



STQ EZ1 2002ST SPEED AND TORQUE KIT 1988 to 1994.5 MARATHON MODELS (SOLID STATE)

This kit is designed for E-Z-GO 1988 to 1994.5 Marathon Models using Solid State Speed control. **This kit is not designed for resistor controlled cars.** For resistor controlled cars use part number (STQ EZ1 2001ST).



As with any installation Safety is a must! Always wear the appropriate eye protection during the install! Make sure the car is properly supported with jack stands. Make sure all connections are clean and tight to prevent arcing and heat issues. Some heavy components such as batteries and or motor can weigh up to 70 lbs or more. Have someone assist you while lifting these items. Make sure the battery pack is disconnected at battery positive and negative before beginning the install.

Removal of components:

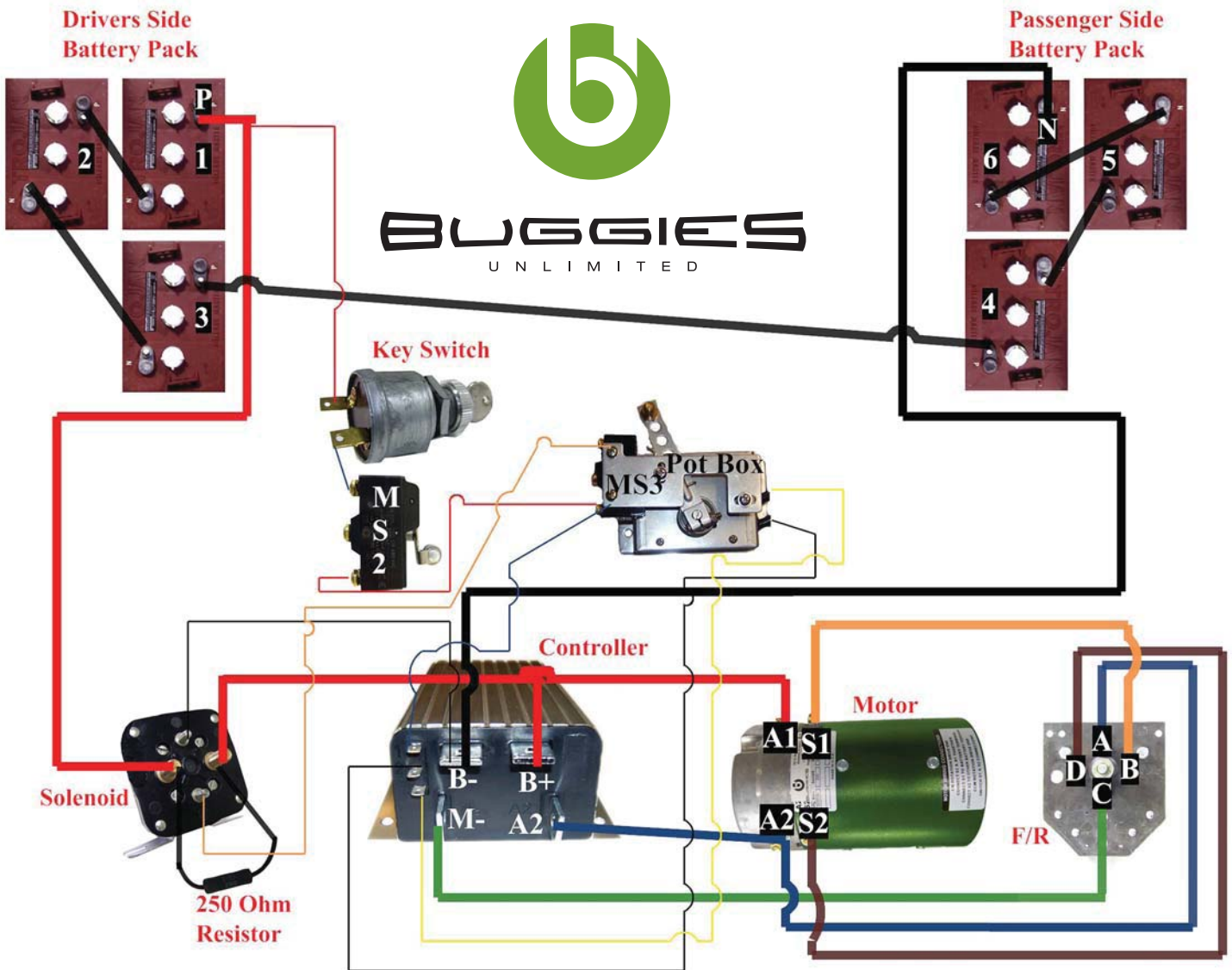
- Discharge the controller by shorting across B+ to B- (**making sure the battery pack is disconnected**) with a jumper wire or insulated screw driver.
- Remove all power cables and retain all the activation wiring and hardware
- Remove the motor using care when lifting as it is heavy and will drop quickly
- Remove the controller and solenoid
- It is recommended to remove the batteries for cleaning and or painting of the battery frame work; this will also aid in a much easier installation of the new components.

Installation:

- Install a small amount of grease on the motor coupling and install the motor to the drive unit. When tightening the mounting bolts use a crisscross pattern to evenly secure the motor.
- Install the controller and make sure you support the controller terminal connections using the two wrench method. **Note: bending the controller terminal can damage the seals or internal controller components, this will not be covered by warranty.**
- Install the solenoid and make sure when connecting the cables to use the two wrench technique to avoid breaking the terminals. Make sure to install the 250 ohm resistor across the two large terminals. If the system had a pre existing diode on the two small terminals discard it.
- Install the power cables as per page two and make sure of proper routing and connection
- After all connections are made connect the negative battery cable last and watch for any kind of arcing and if arcing is noticed **“stop”** and recheck your wiring!

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- 38.5" Orange Coded Cable (Fits from S1 to B on F/R assembly)
- 21.5" Green Coded Cable (Fits from M- on Controller to C on F/R assembly)
- 20" Red Coded Cable (Fits from Solenoid to Battery Positive)
- 11" Red Coded Cable (Fits from Solenoid to B+ on the Controller)
- 20" Blue Coded Cable (Fits from A2 on the Motor to A2 on the Controller) **Optional**
- 25.5" Red Coded Cable (Fits from A1 on Motor to B+ on the Controller)
- 37.5" Brown Coded Cable (Fits from S2 on Motor to D on F/R)
- 40.5" Blue Coded Cable (Fits from A2 on Motor to A on F/R)
- 44.5" Black Coded Cable (Fits from B- on Controller to Battery Negative)
- 10" Black Coded Battery Cable (2)
- 17" Black Coded Battery Cable (1)
- 22" Black Coded Battery Cable (1)
- 29.5" Black Coded Battery Cable (1)

The 20" Blue Coded Cable from A2 at the Motor to A2 on the Controller is **optional** and if the Controller you are using does not have terminal A2 on the Controller it **is not used**. The 40.5" Blue Coded Cable from A2 on the Motor to A on the F/R assembly is used.

Optional Backup Buzzer Circuit

On the shifter you will find (some models) two micro switches mounted together. One is used for 1/2 speed reverse and one for the back up alarm. The back up circuit is as per the drawing either single switch or double stacked. O.E.M. at COM is a white wire. If this wire is missing just connect to battery positive with a red or white wire.

