Technical Support Bulletin: S3-FRHVBD-01

Field Replacement of High Voltage PCB in BVS-S3

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This procedure outlines the steps required to replace the High Voltage Board in the BVS-S3 chassis. The Chassis is located inside the lower half of the BVS enclosure.

Note: Before performing this replacement, read this entire document. If you have any questions, contact BTECH Technical Support. We are here to assist you!

ELECTROCUTION HAZARD!

This procedure involves working with high voltage. The voltage sensing leads and load current leads carry full battery voltage. Battery Voltage can be as high as 600Vdc depending on the battery system! If you are not trained to work with high voltage equipment, do not attempt to use this procedure!

Tools Required:
Screwdriver with a 1/8" (3.2mm) flat blade
#1 Phillips screwdriver
#1 Phillips stubby or right-angle screwdriver

Parts included in kit:
1 High Voltage PCB
Instructions

Follow the steps below and refer to the attached drawing when replacing the High Voltage PCB in your BVS-S3.

1. Turn **OFF** the **NICAD** battery switch and move the **RUN/STANDBY** switch to the **STANDBY** position. These switches are located on the top of the right-hand side of the chassis. Unplug the AC step-down transformer from the duplex outlet in the cabinet.

2. Unplug **ALL** of the black load current lead connector(s) from the sockets located at the top left-hand side of the cabinet. **NOTE: The button on the connector must be depressed to release the latch!**

3. **CAUTION: The plugs to be disconnected in this step carry battery voltage! Verify that no bare wires are exposed where the wires are inserted into the plugs and the wires are not loose. If bare wire is visible, avoid contact with the exposed wire(s)!** Carefully remove ALL the orange 16 and 17 pin plugs from the sockets on the top of the chassis. Remove the orange 3 pin "Battery Negative" plug from the High Voltage PCB. If present, remove the orange 5 or 8 pin "Load Relays" plug. **NOTE: Pry up the front left corner of the plug with a thin blade screwdriver to release the connector. Once the front of the plug is raised, the wires can be used to pull the plug from the socket.**

4. Remove 10 Phillips-head screws holding the Inner Cover and set the cover and screws aside.

5. Unplug the right-hand end of the ribbon cable connector (A) from the Mother Board. Unplug the 1 white and 4 red connectors from the High Voltage Board

6. Using a stubby or right angle Phillips screwdriver, remove the screw (B) holding the right-hand end of the Lower Board Retainer. The High Voltage Board Grounding Braid Ring will be dismounted also. Loosen the screw (C) on the left-hand end only 1 turn. This will lower the right-hand end of the retainer to allow the High Voltage Board to be removed, but the other boards will remain in place.

7. Remove 4 screws (D) holding the Upper Card Retainer and set it aside.

8. Pull the High Voltage Board towards you and remove from chassis. Using the small flat blade screwdriver, loosen the screw in the Green Terminal Strip to remove the Grounding Braid. Insert the cut end of the braid into one of the receptacles of the Green Terminal Strip on the replacement board and tighten screw. Pull lightly on the Grounding Braid to be sure it is secure.

9. Insert the new board into lower card guide and slide into the chassis. Be careful to seat board into guide slot in bottom.

10. Put Upper Board Retainer back in place and loosely attach only the left-hand screw (D). Starting from the left, be sure all boards are in slots and secure retainer in place with the remaining 3 screws (D).

11. Insert screw (B) through ring of grounding braid, into hole and tighten screws (B) and (C).

12. Connect the 1 white and 4 red connectors on the High Voltage Board. Connect the right-hand end of the ribbon cable connector (A) to the Mother Board. Be careful to seat the connector properly.

13. Reinstall all of the orange connectors that were removed in step 3.

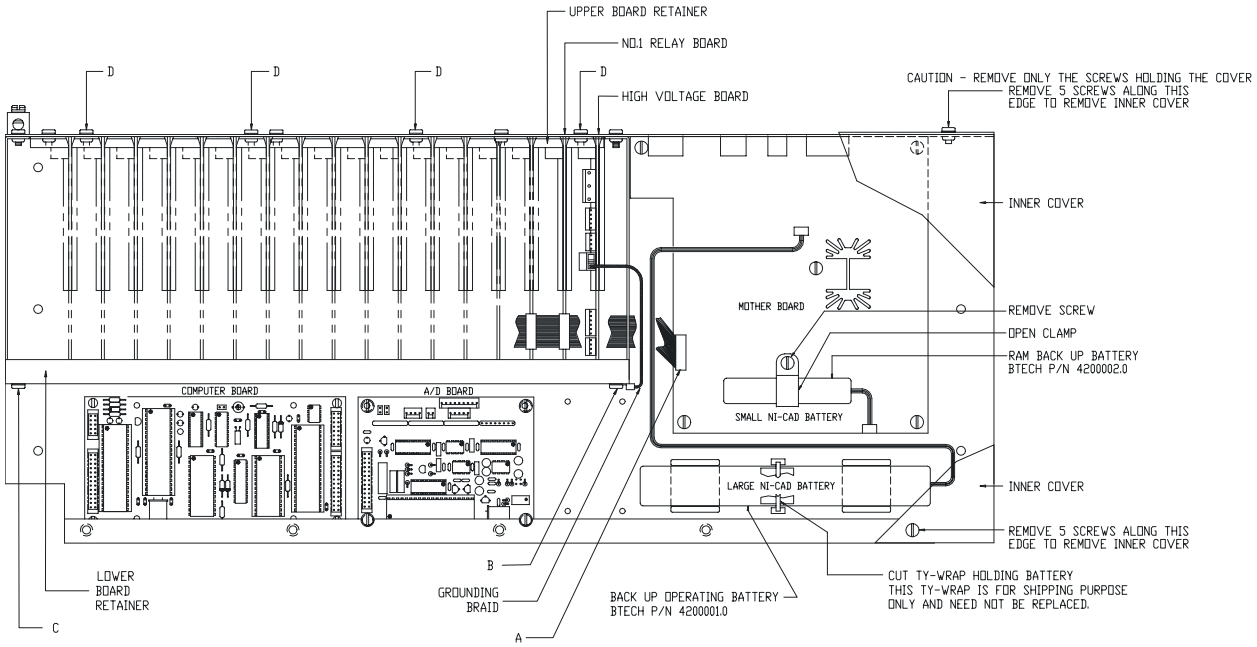
14. Install the Inner Cover with 10 Phillips-head screws.

15. Plug the AC step-down transformer into the duplex outlet in the cabinet and wait for the display to show the time.

16. Turn **ON** the **NICAD** battery switch and move the **RUN/STANDBY** switch to the **RUN** position.

17. Plug all of the black load current lead connector(s) into their respective sockets located at the top left-hand side of the cabinet.

Please call **BTECH Inc.** Technical Support if any questions arise.



BVS S3 CHASSIS ASSEMBLY