

ELECTRIC BICYCLE CONVERSION KIT USER MANUAL



Read Carefully Before Use
Keep for Future Reference

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Safety Information

Warning!

- Install and operate this equipment **ONLY** in accordance with these instructions. Read them completely prior to installation and use. Contact customer service if any point is unclear.
- **ALWAYS** obey all applicable local and national laws and regulations while riding. Do not ride your modified 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.
- **ONLY** use this equipment with bicycles with fully functioning brakes. Even after power is cut to the motorized wheel, 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 your bicycle if any part of this equipment is damaged or malfunctions. Repair or replace worn and broken parts before further use.
- Pay attention to the 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.
- **DO NOT** allow children or persons unfamiliar with these instructions to operate your modified bicycle without strict supervision.
- **DO NOT** wear loose footwear or clothing that may become caught in the motorized wheel.
- It is recommended that you not ride your bike faster than about 25 km/h (15 mph) when getting started. This can be ensured by connecting wires J & K on the control hardware and setting the bike's maximum speed to this level until you are fully familiar with your new motorized 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 motorized 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 LCD display 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 motorized wheel, cruise control, pedal assist system (PAS), or timed shutoff in any situation, road condition, or terrain where doing so might impair your control of your bicycle.
- **NEVER** adjust P03, P06, or P07 while using the provided motorized wheel system. Adjustment of these parameters should only be made when using the display and control hardware with other compatible wheels of differing voltage, diameter, or magnet arrangements. In any other case, any adjustment of these parameters should be undone immediately and the original settings restored before any further use of your bicycle.
- Disconnect the battery from the motorized wheel before any cleaning, servicing, and storage.

Specifications

Model Name	EBK-K261-FT	EBK-K261-RR	EBK-K265-FT	EBK-K265-RR	EBK-K281-FT	EBK-K281-RR	EBK-K285-FT	EBK-K285-RR
Wheel Location	Front	Rear	Front	Rear	Front	Rear	Front	Rear
Wheel Diameter	66 cm (26 in.) (P06=0026.0)		71 cm (28 in.) (P06=0028.0)					
Magnet Arrangement								
46 Alnico Magnet Ring (P07=00046)								
Compatible Forks	Fork Width	100–110 mm (4–4.3 in.)	135–142 mm (5.3–5.6 in.)	100–110 mm (4–4.3 in.)	135–142 mm (5.3–5.6 in.)	100–110 mm (4–4.3 in.)	135–142 mm (5.3–5.6 in.)	100–110 mm (4–4.3 in.)
	Slot Width	About 10 mm (0.4 in.)						
Compatible Battery Types								
Rated Power	48V Lead-Acid or Lithium (P03=00048)			36V Lead-Acid or Lithium (P03=00036)			48V Lead-Acid or Lithium (P03=00048)	
	1000W			500W			1000W	
Max. Speed*	1st Gear	10.5 km/h (6.5 mph)		7.5 km/h (4.5 mph)		11.5 km/h (7 mph)		8 km/h (5 mph)
	2nd Gear	24 km/h (15 mph)		16 km/h (10 mph)		28 km/h (16 mph)		17.5 km/h (10.5 mph)
	3rd Gear	37 km/h (23 mph)		24.5 km/h (15.5 mph)		38.5 km/h (24 mph)		26.5 km/h (16.5 mph)
	4th Gear	48 km/h (30 mph)		32 km/h (20 mph)		51 km/h (32 mph)		34.5 km/h (21.5 mph)
	5th Gear	59.5 km/h (37 mph)		40 km/h (25 mph)		63.5 km/h (39.5 mph)		43 km/h (26.5 mph)

* Based on unloaded wheel rotation at full power without friction. Actual speed will be somewhat lower, reflecting battery strength, the load on the bicycle and condition of the road surface, tyre wear, wind speed, and other factors.

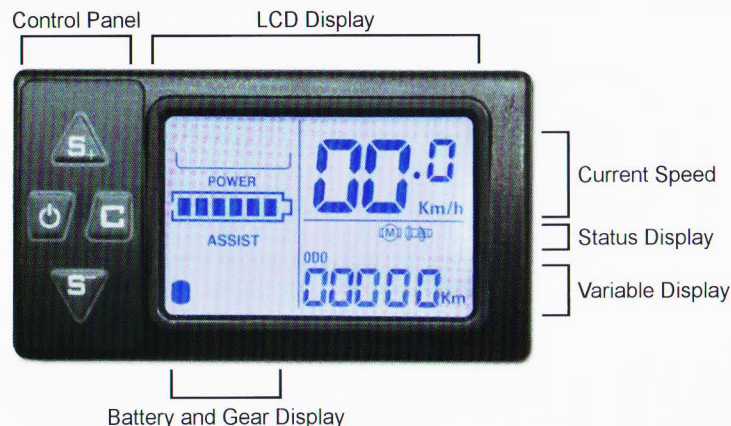
Package List

A Motorized Wheel  × 1		B Brake Levers  × 2	
C Throttle Handle  × 1	D Standard Handle  × 1	E LCD Display Panel  × 1	
F Pedal Assist Sensor  × 1	G Control Hardware  × 1	H Bag  × 1	
I Power Cable  × 1	J Cable Cover  × 1	K Cable Ties  × 5	

Not Included but Necessary

- 36/48V Lead-Acid or Lithium Rechargeable Battery
- Adjustable Spanner
- M3 & M5 Allen Keys

LCD Display Panel

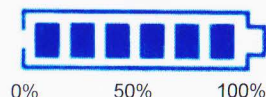


S+: Shifts up when pressed

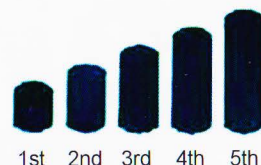
Power: Turns the LCD display on and off when held and toggles the variable display when pressed

C: Turns cruise control on and off when held and turns attached lights on and off when pressed

S-: Shifts down when pressed



Battery Display: Displays the remaining battery power level



Gear Display: Displays the current gear and whether pedal assist has been activated

Current Speed: Displays the current speed in km/h or mph

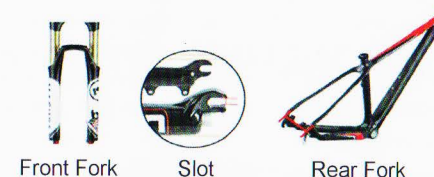
Status Display: Displays whether cruise control has been activated (S+), the battery is running low (BATT), or the control hardware (MOTOR), motor (MOTOR), throttle (THROTTLE), or brake levers (BRAKE) have failed

Variable Display: Displays the total distance traveled (ODO), current trip distance (TRIP), battery voltage (VOL), battery current (CUR), and trip time (T1)

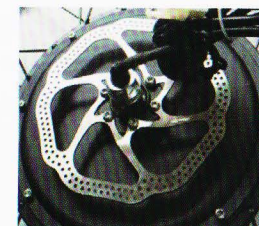
Assembly

Installing the Motorized Wheel

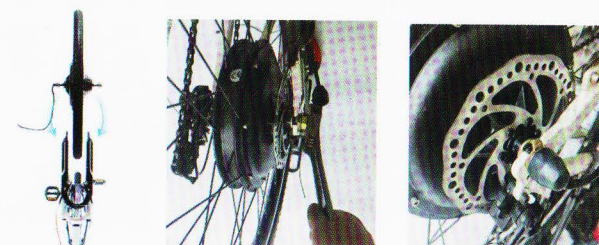
1. Make sure your bicycle is fully functioning and has a front or rear fork compatible with the model of your kit.



2. Turn the main frame of your bicycle upside down and separate the wheel to be replaced from the frame. Note that front and rear motorized wheels are not interchangeable. **DO NOT** replace your bicycle's front wheel with a motorized rear wheel or replace your bicycle's rear wheel with a motorized front wheel.
3. In the case of disc brakes, disconnect them from the removed wheel and attach them to the new motorized wheel. Make similar adjustments for other styles of brakes. Test the brakes carefully before use and **NEVER** use your motorized bicycle if its brakes fail to catch or perform badly during testing.

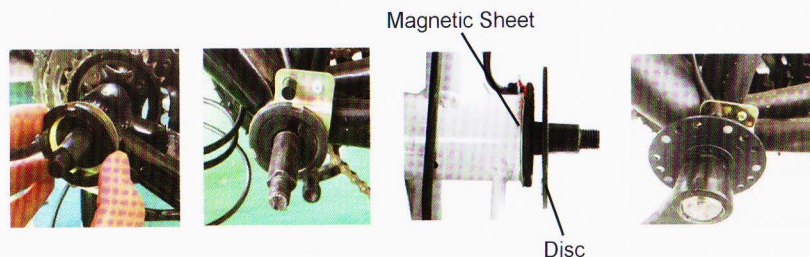


4. Loosen the caps, nuts, and washers on the motorized wheel hub.
5. Fit the motorized wheel (A) onto the appropriate fork of the frame, securing it using its washers, nuts, and caps. Use an adjustable spanner (not included) as needed to fully retighten all fasteners.



Installing the Pedal Assist Sensor

1. Remove either crank arm from the pedal axle of your bicycle's main frame.
2. Attach the magnetic sheet of the pedal assist sensor (F) to the axle, sliding it completely forward.
3. Secure the magnetic sheet by mounting the removed washers back into place.
4. Fit the sensor disc onto the axle, keeping it 1–2 mm (0.05–0.1 inches) away from the magnetic sheet.
5. Replace the crank arm onto the pedal axle and secure it with its previously removed fasteners.



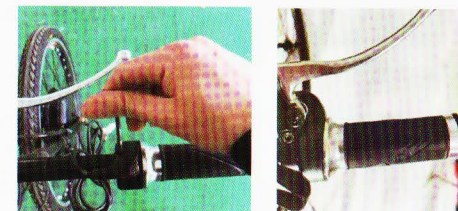
Installing the Brake Levers

1. Disconnect the original brake levers from your bicycle. Separate them from their brake cables.
2. Open the clamp of one brake lever (B) by removing its nut and bolt with your adjustable spanner and M5 allen key (not included).
3. Attach the brake lever to the appropriate handlebar for your jurisdiction. For instance, in the United Kingdom the left handlebar should control the rear brake but in the US it should control the front brake. Close the clamp, replacing and retightening its previously removed bolt and nut.
4. Fit the brake cable onto the brake lever by passing its round metal head through this lever.
5. Install the other brake lever on the other handlebar and connect it to the other brake cable in the same fashion.



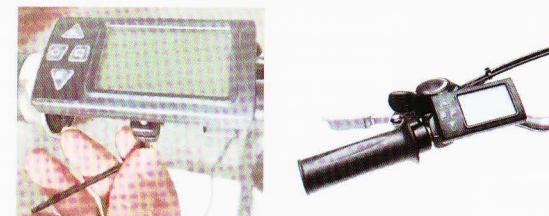
Installing the Handles

1. Remove the handle corresponding to the brake for the motorized wheel.
2. Release the clamp inside the throttle handle (C) by loosening the attached bolt with an M3 (not included).
3. Attach the throttle handle to the handlebar and tighten the bolt until the handle is securely attached.
4. Remove the other original handle and attach the standard handle (D) in its place. To secure the new handle, turn it back and forth while pressing in until it is securely attached. This step can be skipped if your bicycle is incompatible with the inner diameter of the new handle (about 22.2 mm or 0.9 inches). In that case, reattach the brake cable to the original handle and leave it in place.

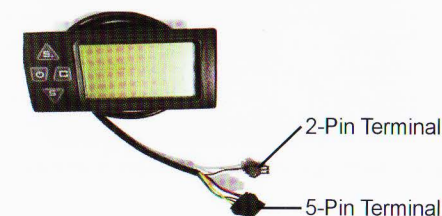


Installing the LCD Display Panel

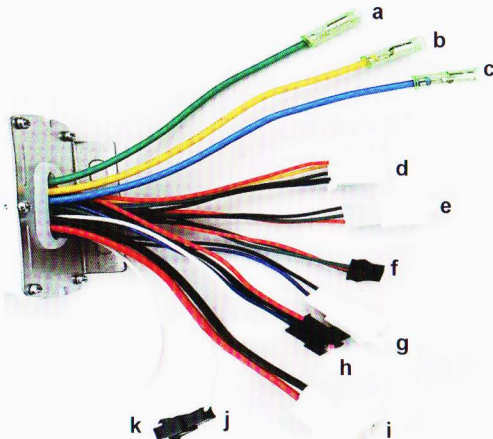
1. Open the clamp under the display panel (E) by removing its bolt with your M3 allen key.
2. Mount the display on the frame of your bike opposite from the throttle handle.
3. While holding the display in place, close its clamp and secure it by replacing and retightening its previously removed bolt.



4. The display panel can be used to control your bike's light(s) if desired. Simply disconnect your light from its current power source and connect it to the display's 2-pin terminal, matching the positive (brown) and negative (white) wires to those from your light.



Installing the Control Hardware

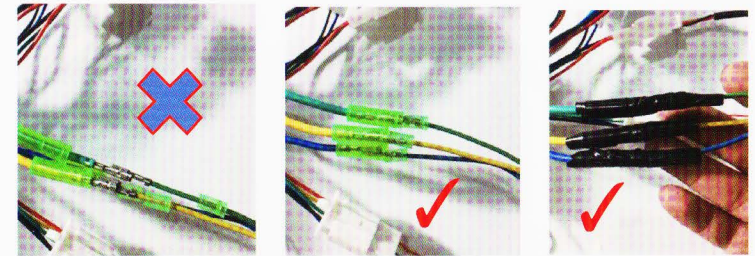


1. Fit the control hardware (G) into the provided bag (H), running wires a–k from the hole of this bag.
2. Connect these wires as shown:

Wire	Type & Colour	Cable Colour(s)	Parts
a	Female, Silver	Green	Motorized Wheel
b		Yellow	
c		Blue	
d	Female, White	Green, Yellow, Blue, Black, Red	Throttle Handle
e	Male, White	Green, Black, Red	
f	Female, Black	Green, Black, Red	
g	Male, White	Blue, Black	Brake Levers
h	Male, Black	Green, Yellow, Blue, Black, Red	LCD Display Panel
i	Male, White	Black, Red	Battery Power Cable
j	Male, Black	White	Wire k
k	Female, Black	White	Wire j

3. When connecting wires and terminals, be sure all colours match exactly.

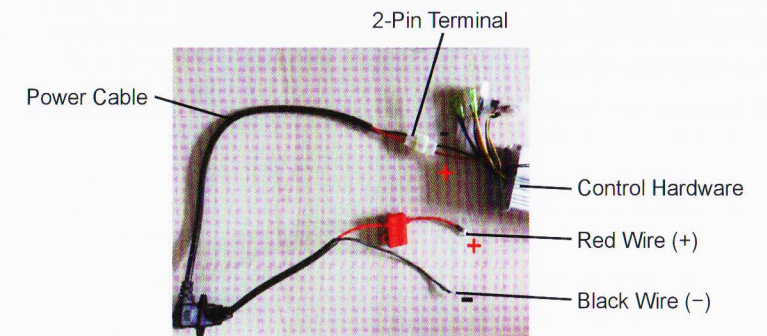
4. For exposed connectors (a–c), cover them securely with the provided sheaths and with electrical tape or other durable insulation. It is recommended that the cable cover (J) be used to join all the motorized wheel wiring after they are fully connected and wrapped.



5. When wires j & k are connected, the motorized wheel will never upshift to 4th or 5th gear. To access these gears, keep these wires disconnected. When you have decided, tuck these wires back into the bag.
6. Hang the bag from the main frame of your bicycle using its velcro straps.

Installing Your Battery

1. Ensure that your bicycle battery is compatible with your model of motorized wheel.
2. Fully charge it according to its separate instructions.
3. Install your battery at a convenient position on your bicycle.
4. Connect the power cable (I) to your battery's terminals, ensuring its red (+) and black (–) ends are securely attached to its anode and cathode respectively.
5. Fully insulate these connections.



Binding the Wires and the Brake Cables

For best results, bind all loose wires and cables using the provided cable ties (K) or other fasteners.



Operation

Riding with Manual Control

1. To ride your bike normally, simply leave the display panel turned off.
2. You can also ride normally with the display turned on by downshifting the motorized wheel to neutral.

Riding with Throttle Control

1. Hold **⏻** until the display panel turns on.
2. Turn the throttle handle to activate the motorized wheel.
3. To speed up, turn the throttle handle further. The bicycle will not exceed the maximum speed for its gear on flat pavement but may do so on slopes.

To slow down, ease the throttle handle back and/or press your brake levers. Pressing either brake lever completely will cut off all power from your battery to the motorized wheel, temporarily leaving it in neutral. Release the brake to restore power at its previous gear.

4. To stop your bicycle, release the throttle handle completely and apply your brakes as needed.
5. To turn off the motorized wheel, release the throttle and brake levers while the bike is completely stopped. Hold **⏻** until the display panel turns off.

Riding with Cruise Control

1. To activate cruise control, first use throttle control to reach your ideal speed.
2. Hold **C** until **CC** appears at the far left of the status display area.
3. Release the throttle handle **BUT** keep gripping it. Your bicycle should maintain its current speed without further adjustment.
4. Turn off cruise control by turning the throttle or pressing either brake lever. The bike will default to throttle control at the current gear.

Riding with Pedal Assist Control

1. To run at the maximum speed of the current gear, you can also fully release the throttle and turn the pedals on your bicycle once. The pedal assist system (PAS) will activate and automatically turn the pedals using the motor's power.
2. Turn off the pedal assist system by turning the throttle or pressing either brake lever. The bike will default to throttle control at the current gear or neutral.

Changing Gears


1. Make sure the throttle handle is fully released.
2. Hold **⏻** until the display panel turns on.
3. Press **S+** and **S-** to change gears. Pressing **S+** shifts up to one gear higher (e.g. 3 to 4). Pressing **S-** shifts down to one gear lower (e.g. 3 to 2). Downshifting from 1st gear places the motorized wheel in neutral. Pressing **S+** while in neutral returns the bicycle to 1st gear.

Setting the Maximum Speed Limit

1. Connect wires j & k on the control hardware to disable 4th and 5th gears.
2. The default maximum speed limit is set as a percentage of the maximum speed in 5th gear, varying by model. To see or adjust the value, hold **S+** and **S-** simultaneously until "P01" is displayed. Press **⏻** to toggle to "P08". The percent value is shown on the bottom right of the display. Press **S+** or **S-** to adjust the value by 1% ("00001") up or down.



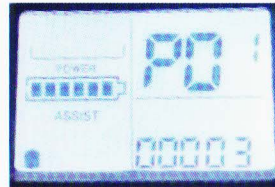
Activating Your Headlights

1. If your bike light or lights are wired to the display panel, press **C** to turn them on and off.
2. While activated, the  icon will appear above the battery display.

Adjusting the Display Panel

Adjusting the LCD Display Brightness

1. Hold **S+** and **S-** simultaneously until "P01" is displayed.
2. Press **S+** or **S-** to adjust the display brightness, toggling from low ("00001") to medium ("00002") to high ("00003").



Adjusting Unit Displays

1. All measurements on the display are given in metric by default.
2. To change this, hold **S+** and **S-** simultaneously until "P01" is displayed.
3. Press **U** once to toggle to "P02".
4. Press **S+** or **S-** to toggle between metric ("Km") and U.S. customary units ("MILE").



Toggling the Variable Displays

Press **U** to toggle the variable display among the total distance traveled ("ODO"), the current trip distance ("TRIP"), the battery voltage ("VOL"), the battery current ("CUR"), and the duration of the current trip in hours and minutes ("T1").

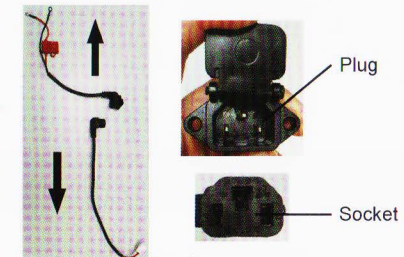
Timed Shutoff

1. The default setting is for the display panel and motorized wheel to remain in standby indefinitely once parked ("00000").
2. To activate an automatic timed shutoff, hold **S+** and **S-** simultaneously until "P01" is displayed. Press **U** 3 times to toggle to "P04".
3. Press **S+** or **S-** to adjust the length of the system's standby mode 1 minute up or down.
4. Once activated, parking the bike will start a countdown after which the system will automatically shut off completely.
5. Restart the panel and the motorized wheel as normal, holding **U** until the panel activates.








Maintenance

- For best results, disconnect the motorized wheel from its battery between uses. While the wheel and battery are disconnected, close the plug cover.



- Check the parts for any signs of looseness, wear, or damage between uses. Tighten, repair, or replace any problematic parts before further use.
- Periodically clean all parts with a soft damp cloth. Do not use abrasive cleaners or caustic chemicals.

Troubleshooting

Icon	Problem	Possible Solutions
	Control Hardware Failure	<ol style="list-style-type: none"> 1. Retighten the appropriate wire connection(s). 2. Replace the problematic part with a new identical one.
	Motor Failure	
	Throttle Failure	
	Brake Lever Failure	<ol style="list-style-type: none"> 1. This icon is displayed every time the brake levers disconnect the motorized wheel from its power. This is normal and indicates everything is working correctly. 2. If this icon is displayed when the brake levers are not engaged, something has malfunctioned. Check the wiring and condition of the brake levers, lines, and motorized wheel. 3. Replace any problematic parts with a new identical one.
	Battery Failure	<ol style="list-style-type: none"> 1. Recharge your battery. 2. Replace your battery with a new fully compatible one.

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.



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