



BATTERY REPLACEMENT GUIDE

**Uninterruptible Power Supply Models:
SG1K-1T, SG1K-2T**



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IMPORTANT SAFETY INSTRUCTIONS

SAVE THESE INSTRUCTIONS

This guide contains important instructions which must be followed during the maintenance of this UPS and its batteries. Please read all instructions before operating this equipment and save this guide for future reference.

CAUTION

Servicing of batteries should be performed or supervised by personnel knowledgeable of batteries and the required precautions. Keep unauthorized personnel away from batteries. When replacing the UPS batteries, use the same number and type of batteries.

CAUTION

High voltage exists within the unit, which could cause electrical shock. Always unplug this UPS and remove the UPS battery fuse (if present) prior to attempting battery replacement.

CAUTION

This UPS contains its own energy source (batteries). The output receptacles may carry live voltage even when the UPS is not connected to an AC source.

This UPS contains sealed maintenance-free batteries (VRLA). When situated in a typical office environment, with the proper charging and limited cycling, the batteries can last many years. In home, office or computer room environments, the batteries should be replaced every three to five years. In critical applications replace the batteries every two years.

CAUTION

When replacing the UPS batteries, use the same number and type of batteries. The batteries approved for the Falcon SG1K-1T & SG1K-2T models are as follows:

3 pieces of Yuasa/Energys NP7-12, 7Amp Hour, 12Vdc VRLA Type Battery

or

3 pieces of CSB GP 1272 F2, 7.2 Amp Hour, 12Vdc VRLA Type Battery

CAUTION

NEVER dispose of batteries in a fire, as batteries will explode.

NEVER dispose of used batteries in the trash or landfill as it is a violation of federal and state laws. **The batteries must be recycled.**

For battery recycling information, please contact:

www.energysinc.com/default.asp or

www.csb-battery.com/Top/english/recycle_state.htm

for the name and address of the nearest battery recycling facility.

CAUTION

Never open or mutilate the battery or batteries. Released electrolyte is harmful to the skin and eyes. It may be toxic.

CAUTION

A battery can present a risk of electrical shock and high short circuit current.
ALL BATTERY SERVICING OR REPLACEMENT MUST BE PERFORMED BY A QUALIFIED SERVICE TECHNICIAN.

ALL BATTERY SERVICING OR REPLACEMENT IS PERFORMED AT THE RISK OF THE PERSONS, ENTITIES OR COMPANIES PERFORMING THE BATTERY SERVICING OR REPLACEMENT OF FALCON ELECTRIC INC. PRODUCTS.

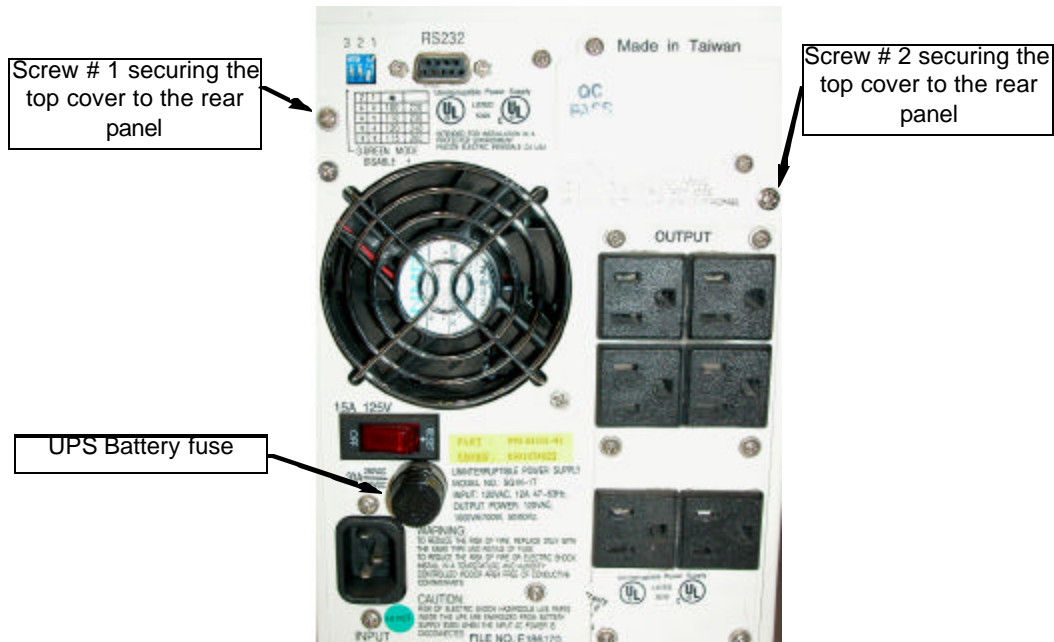
THE FOLLOWING IS GIVEN AS A GUIDE ONLY. THE PERSON(S) PERFORMING THE BATTERY REPLACEMENT MUST HAVE PRIOR KNOWLEDGE AND EXPERIENCE IN UPS BATTERY REPLACEMENT, AND IN THE PROPER CARE, HANDLING AND RECYCLING OF SEALED LEAD ACID BATTERIES.

LIMITATION OF LIABILITY:

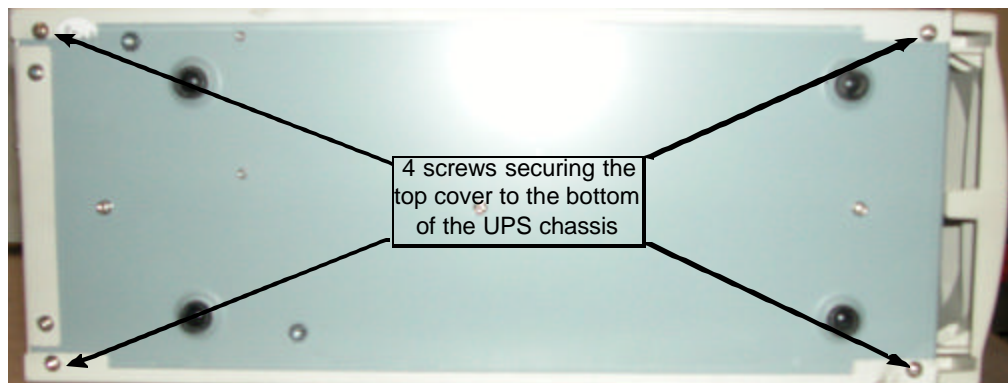
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Battery Replacement Guideline

1. Per the picture below detailing the SG1K-1T rear panel, remove the battery fuse. For SG1K- 2T models there is no rear panel mounted battery fuse. Go to step 2.
2. Per the picture below remove the two screws securing the UPS top cover to the rear panel.

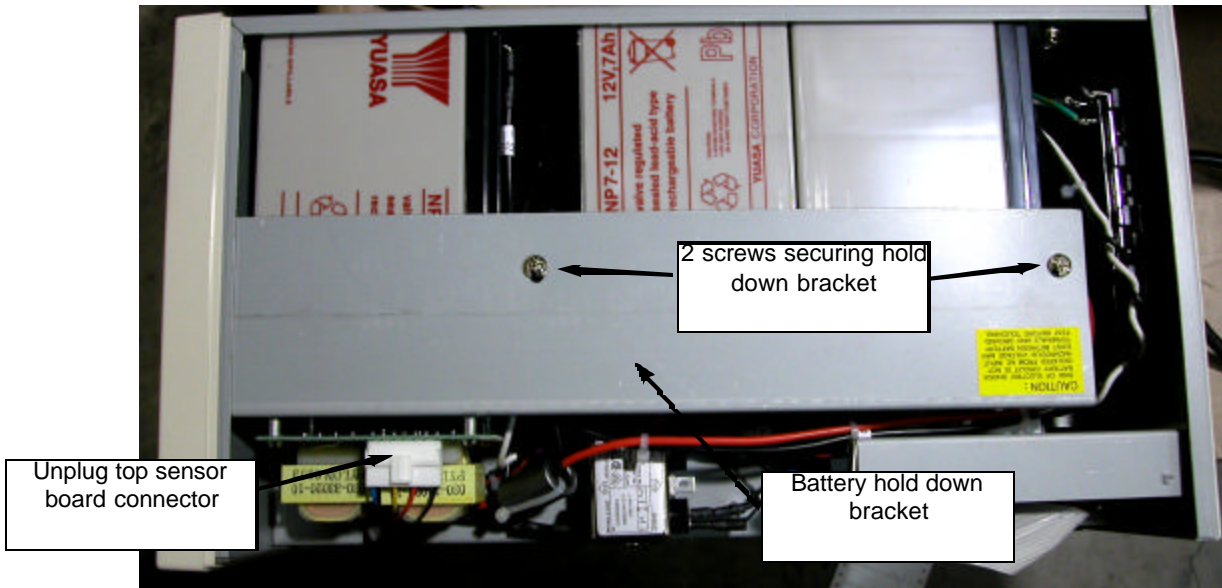


3. Per the picture below, turn the UPS so the bottom of the UPS is facing you (UPS on its side).
4. Remove the four screws securing the UPS top cover to the bottom of the UPS chassis.

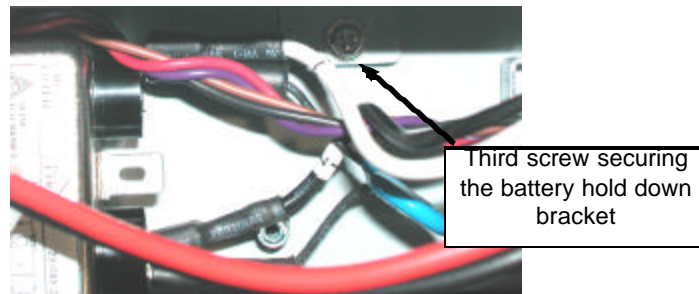


5. Carefully return the UPS and top cover to the upright position.
6. Carefully slide the top cover off toward the rear panel direction. Take care to ensure the top cover does not short on any of the internal UPS electronics when removing.

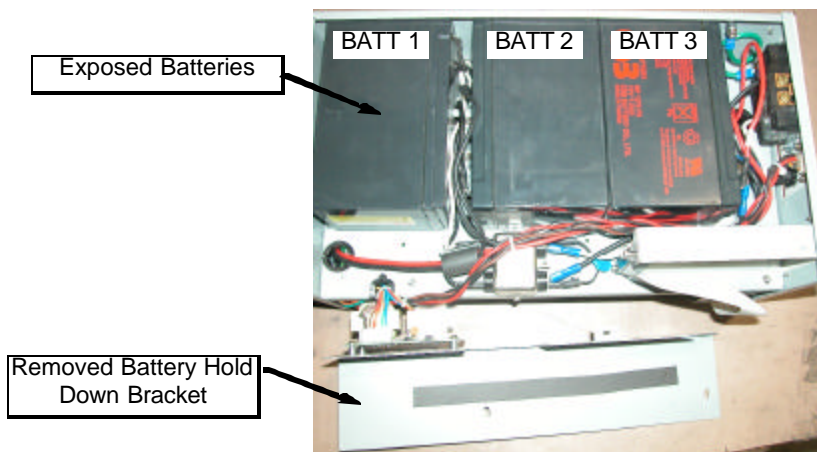
7. Remove the two screws securing the battery hold-down bracket. Next, unplug the sensor board connector.



8. Remove the third screw securing the battery hold-down bracket (see detail picture)



9. Gently lift the battery hold down bracket and rotate it off of the batteries. Use care not to pull the remaining wiring connected to the battery hold down bracket.

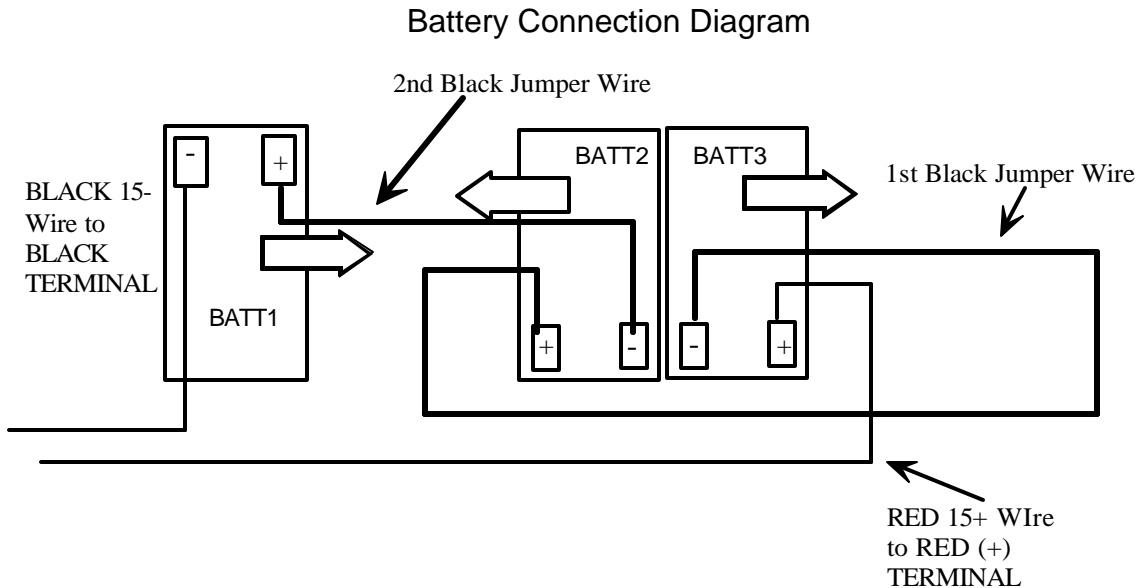


10. Immediately disconnect the red battery wire marked 15+ connected to the + (red) terminal of BATT 3.
11. Lift the batteries to an upright position and disconnect the black wire marked 15- and disconnect the two black battery jumper wires.

- Note the position of the three batteries and remove them from the chassis. See the battery connection diagram below.

CAUTION

WHEN REMOVING AND INSTALLING THE NEW BATTERIES, EXTREME CARE MUST BE USED NOT TO SHORT METAL CHASSIS PARTS ACROSS THE BATTERY TERMINALS AND NOT TO SHORT THE BATTERIES TO EACH OTHER OR PERSONAL INJURY MAY RESULT.



- Verify the UPS chassis is positioned as shown in step 9 and position the three new batteries upright in the UPS chassis as shown in the battery connection diagram above.
- Reconnect the Red 15+ wire to the + (red) terminal on BATT 3 as shown.
- Reconnect one end of the 1st Black jumper wire to the - (black) terminal of BATT 3 and reconnect the second end of the 1st jumper to the + (red) terminal of BATT 2 as shown.
- Reconnect one end of the 2nd Black jumper wire to the - (black) terminal of BATT 2 and reconnect the second end of the 2nd jumper to the + (red) terminal of BATT 1 as shown above.
- Using a DC Volt Meter touch the red lead of the meter on the + (red) BATT3 terminal and touch the black meter lead to the - (black) BATT 1 terminal. The meter should read +36-41Vdc if the batteries are connected correctly. If the voltage readings incorrect or reads -36-41Vdc check all battery wiring connection and meter lead polarity. This voltage must read +36-41Vdc before performing the next step.

18. If the UPS is model SG1K-2T,. temporally connect one end of a 100 ohm, 10 watt resistor to the - (black) terminal of BATT 1. Next, touch the metal fast-on terminal to the other end of the resistor for 30 seconds. Next, remove the resistor and reconnect the Black 15- wire to the - (black) terminal of BATT 1 as shown on the previous page. This is necessary to precharge the UPS electronics.
19. If the UPS is model SG1K-1T, reconnect the Black 15- wire to the - (black) terminal of BATT 1 as shown in the battery connection diagram on the previous page.
20. Recheck all battery connections to make sure the fast-on terminals are all the way on and are tight.
21. Lay BATT 1 down on its side on the direction indicated by the associated arrow in the battery connection diagram on the previous page.
22. Lay BATT 2 down on its side on the direction indicated by the associated arrow in the battery connection diagram on the previous page. (BATT 2 Terminals should be facing and opposite the terminals on BATT 1).
23. Lay BATT 3 down on its side on the direction indicated by the associated arrow in the battery connection diagram on the previous page. (The bottom of BATT 2 should be flat against the bottom of BATT 1).
24. Dress the battery wiring between and around the batteries so that the wires will not be pinched between the battery hold down bracket when reinstalled. Also check to make sure that no wiring can be pinched or shorted to the battery terminals.
25. Carefully rotate the battery hold down bracket back up over the batteries. Dress wiring around the bracket and verify no wiring is pinched under the bracket or between the bracket and the batteries.
26. Reinstall the third screw removed in step 8 and tighten.
27. Reinstall the two screws removed in step 7 and tighten
28. Reconnect the sensor board connector removed in step 7 and verify the lock is in place with the mating connector.
29. Perform a last visual inspection. Check all wiring and connections. Make sure no wiring will be pinched or shorted when the UPS top cover is reinstalled.
30. Set the UPS in an upright position.
31. Position the top cover so the open side slides over the rear of the UPS and continue to slide it forward until the front of the top cover is flush with the UPS front plastic bezel. Verify no wiring has been pinched. Use care not to short the top cover to the internal UPS electronics.

32. Reinstall the two rear panel screws removed in step 2 and tighten.
33. Gently place the UPS on its side with the bottom facing you.
34. Reinstall the four screws removed in step 4 and tighten.
35. If the UPS is model SG1K-1T reinstall the battery fuse and cap.
36. Connect the UPS to an utility power source.
37. Turn on the UPS power switch located on the rear panel. The UPS should power up and function normally as defined in the Owner's Manual.
38. Leave the UPS turned on for 24 hours to allow the batteries to fully charge.