



**RIVA RACING**  
PERFORMANCE PRODUCTS & ACCESSORIES

## **Vi-PEC V88R3 Pro-Series ECU**

***PART# - RY11840-ECU-DC-1***



**APPLICATION(S):** Yamaha 1.8L Engine Models (SVHO/SHO/HO)

We strongly recommend the use of a service manual to familiarize yourself with the various components and procedures involved with this installation. These instructions have been written in step-by-step format and refer to illustrations. Read through instructions entirely before performing installation. Please follow these step-by-step instructions and illustrations carefully.



**WARNING: DO NOT START ENGINE!!!**



Following the installation of your Pro-Series Vi-PEC V88R3 ECU you must perform ECU set up process using the Quick Start Guide available on the RIVA/ViPEC ECU Manager Web Site. Go to [www.riva-vipec.com](http://www.riva-vipec.com) > 'Downloads' to obtain Quick Start Guide.

## -ViPEC V88R3 INSTALLATION INSTRUCTIONS -

Remove seats and rear storage bin.

Disconnect battery cables. **NOTE: Negative (black) first. Positive (red) second.**

Remove rear grab handle/seat support if equipped.

Remove electrical box cover (2 locking tabs at top).



Disconnect stock ECU (3 electrical connectors at bottom). **NOTE: Document order of connectors.**



Remove stock ECU (4 bolts). Retain stock hardware.

**2010~08 FX-SHO models only:**  
**Proceed to page 6 and follow steps through completion of installation.**

All other Yamaha 1.8L models continue this page.

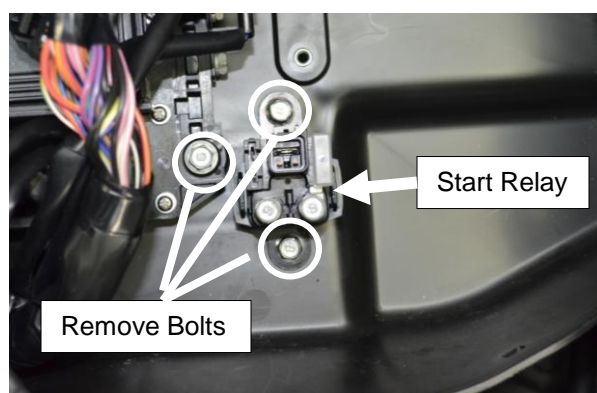
## **2015 & Newer Models:**

Disconnect wire leads from start relay. **Note: Document position of wire leads.**

Remove bolts (4) securing electrical panel to bulkhead. Lift up electrical panel and set on bulkhead.

Remove bolts (2) securing start relay to electrical panel.

Remove lower right bolt on fuse panel.

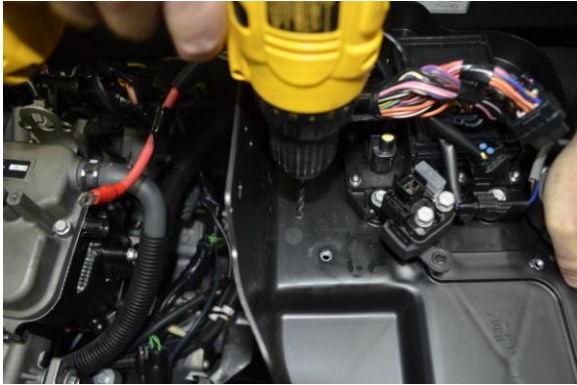


Install top hole of start relay bracket in lower right bolt position of fuse panel. Secure with original bolt. **Do not tighten bolt yet.**

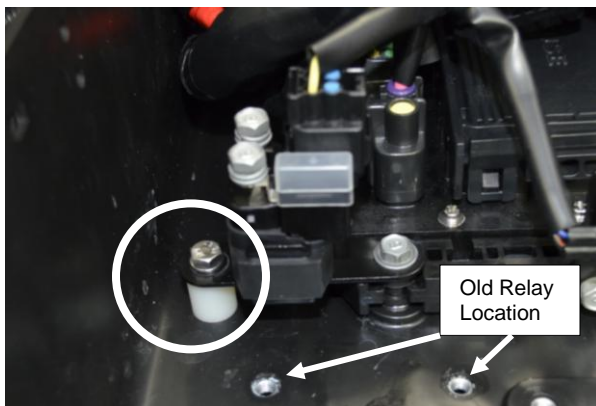
Position start relay bracket straight up/down. Using a "B" size drill bit, slide drill bit through relay bracket, straight down, and mark the hole location in the electrical panel. (see illustration below)



Rotate relay bracket out of the way & complete drilling the hole.



Rotate relay bracket in position & secure with supplied M6 bolt, spacer, washers (2) and nylon lock nut. Tighten both relay bracket bolts.

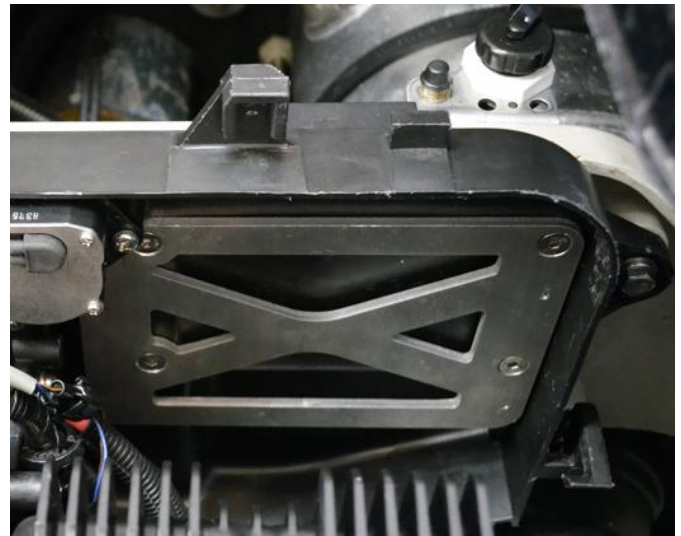


Reinstall electrical panel to bulkhead.

Reinstall wire leads to starter relay.

**All Year Models: Continue from this point.**

Install supplied billet ECU mounting bracket into electrical box using supplied hardware (4 M6 bolts). **NOTE: Apply blue Loctite to bolts. Do not over tighten.**



At lower right side of electrical box cut and remove zip tie securing wiring harness to electrical box.



Follow harness and locate crank sensor connector. (black & white wire/black plug) Install supplied cable splicer between connectors for black & white wiring harness.





Connect stock ECU connectors (3) to Vi-PEC V88R3 ECU. **NOTE: Do not force. Verify order, location, and orientation. Listen/feel for click when locked in place.**

Secure RIVA/ViPEC ECU to ECU mounting bracket in electrical box using supplied hardware (4 M4 bolts and washers). **NOTE: Apply blue Loctite to bolts. Do not over tighten.**



Secure wiring harness at lower, right side of electrical box using supplied zip tie.



Replace electrical box cover. Carefully slide into place so that wiring harnesses fit into cut out.

Secure electrical box cover (2 locking tabs at top).

At lower right side of electrical box tighten zip tie securing wiring harness to electrical box.

Inside front storage compartment remove rivets (5) securing service lid in place. **NOTE: Press pin at center inward.**

Remove service lid and locate remote control sensor.



Disconnect electrical connector and install supplied block-off into wiring harness connector. **NOTE: Make sure block-off 'snaps' into place.**



**NOTE:** If a RIVA/Vi-PEC V88 ECU was previously installed you must swap the black block-off with the supplied blue block-off.

Secure bypass module to OEM wiring harness using supplied zip tie.

Replace service lid and secure using stock rivets.

Replace rear grab handle/seat support if removed

Reconnect battery cables. **NOTE: Positive (red) first. Negative (black) second.**

Check bilge for tools, rags, etc.

**NOTE:** ECU is equipped with our Stage 3 SVHO Base Map. Verify required parts to run this map safely or download others by going to [www.riva-vipec.com](http://www.riva-vipec.com). Click on Yamaha. Click on V88R3, then click on 'Base Maps' in the left navigation.



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### **Technical Support**

For answers to questions regarding installation or trouble shooting RIVA Performance Products contact:  
RIVA Technical Support directly at (954) 247-0705 or by e-mail at [tech\\_support@rivamotorsports.com](mailto:tech_support@rivamotorsports.com).

### **Limited Warranty**

RIVA/Vi-PEC Pro-Series ECU's carry a 1-year limited warranty to the original purchaser. They are warranted to be free of defects in materials and workmanship under normal use and service. Customer modified components will be void of warranty. This warranty is limited to defects in the primary components only. Finish and/or wear marks in or on primary components are not covered under this warranty.

RIVA Racing's liability is expressly limited to the repair or replacement of the components contained within or associated with this kit. RIVA Racing agrees to repair or at RIVA's option, replace any defective unit without charge, if product is returned to RIVA Racing freight prepaid within the warranty period. Any equipment returned which, in RIVA's opinion, has been subjected to misuse, abuse, overheating or accident shall not be covered by this warranty.

RIVA Racing shall have no liability for special, incidental or consequential damages or injury to persons or property from any cause arising from the sale, installation or use of this product.

No other warranty, express or implied, including, but not limited to the implied warranties of merchantability and fitness for a particular purpose, applies. Various states do not allow for the limitation of incidental or consequential damages and therefore the above exclusion or limitation may not apply to you.

Warranty does not include the expenses related to freight or transportation of parts or compensation for any inconvenience or loss of use while being repaired. A copy of the original invoice and a Return Authorization Number (RA#) must accompany all warranty claims.

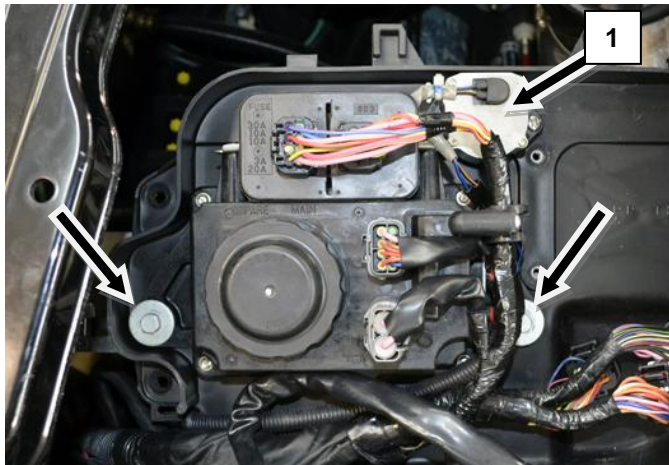
Warranted replacement parts will be returned freight collect.

# 2010~08 FX-SHO Models ONLY

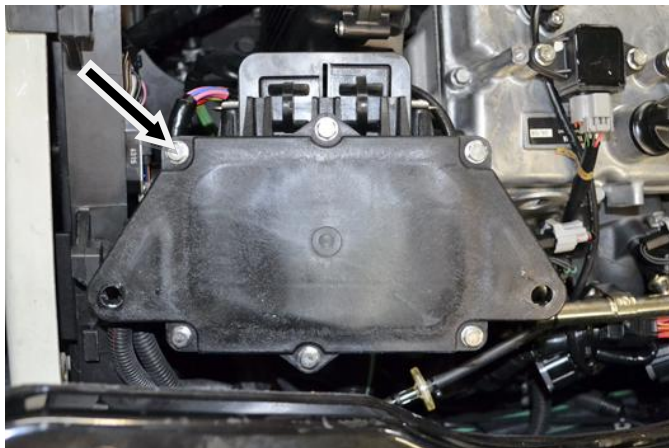
## INSTALLATION INSTRUCTIONS -

Remove ECU electrical box (4 bolts) from hull.

Disconnect Slant Detection Switch<sup>1</sup>. Remove electrical system relay box (2 bolts) from electrical box.



Remove relay box backing plate (6 bolts).

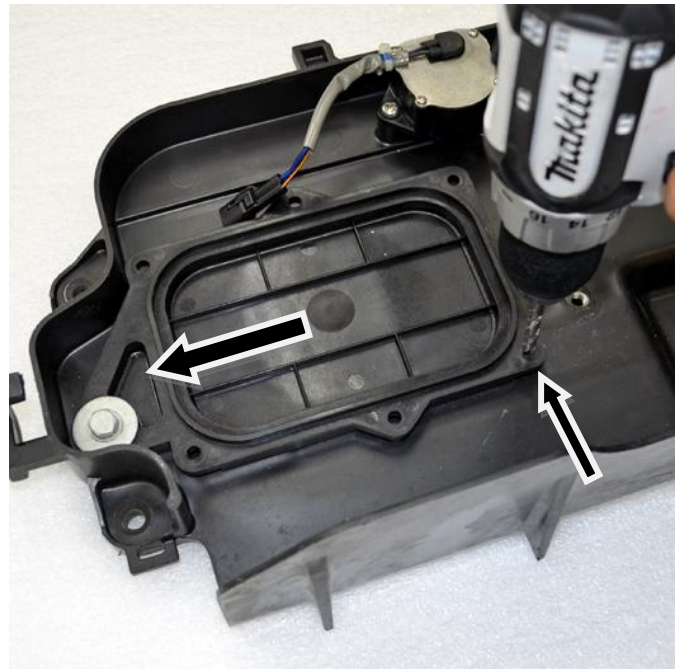


Remove electrical box backing plate from hull and set aside.

Remove mounting tab on right side of relay box backing plate.



Install relay box backing plate onto electrical box backing with one original bolt. Push relay box backing plate towards bolt, check to make sure it's level and then secure.

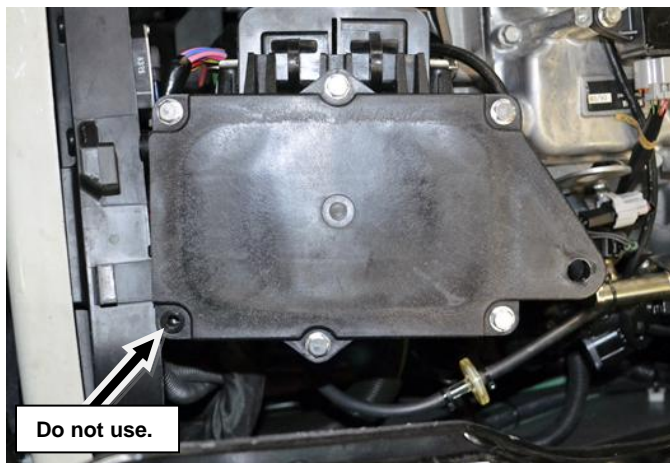


Locate and drill 1/4" hole through electrical box backing plate.

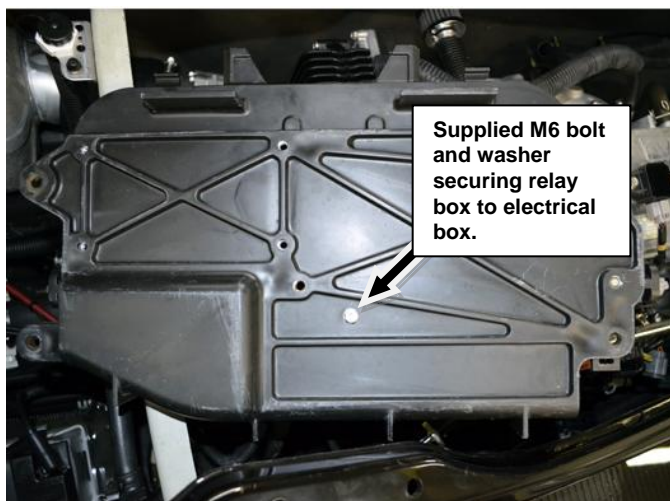
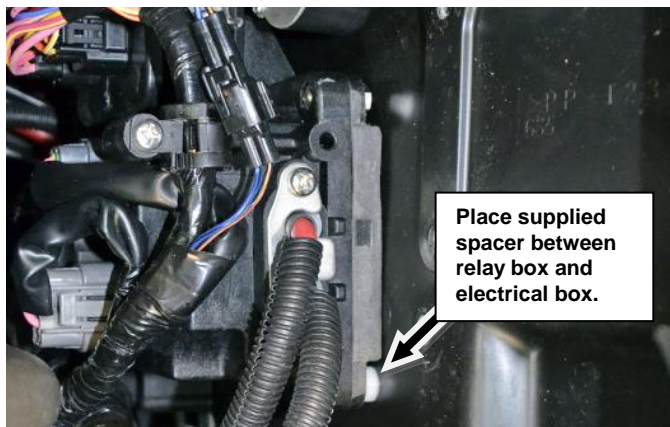
Remove relay box backing plate from electrical box.



Replace relay box backing plate onto relay box using only 5 original bolts. **NOTE: Apply blue Loctite to threads. Do not over tighten bolts.**

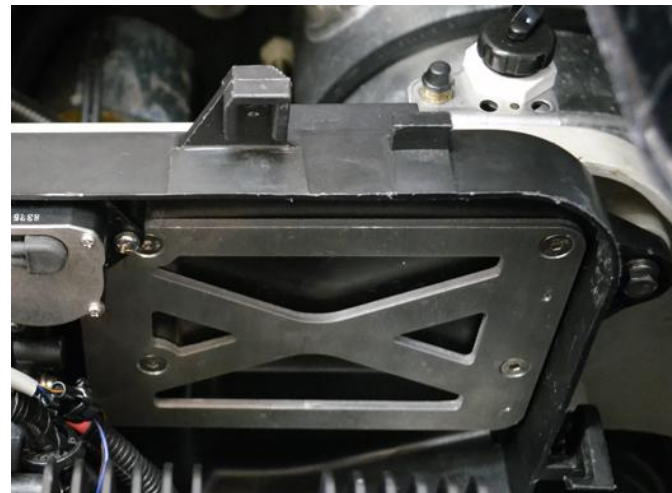


Replace relay box onto electrical box backing plate using one original bolt. At opposite side use supplied M6 bolt, washer and spacer to secure relay box to electrical box. **NOTE: Apply blue Loctite to threads. Do not over tighten bolts.**



Replace electrical box backing plate (4 bolts) onto hull. **NOTE: Apply blue Loctite to threads. Do not over tighten bolts.**

Install supplied billet ECU mounting bracket into electrical box using supplied hardware (4 M6 bolts). **NOTE: Apply blue Loctite to bolts. Do not over tighten.**



At lower right side of electrical box cut and remove zip tie securing wiring harness to electrical box.



Follow harness and locate crank sensor connector. (black & white wire/black plug) Install supplied cable splicer between connectors for black & white wiring harness.



Connect stock ECU connectors (3) to Vi-PEC V88R3 ECU. **NOTE: Do not force. Verify order, location, and orientation. Listen/feel for click when locked in place.**

Secure RIVA/ViPEC ECU to ECU mounting bracket in electrical box supplied hardware (4 M4 bolts and washers). **NOTE: Apply blue Loctite to bolts. Do not over tighten.**



Secure wiring harness at lower, right side of electrical box using supplied zip tie.



Replace electrical box cover. Carefully slide into place so that wiring harnesses fit into cut out.

Secure electrical box cover (2 locking tabs at top).

At lower right side of electrical box tighten zip tie securing wiring harness to electrical box.

Inside front storage compartment remove rivets (5) securing service lid in place. **NOTE: Press pin at center inward.**

Remove service lid and locate remote control sensor.



Disconnect electrical connector and install supplied block-off into wiring harness connector. **NOTE: Make sure block-off 'snaps' into place.**



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Secure bypass module to OEM wiring harness using supplied zip tie.

Replace service lid and secure using stock rivets.

Replace rear grab handle/seat support if removed

Reconnect battery cables. **NOTE: Positive (red) first. Negative (black) second.**

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