

INSTRUCTIONS

1. Disassembly

- 1.1. Disconnect chassis ground and remove fuse #32 (if equipped)
- 1.2. Remove breaker cover on the front of the seat and turn off all breakers for the batteries and other items
- 1.3. Remove four screws holding down wooden panel to expose batteries



- 1.4. Remove seven screws holding front wooden panel on



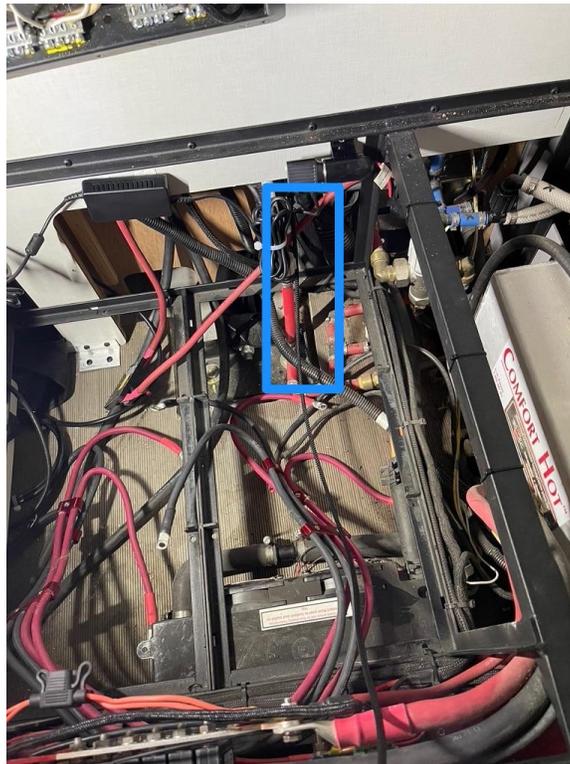
- 1.5. Remove twelve screws holding panel to wall



- 1.6. Put clamps on wall to rest the panel on to be sure there is no wires being pulled
- 1.7. Remove all the batteries from system
- 1.8. Remove AC 120V panel faceplate and panel from wall
- 1.9. Route the new harness starting from the top. Drop the long tail of the harness down the wall along the black PVC vent pipe.



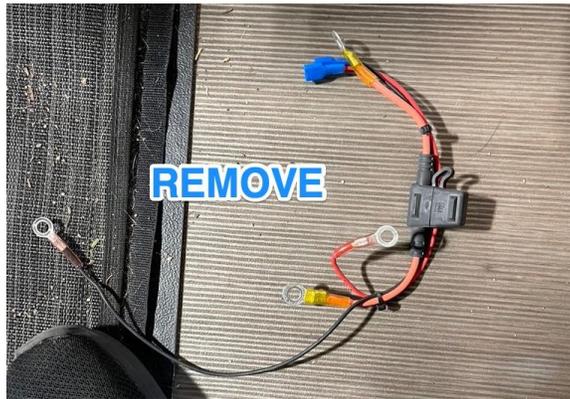
- 1.9.1. This should end up where the main harness, solar wires and DC panel wires come off of frame (bottom corner of battery tray)



- 1.10. Run the harness under the battery tray with other wires
1.11. Make sure 8 gauge input and output are on separate terminals on relay. If they are under one terminal, remove the nuts and separate them to their own terminals

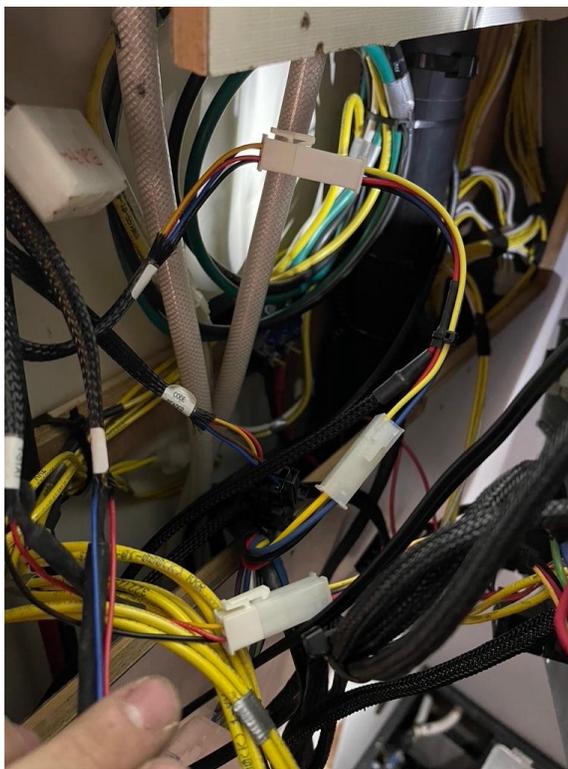


- 1.12. Remove all wires from the Victron BP65 (blue box) if still installed. It will be necessary to remove the ground wire for the relay from the negative bus bar



2. Wiring

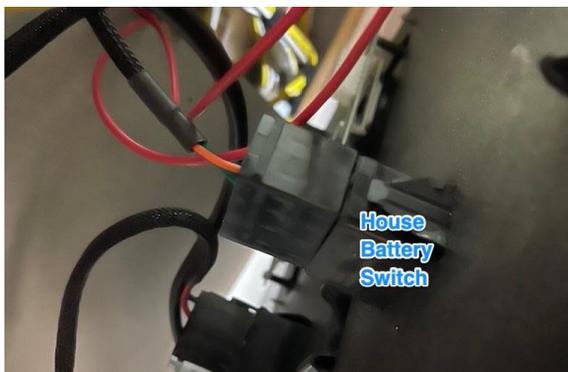
- 2.1. Find the 4-pin minifit connector labeled FURNACE coming off of the relay harness and put the mini fit male and female connectors in line with this. This is the only 4 pin connector with four wires in it. The wire colors are RED, BLACK, BLUE and YELLOW. Wire colors in and out should match on each connector.



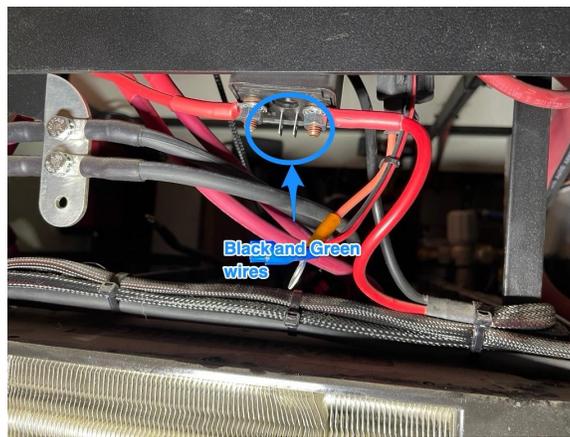
- 2.2. Remove the wires from the back of the Victron BMV gauge and plug in the two ferrules on the RED and ORANGE wires of the update harness into the COM and NC spots. It does not matter which one goes in each.



- 2.3. Remove the black connector from the back of the House Battery switch and replace it with the black connector with the ORANGE and GREEN wires



- 2.4. The two female quick connectors on the BLACK and GREEN wires go on the control terminals of the relay



3. Reassembly and testing

- 3.1. Zip tie up removed wires behind panel to main harness
- 3.2. Zip tie wire along bottom of battery tray with other existing wires. Make sure to leave some slack on wires on relay
- 3.3. Mount AC 120V panel back on wall
- 3.4. **Before reinstalling the batteries, use two 7/16" or 11mm wrenches/sockets to verify that each nut on the breakers is tight against the bus bar or wire it is connected to. DO NOT just tighten the outside nut as you risk breaking the stud on the breaker if you do this! Tighten both inside/outside nuts AGAINST the bus bar or wire. These DO NOT need to be super tight, but check each one to ensure that they have not become loose over time.**
- 3.5. Install and reconnect the batteries
- 3.6. Turn the breakers on and test function of the house battery switch and verify it turns the relay on and off
- 3.7. Reattach wooden panel on front of bench seat
- 3.8. Reattach wood panel on top of batteries
- 3.9. Reattach panel on wall
- 3.10. Update the Victron Battery Monitor with new settings
 - 3.10.1. Relay screen
 - 3.10.1.1. Relay Mode: Default
 - 3.10.1.2. Invert Relay: Off
 - 3.10.1.3. No time delays
 - 3.10.1.4. Low SOC relay alarm 0%, alarm off 5%
 - 3.10.1.5. Low voltage relay alarm on 11.5V, off 12V
 - 3.10.1.6. No other alarms will be enabled
- 3.11. Test that the relay is working properly. With the house battery switch ON, change the low voltage alarm setting to 14V and the relay should turn off. When you return the setting to 11.5V and 12V, the relay should turn back on.