



EggRider User Manual

For EggRider V2 ebike display and mobile apps

EggRider Team

Copyright © 2019 EggRider.

Table of contents

1. EggRider user manual	4
1.1 Personalize your ebike ride	4
1.2 Why EggRider	4
2. EggRider display setup	6
2.1 Install display on your handlebar	6
2.2 Plug in the connector to your bike	7
2.3 Protocol detection	10
2.4 Connect with the mobile app	11
2.5 Activation	12
2.6 Important configuration	12
3. Display	16
3.1 EggRider Display	16
3.2 EggRider display specification	20
3.3 Pinout	21
3.4 EggRider display features	22
4. Firmware Update	23
4.1 EggRider Display Firmware Update	23
4.2 EggRider display firmware update from EggRider mobile app	25
5. Mobile App	27
5.1 EggRider mobile apps	27
5.2 Dashboard page	29
5.3 Search page	33
5.4 Rides	35
5.5 Display settings	39
5.6 Display advanced settings	45
5.7 App settings	48
5.8 Power levels	50
6. E-bike Settings	51
6.1 Ebike settings overview	51
6.2 Bafang	52
6.3 Lishui settings (LSW)	67
6.4 EggRider V2 Mate X settings	71
6.5 EggRider V2 Rad Power bikes settings	74
6.6 Kunteng settings (KT)	80
6.7 ASI - Accelerated Systems Inc settings	84

7. EggRider display compatibility	87
7.1 How to find out controller brand?	87
7.2 Compatibility list	88
7.3 Accelerated Systems Controllers	93
7.4 CYC Motor	94
7.5 Kunteng (KT) Controller	94
7.6 Check compatibility	95
7.7 EggRider V2 Pinout	96
8. Troubleshooting	97
8.1 Solve mobile app connection problems	97
8.2 EggRider display speed shows --.- km/h	97
8.3 Settings Errors	99
9. Support	100
10. Road map	101
11. EggRider Release Notes	102
12. Disclaimer	103
13. Frequently asked questions	104

1. EggRider user manual



1.1 Personalize your ebike ride

EggRider is the fusion of an e-bike display with a mobile app, allowing you to enhance the performance of your e-bike ride. You can get your riding statistics and customize your riding profile.



1.2 Why EggRider

- Compact design with premium feel
- Ebike setting personalization
- Road/Offroad profiles
- Ride statistics
- Continuously improving
- Mobile apps

Android	iPhone
 GET IT ON Google Play	 Download on the App Store

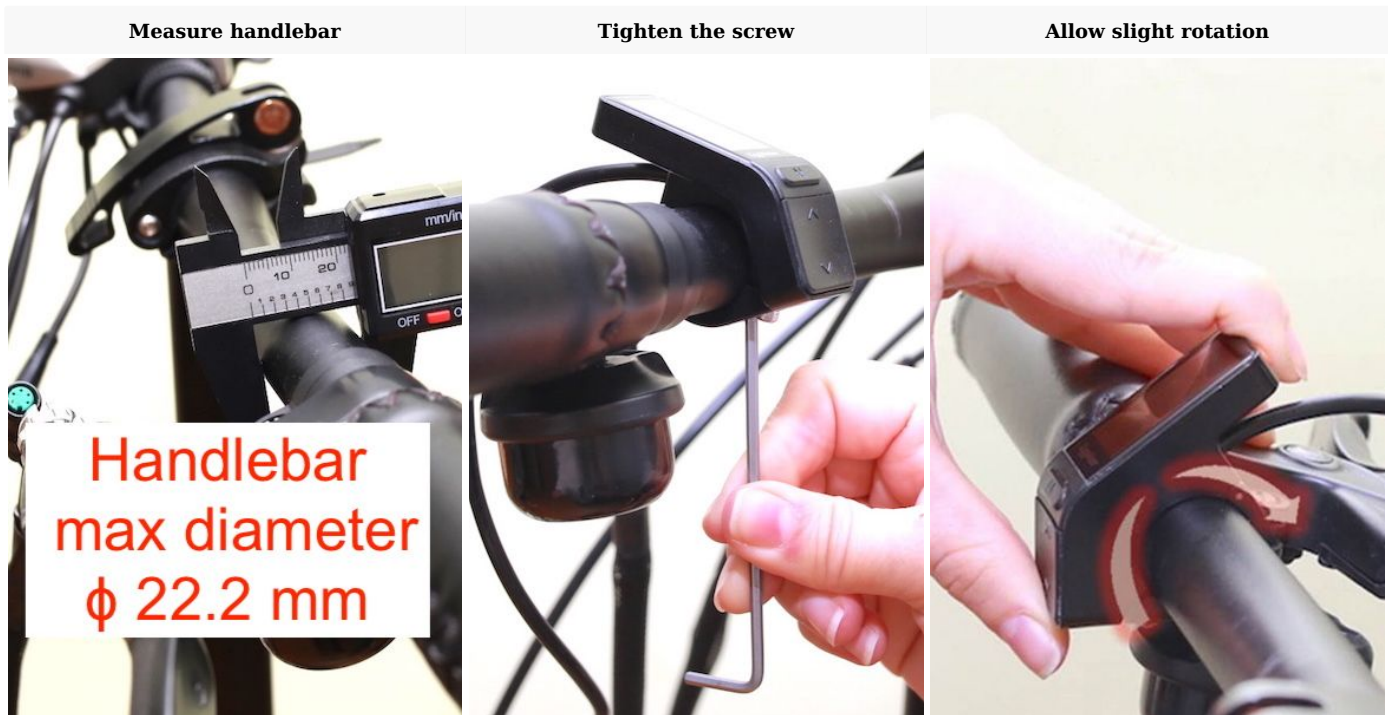
Last update: November 1, 2021

2. EggRider display setup

Please carefully follow the instructions bellow for a successful setup.

2.1 Install display on your handlebar

Find the spot on the handlebar, open the hinge, make sure no other components are pushing the display.

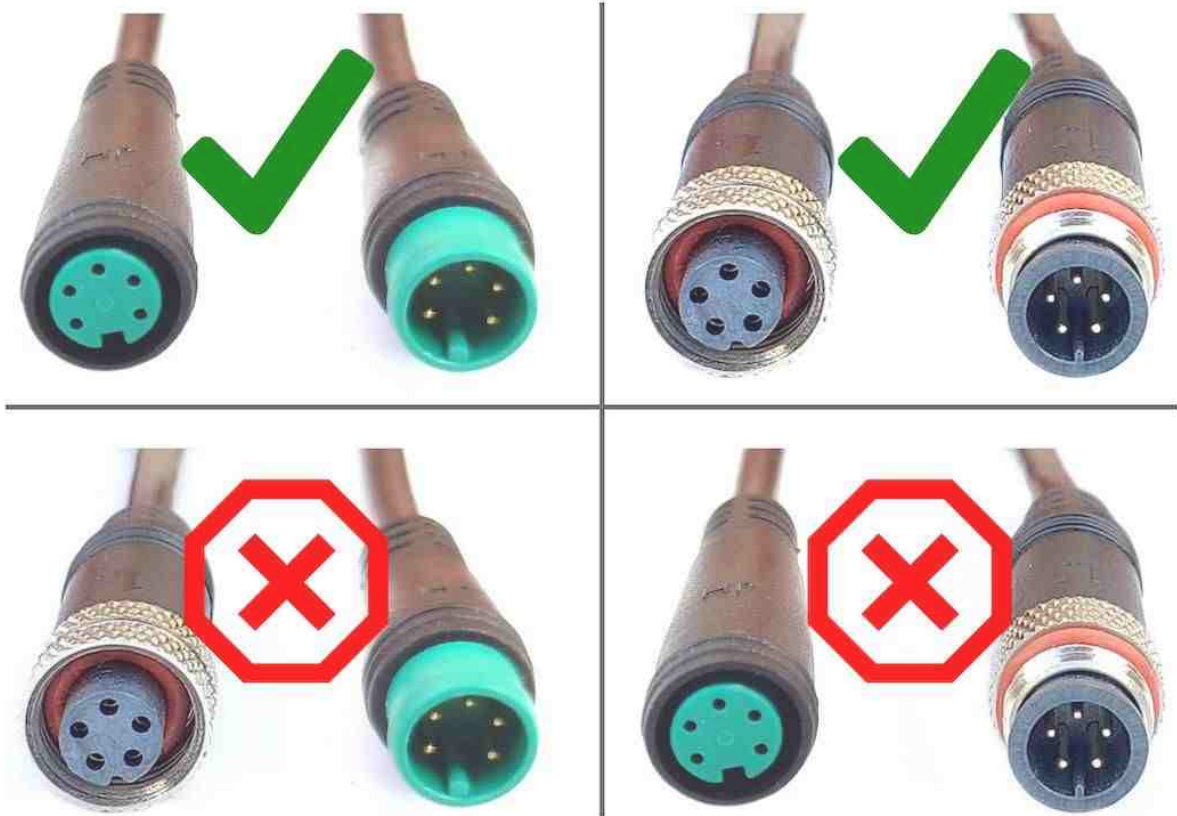


Please ensure the diameter of the handlebar is **22.2 millimeters** and the handlebar is straight where you place EggRider display.

When tightening the screw please allow some movement for display to rotate.

2.2 Plug in the connector to your bike

**Make connection only
with same type of connectors**



**Connecting different types of
connectors voids your WARRANTY!**

Do not make a connection if connectors are not the same type. Do not use unauthorized adapters such as female to female and male to male adapters because most likely they will burn the display and controller.



How to connect *EggRider* to Rad bikes



Step 1: Align the arrows



Step 2: Gently push the connectors together

DO NOT TWIST THE CONNECTORS!



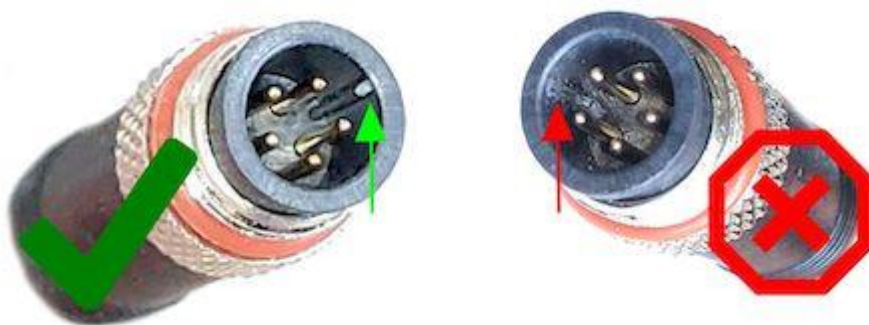
If you twist the connectors you will permanently damage your *EggRider* and this is NOT covered under WARRANTY



Step 3: Gently secure the silver screw

⚡ Alert

If connector guide is broken, it means the connection was forced wrongly or twisted during installation and your **warranty is VOID!**

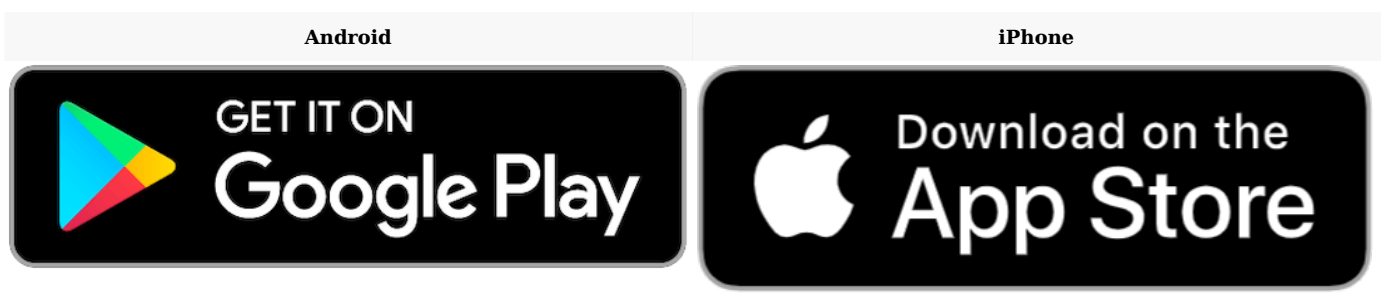


2.3 Protocol detection

When you first connect the display it is important to check that speed shows **00.0** as shown in the picture bellow. This means the EggRider display is able to communicate correctly with your bike. If instead you see speed **--.-** or **error FF (EFF)** please follow Protocol not correctly setup in troubleshooting. Once the working protocol is found you should **NOT change** it from Display Settings page.



2.4 Connect with the mobile app



Download the mobile app from the store by clicking on one of the images above.

At startup, an **automatic scan** is triggered for nearby devices. If the scan finishes and you still don't see the device in the list, restart display and pull down on the page to manually trigger a re-scan.

When the device shows in the list you can tap on it to initiate the connection.

Do not pair from the Bluetooth menu. Connect only from the app. (see Connection troubleshooting)

2.5 Activation

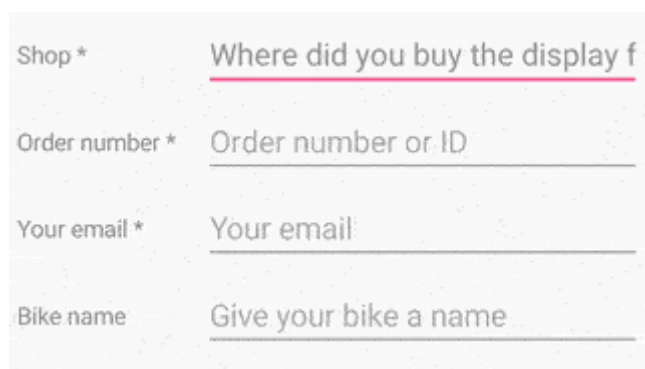
Tap on the device in the search list. When the popup shows, choose option **Activate now**.

Inserting correct information gives you instant activation.

The following information is required:

- **Shop name** - Insert the shop where you bought EggRider display from. Start typing and chose from the suggestions.

Example: ~~www.shop.~~ **eggrider** .com → **eggrider**



The screenshot shows a form with four input fields, each with a placeholder text and a label to its left:

- Shop ***: Placeholder text "Where did you buy the display f"
- Order number ***: Placeholder text "Order number or ID"
- Your email ***: Placeholder text "Your email"
- Bike name**: Placeholder text "Give your bike a name"

- **Order ID** - it is usually a number and you can find it on your order email or invoice
- **Your email**

⚠ Attention

Inserting wrong information will lead to activation delays.

2.6 Important configuration

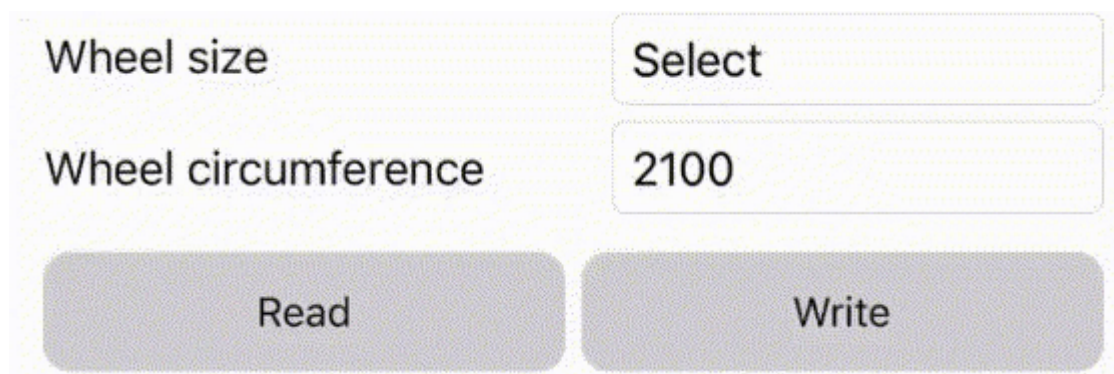
2.6.1 Wheel size

To calculate the **speed** we use **Wheel circumference (millimeters)** value from **Display settings** page. You can use the **Wheel size** drop down helper with some predefined wheel circumferences.

The following links provide comprehensive resources for determining the wheel circumference Wheel size math or Cyclecomputer calibration

i Info

The **Wheel size** drop down is just a helper with predefined values for **Wheel circumference**. It is normal to go back to **Select**.



The screenshot shows a user interface with two input fields. The first field is labeled 'Wheel size' and has a dropdown menu currently showing 'Select'. The second field is labeled 'Wheel circumference' and has a text input showing '2100'. Below these fields are two large, grey buttons labeled 'Read' and 'Write'.

2.6.2 Battery

To have a good **battery percentage**, you have to set the Voltage 0% V, 100% V and capacity (Ah) in the **Display settings** page.

Use the **Battery Voltage** drop down helper with predefined values for Voltage 0% and Voltage 100%. You can also manually adjust the values to your specific requirements.

These settings are used for **battery measurements only**, they don't influence the voltage cutoffs for example. Use the controller specific settings for protection.



Warning

EggRider doesn't work with voltage over 60V (max 52V batteries) or with **dual battery** systems based on diodes. If you see the Display **Over Volt** message please **Stop** using the display and **Contact us via email**.



2.6.3 Saving settings

Warning

The information on EggRider display it is only saved permanently when the display it is powered off from it's own power button. This also includes the trip data.

2.6.4 Configure e-bike specific settings

One more step before you're set to go!

On specific models you need to configure the e-bike/controller specific settings to have full functionality. Please open the navigation menu and go to **E-bike settings** group and select the page relative to your e-bike/controller model.

- Bafang mid drives
- Rad power bikes
- Mate X
- ASI
- Kunteng

Tip

If you encounter any issues please keep in mind our **Troubleshooting page**

Tip

At the bottom of each page you can also find **Next** and **Previous** buttons to go through the user manual in sequence.

Last update: August 10, 2023

3. Display

3.1 EggRider Display

3.1.1 Buttons



Short press definitions

- Power short press to turn on or off
- Up increase the assist level
- Down decrease the assist level
- M switch between Road and OffRoad


Long press and combinations definitions

- M for 3 seconds to see **second screen** (trip data)
- Down for 3 seconds to **activate headlight**, keep holding to toggle **display luminosity**
- Up for 3 seconds to activate **Walk Assist** mode. It is designed to allow motor to push the bike along while you walk beside it.
- Up + Power when the display is OFF, press until display turns ON to start in **Update firmware** mode
- M + Power when the display is OFF, press until display turns ON to **load default factory settings**. This resets only the display settings. Bafang also stores settings in the controller, those will still remain.

The following combinations are available from firmware version v2.6.49

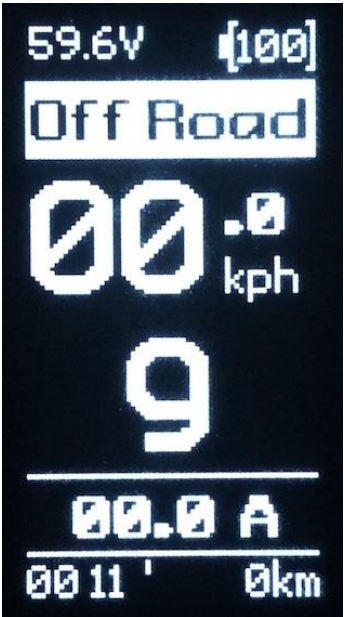
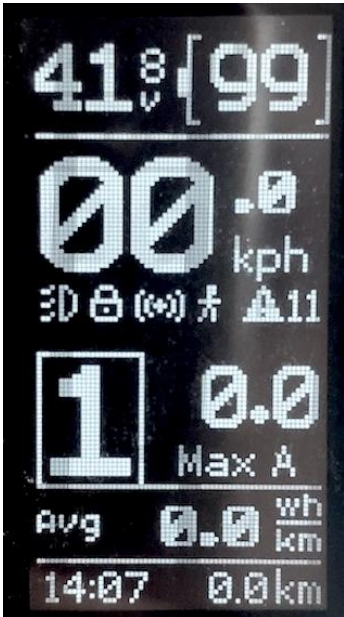


With **second screen** on, hold **Down** for 3 seconds to **reset trip**

With **second screen** on, hold **Up** for 3 seconds to change **selected battery**

 **Save settings**

Settings, mode, levels, odometer and trip data is saved when the system is shut down from **Power** button. If the power supply is cut before pressing the **Power** button, the data is not saved into the permanent memory.

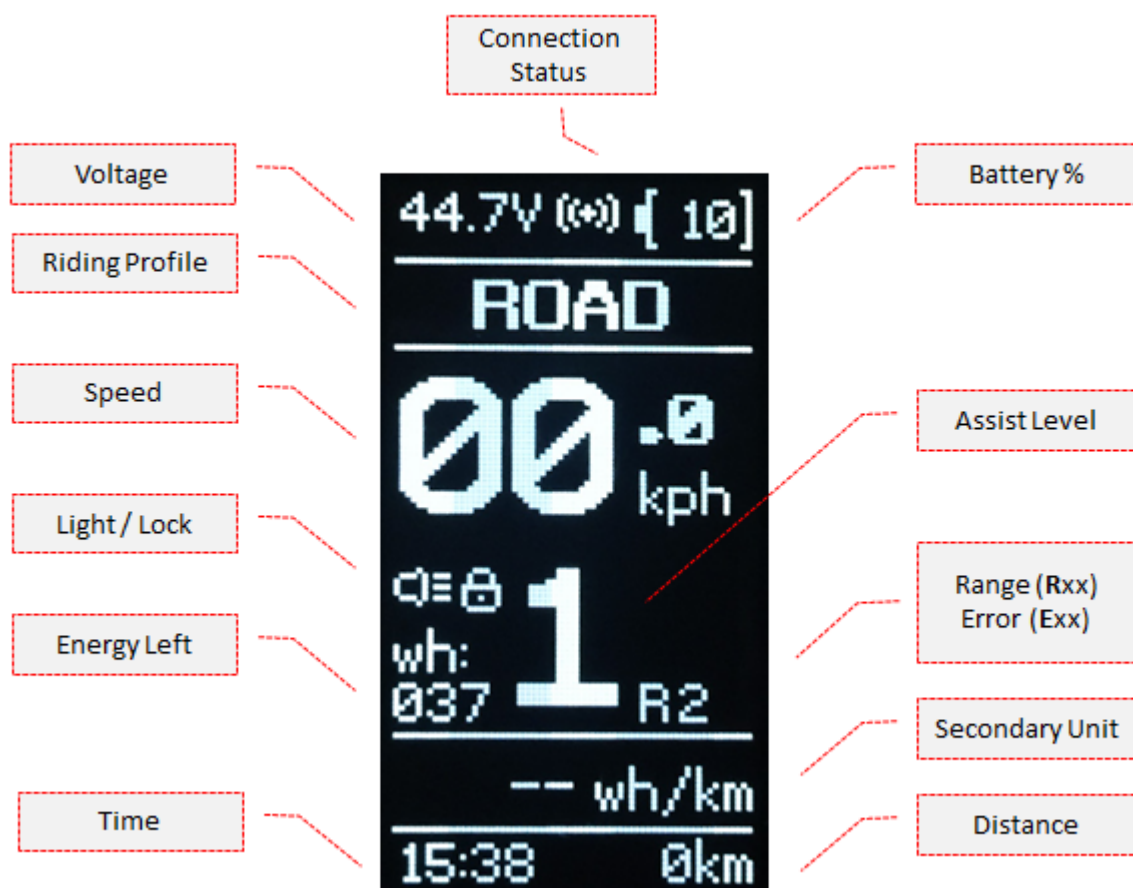
3.1.2 EggRider screens

Main screen layout V1	Main screen layout V2	Second screen	Update screen
			

3.1.3 Main screen content

You can select between the Layout V1 and V2 from the display settings in the mobile app.

On Layout V2 the Mode profile is embedded in the assist level background: dark for Road mode and white for OffRoad mode.



- **Battery %** - Battery percentage
- **Voltage** - The battery voltage
- **Connection status** - Status of the mobile app connection
- **Riding profile** - It can be Road/OffRoad or Eco/Sport based on the labels selected
- **Speed** - Speed in miles per hour (mph) or kilometers per hour (kph)
- **Error (Exx)** - Shows when an error is detected (example E03 - brake on)
- **Range (Rxx)** - Indicates the remaining range in km or mi. It shows when there is no error. example: R16, R25 (the number being distance in km or miles)
- **Light** - Headlight status (if the headlight is switched on)
- **Lock** - If the bike is locked in assist level 0
- **Assist Level** - Indicates the assist level the motor should provide
- **Secondary Unit** - It can be Power (W), Current(A), or Efficiency (watt per distance unit)
- **Time** - It can be the hour (if the app was connected previously) or current trip time
- **Distance** - Current trip distance

3.1.4 Second screen content (subject to content change)

Trip

Stats of the trip since last reset. Based on the setting, it can be since display power on or since a manually reset.

Note

If the **Reset trip** -> **At start-up** setting is selected these values reset only after 50-100 meters of distance is traveled. This is to allow downloading these stats with the mobile app.

- **Wh** Energy used
- **mAh** Capacity used
- **Wh/distance(km/mi)** Efficiency since the last restart, lower value gives longer range
- **SpdAvg** Average speed
- **Km/mi** Travelled distance
- **Time** Moving time, when speed > 0 value in hours, minutes, seconds
- **BmAh** Full battery capacity estimation (dependent heavily on the current accuracy), shows only after certain time/distance
- **SloEff** Efficiency of the last 30 minutes of travel

Total

Lifetime stats

- **Total** 00001245 - Traveled distance (km/mi)
- **Wh** Energy used
- **mAh** Capacity used
- **BmAh** Full battery capacity estimation (last 10 trips or so)
- **R.mOhm** Battery series resistance (calculated in the last hour or so)
- **BCyc** Battery cycles (calculated using the declared capacity), estimates how many times you fully charged the battery.
- **Range** Distance to go until the battery runs out

Last update: April 4, 2023

3.2 EggRider display specification

SIZE

75mm x 47mm x 35mm

WEIGHT

31g

CABLE LENGTH

50cm

HANDLEBAR MOUNTING BRACKET

Standard 22.2mm diameter

CLAMP SCREW

Hex bolt M3x10mm

MOUNTING CLAMP PIN

2.0mm diameter and around 15mm length

PHYSICAL BUTTONS

Power On/Off, Level Up/Down and popular Road/OffRoad mode switch

CONNECTOR

Higo/Julet waterproof 5 pin male/female (see image)

CONNECTIVITY

Bluetooth low energy (BLE)

PROTECTION

Dust and water-resistant - IP65 protection

VOLTAGE

Supports direct voltage up to 60V (maximum 52v nominal voltage batteries). We can support systems with higher voltages only with specific controllers and with special connections to 12V output.

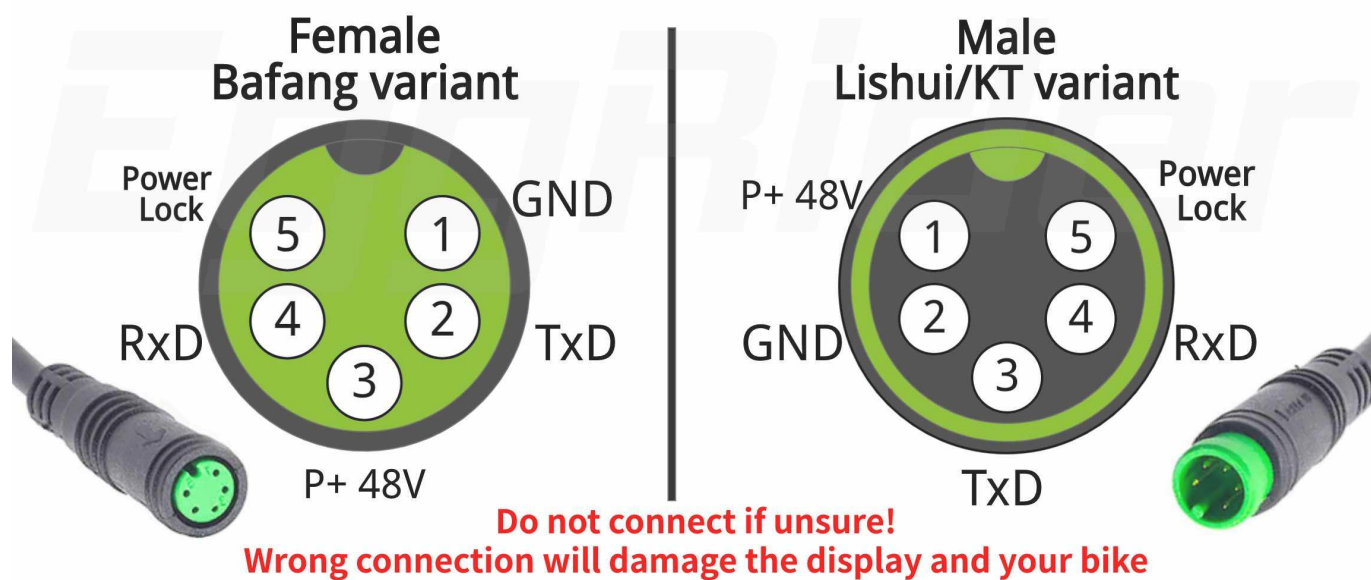
Current consumption

- Full brightness: ≤ 20 mA
- Low brightness (dimmed) ≤ 12 mA

3.3 Pinout

EggRider V2

Display pinout



Last update: February 10, 2023

3.4 EggRider display features

Elegant design with premium feel.

Small enough to avoid unwanted attention.

Lightweight and compact design keeping your handlebar clean.

Voltage reading from 20V up to 60V.

OLED screen, displaying the most important information while riding without the need of your phone.

Android and iOS mobile apps for more statistics and configurations.

Essential and accurate information; battery percentage, speed, power and distance.

Advanced stats; energy efficiency, range estimation, voltage and battery cycles.

Detects real battery capacity and tracking stats of up to 3 batteries.

EggRider mobile app available for Android and iOS.

Easy configuration from the EggRider app.

Ability to use the EggRider app as a larger display.

In-depth charts capability for your rides.

One button switch between two profiles

- Throttle yes/no switching
- Pedal assist yes/no
- Power level

Last update: November 1, 2021

4. Firmware Update

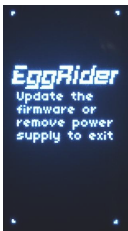
4.1 EggRider Display Firmware Update

Attention

It is highly recommended to ensure you update your firmware to the latest available when you receive your EggRider.

Please make sure to put EggRider display in update mode when doing the update procedure!

With EggRider Display off, press  +  until it shows **EggRider Updater** screen



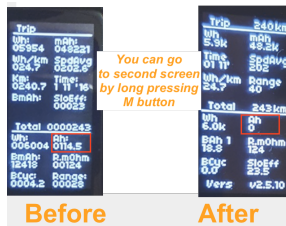
4.1.1 Update instructions for versions V2.5.xx +

⚠ Attention

Because of the many changes in some of the core functionalities we recommend following the steps bellow for a smooth transition. We tested the update from firmware version $\geq v2.4.11$. It should also work from older firmware versions but we recommend doing a reset to defaults afterwards.

To have access to all the features you need to use in conjunction with app $\geq v2.5.03$

- Backup your settings and ODO stats (in rare cases they can be lost)



- Check if any of the ODO Total KM, Wh or Ah are different than before, as highlighted in the picture above. If so we recommend to reset ODO from Display Advanced settings
- To use the new features like change Display Main screen layout (with app $\geq v2.5.03$), after update make sure to rescan for device (disconnect if already connected) and check that version shown is v2.5.23 as in picture bellow



- If you had to reset the ODO you can use the ODO distance offset to input the old ODO distance
- We recommend checking the battery specifications. For Battery Voltage 100% in display settings we now required the full battery voltage for a better battery estimation. For example, for a 48V battery it should be 54.6V. You can use the helping predefined selections if not sure. Also for Capacity (Ah) you might find that lower values than the manufactured declared capacity might work better. This --is-- because in time the battery degrades but also because sometimes the voltage cutoff is higher.

4.1.2 How to update EggRider display?

- **Using EggRider mobile app**
- ~~Using Google Chrome browser~~ (Deprecated)
- ~~Using iPhone or iPad~~ (Deprecated)
- ~~Using Android or Tablet~~ (Deprecated)

Last update: March 13, 2022

4.2 EggRider display firmware update from EggRider mobile app

⚠ Attention

It is highly recommended to ensure you have the latest firmware available on your EggRider display.

⚡ Attention

Available starting from app version 2.6.03

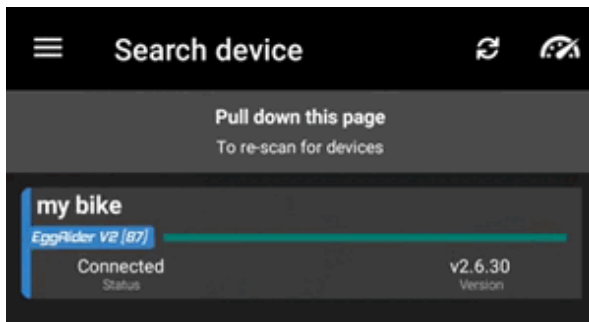
4.2.1 Steps to update

1. **Backup** your settings and ODO stats
2. **Connect** to EggRider display

If you are unable to connect: with display off, press **Up** + **Power** until display **Update firmware** screen. Skip to step 5

3. Go to Search page and **slide right** on EggRider in the list

Firmware update option in Search list by sliding right



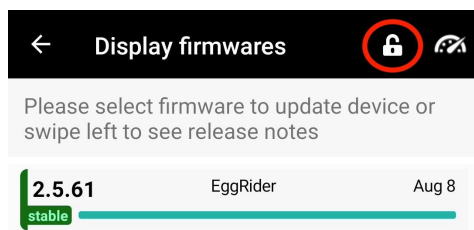
4. Tap **Update**
5. Display restarts in update mode showing the following screen



6. **Display firmware** page will open

If not, go to **Search** page and slide down to scan for devices. Tap on **EggRiderBL** or **DispUpdV2**

- a. Optional - **slide left** on one item in the list to see **release notes**
- b. Optional - If you have a **specific firmware code** tap on unlock button in the right top corner to enter it



7. Tap on the latest stable version

8. Update procedure will start

9. When update is finished the EggRider display will start in normal running mode and the app will connect to it

Attention

If the update hangs, power off from the battery or unplug the cable and restart procedure.

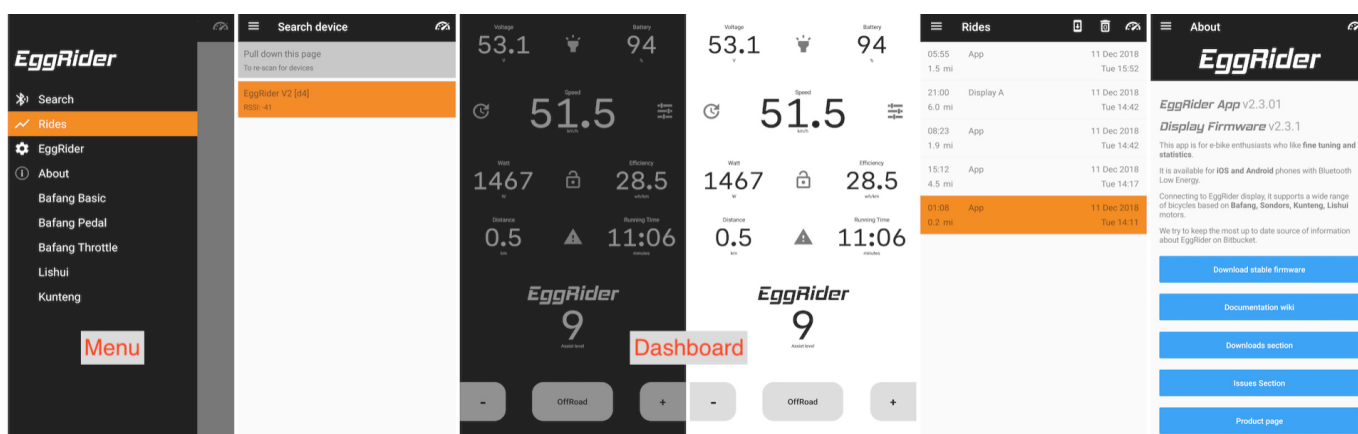
Last update: March 13, 2022

5. Mobile App

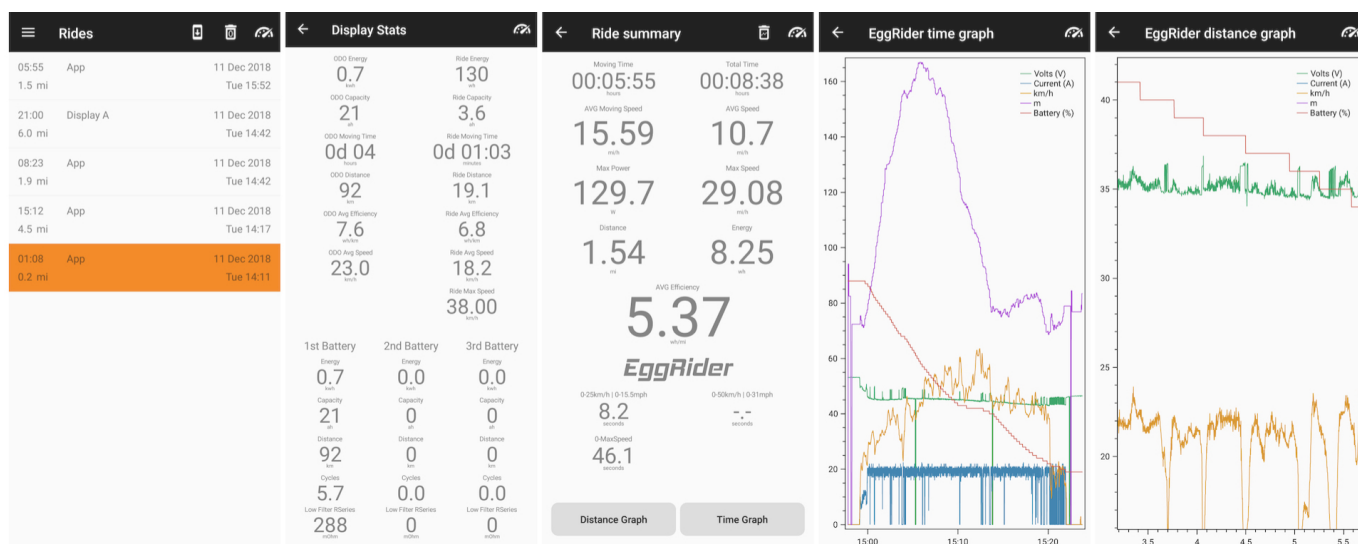
5.1 EggRider mobile apps

Both Android and iOS apps have the same functionalities, except for short periods of time between version releases. Although generally similar in appearance, there are some visual differences due to platform-specific components.

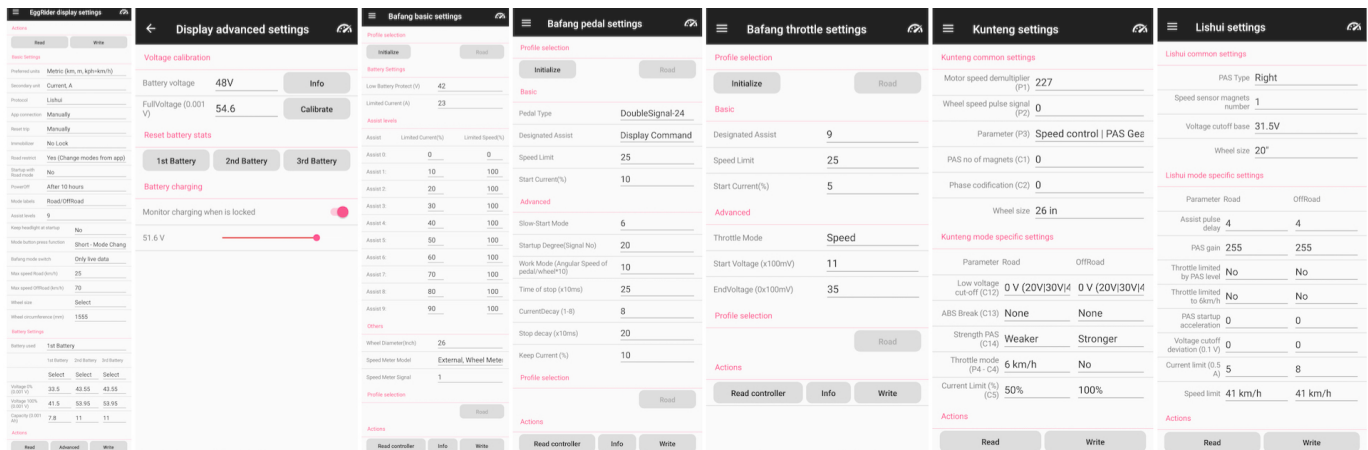
5.1.1 App overview main pages



5.1.2 App overview stats pages



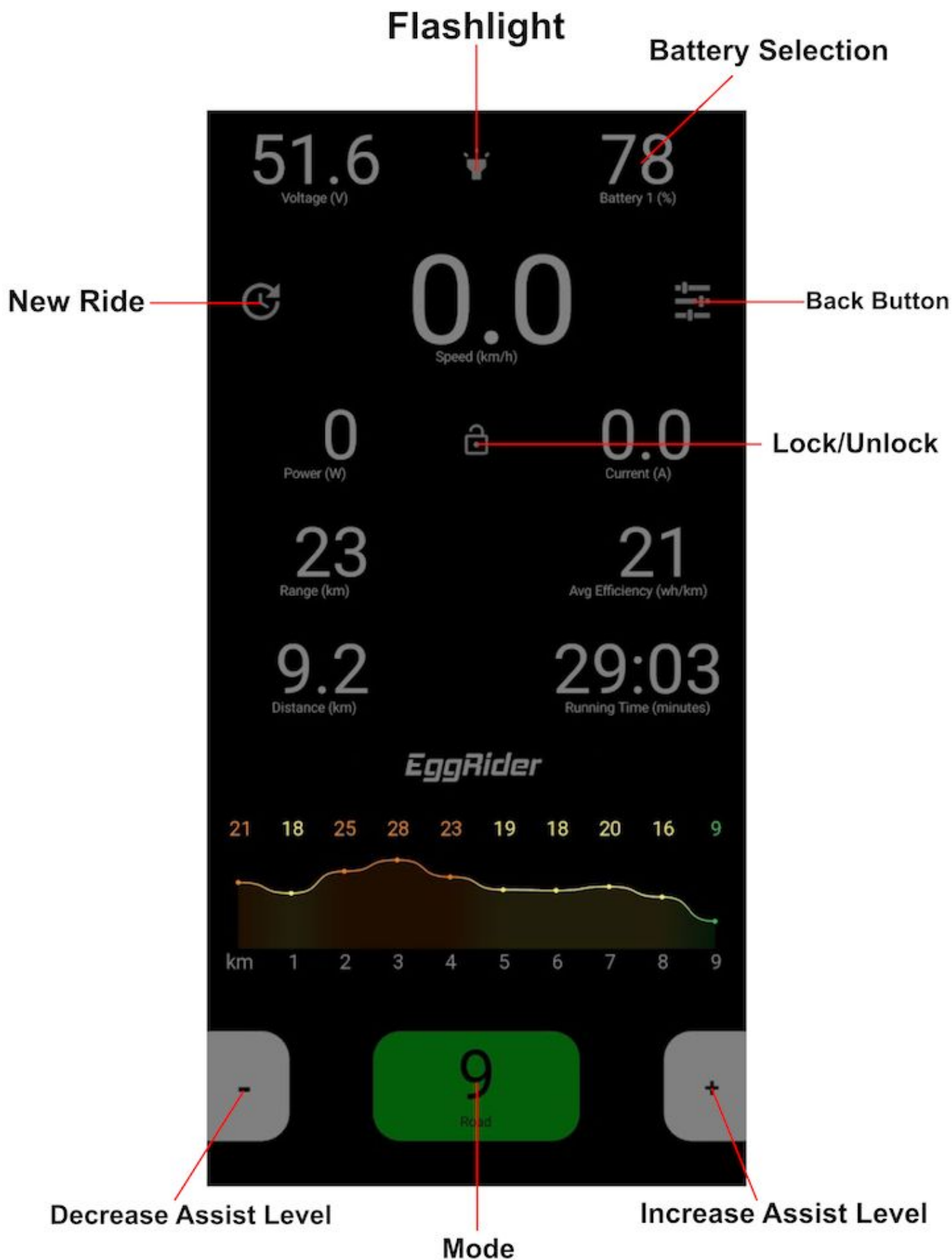
5.1.3 App overview settings pages



Last update: February 7, 2023

5.2 Dashboard page

Accessible from **Dashboard icon** 




Shows real-time information about your riding.

- **Voltage** = Battery Voltage
- **Flashlight** = Turning on / off your headlight
- **Battery Selection** = Battery percentage | If you press on it you can change the battery
- **New Ride** = A new Ride will start and the current ride will stop
- **Speed (km/h)** = Your current speed
- **Power (W)** = Engine power
- **Lock/Unlock** = Lock/Unlock screen
- **Current (A)** = Battery current
- **Range (km)** = Distance until battery will drain
- **Avg Efficiency(wh/km)** = Efficiency on watt-hours per km
- **distance (km)** = Distance that you rode on the current ride
- **Running Time (minutes)** = Total time on the current ride
- **Decrease Assist Level** = Assist level will decrease when pressed
- **Increase Assist level** = Assist level will increase when pressed
- **Mode** = Change the current mode

Dashed values displayed can be caused by the following; a communication issue, or not connected to EggRider display.

5.2.1 Record your ride

Real-time information is recorded by the app only when this page is visible and connected.

Make sure you send the app in the background from this page (press the  button on your phone) if you want to record in your statistics while using other apps.

In order to save the stats of your ride you will need to do the following:

1. After you finish the ride press on "**New Ride**"
2. Next, go in the "**Rides**" page
3. Press on your last Ride
4. Press on "**share**" icon
5. Save your file on your phone or share it with your friends!

Remember that some operating systems can still kill the app running in the background. If this is the case, go into your system settings and disable any optimization or similar settings. Also on Android, you might have the option to lock the app which will prevent it from being killed by the operating system.

To return to the settings pages, press the settings icon on the right (on android it can also be achieved using the  button)

Last update: February 22, 2023

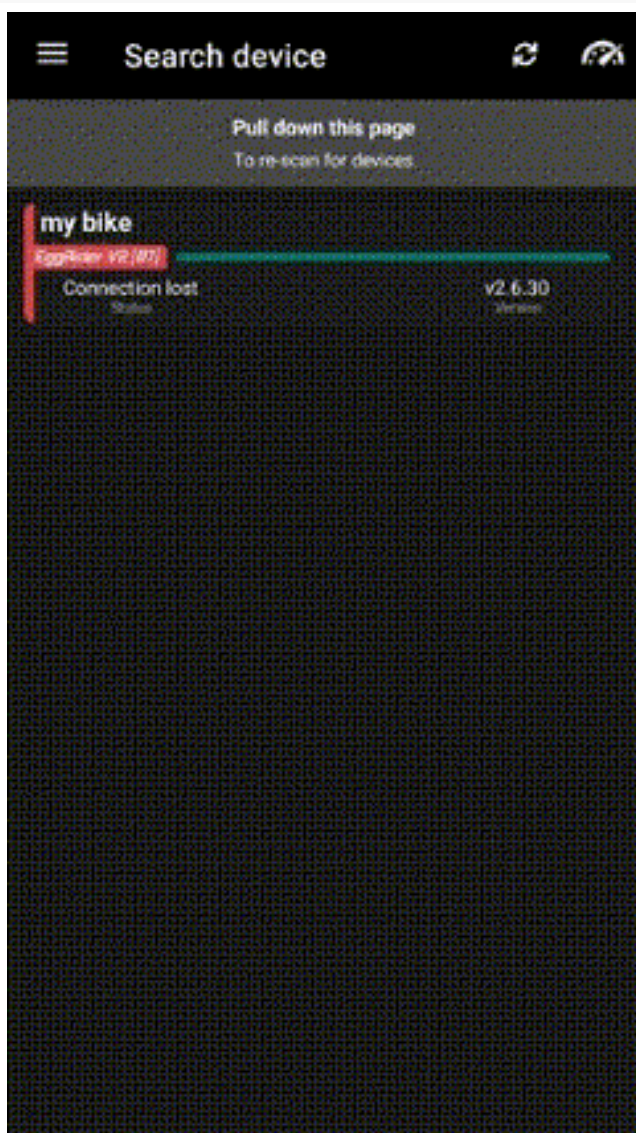
5.3 Search page

Accessible from menu **Search**

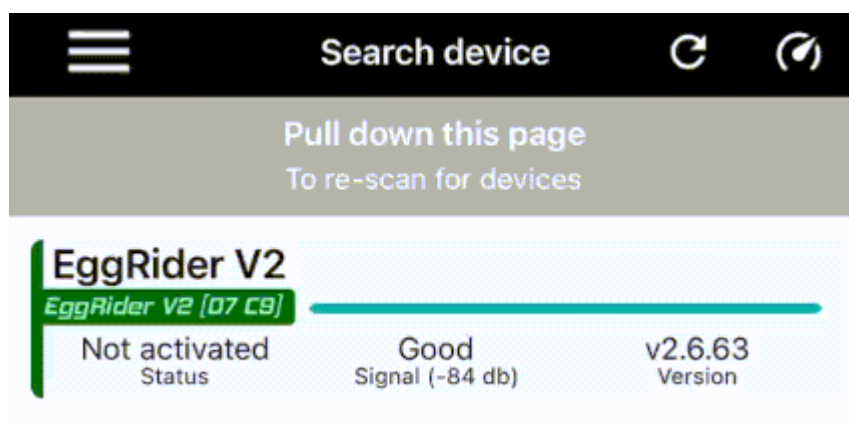
It shows the list of EggRider displays in range.

When the app starts, it scans for EggRider devices nearby and displays them in the list. You can also trigger the scan manually by pulling down on the page.

Tap on the device name in the list to connect with the app



You can also slide from left to right or from right to left in order to check the other options.



- **Rename** -> You can rename your EggRider display
- **Update** -> Enter in Update mode (you need to be connected first)
- **Connect** -> You can connect to the EggRider display
- **Disconnect** -> Disconnect from EggRider display

5.3.1 Troubleshooting

If your device is not showing up in the list

- Make sure the app has access to bluetooth under your phone's settings
- Make sure the EggRider display is plugged in and turned on
- Restart the EggRider display
- Pull down the page to refresh the scan

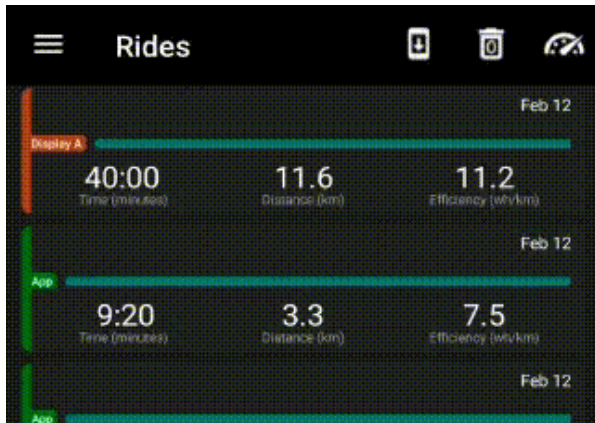
Last update: February 20, 2023

5.4 Rides

Accessible from menu **Rides**

Shows a list of rides recorded from the app or the display. Each ride shows its source label, running time, distance, and date it was recorded in the app:

The rides page with the options by sliding right or left



In the **Rides** page, on the top bar you have the following extra actions:

- **Delete Rides** - It deletes all Rides with distance < 0.1 km



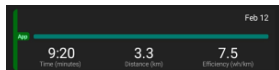
- **Get Display stats** - Display Last Ride Stats



Rides are differentiated by the source labels.

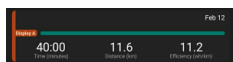
- **App** - Real-time information recorded by app when connected to EggRider display. (Tapping shows Ride summary).

Ride recorded by the app



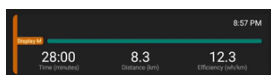
- **Display A (Auto)** - At every connection the app collects automatically the last ride data recorded by display (Tapping shows Display stats).

Display A (Auto) ride



- **Display M (Manual)** - Manually collected ride data recorded by display (tapping shows Display stats).

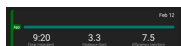
Display M (Manual) ride



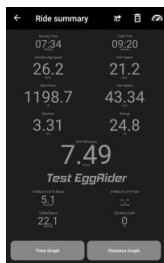
5.4.1 Ride Summary

Accessible from the Rides list page by tapping on a ride labelled with App.

Tap in Rides list

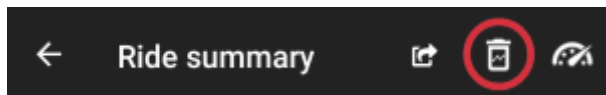


Ride Summary

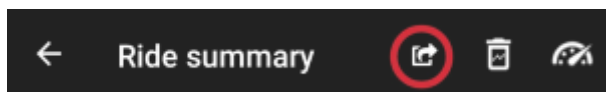


In the **Ride Summary** page, on the top bar you have the following extra actions:

- **Delete Graph** - deletes all the data points related to the trip but keeps the summary stats. You might consider this for saving memory.



- **Export trip** - generates a .csv file of the trip available for viewing and sharing outside the app.



5.4.2 Ride Graph

Accessible in the **Ride Summary** page by tapping **Distance Graph** or **Time Graph** buttons.

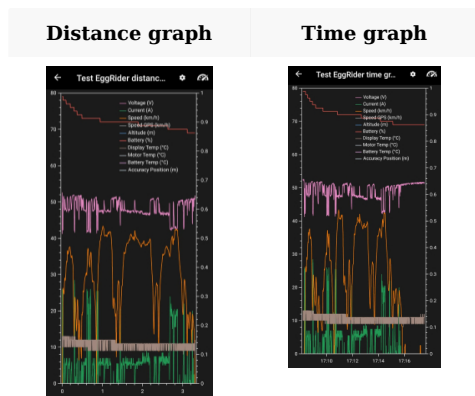


Distance Graph - Shows the ride real-time information distance based (having the distance on the x (horizontal) axis).

Time Graph - Shows the ride real-time information time based (having the time on the x (horizontal) axis).

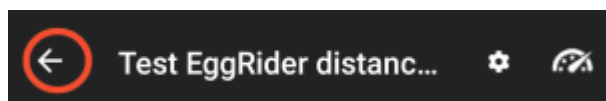
Y (vertical) axis are as follows:

- **right side axis** - it is plotted only altitude
- **left side axis** - are plotted all the other values



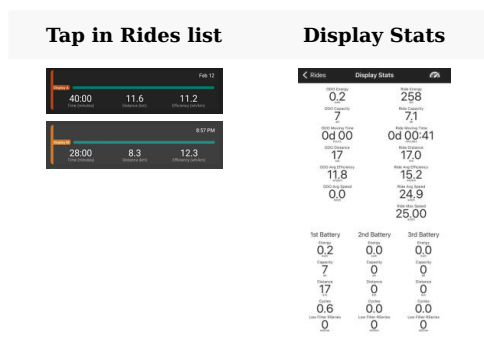
These graphs also support two fingers pinch for zoom in/out.

To go back to **Ride summary**, press the arrow in the left top corner (or **Back** button on android).



5.4.3 Display Stats

Accessible from the **Rides list** page by tapping on a ride labelled with **Display A** or **Display M**.



ODO labels - These represent the cumulative or lifetime data values tracked by the display. ODO, short for "odometer," records information that accumulates over the entire lifespan of the device. For instance, this could include total distance traveled, overall usage time, or other similar statistics.

Ride labels - These pertain to specific data values related to individual display trips. Unlike ODO labels, which cover overall data, ride labels focus on metrics that are relevant to each separate trip. These metrics might encompass information such as distance, duration, speed, energy consumption, and more, providing insights into each ride taken using the EggRider display.

Battery labels - This section displays a trio of distinct columns, each dedicated to presenting detailed statistics specific to an individual battery. This arrangement ensures a comprehensive view of the performance metrics for each battery.

To go back to **Rides list** select **Rides** on the top right corner of the screen.

Last update: August 10, 2023

5.5 Display settings

Accessible from menu **Display Settings**

5.5.1 Preferred units

It allows you to select units for measurement to specify various distance, speed and altitude. You could see this in the mobile app and your display.

Options

- Metric (km, m, kph=km/h)
- Imperial (mi, ft, mi/h)

Secondary unit

It controls which value to show on the display main screen for the secondary unit.

- Power, W
- Current, A
- Efficiency, wh/distance

Protocol

For each protocol type there are two options, one normal and one Rx/Tx Swap. The last one is to help when the communications wires are inverted.

Info

When set to **Auto** the display will try to autodetect the protocol at the next startup.

Options

- Auto
- Bafang
- Lishui
- Kunteng
- Tonseng
- ASI
- Bafang Rx/Tx Swap
- Lishui Rx/Tx Swap
- Kunteng Rx/Tx Swap
- Tonseng Rx/Tx Swap
- ASI Rx/Tx Swap

Reset trip

It controls when the current trip is reset on the display. If **Manually** selected, the trip will reset only when requested from the **Dashboard** page. When selected **At start-up** the trip will reset after every power cycle but keeps the old trip information so it can be downloaded by the app until bike starts to move.

Options

- Manually
- At start-up

Immobilizer

NO LOCK

Default behavior, no action taken.

LOCKED LEVEL 0 (CONNECT WITH APP TO UNLOCK)

Display will always start locked in assist level 0. You have to connect with the mobile app to unlock to be able to change the assist level or mode profile.

This is intended to cut-off the motor until connected with the mobile app. This setting will also be set if display is locked from dashboard and then power off but it has to be expressly disabled from settings (on dashboard can be disabled only temporary).

Road restrict

Option to inhibit changing profile from Road to OffRoad with the **M** button on the display.

If set to **Yes** you can only change profile from OffRoad to Road and based on the option use the mobile app for both ways or also the display when the app is connected.

Options are:

- No
- Yes (Change modes only from app)
- Yes (Change modes from the display when the app is connected)

Startup with Road

Decides if the display should always start with the Road profile.

Options are **No** or **Yes**.

PowerOff

The time after which the display should power off.

Options

- Never
- After 5 minutes
- After 2 hours
- After 10 hours

Mode Labels

The labels used on the display to identify the current profile settings.

Options

- Road/OffRoad
- Eco/Support

Assist Levels

The number of assist levels to be used when using **Up** and **Down** buttons. Each option also includes assist level 0.

Attention

Keep in mind that when you select lower than 9 assist levels, EggRider uses internally the levels between **0** for pages like power levels or for the bafang basic assist levels. This is to allow changing the number of assist levels without altering the power levels.

- 3 - [0, 1(1), 2(5), 3(9)]
- 5 - [0, 1(1), 2(3), 3(5), 4(7), 5(9)]


Options are 9, 3 and 5

Keep headlight at startup

This is a convenient feature to keep the headlight as it was before shutting down.

Options are **No** or **Yes**.

Mode button press function

Option to change the short and long press functionality of the  button.

Options

- Short - Mode Change / Long - Stats
- Short - Stats / Long - Mode Change

Bafang switch mode

The Road/OffRoad mode switch behavior for bafang controllers.

ONLY LIVE DATA

Consists in switching only between **Max speed Road** and **Max speed OffRoad** settings from the **Display Settings** page

LIVE DATA AND SETTINGS

Consists of switching between the **Max speed Road** and **Max speed OffRoad** setting from the **Display settings** page plus the relative **Road/OffRoad** mode for the **Bafang Basic**, **Bafang Pedal**, **Bafang Throttle** profile settings.

Warning

If you are an unexperienced user we highly recommend using **Only live data** setting until you get familiarised with the bafang settings.

Max speed (km/h)

Determines the speed limits for Road and OffRoad. This values can be overwritten by the specific bike/controller settings.

Wheel size

Offers some predefined **Rim + Tire** options to populate **Wheel circumference** with the right value.

Info

The **Wheel size** drop down is just a helper with predefined values for **Wheel circumference**. It is normal to go back to **Select** after the app is restarted.

Wheel circumference (mm)

This value is used to calculate the speed. Please use rim + tire value for this setting.

The following links provide comprehensive resources for determining the wheel circumference **Wheel size math** or **Cyclecomputer calibration**

Tip

If you think the speed measurement is not precise, you can use this field as a factor to increase or decrease your speed measurement.

5.5.2 BATTERY SETTINGS

EggRider has up to 3 battery profiles. You can use these profiles to track stats independently if you have more than one battery.

Please be sure you are setting at least the battery selected profile correctly. You can leave the other battery profiles as they are by default if not used.

To maximize the **battery percentage precision**, please set the following fields correctly.

Battery used

Represents the battery profile to be used.

Options are 1st, 2nd and 3rd

Battery voltage

Offers some predefined values to populate the Voltage 0% and 100%.

Options are 24V, 36V, 48V, 52V, 72V.

Attention

Never connect EggRider to a battery bigger than 52V. EggRider display works up to 60V when directly connected. With certain controllers we can overcome this limit by connecting to a 12V output.

Info

Battery voltage drop down is just a helper with predefined values for **Voltage 0%** and **Voltage 100%**. It is normal to go back to **Select**.

Voltage 0%

The empty battery voltage.

This field has a resolution of 0.01 V.

Voltage 100%

The full battery voltage.

This field has a resolution of 0.01 V.

Capacity

The capacity of the battery measured in ampere hour (Ah).
This field has a resolution of 0.01 Ah.

Last update: November 30, 2021

5.6 Display advanced settings

5.6.1 Voltage calibration

Available with firmware and mobile apps version > v2.1.0

This should be done only if the voltage displayed is not accurate or the battery percentage is not 100% after you just fully charged your battery.

The calibration is maintained once the operation is successful, so it is not necessary to repeat.

Essential

Full battery (preferably just after disconnected from the plug) or a **multimeter**.

Attention

Please ensure that you have the right Voltage 0% and 100% relative to your battery which can be found in EggRider settings page. You can select from the drop down Select to auto-fill these values.

Full battery method

With **full battery** select your battery voltage and then press **Calibrate**

Multimeter method

If you have a **multimeter** at hand, insert the battery voltage read with your multimeter under **FullVoltage** and then press **Calibrate**



Attention

If your voltage difference is greater than 2.5V you will receive a popup alert. If you are sure about your voltage then follow the steps used for the following example (adapt accordingly):

Voltage calibration for more than 2.5V example

EggRider voltage read is 38V and you know that the voltage should be 41.6V.
 $(41.6V - 38V = 3.6V > 2.5V)$

Steps

1. Write into FullVoltage 40V (38V + 2V), press 
2. Check that the new voltage shown on the dashboard is 40V and get back to display advanced settings
3. Repeat step 1, 2 until the voltage difference is lower than 2.5V
4. Write into FullVoltage 41.6 (40 V + 1.6 V), press 
5. Check that the new voltage shown on the dashboard is is 41.6V.

5.6.2 RESET BATTERY STATS

Option to reset battery statistics.

Options

- 1st Battery
- 2nd Battery
- 3rd Battery

5.6.3 BATTERY CHARGING

This function allows you to set an alarm when the battery reaches a specific voltage.

Steps to setup:

1. Enable **Monitor charging when is locked**
2. Select the your desired voltage
3. Open **Dashboard** page and press **Lock** icon
4. Start charging your battery
5. When the voltage on the dashboard will reach the voltage you set at step 2, a sound alarm and a popup will be triggered
6. Please see Notes below

Notes

Make sure your phone is on loud.

When you start charging the voltage should be at least 1 volt lower than your desired voltage.

This does not stop your charging, it is just an alert.

Your phone has to be connected at all time, connection loss might disable the functionality.

5.6.4 CURRENT CALIBRATION

Option to calibrate current if you know that the controller provides the current with an offset.

5.6.5 ODO Reset

Function used to permanently reset the ODO stats

5.6.6 ODO Offset

Function used to set an offset to the ODO distance in case you want to have your old display distance in the odo total distance

5.6.7 ASI password

In case you have an ASI controller that has been locked with a password, you can insert the password here so that EggRider can still change the settings

Last update: March 3, 2023

5.7 App settings

Accessible from menu **App Settings**

5.7.1 CONNECTION

Startup connection

With auto, when the app is started, it tries to connect to the latest connected display.

- Manually
- Auto at startup

Background re-connection

- No
- Retry 30 seconds
- Retry 1 minute
- Retry 5 minutes
- Retry 10 minutes
- Retry 15 minutes

5.7.2 LOCATION

Use GPS data

Enabling this functionality offers altitude measurements in the ride stats.

5.7.3 SHOW GRAPH LINES

Options

- Dark Theme (Enables dark theme for graphs pages)
- Volts (V)
- Current (A)
- Speed (km/h)
- Speed GPS (km/h)
- Altitude
- Battery (%)
- Display Temp (C)
- Motor Temp (c)
- Accuracy Position (m)
- Altitude accuracy threshold - the threshold for position accuracy under which it will show the altitude in the graphs

5.7.4 Others

Dashboard version

- Dashboard v1
- Dashboard v2 - as Dashboard v1 plus live efficiency graphs, range and current values

Range adaptability factor

This value decides how fast the mobile app range estimation changes. A higher value will give more steadier estimation behavior while lower values will give range estimation values closer to the actual type of riding

Last update: November 1, 2021

5.8 Power levels

From app \geq v2.5.03 and firmware \geq v2.5.17

This page offers the possibility to adjust individually each assist level power and speed limit.

It is used for ASI and Lishui controllers. Please see the e-bike specific pages for more information.

Last update: November 1, 2021

6. E-bike Settings

6.1 Ebike settings overview

The settings specific to the controller/ebike are visible after the first successful connection to the display and they show based on the protocol detection.

Settings in these pages are used for controller configuration and for profile switching between Road/OffRoad modes.

After a successful write, the settings are stored in the display memory as well as in the app's memory. Doing this successfully, settings will be visible even when the app is not connected.

Last update: November 1, 2021

6.2 Bafang

6.2.1 Bafang settings

This settings are relative only to the Bafang controllers integrated in their mid-drive units (such as the BBSxx series). Most of the times the **Bafang hub motors don't have** these settings available, since they use different controllers (such as Lishui, Kunteng, etc.)

Bafang switch mode setup

Instructions on configuring Road and OffRoad mode with different settings

If you are not familiar with the Bafang settings we recommend using **Only live data** for **Bafang switch mode** in **Display settings** page until you understand their functionality. For more information on how to proceed visit the **Mobile App/Display settings page** section.

FIRST CONFIGURATION

Do not change profile by pressing **M** on display during this procedure.

1. Make sure display is set to **Road** mode
2. Select **Live data and settings** for **Bafang switch mode** in the Display settings page, press Write then Read to check its saved.
3. After first connection, an automatic read for Bafang Basic, Pedal and Throttle pages will be executed. At the end of this procedure both profiles Road and OffRoad would be identical. In case of failure this action can be triggered manually from **Initialize** from one of the pages
4. Make sure to save the initial configuration from every page before modifying. (Take screenshots of all the pages).
5. Modify settings as desired
6. You have to **Write** successfully to be able to use switch mode from display or mobile app
7. Switch profile settings by pressing **Road** or **OffRoad** from any page.

SUCCESSIVE CONFIGURATIONS

1. Make sure display and mobile app are showing the same Road or OffRoad mode.
2. Follow steps 5, 6, 7 from First Configuration

Attention

If the app and display are out of sync, use **Read controller** to see the last settings written to controller by either the app/display or your own tool.

If you experience intermittent power cuts, it is most probably because you reach a speed limit or voltage cutoff. It can also be due to wrong configuration on the Pedal advanced settings.

By using a low gear, your motor may not reach its full potential.

BAFANG ERROR CODES

- E03 - Brake ON (03H)
- E04 - Throttle doesn't go back (in the furthest position) (04H)
- E05 - Throttle fault (05H)
- E06 - Low voltage protection (06H)
- E07 - Over voltage protection (07H)
- E08 - Hall signal wires fault on the motor (08H)
- E09 - Phase wire fault on the motor (09H)
- E10 - Controller temperature is too high, and reaches the protection point (10H)
- E11 - Temperature sensor inside controller fault (11H)
- E12 - Current sensor fault (12H)
- E13 - Temperature sensor inside battery fault (13H)
- E14 - Temperature sensor inside the motor fault (14H)
- E21 - Speed sensor fault (21H)
- E22 - BMS communication fault (22H)
- E23 - Light fault (23H)
- E24 - Light sensor fault (24H)
- E25 - Torque sensor torque signal fault (25H)
- E26 - Torque sensor speed signal fault (26H)
- E30 - Communication fault (30H)

BAFANG BBS01 250W DEFAULT CONFIGURATION

Basic	Pedal	Throttle																																	
Bafang basic settings	Bafang pedal settings	Bafang throttle settings																																	
Profile selection	Profile selection	Profile selection																																	
<div>Initialize</div> <div>Road</div>	<div>Initialize</div> <div>Road</div>	<div>Initialize</div> <div>Road</div>																																	
Battery Settings	Basic	Basic																																	
Low Battery Protect (V) <u>31</u>	Pedal Type <u>DoubleSignal-24</u>	Designated Assist <u>Display Command</u>																																	
Limited Current (A) <u>15</u>	Designated Assist <u>Display Command</u>	Speed Limit <u>40</u>																																	
Assist levels	Speed Limit <u>Display Command</u>	Start Current(%) <u>10</u>																																	
<table border="1"> <thead> <tr> <th>Assist</th> <th>Limited Current(%)</th> <th>Limited Speed(%)</th> </tr> </thead> <tbody> <tr><td>Assist 0</td><td><u>0</u></td><td><u>0</u></td></tr> <tr><td>Assist 1</td><td><u>28</u></td><td><u>44</u></td></tr> <tr><td>Assist 2</td><td><u>37</u></td><td><u>51</u></td></tr> <tr><td>Assist 3</td><td><u>46</u></td><td><u>58</u></td></tr> <tr><td>Assist 4</td><td><u>55</u></td><td><u>65</u></td></tr> <tr><td>Assist 5</td><td><u>64</u></td><td><u>72</u></td></tr> <tr><td>Assist 6</td><td><u>73</u></td><td><u>79</u></td></tr> <tr><td>Assist 7</td><td><u>82</u></td><td><u>86</u></td></tr> <tr><td>Assist 8</td><td><u>91</u></td><td><u>93</u></td></tr> <tr><td>Assist 9</td><td><u>100</u></td><td><u>100</u></td></tr> </tbody> </table>	Assist	Limited Current(%)	Limited Speed(%)	Assist 0	<u>0</u>	<u>0</u>	Assist 1	<u>28</u>	<u>44</u>	Assist 2	<u>37</u>	<u>51</u>	Assist 3	<u>46</u>	<u>58</u>	Assist 4	<u>55</u>	<u>65</u>	Assist 5	<u>64</u>	<u>72</u>	Assist 6	<u>73</u>	<u>79</u>	Assist 7	<u>82</u>	<u>86</u>	Assist 8	<u>91</u>	<u>93</u>	Assist 9	<u>100</u>	<u>100</u>	Start Current(%) <u>20</u>	Advanced
Assist	Limited Current(%)	Limited Speed(%)																																	
Assist 0	<u>0</u>	<u>0</u>																																	
Assist 1	<u>28</u>	<u>44</u>																																	
Assist 2	<u>37</u>	<u>51</u>																																	
Assist 3	<u>46</u>	<u>58</u>																																	
Assist 4	<u>55</u>	<u>65</u>																																	
Assist 5	<u>64</u>	<u>72</u>																																	
Assist 6	<u>73</u>	<u>79</u>																																	
Assist 7	<u>82</u>	<u>86</u>																																	
Assist 8	<u>91</u>	<u>93</u>																																	
Assist 9	<u>100</u>	<u>100</u>																																	
Others	Advanced	Throttle Mode <u>Speed</u>																																	
Wheel Diameter(Inch) <u>26</u>	Slow-Start Mode <u>4</u>	Start Voltage (x100mV) <u>11</u>																																	
Speed Meter Model <u>External, Wheel Me</u>	Startup Degree(Signal No) <u>4</u>	EndVoltage (0x100mV) <u>35</u>																																	
Speed Meter Signal <u>1</u>	Work Mode (Angular Speed of pedal/wheel*10) <u>10</u>																																		
	Time of stop (x10ms) <u>25</u>																																		
	CurrentDecay (1-8) <u>4</u>																																		
	Stop decay (x10ms) <u>0</u>																																		
	Keep Current (%) <u>20</u>																																		

BAFANG ULTRA M620 DEFAULT CONFIGURATION

Basic	Pedal	Throttle	Torque																																																																					
Bafang basic settings	Bafang pedal settings	Bafang throttle settings	Bafang torque settings																																																																					
Profile selection <div>Initialize Road</div>	Profile selection <div>Initialize Road</div>	Profile selection <div>Initialize Road</div>	Base Voltage (mV) <u>0</u> Error Voltage Min (mV) <u>300</u> Error Voltage Max (mV) <u>4300</u> 0 Speed Boost Time (x10ms) <u>120</u>																																																																					
Battery Settings Low Battery Protect (V) <u>41</u> Limited Current (A) <u>30</u>	Basic Pedal Type <u>BB-Sensor-32</u> Designated Assist <u>Display Command</u> Speed Limit <u>Display Command</u> Start Current(%) <u>30</u>	Basic Designated Assist <u>9</u> Speed Limit <u>40</u> Start Current(%) <u>10</u>	Delta Voltage (mV) 0-5 Kg <u>200</u> 5-10 Kg <u>200</u> 10-15 Kg <u>200</u> 15-20 Kg <u>200</u> 20-30 Kg <u>400</u> 30-40 Kg <u>400</u> 40-50 Kg <u>400</u> 50-60 Kg <u>400</u>																																																																					
Assist levels <table border="1"> <thead> <tr> <th>Assist</th> <th>Limited Current(%)</th> <th>Limited Speed(%)</th> </tr> </thead> <tbody> <tr><td>Assist 0</td><td><u>1</u></td><td><u>1</u></td></tr> <tr><td>Assist 1</td><td><u>10</u></td><td><u>100</u></td></tr> <tr><td>Assist 2</td><td><u>18</u></td><td><u>100</u></td></tr> <tr><td>Assist 3</td><td><u>25</u></td><td><u>100</u></td></tr> <tr><td>Assist 4</td><td><u>40</u></td><td><u>100</u></td></tr> <tr><td>Assist 5</td><td><u>50</u></td><td><u>100</u></td></tr> <tr><td>Assist 6</td><td><u>60</u></td><td><u>100</u></td></tr> <tr><td>Assist 7</td><td><u>70</u></td><td><u>100</u></td></tr> <tr><td>Assist 8</td><td><u>80</u></td><td><u>100</u></td></tr> <tr><td>Assist 9</td><td><u>100</u></td><td><u>100</u></td></tr> </tbody> </table>	Assist	Limited Current(%)	Limited Speed(%)	Assist 0	<u>1</u>	<u>1</u>	Assist 1	<u>10</u>	<u>100</u>	Assist 2	<u>18</u>	<u>100</u>	Assist 3	<u>25</u>	<u>100</u>	Assist 4	<u>40</u>	<u>100</u>	Assist 5	<u>50</u>	<u>100</u>	Assist 6	<u>60</u>	<u>100</u>	Assist 7	<u>70</u>	<u>100</u>	Assist 8	<u>80</u>	<u>100</u>	Assist 9	<u>100</u>	<u>100</u>	Advanced Slow-Start Mode <u>5</u> Startup Degree(Signal No) <u>4</u> Work Mode (Angular Speed of pedal/wheel*10) <u>10</u> Time of stop (x10ms) <u>20</u> CurrentDecay (1-8) <u>4</u> Stop decay (x10ms) <u>0</u> Keep Current (%) <u>30</u>	Advanced Throttle Mode <u>Speed</u> Start Voltage (x100mV) <u>15</u> EndVoltage (0x100mV) <u>36</u>	Speeds <table border="1"> <thead> <tr> <th></th> <th>Spd0</th> <th>Spd20</th> <th>Spd40</th> </tr> </thead> <tbody> <tr><td>Start (kg)</td><td><u>20</u></td><td><u>16</u></td><td><u>12</u></td></tr> <tr><td>Full (kg)</td><td><u>50</u></td><td><u>45</u></td><td><u>40</u></td></tr> <tr><td>Return (kg)</td><td><u>12</u></td><td><u>9</u></td><td><u>6</u></td></tr> <tr><td>MinCur (%)</td><td><u>10</u></td><td><u>10</u></td><td><u>15</u></td></tr> <tr><td>MaxCur (%)</td><td><u>100</u></td><td><u>100</u></td><td><u>100</u></td></tr> <tr><td>KeepCur (%)</td><td><u>4</u></td><td><u>4</u></td><td><u>3</u></td></tr> <tr><td>CurDecay</td><td><u>3</u></td><td><u>3</u></td><td><u>3</u></td></tr> <tr><td>StartDegree</td><td><u>1</u></td><td><u>1</u></td><td><u>1</u></td></tr> </tbody> </table>		Spd0	Spd20	Spd40	Start (kg)	<u>20</u>	<u>16</u>	<u>12</u>	Full (kg)	<u>50</u>	<u>45</u>	<u>40</u>	Return (kg)	<u>12</u>	<u>9</u>	<u>6</u>	MinCur (%)	<u>10</u>	<u>10</u>	<u>15</u>	MaxCur (%)	<u>100</u>	<u>100</u>	<u>100</u>	KeepCur (%)	<u>4</u>	<u>4</u>	<u>3</u>	CurDecay	<u>3</u>	<u>3</u>	<u>3</u>	StartDegree	<u>1</u>	<u>1</u>	<u>1</u>
Assist	Limited Current(%)	Limited Speed(%)																																																																						
Assist 0	<u>1</u>	<u>1</u>																																																																						
Assist 1	<u>10</u>	<u>100</u>																																																																						
Assist 2	<u>18</u>	<u>100</u>																																																																						
Assist 3	<u>25</u>	<u>100</u>																																																																						
Assist 4	<u>40</u>	<u>100</u>																																																																						
Assist 5	<u>50</u>	<u>100</u>																																																																						
Assist 6	<u>60</u>	<u>100</u>																																																																						
Assist 7	<u>70</u>	<u>100</u>																																																																						
Assist 8	<u>80</u>	<u>100</u>																																																																						
Assist 9	<u>100</u>	<u>100</u>																																																																						
	Spd0	Spd20	Spd40																																																																					
Start (kg)	<u>20</u>	<u>16</u>	<u>12</u>																																																																					
Full (kg)	<u>50</u>	<u>45</u>	<u>40</u>																																																																					
Return (kg)	<u>12</u>	<u>9</u>	<u>6</u>																																																																					
MinCur (%)	<u>10</u>	<u>10</u>	<u>15</u>																																																																					
MaxCur (%)	<u>100</u>	<u>100</u>	<u>100</u>																																																																					
KeepCur (%)	<u>4</u>	<u>4</u>	<u>3</u>																																																																					
CurDecay	<u>3</u>	<u>3</u>	<u>3</u>																																																																					
StartDegree	<u>1</u>	<u>1</u>	<u>1</u>																																																																					
Others Wheel Diameter(Inch) <u>28</u> Speed Meter Model <u>External, Wheel Me</u> Speed Meter Signal <u>1</u>			<table border="1"> <thead> <tr> <th></th> <th>Spd60</th> <th>Spd80</th> <th>Spd100</th> </tr> </thead> <tbody> <tr><td>Start (kg)</td><td><u>10</u></td><td><u>8</u></td><td><u>6</u></td></tr> <tr><td>Full (kg)</td><td><u>35</u></td><td><u>30</u></td><td><u>25</u></td></tr> <tr><td>Return (kg)</td><td><u>5</u></td><td><u>4</u></td><td><u>4</u></td></tr> <tr><td>MinCur (%)</td><td><u>15</u></td><td><u>10</u></td><td><u>10</u></td></tr> <tr><td>MaxCur (%)</td><td><u>100</u></td><td><u>100</u></td><td><u>100</u></td></tr> <tr><td>KeepCur (%)</td><td><u>2</u></td><td><u>2</u></td><td><u>2</u></td></tr> <tr><td>CurDecay</td><td><u>2</u></td><td><u>2</u></td><td><u>2</u></td></tr> <tr><td>StartDegree</td><td><u>1</u></td><td><u>1</u></td><td><u>1</u></td></tr> </tbody> </table>		Spd60	Spd80	Spd100	Start (kg)	<u>10</u>	<u>8</u>	<u>6</u>	Full (kg)	<u>35</u>	<u>30</u>	<u>25</u>	Return (kg)	<u>5</u>	<u>4</u>	<u>4</u>	MinCur (%)	<u>15</u>	<u>10</u>	<u>10</u>	MaxCur (%)	<u>100</u>	<u>100</u>	<u>100</u>	KeepCur (%)	<u>2</u>	<u>2</u>	<u>2</u>	CurDecay	<u>2</u>	<u>2</u>	<u>2</u>	StartDegree	<u>1</u>	<u>1</u>	<u>1</u>																																	
	Spd60	Spd80	Spd100																																																																					
Start (kg)	<u>10</u>	<u>8</u>	<u>6</u>																																																																					
Full (kg)	<u>35</u>	<u>30</u>	<u>25</u>																																																																					
Return (kg)	<u>5</u>	<u>4</u>	<u>4</u>																																																																					
MinCur (%)	<u>15</u>	<u>10</u>	<u>10</u>																																																																					
MaxCur (%)	<u>100</u>	<u>100</u>	<u>100</u>																																																																					
KeepCur (%)	<u>2</u>	<u>2</u>	<u>2</u>																																																																					
CurDecay	<u>2</u>	<u>2</u>	<u>2</u>																																																																					
StartDegree	<u>1</u>	<u>1</u>	<u>1</u>																																																																					

BAFANG BBSHD 1000W CONFIGURATION EXAMPLES

 **Disclaimer**

The following examples are for demonstration purpose only. The EggRider V2 display does not ensure legal compliance. Please check your local laws before riding to make sure you are riding legally and safely.

Example 1

Features

- power limited to 250w
- speed limited to 25 km/h
- throttle limited to 6 km/h (by forcing it to the specially configured **assist 2**. To disable the throttle set **designated assist** to **0** and make sure that **Assist 0** has **limited current** and **limited speed** set to **1**)
- 5 pedal assist levels

Basic	Pedal	Throttle	Display settings																																	
<div> <div>≡ Bafang basic settings</div> <div>Profile selection</div> <div> <div>Initialize</div> <div>Road</div> </div> <div>Battery Settings</div> <div> <div>Low Battery Protect (V)</div> <div>43</div> </div> <div> <div>Limited Current (A)</div> <div>30</div> </div> <div>Assist levels</div> <table> <tr> <th>Assist</th> <th>Limited Current(%)</th> <th>Limited Speed(%)</th> </tr> <tr> <td>Assist 0</td> <td>1</td> <td>1</td> </tr> <tr> <td>Assist 1</td> <td>4</td> <td>100</td> </tr> <tr> <td>Assist 2</td> <td>100</td> <td>24</td> </tr> <tr> <td>Assist 3</td> <td>6</td> <td>100</td> </tr> <tr> <td>Assist 4</td> <td>8</td> <td>100</td> </tr> <tr> <td>Assist 5</td> <td>10</td> <td>100</td> </tr> <tr> <td>Assist 6</td> <td>11</td> <td>100</td> </tr> <tr> <td>Assist 7</td> <td>13</td> <td>100</td> </tr> <tr> <td>Assist 8</td> <td>15</td> <td>100</td> </tr> <tr> <td>Assist 9</td> <td>17</td> <td>100</td> </tr> </table> <div>Others</div> <div> <div>Wheel Diameter(Inch)</div> <div>26</div> </div> <div> <div>Speed Meter Model</div> <div>External, Wheel Meter</div> </div> <div> <div>Speed Meter Signal</div> <div>1</div> </div> </div>	Assist	Limited Current(%)	Limited Speed(%)	Assist 0	1	1	Assist 1	4	100	Assist 2	100	24	Assist 3	6	100	Assist 4	8	100	Assist 5	10	100	Assist 6	11	100	Assist 7	13	100	Assist 8	15	100	Assist 9	17	100	<div> <div>≡ Bafang pedal settings</div> <div>Profile selection</div> <div> <div>Initialize</div> <div>Road</div> </div> <div>Basic</div> <div> <div>Designated Assist</div> <div>Display Command</div> </div> <div> <div>Speed Limit</div> <div>Display Command</div> </div> <div> <div>Start Current(%)</div> <div>10</div> </div> <div> <div>Keep Current (%)</div> <div>100</div> </div> <div>Advanced</div> <div> <div>Pedal Type</div> <div>DoubleSignal-24</div> </div> <div> <div>Slow-Start Mode</div> <div>8</div> </div> <div> <div>Startup Degree(Signal No)</div> <div>4</div> </div> <div> <div>Work Mode (Angular Speed of pedal/ wheel*10)</div> <div>Undetermined</div> </div> <div> <div>Time of stop (x10ms)</div> <div>8</div> </div> <div> <div>CurrentDecay (1-8)</div> <div>4</div> </div> <div> <div>Stop decay (x10ms)</div> <div>0</div> </div> </div>	<div> <div>≡ Bafang throttle settings</div> <div>Profile selection</div> <div> <div>Initialize</div> <div>Road</div> </div> <div>Basic</div> <div> <div>Designated Assist</div> <div>2</div> </div> <div> <div>Speed Limit</div> <div>Display Command</div> </div> <div> <div>Start Current(%)</div> <div>90</div> </div> <div>Advanced</div> <div> <div>Throttle Mode</div> <div>Current</div> </div> <div> <div>Start Voltage (x100mV)</div> <div>11</div> </div> <div> <div>End Voltage (0x100mV)</div> <div>35</div> </div> </div>	<div> <div>≡ Display settings</div> <div>Basic Settings</div> <div> <div>Preferred units</div> <div>Metric (km, m, kph=km/h)</div> </div> <div> <div>Secondary unit</div> <div>Power, W</div> </div> <div> <div>Protocol</div> <div>Bafang</div> </div> <div> <div>Reset trip</div> <div>Manually</div> </div> <div> <div>Immobilizer</div> <div>No Lock</div> </div> <div> <div>Road restrict</div> <div>No</div> </div> <div> <div>Startup with Road mode</div> <div>No</div> </div> <div> <div>PowerOff</div> <div>After 2 hours</div> </div> <div> <div>Mode labels</div> <div>Road/OffRoad</div> </div> <div> <div>Assist levels</div> <div>5</div> </div> </div>
Assist	Limited Current(%)	Limited Speed(%)																																		
Assist 0	1	1																																		
Assist 1	4	100																																		
Assist 2	100	24																																		
Assist 3	6	100																																		
Assist 4	8	100																																		
Assist 5	10	100																																		
Assist 6	11	100																																		
Assist 7	13	100																																		
Assist 8	15	100																																		
Assist 9	17	100																																		

Example 2

Features

- Speed not limited
- Peak power up to 1500w (not recommended to hold the throttle at 30A current draw for more than a few seconds)
- 5 assist levels (can be set to 9 in the **display settings**)
- throttle always full power (not based on the assist level selected on the display)

Basic

Bafang basic settings

Profile selection

InitializeOffRoad

Battery Settings

Low Battery Protect (V)43

Limited Current (A)30

Assist levels

Assist

Limited Current(%)

Limited Speed(%)

Assist 011

Assist 110100

Assist 217100

Assist 328100

Assist 439100

Assist 550100

Assist 660100

Assist 775100

Assist 888100

Assist 9100100

Others

Wheel Diameter(Inch)26

Speed Meter ModelExternal, Wheel Meter

Speed Meter Signal1

Pedal

Bafang pedal settings

Profile selection

InitializeOffRoad

Basic

Designated AssistDisplay Command

Speed LimitDisplay Command

Start Current(%)5

Keep Current (%)100

Advanced

Pedal TypeDoubleSignal-24

Slow-Start Mode2

Startup Degree(Signal No)4

Work Mode (Angular Speed of pedal/ wheel*10)Undetermined

Time of stop (x10ms)4

CurrentDecay (1-8)4

Stop decay (x10ms)0

Throttle

Bafang throttle settings

Profile selection

InitializeOffRoad

Basic

Designated Assist9

Speed LimitDisplay Command

Start Current(%)5

Advanced

Throttle ModeCurrent

Start Voltage (x100mV)11

End Voltage (0x100mV)35

Display settings

Display settings

Basic Settings

Preferred unitsMetric (km, m, kph=km/h)

Secondary unitPower, W

ProtocolBafang

Reset tripManually

ImmobilizerNo Lock

Road restrictNo

Startup with Road modeNo

PowerOffAfter 2 hours

Mode labelsRoad/OffRoad

Assist levels5

Last update: January 19, 2023

6.2.2 Bafang basic settings

Accessible from menu **Bafang Basic**.

Buttons

Initialize - Reads all Bafang Basic/Pedal/Throttle settings at once. After this procedure both Road/OffRoad would have identical settings.

Road or **OffRoad** - switch between profiles.

Read controller - reads Bafang Basic settings.

Info - provides information for the Bafang switch mode.

Write - writes the Basic settings to controller. If the operation is successful it updates the settings on the display as well.

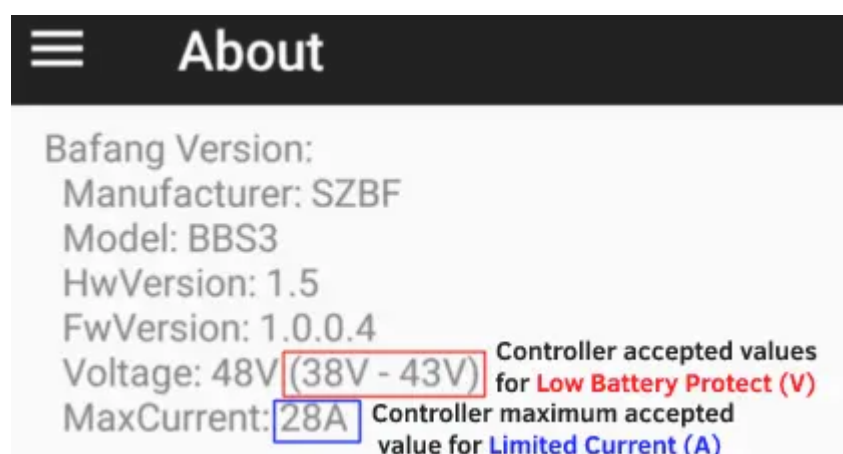
BATTERY SETTINGS

⚡ Attention

Please use settings in the range for your motor for **Low Battery Protect** and **Limited Current**. Each controller has its own hardware limitations which cannot be bypassed. The controller will reject values outside its capabilities.

Example of Bafang controller limits

This can be found in the EggRider app **About** page.



LOW BATTERY PROTECT (V)

Value to prevent battery voltage cutoff (most likely your battery will have a BMS that will shut off power when the voltage gets too low). If your battery shuts down before reaching this value you should increase it.

If you get **Low Battery Protect (V)** error, it means means you are outside your controller accepted limits. Following the example picture above you can set values between 38V and 43V.

LIMITED CURRENT (A)

Represents the global current limit in ampere (A). This sets the power level that the drive unit will pull from the battery pack.

Current limit affects your bike power, as the following formula shows:

Battery voltage (V) * Current limit (A) = Power (W) (For example: **48V * 20A = 960W**)

If you get **Limited Current (A)** error, it means you are outside your controller accepted limits. Following the example picture above you can set a value of maximum to 28A.

 **Attention**

Keep this current limit the same for both Road/OffRoad profiles to avoid unexpected behavior. Some bafang controllers misbehave when this value changes without a power on/off cycle.

Assist levels mapping

Each row, defines for each assist level the relative limited current and limited speed.

 **Tip**

To have no power on Level 0, set both Current and Speed Limit to 0. In some cases it is required a value of 1.

ASSIST

Identifies the assist level

LIMITED CURRENT(%)

The percentage of the current from the **Limited current (A)**.

For example if your bike has 250W and you set this setting to 50% you will have 125W. If you set it to 100% you will have 250W.

LIMITED SPEED(%)

The percentage of the speed limit.

Cases

- If **Speed Limit** is set to a value on **Bafang Pedal** or **Bafang Throttle** pages, then the percentage is from that value.
- If **Speed Limit** is set to **Display command**, then the percentage is from the **Max Speed Road** or **Max Speed OffRoad**.

OTHERS

WHEEL DIAMETER (INCH)

SPEED METER MODEL

Options

- External, Wheel Meter
- Internal, Motor Meter
- By Motor Meter

SPEED METER SIGNAL

The number of magnets per one wheel revolution, default **1**.

Last update: February 3, 2023

6.2.3 Bafang pedal settings

Accessible from menu **Bafang Pedal**

Buttons

Initialize - Reads all Bafang Basic/Pedal/Throttle settings at once. After this procedure both Road/OffRoad would have identical settings.

Road or **OffRoad** - switch between profiles.

Read controller - reads controller Pedal settings.

Info - provides information for the Bafang switch mode.

Write - writes the Pedal settings to controller. If the operation is successful it updates the settings on the display as well.

BASIC

DESIGNATED ASSIST

The value of the assist power level.

If set to **Display command** the assist level shown on the display would be considered.

Disable Pedal Assist

1. Set **Designated Assist** to **0**
2. Configure **Assist Levels** in **Bafang basic settings** page
3. For **Assist 0** set **Limited Current(%) = 0** and **Limited Speed = 0**. In some cases value **1** should be set
4. Your **Pedal assist** should no longer work

Enable Pedal Assist - PAS dependent

1. Set **Designated assist** to **Display Command**
2. Configure **Assist Levels** in **Bafang basic settings** page
3. Set desired values for **Limited Current(%)** and **Limited Speed** for **Assist 1 - 9**
4. Your **Pedal assist** should be limited based on the PAS level you see on display

Enable Pedal Assist - always max power

1. Set **Designated assist** to **9**
2. Configure **Assist Levels** in **Bafang basic settings** page
3. For **Assist 0** set **Limited Current(%) = 100** and **Limited Speed = 100**
4. Your **Pedal assist** should work the same (speed and current limit) no matter what PAS level you see on display

SPEED LIMIT

The value of the speed limit.

If set to **Display command** the value from **Max Speed Road** or **Max Speed OffRoad** from **Display settings** page will be used.

START CURRENT(%)

The initial percentage of current delivered. This variable is vital for not killing the controller. The lower the Start Current is set the less power is directed to the PAS system upon startup, this will create less strain on the controller and on your bike's drivetrain when starting from a standstill, especially if you are in a gear that is too high. 100% **Start Current** will peak at well over 1000w draw. A lower value will give you a smoother acceleration.

KEEP CURRENT(%)

The percentage of current that is maintained at a certain rate of pedaling (cadence). It is the percentage of the current limit set per each level of PAS.

E.g.: For 50% current limit set for level 5, if the **keep current** is set to 70%, the keep the current limit will drop to 35% while pedaling faster(at a higher cadence), but once the cadence drops the current will increase back to the current limit set for the certain level. The pedaling cadence value can be modified by changing the value of **current decay**.

ADVANCED**PEDAL TYPE**

Options

- None
- DH-Sensor-12
- BB-Sensor-32
- DoubleSignal-24

SLOW-START MODE

Controls how quickly the power ramps up.

STARTUP DEGREE (SIGNAL NO)

The number of sensor steps before the start up commences. The maximum accepted is 20. 24 is a full pedal revolution. Too few makes start-up occur with too slight a pedal movement. Lower number is less pedal movement to start the motor. Does not work properly with 1 or 0.

WORK MODE (ANGULAR SPEED OF PEDAL/WHEEL *10)

Adjusts the amount of power that can be applied to each pedal rotation. The higher the number the greater the power applied to each rotation. This might affect at what rpm peak power sits in PAS operation, changing it doesn't seem to be noticeable so we advise to leave it alone.

TIME OF STOP (X10MS)

This affects how quickly the drive stops after you stop pedaling.. If you set it to 0 the PAS system ceases to work. 25 is probably too high. This setting disables the PAS if it is set less than 5. I strongly recommend setting this to 5, especially if you want to use the PAS system without using e-brakes.

 **Tips**

Some people report that setting this lower (as low as 5) may affect the startup delay on the throttle If you set this less than 10 on the v2 of the BBS02 controllers then your PAS will not work properly at all. On the older BBS02v1 controllers and the BBSHD controllers you can set this as low as 5 before you start having issues with the PAS

CURRENTDECAY(1-8)

Determines how high up the pedal cadence rpm range it starts to reduce power, 8 being the highest. There is no detail on actual rpm speeds for the **Current Decay** setting. The lower this setting is the sooner the drive unit will start cutting back on the power as you pedal faster.

STOP DECAY (X10MS)

The amount of time the decay system takes to cut after pedaling stops.

Last update: January 19, 2023

6.2.4 Bafang throttle settings

Accessible from menu **Bafang Throttle**

Buttons

Initialize - Reads all Bafang Basic/Pedal/Throttle settings at once. After this procedure both Road/OffRoad would have identical settings.

Road or **OffRoad** - switch between profiles.

Read controller - reads controller Throttle settings.

Info - provides information for the Bafang switch mode.

Write - writes the Throttle settings to controller. If the operation is successful it updates the settings on the display as well.

BASIC

DESIGNATED ASSIST

The value of the assist power level.

If set to **Display command** the assist level shown on the display would be considered.

Disable Throttle Assist

1. Set **Designated Assist** to **0**
2. Configure **Assist Levels** in **Bafang basic settings** page
3. For **Assist 0** set **Limited Current(%) = 0** and **Limited Speed = 0**. In some cases value **1** should be set
4. Your **Throttle assist** should no longer work

Enable Throttle Assist - PAS dependent

1. Set **Designated assist** to **Display Command**
2. Configure **Assist Levels** in **Bafang basic settings** page
3. Set desired values for **Limited Current(%)** and **Limited Speed** for **Assist 1 - 9**
4. Your **Throttle assist** should be limited based on the PAS level you see on display

Enable Throttle Assist - always max power

1. Set **Designated assist** to **9**
2. Configure **Assist Levels** in **Bafang basic settings** page
3. For **Assist 0** set **Limited Current(%) = 100** and **Limited Speed = 100**
4. Your **Throttle assist** should work the same (speed and current limit) no matter what PAS level you see on display

SPEED LIMIT

The value of the speed limit.

If set to **Display command** the value from **Max Speed Road** or **Max Speed OffRoad** from **Display settings** page will be used.

START CURRENT (%)

Percentage of available current when throttle initially applied. Lower values for smoother startup: or gives a much smoother startup. This can be set all the way down to .

ADVANCED**THROTTLE MODE**

Options

- Speed
- Current

Tip

Switching this to Current Mode (instead of Speed mode) has an improvement in the throttle response smoothness.

START VOLTAGE (X100MV)**Attention**

Do not change this value unless you really know what you are doing.

This is the throttle input starting voltage. The point at which the controller responds to input is at 1.1 volts, so set value to 11 which = 1.1 volts. As you begin to roll on the throttle the voltage moves up from zero and when it reaches 1.1v the motor begins to turn. Best to leave between 10 and 15. Too low and the display will throw an error as the motor will want to run continuously. If you change the throttle you will need to find the new lowest setting.

END VOLTAGE (0X100MV)**Attention**

Do not change this value unless you really know what you are doing.

You can set the max range to 42 which is the max input the controller accepts from throttle input 4.2v. If you set lower than this value your throttle response is not as linear or smooth as it could be.

Last update: January 19, 2023

6.2.5 Bafang torque settings

Accessible from menu **Bafang Torque Settings**.

This page can be used only with Bafang mid-drive motors with torque sensors. The fact that the page is available in the app doesn't mean your motor has torque sensor.

These settings don't change when switching modes Road/OffRoad. They are changed only when programming from the app.

BASIC SETTINGS

BASE VOLTAGE

ERROR VOLTAGE MIN (MV)

ERROR VOLTAGE MAX (MV)

0 SPEED BOOST TIME (X10MS)

DELTA VOLTAGE (MV)

SPEEDS

Last update: November 1, 2021

6.3 Lishui settings (LSW)

Accessible from menu **Lishui**

Consists of common settings section shared by both profiles Road and OffRoad and profile independent settings.

Read - reads the settings stored on the display

Write - writes the modified settings to the display.

Attention

After writing settings, turn off your display from the **Power** button in order to save the settings permanently. Some settings take effect only after a power on/off cycle.

Lishui controllers do not broadcast factory setting values, so in particular cases you have to find the right settings for your controller by trying different combinations.

6.3.1 Settings explanation

PAS Type

Side on which the PAS sensor is mounted. However there are many cases where the bike manufacturer modifies the sensor slightly, so please use the other way around if the assist doesn't work correctly.

Options

- Left
- Right

Speed Sensor magnets number

Represents the number of magnets used for speed measurement. Most hub motors have an additional hall switch on the shaft for speed measuring purposes. In this case please set it to **1**. Some other might have the speed sensor on the motor before the reduction, if that is the case please set it to **5**.

Voltage cutoff base

The base under-voltage protection at controller.

Options are

- 21V - for 24V batteries
- 31.5V - for 36v batteries
- 42V - for 48v batteries

Wheel Size

Internal controller wheel size in inches. This is used for internal controller speed limit purposes and it does not affect the speed measurements of the display.

Options are 16", 18", 20", 22", 24", 26", 700C, 28"

Assist Pulse Delay

This settings determines how fast the motor assist starts when using the pedals. Lower values will make the motor assist quicker.

Attention

To avoid accidental power on we recommend using a value that starts the motor assist after at least half turn of the pedals

PAS Gain

Can be a value between 0 and 255 and is correlated to the PAS number of magnets. Example of values:

- 128 - for PAS with 6 magnets
- 64 - for PAS with 12 magnets

This field can have different behavior but mainly is the pedal assist power

Throttle limited by PAS level

Options

- **Yes** - Throttle power is limited by the assist level
- **No** - Throttle has maximum power all the time regardless of the assist level

Throttle limited to 6 Km/h

Options

- **Yes** - Throttle works only up to 6 kph.
- **No** - Throttle is available at any speed

PAS startup acceleration

The power ramp for assist. Lower value means softer start.

Options are 0, 1, 2, 3.

Voltage cutoff deviation (0.1 V)

Value to fine tune the battery voltage cutoff. If your battery shuts down before reaching 0% this should be increased.

You have to sum this value to the base cutoff voltage to get the actual voltage cutoff the motor will impose.

For example if voltage cutoff base is 31.5V and voltage cutoff deviation is -2.5V then your actual voltage cutoff will be 29V.

This field accepts values between -12.6 and 12.7v with increments of 0.1 volts.

Current Limit (0.5 A)

Attention

Please do not exceed the maximum current you can find on your controller label. Also keep in mind that some controllers are not accepting values lower than a threshold resulting in defaulting to a specific value.

Value to set main power of the bike. Lower value means lower power.

This field accepts values between 0A to 31.5A with increments of 0.5 ampere.

Speed limit

Internal controller speed limit at which assistance is stopped.

Running strategy

These are different algorithms strategies to try to overcome some of the Lishui protocol limitations.

SPEED LIMITATION

When in speed limitation, the values that are used from power levels are only the speed %.

This can have a different result based on the controller configuration. Some Lishui controller are limited in speed, so this option will change the speed limit of each assist level. Other Lishui controllers are limited in current so this option will change the current limitation of each assist level.

CURRENT LIMITATION

When in current limitation, both values power and speed % are used.

Power % is used to change the current limit and speed is used to limit the assistance based on the display settings speed limits.

In this mode throttle will be limited by pass level even if the option is set to No in the settings.

Attention

Please keep in mind that if **Power % * Current limit** is lower than the controller accepted threshold then it will default to a defined value which will be higher which will result in an undesired assist level behavior.

RADPOWER MODE

Replicates the RadPower original display running mode. When using this option you should set to 5 assist levels.

Power levels maps are not used with this option

Last update: November 1, 2021

6.4 EggRider V2 Mate X settings

Accessible from menu **Lishui**

All mate X version have Lishui controllers. For information about each setting option please consult the Lishui settings page

⚠ Attention

If speed shows **-- km/h** on EggRider display, please reset to default factory settings with the following procedure When the display is off, press **M** + **Power** until display turns on. (You should see **Load default settings**)

⚡ Important

If you received your display with an adapter please make sure it is connected correctly. Wrong connection can damage the display and the bike.



Please check:

- Current Limit
- Running strategy

6.4.1 Settings example

⚠ Attention

Make sure to change **Current limit** according to your controller parameters. Usually they can be found on the controller label.

If you want to increase the speed limit above 41 km/h, you can change wheel size to 16" on the **Lishui settings** page. This change will affect all speed limits.

If speed measurements don't seem to be correct, please use **wheel circumference** from **Display settings** page to adjust.

Mate X 750W Taiwan version

Display		Lishui																																					
<div> <div>≡</div> <div>Display settings</div> <div>⚙️</div> </div>		<div> <div>≡</div> <div>Lishui settings</div> <div>⚙️</div> </div>																																					
Basic Settings		Lishui common settings																																					
Preferred units	Metric (km, m, kph=km/h)	PAS Type	Left																																				
Secondary unit	Power, W	Speed sensor magnets number	1																																				
Protocol	Lishui Or Lishui Rx/Tx Swap	Voltage cutoff base	42V																																				
Reset trip	Manually	Wheel size	22"																																				
Immobilizer	No Lock	Lishui mode specific settings																																					
Road restrict	No	<table border="1"> <thead> <tr> <th colspan="2">Parameter</th> </tr> <tr> <th>Road</th> <th>OffRoad</th> </tr> </thead> <tbody> <tr> <td colspan="2">Assist pulse delay</td> </tr> <tr> <td>1</td> <td>1</td> </tr> <tr> <td colspan="2">PAS gain</td> </tr> <tr> <td>255</td> <td>255</td> </tr> <tr> <td colspan="2">Throttle limited by PAS level</td> </tr> <tr> <td>Yes</td> <td>No</td> </tr> <tr> <td colspan="2">Throttle limited to 6km/h</td> </tr> <tr> <td>Yes</td> <td>No</td> </tr> <tr> <td colspan="2">PAS startup acceleration</td> </tr> <tr> <td>1</td> <td>3</td> </tr> <tr> <td colspan="2">Voltage cutoff deviation (0.1 V)</td> </tr> <tr> <td>-1.5</td> <td>0</td> </tr> <tr> <td colspan="2">Current limit (0.5 A)</td> </tr> <tr> <td>15</td> <td>20</td> </tr> <tr> <td colspan="2">Speed limit</td> </tr> <tr> <td>25 km/h</td> <td>41 km/h</td> </tr> </tbody> </table>		Parameter		Road	OffRoad	Assist pulse delay		1	1	PAS gain		255	255	Throttle limited by PAS level		Yes	No	Throttle limited to 6km/h		Yes	No	PAS startup acceleration		1	3	Voltage cutoff deviation (0.1 V)		-1.5	0	Current limit (0.5 A)		15	20	Speed limit		25 km/h	41 km/h
Parameter																																							
Road	OffRoad																																						
Assist pulse delay																																							
1	1																																						
PAS gain																																							
255	255																																						
Throttle limited by PAS level																																							
Yes	No																																						
Throttle limited to 6km/h																																							
Yes	No																																						
PAS startup acceleration																																							
1	3																																						
Voltage cutoff deviation (0.1 V)																																							
-1.5	0																																						
Current limit (0.5 A)																																							
15	20																																						
Speed limit																																							
25 km/h	41 km/h																																						
Startup with Road mode	No																																						
PowerOff	After 5 minutes																																						
Mode labels	Road/OffRoad																																						
Assist levels	5																																						
Display main screen layout	Main Screen V2																																						
Keep headlight at startup	No																																						
Mode button press function	Short - Mode Chang																																						
Max speed Road (km/h)	25																																						
Max speed OffRoad (km/h)	45																																						
Wheel size	Select																																						
Wheel circumference (mm)	1780																																						
Battery Settings																																							
Battery used	1st Battery																																						
	1st 2nd 3rd																																						
Battery voltage	48V Select Select																																						
Voltage 0% (0.01 V)	43.55 41.5 41.5																																						
Voltage 100% (0.01 V)	54.6 54.6 54.6																																						
Capacity (0.01 Ah)	14 10.4 10.4																																						

Last update: January 30, 2023

6.5 EggRider V2 Rad Power bikes settings

Accessible from menu **Lishui**

⚡ Attention

RadPower Bikes with a upgraded **Kunteng** controller are not compatible with EggRider display.

All Rad Power bikes have Lishui controllers with custom connectors. They require EggRider with specific RadPower connector and the display protocol used should be Lishui or Lishui Rx/Tx. To see the parameters description please consult the Lishui settings page.

The EggRider Rad version can have green or black color but it is important to be a screw connector as shown in the pictures below.



6.5.1 How to connect EggRider display to Rad bikes

How to connect *EggRider* to Rad bikes



Step 1: Align the arrows



Step 2: Gently push the connectors together

DO NOT TWIST THE CONNECTORS!



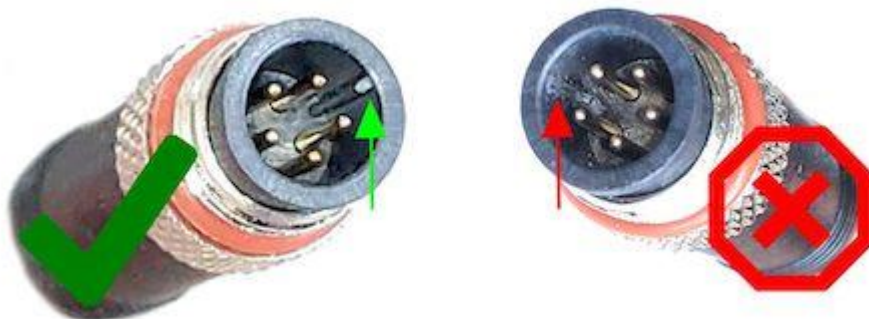
If you twist the connectors you will permanently damage your *EggRider* and this is NOT covered under WARRANTY



Step 3: Gently secure the silver screw

⚡ Alert

If connector guide is broken, it means the connection was forced wrongly or twisted during installation and your **WARRANTY is VOID!**



⚠ Attention

If speed shows **--. km/h** on EggRider display, please reset to default factory settings with the following procedure. When the display is off, press **[M] + [Power]** until display turns on. (You should see **Load default settings**)

Please check:

- Current Limit
- Running strategy

6.5.2 Settings example

⚠ Attention

Make sure to change **Current limit** according to your controller parameters. Usually they can be found on the controller label.

If you want to increase the speed limit above 41 km/h, you can change wheel size to 16" on the **Lishui settings** page. This change will affect all speed limits.

If speed measurements don't seem to be correct please use **wheel circumference** from **Display settings** page to adjust.

Rad Runner configuration example

Please keep in mind that when **Running strategy** is set as **Normal** only the **Speed %** values are used.

Power Levels	Display	Lishui																																																																																				
<div> <div> <div>≡</div> <div>Power levels</div> <div></div> </div> </div>	<div> <div> <div>≡</div> <div>Display settings</div> <div></div> </div> </div>	<div> <div> <div>≡</div> <div>Lishui settings</div> <div></div> </div> </div>																																																																																				
Power levels mode specific	Basic Settings	Lishui common settings																																																																																				
<table border="1"> <thead> <tr> <th colspan="2">Road</th> <th colspan="2">OffRoad</th> </tr> <tr> <th>Power %</th> <th>Speed %</th> <th>Power %</th> <th>Speed %</th> </tr> </thead> <tbody> <tr> <td>20</td> <td>20</td> <td>20</td> <td>20</td> </tr> <tr> <td>30</td> <td>30</td> <td>30</td> <td>30</td> </tr> <tr> <td>40</td> <td>40</td> <td>40</td> <td>40</td> </tr> <tr> <td>50</td> <td>50</td> <td>50</td> <td>50</td> </tr> <tr> <td>60</td> <td>60</td> <td>60</td> <td>60</td> </tr> <tr> <td>70</td> <td>70</td> <td>70</td> <td>70</td> </tr> <tr> <td>80</td> <td>80</td> <td>80</td> <td>80</td> </tr> <tr> <td>90</td> <td>90</td> <td>90</td> <td>90</td> </tr> <tr> <td>100</td> <td>100</td> <td>100</td> <td>100</td> </tr> </tbody> </table>	Road		OffRoad		Power %	Speed %	Power %	Speed %	20	20	20	20	30	30	30	30	40	40	40	40	50	50	50	50	60	60	60	60	70	70	70	70	80	80	80	80	90	90	90	90	100	100	100	100	<table border="1"> <tbody> <tr> <td>Preferred units</td> <td>Metric (km, m, kph=km/h)</td> </tr> <tr> <td>Secondary unit</td> <td>Power, W</td> </tr> <tr> <td>Protocol</td> <td>Lishui Or Lishui Rx/Tx Swap</td> </tr> <tr> <td>Reset trip</td> <td>Manually</td> </tr> <tr> <td>Immobilizer</td> <td>No Lock</td> </tr> <tr> <td>Road restrict</td> <td>No</td> </tr> <tr> <td>Startup with Road mode</td> <td>No</td> </tr> <tr> <td>PowerOff</td> <td>After 5 minutes</td> </tr> <tr> <td>Mode labels</td> <td>Road/OffRoad</td> </tr> <tr> <td>Assist levels</td> <td>5</td> </tr> <tr> <td>Display main screen layout</td> <td>Main Screen V2</td> </tr> <tr> <td>Keep headlight at startup</td> <td>No</td> </tr> <tr> <td>Mode button press function</td> <td>Short - Mode Chang</td> </tr> <tr> <td>Max speed Road (km/h)</td> <td>25</td> </tr> <tr> <td>Max speed OffRoad (km/h)</td> <td>45</td> </tr> <tr> <td>Wheel size</td> <td>Select</td> </tr> <tr> <td>Wheel circumference (mm)</td> <td>1780</td> </tr> </tbody> </table>	Preferred units	Metric (km, m, kph=km/h)	Secondary unit	Power, W	Protocol	Lishui Or Lishui Rx/Tx Swap	Reset trip	Manually	Immobilizer	No Lock	Road restrict	No	Startup with Road mode	No	PowerOff	After 5 minutes	Mode labels	Road/OffRoad	Assist levels	5	Display main screen layout	Main Screen V2	Keep headlight at startup	No	Mode button press function	Short - Mode Chang	Max speed Road (km/h)	25	Max speed OffRoad (km/h)	45	Wheel size	Select	Wheel circumference (mm)	1780	<table border="1"> <tbody> <tr> <td>PAS Type</td> <td>Left</td> </tr> <tr> <td>Speed sensor magnets number</td> <td>1</td> </tr> <tr> <td>Voltage cutoff base</td> <td>42V</td> </tr> </tbody> </table>	PAS Type	Left	Speed sensor magnets number	1	Voltage cutoff base	42V
Road		OffRoad																																																																																				
Power %	Speed %	Power %	Speed %																																																																																			
20	20	20	20																																																																																			
30	30	30	30																																																																																			
40	40	40	40																																																																																			
50	50	50	50																																																																																			
60	60	60	60																																																																																			
70	70	70	70																																																																																			
80	80	80	80																																																																																			
90	90	90	90																																																																																			
100	100	100	100																																																																																			
Preferred units	Metric (km, m, kph=km/h)																																																																																					
Secondary unit	Power, W																																																																																					
Protocol	Lishui Or Lishui Rx/Tx Swap																																																																																					
Reset trip	Manually																																																																																					
Immobilizer	No Lock																																																																																					
Road restrict	No																																																																																					
Startup with Road mode	No																																																																																					
PowerOff	After 5 minutes																																																																																					
Mode labels	Road/OffRoad																																																																																					
Assist levels	5																																																																																					
Display main screen layout	Main Screen V2																																																																																					
Keep headlight at startup	No																																																																																					
Mode button press function	Short - Mode Chang																																																																																					
Max speed Road (km/h)	25																																																																																					
Max speed OffRoad (km/h)	45																																																																																					
Wheel size	Select																																																																																					
Wheel circumference (mm)	1780																																																																																					
PAS Type	Left																																																																																					
Speed sensor magnets number	1																																																																																					
Voltage cutoff base	42V																																																																																					
	Battery Settings	Lishui mode specific settings																																																																																				
	<table border="1"> <tbody> <tr> <td>Battery used</td> <td colspan="3">1st Battery</td> </tr> <tr> <td></td> <td>1st</td> <td>2nd</td> <td>3rd</td> </tr> <tr> <td>Battery voltage</td> <td>48V</td> <td>Select</td> <td>Select</td> </tr> <tr> <td>Voltage 0% (0.01 V)</td> <td>43.55</td> <td>41.5</td> <td>41.5</td> </tr> <tr> <td>Voltage 100% (0.01 V)</td> <td>54.6</td> <td>54.6</td> <td>54.6</td> </tr> <tr> <td>Capacity (0.01 Ah)</td> <td>14</td> <td>10.4</td> <td>10.4</td> </tr> </tbody> </table>	Battery used	1st Battery				1st	2nd	3rd	Battery voltage	48V	Select	Select	Voltage 0% (0.01 V)	43.55	41.5	41.5	Voltage 100% (0.01 V)	54.6	54.6	54.6	Capacity (0.01 Ah)	14	10.4	10.4	<table border="1"> <thead> <tr> <th colspan="2">Road</th> <th colspan="2">OffRoad</th> </tr> <tr> <th colspan="2">Running strategy</th> <th colspan="2">Running strategy</th> </tr> </thead> <tbody> <tr> <td>Normal</td> <td>Normal</td> <td>Normal</td> <td>Normal</td> </tr> <tr> <td>Assist pulse delay</td> <td>4</td> <td>4</td> <td>4</td> </tr> <tr> <td>PAS gain</td> <td>100</td> <td>100</td> <td>100</td> </tr> <tr> <td>Throttle limited by PAS level</td> <td>Yes</td> <td>No</td> <td>No</td> </tr> <tr> <td>Throttle limited to 6km/h</td> <td>Yes</td> <td>No</td> <td>No</td> </tr> <tr> <td>PAS startup acceleration</td> <td>0</td> <td>0</td> <td>0</td> </tr> <tr> <td>Voltage cutoff deviation (0.1 V)</td> <td>0</td> <td>0</td> <td>0</td> </tr> <tr> <td>Current limit (0.5 A)</td> <td>7</td> <td>10.5</td> <td>10.5</td> </tr> <tr> <td>Wheel size</td> <td>20"</td> <td>20"</td> <td>20"</td> </tr> <tr> <td>Speed limit</td> <td>25 km/h</td> <td>41 km/h</td> <td>41 km/h</td> </tr> <tr> <td>Cruise</td> <td>No</td> <td>No</td> <td>No</td> </tr> </tbody> </table>	Road		OffRoad		Running strategy		Running strategy		Normal	Normal	Normal	Normal	Assist pulse delay	4	4	4	PAS gain	100	100	100	Throttle limited by PAS level	Yes	No	No	Throttle limited to 6km/h	Yes	No	No	PAS startup acceleration	0	0	0	Voltage cutoff deviation (0.1 V)	0	0	0	Current limit (0.5 A)	7	10.5	10.5	Wheel size	20"	20"	20"	Speed limit	25 km/h	41 km/h	41 km/h	Cruise	No	No	No								
Battery used	1st Battery																																																																																					
	1st	2nd	3rd																																																																																			
Battery voltage	48V	Select	Select																																																																																			
Voltage 0% (0.01 V)	43.55	41.5	41.5																																																																																			
Voltage 100% (0.01 V)	54.6	54.6	54.6																																																																																			
Capacity (0.01 Ah)	14	10.4	10.4																																																																																			
Road		OffRoad																																																																																				
Running strategy		Running strategy																																																																																				
Normal	Normal	Normal	Normal																																																																																			
Assist pulse delay	4	4	4																																																																																			
PAS gain	100	100	100																																																																																			
Throttle limited by PAS level	Yes	No	No																																																																																			
Throttle limited to 6km/h	Yes	No	No																																																																																			
PAS startup acceleration	0	0	0																																																																																			
Voltage cutoff deviation (0.1 V)	0	0	0																																																																																			
Current limit (0.5 A)	7	10.5	10.5																																																																																			
Wheel size	20"	20"	20"																																																																																			
Speed limit	25 km/h	41 km/h	41 km/h																																																																																			
Cruise	No	No	No																																																																																			

Rad Wagon configuration example

Please keep in mind that if you set **Power %** and **Current limit** too low, the controller might default to a value that is higher than the comprehensive current calculated by $\text{Power \%} / 100 * \text{Current limit}$. Similar if set too high you might end up with a lower default value set by controller. This varies from controller to controller so you might have to find the limits that work for you.

Also the speed limits used by the **Power levels** are the ones from the **EggRider display settings**

Power Levels	Display	Lishui																																																																																																																																																																																																																																												
<div> <div>≡</div> <div>Power levels</div> <div>⚙️</div> </div>	<div> <div>≡</div> <div>Display settings</div> <div>⚙️</div> </div>	<div> <div>≡</div> <div>Lishui settings</div> <div>⚙️</div> </div>																																																																																																																																																																																																																																												
<div>Power levels mode specific</div> <table border="1"> <thead> <tr> <th colspan="2">Road</th> <th colspan="2">OffRoad</th> </tr> <tr> <th>Power %</th> <th>Speed %</th> <th>Power %</th> <th>Speed %</th> </tr> </thead> <tbody> <tr> <td colspan="4">Power level 1</td> </tr> <tr> <td>35</td> <td>100</td> <td>50</td> <td>100</td> </tr> <tr> <td colspan="4">Power level 2</td> </tr> <tr> <td>38</td> <td>100</td> <td>55</td> <td>100</td> </tr> <tr> <td colspan="4">Power level 3</td> </tr> <tr> <td>41</td> <td>100</td> <td>60</td> <td>100</td> </tr> <tr> <td colspan="4">Power level 4</td> </tr> <tr> <td>44</td> <td>100</td> <td>65</td> <td>100</td> </tr> <tr> <td colspan="4">Power level 5</td> </tr> <tr> <td>47</td> <td>100</td> <td>70</td> <td>100</td> </tr> <tr> <td colspan="4">Power level 6</td> </tr> <tr> <td>50</td> <td>100</td> <td>75</td> <td>100</td> </tr> <tr> <td colspan="4">Power level 7</td> </tr> <tr> <td>53</td> <td>100</td> <td>80</td> <td>100</td> </tr> <tr> <td colspan="4">Power level 8</td> </tr> <tr> <td>56</td> <td>100</td> <td>90</td> <td>100</td> </tr> <tr> <td colspan="4">Power level 9</td> </tr> <tr> <td>59</td> <td>100</td> <td>100</td> <td>100</td> </tr> </tbody> </table>	Road		OffRoad		Power %	Speed %	Power %	Speed %	Power level 1				35	100	50	100	Power level 2				38	100	55	100	Power level 3				41	100	60	100	Power level 4				44	100	65	100	Power level 5				47	100	70	100	Power level 6				50	100	75	100	Power level 7				53	100	80	100	Power level 8				56	100	90	100	Power level 9				59	100	100	100	<div>Basic Settings</div> <table border="1"> <tbody> <tr> <td>Preferred units</td> <td>Metric (km, m, kph=km/h)</td> </tr> <tr> <td>Secondary unit</td> <td>Current, A</td> </tr> <tr> <td>Protocol</td> <td>Lishui Or Lishui Rx/Tx Swap</td> </tr> <tr> <td>Reset trip</td> <td>Manually</td> </tr> <tr> <td>Immobilizer</td> <td>No Lock</td> </tr> <tr> <td>Road restrict</td> <td>No</td> </tr> <tr> <td>Startup with Road mode</td> <td>No</td> </tr> <tr> <td>PowerOff</td> <td>After 5 minutes</td> </tr> <tr> <td>Mode labels</td> <td>Road/OffRoad</td> </tr> <tr> <td>Assist levels</td> <td>5</td> </tr> <tr> <td>Display main screen layout</td> <td>Main Screen V2</td> </tr> <tr> <td>Keep headlight at startup</td> <td>No</td> </tr> <tr> <td>Mode button press function</td> <td>Short - Mode Chang</td> </tr> <tr> <td>Max speed Road (km/h)</td> <td>25</td> </tr> <tr> <td>Max speed OffRoad (km/h)</td> <td>45</td> </tr> <tr> <td>Wheel size</td> <td>Select</td> </tr> <tr> <td>Wheel circumference (mm)</td> <td>2400</td> </tr> </tbody> </table> <div>Battery Settings</div> <table border="1"> <thead> <tr> <th>Battery used</th> <th colspan="3">1st Battery</th> </tr> <tr> <th></th> <th>1st</th> <th>2nd</th> <th>3rd</th> </tr> </thead> <tbody> <tr> <td>Battery voltage</td> <td>48V</td> <td>Select</td> <td>Select</td> </tr> <tr> <td>Voltage 0% (0.01 V)</td> <td>43.55</td> <td>41.5</td> <td>41.5</td> </tr> <tr> <td>Voltage 100% (0.01 V)</td> <td>54.6</td> <td>54.6</td> <td>54.6</td> </tr> <tr> <td>Capacity (0.01 Ah)</td> <td>14</td> <td>10.4</td> <td>10.4</td> </tr> </tbody> </table>	Preferred units	Metric (km, m, kph=km/h)	Secondary unit	Current, A	Protocol	Lishui Or Lishui Rx/Tx Swap	Reset trip	Manually	Immobilizer	No Lock	Road restrict	No	Startup with Road mode	No	PowerOff	After 5 minutes	Mode labels	Road/OffRoad	Assist levels	5	Display main screen layout	Main Screen V2	Keep headlight at startup	No	Mode button press function	Short - Mode Chang	Max speed Road (km/h)	25	Max speed OffRoad (km/h)	45	Wheel size	Select	Wheel circumference (mm)	2400	Battery used	1st Battery				1st	2nd	3rd	Battery voltage	48V	Select	Select	Voltage 0% (0.01 V)	43.55	41.5	41.5	Voltage 100% (0.01 V)	54.6	54.6	54.6	Capacity (0.01 Ah)	14	10.4	10.4	<div>Lishui common settings</div> <table border="1"> <tbody> <tr> <td>PAS Type</td> <td>Left</td> </tr> <tr> <td>Speed sensor magnets number</td> <td>1</td> </tr> <tr> <td>Voltage cutoff base</td> <td>42V</td> </tr> </tbody> </table> <div>Lishui mode specific settings</div> <table border="1"> <thead> <tr> <th colspan="2">Road</th> <th colspan="2">OffRoad</th> </tr> </thead> <tbody> <tr> <td colspan="4">Running strategy</td> </tr> <tr> <td colspan="2">Current simulation</td> <td colspan="2">Current simulation</td> </tr> <tr> <td colspan="4">Assist pulse delay</td> </tr> <tr> <td colspan="2">4</td> <td colspan="2">4</td> </tr> <tr> <td colspan="4">PAS gain</td> </tr> <tr> <td colspan="2">100</td> <td colspan="2">100</td> </tr> <tr> <td colspan="4">Throttle limited by PAS level</td> </tr> <tr> <td colspan="2">Yes</td> <td colspan="2">No</td> </tr> <tr> <td colspan="4">Throttle limited to 6km/h</td> </tr> <tr> <td colspan="2">Yes</td> <td colspan="2">No</td> </tr> <tr> <td colspan="4">PAS startup acceleration</td> </tr> <tr> <td colspan="2">0</td> <td colspan="2">0</td> </tr> <tr> <td colspan="4">Voltage cutoff deviation (0.1 V)</td> </tr> <tr> <td colspan="2">0</td> <td colspan="2">0</td> </tr> <tr> <td colspan="4">Current limit (0.5 A)</td> </tr> <tr> <td colspan="2">19.5</td> <td colspan="2">19.5</td> </tr> <tr> <td colspan="4">Wheel size</td> </tr> <tr> <td colspan="2">28"</td> <td colspan="2">28"</td> </tr> <tr> <td colspan="4">Speed limit</td> </tr> <tr> <td colspan="2">25 km/h</td> <td colspan="2">41 km/h</td> </tr> <tr> <td colspan="4">Cruise</td> </tr> <tr> <td colspan="2">No</td> <td colspan="2">No</td> </tr> </tbody> </table>	PAS Type	Left	Speed sensor magnets number	1	Voltage cutoff base	42V	Road		OffRoad		Running strategy				Current simulation		Current simulation		Assist pulse delay				4		4		PAS gain				100		100		Throttle limited by PAS level				Yes		No		Throttle limited to 6km/h				Yes		No		PAS startup acceleration				0		0		Voltage cutoff deviation (0.1 V)				0		0		Current limit (0.5 A)				19.5		19.5		Wheel size				28"		28"		Speed limit				25 km/h		41 km/h		Cruise				No		No	
Road		OffRoad																																																																																																																																																																																																																																												
Power %	Speed %	Power %	Speed %																																																																																																																																																																																																																																											
Power level 1																																																																																																																																																																																																																																														
35	100	50	100																																																																																																																																																																																																																																											
Power level 2																																																																																																																																																																																																																																														
38	100	55	100																																																																																																																																																																																																																																											
Power level 3																																																																																																																																																																																																																																														
41	100	60	100																																																																																																																																																																																																																																											
Power level 4																																																																																																																																																																																																																																														
44	100	65	100																																																																																																																																																																																																																																											
Power level 5																																																																																																																																																																																																																																														
47	100	70	100																																																																																																																																																																																																																																											
Power level 6																																																																																																																																																																																																																																														
50	100	75	100																																																																																																																																																																																																																																											
Power level 7																																																																																																																																																																																																																																														
53	100	80	100																																																																																																																																																																																																																																											
Power level 8																																																																																																																																																																																																																																														
56	100	90	100																																																																																																																																																																																																																																											
Power level 9																																																																																																																																																																																																																																														
59	100	100	100																																																																																																																																																																																																																																											
Preferred units	Metric (km, m, kph=km/h)																																																																																																																																																																																																																																													
Secondary unit	Current, A																																																																																																																																																																																																																																													
Protocol	Lishui Or Lishui Rx/Tx Swap																																																																																																																																																																																																																																													
Reset trip	Manually																																																																																																																																																																																																																																													
Immobilizer	No Lock																																																																																																																																																																																																																																													
Road restrict	No																																																																																																																																																																																																																																													
Startup with Road mode	No																																																																																																																																																																																																																																													
PowerOff	After 5 minutes																																																																																																																																																																																																																																													
Mode labels	Road/OffRoad																																																																																																																																																																																																																																													
Assist levels	5																																																																																																																																																																																																																																													
Display main screen layout	Main Screen V2																																																																																																																																																																																																																																													
Keep headlight at startup	No																																																																																																																																																																																																																																													
Mode button press function	Short - Mode Chang																																																																																																																																																																																																																																													
Max speed Road (km/h)	25																																																																																																																																																																																																																																													
Max speed OffRoad (km/h)	45																																																																																																																																																																																																																																													
Wheel size	Select																																																																																																																																																																																																																																													
Wheel circumference (mm)	2400																																																																																																																																																																																																																																													
Battery used	1st Battery																																																																																																																																																																																																																																													
	1st	2nd	3rd																																																																																																																																																																																																																																											
Battery voltage	48V	Select	Select																																																																																																																																																																																																																																											
Voltage 0% (0.01 V)	43.55	41.5	41.5																																																																																																																																																																																																																																											
Voltage 100% (0.01 V)	54.6	54.6	54.6																																																																																																																																																																																																																																											
Capacity (0.01 Ah)	14	10.4	10.4																																																																																																																																																																																																																																											
PAS Type	Left																																																																																																																																																																																																																																													
Speed sensor magnets number	1																																																																																																																																																																																																																																													
Voltage cutoff base	42V																																																																																																																																																																																																																																													
Road		OffRoad																																																																																																																																																																																																																																												
Running strategy																																																																																																																																																																																																																																														
Current simulation		Current simulation																																																																																																																																																																																																																																												
Assist pulse delay																																																																																																																																																																																																																																														
4		4																																																																																																																																																																																																																																												
PAS gain																																																																																																																																																																																																																																														
100		100																																																																																																																																																																																																																																												
Throttle limited by PAS level																																																																																																																																																																																																																																														
Yes		No																																																																																																																																																																																																																																												
Throttle limited to 6km/h																																																																																																																																																																																																																																														
Yes		No																																																																																																																																																																																																																																												
PAS startup acceleration																																																																																																																																																																																																																																														
0		0																																																																																																																																																																																																																																												
Voltage cutoff deviation (0.1 V)																																																																																																																																																																																																																																														
0		0																																																																																																																																																																																																																																												
Current limit (0.5 A)																																																																																																																																																																																																																																														
19.5		19.5																																																																																																																																																																																																																																												
Wheel size																																																																																																																																																																																																																																														
28"		28"																																																																																																																																																																																																																																												
Speed limit																																																																																																																																																																																																																																														
25 km/h		41 km/h																																																																																																																																																																																																																																												
Cruise																																																																																																																																																																																																																																														
No		No																																																																																																																																																																																																																																												

Last update: February 20, 2023

6.6 Kunteng settings (KT)

Accessible from menu **Kunteng**

Attention

RadPower Bikes with a upgraded **Kunteng** controller are not compatible with EggRider display.

Consists of one common settings section shared by both profiles Road and OffRoad and profile independent settings.

Speed limits are used from EggRider display settings page.





- reads the settings stored on the display

- writes the modified settings to the display.

Attention

After writing settings, turn off your display from the button in order to permanently save the settings.

6.6.1 Settings example

Display		Kunteng	
	Display settings 		Kunteng settings 
Basic Settings		Kunteng common settings	
Preferred units	Metric (km, m, kph=km/h)	Motor speed demultiplier (P1)	100
Secondary unit	Current, A	Wheel speed pulse signal (P2)	1
Protocol	Kunteng Rx/Tx Swap	Assist mode (P3)	Torque Max Power
Reset trip	Manually	PAS no of magnets (C1)	6
Immobilizer	No Lock	Phase codification (C2)	0
Road restrict	No	Wheel size	26 in
Startup with Road mode	No	Kunteng mode specific settings	
PowerOff	After 5 minutes	<div> <div>Road</div> <div>Parameter</div> <div>OffRoad</div> </div>	
Mode labels	Road/OffRoad	<div> <div>Low voltage cut-off (C12)</div> <div>0 V (20V 30V 40V)</div> <div>0 V (20V 30V 40V)</div> </div>	
Assist levels	5	<div> <div>ABS Break (C13)</div> <div>None</div> <div>None</div> </div>	
Display main screen layout	Main Screen V2	<div> <div>Strength PAS (C14)</div> <div>General</div> <div>General</div> </div>	
Keep headlight at startup	No	<div> <div>Throttle mode (P4 - C4)</div> <div>6 km/h</div> <div>Yes</div> </div>	
Mode button press function	Short - Mode Chang	<div> <div>Current Limit (%) (C5)</div> <div>75%</div> <div>100%</div> </div>	
Max speed Road (km/h)	25		
Max speed OffRoad (km/h)	45		
Wheel size	Select		
Wheel circumference (mm)	2400		
Battery Settings			
Battery used	1st Battery		
	1st	2nd	3rd
Battery voltage	48V	Select	Select
Voltage 0% (0.01 V)	43.55	41.5	41.5
Voltage 100% (0.01 V)	54.6	54.6	54.6
Capacity (0.01 Ah)	14	10.4	10.4

6.6.2 Kunteng Common Settings

Motor speed demultiplier

Wheel speed pulse signal (P2)

Options are 0, 1, 2, 3, 4, 5, and 6.

Assist mode (P3)

Options

- Speed control / PAS Gear Ratio
- Torque I Max Power

PAS no of magnets(C1)

Options are 0, 1, 2, 3, 4, 5, 6 and 7.

Phase codification

Options are 0, 1, 2, 3, 4, 5, 6 and 7.

Wheel Size

Options are 6 in, 8 in, 12 in, 14 in, 14 in, 16 in, 18 in, 20 in, 22 in, 24 in, 26 in, 700c and 28 in.

6.6.3 Kunteng Mode Specific Settings

Low voltage cut-off (C12)

OPTIONS

- -2V ()
- -1.5V
- -1V
- -0.5V
- 0V
- +0.5V
- +1V
- +1.5V
- +2V

ABS Brake (C13)

Options

- None
- Minimum Motor Brake
- Low Motor Brake
- Medium Motor Brake
- High Motor Brake
- Maximum Motor Brake

Strength PAS(C14)

Options

- Weaker
- General
- Stronger

Throttle mode(P4-C4)

Options

- Yes
- 6km/h
- 12km/h
- Assist
- No

Current Limit (%) (C5)

Options are 50%, 67%, 75%, 80%, 83%, 87%, 91% and 100%.

Last update: February 20, 2023

6.7 ASI - Accelerated Systems Inc settings

Accessible from menu **ASI settings**

Read - reads the settings stored on the display

Write - writes the modified settings to the display.

Requires EggRider display firmware \geq v2.4.83 and ASI firmware controller version \geq V5.921

For first time use please ensure to write ASI settings and power off display from **Power** button.

At each **M** press on EggRider display, the relative profile settings are written to the controller but they are not permanently saved on the controller.

Required Asi controller configuration

- Flash parameter read access code (address 62) - 0
- Display Protocol (address 66) - Disabled
- Assist Mode Source (address 210) - Network Gains

Pinout setup for batteries bellow 60v fully charged

Do not confuse with nominal voltage. A 52v battery fully charged goes to 58.8v

ASI BAC500/800 pin #	ASI pin function	EggRider pin function
16	Gnd	GND
17	Display Rx	TxD
18	Display Tx	RxD
21	Key out	P+
22	Key in	Power Lock

Necessary pinout setup for batteries over 60V

Please do not connect EggRider to a power source over 60v as it will permanently damage the display.

With ASI controller to go above 60v you **MUST** connect the EggRider display to the 12v output. This configuration requires an external switch to power on/off the controller.

This setup will loose the functionality to power on/off the controller from EggRider display, but still requires to start the display after the main switch has been powered on.

Start sequence:

1. Main Switch/key turn/press ON (power the controller)
2. Press power button on the display (Turns ON EggRider)

Stop sequence:

1. Press power button on the display (Turns Off EggRider and also save settings/data)
2. Main Switch/key turn/press OFF (cuts power to controller)

CONNECTION FOR BAC500, BAC555, BAC800, BAC855

Mount a switch between ASI pins # 21 and # 22 or between your battery + pole and ASI pin # 22. Another option is to short circuit the ASI pin # 21 and 22 which will power on the controller automatically when the battery is on.

ASI pin #	ASI pin function	EggRider pin function	Notes
13	+12V (90mA max!)	P+	
16	Gnd	GND	
17	Display Rx	TxD	
18	Display Tx	RxD	
-	-	Power lock	Keep free
21	Key out	-	Connect to ext switch
22	Key in	-	Connect to ext switch

CONNECTION FOR BAC2000, BAC4000, BAC8000

Mount a switch between your battery + pole and ASI pin # 9

You should definitively secure this wire section with a 500mA fuse.

ASI pin #	ASI pin function	EggRider pin function	Notes
16	+12V (50mA max!)	P+	
14 or 15	Gnd	GND	
13	Display Rx	TxD	
3	Display Tx	RxD	
-	-	Power lock	Keep free
9	Key in	-	Connect to ext switch key from batt+

Throttle Max Power (W)

PAS Max Power (W)

Motor Phase Current (A)

Regen Ratio (%)

Throttle Max Speed (km/h)

Pas Max Speed (km/h)

Battery Current Limit (%)

Field Weakening (Max 50%)

Last update: October 14, 2023

7. EggRider display compatibility

If you want to check compatibility with your bike please complete EggRider compatibility form.

There are two main things to consider for compatibility:

- **Hardware** - voltage, connector and pinout compatibility
- **Software** - communication protocol compatibility

Warning

Having the same **connector/pinout** or bike model doesn't guarantee a compatibility.

Attention

EggRider V2 is **not compatible** with **CAN bus** systems.

Do not make a connection if connectors are not the same type. Do not use unauthorized adapters such as female to female and male to male adapters because most likely they will burn the display and controller.



7.1 How to find out controller brand?

Attention

It is important to identify your controller brand, do not confuse this with the motor brand.

You can find the controller by following the display cable.

If you have a **hub wheel motor**, most probably your controller is Kunteng or Lishui.

The hub motor ebikes mostly have the controller in an aluminum box attached to the frame or integrated in the battery mount or the bike frame.

If you identified your controller as Kunteng(KT) or Lishui(LSW), keep in mind that there are more types of connectors, not only julet/higo 5 pin waterproof.

7.2 Compatibility list

7.2.1 Bafang hub motors

Bafang hub motors are not necessarily compatible. It is important to understand what controller brand you have. Please read all this page carefully.

7.2.2 Bafang mid drive motors

Bafang mid-drive motors have 2 types of controllers based on the communication protocol

1. UART communication - Compatible
2. CANbus communication - Not Compatible

UART display connector

Compatible with
EggRider V2 Display



CANbus display connector

NOT COMPATIBLE with
EggRider V2 Display



Bafang mid drive ebikes have the controller integrated into the motor and the type is written on the case. EggRider is compatible with Bafang mid drive systems:

- Bafang BBS01 250W 350W 500W 750W
- Bafang BBS02 250W 350W 500W 750W
- Bafang BBS03 BBSHD LUNA 750W 1000W 1500W 2500W Ludacris
- Bafang Ultra M620
- Bafang Ultra 1000W
- Bafang MM G510 1000
- Bafang M600
- Bafang Max
- Bafang MM G320
- Bafang MM G330 250
- Bafang MM G340
- Bafang M300
- Bafang M400

7.2.3 Mate bikes

Compatible with all **Mate X** versions. Please select Mate X EggRider version.

Attention

Mate classic bikes are not compatible with EggRider display.

Bike compatibility list:

- MATE X 250
- MATE X 250+
- MATE X 750S
- MATE City 250

Controllers supported:

- Lishui LSW1545-5-2M
- Lishui LSW856-66M
- Lishui LSW856-66-1M

Attention

EggRider is not compatible with the following Mate X Controllers:

- YCSH-C

Motors supported:

- Bafang RM G060.750.DC 48V 750W SWX02
- Shengyi DGW25 SY25N4820TA 48V 250W
- Shengyi DGW25 SY254820SJ 48V 500W
- JiaBo CZJB JB-104C2 24V-60V 750W

Replaces the following displays:

- Key-Disp KD51C-D
- Bafang DPC-14 / 850C 3.2-inch MATE-customized TFT LCD color display
- Ukriver UKC1 / UK-CT-18 / UKCT-18 3.5-inch MATE-customized TFT LCD color display

7.2.4 RadPower bikes

Attention

If you are unable to find your specific bike model in the compatibility list provided, it indicates that your bike may not be compatible with the EggRider display. To ensure compatibility or if you have a new RadPower bike that is not listed, we kindly request you to provide information required here

Attention

EggRider is not compatible with:

- Version **Rad Rover 6 Plus**
- Version **Rad Rhino 6 Plus**
- Version **RadCity 5 Plus**
- Version **RadRunner 3 Plus**
- Version **RadTrike 1**
- RadPower bikes with upgraded **Kunteng (KT)** controllers

Compatible RadPower bikes have the following 5 pin screw connector for display





Click to see compatibility list

Bike model	Compatibility
RadCity 1	
RadCity 2	
RadCity 3 Step-Thru	
RadCity 4	
RadCity 5 plus	
RadExpand 5	
RadMini 1	
RadMini 2	
RadMini 3	
RadMini 4	
RadMission 1	
RadRhino 1	
RadRhino 5	
RadRhino 6 plus	
RadRover 1	
RadRover 2	
RadRover 3	
RadRover 4	
RadRover 5	
RadRover 6 Plus	
RadRunner 1	
RadRunner Plus	
RadRunner 2	
RadRunner 3 Plus	
RadWagon 1	
RadWagon 2	
RadWagon 3	
RadWagon 4	
RadTrike 1	

7.2.5 Urban Drivestyle bikes



Attention

If you can't find your model in the list below or you want to be sure about compatibility, please provide the information required here

Compatible Urban Drivestyle bikes:

- Unimoke V4
- Unimoke V5
- Unimoke V6

7.2.6 CoastCycles bikes:

Compatible bikes:

- Buzzraw
- Buzzraw X

7.2.7 Lishui (LSW) controllers

Lishui has different models of controllers. Some of them are compatible, some are not. It is important to provide us with the code on the controller so we can make a list of compatible controllers.


[Click to see compatibility list](#)

Controller	Compatibility
Lishui LSW1599-4M	
Lishui LSW 1350	
Lishui LSW943-217-1M	
Lishui LSW686-21F	
Lishui LSW 947-54F	
Lishui LSW352-89F	
Lishui LSW1584-1M	
Lishui LSW1596-2F	
Lishui LSW765-28-48F	
Lishui LSW1332-47F	
Lishui LSW781-62-7	
Lishui LSW-1405-4-7F	
Lishui LSW352-89FA	
Lishui LSW1023-3-2	
Lishui LSW1350-11-1F	
Lishui LSW125-11-1M	
Lishui LSW1106-58-020F	
Lishui LSW1188-29-1F	
Lishui LSW1433-2F	
Lishui LSW1155-37M	
Lishui LSW1568-13-4M	
Lishui LSW1497-2-1f	
Lishui LSW1659-14F	

7.3 Accelerated Systems Controllers

ASI controllers are compatible with EggRider V2 display if you have access to Bacdoor app. Please provide us picture with your display cable, battery voltage and controller model.

Please read our dedicated page for more information

- ASI BAC 300
- ASI BAC 500
- ASI BAC 800
- ASI BAC 355
- ASI BAC 555
- ASI BAC 855
- ASI BAC 4000
- ASI BAC 8000

7.4 CYC Motor

CYC motors that use ASI controllers are compatible.

Attention

Special connection is required if you have battery greater than 52V.
Please read our dedicated ASI page for more information

Compatible versions

- CYC motor X1 Pro Gen 2 with controller ASI BAC855 or BAC2000
- CYC motor X1 Stealth with controller ASI BAC855

7.5 Kunteng (KT) Controller

Attention

RadPower Bikes with a upgraded **Kunteng** controller are not compatible with EggRider display.

7.5.1 Other compatible bikes:

- Aostirmotor S07-B
- Voltbike Yukon 750 Limited
- Mycle Cargo Electric Bike
- Ride 1UP

7.6 Check compatibility

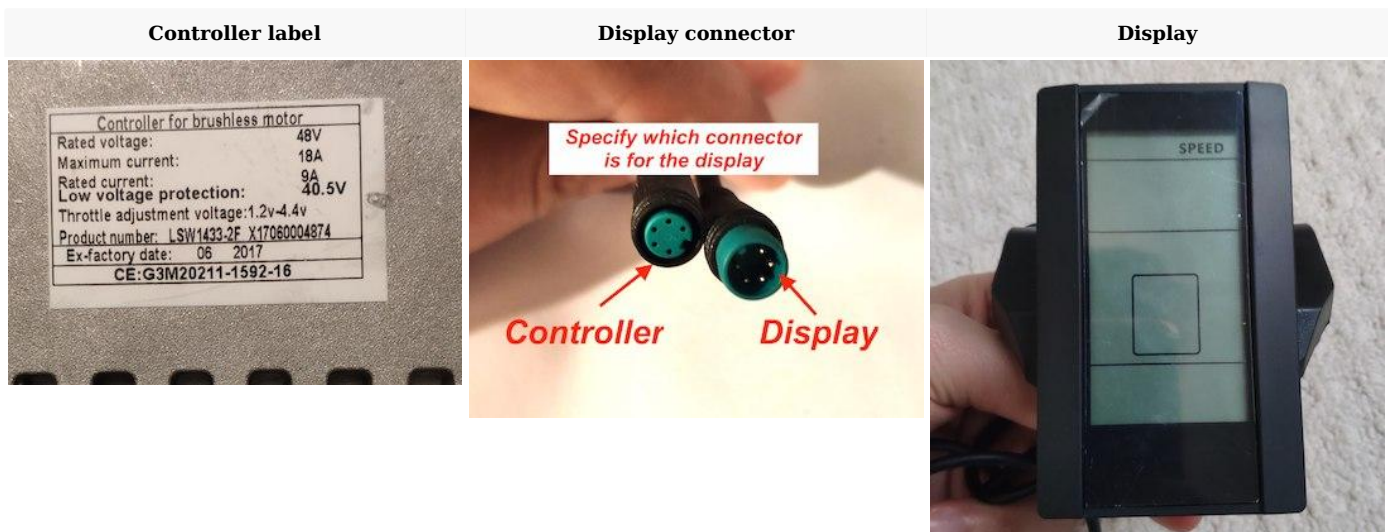
If you are still unsure and would like us to check compatibility, please complete EggRider compatibility form.

- bike brand
- bike model
- year of manufacture
- picture of controller label
- picture of display connector - display side
- picture of display connector - controller side
- picture of display

Attention

For display connector pictures please specify which connector goes to controller and which to display

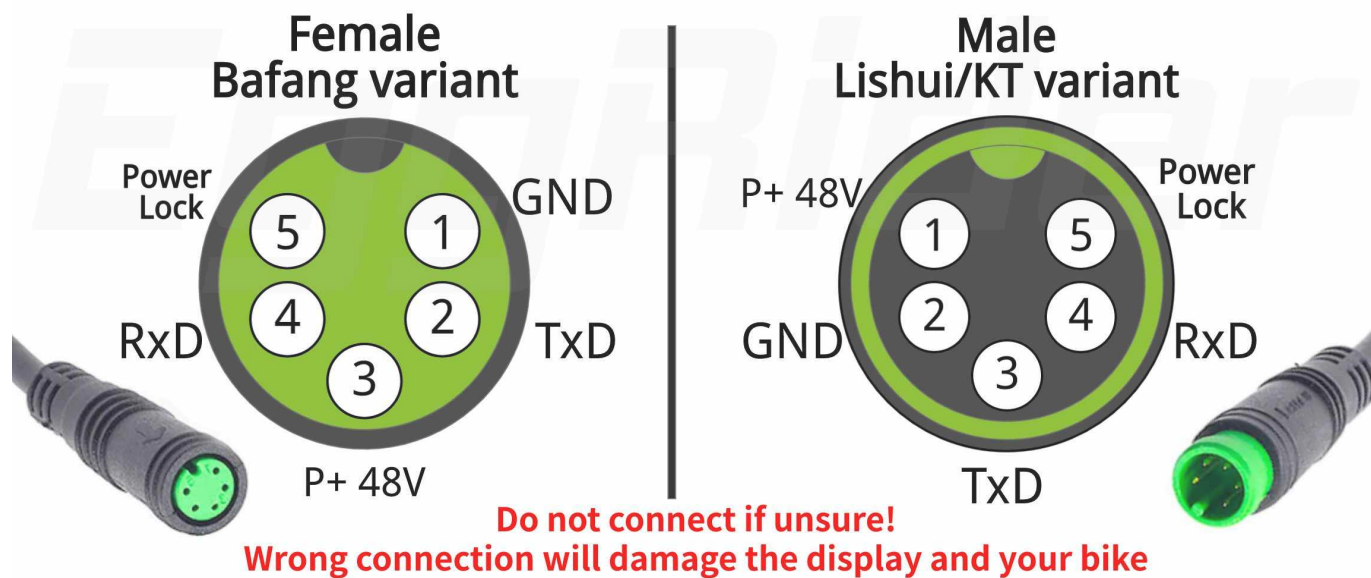
See the example pictures below.



7.7 EggRider V2 Pinout

EggRider V2

Display pinout



Last update: October 13, 2023

8. Troubleshooting

8.1 Solve mobile app connection problems

8.1.1 My phone doesn't connect to EggRider V2

If the display appears on the **Search Device** page but doesn't connect when tapping or doesn't appear at all please follow the instructions below:

Info

Sometimes the mobile app fails to connect because of corrupted Bluetooth cache of the phone. The following procedure usually solves the problem.

1. Go to **App settings** page and set
2. **Startup connection** -> **Manually**
3. **Background re-connection** -> **No**
4. Close the app from memory.
5. Turn off Bluetooth.
6. Power off the phone
7. Power off display
8. Power on display and phone
9. Turn on Bluetooth (do not pair)
10. Turn on GPS
11. Open the app, give permissions and try to connect again



8.2 EggRider display speed shows --.- km/h

EggRider display showing speed as --.-**km/h** or **error FF (EFF)** can be caused by the following reasons:

1. Protocol is not correctly setup
2. Communication port issue
3. The display is not compatible with the connected controller

8.2.1 Protocol is not correctly setup

EggRider display supports multiple bike communication protocols, each controller brand has two possible options, for example **Bafang** and **Bafang Rx/Tx Swap**, but only one of them will work with your bike.

Most of the time the protocol is auto-detected when display is reset to factory settings. To reset, when display is OFF press  +  buttons until display turns ON. (see Button combinations)

Once identified the protocol that works with your bike please don't change it when taking settings examples from somewhere else.

After reset, if speed is not shown as **0.0 km/h**, please follow the steps below:

1. Connect to display with mobile app
2. Go to **Display settings** page, press Read, change **Protocol** type to your controller's brand name (example: Bafang) and press Write.
3. Restart the display
4. Check if speed shows **0.0km/h**
5. If speed still shows **--.-km/h**, repeat from step 1 and change protocol to the Rx/Tx swap version. (example: Bafang Rx/Tx Swap)

Pro tip

Do not confuse controller brand with motor brand. For EggRider, it is important to identify the controller.

If none of the above works it is most likely because of the reasons 2) or 3). In this case please **Contact us via email**.

8.2.2 Communication port issue

This is usually the case if EggRider was previously showing the speed correctly. The issue can be either on EggRider display or on the controller side.

How to identify where the issue is?

- By connecting another compatible display to your bike or controller. If speed shows correctly then it is an issue on EggRider display. In this case please **Contact us via email**.
- By connecting EggRider to another bike or controller. If it works correctly then the issue is on controller side.

8.2.3 EggRider display is not compatible with the connected controller

If the issue is not resolved by following the above steps then it is most likely a software incompatibility, please **Contact us via email**.

8.3 Settings Errors

8.3.1 No Lishui Settings

If you see on the EggRider display the following error **No Lishui Settings** please do the followings:

1. Connect to the EggRider display
2. Go to **Lishui settings** page
3. Configure the Lishui settings to match your bike (RadPower or Mate X Lishui settings examples)
4. Press Write
5. Restart the EggRider

8.3.2 No ASI Settings

If you see on the EggRider display the following error **No ASI Settings** please do the followings:

Attention

First, please make sure that you have the newest firmware version. You can update your EggRider display by doing the following

1. Connect to the EggRider display
2. Go to **ASI settings** page
3. Configure the settings to match your bike (ASI settings examples)
4. Press Write
5. Restart the EggRider

8.3.3 Switch failed B

If you see on the EggRider display the following error **Switch failed B** please do the followings:

1. Connect to the EggRider display
 2. Follow carefully the steps from Bafang first configuration
-

Last update: October 13, 2023

9. Support

We are here to help.

Attention

If you have hardware issues, please **contact us over email** and let us know your order number and description of the issue.

You can use our **EggRider users Facebook group** for your generic questions or feedback. In this way everyone can see the response and benefit from it.

It's really important that you check out **EggRider issues page** first. If you can't find your problem in the list above then you can **Create a new issue** (requires login).

Please also consider reading our **Frequently asked questions**

Attention

Please avoid to contact us personally and use the above mentioned dedicated channels.

Last update: November 1, 2021

10. Road map

These functionalities are not to consider in specific order

- Login functionality with user profiles
 - App notifications
 - Improved app dashboard
 - Improved display graphics
 - Improving background stability
 - Predefined settings and settings sharing
 - Raising issues from the app
 - App multilingual support
 - Human power information for systems with torque sensor
-

Last update: November 1, 2021

11. EggRider Release Notes

Latest stable releases:

Please follow carefully the update instructions: [Update instructions](#)

- EggRider Firmware **v2.6.65** -> [Release notes](#)
- EggRider App Android **v2.6.03** -> [Release notes](#)
- EggRider App iOS **v2.6.04** -> [Release notes](#)

Some known issues:

- Accelerating while display is powering on results in wrong battery measurement
- App Startup connection and Background re-connection can create unintended behavior

Last update: April 20, 2023

12. Disclaimer

Attention

Having the same `connector/pinout`, `controller` or `bike model` doesn't guarantee a compatibility.

Disclaimer

The EggRider V2 display does not ensure legal compliance. It does provide all the flexibility that the motor or controller can offer. The Road/Eco and OffRoad/Sport are merely 2 independently configured profiles. Please check your local laws before riding to make sure you are riding legally and safely.

Warranty

By changing specific settings, you can void the warranty of your motor/bike. You can also experience a significant loss of range due to the high speed and power output. Please use your own judgement.

The app and display interface might vary significantly from the shown screenshots. Please get in touch if you cannot see all the content.

The battery and range estimations need a couple of trips before providing reliable enough data.

The battery capacity estimation relies heavily on the current estimation. According to our experience, the estimated capacity is about 60% of the actual battery capacity. This might be due to a tolerance stack-up in the current measurement, battery voltage vs level non-linearity, etc. We are confident we can improve it over time, and we are open to suggestions.

Last update: November 1, 2021

13. Frequently asked questions


Am I required to have the phone connected to the display while riding?

No, EggRider display works without the need of the mobile app connection.

Can I connect with more than one phone?

Yes, you can use more phones to connect to EggRider display, you have to activate for every phone.

Why are my EggRider settings not saved?

When you write the EggRider settings from the app to the display, they are saved permanently only when you press the  on the display.

What is the maximum power EggRider supports?

EggRider can support virtually any power. You have to keep in mind that the maximum power it is given by your motor controller and that it can't be bypassed.

What is the maximum voltage EggRider supports?

EggRider supports direct voltage up to 60V (maximum 52v nominal voltage batteries). We can support systems with higher voltages only with specific controllers and with special connections to 12V output.

EggRider specifications.

Why do I get an alert even if I updated my EggRider: "Your EggRider display version (Unknown/v2.x.x) is lower than the supported version by the app (v2.x.x)?"

You have to connect with the app to the display to make the warning disappear after an update.

What does "R10", "R35"... means on the display?

The Rxx represents the range in km/mi. If there is an error it will be replaced with Exx representing the error code.

Why trip data is not registered when my phone is in the pocket?

You have to make sure the app is allowed to run in the background. Please search for "Lock App in background"

When does a trip stop recording?

At every connection a new trip is started and it ends on disconnection or by pressing "Restart" icon on the Dashboard page.

What happens if I connect my display wrongly?

If your display comes with adapters (Lishui/Mate X/Rad) Please make sure it is connected correctly.

Please do not use male-to-male or female-to-female adapters. Wrong connection can damage the display or the bike and void your warranty. **Contact us via email**

How can I configure different Road and OffRoad mode settings?

If you see Road or OffRoad button gray out please follow the **initial Bafang setup**

Speed is not accurate. How can I fix this?

In order to get an accurate speed on EggRider display, you will need to configure your **wheel size**.

Why my headlight is not turning on?

This usually happens when you did not set up your **protocol** correctly. If that is not the case it can be that EggRider doesn't support this functionality on your bike or there is a hardware problem with your system.

Why I can't see speed on my display (--.- km/h or error E FF)?

This usually happens when you did not set up your **protocol** correctly.

My EggRider turned off when I still had plenty of battery left. How can i fix this?

In order to fix this you will need to configure your **battery settings** .

Why do I get "No Lishui Settings / No ASI Settings" error on my display.

You get this notification if Lishui or ASI settings have not been configured yet. This is a common error that happens when you set up EggRider for the first time. In order to fix this please check our **Troubleshooting Page** .

My connectors are both female?

Please do not use male-to-male adapters. Wrong connection can damage the display or the bike and void your warranty. **Contact us via email**

My connectors are both male?

Please do not use female-to-female adapters. Wrong connection can damage the display or the bike and void your warranty. **Contact us via email**

Last update: August 10, 2023