



Assembly Manual



Tools suggested:

- Electric Drill
- 3/8ths bit
- 5/16ths bit
- Phillips screw driver
- Cutting pliers
- 1/2 inch socket wrench
- 1/2 inch wrench or crescent wrench
- 8 mm socket wrench
- Center punch

Parts included:

1. Hitch Hiker with wheel, fender, crank and mounting apparatus
2. Battery Box (black) and controller (silver box with electrical wires on battery box lid)
3. Battery
4. Battery Box frame (black frame in the same shipping box as the Battery Box.
5. Throttle with cord and Dashboard Adapter
6. Charger with cord

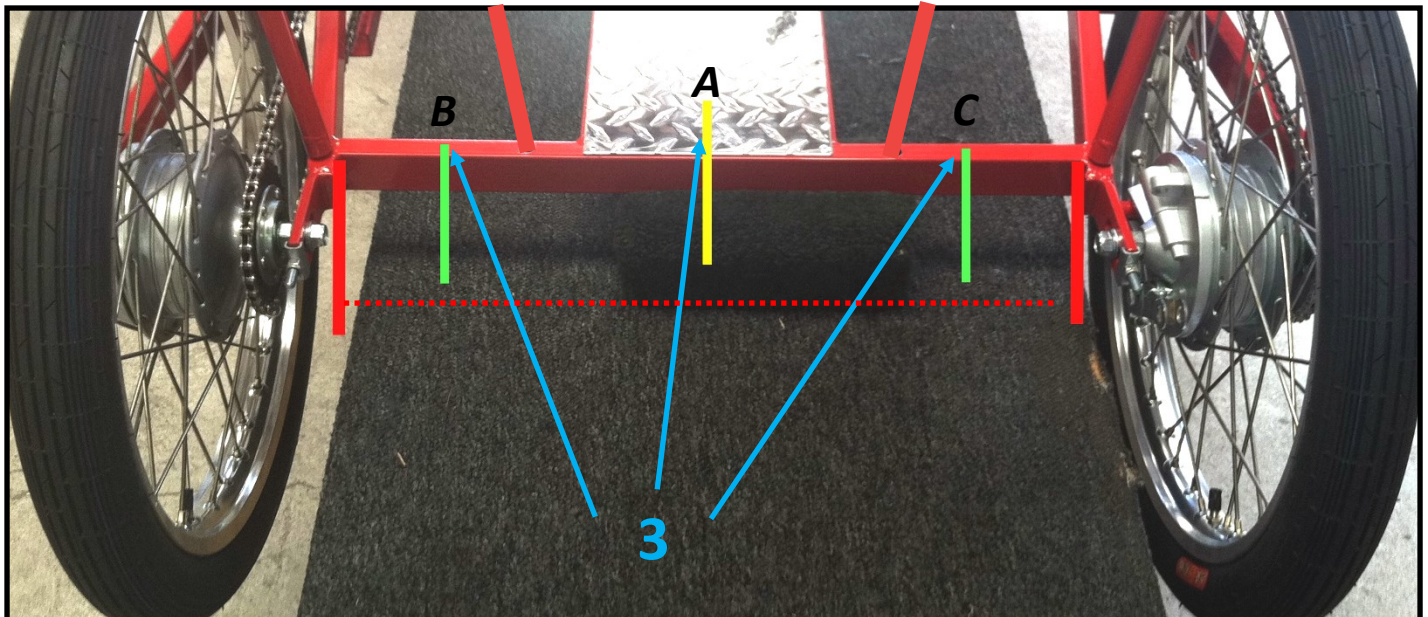
Assembly Instructions — Read Carefully

Frame Mounting

Steps:

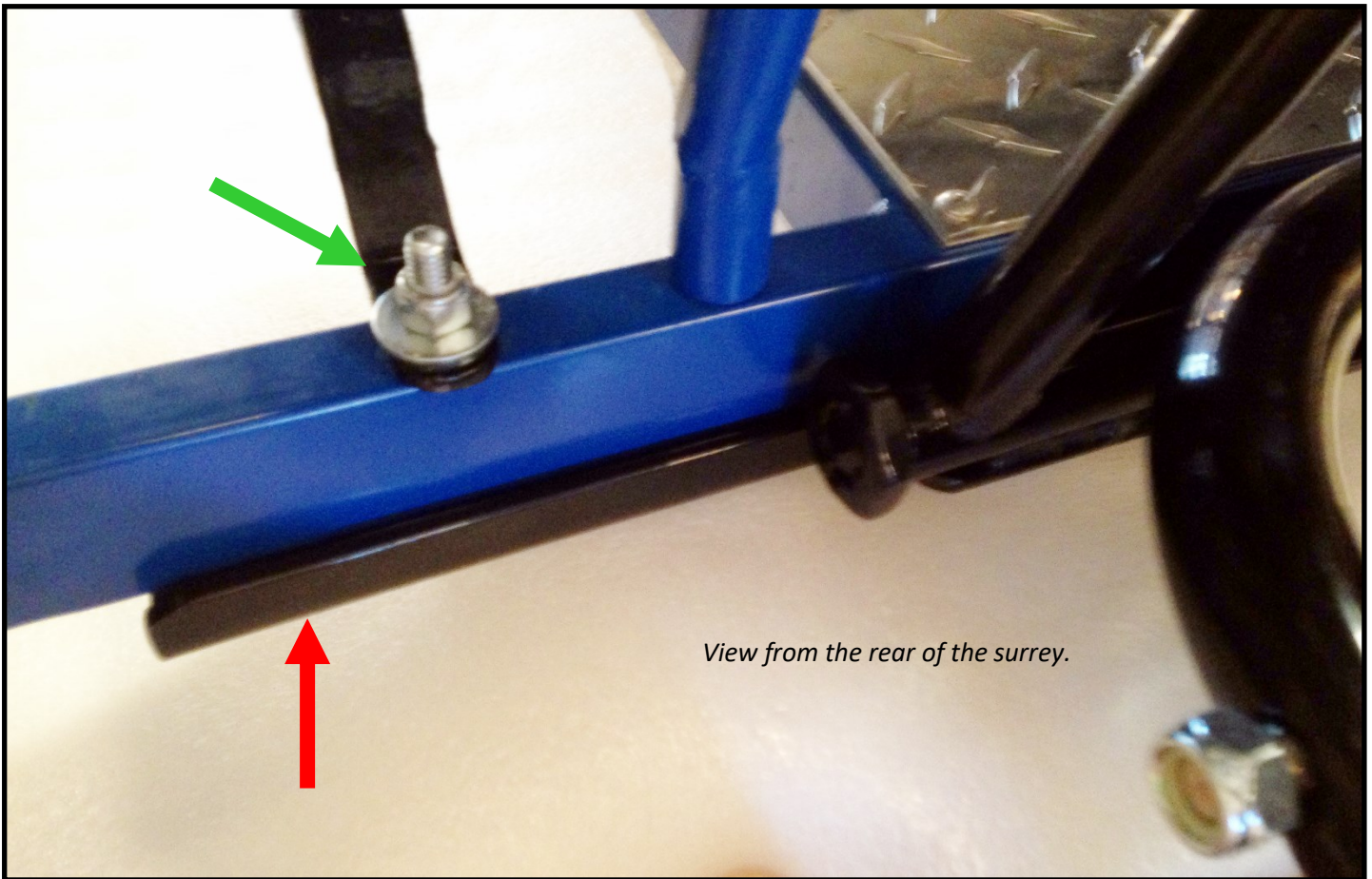
1. Find center of rear base frame (surrey's base frame). You will need to drill three 3/8ths holes. To do so, measure the overall length of the rear base frame (red dotted line marking the distance between the two red lines below). Find the center of the tube by dividing the overall length in half (yellow line below—A). Drill the first 3/8ths hole in the center of the tube at the yellow mark position. It is always advisable to first mark where the hole should be with a marker, and use a center punch and hammer to make an indentation on the frame marking where the drill bit will start the hole. **Be sure bit is perpendicular to the frame!**

Fig. 1



2. Measure 8 inches from the center of the hole drilled in the center of the tube (A -yellow line below) in both directions (B & C -at the green lines below). Mark the tubing at the 8 inch mark measuring from both sides of the center hole. The two marks should match the holes in the two legs of the battery box frame, approximately 16 inches center to center hole. Check it!
3. Use the angle iron (L shaped; see the red arrow on Fig.2) base piece of the Hitch Hiker to check the hole pattern (the center hole and the two marks 8 inches from the center of the center hole — *measure twice, drill once!*) Always drill perpendicular to frame and straight!
4. Drill a 3/8ths hole in each of the positions marked below with green lines for a total of three 3/8ths holes. These three holes (two green and one yellow positions) are attachment points for the angle iron base piece of the Hitch Hiker.

Fig. 2



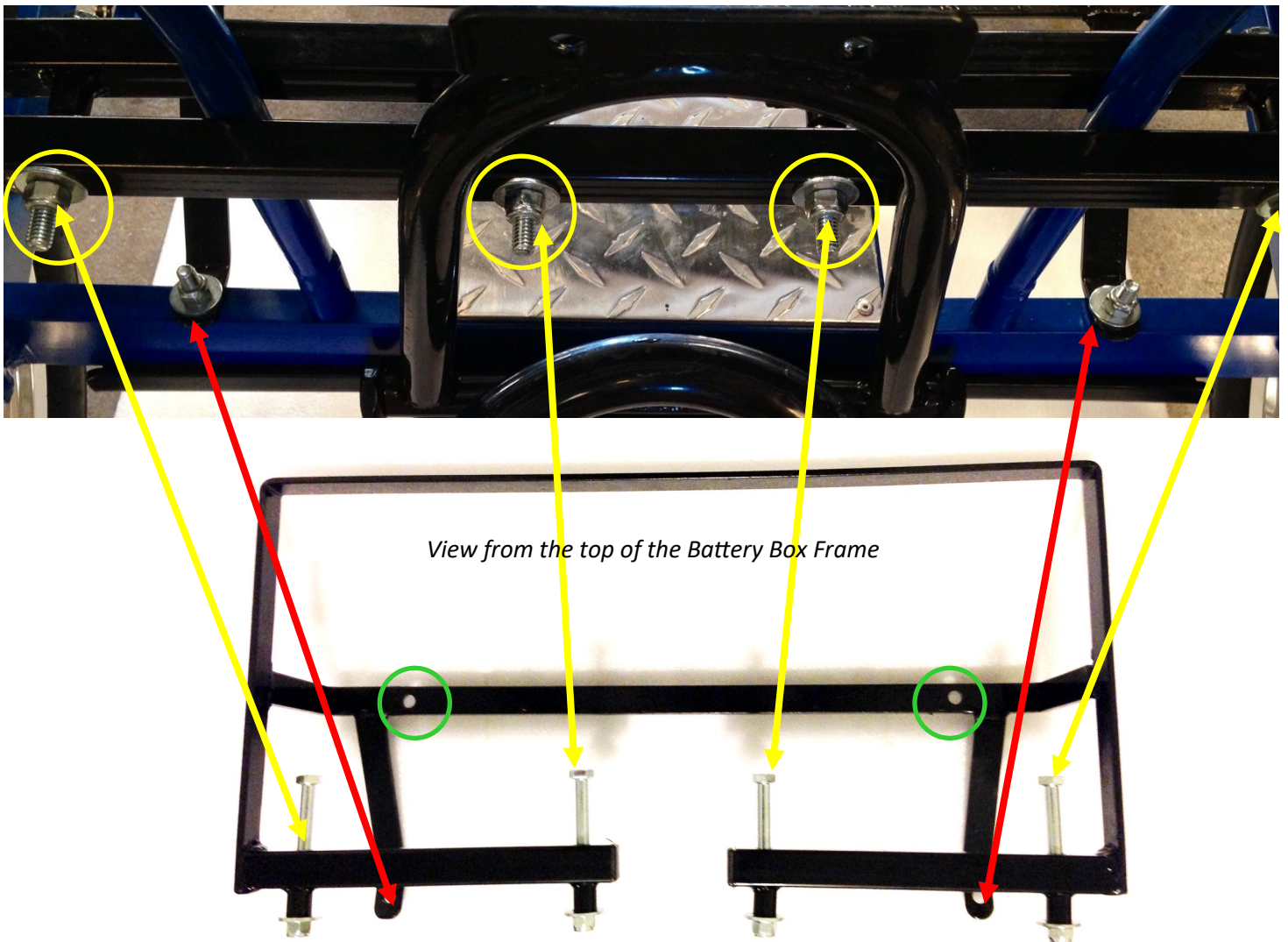
5. Three 3.5 inch bolts are provided to secure the Hitch Hiker base piece to the base frame of the Surrey. Entering from the bottom, the bolt should pass through the black angle iron base frame though the nylon spacer and next through the base frame. The center bolt will secure to the frame with a washer and nylon lock nut. The bolts on each side of the center hole will pass through the black legs for the battery box (see the green arrow in Fig. 2 above) before applying the washer and securing with the nylon lock nut. Please note, it might be necessary to flex the 2 legs out to match the holes.
6. Tighten all three nylon lock nuts so that each of the battery box legs are flush with the frame. Do not over-tighten the nuts.



View from the front of the surrey.

Spacers—Washers

View from the rear of the surrey.



7. Locate the 4 horizontal bolts on the backside of the Battery Box Frame. *(Note that the first bolt on the driver side of the frame has the ignition keys attached)*
8. The 4 horizontal bolts pass through the horizontal brace on the Hitch Hiker frame (two on each side of the crank). Each bolt secures with a washer and a nylon lock nut. Each side secures itself around the rear stay backrest braces that runs from each side frame down to the base frame.
9. Securely tighten all 4 bolts alternating a complete turn on each bolt until all are tightened equally. Tight so that no rattle develops, but do not over-tighten. Tighten to close gaps is not necessary.
10. Set the black Battery Box into the Battery Box Frame. Fasten the Battery Box to the Battery Box Frame through the floor of the Battery Box with the two bolts supplied. *(see the green circles above) Do not overtighten! Overtightening might damages the Battery Box!*

Step 1. Attach the throttle to the dashboard of the Surrey. Position the throttle to the right of the brake arm as shown in Fig. 1. T

Carefully position the throttle so that (1) the brake arm is unimpeded so it can be properly operated (2) the driver can comfortably pedal the Surrey. When the driver's knee is on the upswing while pedaling, the throttle grip should be clear of the knee's path. Tighten both nuts.

Step 2. Route Throttle wire along the bottom bar of the dashboard and down the side frame. Use the brake cable housing as a guide down the side frame. Use an electrical tie to secure the throttle wire to the brake cable housing in positions to keep the throttle wire from hanging loose. A loose hanging wire can be caught on passing objects possible causing damage to the wire. (see Fig.2)

Step 3. Route the Throttle wire on top of the base frame and over the crank bottom bracket. Use electrical zip ties to secure the slack from the Throttle wire as needed. (see Fig. 3)

Step 4. Finally, route the Throttle wire between the top and bottom of the chain (or in any other direction) toward the bottom of the battery box, entering from the bottom. (see Fig. 4)



Fig. 1.

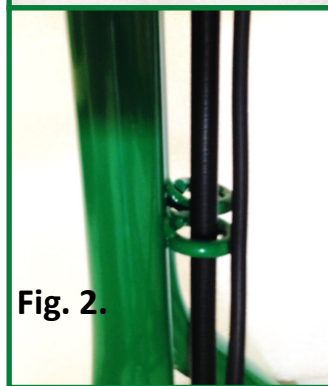


Fig. 2.

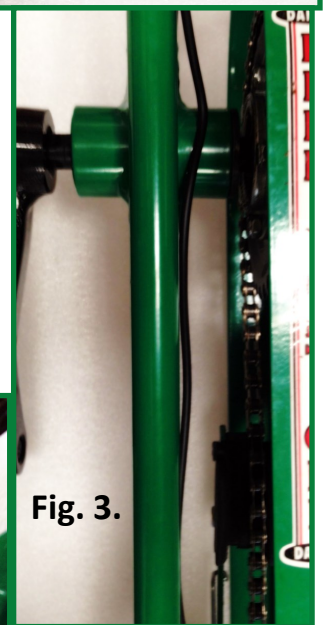


Fig. 3.



Fig. 4.

Install Wheel and Fender— (1) Position the Motor Wheel with the wiring on the left side of the wheel. (2) Check the rotation arrow on the side of the tire to confirm the correct direction of spin. (3) Slide the axle into the slotted stay with the tongue of the nonturn washer on the top side of the wheel to prevent the wheel from sliding too far into the slots of the frame. The nonturn washer can be placed on the inside or outside of the frame slot. (4) Tighten the wheel with alternating turns (on left and right side of axle) until completely tight. (5) Install the fender over the rear wheel using the hardware provided in the holes on the left and right side of the wheel that are the front side of the frame. The fender can be adjusted front to back by rotating it before firmly tightening both bolts.

Electrical Connections

The box will mount under the bottom seat at the rear of the surry.

Steps:

Install Battery in Battery Box-

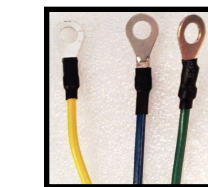
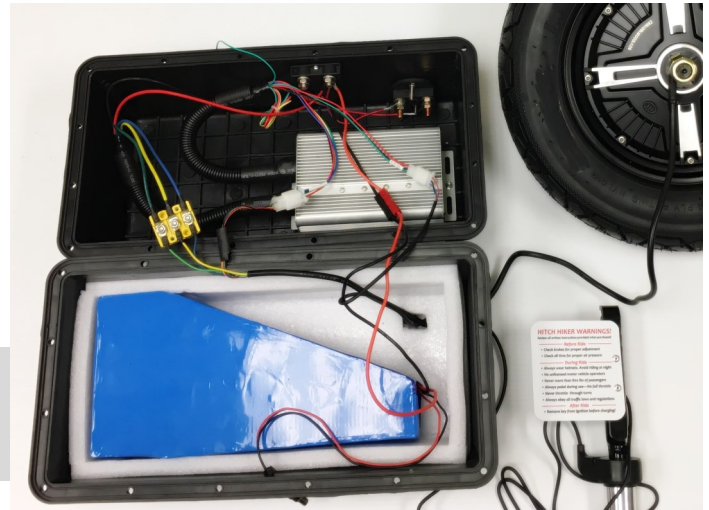
1. The Battery will include a white foam pad around the Battery in the shipping box. *Do not remove that pad.*

2. Inside the Battery Box, locate the three connection points not connected already including a (i) yellow plastic block, (ii) rectangular connector with a white, black and red wire and (iii) a square connector with multiple colored wires attached.

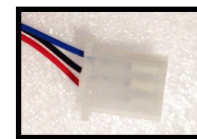
3. From the Hitch Hiker Wheel, there are a total of 4 wires that exit from the driver side of the wheel. Those four wires should enter the Battery Box through the hole on the bottom side of the Battery Box, which is easily identifiable.

4. After removing the cover from the yellow box with a Phillips screwdriver, use a 8 mm wrench to remove the nut of the yellow wire. Attach the yellow wire from the motor and replace the 8 mm nut and tighten it securely. Repeat this step for both the green and blue wire. Make sure the colors are matched, yellow to yellow, blue to blue and green to green. Securely tight all nuts.

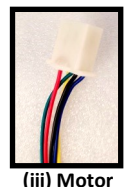
5. Replace the yellow block cover and secure it with the two Phillips screws. ***If optional speedometer/voltmeter was purchased, skip to the attached addendum at the back of these instructions.***



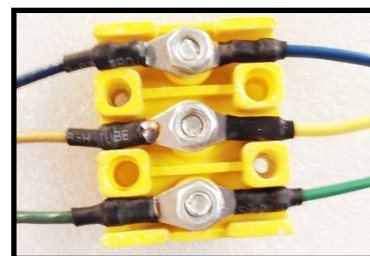
(i) Wires inside yellow block



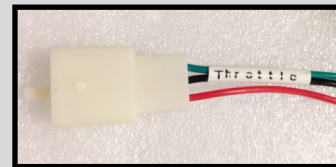
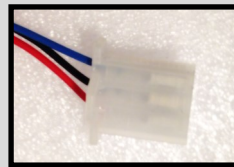
(ii) Throttle Connector



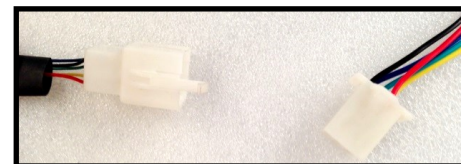
(iii) Motor Connector



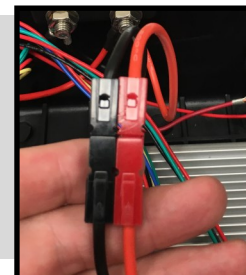
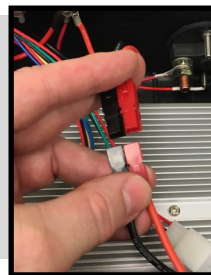
6. Locate the red, black and green Throttle wire from the controller (marked Throttle). Plug the male end with the red, black and blue wires into the controller side connector matching red to red.



7. Locate the multi-colored wire from the Motor wheel. Locate the multi-colored wire from Controller (marked Hall Sensors). Match the colors and securely plug the wire connector in until it clicks into place.



8. Locate the red and black connector attached to the red and black wire from the connection block. Connect the battery to the connection block by matching the colors and firmly pressing the connectors together.



9. Replace the Battery Box cover and secure the Battery Box cover to the base with the Phillips head screws provided with one at each corner.

10. After installation is complete and all components are tight, check the operating instruction for charging procedures.

11. After the Hitch Hiker is fully charged, next rotate the crank clockwise to lift the Hitch Hiker wheel off the ground, insert the key and turn the ignition all the way to the right until you feel spring loaded resistance, remove your hand from the key and gently twist the throttle. The wheel should spin. The Hitch Hiker is ready to ride!

12. If the wheel does not spin, check **all** connections, including battery terminal connections, and butt end connections. Again, test the throttle.

13. Test the battery with a volt meter to confirm that the battery is providing at least 54 volts. Again, test the throttle.

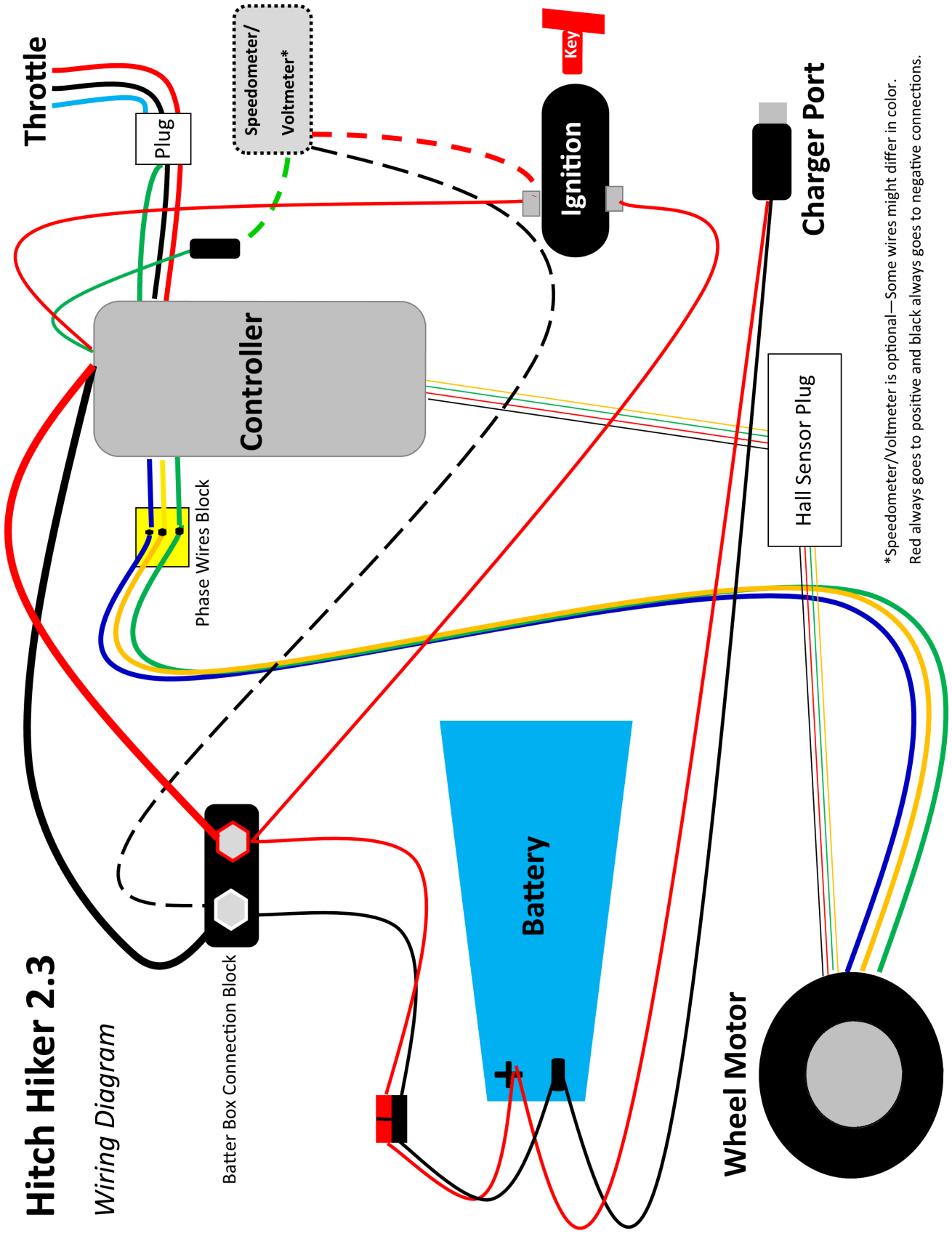
14. Please check to make sure you have proper tire pressure in the Hitch Hiker tire and all tires on your Surrey. Recommended tire pressure is noted on the side of each tire. Do this before each ride during the life of the Hitch Hiker.

15. Check proper brake adjustment on your Surrey wheels before each ride also!

If you have questions, call 1.800.765.7370.

Hitch Hiker 2.3

Wiring Diagram



*Speedometer/Voltmeter is optional—Some wires might differ in color.
Red always goes to positive and black always goes to negative connections.

Speedometer / Voltmeter Installation Addendum

1. Using the bracket that was purchased with the speedometer/voltmeter, attach the unit on the driver side awning post at the desired height for the user.
2. Run the electrical wires encased in the housing along the same route along the frame as the brake cables. Before getting to the front of the driver side rear wheel, run the wires under the Hitch Hiker's black box and enter the access hole on the right side, under the box.
3. As shown by the wire diagram on the previous page, the speedometer/voltmeter properly connects by:
 - A. Attach the red power wire to the side of the ignition switch where the controller's thin red switch wire is connected (*opposite side of the ignition switch that is connected to the thicker red wire that is connected to the positive (+) red post of the connection block*).
 - B. Attach the black wire to the negative (-) black post of the connection block.
 - C. Connect the single wire from the speedometer/voltmeter (*with the single wire from the controller (usually green)*). We advise using a small bit of electrical tape to secure the connection and to ensure it will not vibrate loose.



Proceed with the remainder of the installation in the instructions!

CERTIFICATE OF WARRANTY

THIS CERTIFICATE OF WARRANTY offered by International Surrey Company Ltd. ("Company") is a non-transferable, limited warranty on the electric product ("Product"). The limited, non-transferable warranty is a 180 day warranty from the date of delivery on all mechanical frame components and 90 day warranty on all electrical components against all material and manufacturing defects. All other warranties, express or implied, statutory and otherwise, including but not limited to fitness for a particular purpose and merchantability, are specifically disclaimed. Damage or component failure from normal wear and tear and/or misuse, casualty or other damage is specifically excluded from this Certificate of Warranty. This warranty does not include any labor cost in connection with repairing, replacing and maintaining the Product. All warranty claims must be made to Company in writing and all parts on which warranty is claimed must be returned to Company for its determination, in its sole and absolute discretion, on whether this warranty applies. Claimant is responsible for all shipping, handling and/or freight costs associated with making a claim on this warranty.

