EB POWER

AC KIT INSTALL GUIDE

EARLY YAMAHA DRIVE

www.ecobattery.com

BEFORE YOU BEGIN

Your AC Motor and Controller **must be registered within 60 days of purchase** to activate the 2 year limited warranty. Products not registered within 60 days of purchase will carry a 1 year limited warranty.

Tip: The serial numbers on the components are easier to read when not installed.

www.ecobattery.com/register

INTRODUCTION



Early Version:
This installation guide is for early Yamaha models from 2007 to 2010. There may be some overlap in production years, so this guide applies specifically to models with a stock battery configuration of four 12V batteries. If your cart came equipped with six 8V batteries, please refer to the late model Yamaha installation guide.



Late Yamaha Battery Bay

WARNING!



• Remove all batteries before you begin installation.

• Working with batteries can be dangerous. Safety gear such as protective eyewear, insulated gloves, and insulated tools are required for safe installation.

• We recommend using glasses and other personal protective equipment during the install. When working with lead acid batteries, it is highly recommended to use rubber gloves to prevent contact with acid and other harmful chemicals.

• This guide is not meant to give an untrained person enough knowledge to competently work with lithium batteries or electric vehicle systems. If you do not fully understand this guide, please stop and seek professional installation.

• Damage to the battery, system components, or property due to incorrect or improper installation is not covered by the warranty. Do not short circuit or connect with reverse polarity, damage from improper connections is not covered by warranty.

• When working with electrical components take extra care to avoid contact between tools, battery terminals and other electrical components that would lead to damage or injury.

Important: Inspect your new products for any damage that may have occurred during shipping. If there are any visible signs of damage, **DO NOT CONTINUE** and contact your dealer or Eco Battery.

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INSTALLATION



Step 1:

Turn the key to the off position.

Block the cart and set the parking brake.

Remove the seat.



Step 2:

Disconnect the main connector from the factory controller.





Step 3:

Remove all of the cables from the factory controller.

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INSTALLATION





Step 4:
Remove the three bolts holding the factory controller and remove from the controller plate.





Step 5:
Remove all of the cables from the solenoid.



Step 6:
Unplug the motor speed sensor.



Step 7:

Remove the two mounting bolts from the solenoid in order to remove it.



Step 8:

Remove all of the cables from the motor.

Step 9:

Remove the cable hanger from the rear support. Remove the cables from the cart.



INSTALLATION



Step 10:

Remove the motor hardware.





Step 11:

Jack the cart up. Support the cart with jack stands ocated under the frame.



Step 12:

Remove the factory motor.

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Step 13:

Grease the input shaft splines.

Step 14: Install the EB motor using the supplied hardware—torque to 15 foot pounds or 180 inch pounds.









Step 15:

Lower the cart back down to the ground.




Step 16:

Remove the clips securing the floor mat.



Step 17:

Remove the floor mat.

Step 18: Remove the hardware securing the rocker panels.

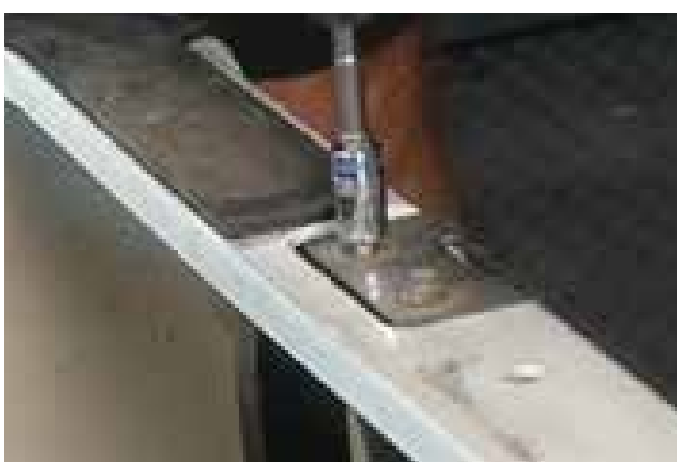





Step 19:
Pull the rearward portion of the rocker panels out. The front does not need to be undone.



Step 20:
Remove the plastic clips from the top of the seat base.



Step 21:
Remove the seat hinges.

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INSTALLATION



Step 22:

Remove the charge port hardware.

Remove the charge port.



Step 23:

Remove the pedal cover.

Step 24: Using a Allen 3mm Socket, remove the screw securing the cup holder. Remove cup holder.







Step 25:

Unplug the key switch connector.



Step 26:

Unplug the FNR connector.



Step 27:

Remove the FNR switch.

Step 28: Cut any zip ties that are securing the harness in the dash.



Step 29:

Disconnect the reverse buzzer.





Step 30:

Disconnect the foot switch connector.

Disconnect the throttle connector.



Step 31:
Pull the harness from the dash towards the floorboard.





Step 32:
Cut all of the zip ties securing the harness in the battery compartment.

Step 33: Disconnect the tow/run switch.





Step 34:
Remove the factory harness from the cart.



Step 35:
Locate the MCU plate mounting bracket. Set it on the driver's side of the battery tray. Measure one and a half inches from the edge of the battery tray as shown. Center the bracket front to rear. Drill the four quarter-inch holes.



Step 36:
Locate the MCU plate and install it on the MCU mounting bracket using the supplied M6x20 bolts and nuts.



Step 37:

Lower the assembly onto the previously drilled holes and install the four M6x20 bolts and nuts using hand tools only.

DO NOT OVERTIGHTEN.
DO NOT USE AN IMPACT TOOL.





Step 38:

If you are using the EB 12-Volt Reducer, take the opportunity to install it in one of the two locations on the MCU plate as shown.



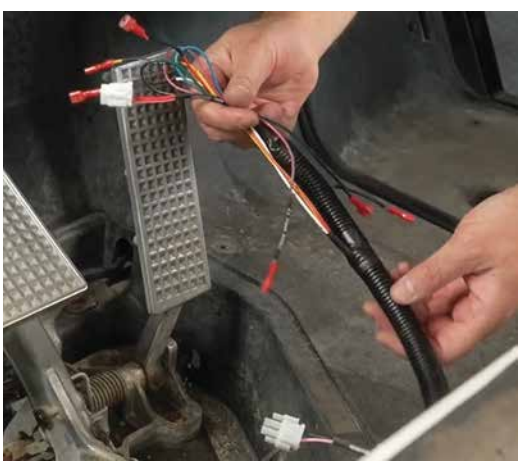
Step 39:

Locate the EB harness.



Step 40:
Connect the main harness connector to the controller. Make sure that the connector snaps in completely.





Step 41:
Cut all of the zip ties securing the harness in the battery compartment.



Step 42:
Route the harness through the hole in the floor.



Step 43:

Route the harness up towards the dash.



Step 44:

Plug in the reverse buzzer connector.



Step 45:

Locate the EP switch plate. Using the switch plate as a template, mark the switchouts and holes. Drill the holes to three sixteenths or 5mm.

DO NOT DRILL LARGER OR THE PLASTIC PUSH PINS WILL NOT FIT CORRECTLY.

*continue on next page

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Step 45: Using a Dremel tool or preferred cutting tool, remove the necessary material as shown. Install the switch plate using the four plastic push pins. Install the FNR and mode switches in the plate.









Step 46:
If you are using the factory DC to DC reducer, plug the key switch wires in as shown.



Step 47:
If you are not using a factory DC to DC reducer, plug the key switch wires in as shown.

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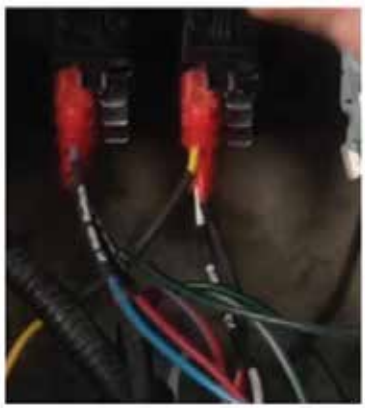




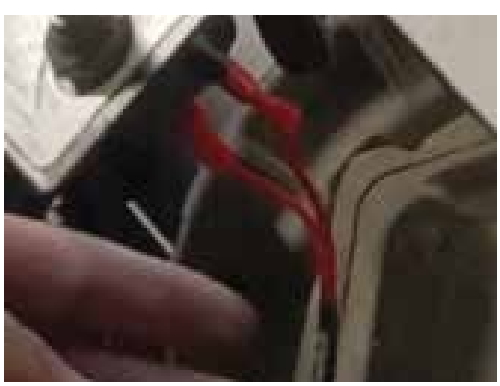
Step 48:
Install the Forward, Neutral, and Reverse spade connectors on the FNR switch. Install the mode switch spade connectors on the mode switch. Note the P1, P2, and P3 labels on the harness correspond with the 1, 2, and 3 positions molded on the side of the switch housing, as highlighted in the diagram.





Step 49:
Connect the throttle connector and foot switch connector.

Step 50: Connect the tow/run switch wires. The first way shown is without a factory 12-volt reducer. The second way shown is with a factory reducer (Note the two ways with and without the DC to DC reducer)



Without a Factory Reducer



With a Factory Reducer



Step 51:
Install the provided high-current motor cables on the corresponding color-coded motor terminals torque terminal hardware to 8 foot pounds or 96 inch pounds.





Step 52:
Plug in the motor temp sensor and speed sensor connectors.



Step 53:
Connect the motor cables to the corresponding color-coded controller terminals—torque terminal hardware to 8 foot pounds or 96 inch pounds.





Step 54:

Using a quarter-inch drill bit, drill the two existing holes in the battery tray shown. Insert the two zip ties and secure the motor cables, speed sensor, and temp sensor.



Step 55:

Plug in the solenoid harness labeled "TO SOLENOID."



Step 56:

Install the positive battery cable labeled "TO SOLENOID" on the solenoid—torque terminal hardware to 8 foot pounds or 96 inch pounds.

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Step 57:
Plug the pink wire from the tow/run switch to the pigtail on the high current cable on the solenoid.



Step 58:
Install the negative battery cable labeled "TO CONTROLLER B negative" on the controller—torque terminal hardware to 8 foot pounds or 96 inch pounds.

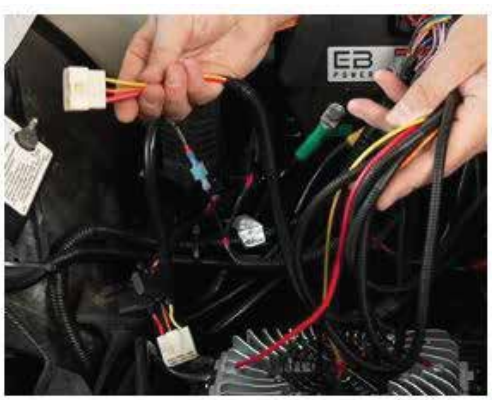


Step 59:
Install the positive battery cable and any associated cables on the positive battery terminal. Install the negative battery cable and any associated cables on the negative battery terminal—torque to 8 foot pounds or 96 inch pounds.




Step 60:
Connect the CAN harness labeled “CAN TO BATTERY” to the battery meter cable.

Step 61:
If using an EB 12-Volt Reducer, locate the 12-volt reducer harness. Plug the harness into the 12-volt reducer. Cut the orange wire as shown. Install the provided 4mm male bullet connector.
Plug the previously installed 4mm male bullet connector into the 4mm female bullet connector on the harness labeled “KSI/DC to DC TRIGGER.”



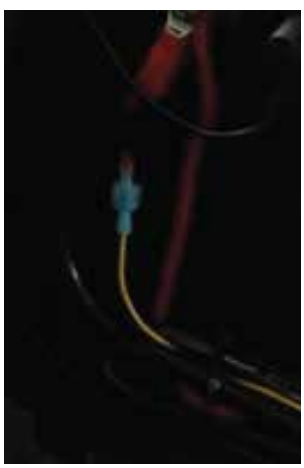







Step 62:

Route the small 16-gauge black and red wire towards the battery. Install the provided 5mm bullet connector on the black 16-gauge wire. Install the provided quarter-inch female spade connector on the yellow 16-gauge wire.




Step 63:

Connect the black and yellow 16-gauge wires to the pigtails on the battery cables labeled “DC to DC positive” and “DC to DC negative,” respectively.



Step 64:

Connect the red (positive) and black (negative) 12-gauge wires to the input side of your cart’s 12-volt system.

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Step 65:
Reinstall the seat hinges and plastic body clips in the seat base.



Step 66:
Reinstall the rocker panels.





Step 67:
Reinstall the pedal cover.
Reinstall the floor mat and hardware.

INSTALLATION



Final Steps:

Reinstall the cup holder and hardware.

Connect to the EB Power App and tune your cart.

Step-by-step App instructions can be found by scanning the first QR code below, and selecting Product Resources, then Install Help and AC Controller App Programming.

NEED MORE HELP?

877-326-2288

support@ecobattery.com

For additional product info, user manuals, user guides, and warranty information visit **https://ecobattery.com/pages/quickstart**

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