

ROADIO

RadRover 6 Install Instructions

This guide should take approximately 50 minutes to complete.

1. Gather your Roadio kit

Tools:

Allen keys (2.5mm, 3mm, 5mm)



Flush Cutters



Socket Wrench (8mm)



Fasteners:

Zip ties (small and large)



1x button head hex bolt M5x0.8 10mm
(*spare*)



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Roadio Hardware:

Rear camera+mount+1m extension cable



Front camera+mount+1.2m extension cable



Roadio controller+mount



Lightning USB cable (1.4m)



PIB



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- **General tip:** Before inserting the connectors into each other, make sure the arrows on the housing point at each other. This ensures that the plugs are properly keyed together when they are connected.



2. Mount the Roadio Controller

- Step 2 will be completed on the middle of the bike in the area marked by the red box.



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- Using a 3mm Allen key, unscrew the rear fender mounting bolt on the seat stay bridge. (see green arrow in previous picture for location).

Set this bolt aside for now.



- Cut the cable bundle between the seat tube and rear fender to clear space to add the Roadio controller.



Cutting the zip ties holding in the cable bundle.

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- Place Roadio controller mount in between the bike frame and the rear wheel fender attachment point. Re-use the bolt you just removed for this step to clamp the mount to the frame.
 - a. If there was no bolt on your bike in this mounting point, use the included spare bolt (M5x10mm).



Roadio controller mount secured between bike frame and rear fender attachment point.

- Ensure that the Roadio controller is oriented correctly. The top face of Roadio controller (with the logo) will be facing towards the front of bike, with the cable exit pointing towards the ground.



Roadio controller mount in place. Note orientation of Roadio controller.

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3. Connecting the PIB

- The PIB will connect to an accessory power port located near the base of the seat tube (marked by the red box in the picture to the right).



- Locate the accessory port near the bottom of the Roadio controller on the bike. Remove the dummy connector plug from the end.
 - a. **Note:** The dummy connector pulls straight out. If it feels really stuck, rock it back and forth while pulling it out.



Dummy connector plug.



Accessory port without the dummy connector.

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- Connect the PIB to the accessory port of the bike.



- Connect the red connector on the Roadio controller to the red connector on the other end of the PIB.



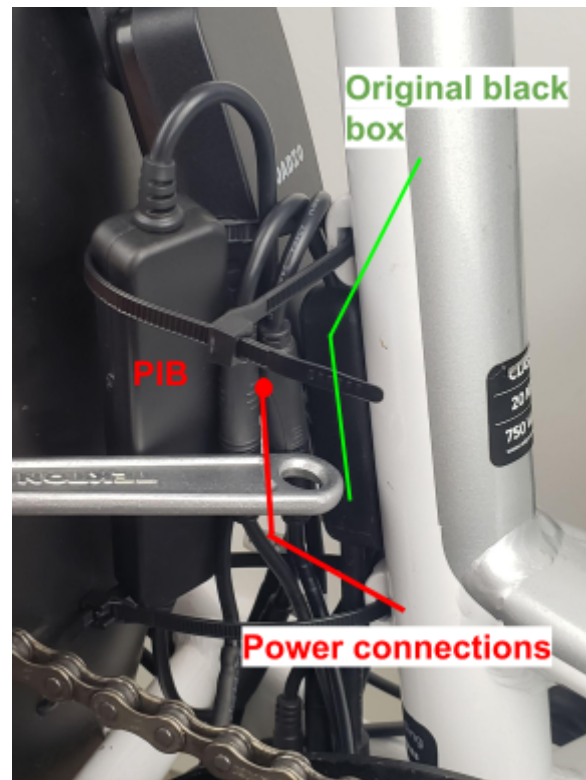
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- Locate the two zip tie mounts on the vertical tube of the bike frame in this area (*the seat tube*).
- Thread two large zip ties through these mounts, bending them in front of the Roadio Controller.
 - a. The zip ties do not wrap around the Roadio controller - they only contain the PIB and other associated cables.



Zip tie mounts on back of seat tube.

- Bundle together the PIB box, the cable connectors, and the original Rad black box on the bike. **Loosely** secure them with the two zip ties.
 - a. **DON'T** tighten these zip ties yet to allow yourself to manage cable slack later on.



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4. Mount the Front Camera

- During the next two steps, you will install two cables (front camera cable and Lightning USB cable) that run down the downtube of the bike and under the bottom part of the cable cover.



- The front camera cable will run down the left side of the bike when you are looking at the front of the bike.
- The Lightning USB cable will run down the other side of the downtube (on the right side of the bike).

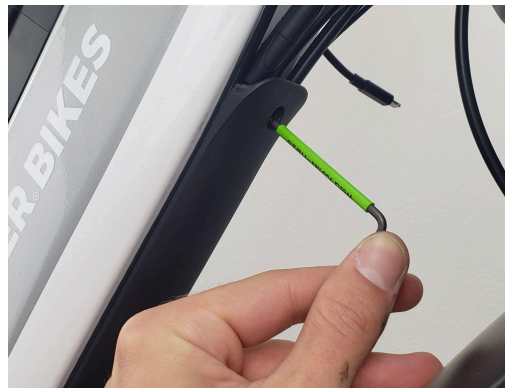


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- Use a 5mm Allen key (*the largest one included in your kit*) to unscrew the upper 2 headtube mounting bolts. Install the front camera (**above the mounting holes**) using the original bolts.
 - a. Camera cable should be on the left side of the bike when looking at the camera from the front.



- Loosen the four bolts of the cable cover under the main tube of the bike by about 3 or 4 turns.
 - a. **IMPORTANT:** Do NOT back the screws all the way out (it is a big hassle to get them back in)
 - b. If you accidentally remove one of the bolts, just put it back in place with a couple of turns to hold it in before proceeding.



Loosening the top bolt of the cable cover.



Location of all cable cover bolts.

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- Begin to tuck the front camera cable into the edge of the cable cover, leaving a small amount of cable slack such that the camera connector isn't being pulled on too hard.



Tucking the front camera cable into the cable cover with a small amount of cable slack.

- Route the cable down along the length of the downtube, tucking it into the cable cover as you go.
 - a. Note: it can be helpful to use an Allen key to help feed the cable into the side of the cable cover.



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- Route the camera cable up through the triangular opening in the bike frame at the bottom of the bike in between the cranks and insert the front camera cable connector into the green connector on the Roadio controller labeled “FRONT”.



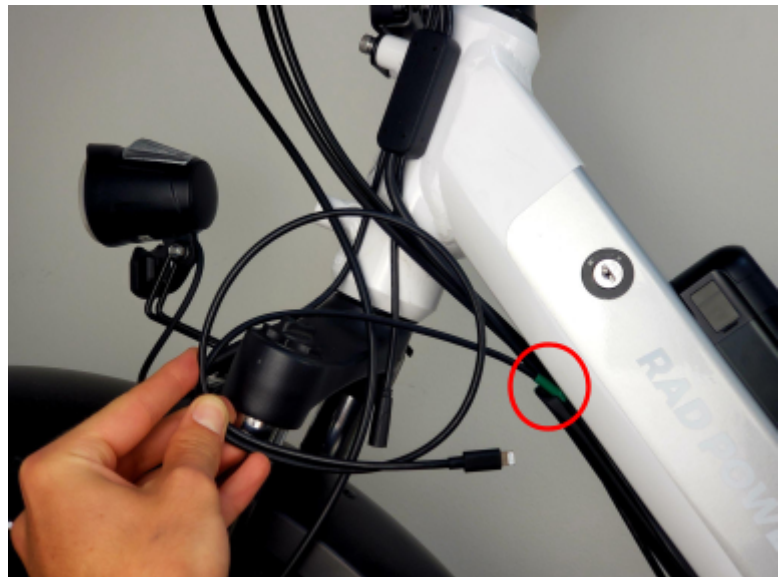
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5. Install the Lightning USB cable

- The Lightning USB cable has a piece of colored electrical tape about 30" inches from the end with the Lightning connector.
- In the next step, the Lightning connector should be at the front end of the bike such that it can be plugged into a Roadio app equipped phone that will be mounted to the handlebars. This will position the piece of colored tape at the top of the cable cover.



- Begin routing this cable along the right side of the cable cover when looking at the front of the bike.
- Align the piece of tape at the top of the cable cover to ensure there is enough slack in the cable for it to be plugged into a phone.



Note the piece of colored tape at the top of the cable cover.

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- The Lightning USB cable will route down through the downtube cable cover on the opposite side as the camera cable.



- Use your 2.5mm Allen key to re-tighten the four bolts on the cable cover to secure it to the bike frame with the 2 new cables inside.



Cable cover bolt locations.

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- Connect the Lightning USB cable to its associated connector on the Roadio controller (black connection port).



- If there is excess cable slack, feed it through the loose zip ties you placed in this area.
 - a. Again, don't tighten these zip ties just yet.



- Returning to the front of the bike, bundle the Lightning USB cable together with the existing cables at the front of the bike and secure it to these existing cables with two small zip ties.
- Use your flush cutters to snip off the excess length of the zip tie.



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6. Mount Rear Camera

- The rear camera will be mounted on the backmost horizontal rail of the rear rack.



- Place the 'clamp' part of the rear camera mount on the center of the back horizontal rail of the rear rack.
- Use your socket wrench and 3mm Allen key to tighten the bolt/lock nut that holds the parts of the clamp together.
 - a. The socket wrench should remain stationary on the back while the Allen key is rotated to tighten the mount.
- Tighten the clamp slightly but not all the way, then reposition the mount so that it is at the center of the rail (*if necessary*).
Make sure the camera angle is parallel to the ground.



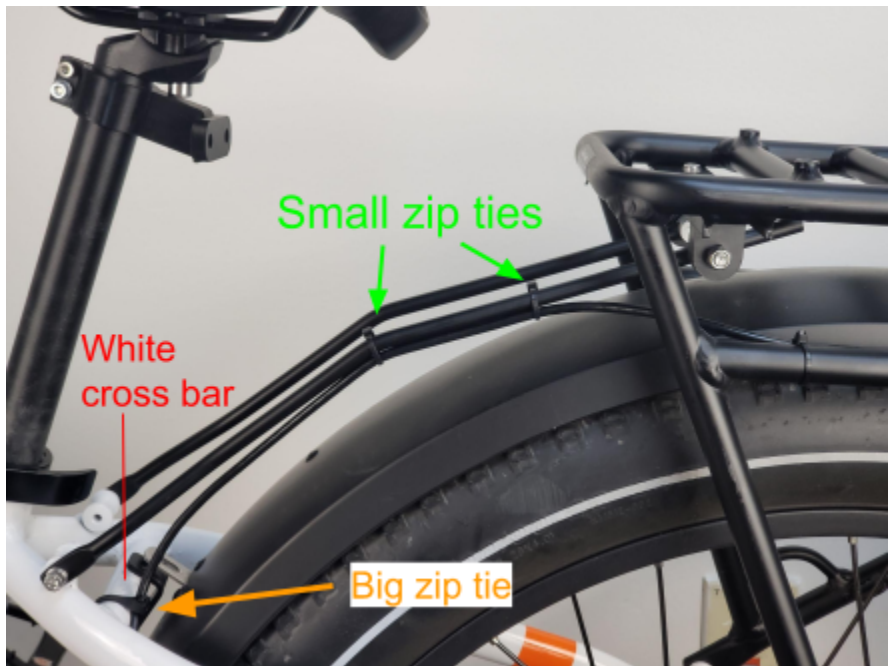
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- Route the rear camera cable along the inside part of the lower bar of the rear rack. Use two small zip ties to secure the cable to the bar.
- Use your flush cutters to cut off the excess length of the zip tie.



Routing the rear camera cable along the inside part of the lower bar.

- Route the camera cable along the rear support bars of the rear rack and then down in between the fender and the white cross bar in the middle.
- Use two small zip ties to secure the cable to the support bars of the rear rack and a big zip tie to secure the cable to the white cross bar.
- Cut the extra zip tie length.



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- Pass the camera cable between the white bar highlighted in green and up through the bike frame opening highlighted in magenta.



Cable path shown in blue.

- Connect the rear camera cable to the green connector on the Roadio controller labeled "REAR"



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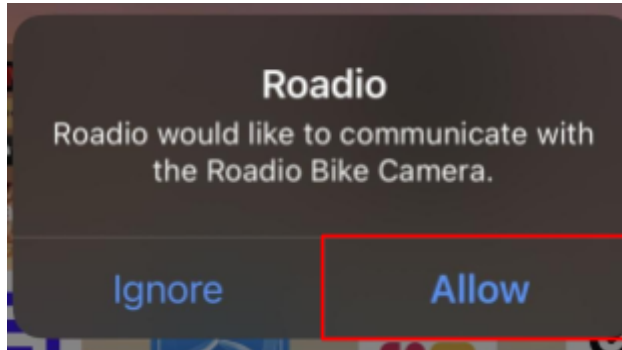
- Cinch the zip ties to secure the cable bundle to the seat tube, then cut off the extra zip tie length with the flush cutters.



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7. Safety checks / Miscellaneous

- Turn on the bike power, then plug in a Roadio-equipped phone to confirm that the system works.
 - a. Check to make sure the video feed from the rear camera is clear and not tilted.
 - b. Click (Allow) when given the option in the Roadio pop-up, then confirm that you are getting a live view from the rear camera.



- Using your flush cutters, make sure you have cut the excess length on all zip ties.
 - a. **Important:** ensure zip tie cuts are flush, zip ties can leave sharp tips that can cut riders.
- **Safety check 1:** Are all nuts and bolts securely fastened? (including any existing on the bike that could have been affected).
- **Safety check 2:** Cable control - have you securely fastened all cables added or affected? Is there extra cable length anywhere that needs to be bundled / affixed to the bike? Specific checks:
 - a. Make sure handlebar range of motion is not restricted.
 - b. Confirm that loose cables / wire routing does not have the potential of getting in the way of pedaling, or snagged in any way near the rider, and that no loose wires or anything could get into the spokes. If any cables are loose, use zip ties to secure them tighter.
 - c. Confirm that all cables are plugged into the correct plug on the Roadio controller. Follow the route of the cable from camera to controller for both the front and rear cameras.



- The install and safety checks are complete! You are now ready to plug your phone in and ride with Roadio!