

Smart-UPS Battery Pack Supplement

990-7072 Revision 1 9/98

When used with external battery packs, the extended run (XL) Smart-UPS offers longer run times than a standard Smart-UPS and extra load protection during battery replacement. When replacing the batteries either in the UPS or battery pack(s), the UPS can still respond to a power disturbance using the remaining connected batteries. Please refer to the User's Manual for basic information about the Smart-UPS and the Smart-UPS XL Supplement for additional information on extended run versions of the UPS. This supplement provides information on the battery packs.

To obtain warranty coverage, please fill out and return the warranty registration card now.

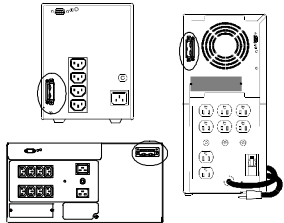
Installation

Inspection

Inspect the battery pack upon receipt. Notify the carrier and dealer if there is damage. The packaging is recyclable; save it for reuse or dispose of it properly.

Placement

Warning: Changes or modifications to this unit not expressly approved by the party responsible for compliance could void the warranty.

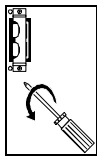


This figure shows the location of the battery pack connector on the SU3000 tower unit (right), the 5U SU3000RM (bottom), and the SU1000XL tower unit (left). Some UPS models have the battery pack connector in different positions, but the size and shape of the connector is always the same.

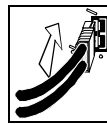
Battery pack connectors are color coded as shown in the table below. Battery pack connectors are also keyed to prevent improper connection. Do not try to install battery packs with connectors that are a different color from the battery pack connector in the UPS.

UPS	Nominal System Voltage	Battery Pack (connector color)
SU700XL SU1000XL	24 VDC	SU24XLBP (gray)
SU1400XLT SU2200XL SU2200XLT	48 VDC	SU48XLBP (blue)
SU3000 SU3000RM SU3000RMT	48 VDC	SU48BP (red)
SU1400RMXL SU1400RMXLT SU2200RMXL SU2200RMXLT	48 VDC	SU48RMXLBP(blue)

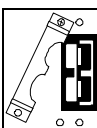
Install up to 10 battery packs per XL model UPS following the instructions below. **Note: The 3000 VA Smart-UPS accepts only one SU48BP battery pack.**



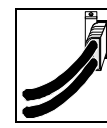
1. Prepare the UPS to connect the battery pack(s). Note the holes used to attach the battery pack connector clamp (near the center of the connector opening). Use a #2 Phillips head screwdriver to remove the battery pack connector clamp from the back of the UPS.



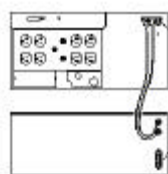
3. Holding the clamp aside, insert the battery pack connector into the UPS.



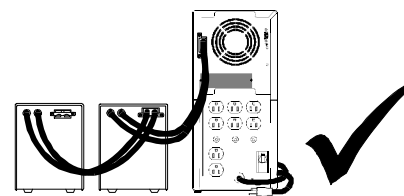
2. Turn the clamp over and loosely attach one end at the edge of the connector opening in the UPS.



4. Secure the connector clamp.



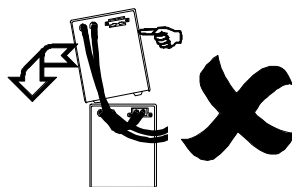
Correctly completed rack mount XL installation with one battery pack



Correctly completed tower XL installation with two battery packs.

For additional battery packs, repeat this procedure using the battery pack connectors on the battery packs.

Note: Do not stack battery packs. Stacking results in a tipping hazard.



Storage

Storage Conditions

Store the battery pack covered and upright in a cool, dry location, with its batteries fully charged. Before storing, charge the battery pack for at least 4 hours.

Extended Storage

At -15 to +30 °C (+5 to +86 °F), charge the battery pack every 6 months

At +30 to +45 °C (+86 to +113 °F), charge the battery pack every 3 months.

Battery Charge and Run Times

A floppy disk is shipped with each battery pack to configure your Smart-UPS for use with each new battery pack added. Your Smart-UPS needs to be configured appropriately so that it can better calculate the discharge time. Connect the UPS' port to a serial port on a PC or workstation running DOS or Windows, by using the black colored communications cable included. Next, while at the DOS prompt, insert the floppy disk into a drive and change to that drive's letter (e.g., A:) Then type: **battpack com[X] [Y]** where [X] = 1 or 2 depending on the serial port used, and [Y] = number of battery packs attached to the UPS.

The *Smart-UPS XL Supplement* contains tables showing both the time required for charging UPS and battery pack batteries for rated protection and typical run times.

Note: When configuring a Smart-UPS for use with an SU48RMXLBP, remember that one SU48RMXLBP is equivalent to two battery packs of any other model.

Replacing the Battery

This battery pack has easy to replace hot-swappable batteries. Battery replacement is a safe procedure, isolated from electrical hazards. You may leave the UPS and loads on for the following procedure. See your dealer or call the number in this manual for information on replacement battery kits.

Note: Please read the cautions in the APC Safety Guide. Save your data before beginning this procedure. Once the battery is disconnected, the loads are not protected from power outages.

Battery Replacement Procedure - Rack Mount XL Battery Packs

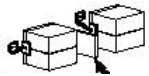


1. Reach into the finger pull and **remove** the front cover.
2. Use a flat-blade, screwdriver or coin to remove the battery door screws and open the door.

Warning! Do not force the battery out. This may damage internal wiring!



3. **Disconnect** the battery connector by pulling on the white cord on the side of the battery.
4. **Slide** the battery out of the battery pack.
5. Remove the foam separator.
6. Repeat steps 3 - 5 for the second battery.
7. Repeat steps 3 - 6 for the two batteries on the other side of the battery pack.



Note: Be careful removing the batteries - they are heavy.

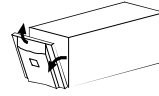
8. Slide the new battery into the battery pack.
9. Connect the battery connector

Note: Small sparks at the battery connectors are normal during connection.

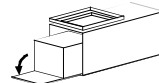
10. Push the battery in as far as it will go. There are stops in the back to prevent it from going too far.
11. Replace the foam separator.
12. Repeat steps 8 - 10 for the second battery.
13. Repeat steps 8 - 12 for the two batteries on the other side of the battery pack.
14. Close the battery door, replace the battery compartment screws, and replace the front cover.
15. Dispose of the old battery properly at an appropriate recycling facility or return it to the supplier in the packing material for the new battery. See the new battery instructions for more information.



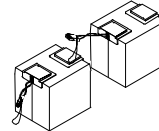
Battery Replacement Procedure - Tower XL Battery Packs



1. Grasp the side of the front cover and **tilt** it out and down.



2. **Unhook** the bottom of the cover from the chassis and remove it to expose the battery door
3. Use a flat-blade screwdriver or a coin to **remove** the two battery door screws and open the door.
4. Pull the white cord on the front battery connector to remove the battery connector.
5. Grasp the tab and gently **pull** the battery out of the battery pack.
6. Reach into the battery compartment and grasp the white cord on the other battery connector. **Pull** firmly to disconnect the connector and remove the second set of batteries.



Note: Be careful removing the batteries - they are heavy..

8. Slide the first set of new batteries into the unit. Hold the connector down below the top of the batteries and toward the door, otherwise the assembly will not fit. Guide the connector over the top of the batteries and **press firmly** to connect it to the rear connector of the battery compartment.

Note: Small sparks at the battery connectors are normal during connection.

9. Slide the second set of batteries in, then guide the connector over the batteries and **press firmly** to connect it to the front connector of the battery compartment.
10. Now close the battery door, replace the screws, and replace the front cover.
11. Dispose of the old battery properly at an appropriate recycling facility or return it to the supplier in the packing material for the new battery. See the new battery instructions for more information.



Specifications

	All Models	
Battery Type	Valve-regulated, sealed, lead-acid	
Typical Battery Life	3 to 6 years, depending on number of discharge cycles and ambient temperature	
Operating Temperature	0 to 40°C (+32 to +104°F)	
Storage Temperature	-15 to 45°C (+5 to 113°F)	
Operating and Storage Relative Humidity	5 to 95%, non-condensing	
Operating Elevation	0 to +3,000 m (0 to +10,000 ft.)	
Storage Elevation	0 to +15,000 m (0 to +50,000 ft.)	
Size (H x W x D)	Tower: 21.6 x 17.0 x 43.9 cm (8.5 x 6.7 x 17.3 in.)	Rack Mount: 17.8 x 48.3 x 45.7 cm (7.0 x 19.0 x 18.0 in.)
Weight - net (shipping)	31.3 (33.1) kg 69.0 (73.0) lb.	61.7 (69.4) kg 136.0 (153.0) lb.

Service Contacts

North & Latin America	Europe
APC 132 Fairgrounds Road West Kingston, Rhode Island 02892 USA 1-800-800-4APC/1-401-789-5735	APC Ballybritt Business Park Galway, Ireland 1800-702000 Toll-free within the Republic of Ireland only
Internet: http://www.apcc.com	
E-Mail: North America: apctech@apcc.com Latin America: apctchla@apcc.com	E-Mail: apceurtech@apcc.com

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