

# Replacement Battery Installation

**For Use with Ametek Powervar Active and  
Sinergy II Series UPS**

User Installation Instructions



**Universal  
Mount**

Thank you for purchasing original OEM batteries for your Ametek Powervar or Sinergy II S Series UPS. Prior to starting the battery replacement, please read the entire instructions for important safety procedures and time restrictions.

If you have any questions about this procedure contact Powervar Service at 847-596-7000, toll free at 800-369-7179.

## Safety Warnings:



**WARNING:** Safety while performing the following procedure is PARAMOUNT and must be performed by qualified and trained battery service personnel familiar with battery safety. Most, if not all, of the connections are handling lethal voltages anywhere from **230VAC** to as high as **700VDC** while the unit is in operation.



**NOTE:** The UPS cannot protect against power outages while the batteries are disconnected.



### **WARNING:**

- Servicing of batteries should be performed or supervised by personnel knowledgeable about batteries and the required precautions.
- The batteries installed in the UPS and in the external battery cabinets contain electrolyte. Under normal conditions the containers are dry. A damaged battery may leak electrolyte that can be dangerous in contact with the skin and cause irritation to the eyes. Should this happen, wash the affected part with copious amounts of water and seek immediate medical attention.
- When replacing batteries, replace with the same type and number of batteries or battery packs.
- Do not dispose of batteries in a fire. The batteries may explode.
- Do not open or damage the battery cases. Released electrolyte is harmful to the skin and eyes and may be toxic.
- A battery can present a risk of electrical shock and high short-circuit current. The following precautions should be observed when working on batteries:
  - Remove watches, rings or other metal objects
  - Use tools with insulated handles
  - Wear rubber gloves and boots

- Do not lay tools or metal parts on top of batteries
- Disconnect charging source prior to connecting or disconnecting battery terminals

The UPS does not require maintenance by the user, however, battery maintenance is recommended in accordance with IEEE Recommended Practice for Maintenance, Testing and Replacement of Valve-Regulated Lead-Acid (VRLA) Batteries for Stationary Applications (IEEE Std 1188-1996).

When the batteries expire, trained battery service personnel should replace them. A certified disposal/recycling company should carry out disposal / recycling of the UPS and / or batteries. Exhausted rechargeable batteries are classified as “harmful toxic waste” and as such the law demands that they be disposed of / recycled by an authorized recycling center.

The manufacturer’s service center is fully equipped to deal with such batteries, in accordance with the law and with the greatest respect for the environment. Contact Technical Support to arrange for maintenance and/or battery replacement.

The typical battery life cycle is 3 to 5 years, at an ambient temperature of 77°F (25°C); however battery life is also dependent on the frequency and duration of mains failures or battery discharge cycles.

## Battery Replacement Procedure:

Tool Required: # 1 Phillips screw driver.

Refer to the drawing below for button and LED locations.

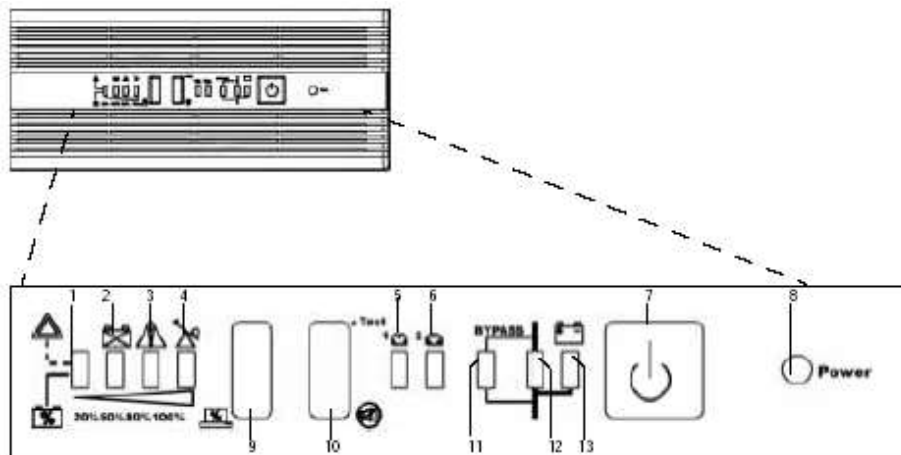


Figure 1

1. The battery replacement procedure may be performed while unit is in STANDBY mode (Power LED # 8 OFF) or while unit is in ON-LINE mode (Power LED # 8 ON).
2. On the left side of the front cover, locate the indentation.
3. Place fingers of left hand into the indentation, and pull forward until the left side of the front cover “snaps” out of position.
4. Remove the left side of the front cover and place it in a safe place.

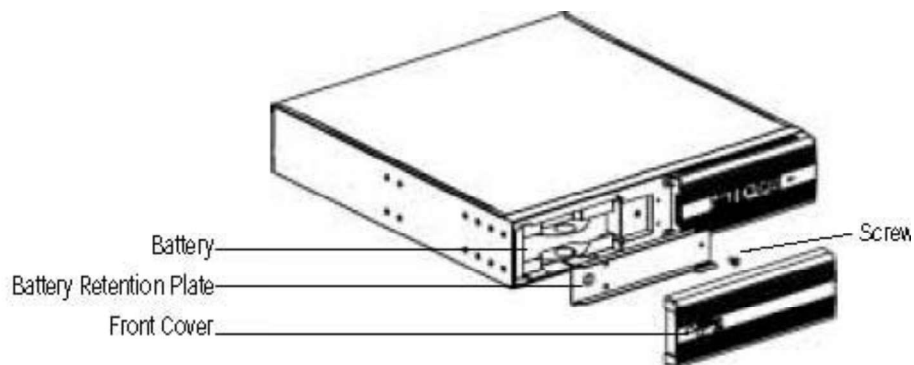
**NOTE:** After completing the following step you will have 2 minutes to insure all of the batteries, both internal and external, are disconnected from the unit. If you are unable to get all of the batteries disconnected in that time the unit will beep twice indicating it has exited the battery replacement mode and you will need to start over from this point.

5. Press and hold the LED Test/Alarm Reset button (# 10) for approximately 10 seconds, until you hear 2 beeps.

**WARNING:** Once the batteries are disconnected, loss of mains power will cause the load to drop.

**NOTE:** For 2kVA & 3kVA units perform step # 8 – disconnect the battery pack – prior to step # 6 below.

6. Remove one screw on the right side of the battery retention plate that is now exposed on the front left side of the UPS. Then remove the plate.

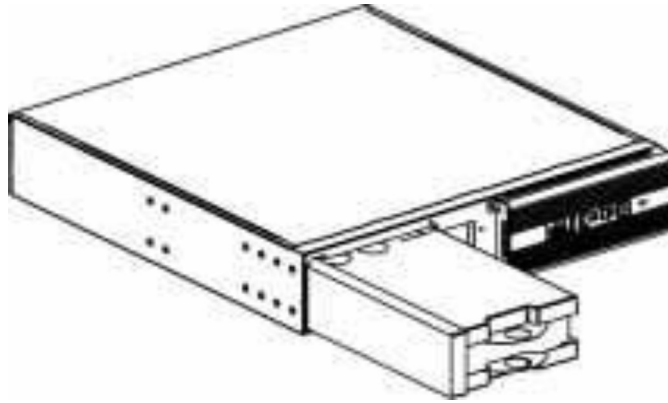


**Figure 2: Removing Front Cover Battery Retention Plate**

7. If there are external battery cabinets, turn off the circuit breaker on the back of each cabinet, and disconnect the external battery cabinet counter cable(s) (looks similar to a telephone cord).
8. Disconnect the internal battery pack.
9. Once all of the batteries have been disconnected the “Battery Disconnected” LED (# 2) on the front panel will begin flashing, and the unit will alarm with beep at 1 second intervals.
10. If there are external battery cabinets, disconnect their battery cables.

**NOTE:** Alarm may be silenced by pressing the LED Test / Alarm Reset button (#10)

11. If you are replacing external battery cabinets, remove the old cabinets, install the new cabinets, and only reconnect the battery power cable at this time. Leave the battery cabinet circuit breakers in the OFF position, and do **NOT** reconnect the external battery cabinet counter cables (looks like a phone cord).



**Figure 3**

**ATTENTION:** Battery pack is heavy. Use two hands when removing pack from unit.

12. Slide out the internal battery pack and slide in the replacement battery pack.

**NOTE:** For 2kVA & 3kVA units perform step # 14 – replace the battery retention plate – prior to step # 13 below.

13. Reconnect the battery connectors. At this point, the “Battery Disconnected” LED (#2) will stop flashing, and the unit will beep twice, indicating that it has exited the battery replacement mode. LEDs #1 - #4 will return to indicating battery charge %. The unit is now in the state that it was in prior to the start of this battery replacement procedure.
14. Replace metal battery retention plate and fasten with screw.
15. Align left plastic front cover by sliding tab into slot, tilt towards unit, and snap into place.
16. If you replaced external battery cabinets, reconnect the external battery cabinet counter cable(s) and turn on the circuit breakers on the battery cabinet(s).

### 17. Updating Installation Date of Battery Pack:

The following items are required to complete the next steps:

- PC with USB connection available.
- USB cable that ships with unit connecting UPS to PC.
- Management software / utility disk that ship with the unit.

Note: This procedure assumes that the UPS is already being monitored through one of its management connectivity options and that MopUPS management software has already been installed and is communicating with the UPS hardware. If this is the case please proceed to step #1 below.

If the UPS is being used as a stand alone unmanaged unit then the management software will need to be installed on an additional suitable PC platform.

Instructions for installing the management software are available in PDF format on the *Connectivity Product Set Disk* part #901-035.

For information on obtaining the cables or software please contact technical support.

1. Verify that the UPS is functioning normally. Please consult your user instruction manual for additional information about your UPS and it's functionality.
2. After installation of your new battery pack the pre-programmed date code of replacement battery pack needs to be updated. This is accomplished either using MopUPS software or using a ManageUPSNET adapter card.
3. If the UPS is managed by a previously connected USB interface then continue to follow the steps starting at 4.1 as outlined below.
4. If the UPS is managed via ManageUPSNET SNMP Network Adapter then continue to follow the steps starting at 4.2 as outlined below.

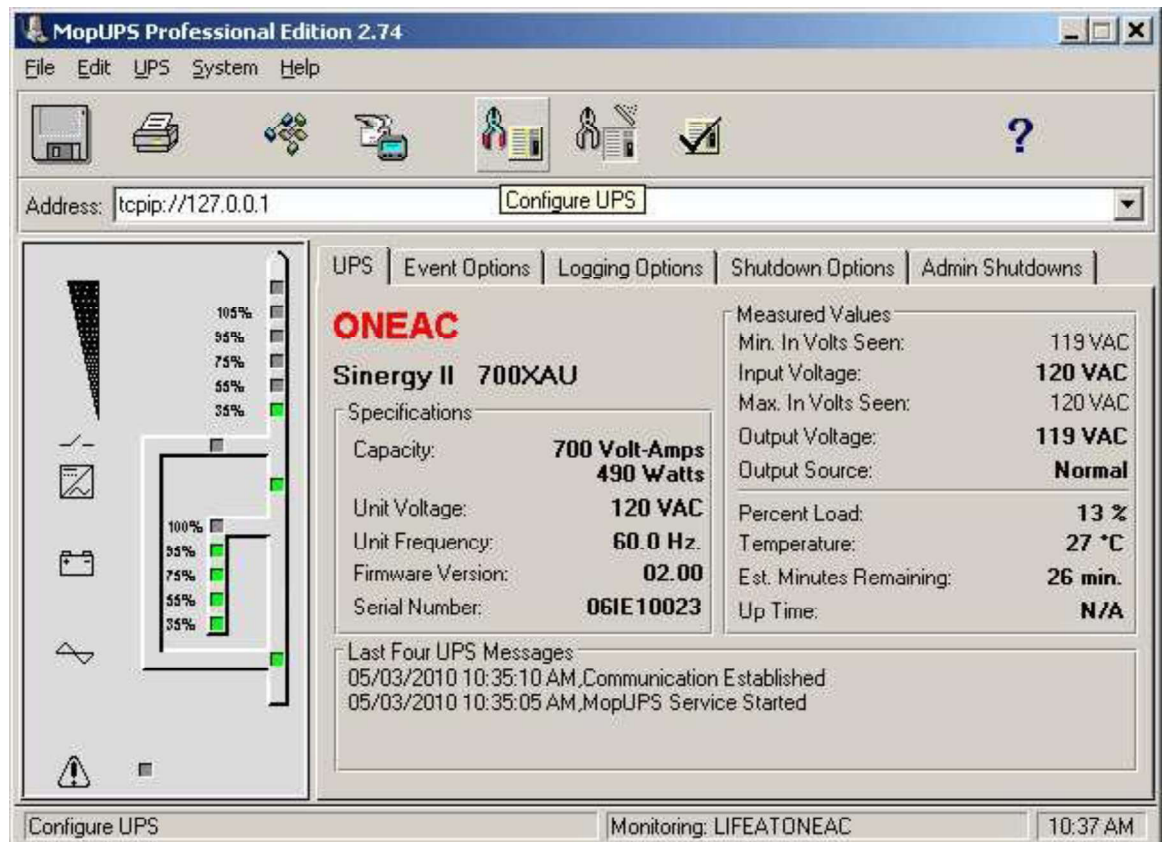


#### 4.1. System configured using MopUPS Professional management software.

- 4.1.1. Launch MopUPS management software from the c:\Program Files\Chloride Power\MopUPS\ups.exe directory installed on the PC.
- 4.1.2. Launch the GUI providing the appropriate password when prompted.



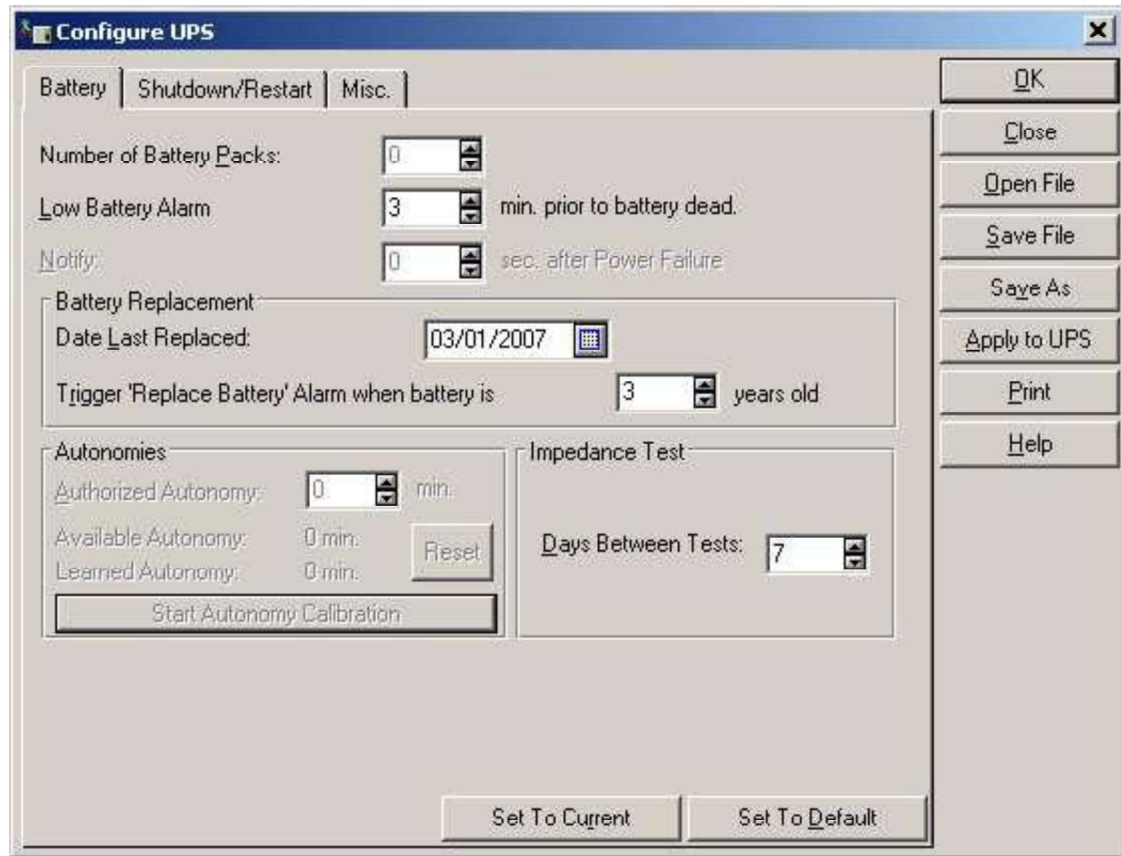
- 4.1.3. After log in follow the screen shots below to change the date for the newly installed battery pack.
- 4.1.4. From the MopUPS screen. Select "Configure UPS" icon.



**UPS As Viewed Through MopUPS Professional Program. 700Va Unit Shown.**



- 4.1.5. From the MopUPS screen. Navigate to “Battery Replacement”.  
Click on the calendar ICON and change the date to when the new battery pack was installed. Then select “OK”



- 4.1.6. Verify that you see the following message below and select “Yes”.



- 4.1.7. Verify that you see the following message below and select “Ok”.



4.1.8. The new date is now saved inside the UPS non-volatile memory.

#### **4.2. System configured using ManageUPSNET SNMP Network Adapter.**

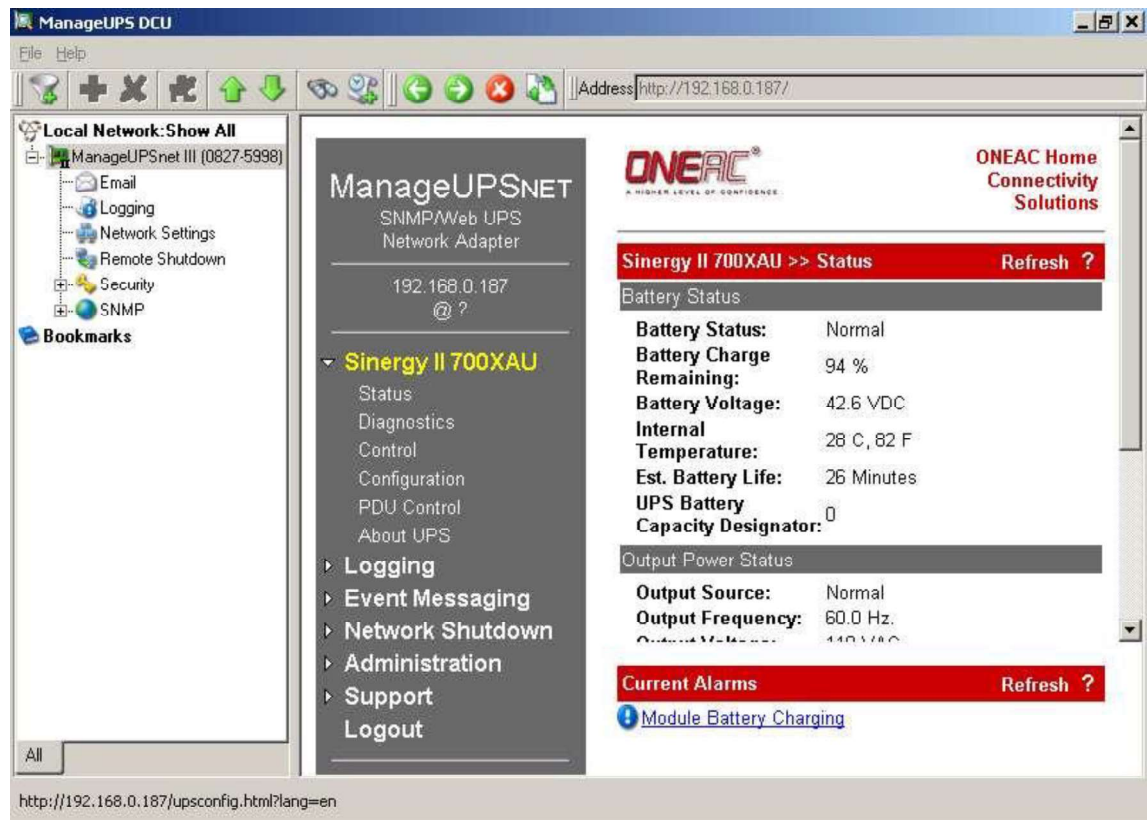
4.2.1. Follow the screen shots below to change the date for the newly installed battery pack.

4.2.2. Log into the management card by providing the proper username and password.

Note: The management card can be located on your network using the DCU utility program that is included with the management software disk.

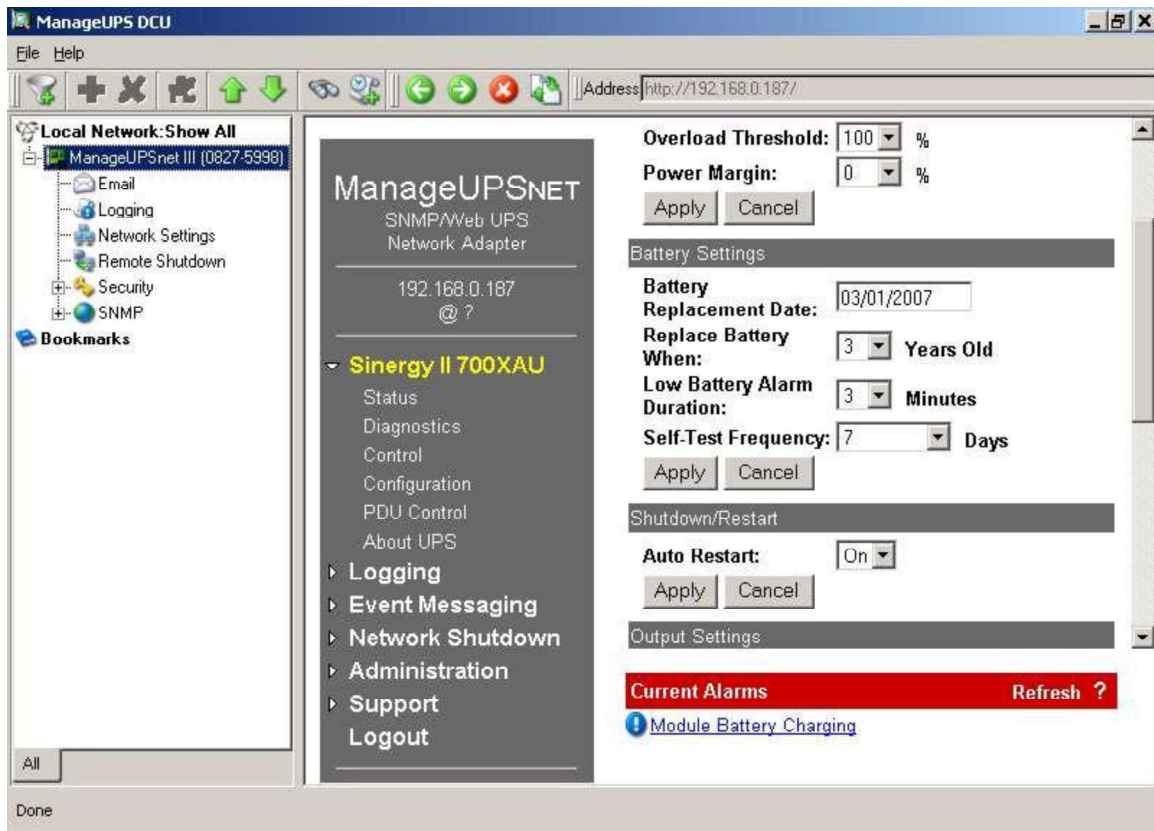


4.2.3. After a successful log on the following screen appears.



**SNMP Card As Viewed Through DCU Utility Program. 700Va Unit Shown.**

- 4.2.4. From the menu screen. Navigate to "Configuration". Under the "Battery Settings" menu. Change the date in the window box to that of when the new battery pack was installed. Then select "Apply".



**SNMP Card As Viewed Through DCU Utility Program. 700Va Unit Shown.**

18. Carefully pack the used battery pack and send it to an authorized recycle center.

### **Recycling of Batteries:**

Powervar provides for pre-paid return of depleted batteries with all replacement battery purchases. Just follow these simple steps:

1. Remove the new battery pack and install it in the UPS as per the installation instructions. Set the Fed Ex label aside.
2. After the battery pack has been replaced, place the depleted battery pack in the box the same way the new battery was packaged and seal the box.
3. Follow the return instructions on the back of the Fed Ex label and affix to the box.
4. To return to our factory for proper recycling (at no cost to you), give the box to any Fed Ex pick-up driver or call 1-800-393-4585 for the nearest drop-off location.