Safety and General Information

Inspect the package contents upon receipt. Notify the carrier and dealer if there is any damage.

Read the following reminders before installing the UPS.

• This UPS is intended for indoor use only.
• Connect the UPS power cable directly to a wall outlet. Do not use surge protectors or extension cords.
• When grounding cannot be verified, disconnect the equipment from the AC power outlet before installing or connecting to other equipment. Reconnect the power cord after all connections are made.
• Servicing of batteries should be performed by Schneider Electric IT (SEI) Customer Support only.
• When replacing the battery the UPS must be OFF, and its AC inlet unplugged.
• Do not dispose of batteries in a fire. The batteries may explode.
• Do not open or mutilate batteries. They contain a fluid that is toxic and harmful to the skin and eyes.
• To avoid harmful injury due to energy hazard, remove wrist watches and jewelry such as rings when replacing the batteries. Use tools with insulated handles.

Back-UPS™

CS
350/500/650
User Manual

EN 990-9237A 10/2014

Placement / Power

• This UPS is intended for indoor use only.
• Do not operate this UPS in direct sunlight, in contact with fluids, or where there is excessive dust or humidity.
• Be sure the air vents on the UPS are not blocked.
• Allow adequate space for proper ventilation.

Battery typical lasts for three to five years.

Connect the UPS power cable directly to a wall outlet. Do not use surge protectors or extension cords.

Plug the Back-UPS into a wall outlet, as shown.

Your computer’s power cord.

The Back-UPS charges the internal battery any time if it is connected to a wall outlet.

Status Indicators and Alarms

There are four status indicators (lights) on the front panel of the Back-UPS (On Line, On Battery, Overload, and Replace Battery).

1. Overload (red) - is lit whenever power demand has exceeded the capacity of the Back-UPS.
2. On Battery (yellow) - is lit whenever the battery of the Back-UPS is powering equipment connected to the Battery Backup Outlets.
3. Continuous Beeping - this alarm is sounded whenever the Battery Backup outlets are overloaded.
4. Replace Battery (red) - is lit whenever the battery is near the end of its useful life, or if the battery is not connected (not above). A battery that is near the end of its useful life has insufficient run-time and should be replaced.
5. Chips for 1 Minute Every 5 Hours - this alarm is sounded whenever the battery has failed the automatic diagnostic test.

Order Replacement Battery

The typical battery lifetime is 3-5 years (depending on the number of discharge cycles and opening temperatures). A replacement battery can be ordered over the phone from Schneider Electric, or the battery can be ordered on-line from the APC by Schneider Electric web site (http://www.apc.com, a valid credit card is required).

When ordering, specify Battery Cartridge RBC2 (Back-UPS 350/500) or RBC17 (Back-UPS 650).

To replace the internal battery, proceed as follows:

Place the unit on its side. Slide the battery compartment cover up and off the UPS.

Align the battery compartment cover with the grooves in the UPS. Slide the cover down until it locks.

Pull the battery out, exposing the battery terminals and wires. Disconnect the wires from the terminals.

Slide the new battery into the battery compartment. Connect the battery wires to the terminals as follows:

Black wire to Negative (-) terminal
Red wire to Positive (+) terminal

NOTE: Macintosh Users - for full USB performance, use Mac OS 10.1.5 or higher. If USB host is not enabled on the computer, proceed as follows:

1. On the computer desktop of the display, double-click on My Computer.
2. Double-click on the CD-ROM drive icon and follow the on-screen instructions.

Connecting Equipment to the Back-UPS

The rear panel of the Back-UPS consists of the following elements:

Battery Backup Outlets (ups. of 3): These outlets provide battery back-up, surge protection, and Electro-magnetic Interference (EMI) filtering. In case of power outage, battery power is automatically transferred to these outlets and the equipment connected to these outlets is powered. The UPS will not supply to these outlets when the Back-UPS is switched OFF. Connect a computer, monitor, router, and external disk or CD-ROM drive to these outlets.

Surge Only Outlet: This outlet is always ON (when utility power is available) and is not controlled by the On/Off switch. This outlet does not provide power during a power outage. Connect a printer, fax machine or scanner to this outlet.

Connect Equipment to the Back-UPS

Connect the Phone Line to Surge Protection

The telephone ports provide lightning surge protection for any device connected to the telephone line (computer, modem, fax or telephone). The telephone ports are compatible with Home Phoneline Networking Alliance (HPNA) and Digital Subscriber Line (DSL) installations, as well as all modem data rates. Connect as shown.

Connect the USB Cable and Install Software (optional)

Follow the on-screen instructions.

Replace the Internal Battery

To replace the internal battery, proceed as follows:

1. Place the unit on its side. Slide the battery compartment cover up and off the UPS.
2. Align the battery compartment cover with the grooves in the UPS. Slide the cover down until it locks.
3. Pull the battery out, exposing the battery terminals and wires. Disconnect the wires from the terminals.
4. Slide the new battery into the battery compartment. Connect the battery wires to the terminals as follows:
   - Black wire to Negative (-) terminal
   - Red wire to Positive (+) terminal
5. Press the push button on the front panel of the Back-UPS.

Observe that the following events occur after pressing and releasing the push-button:

• The green On-Line indicator flashes.
• The yellow On Battery indicator lights while the Self-Test is being performed.
• When Self-Test has successfully completed, only the green On Line indicator will be lit.

Replacing the battery is a safe procedure. However, small sparks may occur during the process. This is normal.
**Specifications**

**Input Voltage (on line)**
- 180 - 260 VAC (default setting)

**Frequency Limits (on line)**
- 47 - 63 Hz (auto-sensing)

**On Battery Waveform**
- Stepped Sine Wave

**Maximum Load**
- 350 VA - 210 W
- 500 VA - 300 W
- 650 VA - 400 W

**Typical Recharge Time**
- 8 Hours

**Operating Temperature**
- 20% to 40% (32°F to 104°F)

**Storage Temperature**
- -30% to 45% (3°F to 113°F)

**Operating and Storage**
- Relative Humidity
  - 5% to 95% non-condensing

**EMI Classification**
- EN 55022, IEC 801-2 and 801-4 (level IV), and IEC 801-3 (level III)

**Battery**
- 350 V A - 13.2 minutes (typical) - computer and
- 650 V A - 17 minutes (typical) - computer and
- 800 V A - 10.8 minutes (typical) - computer and
- 800 V A - 12 minutes (typical) - computer and
- 1200 V A - 20 minutes (typical) - computer and

**Warranty**
- The standard warranty is two (2) years from the date of purchase. APC’s standard procedure is to replace the original unit with a factory-reconditioned unit. Customers who have the original unit and back due to equipment upgrades and set depreciation schedules. The technician will be required to provide input voltage.

**Troubleshooting**

**Use the tables below to solve minor Back-UPS installations and operation problems. Consult Schneider Electric IT (SEIT) On-line Technical Support or call SEIT Technical Support for assistance with problems that cannot be resolved using this document.**

**Possible Cause**

- **Back-UPS will not turn on**
  - **Procedure**
    - Check that the Back-UPS power plug is securely connected to the wall outlet.

- **Back-UPS circuit breaker “tripped”**
  - **Procedure**
    - Disconnect non-essential equipment from the Back-UPS. Reset the circuit breaker (located on the rear panel of the Back-UPS) by pushing in the circuit breaker button fully inward until it catches. If the circuit breaker resets, switch the Back-UPS on and reconnect the equipment one-at-a-time. If the circuit breaker trips again, it is likely that one of the connected devices is causing the overload.

- **Very low or no utility voltage**
  - **Procedure**
    - Check the wall outlet that supplies power to the Back-UPS using a table lamp. If the lamp is not lit, the utility voltage was checked and a qualified technician must be contacted.

- **Portable generator being used to provide input voltage**
  - **Procedure**
    - Set the Transfer Voltage and Sensitivity setting to Low (see Voltage Transfer and Sensitivity Adjustment). By setting the Back-UPS to Low sensitivity, it can accept a wider range of input voltage.

- **Back-UPS does not power computer/monitor/external drive during an outage**
  - **Procedure**
    - Contact the monitor manufacturer or external drive power plug plug to the Battery Backup outlets.

- **Back-UPS circuit breaker “tripped”**
  - **Procedure**
    - Disconnect non-essential equipment from the Back-UPS. Reset the circuit breaker (located on the rear panel of the Back-UPS) by pushing in the circuit breaker button fully inward until it catches.

- **The wall outlet that the Back-UPS is connected to does not supply utility power to the unit**
  - **Procedure**
    - Contact the circuit breaker to another wall outlet or have a qualified technician check the building wiring.

- **Back-UPS does not provide expected backup time**
  - **Procedure**
    - Unplug non-essential Battery Backup connected equipment, such as printers and plug them into Surge Only outlets. Note: Devices that have motors or dimmer switches (laser printers, electric lamps, and vacuum cleaners, for example) should not be connected to the Battery Backup outlets.

- **Back-UPS battery is weak due to recent outage and has not had time to recharge**
  - **Procedure**
    - Replace battery (see Order Replacement Battery). Batteries typically last 3-4 years, shorter if subjected to frequent power outages or elevated temperatures.

**A red indicator is lit**

- **Batteries are not connected properly.**
  - **Procedure**
    - Connect the battery connections.

- **The Overload indicator is lit. If equipment connected to the Battery Backup outlets is drawing more power than the Back-UPS can provide.**
  - **Procedure**
    - Move one or more equipment power plug to the Surge Only outlets.

- **Equipment requires replacement.**
  - **Procedure**
    - Replace the battery. The battery should be replaced within two weeks (see “Order Replacement Battery”). Failure to replace the battery will result in reduced run-time during a power outage.

**Red indicators are flashing**

- **Back-UPS failure. Call APC for service.**
- **Input Voltage (on line)**
- **Frequency Limits (on line)**
- **On Battery Waveform**
- **Maximum Load**
- **Typical Recharge Time**
- **Operating Temperature**
- **Storage Temperature**
- **Operating and Storage**
- **Relative Humidity**
- **EMI Classification**
- **Battery**
- **Warranty**
- **Troubleshooting**
- **Service**
- **Specifications**
- **Back-UPS Storage**
- **Contact APC Technical Support to troubleshoot the unit before returning it to APC**
- **Note:** If the UPS requires service, do not return it to the dealer. The following steps should be taken:

1. Consult the Troubleshooting section to eliminate common problems.
2. Determine if the circuit breaker is tripped. If the circuit breaker is tripped, reset the breaker and determine if the problem still exists.
3. If the problem persists, consult the APC Worldwide Web site (www.apc.com) or call customer service.

**Service**

Before storing, charge the Back-UPS for at least eight hours. Store the Back-UPS covered and upright in a cool, dry location. During storage, recharge the battery according to the following table:

**Specifications**

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  - **Procedure**
    - Contact the circuit breaker to another wall outlet or have a qualified technician check the building wiring.

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  - **Procedure**
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**Red indicators are flashing**

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