

Installation Instructions

Variable Speed Kit for Razor electric scooters

Model: RAZ-VSK3

Fits the following Razor scooters:

- E200
- E300
- MX350 / MX400
- Pocket Mod
- Pocket Rocket



Preparation

- Follow these instructions carefully. For safety, place something under the drive wheel so it cannot move.
- Make sure the scooter is off and disconnect the charger.
- Installing our Variable Speed Kits is simple, it's the same procedure as installing an electrical kit from Razor and there is a video on our website.
- Tools Required (not included):
 - Phillips head screwdriver
 - Flat head screwdriver
 - Metric allen wrench set (2.5mm, 3mm, 4mm, and 5mm)
 - 8mm and 10mm wrench
 - adhesive velcro

Remove old components

* Note that these steps were written for the E300, but they should be mostly similar on other Razor scooters.

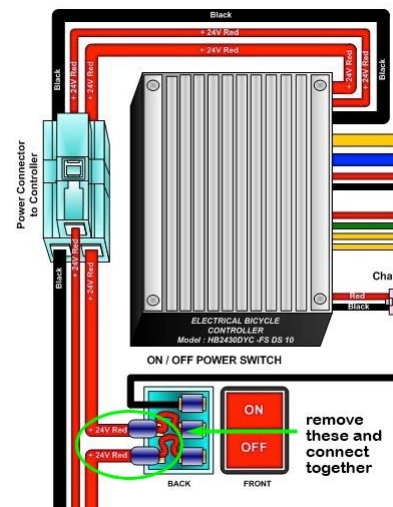
1. Using a phillips screwdriver, remove the deck screws or screws to the enclosed area. On the E series scooters you will need to use the 8mm wrench to hold the locknut on the back 2 screws.
2. Using a phillips screwdriver, remove the screws on the battery bracket and remove the bracket.
3. Disconnect the 5 plastic wire connectors on the control module by depressing the tab on each connector.
4. Using a phillips screwdriver, remove the 2 screws holding the control module in to the battery enclosure.
5. Now the controller can be pulled out to make it easier to get at the 2 connectors from the on/off switch. These can be pulled off by depressing the tab. Remove the controller from the battery enclosure.
6. Remove the slot on the enclosure where the wires enter and remove the throttle wire. Carefully cut the zip tie located between the fork and the deck and unwrap the wire wraps.
7. Using a 2.5mm allen wrench, loosen the set screw on the throttle and slide the throttle away from the grip.
8. Remove the old grip (if there is one) from the throttle side of the handlebars. It may require a lot of twisting and pulling to get it off. You can insert a flat head screwdriver between the handlebar and grip and spray WD-40 inside to make this easier.
9. Once the grip is off, now you can slide the throttle off the handlebar.

Convert older MX350, Pocket Mod, or Pocket Rocket to new wiring

- With the original controller removed, it's easy to determine if you have an older bike that needs to be converted. If the controller didn't have wires connecting directly to the switch in step 5 above and the connector for the battery has 3 wires, you have an older version and will need to proceed with this section. If it only has 2 wires move on to "Installing the new pieces"
- E200, E300, and some old Pocket Rockets use a circuit breaker. If your scooter has a circuit breaker please follow the instructions in "Convert older E200 / E300"
- If you didn't remove the 2 red wires connected to the on/off switch in step 5, do so now.
- Using the provided butt connector, you will connect these 2 wires together. Cut off the terminals from both wires and strip back a bit of insulation, then insert each stripped end in to the butt connector and crimp it down. The finished result should look like the picture below.

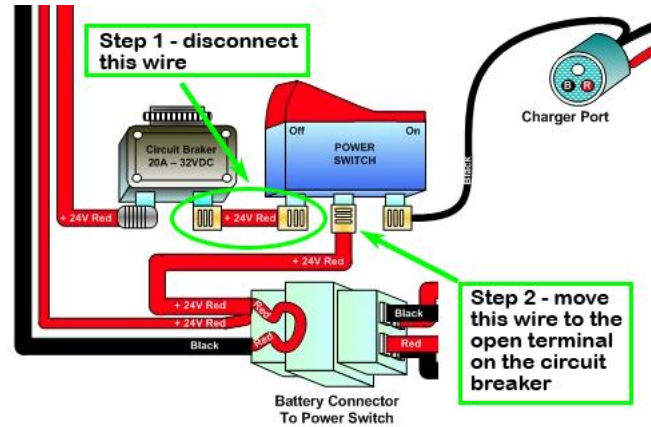


- The 2 individual red and blue wires on the new controller will now connect to the free terminals on the power switch.



Convert older E200 / E300, Ground Force or Mini Chopper to new wiring

- With the controller removed, it's easy to determine if you have an older scooter that needs to be converted. If the controller didn't have wires connecting directly to the switch in step 5 above and the connector for the battery has 3 wires, you have an older version and will need to proceed with this section. If it only has 2 wires move on to "Installing the new pieces"
- These instructions are for converting scooters with circuit breakers, if you do not have a circuit breaker use the "Convert older MX350" instructions above.
- Disconnect and remove the wire that goes from the power switch to the circuit breaker as shown in the image above.
- Disconnect the other red wire from the power switch and connect it to the now open terminal on the circuit breaker.
- The 2 individual red and blue wires on the new controller will now connect to the free terminals on the power switch.



Installing the new pieces

10. Slide the new throttle on the handlebar and tighten the set screw with a 3mm allen wrench to secure it in place.
11. Although pressure will hold it in place, we recommend putting some adhesive velcro on the bottom of the control module to secure it in place.
12. Before putting the new controller in to the battery enclosure, connect the 2 individual red and blue wires to the on/off switch. (There should also be a black wire still connected to the switch that remains in place. If you removed the black wire it goes on the terminal that has a different metal color.) Now secure the new control module inside where the old controller was and connect all the white connectors.
13. Now reconnect all of the white plastic connectors. They are labeled, but each connector is unique and can only connect to it's proper corresponding one. Tuck all the wires and connectors away neatly inside the enclosure.
14. Once everything is plugged back in, place something under the scooter to keep the drive wheel off the ground (if the throttle were hooked up incorrectly it may go wide open). Switch it on and turn the throttle to make sure it is working properly.
15. If everything is working fine, you can install the matching grip on the other side of your handlebars. Removing the old grip will require a lot of twisting and pulling, but once off getting the new one on isn't as bad and you can use a rubber mallet to tap it in if you have one. Also rewrap the wires using the wrap you removed in step 2 and screw back in the battery hold down bracket and deck plate or enclosure screws.

Note about power switch connection for new model MX350 and MX400 dirt bikes

Newer Razor dirt bikes do not have a black wire connecting from the charger port to the power switch. Instead that wire comes from the control module. If you have one of these model Razors you can use the black adapter wire included with the kit and connect it as shown in the picture to the right.

The side with a small straight terminal is inserted in to the throttle connector in the slot next to the yellow wire. The other side will connect to the brass colored terminal on the power switch.



If you have any questions or it's not working as it should, give us a call 720-443-3231, we're always here to help.