch Bike is equipped with powerful hydraulic disc brakes; 2 in front and 1 in the rear. Each of the front ("twin") brakes and the single rear brake is operated with one lever on the handlebar. Brake with both brakes at the same time and uniformly to continue in a more or less straight line. Preferably do not brake (too) hard when turning; that causes unwanted riding and steering performance in any type of vehicle (two- or three-wheel, with or without a motor).

In addition, each brake lever has a parking brake. When parking the bike on a downhill or uphill part of a road, operate the brake (press it in), then turn the small knob on the brake actuator to the outside and release it. Do the same when starting up: press the brake, turn the knob toward the inside and the handbrake is released again.

**Note:** To ensure good braking power, keep the brake discs and braking pads absolutely grease and oil free. If you use a cleaning agent when cleaning your bike, make sure it does not come into contact with the discs or brake pads.
5. Battery

5.1 Product description
The Li-ion 36V-20Ah battery is made up of Li-ion cells connected to a BMS (Battery Management System). The BMS system monitors the battery during charging and discharging. This ensures that the maximum allowed charging and discharging currents are not exceeded. The BMS system also shuts off the battery when the battery capacity is depleted. The Li-ion battery has a high-quality plastic housing.

5.2 Safety instructions

5.2.1 Safety warnings
- The safety instructions will help you avoid hazards in performing operations. The safety instructions are divided into the following categories:

- **WARNING!** Means that the action is dangerous and you should prepare carefully before proceeding.

- **CAUTION!** Means that the action can cause harm.

5.2.2 General safety instructions
- Read these instructions carefully before putting the battery into use.
- Store the instructions close to the battery and make sure they are available for the battery user.
- Only technically qualified personnel may install the battery.
- Use cables of the correct diameter and keep the cable connections as short as possible. Use reliable cable clamps and tighten the bolts well on the proper coupling.
- Make sure that you do not cause a short circuit between the + and - poles. In the case of a short circuit, the BMS does disconnect the battery, but this can nevertheless cause hazardous sparks.
- Do not open the battery. The warranty is voided if the battery has been opened. The electrolyte of the Li-ion battery is highly corrosive. Contact with the electrolyte is impossible under normal circumstances. If the battery is damaged, avoid contact with the electrolyte or the powder.
- Always use the battery charger supplied. It is appropriate for the chemistry of the cell and charges the battery with the correct charging properties.

- **WARNING!** Do not charge the battery at temperatures below 32°F. The built-in temperature sensor prevents the charger from starting the charging cycle at temperatures of less than 32°F.

- If the battery will be stored for a long time, we recommend charging it once every six months.
- Do not submerge the battery in water.
- Do not expose the battery to excessively high temperatures (>149°C).
Never use a damaged battery!
The warranty will be invalidated if the instructions in this manual are not followed and if repairs are performed without authorization.

5.2.3 Instructions for safe transport
- The Li-ion battery must be transported in its original package or equivalent.
- The Li-ion batteries have been tested in accordance with the UN Handbook of Tests and Criteria, part III, subsection 38.3 (ST/SG/AC.10/11/Rev.5)
- The Li-ion batteries are categorized for transport as Dangerous Goods.

5.3 Installation
The battery can be carried easily using the built-in carrying handle. The battery is easy to install in the special holder. Place the battery against the holder and slide into the holder as far as it can go. Lock the battery in place by turning the key one-half turn clockwise.

Turn on the battery using the button on the left rear side of the battery.

The battery is now ready for use. Now press "D" to turn on the system, and you are ready to ride. The battery can be removed from the holder by turning the key one-half turn counterclockwise and then sliding the battery back slightly.

CAUTION!
When removing the battery, support it with both hands if possible, so it will not fall on the ground, which can damage it, or land on your feet.
5.4 Operation

Before the first use, charge the battery completely and mount it as described in section 4. The battery capacity can be 100% utilized.

- The battery is provided with an internal monitoring and control system (BMS), which automatically turns the battery off when it is fully discharged.
  It is not necessary to charge the battery after each use. However, we recommend that you do, so that you always start a trip with a fully charged battery. This does not affect the battery life.
- The battery’s connection point is also located in the cargo box, on the left front side of the seat. You do not need to remove your battery from the bike for charging.
- The battery has the following connections:
  - 3-point charging option
    The charging connector may be used to charge the battery using an external charger.
- The battery has a 30A plug-in fuse.

- The battery has a metal ON/OFF switch. Always turn the battery off after using the bike. If the battery is left on, it will go into sleep mode after 36 hours when the charge drops below 75%. The battery can be awakened from sleep mode by briefly plugging it in to local power.

5.5 State of Charge (SOC)

The battery has a SOC LED indicator. When the button for the SOC LEDs is pressed, this will light up to indicate the remaining charge on the battery. All LEDs green means 100% capacity. The LEDs go out one by one during discharging. When only the red light is still lit, the battery should be charged.
5.6 Maintenance
The battery requires no special maintenance. If the battery is dirty, it can be cleaned with a damp cloth.

5.7 Taking out of service
Electrical equipment must not be disposed of with normal household waste. Take the battery to a registered waste processor for disposal.

5.8 Technical specifications

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
<th>Unit</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cell chemistry</td>
<td>Li-ion</td>
<td></td>
</tr>
<tr>
<td>Nominal voltage</td>
<td>36</td>
<td>Volts</td>
</tr>
<tr>
<td>Capacity</td>
<td>20</td>
<td>Ah</td>
</tr>
<tr>
<td>Internal consumption</td>
<td>≤150</td>
<td>µA</td>
</tr>
<tr>
<td>Max charging voltage</td>
<td>42V±0.1V</td>
<td>A</td>
</tr>
<tr>
<td>Limit discharged voltage</td>
<td>28V±0.1V</td>
<td>A</td>
</tr>
<tr>
<td>Max continuous charging current</td>
<td>4</td>
<td>A</td>
</tr>
<tr>
<td>Max continuous discharging current</td>
<td>20</td>
<td>A</td>
</tr>
<tr>
<td>Pulse discharging current</td>
<td>120</td>
<td>A</td>
</tr>
<tr>
<td>Housing material</td>
<td>ABS</td>
<td></td>
</tr>
<tr>
<td>Charging temperature</td>
<td>0 to 65</td>
<td>°C</td>
</tr>
<tr>
<td>Discharging temperature</td>
<td>-20 to 65</td>
<td>°C</td>
</tr>
<tr>
<td>Storage temperature</td>
<td>5 to 30</td>
<td>°C</td>
</tr>
<tr>
<td>Cycle life (80% DOD) [Depth of Discharge]</td>
<td>&gt;500</td>
<td>cycles</td>
</tr>
<tr>
<td>Weight</td>
<td>3.5</td>
<td>kg</td>
</tr>
<tr>
<td>Dimensions</td>
<td>310 x 87 x 125</td>
<td>mm</td>
</tr>
</tbody>
</table>
5.9 Troubleshooting

<table>
<thead>
<tr>
<th>No voltage</th>
<th>Solution</th>
</tr>
</thead>
<tbody>
<tr>
<td>- Battery empty</td>
<td>- Charge battery</td>
</tr>
<tr>
<td>- Plug not connected</td>
<td>- Insert plug</td>
</tr>
<tr>
<td>- Battery not properly positioned in holder</td>
<td>- Position holder properly</td>
</tr>
<tr>
<td>- Fuse defective</td>
<td>- Replace fuse</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Charger does not start charging</th>
<th>Solution</th>
</tr>
</thead>
<tbody>
<tr>
<td>- Temperature below 0°C.</td>
<td>-</td>
</tr>
</tbody>
</table>

**NOTE:** If the battery/bike has not been used for more than **36 hours**, the battery goes into "sleep mode" and the bike will not turn on with the on/off button on the handlebar (unless the battery is connected). This prevents the battery from gradually draining. To "wake up" the battery, briefly connect the charger to local power.

5.10 Warranty conditions

The battery supplier warrants that the battery was made in compliance with legal standards and specifications. During production and before delivery, all batteries undergo extensive testing and inspection. If you do not follow the instructions and the terms in this manual, damage may occur and/or the unit will not meet our specifications. This could void the warranty.

5.11 Liability

Bunch Bikes cannot be liable for:
- Damage resulting from the use of the battery.
- Use incompatible with the purpose of the product.
6. Battery charger

6.1 Product description
- The Li-ion battery charger is a universal charger for Li-ion batteries equipped with advanced high-frequency capability switching technology.
- The charger is suitable for batteries with a capacity of up to 40 Ah and has a two-stage charging characteristic: Constant Current (CC) – Constant Voltage (CV) for completely automated charging of lithium batteries.
- The charging parameters are not sensitive to the input voltage. It is suitable for 110 V and 230 V AC, 50-60 Hz.
- The charger is protected against short-circuiting, excess voltage, high temperatures and polarity reversal.

6.2 Safety instructions
- Always connect the charger directly to a power source. Never use an extension cord!
- Do not use the charger for non-rechargeable batteries. These can overheat and burst.
- The charger is made for indoor use. Do not expose the charger to rain or snow.
- Batteries cannot withstand short-circuiting! Therefore do not short-circuit the battery. Never create a short-circuit when the charger is connected to the battery, regardless of whether the utility power is present. If a battery is short-circuited, the battery could explode! In that case, the charger may also be damaged beyond repair.
- Always place the charger in a well-ventilated, dry space.

6.3 Description and operation
- Connect the charger plug directly to the battery or into the bike's cargo box. This will fit in only one way and will be automatically guided to its position and held there by magnetic forces.
- Check whether your local power supply is suitable for the input voltage of 110 V or 230 V. Connect the charger to a wall socket.
- LED GREEN confirms power supply or end of charging.
- LED RED confirms that the charger is charging.
- Two-stage charging curve; Stage 1: CC (Constant Current) Stage 2: CV (Constant Voltage)

The charger has one LED:
- LED red = power on, charging mode
- LED green = battery fully charged / stand-by mode
- LED blinking red = Overvoltage
  Short-circuit outlet
  Polarity reversal
  Overvoltage
  Over-timing

- When the charger remains connected to the battery after charging, it will resume charging again as soon as the battery voltage drops below 40 V.
6.4 Unpacking and mounting/installation
The package contains the following parts:

- Charger with charging cable and socket
- Power cord
- Instructions for use

6.5 Maintenance
The charger requires no special maintenance. Clean the charger with a damp cloth if you wish.

6.6 Taking out of service
Electrical equipment must not be disposed of with normal household waste. Take the battery to a registered waste processor for disposal.

6.7 Technical specifications

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
<th>Unit</th>
</tr>
</thead>
<tbody>
<tr>
<td>Model</td>
<td>MDA222</td>
<td></td>
</tr>
<tr>
<td>Input voltage</td>
<td>90 - 264</td>
<td>V AC</td>
</tr>
<tr>
<td>Input frequency</td>
<td>47 – 63</td>
<td>Hz</td>
</tr>
<tr>
<td>Internal consumption without load</td>
<td>≤1.0</td>
<td>W</td>
</tr>
<tr>
<td>Max amperage input under full load</td>
<td>≤2.5</td>
<td>A</td>
</tr>
<tr>
<td>Surge current</td>
<td>≤75</td>
<td>A</td>
</tr>
<tr>
<td>Efficiency</td>
<td>≥85</td>
<td>%</td>
</tr>
<tr>
<td>Output voltage</td>
<td>41.9 ± 0.2</td>
<td>V DC</td>
</tr>
<tr>
<td>Charging current</td>
<td>4.0 ±0.3</td>
<td>A</td>
</tr>
<tr>
<td>Shut-off current (stop charging)</td>
<td>150 ± 100</td>
<td>mA</td>
</tr>
<tr>
<td>Nominal output power</td>
<td>167</td>
<td>W</td>
</tr>
<tr>
<td>Housing material</td>
<td>ABS</td>
<td></td>
</tr>
<tr>
<td>Temperature of use</td>
<td>0 to 40</td>
<td>°C</td>
</tr>
<tr>
<td>Storage temperature</td>
<td>-20 to 65</td>
<td>°C</td>
</tr>
<tr>
<td>Max. temperature increase</td>
<td>≤45</td>
<td>°C</td>
</tr>
<tr>
<td>Weight</td>
<td>0.9</td>
<td>kg</td>
</tr>
<tr>
<td>Dimensions</td>
<td>179 x 80 x 38</td>
<td>mm</td>
</tr>
</tbody>
</table>
Nameplate on charger:

Serial number located on side or bottom of charger:

6.8 Warranty conditions
The battery supplier warrants that the Li-ion MDA222 charger was made in compliance with legal standards and specifications. During production and before delivery, all Li-ion chargers undergo extensive testing and inspection. If you do not follow these instructions and the terms in this manual, damage may occur and/or the unit will not meet our specifications. This could void the warranty.

6.9 Liability
Bunch Bikes cannot be liable for:
- Damage resulting from the use of the Li-ion MDA222.
- Use incompatible with the purpose of the product.
7. Accessories

If desired, you Bunch cargo bike can be equipped with a plug-in chain, rain hood, a set of Maxi-Cosi carriers, a cover, and a set of stainless steel eye bolts for securing a dog so that it cannot jump out of the cargo box.

Tip: Place a rug or a rubber mat on the bottom of the cargo box to prevent injury to a dog's paws on the holes in the bottom plate.

Each of these accessories is easy to install and to use. Order at www.bunchbike.com
8. **Tips for use and safety**

The Bunch Bike Coupe is a stable, three-wheeled cargo bike with the great advantage that when stationary you can rest your feet on the pedals without having to pedal. Especially for a heavily loaded cargo bike, this is an advantage over a two-wheeled bike, which is more difficult to handle in that situation. Slow down on curves (see "Brakes") because there is always a risk of tipping at excessive speeds, even with a three-wheeled cargo bike! When approaching the beginning of a driveway, be sure to ride up over the curb with both front wheels at the same time - approach at a right angle.

The Coupe a has front hatch. This is to make it easy for small children or a dog to step in and out. The hatch is fastened on the left and right with a latching system. When closing the hatch, make sure that the pawls of the latches mesh well on the left and right sides of the frame, to prevent the latch from opening accidentally while cycling.

To protect your children's fingers, The Coupe has specially developed mudguards. Your children sit safely in the cargo box with three-point safety belts.

8.1 **Helmets**

All riders and passengers should always wear a helmet. Helmets can significantly reduce your chance of head injury in the event of a crash. Riding a Bunch cargo bike does not protect you or your children from the risk inherent in riding with traffic. Make sure your helmet is U.S. Consumer Product Safety Commission certified and always make sure you follow the manufacturer’s instructions for proper fit and size. Always properly attach your helmet. Never use a damaged helmet. If your helmet becomes damaged, replace it immediately.

8.2 **Children in the cargo bike**

Children must be seated on the bench and properly buckled at all times when riding in the cargo bike. Always check that your children’s seat belts are properly buckled, prior to each ride. Failure to do so can result in serious injury to your child as a result of sudden acceleration or braking of the bike, or in the case of a road collision.

Do not allow children to play inside or on the cargo bike unsupervised. Do not allow children to play with the equipment mounted on the handlebars. Doing so can result in serious injury or death.

Make sure that your children keep their hands and all objects inside the cargo bike at all times. Do not allow them to hang their arms out of the cargo box. Doings so can result in serious injury or death.

Warning: Do not leave children unsupervised for any length of time while they are inside the cargo bike. Doing so can result in serious injury or death.
8.3 Riding on the road

Riding on the Road contains its own set of dangers and risks. It is inherently hazardous. Always follow your local laws concerning bikes on the road and always follow traffic law. In addition, consider these items before setting out on any ride to help keep you and your passengers safe:

- Route: what is the safest route? Choose low traffic neighborhood streets, roads with designated bike lanes or routes, or bike paths. Think about where you’re going to cross any busy roads along your route and incorporate the safest option for crossing into your route.
- Ride defensively. Always assume that others do not see you!
- Make eye contact with drivers at intersections, and confirm they see you. A friendly wave can help as well.
- Be respectful of other road or path users including motorist, pedestrians, and other cyclist. Remember, especially if you are commuting, that these may be the same people you encounter on your ride every day.
- Look ahead and be ready to avoid; Vehicles slowing or turning, entering the road or your lane ahead of you, or coming up behind you. Parked car doors opening. Pedestrians stepping out. Children or pets playing near the road. Potholes, railroad tracks, construction, debris, or any other obstacles that may cause you to swerve or lose control.
- Stop at stop signs and traffic lights. Slow down and look both ways at street intersections. Remember that a bicycle always loses in a collision with a motor vehicle, so be prepared to yield even if you have the right of way.
- Never carry anything which obstructs your vision or your complete control of the bicycle. Never ride with more weight than you can handle.
- Use approved hand signals for turning and stopping. Because of your riding position on the cargo bike it may be hard for drivers to read your body language and understand your intention to turn. This makes the use of hand signals especially important.

8.4 Riding at night

Riding at night drastically increases the risks of riding on the road. Driver visibility is extremely reduced at dawn, dusk, or night time. During this time it is especially important that you stay aware of your surroundings and do what you can to increase your visibility to others and your own ability to see obstacles.

- The Coupe is equipped with front lights and a rear light/reflector. Do not remove any of these vital pieces of safety equipment and always check before riding at night to make sure your lights are functioning properly.
- Wear light colored or reflective clothing and accessories. Such as reflective vest, arm and leg bands, and flashing lights.
- Know your local laws regarding bike visibility, including lights and reflectors.

Warning: The risk of an accident, particularly being struck by a motor vehicle, is much higher at night. Riding at dawn, dusk, or night without an adequate bicycle lighting system and without reflectors is dangerous and may result in serious injury or death. DO NOT remove the lights and reflectors from your bike.
8.5 Riding in wet conditions

When road surfaces are wet, stopping times for both your Bunch cargo bike and any other vehicle on the road can increase and tire traction can decrease. These effects can increase your risk of accident and resulting injury while riding.

Warning: wet weather impairs traction, braking, and visibility for the cyclist and for vehicles sharing the road.

8.6 Intended Use

All Bunch Cargo bikes are intended for pave road use only. We understand that road conditions can vary and all Bunch cargo bikes are designed to hold up to the abuse of commuting on city streets. They are not, however, intended for off road use, extended gravel or dirt road use, commercial use, racing, or any uneven terrain. If you must take your bike across a section of off road area or up/down any curb feature we recommend dismounting and walking the bicycle, especially if the bike is loaded.

Warning: Unintended use of any Bunch cargo bike may result in damage to the frame, premature fatigue of the frame, or failure of the frame, and will void the warranty. Use in any conditions outside the specified conditions may result in injury to the rider and/or passengers.
9. Maintenance

We strongly recommend having your bike regularly serviced by a professional mechanic.

Note: The first service visit must be made after 300 miles or within 3 months after purchase. The following service visits should be made after 1000 miles / 10 months, 2750 miles / 18 months, 4500 miles / 24 months, 6000 miles / 36 months, 9000 / 42 months, and 11000 / 48 months.

9.1 Tightening torques

When repairs are done on The Coupe, please use the following tightening torques:

<table>
<thead>
<tr>
<th>Fastening</th>
<th>Required</th>
<th>Tool</th>
<th>Tightening torque [Nm]</th>
<th>Comment</th>
</tr>
</thead>
<tbody>
<tr>
<td>REAR FRAME</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>26&quot; rear wheel/ Enviolo hub</td>
<td>2x M10 axle nut</td>
<td>15 mm wrench</td>
<td>35</td>
<td></td>
</tr>
<tr>
<td>Pads, left/right</td>
<td>4x M8 x 16</td>
<td>Allen key 5</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Disk adapter</td>
<td>2x M6 Allen key</td>
<td>Allen key 5</td>
<td>8 - 10</td>
<td>Loctite</td>
</tr>
<tr>
<td>Caliper</td>
<td>2x M6 Allen key</td>
<td>Allen key 5</td>
<td>6 - 8</td>
<td>Loctite</td>
</tr>
<tr>
<td>Rear fender</td>
<td>2x M5x16 button head screw</td>
<td>Allen key 3</td>
<td>hand-tight</td>
<td></td>
</tr>
<tr>
<td>Lock</td>
<td>2x M5x16 button head screw</td>
<td>Allen key 3</td>
<td>hand-tight</td>
<td>Loctite</td>
</tr>
<tr>
<td>Rear light</td>
<td>2x M5 nut</td>
<td>Open-end wrench 8</td>
<td>5 - 7</td>
<td></td>
</tr>
<tr>
<td>Central motor cranks</td>
<td>2x M8 crank screw</td>
<td>Allen key 8</td>
<td>40</td>
<td>Copper grease</td>
</tr>
<tr>
<td>Central motor sprocket</td>
<td>1x Circlip</td>
<td>Torque wrench</td>
<td>35</td>
<td>Left-hand thread</td>
</tr>
<tr>
<td>Bafang motor cap</td>
<td>2x M3x8 Phillips screw</td>
<td>Screwdriver</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>Bafang central motor</td>
<td>3x M6 Allen key</td>
<td>Allen key 5</td>
<td>18 - 20</td>
<td></td>
</tr>
<tr>
<td>Speed sensor</td>
<td>1x M5 x 10</td>
<td>Allen key 3</td>
<td>1.5 - 2</td>
<td>Loctite</td>
</tr>
<tr>
<td>Magnet in rear wheel</td>
<td>Magnet</td>
<td>Screwdriver</td>
<td>1 - 2</td>
<td></td>
</tr>
<tr>
<td>Pedals</td>
<td>2x pedal axle</td>
<td>15 mm pedal key</td>
<td>45 - 50</td>
<td>Copper grease</td>
</tr>
<tr>
<td>Seat/seat post</td>
<td>Allen key M</td>
<td>Allen key 6</td>
<td>18 - 20</td>
<td>According to specification of the seat post</td>
</tr>
<tr>
<td>Rear frame/</td>
<td>3x Nord Lock / 3x Ratchet cap</td>
<td>undefined</td>
<td>Nord lock ring</td>
<td></td>
</tr>
</tbody>
</table>
### FRONT FRAME

<table>
<thead>
<tr>
<th>Component</th>
<th>Material/Part Number</th>
<th>Fastener</th>
<th>Torque Range</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rear frame/ Front frame</td>
<td>Axle M20 / Locknut M20</td>
<td>Ratchet cap 30</td>
<td>20 - 30</td>
</tr>
<tr>
<td>2x side frame/ bottom frame</td>
<td>4x M8 x 70 hex bolt</td>
<td>Ratchet cap 13</td>
<td>35 - 40</td>
</tr>
<tr>
<td>Front cover</td>
<td>6x M6 x 16 button head screw</td>
<td>Allen key 5</td>
<td>hand-tight</td>
</tr>
<tr>
<td>24&quot; front wheels</td>
<td>2x M10 wheel nuts</td>
<td>Ratchet cap 15</td>
<td>35</td>
</tr>
<tr>
<td>Cargo box connecting rod</td>
<td>4x M6 x 10 button head screw</td>
<td>Allen key 4</td>
<td>hand-tight</td>
</tr>
<tr>
<td>Battery plate</td>
<td>2x recessed M5 x 16</td>
<td>Allen key 3</td>
<td>hand-tight</td>
</tr>
<tr>
<td>Steering joint</td>
<td>4x M5 x 10</td>
<td>Allen key 3</td>
<td>hand-tight</td>
</tr>
<tr>
<td>Safety belts</td>
<td>2x M6 x 16</td>
<td>Allen key 5</td>
<td>hand-tight</td>
</tr>
</tbody>
</table>

### 10. Warranty

Our bike frames are covered under a lifetime repair or replace warranty. This includes defects caused by corrosion or fatigue but excludes corrosion caused by scratch penetration of coatings.

We cover the following under a 2 year warranty: 1) the battery and motor system. 2) The wooden panels of the cargo box – including delamination of wood but excludes any deterioration of wood caused by penetration of the protective surface by wear and tear or deep scratching. 3) The following “non-wear and tear” items: Saddle, Seatpost, Brake Calipers, Brake Levers, Gear Shifter, Rear Rack, Pivot Shaft and Bearings.

The following items are considered “wear and tear” items and are not under any warranty: Tires, Inner Tubes, Valves, Wheels, Spokes, Brake Pads, Handlebar Grips, Bell, Chain, Gear Cables, Brake Cables, Fenders, Reflectors, Rain Cover, Loose Nuts and Bolts.

The Warranty starts the day of delivery, is non-transferable, and expires in the case of improper use or inadequate maintenance. Improper use is defined as riding directly up and down curbs, side impact against curbs, riding on two wheels (on a 3-wheel bike), loading of the cargo box above the maximum load of 250 pounds, exceeding the maximum load on the bike of 330 pounds, damage arising from exceeding the design speed of the cycle or extended off road use (i.e. racing), damage as a result of an impact caused in an accident or malicious damage, using the bike in any commercial application such as renting or marketing, or if the standard components on the bike have been upgraded, modified or removed. Bunch Bikes reserves the right to decide the cause of any warranty claim items, and our judgment is binding.
Bunch Bikes

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Email : info@bunchbike.com
(Business hours Monday-Friday 8am-4pm)

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