

Hi Performance Electric Vehicle Systems

620 Magnolia Avenue Suite B Ontario, CA 91762 (909) 923-1973

INSTALLATION INSTRUCTIONS

Yamaha G MAX Installation Notes

CURTIS 1232, 1234, 1236 OR 1238 AC INDUCTION MOTOR/ CONTROLLER

Yamaha G Max Installation Notes:

1: Remove all Battery Cables

2: Remove original Motor, Controller and wiring harness. (Unplug all connectors, Do Not cut, most connectors will be reused.)

3: Install controller adapter plate in place of old controller. Use supplied 6mm flat head bolts.

4: Install new Motor. Top bolt of passenger side shock will need to be removed to install motor, after motor is installed, reinstall bolt. Shock reallocation is not necessary. Position motor so the Terminal block is rotated slightly to the rear of the cart. Use 3 supplied ¹/₄-20 x 1" bolts.

5: Install new motor Controller. Main 35-pin connector faces down. Use supplied ¹/₄-20 x 1 ¹/₄" bolts.

6: Mount the dash display. Some custom dashes will allow for a 2 1/16" hole to be drilled in dash for mounting. If there is not sufficient space in dash for mounting, use a standard gauge mounting bracket from an auto parts store, and mount under the dash. Drill a 3/8" hole and install the menu button near the dash display. Cut hole and mount the Golf Street switch. Any SPST Switch can be used for the Golf Street Switch.

7: Install wiring harness. Route the new harness the same as the original. Plug in the connectors to the main solenoid, Forward & Reverse Switch and the key switch. Connect the Menu Button to one of the Red/Blue wires and the White/Red wire. Connect the Golf/Street Switch to the other Red/Blue and the Brown wires.

8: Cut original connector from wires going to the Throttle Pot and Throttle switch. Connect wires color to color.

9: Mount supplied relay near the brake assembly. Also mount a factory Yamaha style Brake Switch in the normal location. Use of the Brake Switch is not optional, it must be installed for boosted Regen and programming features to work. The relay is optional, use only if the cart is equipped with Brake Lights. Connect wires as follows:
Orange to #85 on relay
Blue to #86 and one side of the brake switch
+ 12 volts to #30 on Relay
Brake lights to #87 on Relay
Purple wire to Brake Switch

In this installation, the Relay is what turns on the brake lights, not the Switch. The switch signal is used by the Motor Controller to not only turn on the Brake Lights, but also provide

boosted Regen while braking. DO NOT use a timer to turn Off the brake lights, the controller automatically does this. The Pink wire is used for the optional Battery Filling System Pump.

10: Connect the Motor to the Controller using the supplied 17" long cables. U to U, V to V, W to W. Plug in small gray cable coming from motor to mating plug on wiring harness.

11: Run the 13" Red cable from the solenoid and the stud labeled Fuse on the controller. Run the longer Red cable from the + on the Batteries to the solenoid, with the wire with the 10 amp fuse. Install all other Battery cables. New cables are the same lengths as the originals, so there is no need to remove or change the position of any of the batteries.

12: System is now ready to run. You <u>can</u> test run this system with the cart up on jack stands; no damage will come to the motor. After test running the motor, proceed to the throttle set up in the next pages.

Operation:

<u>Dash Display</u> - When your key is first turned to the ON position, you will be shown an hour meter. This will be actual hours your drive system has been in service and will default to your next position in approximately three seconds. You may use the button to the left of the display to show various other features. The other features include:

- 1. <u>Batt %</u> or battery percentage. This will tell you the percentage of charge you have left in your batteries.
- 2. <u>TOC</u> or Time On Charge. This will tell you in minutes how long your car has run on this charge cycle.
- 3. <u>VOLTS</u> or Battery volts. This will tell you the voltage your batteries are running.
- 4. <u>RPM</u> or revolutions per minute. This will tell you the RPM of the motor while it is running.

At the bottom of the display, the battery indicator will illuminate showing the amount of charge left in your Batteries. When you have reached the flashing red indicator or LOW BATT on the display, your car will go into LIMP mode and will cut back on top speed and allow you to travel home for a charge.

<u>Forward/Reverse Control</u> - The forward/reverse switch is located on the dash or below the front seat and is marked for direction. The switch is also for NEUTRAL. This is in the middle position on the switch. Your dash display will show MPH when you have selected FWD. The dash will show REVERSE when you have selected REV and will show NEUTRAL

when in the middle position on the switch. The car will not move when in the NEUTRAL position. NOTE: In REVERSE, the car will operate at a reduced speed.

<u>Street/Golf Mode</u>- The Street/Golf Mode switch is located on the dash. Golf Mode is set at approximately 12 MPH on the top end. Street Mode is set for approximately 25 MPH on the top end. Both modes will allow for 1-MPH control or cruising speeds.