# **User Manual** Bikabahn One



# SmartBikeMobility USA LLC

# User Manual

8 BIKABAHN

In order to ensure your safety and maximize your enjoyment from your new ride, we have outlined important topics in this manual for your review.

# Content

- 1、Assembly Instructions
- 2、Warning
- 3、Safe Riding Recommendations
- 4、 Maintenance & Adjustment
- 5、 VLCD Display Panel Controls
- 6、Battery Instructions
- 7、Warranty

# Safety tips

Before operating and enjoying your new Bikabahn One electric bicycle, please read the content of this manual carefully. If you do not understand any section of this manual or if any function is not operating according to this manual, please contact your dealer immediately. In the Bikabahn One box you will find the following items:

- 1. Electric bicycle
- 2.1 Battery chargers
- 3.2 Pedals
- 4. Keys for battery lock
- 5. setup toolkit

Your electric bike is shipped 95% assembled. Follow these steps to get it ready and safe for you to ride.

## **To Prepare**

We recommend that you familiarise yourself with the bike parts before assembling. Gather all required tools. Be sure to work in a clean, dry space with plenty of room. You might wish to lay down a tarpaulin or old blanket to protect the bike during assembly. You may find it helpful to stand the bike frame on a block or sturdy box under the battery housing to work with it in an upright position. Please watch the balance when installing wheels.



Do not activate the brakes until the bike is fully assembled. Squeezing brake levers while calipers have no disc rotor between them can damage the brakes and/or lock the calipers in a closed position!

# **Assembly Instructions**

# 1.Unpack

Carefully lift the electric bike out of the box (two people are recommended for this task).

# 2.Handlebar and Stem

Using the included L6 100mm Allen Wrench adjust the handlebar angle to a positive position for riding; i.e. Perpendicular to the toptube of the bike's frame so that together the bike and handlebars form a "T" shape. Use the Allen wrench to loosen the bolt on the top of the handle bar stem for adjustment and tighten back down once in proper position for riding. See picture below for reference.



# Assembly Instructions

# 3. Brake

Tighten the brake levers on the left and right side of the handlebars using the included L4 100mm allen wrench. See pictures below for reference.



# **4.Basket assembling**

If you selected a BikaBahn One model with a basket follow these steps to install. Skip to Step 5 if this doesn't apply. First set the basket to the side with the four installation screws located close at hand. Next, using the included L 5 100mm Allen Wrench install two of the four screws opposite each other with the mounting brackets. See picture below for reference. Next, install the remaining two screws into their respective mounting brackets.



# **Assembly Instructions**

## 5. Seat

Adjust the seat post to a level that is suited for your riding style. Your feet should comfortably reach the ground while you are sitting on the bike at a stop. To adjust: Release the seat post clamp lever and set the post height to the position suited for you then refasten the seat post clamp. **Do not exceed max height marking on the seat post**. If seat post slides down while sitting on it, tighten the seat post clamp when the release is opened then reclose clamp while at proper height.



## 6.Pedals

Attach the pedals to the crank arms, please note letters "L" and "R" on the axel and pedals. L=Left and R=Right. Note: the peals have opposing threads — Screw in the left pedal counterclockwise and screw the right pedal in clockwise. Once finger-tight secure the pedals with a wrench to tight the last bit on. CAUTION: Do not cross thread the pedals; if you encounter resistance unscrew and try again at a more level angle of approach. Do not only hand-tighten pedals before riding



# Warning

**Do** treat your eBike like any bicycle you would want to last well... keep it stored somewhere secure and away from the elements.

**Don't** treat your eBike as a dirt-bike! The motor and battery are weather proof, but not water-tight. It is ok in rain, but not to ford streams, etc!

**Don't** power up the throttle while the eBike is held stationary. Motor operation for more than a few seconds while the wheel is locked/stationary can damage the motor and controller.

**Important:** Your Bike will arrive with the battery partially charged. You need to give it a full charge before ANY use. BikaBahn bike batteries have been preconditioned for your use so you don't need to charge then discharge you battery before initial use like some e-bike competitors. Just charge your battery fully and go ride...then charge it back up when you get home so it's ready for your next ride. Note: at least once every three months fully expend and then fully recharge your battery so as to preserve the longevity of the Lithium-Ion battery's charge life cycle.

**Note**: The LCD Battery display bars will dip under ful load (on hills, etc). This is normal as running voltage drops under high load.

**Do** take extra care on the road as you will be travelling faster than you normally do on a bike and your bike is now power-assisted, so will behave differently.

**Don't** let others ride your eBike unless you have properly explained safe and appropriate use to them.

**Don't** attempt to open the motor or battery should your system malfunction. This will void the warranty. Return it to the store you purchased it from. Do make sure your charger has free air movement around it as it will get quite warm.

**Don't** use your charger outdoors. It is for indoor use only.

# Warning

**Do** top up your battery whenever possible. Lithium batteries actually prefer shallow discharge (the exact opposite of older types of batteries that have memory effects). Keeping your battery topped up between rides will prolong the life of your battery and give you more power too, as a full battery is better on the hills.

**Do** disconnect your battery from the charger when it is charged. Leaving it connected permanently when not in use will shorten cell life.

**Never** leave a fully discharge battery uncharged for more than a week... you will shorten the lifespan of your battery longer the longer you leave it in a fully discharged or empty state.

**Don't** leave your battery for more than 3 months without top-up charging it.

**Note**: A battery left for more than 3 months at a low voltage may suffer cell damage. This will not be covered under your warranty. It is to your advantage to properly look after your battery as it is the most expensive part of your ebike!

**Important:** Battery Fire Risk Management - Lithium-Ion batteries while charging should be treated as a potential fire-risk. BikaBahn batteries and charging components have been tested and certified to the industry standard so the odds of fire are extremely low; e.g. 1 in 40 Million. When charging the battery on the bike make sure to not lean the bike against a flammable surface. When charging the battery off the bike make sure to do so on a flat level surface that isn't flammable (concrete floor, metal shelf, etc). **1**. Always observe all traffic regulations posted and otherwise that apply to your use of the BikaBahn e-bike in conformity with your local municipality's standards. Don't lend your BikaBahn e-bike to anyone who is unfamiliar with its operation.

2. If you're in a Country/City/State where wearing a cycling helmet is not required we still strongly advise you to always wear proper head protection. If you are unfamiliar with cycling, we also advised you to attend a cycle proficiency learning course before use. Or, seek advice from the dealer where you purchased your BikaBahn e-bike. E-bikes are not toys and should be considered a serious mode of transport.

**3.** Bicycling is an inherently active and potentially dangerous activity. At all times stay within the limits of your safe abilities and if you feel that you are losing control slow down and stabilize. Higher speeds increase the variables of risk in the riding area and in the event of an accident increase the risk of injury.

**4.** Before riding your bike always to a brief pre-ride safety inspection; check your tires for any serious damage, observe the bike's chain for any damage or build up of dirt, check your bikes brakes while walking besides it to make sure their stopping power is strong and safe for use. Remember to allow extra time for braking distance in wet or icy conditions.

**5.** Observe your e-bike's general condition for signs of wear or need of maintenance; e.g. look at your rims, pedals, check the tightness of the handlebars and stem, etc.

# Safe Riding Recommendations

**6**. Moving cyclists are inherently harder to see and during times of poor visibility such as dusk, night, rain, etc. pedestrians and motorists behind the wheel may have a challenge seeing cyclists. Be sure to follow all rules about riding in these conditions while using your BikaBahn bike and use the included safety features such as the front and back mounted lights, don't remove your safety reflectors, and if possible wear bright colored or reflective clothing which enhances visibility in low-light/poor lighting.

**7.** Before riding your BikaBahn e-bike check the tread wear indicator on the front and rear wheels near the tire and rims. BikaBahn bikes have a wear indicator that tells the rider when the tires are in need of replacement; if the indicator is shown DO NOT RIDE THE BIKE operation of it in that condition may be unsafe.

**8.** Don't stick fingers near the rear suspension element of the seat when in use to avoid any pinching of fingers etc.

**9.** Break in period: All new bicycles will have a break-in period where after approximately one month or 125 miles whichever comes first they should be brought in for general service and inspection then approximately every six months or 620 miles . Failure to do this can void your warranty coverage due to unnecessary wear and tear.

# 1. Cleaning your electric bike

Warm soapy water and a cloth can be used to clean the frame of your bike, but care must be taken not to immerse any of the electrical components; they are rainproof but cannot be immersed in water. The motor can be cleaned with a soapy cloth, but also must not be immersed in water. The battery can be cleaned with a damp cloth, then dried afterwards.

# **2.Lubrication**

Once a month or as needed lubricate all pivot points on your bike; e.g. where the fork meets the bike frame above the front wheel, your chain, brake lever pivots, etc.

# 3. Fork adjustment

There is a blue locker on the top right side of the fork, which can be locked following the direction of the arrow that points towards lock. When unlocked the front suspension is active and dampens the vibration absorption from small cracks, pebbles, etc. that you may ride over. Before riding in dirt or off-road please unlock the suspension.

# Maintenance & Adjustment

# 4. Other Maintenance

Excluding the electric drive pedal assist, your BikaBahn e-bike is a normal bicycle, with normal components. Your dealer will be able to explain to you the general care and maintenance of the normal bicycle components. The electric motor system of the BikaBahn e-bike is maintenance free and has self diagnostic codes that will be displayed on the LCD console in the event of an error.

The following list references the various functions and informational display capabilities of the BikaBahn VLCD Display Console.

### 1. Speed display

Shows current speed measured in either miles per hour (M/ph) or kilometers per hour (Km/ph) and can be set to user preference.

### 2. Battery Life Indicator

Six horizontal blocks inside of a battery icon indicate the current battery status of your BikaBahn e-bike. Each two blocks represents approximately 25% of battery life, at a low charge the remaining battery blocks will flicker/blink indicating a need to recharge the BikaBahn e-bike.

### 3. Trip Distance (reset while power off)

Show trip distance.

### 4. Odometer

Shows total miles.

### 5. Record movement time

Record time while sensor gets signal.

### 6. Average speed(AVG)

Shows average speed.

### 7. Power assist

4 levels of power assist are available and represented by the four increasing vertical bars (akin to a cell reception signal).

### 8. Backlight

Switch between 3 levels of brightness, the default is backlight off.

### 9. Wheel diameter setting

Select wheel-diameter setting among 14-32 inch. Default is 26-inches. BikaBahn wheels are set at 26 inches and it's NOT RECOMMENDED to change this setting.

### **10**. Select the magnetic steel number of the speed sensor, default value is **1**.

### **11. Speed unit option**

Switch speed unit from Km/h or Mil/h, fault is Km/h.

### 12.6km/h function

Select the function of 6km/h, the default setting is off. IT IS NOT RECOMMENDED TO ADJUST THIS SETTING.

### 13. Max speed setting

Select max speed of 20 mp/h or 32 km/h. It's NOT RECOMMENDED to adjust this setting as it can affect and limit the max speed of your BikaBahn e-bike.

### 14. Assist ratio settings

This setting adjusts the amount of assistance provided between each individual level of pedal assist. It's NOT RECOMMENDED to adjust this setting from the default value of 16. Adjusting this setting may lead to increased strain on the pedal assist moto Mode selection.

### **15. Mode selection**

Default mode selection is for European.

16. Version of the manual

The current version is 3.7.

### 17. Diagnosis code

The diagnosis codes will be displayed according to the root failure. Fault detection fail safes are launched automatically when the BikaBahn e-bike is powered up.

18. Torque signal value displays.

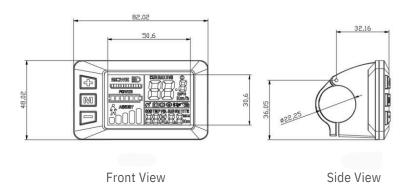
**19.** Initial torque signal value displays.



## **1. Exterior Parameters**

Casing Material: ABS

Display Material: High Hardness Acrylic (the same hardness value as tempered glass).



## 2. Operating Voltage and Connections

**a. Operating Voltage:** DC24V / 36V Compatible, 36/48V Compatible (set by the control panel). Other operating voltage can be customized.

**b.** Connections:

Standard connector sequence







Controller Connector

Panel Outlet Terminal

Wire Connector

## **Standard Connector Sequence Table**

Sequence No.	Wire Colour	Functions
1	Red VCC	Display Power Cord
2	Blue K	Controller Power Switch Cable
3	Black GND	Display Ground Wire
4	Green RX	Display Data Receiving Wire
5	Yellow TX	Display Data Sending Wire

## **Extended Functions**

Light: Brown (DD): The positive electrode of the light White (GND): The negative electrode of the light. The wire colours of the PWM Voltage Motor Power Controller and the independent speed sensor will be defined otherwise.

Note: Some products are equipped with waterproof connectors, whose internal wire colors cannot be determined from outside.

## **3. Functions**

## a. Display

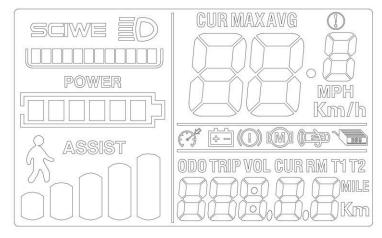
Speed Display, Motor Power Ratio Display, Battery Level Display, Error Indication, Total Mileage, Single Mileage, Cruise Control, Brake Indication, Light Signal

## **b.** Control and Setting

Power Switch, Front Light Control, 6km/h Cruise Control, Real-time Cruise Control, Wheel Diameter Setting, 5-Gear Motor Power Setting, Top Speed Setting, Sleep Interval Setting, Backlight Brightness Setting, Voltage Level Setting

c. Communications Protocol: UART

## Display Readings (display at start for 1 second)



**Display Details** 

3.1 Light อ

3.2 Battery

**3.3 Multi-Function Display** ODO TRIP VOL CUR RM T1 T2 Total Mileage: ODO Single Mileage: TRIP Error Code: ERROR Power: WATT Maintenance: Maintain Rest Mileage: DST TO GO (not in use)

## 3.4 Vehicle Mode 3. Speed Display



Maximum Speed: MAX Average Speed: AVG Measuring Unit: MPH or KM/H

The display will calculate the actual travelling speed based on the wheel diameter and signal data (number of magnet steel is needed for Hall motors).

## 3.6 Vehicle Status



Digital Voltage WOL Motor Failure Throttle Failure 🔐 Controller Failure Brake Indication Wheel Diameter 

# 3.7 Error Code

Error Code (decimal)	Indications	Note
0	Normal Reser ved Brake PAS	
1	Sensor Failure (riding mark)	
2	6km/h Cruise	
3	Real-Time Cruise Low Battery	Not Realized
4	Motor Failure	
5	Throttle Failure	
6	Controller Failure	
7	Communications Receiving Failure	
8	Communications Sending Failure	
9	Communications Sending Failure	
10	Light Failure	
11		
12		
13		

## 3.8 Settings

**P00: Restore Factory Settings** Set this value to 10 and switch to next setting, the display items will show all contents and restore original factory settings. **P01: Backlight Brightness** (1: darkest; 3: brightest) **P02: Mileage Unit** (0: KM; 1: MILE) **P03: Voltage Class** 24V / 36V / 48V **P04: Sleep Interval** (0: never, other value means display sleep interval) Unit: minute

**P05: Power Assist Gear** 

0/3 Gear Mode: Gear 1: 2V Gear 2: 3V Gear 3: 4V 1/5 Gear Mode: Gear 1: 2V Gear 2: 2.5V Gear 3: 4V Gear 4: 3.5V Gear 5: 4V

**P06: Wheel Diameter** Unit: inch Precision: 0.1 **P07: Magnet Steel Number** (for Speed Test) Range: 1-100

## P08: Speed Limit

Range: 0-50km/h, parameter 50 indicates no speed limit.

1. Non-communications status (panel-controlled) When the current speed exceeds the speed limit, the PWM output will be shut down; when the current speed falls to lower than the speed limit, the PWM output will be activated and the driving speed will be set as the current speed 1km/h (only applies to assist power speed, not applicable to the handlebar speed).

2. Communications status (controller-controlled) The driving speed will be kept constant as the limited value.

Error Value: 1km/h (applicable to both the assist power/handlebar speed)

Note: The above-mentioned values are measured by metric unit (kilometers). When the measuring unit is switched to imperial unit (mile), the speed value displayed on the panel will be automatically switched to corresponding imperial unit, however the speed limit value in the imperial unit interface won't change accordingly.

## P09: Direct Start / Kick-to-Start Setting

0: Direct Start

1: Kick-to-Start

## **P10: Drive Mode Setting**

0: Power Assist – The specific gear of the assist drive decides the assist power value. In this status the handlebar does not work.

1: Electric Drive – The vehicle is driven by the handlebar. In this status the power gear does not work.

2: Power Assist + Electric Drive – Electric drive does not work in zero-start status.

P12: Power Assist Intensity Range: 0-5
P13: Power Magnet Steel Number 5 / 8 / 12pcs
P14: Current Limit Value: 12A by default; Range: 1-20A

# **Battery Instructions**

## P15: Unspecified

## P16: ODO Zero-Out

Long press the up key for 5 seconds and ODO value will be erased. special setting function

# P17: (Available Only if Customer Required) Auto Cruise Option.

0: No Auto-cruise

1: Auto-Cruise On. Trigger time of auto-cruise is decided by the controller.

P18: (K5S, APT Protocol Bound) Forward / Backward PAS Option.

0: Forward PAS. 1: Backward PAS.

P19: (K5S Protocol Bound) Throttle Level Option.

0: No throttle level. 1: Has throttle levels.

# P20: (K5S Protocol Bound) 6km/h Cruise Throttle Definition.

0: Throttle without 6km/h cruise definition.

1: Throttle with 6km/h cruise definition.

Note: Due to product upgrade, the product you purchased may be slightly different from the descriptions in this user manual, and this won't affect normal usage.

# **Charging your Battery**

You can charge the battery on or off the bike. The charging port is located on the right of battery. Lift the rubber cap and plug in your charger. The charge light on the charger will show red, and turn green when the battery is fully charged.

Note: be careful to properly reinstall the rubber cap before re using your bike. If the battery is in storage you must charge every 2 months.



# **Battery Instructions**

# **Battery Removal**

To remove the battery, insert the key into the lock on the front left side of battery, turn the key, slide the battery forward, then lift out. To reload the battery make sure the battery is correctly on the slide rail then slide it back in and lock.

Note: always lock the battery into the bike as it can fall out while riding.



# **Battery Capacitance Display**

On the top front of the battery is the capacitance display button. When pushed in, the LED lights below will glow for 4 seconds, indicating the battery output power is live. The number of LED glowing displays the amount of battery capacitance.



# Connections

All ebike components (brake sensors, controller, etc)on the Bikabahn One bikes have isolating marinerated plugs, so, should you damage a component, replacement is easy. Take the bike to your local dealer and they will order a replacement part.

# **Operation of the console page**

# **1.** Powering up the console

To power up your BikaBahn e-bike hold down the (M) button for 3 seconds.

# 2. Switching between display modes

Once a month or as needed lubricate all pivot points on your bike; e.g. where the fork meets the bike frame above the front wheel, your chain, brake lever pivots, etc.

# 3. Using the walking assist function

If you find yourself in a situation where you're walking you BikaBahn e-bike and need to have an assist pushing the bike up a hill or along a path the BikaBahn e-bike has a walking assist function. To activate while the ebike is turned on hold down the ( - ) button for 3 seconds exercise caution while using this function.

# 4. Using the BikaBahn e-bike's lighting system

The BikaBahn e-bike is standard equipped with both front and rear lights for night riding with active braking displays. To activate the lighting system while the ebike is turned on hold down the ( + ) button for 3 seconds. To turn off hold the ( + ) button down again for 3 seconds.

# 5. Advanced setting access

The BikaBahn e-bike console has a range of advanced settings that can be adjusted to use preference; however there are also settings we advise to be left untouched in their default state. This section will advise you on how to access the advanced settings and adjust them as recommended.

- To access the advanced settings while the e-bike is turned on hold down both the ( ) and ( + ) buttons together at the same time for 3 seconds.
- A new display will appear on the right side of the BikaBahn e-bike console with a top and bottom section. The top section will indicate which setting you are adjusting by a code like this: P01. The bottom section will display the setting value that you've currently selected; for example When in setting menu P01 you are in the setting menu for adjusting the brightness of the console screen. When you see below the P01 a number of 3 that means you have selected the highest value brightness for the e-bike's console screen and you can use the ( ) to reduce the screen's brightness.
- To cycle between setting menus use the (M) button and to adjust the value of each setting in their respective menus use the (-) and ( +) buttons accordingly.
- Please see instructional videos on YouTube for further detail and visual guidance on the operation of the BikaBahn e-bike's console and its advanced menu settings.

# 6. Advanced Setting Menu Listings

## **P01: Backlight Brightness**

(1. Darkest 2. Medium 3. Brightest)

## **P02: Mileage Units**

(Menu for selecting Km or Miles displayed on console screen)

### **P03: Voltage Class**

(24V / 36V / 48V)

Note: BikaBahn doesn't recommend the usage of the 48V setting as it will drain the battery life at an increased rate; conversely, usage of the 24V setting will result in longer battery life at the expense of a less powerful pedal assist. Set this setting to your personal preference.

### **P04: Sleep interval**

This setting determines how long until your BikaBahn ebike's console will stay powered up, but inactive before shutting itself down to preserve battery life while not in use. (0 is never; units are displayed in minutes; e.g. "5" is five minutes till the console automatically shuts down when inactive).

## P05: Power gear mode

This mode influences the power assist and impacts the torque ration between each assist level.

IT IS NOT RECOMMENDED TO BE ADJUSTED by BikaBahn.

# **Operation of the console page**

## P06: Wheel diameter setting

This settings influences the power assist as well by providing it with the information it needs in regard to your wheel diameter. DO NOT CHANGE THIS SETTING from it's default value of 26 (representing the 26 inches for the wheel diameter) any other setting will affect to performance of the e-bike motor and may lead to maintenance issues.

## **P07: Magnet Steel Number**

This relates to the magnetic sensor within the wheel and hub used to calculate your speed while riding the bike; THE DEFAULT VALUE IS ONE (1) AND SHOULD NOT BE ADJUSTED. Deviation will result in inaccurate speed readouts and can increase the risk of injury or breaking local rules.

### **P08: Speed limit**

Range is from 0 - 20 Mp/h; setting the parameter to 41 indicates no speed limit. NOTE: As a consumer this setting can be lowered to increase safety and reduce the risk of gaining uncontrolled high speeds. (Ex. Users may set max speed to 15 Mp/h instead of having access to the top speed of 20 Mp/h).

## **P09:** Direct start / kick to start setting.

(Value of 0 indicates direct start. Value of 1 equals Kick-to-Start). This setting determines where or not he active pedal assist starts immediately when the rider begins to pedal, or, waits for a moment ( about a half rotation of the pedals) to initiate.

### **P10:** Drive mode setting

0: Power Assist - The specific gear of the pedal assist drive decides the assist power value; in this status the handlebar throttle doesn't work.

1: Electric Drive - The pedal assist drive is only operated by the handlebar throttle; in this status the power gear (power assist through pedaling) doesn't work.

2: Power Assist + Electric Drive - both functions are combined. Note: electric drive doesn't work in zero-start status.

### **P11: Power Assist Intensity**

**P12: Power Magnet Steel Number** 

Keep set to 5

## P13: Current Limit Value

This setting limits the amount of amps and power pulled from the battery; it's default setting is 12A. IT IS NOT RECOMMENDED TO CHANGE THIS.

# **Operation of the console page**

**P15: Unspecified** 

P16: 0D0 ZER0

OUT

## **P17: Auto Cruise**

0: No auto cruise

1: Auto-Cruise on.

Trigger of auto-cruise time is decided by controller.

### P18: Forward / Backward PAS Option

0: Forward PAS.

1: Backward PAS.

NOTE: It's not recommended to put the BikaBahn e-bike in backward PAS as that will make the pedal assist rotate the back wheel in the opposite direction of travel.

# Warranty

All Bikabahn One Electric Bicycles come with an 12-month warranty against manufacturing defects in materials or workmanship on its frame, battery, controller, and motor assembly.

This warranty applies only to the original registered owner of the Bikabahn One bicycle and is not transferable. This limited warranty does not apply to normal wear and tear, malfunctions, or failures due to abuse, neglect, improper repair, improper maintenance, modification, accidents, or other improper use. It is important that you register your new bicycle within 30 days after purchase in order to activate the warranty.

## **Terms and Conditions**

Frame, Battery, Controller, and Motor Assembly-are warranted to be free from defects in material or workmanship for a period of twelve (12) months from purchase. After end of any warranty period, you may purchase spare and replacement parts by contacting us. If any parts of your bicycle have been damaged during shipping, Bikabahn One will send a replacement part at our expense and will work you or the bike shop of your choice to x the issue at no cost to you. Bikabahn One will cover the cost of labor involved in handing the warranty service within a 60-day period after purchase. To receive this service, the customer needs to bring the bike to the authorized Bikabahn One Service Dealer from which the bike was purchased. If the bicycle was purchased on the website, Bikabahn One will help to arrange an appointment at a bike shop near the customer to investigate and resolve the issue. If a part or component is faulty, please contact us by email to: dharmin@bikabahn.com and provide a video or photo of the faulty part. After the 60-day free labor period for repairs, the customer will be responsible for labor costs associated with warranty replacements.

## Limited Remedy:

For any parts under warranty that need to be replaced within the 12month time frame, Bikabahn One will cover the cost of freight to the customer. Unless otherwise provided, the sole remedy under the above warranty, or any implied warranty, is limited to the replacement of defective components and parts with those of equal or greater value at the sole discretion of Bikabahn One. Unless this falls within the 60-day free labor repair period, the customer is responsible for labor costs associated with warranty replacements. In no event shall Bikabahn One be responsible for direct, incidental or consequential damages, including, without limitation, damages for personal injury, property damage, or economic losses, whether based on contract, warranty, negligence, product liability, or any other theory. Some states do not allow the exclusion or limitation of damages, so the above limitation or exclusion may not apply to you. Exclusions: The above warranty, or any implied warranty, does not cover normal wear and rear. All warranties are void if the electric vehicle is used for other than normal activities. including, but not limited to, failing to follow the owner's manual or using the electric vehicle for commercial activities or in competitive events, and training for such activities or events. Bikabahn One makes no other warranties, express or implied. All implied warranties, including the warranties of merchantability for a particular purpose, are limited in duration to that of the express warranties stated above. Some states do not allow limitations on how long an implied warranty lasts, so the above limitation may not apply to you . This warranty gives you specific legal rights, and you may also have other rights, which vary from state to state.