Contact Us

Thank you for choosing our products! If you have any questions or comments, contact us at support@viribusbikes.com and we'll resolve your issue ASAP!

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Electric Foldable Tricycle

User Manual Read Carefully Before Use Keep for Future Reference





Safety First

When used as instructed, this tricycle is safe for you and other traffic participants. For more **Safety Information**, see **Page 57**.

Disclaimer

Read this disclaimer clearly **BEFORE** use.

1. As-is

This product(s) is sold 'as is' and without any express or implied warranties, including but not limited to the implied warranties of merchantability and fitness for a particular purpose.

2. Product Modifications

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Always wear appropriate protective gear.

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1. Product Diagram

1.1 Overview



1.2 Main Parts



Note

Upon receiving your new tricycle, carefully unpack all these parts and check that nothing is missing or has been damaged in transit. If necessary, ask your local dealer or contractor for supplements or replacements.

Besides, storing your original packaging through the warranty period will speed returns if any are needed.

No. Name		Qty.	
1	Handlebars	1	
2	Main Frame	1	
3	Front Fender with Stay	1	
4	Chain Guard	1	
5	Saddle	1	
6	Rear Frame	1	
7	Rear Fenders	2	
8	Rear Fender Stays	2	
9	Rear Chain	1	
10	Pedals	2	
11	Front Wheel	1	
12	Rear Wheels	2	
13	Rear Basket	1	
14	Rear Basket Locking Frame	1	
15	Rear Basket Handle	1	
16	Rear Basket Bag	1	

1.3 Other Parts



No.	Name	Qty.
17	Display Panel	1
18	Front Light	1
19	Bell	1
20	Headset Spacer	1
21	Cable Lock	1
22	Lock Bracket	1
23	Chain Joint Parts	3
24	Rear Wheel Caps	2
25	Rear Reflectors	2
26	Casters (for Rear Basket)	4
27	Charger	1
28	Power Cord	1

1.4 Tools



No.	Name	Qty.
29	8 mm/10 mm Wrench	1
30	13 mm/15 mm Wrench 1	
31	14 mm/17 mm Wrench 1	
32	19 mm/22 mm Wrench	1
33	Multifunctional Wrench	1
34	M3 Hex Wrench 1	
35	M4 Hex Wrench 1	
36	M5 Hex Wrench	1
37	M6 Hex Wrench	1
38	Dual-Purpose Screwdriver	1

Not Included but Helpful

- Work Gloves
- Goggles
- Pliers
- Adjustable Wrench
- Rubber Mallet

2. Specifications

Motor	Туре	Brushless	
	Power	350 W	
Display Panel	Туре	Liquid Crystal Display (LCD)	
	Weatherproof Rating	IPX5	
	Туре	36 V, Lithium, Rechargeable	
	Weatherproof Rating	IPX4	
Batterv	Operational Temp. Range	−4 to 140 (°F)	−20 to 60 (°C)
	Charging Temp. Range	32 to 113 (°F)	0 to 45 (°C)
	Optimal Storage Temp. Range	−4 to 77 (°F)	−20 to 25 (°C)
Weight	Rear Basket	110 lb.	50 kg
Capacity	Total	330 lb.	150 kg
Rider Height Range		5.3 to 5.9 (ft.)	160 to 180 (cm)
Number of Speed Gearing		7	
Max. Spee	ax. Speed 15.5 mph ⁽¹⁾ 25 km/h ⁽¹⁾		25 km/h ⁽¹⁾
Max. Travel 31 mi. (2) 50 km(2)		50 km ⁽²⁾	
Tire	Туре	24×1.95 or 26×1.95 (in.)	
	Pressure	40–65 (psi)	2.8–4.5 (bar)

(1) Based on unloaded wheel rotation at full power without friction

True maximum speed will vary according to variables such as battery strength and load but should remain ± 1 mph of the preset value.

(2) Based on a 165 lb. or 75 kg load at full power and full legal speed on actual roads

3. Assembly

Warning

• **ONLY** assemble this tricycle following **ALL** instructions in this section.

Improper assembly could result in damage to this tricycle, personal injury, and riding accidents.

• Put on hand and eye protection during assembly to prevent accidents. Work gloves and goggles (not included) are strongly recommended.

For your convenience, all bolts, nuts, and washers are preinstalled where they will be needed.

During assembly, remove the fasteners as needed and keep them nearby.

Reinstall them to connect each part as you go and tighten them securely for a safe and satisfactory experience.

Important

To see these instructions in video form, go to our **YouTube** channel **Viribus Workshop** and search for "**ABR-L1/M1**".

3.1 Installing the Rear Wheels

Parts and Tools







Connect the wheel with the D-shaped slot to the hub.

Replace the washer and nut, tightening the nut with the 22 mm wrench.



Slide the spacer inwards and connect the wheel with the O-shaped slot to the hub.



Replace the washer and nut, tightening the nut in the same fashion.



Attach the rear wheel caps to the rear wheel hubs, pressing hard until they are locked in place.



Turn to test. Finished.

3.2 Installing the Handlebars

Parts and Tools







Tighten the top bolt.





Loosen the handlebar binder bolt.



8

3.3 Connecting the Rear and Main Frames

Parts and Tools



<u>Steps</u>



Loosen and remove the protective bar from the main frame with the 13 mm wrench.



Loosen and remove the 2 sets of bolts and nuts from the main frame with the 17 mm wrench.



Loosen the 2 sets of bolts and nuts on the rear frame with the 17 mm wrench. (**DO NOT** remove the bolts and nuts.)



Align the slots of the frames with each other, sliding the rear frame onto the main frame. For best results, start with either side and repeat for the other side.



Replace the removed 2 sets of bolts and nuts and partly tighten all 4 sets of bolts and nuts on both frames. (Fully tighten them later after rear chain installation.)

3.4 Installing the Rear Chain

Parts and Tools







Push the main frame forward until the rear chain is taut.

Tighten all 4 sets of bolts and nuts on both frames completely.



Test that the chains move freely by rotating the right crank arm.

3.5 Installing the Front Fender and Stay

Parts and Tools



<u>Steps</u>



Loosen the bolts on the protective bar between the front forks with the 13 mm wrench and then remove the bar from the forks.



Loosen and remove the nut on the front light.



Insert the front light using its bolt.



3.6 Installing the Front Wheel

Parts and Tools







Keep the motor cable on the right.



Fit the front wheel into the front fork dropouts.



Retighten the nuts on both sides.



Replace the caps, pressing hard until they are locked in place.



Turn the front wheel and press the front brake lever to test the wheel and the front brake.



If the front wheel is spinning smoothly and the front brake is functioning, turn the tricycle right side up.

3.7 Feeding the Rear Brake Cable

<u>Tools</u>







Feed the rear brake cable into the gap between the pinch bolt and the caliper.



Ensure the rear brake cable is in a tight state, and tighten the pinch bolt.



Use two or more people to test the rear brake by lifting the rear frame, turning the rear wheels clockwise, and pressing the rear brake lever.

If the rear wheels promptly stop rotating, the rear brake is functioning.

3.8 Installing the Rear Fenders and Stays

Parts and Tools









Remove the preinstalled bolts, nuts, and washers on the rear frame.



Align the fender stay and the rear frame.



Replace the removed bolts, nuts, and washers, and tighten the bolts. **DO NOT** allow the fender stays to rub against the wheels.

3.9 Installing the Saddle

Parts and Tools



<u>Steps</u>



Loosen the locking bolt using its handle.



Retighten the locking bolt to secure the saddle.

Loosen and remove the bolts on the lock bracket.



Place the lock bracket onto the saddle post using its clamp, and replace and tighten the removed bolts.



Insert the cable lock into the lock bracket.

3.10 Installing the Chain Guard

Parts and Tools



<u>Steps</u>



Remove the preinstalled bolts and nuts.



Align the chain guard and the main frame, replace the bolts, and tighten the nuts.



Rotate the chain to confirm it does not rub against the guard. If it does, readjust the guard so that the chain can move freely.

3.11 Installing the Pedals

Parts and Tools



<u>Steps</u>



After installation, test that the chain turns smoothly using the pedals, adjusting as needed.

3.12 Installing the Bell

Parts and Tools



<u>Steps</u>



Loosen and remove the bolt on the bell, and fit the bell onto a convenient place on the left handlebar using its clamp.

Replace and tighten the removed bolt until the bell is locked into place.

3.13 Installing the Display Panel

Parts and Tools





3.14 Connecting the Throttle/Panel Cables

Marning

Make sure the color of the connector is the same.



3.15 Connecting the Light/Motor Cables

Marning

Make sure the color of the connector is the same.

<u>Steps</u>



Connect the wiring from the handlebars to the front light.

Arrange the wiring with the wire loom tubing.

Connect the wiring from the handlebars to the motor.

3.16 Assembling the Rear Basket

Parts and Tools







Replace the removed nuts and tighten the bolts and nuts.



Loosen and remove all the preinstalled bolts and nuts on the basket handle.



Attach the handle to the basket by replacing and tightening the removed bolts and nuts.



Loosen and remove the nuts and washers on the casters.



Insert the casters into the basket and replace the removed washers and nuts.



3.17 Installing the Rear Basket

Parts and Tools



<u>Steps</u>



Remove the 4 sets of preinstalled bolts and nuts from the rear frame.



Place the locking frame onto the rear frame, with its lock facing backwards.


Replace and tighten the removed bolts and nuts to secure the locking frame.



Fit the rear basket into the frame, with its lock slots facing backwards.



Pull up the latch on the lock into the slots, and then press down the lock handle to secure the basket.



Unfold the basket bag and fit it into the basket.

3.18 Post-Assembly Actions

Caution

- Remember to take the following post-assembly actions to ensure optimal functionality for a safe and enjoyable riding experience. Failure to do so may result in unpleasant riding, property damage, and personal injury.
- Ensure that the display panel remains off **BEFORE** taking any action. Failure to do so may cause a sudden motor start once the throttle button is accidentally pressed, leading to accidents and injuries.
- If you need replacements, ask your local dealer or contractor for IDENTICAL ones.
- Seek professional assistance from certified and trusted tricycle mechanics if needed.

Intactness



Thoroughly check that **ALL** parts and fasteners **ARE** unbroken and securely attached.

- Pay special attention to the wires, handlebars, display panel, saddle, wheels, chains, and pedals that you already connected or installed.
- Pay additional attention to the folding quick-release, ensuring it is securely locked.
- Use the provided tools (29–38) to tighten any loose fasteners as needed.
- Refer to **Maintenance** and **Troubleshooting** if meeting with problems related to wheel tires.

Smooth Operation



Rotate the wheels, steering, and pedaling.

Make sure that **ALL** movements **ARE** fluid and free from any unusual resistance.

Brake System Reliability



Inspect the front and rear brakes by pressing their levers while pushing the tricycle forward.

Be sure that **BOTH** brake levers can effectively engage the brake systems, facilitating prompt and responsive deceleration and bringing the tricycle to a smooth and controlled stop.

Besides, pressing the brake levers should ensure comfort in your hands.

4. Adjustment

4.1 Adjusting the Cable Tension

Check the amount of free play in both brake levers. If any lever has excessive or insufficient free play before the front or rear brake engages, it indicates that the corresponding brake cable tension needs adjustment.

To adjust the cable tension:

- 1. Loosen the pinch bolt on the front or rear brake caliper with the provided M5 hex wrench.
- 2. Increase or reduce the cable tension as needed.

Pull the cable downwards to increase the cable tension; pull the cable upwards to decrease the cable tension.

- 3. Hold the tension in place and tighten the pinch bolt to secure the cable.
- 4. Re-check the amount of free play in both brake levers and readjust the cable tension following the steps above as needed.



4.2 Adjusting the Brake Caliper

4.2.1 Adjusting the Brake Pads

If you find the brake pads on the front or rear brake caliper are rubbing or any brake lever is pulled all the way back to the handlebars but the brake is not functioning, adjust the position of the brake pads.

- 1. Use the provided M5 hex wrench to adjust the pad bolts on either side of the caliper.
- 2. Turn the bolt clockwise moves the pad towards the disc; turn the bolt counterclockwise moves the pad away from the disc, and the other pad toward the disc.
- 3. Adjust these bolts in small increments, one-quarter to one-half turn and then check by activating the brake lever three to four times after each adjustment.
- 4. Adjust the brake pads to a point where they are as close as possible to the disc without making them rub.

4.2.2 Centering the Caliper

If you still find the brake pads are rubbing on the disc, center the caliper.

- 1. Use the provided M5 hex wrench to loosen the upper and lower caliper bolts.
- 2. Pull the brake lever all the way back to the handlebars and hold it in place, and retighten the bolts.





4.3 Adjusting the Handlebars

Marning

- Improper adjustment of the handlebars may result in damage to the stem post, and steering tube and result in loss of control, serious injury or death. Ensure the minimum insertion marks on the stem post are not visible above the top of the headset.
- Failure to properly tighten handlebar components may result in loss of control, serious injury or death.
- ALWAYS check that the handlebars ARE secure to the stem BEFORE riding.
- Ensure that the display panel remains off **BEFORE** making adjustments to prevent **ANY** accidental throttle activation leading to potential risks.

4.3.1 Adjusting the Handlebars Height and Alignment

- 1. Stand in front of the handlebars and hold the front wheel between your legs.
- 2. Using the M6 Hex wrench to loosen the stem binder bolt.
- 3. Adjust the stem to your desired height.
- 4. Turn the handlebars left or right until the stem aligns with the front wheel.
- 5. Retighten the stem binder bolt until the stem is firmly secured.



4.3.2 Adjusting the Handlebars Angle

- 1. Using the M6 Hex wrench to loosen the handlebars binder bolt.
- 2. Rotate the handlebars into the desired position.
- 3. Check that the handlebars are centered to the frame and front wheel.

Sit on the seat and check your reach to the handle grips and brakes.

4. Tighten the handlebars binder bolt and check the handlebars are securely attached and cannot move.

4.4 Adjusting the Saddle Height

- 1. Loosen the locking bolt.
- 2. Adjust the saddle to your desired height.
- 3. Make sure the centerline of the saddle is aligned with the central axis of the main frame.
- 4. Tighten the locking bolt.
- 5. After tightening, sit on it and double-check to ensure the saddle remains correctly aligned.
- 6. Take a test ride to feel if the saddle position is comfortable. Make fine adjustments during the ride if necessary.





5.Operation

🕂 Warning

Failure to follow all local and state regulations and laws about tricycle use as well as the safety warnings in this manual may result in serious injury or death. **ALWAYS** follow all local and state regulations and laws about tricycle use, follow the safety warnings in this manual and use common sense when riding the tricycle. **ALWAYS** run a pre-ride check of the tricycle's condition before riding.

5.1 Pre-Ride Checks

🕂 Warning

The brake calipers, cables, chains, spokes, and bolted connections may come loose or out of place after an initial break-in period of **50–100 mi (80–160 km)** depending on riding conditions such as carrying weight and road surfaces.

If needed, have a certified and trusted tricycle mechanic perform a tune-up for these.

Regular inspections and tune-ups **ARE** particularly important to ensure that your tricycle remains safe and fun to ride.

Carry out comprehensive safety checks **BEFORE** each ride, fulfilling the following requirements for your tricycle.

Parts	Requirements			
Brakes	 The brake levers and calipers stop the wheels effectively. The brake levers are lubricated and tightly secured to the handlebars. The brake levers are comfortable to be pressed. The brake cables are lubricated, correctly adjusted, and display no obvious wear. The brake pads display no obvious wear. The brake calipers remain in place on the tricycle frame. The discs remain in place on the wheel hubs. 			
	The brake calipers remain properly attached to the discs.			

Parts	Requirements			
Wheels, Tires	 All wheel rims have no obvious wobbles, dents, or kinks. All wheel spokes are tight and unbroken. All axle nuts are securely tight. All tires are inflated to the level marked on their sidewalls and hold air. All tires have good tread, display no bulges or excessive wear, and are free from any other damage. 			
 The handlebars are properly adjusted, meeting the rider's characteristics and allowing for proper steering. The bolts on the stem and faceplate are fully tightened. The handlebars are set correctly to the stem. 				
Chains	 The chains are clean and lubricated. The chains turn smoothly. The front chain remains in place around the front cog, rear cogset, and rear derailleur; the rear chain remains in place around the two freewheels. Anti-thrust treatment has been given if you are going to ride in wet, salty, or otherwise corrosive or dusty conditions. 			
Bearings	 The wheel, pedal, and bottom bracket bearings are lubricated and run freely. No excess movement, grinding, or rattling are displayed. 			
 Cranks, Pedals Both pedals are securely tightened to the crank arms. The cranks are securely attached to the front cog and not bent. 				
Main Frame • All parts of the main frame are not bent or broken. Note: If any of them is not, have it replaced.				
Saddle	 The saddle is properly adjusted, meeting the rider's characteristics. The saddle post is fully locked by the locking bolt. 			
Fenders	No cracks exist on the front and rear fenders.			
Reflectors	The rear, pedal, and spoke reflectors are properly fitted and not obscured.			

Parts	Requirements			
Gear Shifting	 The gear shifter remains in place on the handlebars. The rear derailleur remains in place on the tricycle frame. The derailleur cable remains firmly connected and displays no signs of wear or breakage. Both levers on the gear shifter can be easily pulled. The chains move smoothly when you pedal this tricycle while operating the gear shifter. The gear indicators align correctly with the actual gear positions on the rear cogset. 			
Battery	 The battery is fully charged before use. The battery is locked and securely seated in the seat tube. The battery displays no signs of damage, malfunction, or being internally wet. For best results, avoid leaving the key on the battery to prevent loss or unauthorized use. 			
Signal Cables	Each connection is firm and secure.No wear or breakage exist for each cable and its housing.			
Display Panel	 The display panel remain in place on the handlebars. The LCD screen displays no cracks or breakage. All connected cables display no signs of wear or breakage. The display panel can be correctly operated by its function buttons. 			
Throttle, Motor	 Motor The throttle button can be pressed. The hub motor can spin smoothly, with its bearings in good condition. The axle bolts of the hub motor are securely tight. The power cables running to the hub motor are secured and undamaged. 			
Front Light	 The front light displays no signs of looseness or damage. The front light can be correctly operated by the function buttons of the display panel. 			

5.2 Personal Protective Equipment

🕂 Warning

- Failure to wear appropriate personal protective equipment (PPE) may violate laws and regulations and pose a series of risks.
- DO NOT wear loose footwear or ride with bare feet.

Put on the following PPE **BEFORE** each ride, checking that they meet the required safety standards and show no signs of damage or malfunction.

- Helmet
- Gloves with grip padding
- · Sunglasses or other protective eyewear
- Sunscreen (on sunny days)

5.3 Familiarizing with the Handlebars

🔨 Warning

- If the front brake is applied too quickly or too hard, especially when riding down a slope, the front wheel will completely lose traction and the rear wheel may go off road, potentially tipping over the tricycle and causing serious injuries
- Refrain from cornering as they do on motorcycles. When riding fast, sharply turning the handlebars could tip over the tricycle.
- Brake cables and other parts may become hot during use and can burn the skin if contacted. Do not touch or come in contact with them when they are hot. Allow them to cool before touching.

Before riding the tricycle, it is very important to familiarize yourself with the brake levers.



You may operate one brake at a time, or both together; however, be careful with the front brakes, which can lock up the front wheel. To avoid this:

- Apply both brakes simultaneously, while shifting your body weight back slightly to compensate for braking force.
- As terrain changes, practice and learn how the tricycle will respond to a new terrain or weather change.
- The same brakes will react differently if it is wet, or if there is gravel on the road.
- Always test the brakes and be sure you feel comfortable with the reaction. This is an on-road tricycle; it is not for off-road or rough terrains.
- When braking hard, press both levers at the same time, tighten up your arms and legs to brace for the braking force.

5.4 Display Panel



Controls	C	Turns on/off the display panel when held.			
		Toggles the variable display when pressed.			
	+	Increases the pedal assist level when pressed.			
		Turns on/off the front light when held.			
	-	Decreases the pedal assist level when pressed.			
		Activates push assist control when held.			
	Battery Power	Shows the remaining battery power level.			
	PAS Level	Shows the current pedal assist level (0 to 5).			
Displays	Speed	Shows the current speed in mph or km/h .			
	Variable Display	Shows your current trip distance (TRIP), total distance traveled (ODO), maximum speed of the current trip (MAXS), and average speed of the current trip (AVG).			
Icon		Indicates the front light is on.			

5.5 Turn ON/OFF the Tricycle

To turn on the tricycle:

- 1. Ensure that the battery remains in place in the seat tube.
- 2. Insert one battery key into the socket at the left side of the battery.
- 3. Turn the key clockwise to **ON**.



- 4. Ensure that the battery has sufficient power as described in **Section 5.7** on **Page 46**.
- 5. Locate the display panel on the handlebars.
- 6. Hold **(U)** until the LCD screen lights up.



To turn off the tricycle:

- 1. Hold 0 again until the screen shuts down.
- 2. Turn the key counterclockwise to OFF.





ALWAYS turn off the tricycle between uses or before riding with manual control.



Simply removing the battery can also turn off the tricycle without deactivating the display panel in advance.

HOWEVER, such abrupt cut of power is **NOT** recommended and risks damaging the tricycle's circuits and controller.

5.6 Turning ON/OFF the Front Light

When the display screen is on, hold + to turn on the front light.
 The screen should display *┋*().



• Hold it again to turn off the light.

5.7 Battery

Marning

For your safety, read **Section 7.6** in **Safety Information** on **pages 59–61**.

5.7.1 Battery Power Levels

Method 1

When the display panel is on, you can check the battery's current power level at the screen's upper left corner.

- **Indicates a full battery**.
- indicates a weak one.



Method 2

In addition to the handlebar display, the battery power can be briefly checked on the battery itself.

Turn the key to **ON** and hold the power display button to see how many of the battery's indicator lights turn on.

- 4 lights indicate a full battery.
- 1 light indicates a weak one.



Power Display Button

5.7.2 Removing/Reinstalling the Battery

To remove the battery from the tricycle, follow the steps below. To reinstall the battery, simply reverse the process.



5.7.3 Charging

When you find that recharging is necessary:



3. Periodically check the state of the battery using the power display button.

There is no need to fully recharge the battery. Either 3 or 4 lights should provide strong and responsive service.

Ensure that the battery has been charged for a minimum of four hours, or until the charger indicator illuminates green.

4. When finished, disconnect the power cord from the power.

Remember to properly insert the battery into the holder and then replace the saddle if you have taken it out.

5.8 Throttle Control

The throttle control is available when the battery and display panel are on, enabling your tricycle to run at the 15.5 mph (25 km/h) top speed using the throttle button on the left handlebar.

5.8.1 Activating the Throttle



Press the throttle button and stop pedaling the tricycle.

The tricycle will continue along at the top speed.

Note: The tricycle will not exceed its top speed on flat pavement but may do so on slopes.

5.8.2 Pausing the Throttle

Throttle control automatically pauses and the motor temporarily shifts to neutral in the following cases:

- You release the throttle button completely.
- You press either brake lever.
- You accelerate beyond the 15.5 mph (25 km/h) top speed.

5.8.3 Reactivating the Throttle

The motor will resume working in the following conditions:

- You press the throttle button again.
- You release both brake levers.
- Your speed returns to the top speed or below.

Note:

- If you begin pedaling while the throttle control is active, the tricycle will activate pedal assist control.
- If you turn off the display panel or battery while throttle control is active, the motor will stop and the tricycle will only operate manually.

5.9 Pedal Assist Control

The pedal assist system (PAS) is available when the battery and display panel are on, requiring you to continue using the pedals to keep the motor active but providing additional speed and strength as you ride.

5.9.1 Activating the PAS



Press to go **UP** one level.

Simply pedal your tricycle while keeping the display panel on.

The PAS has 5 levels. The tricycle will accelerate to the speed of the current level as soon as the pedals fully turn two times.

Level	0	1	2	3	4	5
	—	7.5 mph	9.5 mph	11 mph	13 mph	15.5 mph
Speed	—	12 km/h	15 km/h	18 km/h	21 km/h	25 km/h
	0%	48%	60%	72%	84%	100%
Note: True speed will vary according to variables.						

5.9.2 Pausing the PAS

The PAS automatically pauses and the motor temporarily shifts to neutral in the following cases:

- · You stop pedaling.
- You press either brake lever.
- You accelerate beyond the 15.5 mph (25 km/h) top speed.

5.9.3 Reactivating the PAS

The PAS reactivates in the following conditions:

- You resume pedaling.
- You release both brake levers.
- Your speed returns to the top speed or below.

Note:

- If you press the throttle button while the PAS is active, the tricycle will activate throttle control and accelerate to its top speed.
- If you turn off the display panel while the PAS is active, the motor will stop and your tricycle will only operate manually.
- Downshifting the PAS level to **0** disables the PAS and puts the motor in neutral until the **+** button is pressed, restarting the PAS at Level **1**.

5.10 Push Assist Control

The push assist system is available when the display panel is on, providing additional strength as you push the tricycle for a walk or climb.



To activate push assist control:

- 1. After the display panel is turned on, stand beside the tricycle.
- 2. Hold the button while pushing your tricycle forward, which will cause the motor to activate at a speed of 2.5 mph (4 km/h).

To stop push assist control, release the – button or press either brake lever.

5.11 Manual Control

To ride your tricycle normally, you can select any of the following methods:

- Downshift the PAS level to 0.
- Turn off the display panel.
- Simply remove the battery from the tricycle following **Section 5.7** on **Page 46**.

5.11.1 Adjusting the Speed Gearing



The gear shifter on the right handlebar uses two levers to control the 7 rear cogs, providing 7-speed gearing for manual riding.

The larger the number, the smaller the cog and the faster your tricycle will turn the wheels with the same effort.

Best practices for proper shifting:

- Pedal the tricycle with little pressure on the pedals, and move the shifter one gear at a time, ensuring that the chain is fully engaged in the gear before applying more pressure on the pedals.
- It is OK to ride the whole time in only one gear if this is comfortable.
- Shift only while pedaling forward and seated. When shifting, lessen the pressure exerted on the pedals during the shift.
- Once you have successfully shifted gears, it is OK to start to pedal hard if desired.
- Pedaling hard while shifting can cause the chain to skip and not engage the appropriate gear.
- Backpedaling should be avoided because the chain can jam and cause the tricycle to become unstable.

5.12 Securing Your Tricycle

Nobody wants their newly bought tricycles to be stolen. To prevent this, use the provided cable lock mentioned in **Section 3.9** on **pages 21–22**.

5.12.1 Locking the Cable



Simply pull the cable apart as shown.



Extend the cable from the saddle post, wrapping it around an immovable object as well as the down tube and the seat tube. **Note:** The saddle is **NOT** permanently attached to the tricycle frame and should be secured together with the frame.





Turn the dials, disarranging the combination. The cable should be locked in place.

Note: To unlock the cable, dial the default password **0000** and then repeat **Step 2** on **Page 52**.

5.12.2 Resetting the Password



a. Check that the default combination remains in place.

b. Turn the **RESET** wheel completely clockwise as shown.



Set your new password using the dials.



3



Turn the **RESET** wheel completely counterclockwise to confirm your change.



- a. Rejoin the cable parts completely.
- b. Disarrange the combination, testing that the cable cannot be pulled apart.

Note:

5

- Keep in mind that individual parts of a tricycle may be removed. Most commonly, if you lock just a wheel or just the frame, other parts may be removed from. Although it is impossible to lock all the parts, it is suggested to lock the major components if possible.
- Use a lock that is long enough to lock the frame and both wheels if possible.
- The saddle and the battery are not permanently hardwired to the frame, which subjects them to theft. In neighborhoods prone to theft, it is recommended to remove them and carry them with you when leaving the tricycle unattended.

5.13 Folding/Unfolding Your Tricycle

This tricycle features a folding function for convenient storage and transportation. To fold the tricycle, follow the steps below. To unfold it, simply reverse the process.



Unlock the folding quick release.



Turn the quick release handle clockwise.



Lift the handle with one hand and fold the tricycle with the other hand.

6. Parameter Menus

Introduction

The display panel provides eight parameter menus for you to set the following parameters: rated voltage (P1), wheel diameter (P2), speed limit (P3), measurement unit (P4), speed sensor (P5), current limit (P6), PAS sensor (P7), and passport protection (P8).

Brief Guide

- 1. When the display panel is on, hold + and simultaneously for 2 seconds to enter the parameter menus.
- 2. Use + or to select a parameter menu.
- 3. Press 0 to open the selected parameter menu.
- 4. Use + or to set the parameter.
- 5. Press (1) to save changes and move to the next parameter menu.
 Hold (1) to save changes and return to the main menu.

ACaution

Failure to follow these conditions may cause this tricycle to malfunction or break, posing a series of risks and voiding **ALL** warranties implied or stated.

- Read the detailed digital instructions for these parameter menus **BEFORE** opening **ANY** of them and **BEFORE** viewing or adjusting **ANY** parameter settings therein.
- **DO NOT** use the display panel to adjust the default values for **ANY** parameters at random or without any professional guidance. If such an adjustment happens, restore the default settings in accordance with the digital instructions.
- Seek professional guidance from customer service as needed, **ESPECIALLY** if you are unclear or confused with any point in the digital instructions.

Detailed Guide

Scan the following QR code for detailed instructions in digital form.



7. Safety First

🕂 Warning

7.1 General Notice

- Read **ALL** these instructions completely **BEFORE** assembly, use, adjustment, and maintenance.
- Contact customer service if any point herein is unclear or confusing.
- Provide this manual to anyone who will use or service this tricycle and provide it with this tricycle (whether already assembled or not) if it is ever given or sold to a third party.
- **ONLY** assemble, use, adjust, and maintain this tricycle in accordance with these instructions.
- Failure to follow these instructions may lead to serious property damage and severe personal injury and void **ALL** warranties implied or stated.

7.2 Traffic Rules

- **ALWAYS** obey **ALL** applicable local and national laws and regulations while riding.
- **DO NOT** allow use by children, by persons unfamiliar with this tricycle or these instructions, or by anyone whose physical or mental impairment precludes safe use.
- **DO NOT** ride this tricycle while tired or under the influence of drugs or medication.
- **DO NOT** ride this tricycle in areas where electric tricycles are prohibited.
- **ALWAYS** maintain your reflectors and other required safety equipment.

 It is advisable to equip your tricycle with a warning device such as a horn, bell, and light in case you are riding at times of poor visibility. This is **EVEN** required in some jurisdictions.

7.3 Clothing

- **ALWAYS** wear appropriate hand protection during assembly, disassembly, adjustment, or repair of this tricycle.
- **DO NOT** wear loose footwear or clothing that may become caught in the wheels or any other moving parts while riding.
- DO NOT ride this tricycle with bare feet.

ALWAYS wear closed-toe shoes with good traction to maintain grip on the pedals and provide protection for your feet.

 ALWAYS wear a helmet and other required protective gears that meet safety standards while riding.



- Gloves with grip padding are strongly recommended for riding, as they can strengthen your hold on the handlebars and protect your hands in case of a fall.
- Wear sunglasses or other clear protective eyewear to shield your eyes from dust, debris, and insects.
- In sunny conditions, it is advisable to apply sunscreen to exposed skin, especially for long rides.
- For best results, choose brightly colored or reflective clothing or attach reflective accessories or strips to your clothing to enhance visibility from all angles, especially during low-light conditions.

7.4 Safety Checks

- **ALWAYS** check that **BOTH** the front and rear brakes are positioned properly **BEFORE** riding.
- Even when power is cut to the motor, the inertia of the tricycle will often require active braking power.
- ALWAYS check that ALL components and fasteners are intact and securely tightened BEFORE and AFTER riding.
- Regularly check the reflectors to make sure that they are clean, straight, unbroken, and securely mounted.

Also, perform this check for the front light.

Riding with low light or without lights or reflectors is **EXTREMELY** dangerous.

• **DO NOT** ride this tricycle if any part is damaged or shows any sign of malfunction.

Repair or replace worn and broken components **BEFORE** further use, especially bent or broken spokes and wheel rims.

• **NEVER** replace **ANY** components or fasteners with nonidentical ones.

7.5 Sensible Use

- ONLY allow one person to use this tricycle at a time.
- DO NOT carry children in the rear basket while riding.

If carrying pets, ensure that this act is permitted in your jurisdiction and they are safely secured with comfort.

- **NEVER** ride at a speed where your stopping distance exceeds your visibility.
- For optimal safety, it is **NOT** recommended to ride your tricycle at night or in environments with poor visibility (e.g., foggy or snowy conditions).

If you have an emergency that makes it necessary, keep your light on and limit your speed appropriately.

 It is recommended that you NOT ride your tricycle fast UNTIL you are FULLY familiar with this new tricycle and its controls.

HOWEVER, even when you are familiar with the tricycle, **ALWAYS** be mindful of your speed, ensuring that you have sufficient room to brake in an emergency, and **ALWAYS** slow down **BEFORE** making a turn.

- **ALWAYS** allow more distance for braking when riding through leaves, loose gravel, or other debris, as these can affect the stopping power of your brakes.
- **DO NOT** ride this tricycle in extreme weather conditions, such as thunderstorms and hurricanes. If you meet with them during a ride, stop your tricycle, find a safe shelter, and wait until they pass.
- When meeting a strong wind, keep a firm grip on the handlebars, lean into the wind, and adjust your position as needed to maintain control.
- In wet weather, be careful to avoid sharp turns, which are easy to cause an accidental fall.
- **ALWAYS** be cautious when using the front brake. While riding down slopes, **DO NOT** use the front brake only **BUT** apply **BOTH** brakes simultaneously.
- **ALWAYS** be alert for people, animals, or any obstacles that may appear in front of you while riding your tricycle.

ALWAYS be careful of passing parked cars, whose doors might open suddenly.

ALWAYS be aware that pedestrians and drivers may not expect the speed or responsiveness of your tricycle. Adjust your behavior accordingly.

It is advisable to install warning devices to draw their attention, **BUT** always be ready to turn safely out of their way if needed.

- **VIRIBUS** Safety Information
- **ALWAYS** be careful at road and rail crossings.

Slow down and check both ways for oncoming traffic.

- **DO NOT** ride this tricycle near precipices or on highly uneven, sandy, or sloped surfaces.
- **DO NOT** push backward on the pedals when using the gear shifter.

Otherwise, the front chain may get stuck, causing serious damage to this tricycle.

- **DO NOT** carry packages or objects on your tricycle in a way that obstructs your view of the road.
- **DO NOT** use harsh abrasives or caustic chemicals to maintain this tricycle.
- **DO NOT** load this tricycle with more than 395 pounds (180 kg), including 110 pounds (50 kg) in the rear basket.
- When inflating the wheel tires, **ALWAYS** maintain 40 psi–65 psi (2.8 bar–4.5 bar).
- **NEVER** inflate the wheel tires with gas station service pumps or high-pressure air compressors.
- Place this tricycle in locations inaccessible to children after each use.

Otherwise, provide constant supervision to avoid accidents.

- To prevent theft, use cable locks and other appropriate tools to lock this tricycle to immovable objects between uses, especially when parking it outdoors.
- **DO NOT** touch the hub motor or brake discs with bare skin **IMMEDIATELY** after riding, as they may remain hot.

7.6 Battery and Charger

Failure to observe the following instructions could result in fires, explosions, electric shocks, or electrocutions, leading to property damage, severe burns, or **EVEN** death.

<u>Safe Use</u>

• The battery and charger contain hazardous materials.

DO NOT allow children, pets, or persons unaware of the potential hazards to play with the battery or charger.

ALWAYS keep the battery and charger in places out of the reach of them.

- The battery and charger possess NO customer-serviceable parts.
 NEVER open, disassemble, or modify the battery or charger.
- **DO NOT** move the battery or charger while charging is ongoing.
- DO NOT place ANY items on the battery or charger during charging.
- **DO NOT** hold the battery or charger during a thunderstorm.
- **DO NOT** charge the battery if damage is detected on the charger's AC or DC cord.

If the AC cord is damaged, ask your local dealer or contractor for an identical replacement.

If the DC cord is damaged, ask for an identical charger with an intact DC cord.

- **DO NOT** attempt to remove the permanently preconnected DC cord from the charger.
- DO NOT remove or reinstall the battery with wet hands.
 DO NOT plug in or unplug the charger with wet hands.

DO NOT rinse the battery or charger with tap water, immerse them in **ANY** cleaning fluid, subject them to direct pressurized spray, or expose them to rain for a prolonged period of time.

If the interior of the battery accidentally becomes wet, replace it with a new identical one. For the charger, wait for it to completely dry **BEFORE** further use.

- **DO NOT** charge the battery with an unstable or damaged power source.
- **DO NOT** loosen or release the battery using the key while riding, as this may not only abruptly cut power and damage other electronic components but also lead to distraction and accidents.
- If you are going to leave the battery unattended in this tricycle between uses, it is strongly recommended to lock the battery and then remove the key to prevent theft.
- **ALWAYS** remove the battery from this tricycle **BEFORE** undertaking any cleaning, repair, and storage.
- Take care NOT to drop the battery or subject it to impacts at ANY time.

When removing or carrying the battery, keep holding it and avoid throwing it.

When reinstalling the battery, be sure to insert it completely back into place.

- **NEVER** expose the battery to radiation or excessive pressure.
- **NEVER** place the battery near heat sources, around corrosive substances, or in the presence of explosive or flammable gases.
- Overcharging the battery could result in electrical fires and explosions.

DO NOT leave the battery connected to a powered charger for an extended period of time if it has already been fully charged.

- Make sure the charger has been **FULLY** disconnected from power when it is **NOT** in use.
- Contact between the battery contacts and metal objects such as paper clips, coins, keys, nails, screws or other metal items could result in shorting out the battery and cause electrical fires, explosions, or severe burns.
- If the battery is ever damaged, avoid ALL contact with it or any leaking fluid.

Remove contaminated clothing and flush with copious amounts of water if contact accidentally occurs with the skin.

If contact accidentally occurs with the eyes, **IMMEDIATELY** flush them with copious amounts of water for at least 15 minutes while seeking medical attention.

Charger Compatibility

- Charging the battery with **ANY** incompatible charger or using the charger with **ANY** incompatible AC cord may result in fires, explosions, electric shocks, or electrocutions.
- **ONLY** use the provided charger with the battery.
- **ONLY** use the provided AC cord with the charger.
- **NEVER** use the provided charger with **ANY** other batteries or AC cords.
- **NEVER** use the provided AC cord with **ANY** other chargers.
- If you need to replace the battery, charger, or AC cord, ask your local dealer or contractor for a new **IDENTICAL** one.

Charging Environment

- **DO NOT** charge the battery in confined rooms with poor ventilation.
- **DO NOT** charge the battery near flammables, explosives, or corrosives, such as gasoline, propane, firecrackers, and cleaning chemicals.

For optimal safety, prepare a fire extinguisher nearby as a precaution.

- ONLY charge the battery in locations with an ambient temperature between 32°F (0°C) and 113°F (45°C).
- It is highly recommended to remove the battery from this tricycle for charging.

This can not only prevent an unauthorized or accidental motor start but also reduce the risk of electrical damage to this tricycle's components.

• For charging the battery off the tricycle, **ONLY** place the battery and charger on firm, level, dry, and clean surfaces.

Transportation

• The battery is subject to **HAZARDOUS** materials regulations when in transit.

If you are unclear about the specifics, consult competent authorities for the legal or regulatory requirements on rechargeable lithium battery transportation.

• **DO NOT** transport the battery **WITHOUT**: (1) confirming the battery's intactness, (2) insulating the battery contacts, (3) properly packaging the battery in an authorized shipping container, or (4) applying required safety labels.

- **NEVER** transport the battery if it is damaged, which can short circuit, overheat, or cause chemical leaks, posing the risks of fire, explosion, and contamination.
- Remove the battery from this tricycle **BEFORE** transporting your tricycle via an aircraft.

For specific requirements, contact the airline company.

<u>Disposal</u>

• The rechargeable lithium battery and the charger contain regulated materials.

Disposal **MUST** comply with **ALL** applicable local and national laws and regulations.

- **NEVER** dispose of the battery or charger in unapproved facilities or with unauthorized recyclers.
- **NEVER** dispose of the battery or charger by throwing them into fire, water, or sewers or out of your building, yard, or car.
- **NEVER** discard the battery or charger with ordinary household waste or garbage.
- **NEVER** discard the battery or charger by leaving them in public areas at random.

7.7 Other Electronic Components

- **NEVER** use the throttle, PAS, or push assist control in any situation, road condition, or terrain where doing so might impair your control of this tricycle.
- When pushing your tricycle for a walk or climb, **NEVER** press the throttle button while the display panel is on.

- **DO NOT** use the display panel to adjust the default values for **ANY** parameters at random or without any professional guidance.
- **DO NOT** turn off the display panel or the front light by directly removing the battery, as such an abrupt power cut may damage this tricycle's electronic components or shorten their lifespans.
- **DO NOT** disassemble the display panel or modify its internal components.
- **DO NOT** disassemble the internal controller or modify any preconnected wiring.
- If any wiring displays signs of wear, breakage, or malfunction, have trained technicians address the issue(s) **BEFORE** resuming use of this tricycle.
- **ONLY** make wire connections in accordance with the instructions herein.

NEVER connect **ANY** wiring to other power sources, such as wall outlets and extension cords.

• **ALWAYS** avoid direct pressurized spray that might allow the interior of the control and display panels, lights, and other electronic components to become wet.

DO NOT submerge this tricycle or **ANY** of its electronic components in cleaning fluid.

If their interior accidentally gets wet, wait for them to completely dry **BEFORE** resuming use.

- ALWAYS ensure that the display panel and the front light have been turned off **BEFORE** performing cleaning, repair, or battery removal.
- To dispose of this tricycle or any electronic component, obey **ALL** applicable local and national laws and regulations.

8. Maintenance

Marning

- Failure to maintain this tricycle may result in malfunction of a critical part and serious injury or death. Proper maintenance is critical to the performance and safe operation of the tricycle.
- The exact intervals for lubrication and maintenance may vary depending on the conditions the tricycle is exposed to. **ALWAYS** inspect the tricycle and conduct necessary maintenance **BEFORE** each use of the tricycle.
- **DO NOT** leave the display panel or battery on during cleaning, maintenance, or repair.

Failing to follow this may cause accidental activation of the motor, posing a series of safety hazards.

This section presents important information on maintenance and will assist you in determining the proper course of action to take if you have a problem with the operation of the tricycle. If you have questions regarding maintenance, please contact us.

Correct routine maintenance of your new tricycle will ensure:

- Smooth running
- Longer lasting components
- Safer riding
- Good-looking appearance

8.1 Basic Maintenance

The following procedures will help you maintain your tricycle for years of enjoyable riding.

Cleaning the Exterior

- For loose dirt, dust the surface with a dry cloth.
- For stubborn stains, wipe with a damp cloth presoaked in a mild detergent mixture and then dry with another clean cloth.
- For the painted frame, polish its surface with car or furniture wax after cleaning.
- Use soap water to clean the plastic parts and rubber tires.

ACaution

- **DO NOT** use abrasive or caustic cleaners for **ANY** part of this tricycle.
- **DO NOT** flush or soak the entire tricycle or **ANY** of its electronic components including the battery, display panel, front light, etc.

Protecting Against Environmental Corrosion

Riding on the beach or in coastal areas exposes your tricycle to salty airborne moisture, which is very corrosive. Besides, riding in the rain for a long time can corrode this tricycle's metal components, leading to rust and deterioration.

• Wash your tricycle's non-electronic components frequently and wipe or spray all unpainted parts with an anti-rust treatment.

Make sure the brake discs are dry so that braking performance cannot be affected.

• After riding in the rain, dry your tricycle and apply anti-rust treatment. If the hub and bottom bracket bearings have been submerged

in water, take out and regrease them to prevent accelerated deterioration.

• If the paint has become scratched or chipped off the metal parts, use touch-up paint to prevent rust. Clear nail polish is also recommended for use.

Checking for Problems

- Inspect all parts of this tricycle for any looseness, stiffness, wear, damage, or malfunction after each use.
- Tighten, lubricate, repair, or replace any problematic parts before further use.

🕂 Warning

- ONLY use identical replacements.
- Wear hand protection or other necessary PPE during maintenance or repair.
- Keep children and pets away during work, restricting access to the area as needed.

Storing in a Sheltered Area

If this tricycle is not to be used for an extended period of time:

- Remove the battery and store everything in a cool dry location inaccessible to children, against unauthorized use, and well protected from the elements.
- Secure your tricycle to immovable objects using cable locks or other similar tools.
- Avoid exposure to corrosive materials, such as salt, bleach, acids, fertilizers, pesticides, and industrial chemicals.
- Avoid storing electronics in plastic bags, which might allow humidity to build up over time.
- Maintain the ambient temperature within -4°F (-20°C) to 77°F (25°C).
- For best results, check the battery every three months.

If its power sinks below **1/2** (2 of the 4 indicator lights), recharge it to at least that full before returning it to storage.

8.2 Lubrication Schedule

Schedule	Parts	Lubricant	Method	
Weekly	Chains	Chain lube or light oil	Brush on or squirt.	
	Brake levers	Oil	Drip two drops from oil cans.	
	Freewheels	Oil	Drip two drops from oil cans.	
	Crankset, rear cogset	Oil	Drip two drops from oil cans.	
	Brake cables	Lithium based grease	Remove cables from the casing. Grease the entire length. Wipe off exces lubrication from other surfaces.	
	Derailleur cable	Thin layer of grease	Clean and grease the cable.	
Yearly	Bottom bracket	Lithium grease	Disassemble and rub.	
	Pedals	Lithium grease	Disassemble and rub.	
	Wheel bearings	Lithium grease	Disassemble and rub. Note: Exercise caution with the motor and brakes.	
	Headset	Lithium grease	Disassemble and rub.	
	Seat post	Lithium grease	Disassemble and rub.	
	Pedals	Lithium grease	Disassemble and rub.	

8.3 Parts Maintenance

Derte	Items	Checks	Magauraa	
Fails		Actions	Frequency	Measures
Tires	Inflation	Squeeze the tires by hand, seeing if they are firm, loose, or flat.		Inflate the tires to the pressure indicated on the tire sidewall. See Section 8.5 (Page 69) for more details. If the tire is flat, see Section 8.6 (Page 71) for more details.
		Inspect the bead while inflating or refitting a tire, seeing if it remains properly seated		Reduce the air pressure in the tube and reseat the bead.
		Spin a wheel, seeing if rotation is even and smooth while alignment is maintained.	Each use	Reinflate or deflate the tire as needed.
	Bead seating	Inspect the spokes that support the bead for looseness and breakage.		Contact a tricycle mechanic for repair.
	Tread	Inspect for excessive wear, flat spots, cuts, or damage.		Replace the problematic tire(s).
	Valves	Inspect that valve caps are fitted and free of dirt.		Clean any dirt from the valve.
Wheels	Rims	Inspect for dirt and grease.		Wipe clean with a rag; or wash with soapy water, rinse clean, and air dry.
	Axles	Inspect the axle nuts for looseness.		Retighten the axle nuts.
		Spin a wheel, seeing if rotation is even and smooth while alignment is maintained.	Each use	Contact a tricycle mechanic for servicing.
	Spokes	Inspect for looseness and breakage.		Contact a tricycle mechanic for servicing.
	Hub bearings	Raise each wheel, inspecting for looseness from side to side.		Contact a tricycle mechanic for servicing.

Parts	Items	Checks	Manager	
		Actions	Frequency	measures
Drivetrain	Pedals	Inspect that each pedal is secure to the corresponding crank arm.	Every month	Retighten or reinstall any problematic pedal.
		Inspect that the reflectors on both pedals remain clean and in place.		Clean or replace the reflectors.
	Pedal bearings	Raise the rear part of the tricycle off the ground and spin each pedal by hand, seeing if the pedal rotates smoothly and freely without grinding noises or resistance.	Each use	Adjust, lubricate, or replace the bearing; or contact a tricycle mechanic for servicing.
	Chains	Inspect that the front and rear chains remain clean, properly lubricated, and rust-free, displaying no breakage, excessive looseness, or stiff links.		Lubricate the chains as needed. If any chain is rusted, worn, or broken, replace the problematic one.
	Crank set	Inspect that the crank arms, the front cog, as well as the bottom bracket axle and its bearings remain in place.		Contact a tricycle mechanic for servicing.
	Rear cogset	Inspect that the rear cogset remains in place.	Every month	Contact a tricycle mechanic for servicing.
	Freewheels	Inspect that the freewheels remain in place.		Contact a tricycle mechanic for servicing.
	Rear derailleur	Inspect that the rear derailleur remains in place.		Retighten all fasteners that secure the derailleur.
Brakes	Levers	Inspect that the levers are securely attached to the handlebars.		Retighten all fasteners that secure the levers.
	Calipers, Discs	Inspect for looseness, wear, and damage.	Each use	To adjust the calipers, refer to Section 4.2 in Adjustment on Page 36 .
				To replace either, contact a tricycle mechanic.
	Cables	Inspect cables for kinks, rust, broken strands or frayed ends.		Contact a tricycle mechanic to replace the problematic cable.
Dente		Checks		
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Parts	Items	Actions	Frequency	Measures
Battery	Remaining power	Inspect that the battery remains in place.	Each use	Insert the battery into place.
		Inspect that the battery power remains no lower than 1/2.		Recharge the battery.
Display Panel	Locking clamp	Inspect that the panel is securely clamped to the handlebars.	Each use	Retighten the clamp bolt.
	LCD screen	Inspect that the LCD screen has no cracks.		Have the panel repaired by trained technicians; or replace it with a new identical one.
	Function buttons	Inspect that all buttons remain clean.		Clean dust off the buttons.
		Inspect that all buttons function well.		Have the panel repaired by trained technicians; or replace it with a new identical one.
	Display content	Inspect that all letters, numbers, and icons are clearly displayed.		Have the panel repaired by trained technicians; or replace it with a new identical one.
		Inspect that no error codes are displayed.		Refer to Section 9.2 in Troubleshooting on Page 77.
Bell	Locking clamp	Inspect that the bell is securely clamped to the handlebars.		Retighten the clamp bolt.
	Clapper	Press the bell handle to see if the clapper hits the bell properly and emits a clear sound.	Each use	Replace the bell with a new identical one.

8.4 Adjusting a Hub Bearing

Caution

Exercise caution **NOT** to damage the motor or brakes.

Note:

Servicing hub bearings requires specialized tools such as cone wrenches (not included).

If lacking such tools or unsure about hub bearing adjustment, have a skilled tricycle mechanic handle the task to avoid potential issues.

- 1. Check that neither locknut is loose.
- 2. Remove the wheel from the tricycle frame.
- 3. Loosen the locknut on the side of the hub with the bearing while holding the bearing cone at the same side using a cone wrench.
- 4. Rotate the cone as needed to eliminate free play.
- 5. Retighten the locknut while maintaining the cone in position.
- 6. Replace the wheel to the tricycle frame, testing that it can rotate smoothly without any excessive side-to-side play.

8.5 Inflating a Tire Tube

🕂 Warning

- An improperly seated inner tube can rupture unexpectedly and may cause serious injury or death under some circumstances. Be sure the inner tube is properly seated **BEFORE** inflating.
- Overinflation or inflating a tire tube too quickly may cause the tire to blow off the rim, resulting in damage to this tricycle and posing a risk of harm to the rider.

ALWAYS use a hand pump to inflate the tube.

NEVER use a gas station service pump to inflate the tube.



8.6 Repairing a Flat Tire

🕂 Warning

A worn tire can rupture unexpectedly, causing serious injury or even death under some circumstances.

- ALWAYS ensure that the tire is intact BEFORE beginning to inflate its inner tube.
- Repair the tire if it goes flat and cannot be evenly seated after multiple adjustments.
- Replace the tire if it is severely damaged and can no longer be well seated.

Note: The wheel in the following images is for your reference only and **NOT** the front or rear wheel of this tricycle.

Tools Necessary or Helpful

- Hand pump for bikes (or CO₂ inflator): Whether it is of the handheld or standing style, you need to reinflate your new or patched tire.
- Spare tire tubes or patch kits: Carry an identical spare tube for quick replacement. A patch kit is also essential for making repairs at home or during a ride.
- Tire levers: A tire lever can help you get your tire off the rim easily.
- Chalk: Calk can help to mark the locations of small punctures on a tire and keep track of the repair areas.
- **Talcum powder:** You can apply talcum powder to the tube to prevent adhesive patches from sticking to your tire's inside when reassembling a wheel.
- Bucket of water: Submerging an inflated tube in a bucket of water can detect leaks depending on bubbles.

<u>Steps</u>



Remove your tire.

- a. Hook your tire lever around the outer edge of the tire, i.e., the bead.
- b. Once you have the tire lever under the tire rubber, hook the other end of the lever around one spoke to keep the tire elevated.
- c. Add a second tire lever in the same way, taking the tire out of the bead until one side has been completely removed from the rim.



Find and mark the leak.

If the puncture or gash in your tube is not apparent, refill the tube to locate where the air is escaping. There are a couple of ways for your reference:

- Run your hand along the tube and try to feel out the leak.
- If conditions permit:
 - a. Fill water in your sink or bucket.
 - b. Submerge each end of the tube.
 - c. Observe air bubbles escaping from your tire, locating the problematic area.

Note:

- Be sure to submerge each side, as there may be more than one leak.
- Remember to check the tire's inside, removing any objects that cause the puncture.



Patch the hole.

- a. Clean any dirt or debris off the area around the puncture.
- b. Use sand or emery paper from your patch kit to rough up the area for your adhesives to grip.
- c. Patch the hole.
 - For patches that require no glue, simply press them firmly over the hole.
 - For patches that do need glue:
 - a) Add a layer of glue and spread it evenly over the area.
 - b) Wait for the glue to get a little tacky.
 - c) Press your patch onto the area, fully covering the hole.

Note: If talcum powder is available, scatter it over the patch's adhesive side exposed from the hole to prevent the patch from sticking to the tire's inside.



Reassemble the wheel.

- a. Check that there are no foreign objects remaining in the tire.
- b. Inflate the tube 1/4 full.
- c. Refit the tire onto the rim by hand.

DO NOT use tire levers, as they can pinch the tube, causing another flat.

d. Reinflate the tire to the pressure marked on its sidewall.

During the process, ensure that the tire remains properly seated and the valve stem is securely positioned on the tire.

e. When finished, check the tire again to confirm that the bead is snugly fitted against the rim.

9. Troubleshooting

🕂 Warning

To ensure optimal safety, **ALWAYS** avoid leaving the display panel on when performing **ANY** hardware checks, tests, or repair.

- For best results, remove the battery from this tricycle **BEFORE** starting your work.
- If it is necessary to leave the display panel on, wear **INSULATED** hand protection during the process and restrict access to your work area as needed.

9.1 Common Problems

Problems	Causes	Solutions
Front or rear chain slipping	 Excessively worn/chipped cog teeth or freewheel teeth Chains worn or broken Chain links stiff Incompatible chains, front cog, freewheels, rear cogset, or rear derailleur 	 Replace the chains, front cog, freewheels, rear cogset, or rear derailleur. Lubricate, readjust, or replace the links. Seek advice or help from tricycle mechanics.
Front chain jumping off the cogs	Cogs looseCog teeth bent or broken	 Refasten the cogs. Replace the cogs.
Rear chain jumping off the freewheels	Freewheels looseFreewheel teeth bent or broken	 Refasten the freewheels. Replace the freewheels.
Clicking noise during pedaling	 Chain links stiff Pedal axles or bearings loose Bottom bracket axle or bearings loose Bottom bracket or pedal axle bent Crankset loose 	 Lubricate, readjust, or replace the links. Retighten the axle nuts or readjust the bearings. Readjust the bottom bracket. Replace the bottom bracket axle or pedals. Refasten the crank.
Grinding noise during pedaling	Pedal or bottom bracket bearings too tight	Readjust the bearings.
Rear cogset not rotating	Pawl pins jammed	Lubricate or replace the rear cogset.

VIRIBUS Solutions **Problems** Causes · Refasten the brake calipers or discs. Brake calipers or discs loose · Adjust the position of the pads. Refer to Section 4.2.1 in Adjustment on · Brake pads on the calipers too far from the discs Troubleshooting Page 36. Calipers not centered Brakes not working efficiently • Center the calipers. Refer to Section 4.2.2 in Adjustment on Page 36. Brake cables damaged Seek advice or help from tricycle mechanics. Brake cables loose • Adjust the cables tension. Refer to Section 4.1 in Adjustment on Page 35. Brakes squealing or Brake calipers or discs loose · Refasten the brake calipers or discs. • Brake pads on the calipers worn down · Seek advice or help from tricycle mechanics. squeaking Brake pads on the calipers · Adjust the position of the pads. Refer to Section 4.2.1 in Adjustment on · Brake pads on the calipers too close to the discs Page 36. rubbing Replace the wheel axles. Wheel axles broken • Reinstall or refasten the wheels. · Wheels out of place Wheels wobbling · Readjust the hub bearings. Hubs loose • Hub bearings collapsed • Replace the hub bearings. · Stem misaligned with the front wheel • Realign the stem and retighten the stem binder bolt. · Headset loose or binding · Readjust the headset. Steering not accurate Front fork bent · Seek advice or help from tricycle mechanics. · Derailleur cable binding, loose, or damaged · Seek advice or help from tricycle mechanics. Refasten the rear derailleur. · Rear derailleur loose or out of place Gear shifting failure · Seek advice or help from tricycle mechanics. • The tricycle's crank not turning while using the • Be sure that the crank is turning while trying to use the gear shifter. gear shifter Inner tube old or worn Replace the inner tube. • Tire tread or casing worn · Replace the tire. · Replace with the correct tire. Tire unsuited to rim Frequent tire breakage Foreign objects remaining in tire · Remove such objects. Tire pressure too low · Reinflate to the correct pressure. •

• File down the end of the spoke.

Spoke penetrating into rim

Problems	Causes	Solutions
		Ensure the charger is correctly connected to a working power source.Revive the battery in an over-low-power state.
Charging failure	 Charger not correctly connected Battery in an over-low-power state Charger/ power cord/battery broken 	 Reinstall the battery onto your tricycle. Raise the motorized front wheel. Run the motor using the throttle button for a while. Stop the motor, disconnect the battery, and restart charging.
		• Replace the charger, its power cord, or the battery with a new identical one.
Display panel failure	 Battery not seated in place Key not in its ON position Mechanical cause 	 Seat the battery in place. Turn the key to its ON position. Have trained technicians inspect, retighten, repair, or replace the related wiring and/or problematic parts.
Sudden shutdown	 Battery out of place External wiring loose Auto shutoff set for idle motor and controls Mechanical issues 	 Seat the battery in place. Reconnect or retighten the external wiring related to the motor and controls. Reactivate the display panel. Have trained technicians inspect, reconnect, retighten, repair, or replace the related internal wiring and/or problematic parts.
Lighting failure		
Throttle control failure	 Display panel off Mechanical issues 	 I urn on the display panel. Reconnect or retighten the related external wiring.
PAS control failure		Have trained technicians inspect, reconnect, retighten, repair, or replace the related internal wiring and/or problematic parts
Push assist control failure		related internal winng and/or problematic parts.

9.2 Error Codes

Codes	Implications	Causes	Solutions
E001	Control hardware fault	Faulty control hardwareOther mechanical cause	Have trained technicians inspect, retighten, repair, or replace the control hardware or other problematic parts.
E002	Communication fault	 Electromagnetic interference Loose or broken wiring Incorrect settings Faulty control software Damaged control hardware 	 Remove any objects that cause external electromagnetic interference. Reconnect or retighten the wiring coming from the display panel. Restore the factory settings using the display panel. Have trained technicians service the display panel. Replace the display panel with a new identical one.
E003	Motor hall signal fault	 Electromagnetic interference Loose or broken wiring Faulty hall effect sensors Voltage fluctuations 	 Remove any objects that cause external electromagnetic interference. Have trained technicians service the wiring between the hall effect sensors and the controller. Have trained technicians realign or replace any problematic hall effect sensors. Replace the battery with a new identical one.
E004	Throttle control fault	 Faulty throttle button or sensor Loose or broken wiring Controller malfunction 	 Shut off and reactivate the display panel. Reconnect or retighten the external wiring coming from the throttle button. Have trained technicians service the throttle button, controller, or related wiring.
E005	Brake fault	 Faulty brake levers Loose or broken brake cables, calipers, discs, or wiring 	Retighten the loose parts.Have bicycle mechanics repair or replace the problematic parts.
E006	Motor phase fault	 Motor overheating Loose or broken wiring Controller malfunction Short circuits Voltage spikes 	 Allow the motor to rest and cool before resuming use. Reconnect or retighten the motor cable. Shut off and reactivate the display panel. Have trained technicians service the motor, motor cable, or controller. Replace the battery with a new identical one.

10. Disposal

Electrical products should not be disposed of with household products. In the EU and UK, according to the European Directive 2012/19/EU for the disposal of electrical and electronic equipment and its implementation in national laws, used electrical products must be collected separately and disposed of at the collection points provided for this purpose. Locations in Australia, Canada, and the United States may have similar regulations. Contact your local authorities or dealer for disposal and recycling advice.







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