

ELECTRIC BICYCLE USER MANUAL



Read Carefully Before Use
Keep for Future Reference

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Safety Information

Warning!

- Assemble and adjust this bicycle **ONLY** in accordance with these instructions. Read them completely prior to assembly and use. Contact customer service if any point is unclear. Provide this manual to anyone who will use this bicycle and provide it with this bicycle (whether already assembled or not) if it is ever given or sold to a third party. Failure to follow these instructions may lead to serious personal injury and property damage, possibly including death.
- **ALWAYS** obey all applicable local and national laws and regulations while riding. Do not ride this bicycle in any area prohibited to electric bicycles. Always wear your helmet and other required protective gear. Always maintain your reflectors and other required safety equipment.
- Check whether the brakes function well using the brake levers **BEFORE** riding. Even after power is cut to the motor, the inertia of the bike will often require active braking power.
- **ALWAYS** ensure all fasteners and components are intact and securely tightened before and after every use.
- **DO NOT** ride this bicycle if any part is damaged or shows any sign of malfunction. Repair or replace worn and broken components before further use. Never replace any parts with nonidentical ones.
- **DO NOT** allow children or persons unfamiliar with this bicycle or these instructions to operate it. Do not ride it while you are tired or under the influence of drug or medication.
- **DO NOT** wear loose footwear or clothing that may become caught in the wheels or any other moving parts.
- Pay attention to your remaining power before setting out and during use. Recharge your battery as needed to ensure it never runs out of power at a moment where you are taken by surprise.
- It is recommended that you not ride your bike fast when getting started. This can be ensured by setting the bike's top speed low until you are fully familiar with your new electric bike and its controls.
- **ALWAYS** be alert for people, animals, or any obstacles that may appear in front of you while riding your bicycle. Be aware that pedestrians and drivers may not expect the speed or responsiveness of your bike. 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. Do not focus on the display panel for extended periods of time while riding.
- **NEVER** ride at a speed where your stopping distance exceeds your visibility. We do not recommend that you ride your bicycle at night or in an environment with poor visibility. If you have an emergency that makes it necessary to do so, keep your light on and limit your speed appropriately.
- **NEVER** use the throttle or pedal assist system (PAS) in any situation, road condition, or terrain where doing so might impair your control of your bicycle.
- **DO NOT** load this bicycle with more than 264 pounds (120 kilograms).
- **NEVER** adjust the 03, 06, 07, 13, 14, 15, or 16 parameters in the display menus. Adjustment of these parameters should only be made when using the display panel with other motorized wheels of differing voltage, diameter, or magnetic arrangement. In any other case, any adjustment of these parameters should be undone **IMMEDIATELY**. Restore the original settings before any further use of this bicycle.

- **ALWAYS** avoid direct pressurized spray that might allow the interior of the battery, display panel, front light, and other electronic components to become wet. If the interior of the battery accidentally becomes wet, replace it with a new identical one. For the other electronic parts, wait for them to completely dry before any further use.
- **ALWAYS** fully disconnect the battery from this bicycle between uses and before any cleaning, servicing, and storage.
- **NEVER** place the battery near heat sources or explosive or flammable gases. Never expose it to radiation or excessive pressure. Only charge the battery in locations with an ambient temperature between 32°F/0°C and 110°F/45°C.
- **NEVER** modify the battery or power cord. Only use the provided charger with this bicycle. Never get the charger or power cord wet or operate them with wet hands.
- 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.

Specifications

Motor Power		500 W	
Wheel Diameter		26 in. ("06"=26)	66 cm
Magnet Arrangement	Speed Sensor	1 Alnico Magnet ("07"=001)	
	Pedal Assist Sensor	5 Alnico Magnets ("13"=05)	
Battery	Type	48V Lithium ("03"=48)	
	Weatherproofing	IPX4	
	Operational Temp. Range	-4 to 104°F	-20 to 40°C
	Charging Temp. Range	32 to 110°F	0 to 45°C
	Optimal Storage Temp. Range	32 to 104°F	0 to 40°C
Display Panel	Weatherproofing	IPX7	
Front Light	Weatherproofing	IPX5	
Control Hardware	Current Limit	15 A ("14"=015)	
	Undervoltage Lockout	39 V	
Est. Operational Range	Throttle Control	25 mi.*	40 km*
	PAS Control	45 mi.*	75 km*
Max. Speed		20 mph**	32 km/h**
Weight Capacity		264 lb.	120 kg

* Based on unloaded wheel rotation at full power without friction with software limitations. True speed will vary according to variables such as battery strength and load but should remain within ± 1 mph of the displayed speed.

** Based on a 154 lb. or 70 kg load at full power and at full legal speed on actual roads.

Product Diagram



Handlebars










Display Panel



Buttons

- +** Increases the pedal assist level or toggles values up
- M** Toggles the variable display when pressed. Turns the display panel on and off when held
- Decreases the pedal assist level, turns off the motor, or toggles values down when pressed. Turns the push assist on and off when held

Display

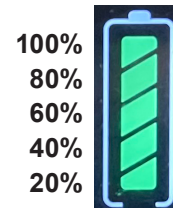
The top left corner displays when the average speed is displayed (AVG), when the maximum speed is displayed (MAX), when the front light is on () , when push assist is active () , or when various errors occur: motor error () , brake error () , throttle error () , control hardware error () , and undervoltage lockout () .

The battery display shows your remaining battery power level.

The number on the middle left is the current speed in mph or km/h.

The number below "PAS" is the current pedal assist level.




The number at the bottom is a variable display that may show your battery's voltage (TIVOL), your current trip distance (TRIP), and your total distance traveled (ODO).



Anti-Theft Alarm Controller

The bicycle is equipped with an anti-theft alarm system. When it is enabled, the alarm sound goes off and the front light turns on by themselves once any part of the bike is touched. The alarm can also be activated manually with either of the provided controllers, helping you find your bike in cluttered or dark areas.



-  Disables the alarm
-  Activates the alarm when pressed twice
-  Enables the alarm

Package List


When you first get your new electric bike, carefully unpack all of the following components and accessories. Check that nothing is missing or has been damaged in transit. Keep children away from the packaging or provide constant supervision. Storing your original packaging through the warranty period will speed returns if any are needed.

Item	Name	Qty.
1	Main Frame with Motorized Rear Wheel, Control Hardware, Battery, & Chain	1
2	Handlebars with Display Panel, Throttle, & Gear Shifter	1
3	Front Wheel with Brake Disc	1
4	Front Brake Caliper	1
5	Saddle	1
6	Front Light	1
7	Front Fender	1
8	Pedals	2
9	48V Battery	1
10	Charger	1
11	Power Cord	1
12	Basket	1
13	Basket Mounting Kit (4×Hex Bolts & Washers)	1
14	Keys	2
15	Anti-Theft Alarm Controllers with CR2032 3V Lithium Coin Batteries	2
16	M5 Hex Wrench	1
17	M6 Hex Wrench	1
18	8×10mm Wrench	1
19	13×15mm Wrench	1
20	Phillips Screwdriver	1

Not Included but Recommended: Bike Stand

Assembly

To see these instructions in video form, go to our YouTube channel **Viribus Bikes** and search for “Viribus Electric Bicycle with Front Basket, RBE-F2”.

 It is recommended to wear hand protection and other PPE necessary for your work during assembly.

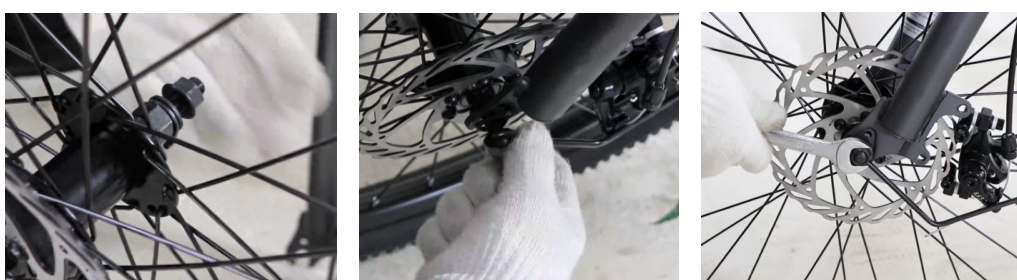
 **DO NOT** use the keys during assembly. Complete assembly before activating the battery.

Handlebar Installation



1. Place the main frame with the preinstalled motorized rear wheel vertically on firm level ground. For best results, secure them with a bike stand or similar device (not included).
2. Rotate the front fork until it stands perpendicular to the down tube.
3. Fit the handlebars into place on the head tube, rotating until they become perpendicular to the down tube.
4. Tighten the central top bolt using the M6 hex wrench until the handlebars are locked in place.

Front Wheel Installation



1. Remove the nuts on the front fork's tips using the 13×15mm wrench and disconnect the protective bar from the fork.
2. Remove the nuts and washers from both sides of the front wheel axle. Place them nearby.
3. Fit the front wheel into the front fork, allowing its axle to be snugly held.
4. Turn the front fender stay, aligning its slots at either side with the axle and adjusting its shape if needed.
5. Replace two washers and one nut to either side of the axle, partially tightening the nut by hand.
6. Align the slots at the other side and replace the remaining washers and nut.
7. Tighten both of the nuts completely with the 13×15mm wrench to lock everything above in place.

Front Fender and Light Installation



1. Remove the nut and bolt from the support frame in front of the front fork.
2. Fit the front fender and light onto the frame, aligning their slots and replacing the bolt and nut.
3. Tighten the bolt with the M5 hex wrench and the nut with the 8×10mm wrench.

Front Brake Caliper Installation



1. Remove the two bolts from the front brake caliper using the M5 hex wrench. Place them nearby.
2. Fit the caliper onto its holder on the left side of the front fork.
3. Replace and tighten the removed bolts to secure the caliper in place.
4. Test that the brake levers and brakes work smoothly and firmly before continuing.

Basket Installation



1. Place the basket onto its holder in front of the head tube.
2. Align the slots and attach the provided washers and hex bolts.
3. Tighten the bolts with the M5 hex wrench until the basket is locked in place.

Pedal Installation



1. Identify the separate pedals, which **ARE** different and should **NOT** be mixed up. The left pedal is marked with an **L** and the right with an **R**.
2. Attach each pedal to the appropriate crank arm, screwing each into place.
3. Tighten the pedals' locking nuts with the 13×15mm wrench.
4. Test that the pedals are securely fastened and rotate freely.

Saddle Installation



1. Release the locking lever on the seat tube of the main frame.
2. Insert the saddle post into the seat tube, sliding it to your preferred height.
3. Close the lever to lock the saddle in place.

Operation



Your battery was charged at the factory but may have run down during shipping. Check the battery's remaining power for the first use and refill it using the provided charger as described in the Charging section below. If charging fails, reinstall the battery onto your bike, secure it in place with its motorized rear wheel raised, run the motor using the throttle lever as described below for a while, stop the motor, disconnect the battery, and restart charging.



Between uses, always fully remove the battery to prevent unauthorized use.

Pedal Assist Control

The pedal assist system (PAS) requires you to continue using the pedals to keep the motor active but provides additional speed and strength as you ride. By default, the PAS has five levels and a 20 mph or 32 km/h top speed. This top speed can be adjusted. If it is, the lower levels will run at 93.7%, 78%, 62.5%, and 46% of the new top speed.

Level	0	1	2	3	4	5
Speed	—	9 mph	12.4 mph	15.5 mph	18.6 mph	20 mph
	—	15 km/h	20 km/h	25 km/h	30 km/h	32 km/h
	0%	46%	62.5%	78%	93.7%	100%

The PAS can also be adjusted to use three levels instead.

Level	0	1	2	3
Speed	—	9 mph	15.5 mph	20 mph
	—	15 km/h	25 km/h	32 km/h
	0%	46%	78%	100%

By default, the PAS is activated at Level 1 as soon as the display panel turns on. The bike will accelerate to the speed of the current level (9 mph or 15 km/h) as soon as the pedals fully turn two times. Press **+** to go up one level. Press **-** to go down one level.

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

- You stop pedaling
- You press either brake lever
- Your bike accelerates on a slope to a speed faster than the top speed.

The PAS reactivates at its current level once both brakes are released, your speed is at or below the current target, and you resume pedaling. Going from Level 1 to 0 also disables the PAS and puts the motor in neutral until **+** is pressed, restarting PAS at Level 1.

If you press the throttle lever while PAS is active, the bike will activate throttle control and accelerate to its top speed. If you turn off the display panel while PAS is active, the motor will stop and the bike will only operate manually.

Throttle Control

The electric bicycle can work as a single-speed scooter using the throttle lever on the right handlebar. By default, throttle control operates at the bike's preset top speed (20 mph or 32 km/h) and is available whenever the display panel is on. Press the throttle lever, stop pedaling the bike, and your bike will continue along at the top speed. Note that the top speed can be adjusted and some jurisdictions may require throttle control to be disabled on electric bikes. (See Parameters 08 and 10 in the Adjustment section below.)



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

- You release the throttle lever completely
- You press either brake lever
- You accelerate beyond the top speed
- You disable the throttle, even without releasing the throttle lever

The motor will resume working once the throttle lever is pressed again, both brake levers are released, and your speed is at or below the top speed.

If you begin pedaling while throttle control is active, the bicycle will activate PAS control. If you turn off the display panel while throttle control is active, the motor will stop and the bike will only operate manually.

Push Assist Control

The push assist system provides additional strength as you push the bicycle for a walk or climb. After the display panel is turned on, stand beside the bike, holding – until  is displayed, and then push your bike forward, which will cause the motor to activate at a speed of 3.7 mph or 6 km/h. Holding – again until  disappears or pressing either brake lever will cease the operation of push assist control.

You can also activate push assist control by adjusting the bike's top speed to 0 and holding the throttle down. Release to stop and adjust the top speed back to 1 or above to deactivate the option. (See Parameter 08 in the Adjustment section below.)

Manual Control

To ride your bicycle normally, leave the display panel or battery turned off or remove the battery. (See the Charging section below for how to do so.) You can also ride normally with the display panel turned on by pressing – until the motor is put to neutral (“0”).

The Shimano thumb shifter uses a lever and a button to control the 7 rear cogs, providing 7-speed gearing for manual riding. The larger numbers represent the smallest cogs and the smaller numbers refer to the largest cogs. Press the + button at the base of the shifter to upshift and push the lever beside the shifter away to downshift.



Be sure your bicycle's crank is turning while using the shifter to adjust the chain.

If you press + while the display panel is on, the bike will activate PAS control at Level 1. If you press the throttle lever while the display panel is on, the bike will activate throttle control and accelerate to its top speed.

Adjustment

To adjust the bike's parameters, turn on the display panel and hold + and – simultaneously to enter the adjustment menus. You will automatically start with Parameter 01 (Display Brightness). For each parameter, use + and – to change the settings and press M to save your changes and move to the next parameter. Hold + and – simultaneously again or wait for the display to automatically reset to leave the adjustment menus, saving all current changes.

WARNING!

DO NOT adjust parameters 03, 06, 07, 13, 14, 15, or 16 while using this display panel with this bike. Parameters 03, 14, and 15 concern details of the electricity coming from the main battery. Parameter 06 allows adjustment of the compatible wheel diameter. Parameters 07 and 13 concern the arrangement of magnets within your motorized wheel and on your PAS sensor. Parameter 16 only applies to motorized wheels equipped with cruise control. These can be used to modify the display panel to work with other motorized bicycles but changing any of these values during use with this bicycle **WILL** cause it to perform abnormally, malfunction, and/or break. If such adjustment happens accidentally, stop the bike **IMMEDIATELY** and **IMMEDIATELY** correct the settings.

Parameter	Value
03	48
06	26.0
07	001
13	05
14	015
15	—
16	000

01 Display Brightness

Press + and – to adjust the brightness of the display panel. Using the minimum setting that is clearly visible affects your battery life a very little bit but more importantly allows your eyes to go between the road and the display with less readjustment in low light conditions. Setting 001 is dim, 002 is medium, and 003 is bright.

02 Measurement Units

By default, speeds and distances are displayed in US/English customary units (miles and mph). Press + and – to toggle between this and metric (km and km/h). Setting 000 is metric and 001 is US.

03 Battery Voltage

Never adjust this value. If it is ever changed by accident, stop the bike and reset it to 48 before continuing on your way.

04 Timed Shutoff

By default, your display panel and motor will automatically shut off once your bike has stopped moving for 10 minutes (Setting 010). Press + and – to adjust the number of minutes before the display shuts down between 001 and 060. Decreasing this setting to 000 disables the timed shutoff, putting your display panel and motor in standby mode indefinitely when you park your bike.

05 Power Levels

By default, your PAS operates with 5 power levels (46/62.5/78/93.7/100%) and can be downshifted to Level 0 (neutral mode). Press + to toggle between this and 3 levels (46/78/100%). Press – once to disable Level 0 and twice to restore it. Settings 05 and 09 activate 5 levels of operation and enable Level 0 while Settings 15 and 19 activate 5 levels but disable Level 0; Setting 03 activates 3 levels and enables Level 0 while Setting 13 activates 3 levels but disables Level 0.

06 Wheel Diameter

Never adjust this value. If it is ever changed by accident, stop the bike and reset it to 26.0 before continuing on your way.

07 Speed Sensor(s)

Never adjust this value. If it is ever changed by accident, stop the bike and reset it to 001 before continuing on your way.

08 Top Speed

By default, your motor has a top speed of 20 mph or 32 km/h. While in 5-level mode (See “05” above), press + and – to adjust this value. While using US customary units (see “02” above), the speeds will vary as shown:

Value	1–10	11	12	13	14	15	16	17	18	19	≥20
Level 1 (mph)	4.6	5.1	5.5	6	6.4	6.9	7.4	7.8	8.3	8.7	9
Level 2 (mph)	6.3	6.9	7.5	8.1	8.7	9.4	10	10.6	11.3	11.9	12.4
Level 3 (mph)	7.8	8.8	9.4	10.1	11.1	11.7	12.5	13.3	14.2	14.8	15.5
Level 4 (mph)	9.4	10.3	11.2	12.2	13.1	14.1	15	15.9	16.9	17.8	18.6
Level 5 (mph)	10	11	12	13	14	15	16	17	18	19	20

While using metric units (see “02” above), the speeds will vary as shown:

Value	1–16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	≥32
Level 1 (km/h)	7.4	7.8	8.3	6.4	9.2	9.7	10.1	10.6	11	11.5	12	12.4	12.9	13.3	13.8	14.3	15
Level 2 (km/h)	10	10.6	11.3	11.9	12.5	13.1	13.8	14.4	15	15.6	16.3	16.9	17.5	18.1	18.8	19.4	20
Level 3 (km/h)	12.5	13.3	14	14.8	15.6	16.4	17.2	17.9	18.7	19.5	20.3	21.1	21.8	22.6	23.4	24.1	25
Level 4 (km/h)	15	15.9	16.9	17.8	18.7	19.7	20.6	21.6	22.5	23.4	24.4	25.3	26.2	27.2	28.1	29	30
Level 5 (km/h)	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32

Adjusting this value to 0 enables push assist control. Hold the throttle down to activate it, release to deactivate, and set this valve to 1 or above to disable it again.

09 Throttle Start

By default, the throttle lever instantly activates the bike's single-speed run. Press + and – to toggle between this and requiring two full rotations of the pedals before throttle control activates. Setting 000 activates instant throttle response and 001 activates a two-rotation start.

10 PAS or Throttle Disablement

By default, your bike offers manual, the PAS, and throttle control as explained above. Press + and – to toggle among this, enabling the PAS only, and enabling throttle control only. Setting 000 disables throttle control. Setting 001 disables PAS control. Setting 002 reactivates both. (To disable both PAS and throttle control, simply leave your battery off or turn off the display panel while riding.)

11 PAS Sensitivity

By default, your bike activates its pedal assist system when you turn the pedals two full rotations while the display panel is on. Press + and – to adjust how quickly you need to turn the pedals to activate the PAS. Lower values require less pedaling and higher values more.

12 PAS Acceleration

By default, your bike ramps up the pedal assist speed for its current level smoothly and evenly. Press + and – to fine tune this acceleration to suit your riding style. Lower values accelerate more gradually and higher values more quickly.

13 PAS Sensor

Never adjust this value. If it is ever changed by accident, stop the bike and reset it to 05 before continuing on your way.

14 Maximum Current

Never adjust this value. If it is ever changed by accident, stop the bike and reset it to 015 before continuing on your way.

15 Minimum Voltage

Never adjust this value. If it is ever changed by accident, stop the bike and reset it to no numbers before continuing on your way.

16 Cruise Control

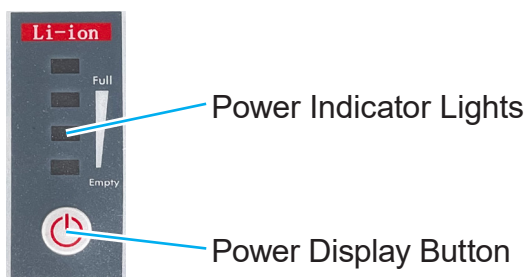
Never adjust this value. If it is ever changed by accident, stop the bike and reset it to 000 before continuing on your way.

17 Odometer Reset

Hold + while this parameter is active to reset your bike's total distance traveled to 0.

Charging

In addition to the battery gauge on the handlebar display, your bike's current power level can be checked on the battery itself. Press the power display button and see how many of the battery's indicator lights turn on. 4 lights indicate a full battery, while 1 light indicates a weak one.








When you find that recharging is necessary,

1. Insert either of the provided keys into the socket on the left side of the battery, turning it to "OFF" and then pushing in while turning it further to "UNLOCK".
2. Tilt the saddle out of the way using the release lever underneath the saddle. Slide the battery up and off and set it down carefully.
3. Connect the provided charger to the charging port on the right side of the battery.
4. Connect the charger to a stable compatible power source using the provided power cord and charging should begin.
5. Periodically check the state of the battery with the power display button. There is no need to fully recharge the battery. Either 3 or 4 lights should provide strong and responsive service. For best results, do not allow the battery to ever drain completely and avoid leaving it connected to power once it is already fully charged.
6. After charging is complete, replace the battery, lock it in place by turning the key to "OFF", and remove the key.

Maintenance

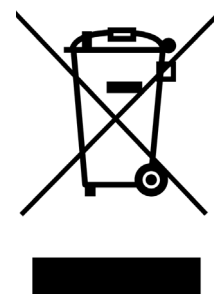
- Always disconnect the main battery before undertaking any cleaning, maintenance, or repair. For the longest possible service life, disconnect the battery between uses.
- Check the parts of the bicycle for any looseness, stiffness, wear, or damage after each use. Tighten, lubricate, repair, or replace any problematic parts before further use. Only replace components of this bike and its accessories with identical ones.
- The exterior of the bicycle can be cleaned with a soft damp cloth. Do not use harsh abrasives or caustic chemicals. All electronic components have waterproofing adequate for rain, but avoid direct pressurized spray that might allow the interior of the electronic components to become wet, never charge the battery while it or your hands are wet, and immediately replace the battery if it ever begins to swell or leak fluid.
- If the bicycle will not be used for an extended period of time, remove the battery and store everything in a cool dry place away from direct sunlight and inaccessible to children. Avoid storing electronics in plastic bags, which might allow humidity to build up over time. For best results, check the battery every three months. If its power sinks below $\frac{3}{4}$ (3 of the 4 indicator lights), recharge to at least that full before returning it to storage.

Troubleshooting

Code	Icon	Problem	Usual Solutions
E02		Brake Lever Failure	This code and icon are displayed every time the brake levers disconnect the motorized wheel from its power. This is normal and indicates everything is working correctly.
			If either or both are displayed when the brake levers are not engaged, something has malfunctioned. Check the wiring and condition of the brake levers, lines, and motorized wheel. Replace any problematic parts with new identical ones.
E06		Undervoltage Knockout	Refill the battery.
			Replace the battery with a new identical one.
E07		Motor Failure	Retighten the appropriate wire connection(s).
			Replace the motorized wheel with a new identical one.
E08		Throttle Failure	This icon is displayed when throttle control is disabled. (See Parameter 10 in the Adjustment section above.) This is normal and indicates everything else is working correctly.
			If this icon is displayed when throttle control is not disabled, something has malfunctioned. Check the wiring and condition of the throttle and motor. Repair or replace any problematic parts.
E09		Control Hardware Failure	Retighten the appropriate wire connection(s).
			Check the condition of the control hardware. Repair or replace any problematic parts.
E10	—	Communication Failure	Retighten the appropriate wire connection(s).
			Check the condition of the display panel, throttle, and motorized wheel. Repair or replace any problematic parts.
E16	—	Short Circuit	Have a trained technician check all electronic components and repair or replace any problematic parts.

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.



Contact Us

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

For a .pdf copy of the latest version of these instructions, use the appropriate app on your smartphone to scan the QR code to the right.

