

**BLACK TEA MOTORBIKES**

# **BONFIRE**

Owner's Manual Version 1.1

## **Hello & Welcome!**

You are now a proud owner of a Black Tea Bonfire.

We are extremely flattered that you have chosen Black Tea Motorbikes for your upcoming adventures. Welcome to our Rider Community. It's now our obligation to do the best we can to serve you with product information, service, and spare parts for an effortless experience.

Our mission is to make adventures accessible to everyone, everywhere. That is why our ambition is to develop compelling motorcycles for any kind of adventures you have in mind. For an easy service & personal customization, we build our bikes as simple as possible allowing any kind of (legal) modification.

This manual should be your tool and guidance for general maintenance, safety precautions, service matters - stretching from what may be dealt with by yourself and what needs to be handed over to professional mechanics, tuning, warranty aspects, handling and trouble shooting.

Please to use this document, to ensure that every ride is a safe ride.

Black Tea Motorbikes

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## **1. Introduction**

### **1.1. Safety regulations**

We want both you and those around you to get through everyday life safely. Therefore, we ask you to pay attention to a few things when you are on the road with your Bonfire.

Keep to the traffic rules. To minimize risk of serious injury, protective equipment should be worn at all times including a helmet. Please always have the following documents with you when you drive your Bonfire: Identity card, insurance papers, number plate and operating license.

Probably you are super excited to start riding your bike but please follow the steps below to make sure to not make any damage to the vehicle, property or injure yourself or others. During transportation the bike might have become damaged. We can't guarantee the bikes drivability as it's been strapped down for up to several weeks before you receive it.

- Read & understand this manual
- Go through the chapter "Regular Inspection and Maintenance"
- Go through the checklist on "Before each ride"

Make sure that you have the latest version of the manual by visiting [www.blackteamotorbikes.com/service](http://www.blackteamotorbikes.com/service)

### **1.2. Unpacking**

If you receive a fully assembled motorcycle, you only need to mount the mirrors and the reflectors before your first ride. If you receive your Bonfire in a cardboard box on a palette, you will have to unpack it and make the final assembly on your own.

We recommend everyone watching our instruction video teaching you how to assemble, ride & maintaining your bike. Visit our page at [www.blackteamotorbikes.com/bonfire](http://www.blackteamotorbikes.com/bonfire) or scan the QR code here to learn how to disassemble the box, unpack & assemble the bike.



## **2. General information**

### **2.1. Safety & Warranty**

#### *Warranty*

The standard warranty guarantee is covered by the attached terms and conditions. It will be voided by damage caused by actions contrary to these operating instructions.

#### *Usage*

Black Tea Motorbikes are designed and homologated to the highest standards for road traffic by TÜV Süd in Munich, Germany. It is therefore forbidden to remove any equipment or manipulate the wiring outside an authorized service centre. The Bonfire is not designed for field use or racing.

#### *Riding*

When riding a Bonfire bike for the first time, there are a few things to be aware of. The bike has an electric motor with instant torque and a primary drive with no gears which means you have all the power available at all times in the throttle. It's very sensitive and it's highly recommended to start riding in the 1st riding mode to get used to this kind of vehicle.

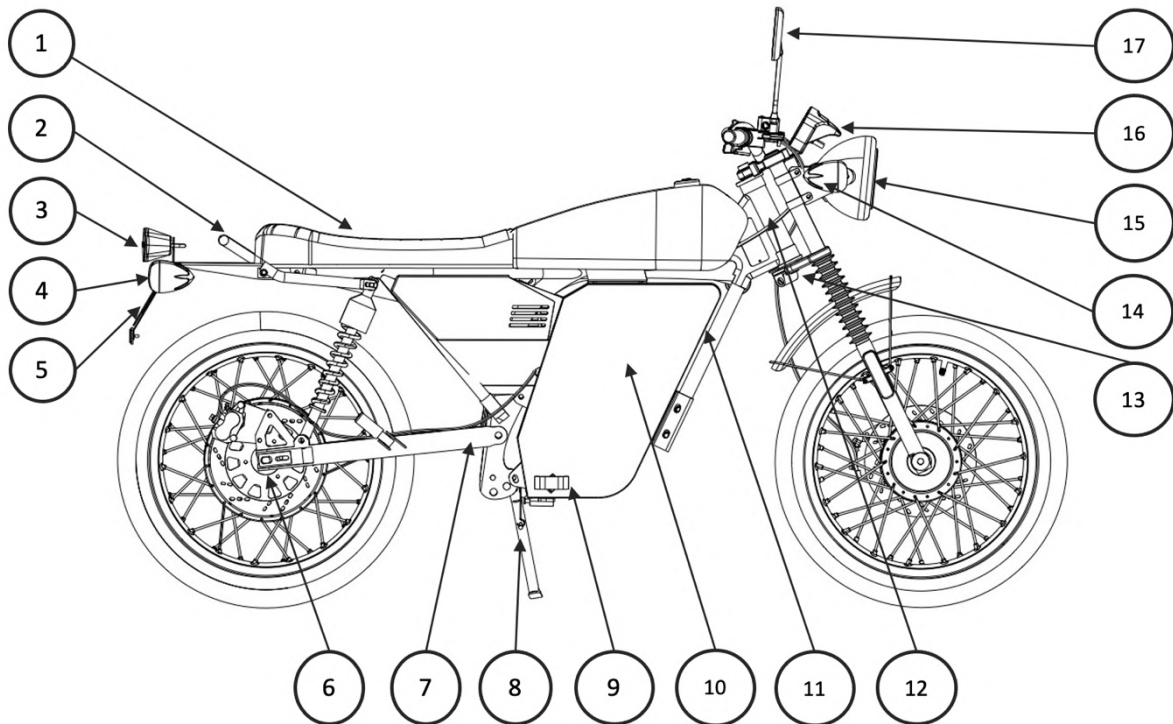
**Important:** You have two keys. One key is for the ignition & the steering lock. The other key is for the battery box. Make sure to use the right key, otherwise you can damage the lock or the key.

There is no clutch, instead you have the rear brake positioned on the left side of the handlebar. This means that there are neither rear brake nor gear shifter to be found by the rider's feet. This can feel very unnatural for experienced combustion motorcyclists.

Be aware of your surroundings. Remember that electric vehicles are quiet. Be aware of people or other cyclists that may be on or near the paths and lanes that you are using.

- Never ride the bike under the influence of alcohol or drugs
- Always check your local laws and regulations where to ride.

## 2.3. Motorcycle Overview



- |                                     |                                     |
|-------------------------------------|-------------------------------------|
| 1. Seat                             | 10. Battery Box                     |
| 2. Holding Mount for passenger      | 11. Position of Certification Label |
| 3. Rear & Stop Light                | 12. Position of VIN                 |
| 4. Rear Indicator                   | 13. Steering Lock                   |
| 5. License Plate Holder             | 14. Front Indicators                |
| 6. Electric Hub Motor               | 15. Headlight                       |
| 7. Position of EPA Label (USA only) | 16. Display                         |
| 8. Side Stand                       | 17. Mirrors                         |
| 9. Footrests                        |                                     |

### *Vehicle Identification Number (VIN)*

The VIN / Chassis Number is a 17-digit number stamped on the head tube of the frame. Do not alter or remove this number as it is the legal identifier for your motorcycle. You can also find the VIN on the statutory plate/ certification label.

### *Battery Serial Number*

The battery serial number is located on the battery. The serial numbers are hidden from view, when the battery is inside the motorcycle.

### *Motor Serial Number*

The motor serial number is laser etched on the left hand side of the motor housing and is visible when the motorcycle is fully assembled.

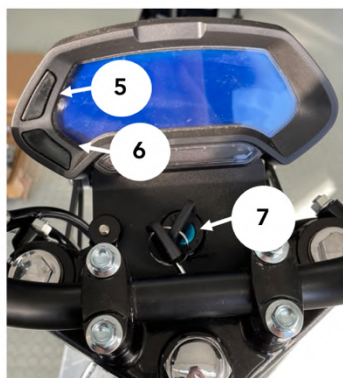
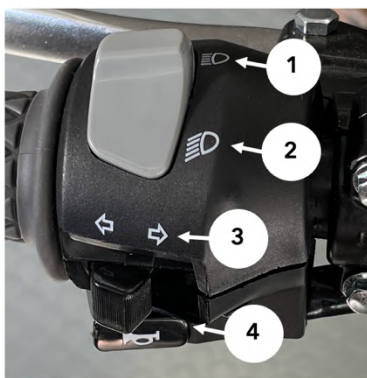
### *Controller Serial Number*

The controller serial number is attached on the top of the controller housing and is visible when one of the side panels is removed.

### *Certification Labels*

The European & US VIN certification labels are located on the right-hand side of the down tube. The EPA label for US motorcycles is mounted on the right-hand side of the swing arm & it includes the official engine family for registration at the local DMV. Do not alter or remove the labels.

## **2.4. Handlebar Controls Overview**



1. High Beam
2. Low Beam
3. Indicator
4. Horn

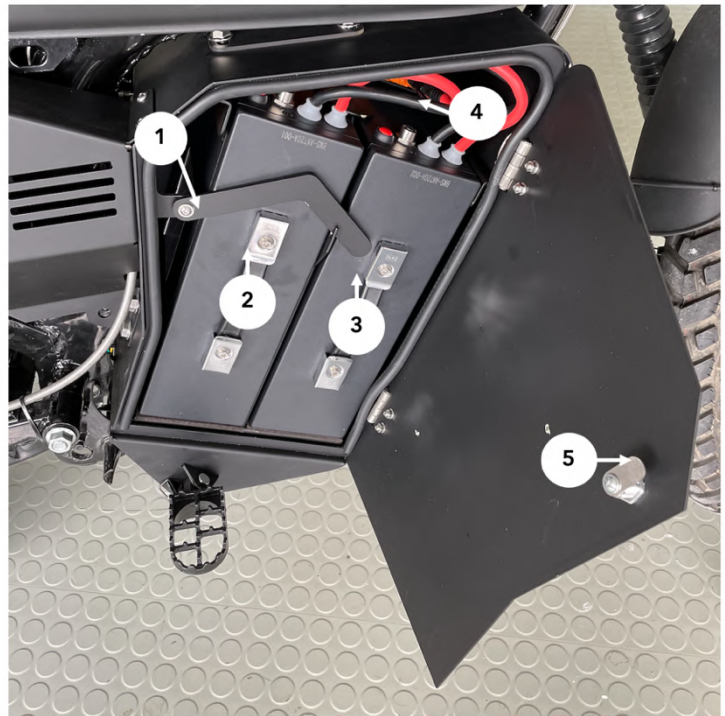
5. Adjust Button
6. Select Button
7. Ignition

8. Kill Switch (On/ Off)
9. Start Button
10. Speed Mode Button

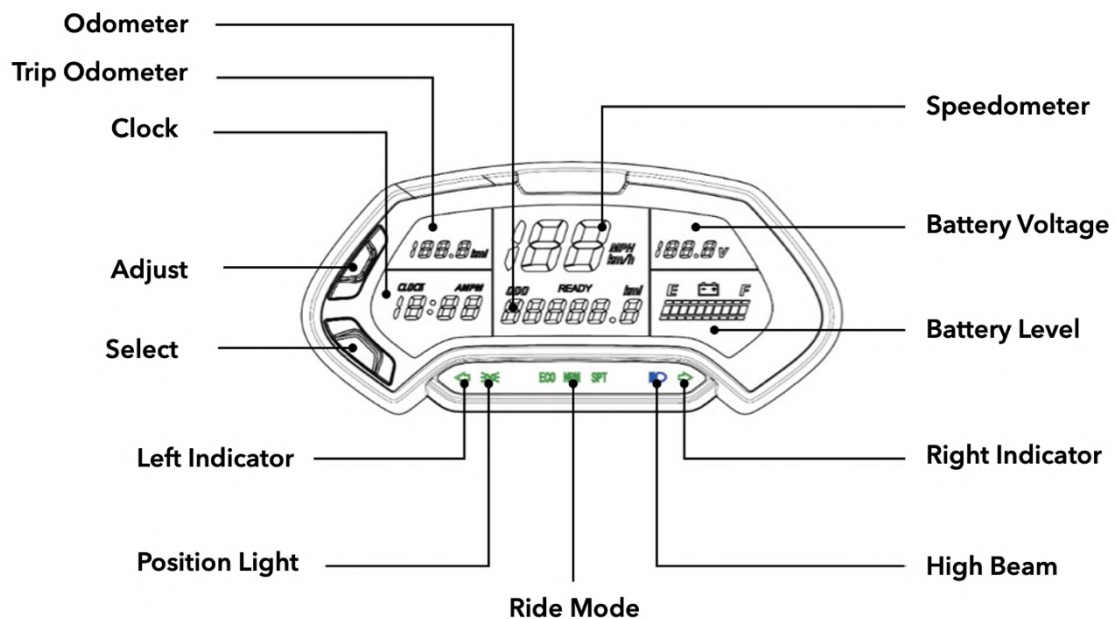


## 2.5. Battery Box Overview

1. Battery safety lock
2. First battery compartment
3. Second battery compartment
4. Connector to the vehicle
5. Battery Box Lock



## 2.6. Display Overview





## **2.7. Vehicle Operation**

### **Start your Bonfire**

Before you start the bike, please remember that this is an all-electric vehicle that is completely silent when it's on. To start your Bonfire, follow the steps below.

1. Make sure that your battery is charged, turned on and connected to the bike
2. Move the battery safety lock down & close the battery box door. If you don't move the battery safety lock down, you are not able to close the door.
3. Make sure that the steering lock, and any other locks being used have been unlocked.
4. Put the key into the ignition and turn it to the right. Now, the display & lights should turn on.
5. Pull up your side stand if you haven't already & sit down on your bike.
6. Now, make sure that the kill switch is in "ON" position & press the START Button
7. If you can see your riding mode appearing on the display, the bike is now active, and you can start riding. If you are still not able to start your bike, you might need to fold the side stand up.
8. To avoid injuries, there is an additional safety feature included. When you stop your bike after riding, "Active" will be shown on the display to remind you that the bike is still on.

### **Turn off your Bonfire**

1. Fold out the side stand & make sure that your Bonfire is stable.
2. To turn off your bike turn your key to left & remove it.
3. Lock your bike, see Chapter 5.4

## **While Riding**

### *Brakes*

Please note that, unlike a regular petrol motorcycle, both the rear and front brake is located on the handlebar and there is no footbrake. The rear brake is located on the left side of the handlebar and the front brake is located on the right side of the handlebar.

### *Speed Button*

With the 1,2,3 Button you can change your Driving Mode. There are 3 different Power modes to choose from when riding the bike. Never ride the bike above your comfort level and always ride according to your personal riding skills. We always recommend new Riders to start in the first mode to get used to the bike and the differences between an electric motor and an internal combustion engine. The 3 different Power modes have different attributes in terms of top speed, acceleration, and torque to suit riders of all riding levels, from beginners to professionals.

### *Power mode 1 - Eco*

This mode is ALWAYS recommended when riding a Bonfire for the first time. It has a limited top speed of 35 km/h (35 mph in the US) and soft acceleration.

### *Power mode 2 - Normal*

With a top speed of 40 km/h (40 mph in the US) and a good acceleration, this mode is perfect for slow roads or off-road passages.

### *Power mode 3 - Sport*

Here you have no restrictions when it comes to the performance, this mode is perfect when you need all the power available. You get 45 km/h (45 mph in the US) top speed & a good acceleration.

### *Regenerative Braking*

Your Bonfire allows one-throttle riding (known as one-pedal driving from cars). When the throttle is released, the bike starts the regenerative braking. It allows to stop the bike without using the brakes & it charges the battery.

*Important:* Regenerative Braking can be unreliable especially at a full battery charge. So always use the regen brake feature with caution.

**Good to know***Side stand*

The side stand can be conveniently folded out even when sitting on your bike and activates a switch that interrupts the power supply to the motor for safety. As long as the side stand is folded out, the bike will not ride.

*Mirrors*

You can easily adjust the alignment of the mirrors. The joint works with a counter-rotating screw system. Insert them into the thread provided on the handlebars & turn them clockwise. Align the mirrors and then tighten the nut. With the help of your mirrors, you should be able to keep an eye on the road and everyone you leave behind.

*Display*

On the display you can see the bike's SOC (state of charge), Ride mode, speed, trip odometer & time.

*Operating the display*

The lower left button is the Select Button, and the upper left button is the Adjust Button.

*Setting the time*

With the bike completely turned off, press and hold the upper button while turning the ignition key. The display turns on and the minutes start flashing, indicating that they can be changed.

Release the upper button and then either press it briefly again to increase the minutes by one or press and hold the upper button to increase the minutes continuously until you release the button.

To select the hours, click the lower button once - this causes the hours to flash, indicating that they can be changed. Again, you can make changes to the hours either by pressing the upper button briefly or by pressing and holding the upper button. When you are finished, click the lower button again and the clock is set, and the dashboard returns to normal operation.

*Clear trip odometer*

With the display on, simply press and hold the Adjust button for 3 seconds. This will clear the trip odometer.

## **Emergency Operation**

### *Battery Overvoltage or Battery Undervoltage*

If the voltage is out of the ordinary range of the battery pack, such as an overcharged battery pack or an empty battery pack, the performance will be limited as to not damage the battery or other components in the drivetrain.

The controller will give out following Error Code (Overvoltage): **01 02**

The controller will give out following Error Code (Undervoltage): **01 03**

### *Controller overtemperature*

If the controller is getting too hot, the performance will gradually be limited. If the temperature reaches 100°C, the bike will stop riding until the temperature falls below 80°C. Go easy on the throttle or take a short break if this occurs.

The controller will give out following Error Code: **02 04**

### *Motor overtemperature*

If the motor is getting too hot, the performance will gradually be limited. If the temperature reaches 150°C, the bike will stop riding until the temperature falls below 130°C. Go easy on the throttle or take a short break if this occurs.

The controller will give out following Error Code: **03 05**

### *Battery overtemperature and Battery under-temperature*

The battery pack does not like extremely warm or cold temperatures. In order to avoid damages on the battery pack, it's recommended to keep your bike inside during if the outside temperature ranges outside of +2°C to +35°C (36 F to 95 F)

### 3. Regular inspection and Maintenance

#### 3.1. Before & after each ride

Make sure that your bike is always in good condition and avoid injury or damage, please make sure to always take care of your Bonfire by the following steps.

- Check your whole bike (according to Chapter 3.2.)
- Check the wheels (see Chapter 3.3.)
- Check that the brakes are functioning properly (see Chapter 3.4.)
- Clean your bike regularly (see Chapter 5.2 - Cleaning)

#### 3.2. Service table and Service intervals

Service	Every Ride	10 Hours	20 Hours	6 Months
Check the angle of your mirrors	<b>x</b>			
Check that the lights & turn signals are working properly	<b>x</b>			
Check that the horn is working properly	<b>x</b>			
Check that the rear and brake light is working properly	<b>x</b>			
Check & Torque Fork, Axle, Handlebar, and Suspension	<b>x</b>			
Check tire pressure	<b>x</b>			
Carefully Check Tires for Any Debris or Wobble		<b>x</b>		
Check rims for damage		<b>x</b>		
Check spoke tension		<b>x</b>		
Check brake discs		<b>x</b>		
Check brake pads			<b>x</b>	
Check brake fluids				<b>x</b>
Check brake hoses for damage				<b>x</b>
Check front wheel bearings				<b>x</b>
Check screws on brake disc, front & rear			<b>x</b>	
Check footrests			<b>x</b>	
Check the battery box				<b>x</b>
Check frame and swing				<b>x</b>
Check cable harness				<b>x</b>
Check Battery Connections				<b>x</b>

### **3.3. Wheels and Tires**

The wheels should be inflated to a pressure of 230 kPa.

Keep checking your spokes regularly. You just need to make sure that there are no loose spokes in the wheel.

- Check that the tires are inflated with the correct pressure
- Check the tires tread pattern is at least 3mm deep
- Check for bent spokes
- Check that all spokes have the correct tension
- Check that the brake discs are straight
- Check that the axle of the front wheel is tightened correctly
- Check that the rear axle is tightened correctly
- Check that the axle of the rear wheel is adjusted correctly

### **3.4. Brakes**

Look at the front and rear callipers to see that they or the brake brackets are not damaged. Look at the front and rear brake pads to see that they are not worn out. Look in the window at the reservoir to see that there is enough brake fluid in the brake housings on the handlebar. Make a brake test to check that both the front and rear brake works properly.

## **4. Removing & Charging the Battery**

### **4.1. Removing the Battery**

As a safety measure, you are not able to ride your bike while charging the bike. Make sure that the bike is standing securely before removing the battery pack.

Use your key to open the battery box. If your bike is standing on a flat ground, the door should stay open. Please make sure to turn the battery off. You can find the On/ Off Button on top of the battery.

Now disconnect the battery from the bike. Move the battery safety lock up. Get the handle of the Battery & take it out of the bike.

**Important:** The battery is heavier than it might look like.

When putting the battery back in the bike, make sure that there's no dirt or objects on the floor. This can damage the battery and block your door from closing. Always be careful handling the battery. If dropped, inspect it visually and get in contact with a Black Tea Motorbikes Employee if there's any damage to it.

### **4.2. Charging the Battery**

Plug in the charger into the wall and then plug in your battery. You should be able to hear the charger while charging. The charger light will change from green to red after the battery is connected. When the battery is done charging the light will turn green.

**Important:** If the outside temperature is below 0°C, wait until the battery has reached room temperature before charging.

### **4.3. Putting the Battery back**

After the charge is complete make sure the battery switch is in the "OFF" position before installing the battery. Place the battery back in the bike. Connect it. Put the safety lock down and turn the battery on. Close the door and lock it.

**Note:** Do not be afraid if you forgot to turn off the battery and the connectors spark on contact. This is okay a few times but over time this can wear out your connector.



## **5. Owning and Operation**

### **5.1. Maintenance & Cleaning**

It's important to keep the bike in good condition in order to get the full performance of the bike and increase its lifetime. When you are done riding, always clean the bike and follow the "regular inspection" checklist. Charge the bike to a minimum of 30 % State of Charge. Turn the bike & the battery off if it will not be used for more than a week. Otherwise, it is in standby and will drain the battery to an unhealthy level which will shorten the lifespan of the battery.

Always be cautious when cleaning the bike. The bikes electrical components can be damaged if cleaned improperly which can damage the bike, property or people. Always make sure that the bike is standing firmly before washing and don't forget to turn the bike off.

Never use a pressure washer or a water hose in order to clean the bike. It's recommended to use pressurized air, a bucket of water together with a cloth and brush.

### **5.2. Storing**

Follow these steps to ensure that your Bonfire is always in a good condition and to extend the life of the bike. We recommend you to ride the bike at least once every month as some of the bike's components needs to be used in order for them to be in the best condition. Store the bike indoors away from sunshine to avoid unnecessary aging or discoloration. Make sure to turn the bike off completely by disconnecting the battery. Never store a bike with an empty battery. If the bike will be stored for a longer period of time, charge the bike to at least 30 % SOC to maximize the lifespan of the battery.

Never store your bike below 10° C, if you are unable to store the bike in temperature above that, remove the battery and bring it inside.

### **5.3. Locking**

In order to keep your bike safe. It's recommended to use an external lock that is recommended for motorcycles. When leaving your bike on the street, always turn the bike off, take out the batteries, lock the steering and take your keys with you.

The steering lock is found under the triple clamps between the fork legs. Lock the steering lock by turning the handlebar all the way to the left and insert the key into the steering lock on the right side and turn the key. You will feel how the handlebar will be locked to that position, so you can't ride the bike.

Warning: Be aware that the key is fragile and twisting of the steering while having the key in the lock can damage the mechanism and/or key.

### **5.4. Crash**

In the case of a crash, please go through the bike for any visual or structural damage. If you find any damage affecting the handling of the vehicle, stop riding to prevent further damage to the vehicle, yourself or the environment around you.

If your bike needs a repair, please contact us under [service@blackteamotorbikes.com](mailto:service@blackteamotorbikes.com)

For inspection, please go through the procedures under Chapter 3 "Regular inspection and Maintenance". In case of a broken or damaged component, visit [www.blackteamotorbikes.com](http://www.blackteamotorbikes.com) to order spare components. If you can't find what you are looking for or have any questions, please get in contact with Black Tea Motorbikes directly.

## 5.5. Troubleshooting

If your bike isn't working properly, please read the following use cases to find a solution. If you can't find the problem you are experiencing or a solution that works for you, contact Black Tea Motorbikes directly.

### *My bike won't turn on*

Start with checking that the battery, the ignition and kill switch is turned on properly. Open the battery box to check that the battery is properly connected to the bike. Make sure that your side stand is up.

### *My bike doesn't give me full power*

The bike will protect itself and can under certain circumstances limit the performance. This happens if any of the drivetrain components gets overheated, under-voltage, over-voltage etc.

Start with making sure that the bike is properly charged by checking the display. As the battery gets close to empty, the battery cells inside lose the ability to have a high discharge (full power).

Please be careful when checking if the controller or motor is overheated as you could get burned. Please let the vehicle cool down sufficiently to avoid permanent damages to either the motor, controller or battery.

### *My motor is sounding strange or won't spin*

If the motor sounds strange when giving throttle and does not run properly, please turn off the bike and do not give the bike any throttle as the motor can still be overheated by the battery current. This could potentially happen if the sensors in the motor get humid/water. The issue is temporary, please put the bike inside to let it dry for 24 hours.

### *My bike won't turn on after a long time of inactivity*

Turn on the main switch and measure the voltage with a multimeter. If the voltage is under 43V, please charge your battery.

## 5.6. Tools

To properly maintain and to keep your Bonfire in good condition, we always recommend using quality tools and to handle the bike with care. If you can't perform and need maintenance, please get in touch with someone who has the proper experience.

For the Bonfire, Black Tea Motorbikes recommends buying and using the following tools

- Hex keys, 1-10 mm
- Screwdriver
- Rubber hammer
- Wrench kit
- Tire iron
- Spoke wrench
- Bleeding kit for brake fluids

## 6. General Vehicle Overview

### 6.1. Overall Vehicle Specifications

Item	Specifications
Drivetrain	3 kW Electric Rear PSM Hub Motor
Drive Modes	Eco/ Normal/ Sport
Riding Range per battery (km)	75 / 65 / 55
Top Speed in EU (km/h)	35 / 40 / 45
Top Speed in USA (mph)	35 / 40 / 45
Battery Type	Removable 52 V Lithium-Ion Battery Pack
Number of Packs	2
Anti-Theft Protection	Steering Lock
Front Fork/Suspension Design	Heavy-Duty Aluminum Fork
Rear Suspension	Double 335 mm Adjustable Shock Absorber
Basic Dimensions (L x W x H)	1900 mm x 700 mm x 1250 mm
Wheelbase	1300 mm
GWR - Gross Vehicle Weight Restriction	260 kg
Total Curb "Wet" Weight (with 1 battery)	97,5 kg
Maximum (Payload) Carrying Capacity	162,5 kg
Total "Dry" Weight (without Battery)	86 kg

### 6.2. Electronics Specifications

Item	Specifications
Throttle	Full Twist Hall Throttle (waterproof)
Battery Voltage Range	45V - 58.8 V
Battery Case Dimensions	310 mm x 220 mm x 100 mm
Battery Weight	11,5 kg
Battery Capacity	1,8 kWh
Rated Current	70 A
Peak Current	~95 A
Charge Current	10 A
Battery Charger Output	10 Amps @ 58,8 VDC
Charging Time	80 % Charge = 3 Hours
Battery Cell Type	3.7V Lithium Ion - NCM 18650 Cells

Item	Specifications
Battery Pack Configuration	14S12P
Battery Management System (BMS)	Safe and efficient charging. Balancing of each cell. Overcharge protection (cut off at 4.25 V +/- 50 mV). Overdischarge protection (cut off at 2.8 V +/-80 mV).
Battery Connector	QS8-S Connectors with resistors
Battery Life Cycle	Rated for 800 Charge Cycles
Motor Controller Type	Electronic Sine Wave (BLDC) Controller
Controller Features	Enhanced Regenerative Braking; Hardware Over-Current and Over-Voltage Protection; LED Fault Code; Thermal and Current Cutback Plus Low Voltage Battery Protection Shutdown; Aluminium Housing for Maximum Heat Dissipation;
Controller Environmental Protection	IP 66
Motor Type	Brushless Permanent Magnet (50H) 3000W Hub Motor
Max Torque	195 Nm
Rated Power	3 kW at 450 RPM
Peak Power	5,4 kW at 480 RPM
Motor Environmental Protection	IP 54
Motor Temperature Protection	Thermic Probe (sense to prevent overheating)
Wiring	Complete Insulated and Wrapped Wiring Harness with Automotive Water-Resistant Connectors

### 6.3. Brakes Specifications

Item	Specifications
Brake System Type	Dual-Piston Hydraulic Disc Brake
Front Brake Rotor Disc	220 mm Disc Brake with 3 mm thickness
Rear Brake Rotor Disc	220 mm Disc Brake with 3 mm thickness
Brake Fluid Type	DOT-4
Front Brake Caliper Style	Dual-Piston
Front Brake Pad Type Material	Asbestos free
Rear Brake Caliper Style	Dual-Piston
Rear Brake Pad Type Material	Asbestos free

## 6.4. Wheels & Tire Specifications

Item	Specifications	
Wheel Rim Size	1.85 x 18 "	
Tire Configuration	Spoke Rim + Inner Liner + Inner Tube + Tire	
Standard Tire Size	3 " Front and Rear	
Maximum Possible Tire Width	3.50 " Front and Rear	
Tire Options	Street	Offroad
Tire Manufacturer	Heidenau	Heidenau
Tire Model	K33	K41
Tire Size	3.00-18 "	3.00-18 "
Tire Position	Front and Rear	Front and Rear
Tire Load Rating	52 (200 kg)	52 (200 kg)
OEM Tire Speed Rating	S (180 km/h)	P (150 km/h)
Tire DOT Safety Code	DOT N6YX CB2R	DOT N6YX CB2R



## 7. Contact and Support

If you have any problems or questions regarding the bike, send an email to [service@blackteamotorbikes.com](mailto:service@blackteamotorbikes.com).

For general questions and information, get in contact with us at [hi@blackteamotorbikes.com](mailto:hi@blackteamotorbikes.com).

[www.blackteamotorbikes.com](http://www.blackteamotorbikes.com)

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This manual is constantly being updated.

Please make sure that you have the latest one on [www.blackteamotorbikes.com/service](http://www.blackteamotorbikes.com/service)



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