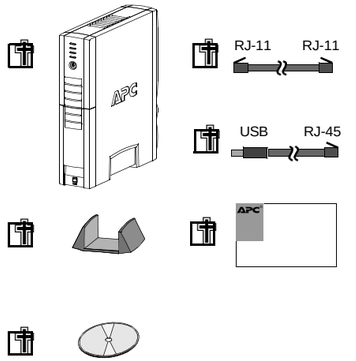
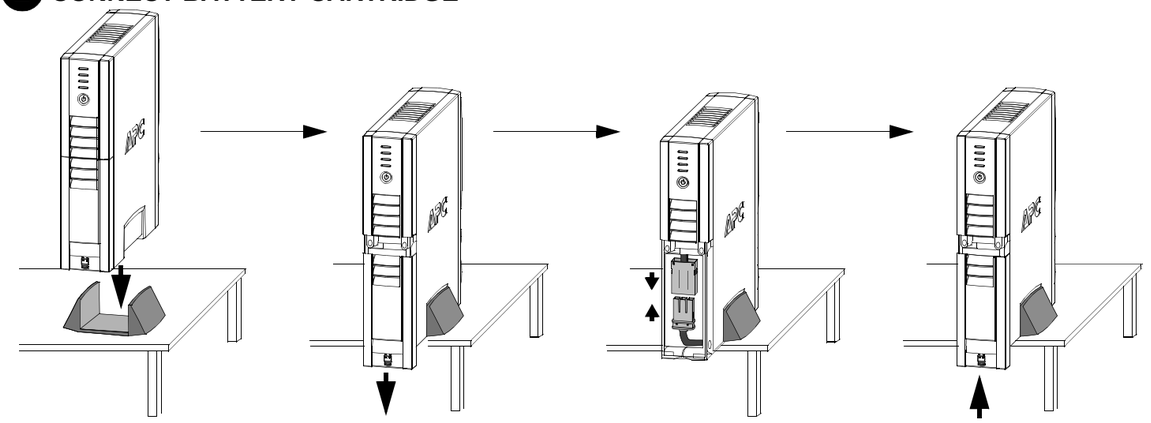
Back-UPS® RS 1000
Back-UPS® RS 1500

User's Manual

1 CONTENTS

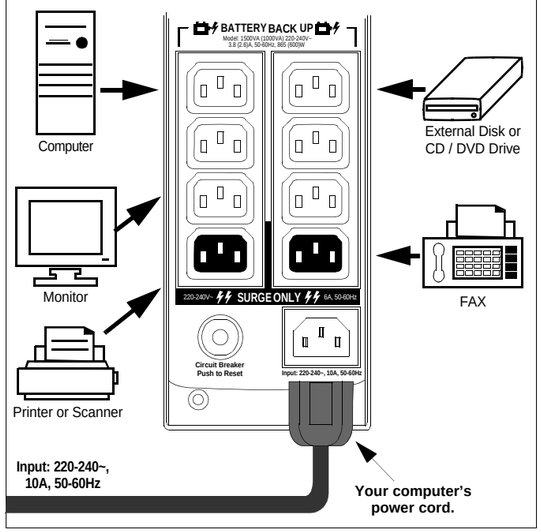


2 CONNECT BATTERY CARTRIDGE

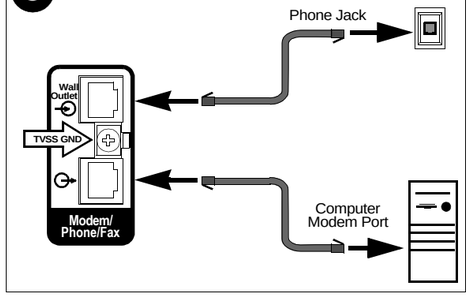


3 OPERATING ENVIRONMENT

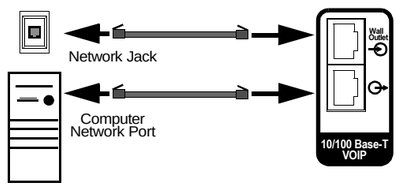
4 CONNECT EQUIPMENT / POWER



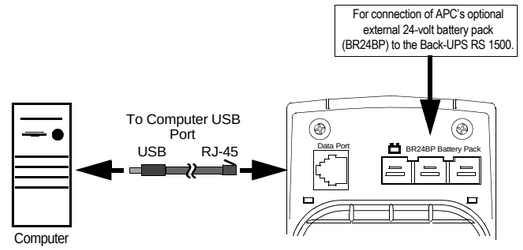
5 CONNECT PHONE/MODEM/FAX



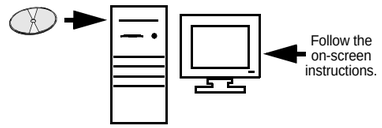
6 CONNECT 10/100 Base-T or VOIP



7 CONNECT INTERFACE CABLE



10 INSTALL SOFTWARE ON COMPUTER



If Autoplay 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.

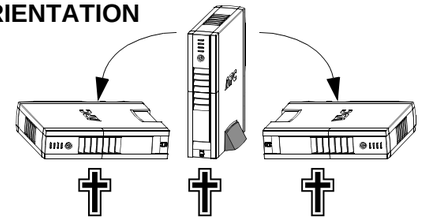
8 SWITCH ON THE BACK-UPS

Note: Allow the Back-UPS to charge for a full eight (8) hours prior to use.

Press the front panel Power ON/OFF switch and observe that the following events occur after pressing and releasing the switch:

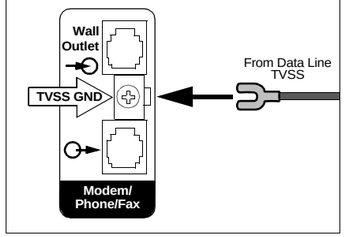
- The green On Line indicator flashes.
- The yellow On Battery indicator lights while a Self-Test is being performed.
- When Self-Test has successfully completed, only the green On Line indicator will be lit.
- If the internal battery cartridge is not connected (see Step 2 above), the green On Line indicator and red Replace Battery indicators will light. The Back-UPS will also emit a chirping sound.

9 ORIENTATION



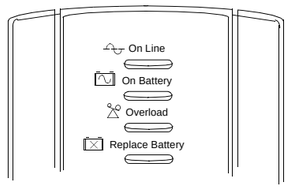
11 CONNECT TVSS GROUND

The Back-UPS features a transient voltage surge-suppression (TVSS) screw for connecting the ground lead on additional surge suppression devices such as network and data line surge protectors.



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).



On Line (green) - is lit whenever utility power is powering the Battery Backup outlets.

On Battery (yellow) - is lit whenever the battery of the Back-UPS is powering equipment connected to the Battery Backup Outlets.

Four Beeps Every 30 Seconds - this alarm is sounded whenever the Back-UPS is running On Battery. Consider saving work in progress.

Continuous Beeping - this alarm is sounded whenever a low battery condition is reached. Battery run-time is very low. Promptly save any work in progress and exit all open applications. Shutdown the operating system, computer and the Back-UPS.

Overload (red) - is lit whenever power demand has exceeded the capacity of the Back-UPS.

Continuous Tone - this alarm is sounded whenever the Battery Backup outlets are overloaded.

Circuit Breaker - the circuit breaker button located on the rear panel of the Back-UPS will stick out if an overload condition forces the Back-UPS to disconnect itself from utility power. If the button sticks out, disconnect non-essential equipment. Reset the circuit breaker by pushing the button inward.

Replace Battery (red) - is lit whenever the battery is near the end of its useful life, or if the battery is not connected (see above). A battery that is near the end of its useful life has insufficient run-time and should be replaced.

Chirps for 1 Minute Every 5 Hours - this alarm is sounded whenever the battery has failed the automatic diagnostic test.

SERVICE

If the Back-UPS arrived damaged, notify the carrier.

If the Back-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. If the problem persists, go to http://www.apc.com/support/.
3. If the problem still persists, contact APC Technical Support.
   - Have the Back-UPS model number, serial number and date of purchase available. Be prepared to troubleshoot the problem with an APC Technical Support representative. If this is not successful, APC will issue a Return Merchandise Authorization (RMA) number and a shipping address.

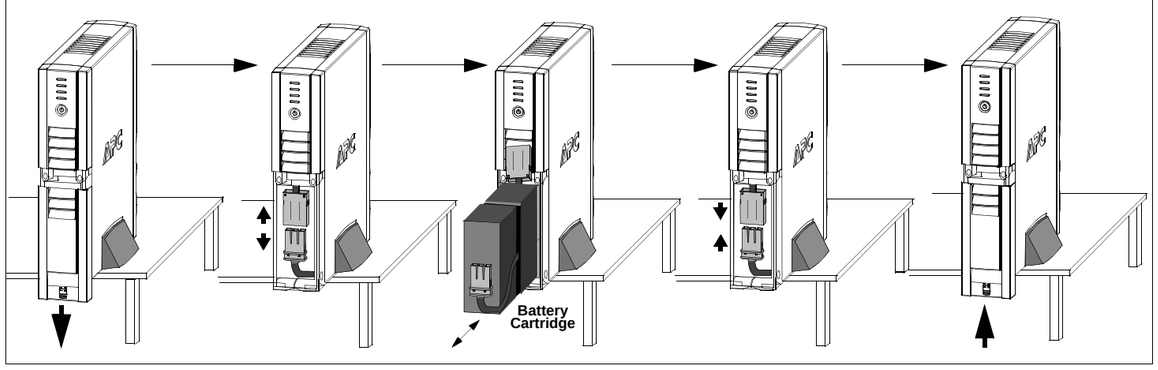
TROUBLESHOOTING

Problem	Possible Cause	Corrective Action
Back-UPS will not switch on.	Back-UPS not connected to AC power source.	Ensure the Back-UPS is securely connected to an AC outlet.
	Back-UPS circuit breaker “tripped”.	Disconnect non-essential equipment from the Back-UPS. Reset (push in) the rear panel circuit breaker. Switch on the Back-UPS and plug in devices one at a time. If the circuit breaker trips again, disconnect the device that caused the breaker to trip.
	Utility input voltage is out of range.	Consider adjusting the transfer voltage and sensitivity. See *Transfer Voltage and Sensitivity Adjustment.*
Back-UPS does not power essential equipment during an outage.	Equipment plugged into a Surge Only outlet.	Unplug device from 'Surge Only' outlet and move to a 'Battery Backup' outlet.
Back-UPS operates on battery although utility power exists.	Back-UPS circuit breaker “tripped”.	Disconnect non-essential equipment from the Back-UPS. Reset (push in) the rear panel circuit breaker. Switch the Back-UPS on and plug equipment in one-at-a-time. If the circuit breaker trips again, disconnect the device that caused the breaker to trip.
	Utility input voltage is out of range.	Consider adjusting the transfer voltage and sensitivity. See *Transfer Voltage and Sensitivity Adjustment.*
Back-UPS does not provide expected backup time.	Back-UPS is heavily loaded.	Unplug non-essential equipment (printers, scanners, etc) from the Battery Backup outlets and plug into 'Surge Only' outlets.
	Back-UPS battery cartridge is discharged due to recent power outage and has not had time to recharge.	Charge the battery cartridge for 8 hours. Back-UPS runtime is reduced until the battery cartridge is fully charged.
	Battery has reached the end of its life.	Replace battery cartridge (see *Order Replacement Battery Cartridge*).
Red Replace Battery indicator is flashing. Green On Line indicator is on.	Internal battery cartridge is not connected.	Connect battery cartridge (see *Connect Battery Cartridge*).
Red Replace Battery indicator is on.	Battery has reached the end of its life.	Replace the battery cartridge (see *Order Replacement Battery Cartridge*).
Red Overload indicator is on or flashing.	Connected equipment is drawing more power than the Back-UPS can provide.	Move one or more equipment power plugs from Battery Backup outlets to Surge Only outlets.
Green On Line indicator is on and all front panel indicators are flashing.	Internal UPS fault.	Contact APC Technical Support (see *Contact Information*).

ORDER REPLACEMENT BATTERY CARTRIDGE

The battery cartridge typically lasts 3-6 years, shorter if subjected to frequent outages or elevated temperatures. Order part number **RBC32** for 1000 VA models, or **RBC33** for 1500 VA models.

REPLACE BATTERY CARTRIDGE



SPECIFICATIONS

Item	Specification
On-line Input Voltage Range (default settings)	175 - 295 Vac
Automatic Voltage Regulation (AVR)	±12%
On-line Frequency Range	47 - 63 Hz (autosensing)
On-battery Waveshape	Stepped Sine Wave
Maximum Load	1000 VA - 600 W 1500 VA - 865 W
Typical Recharge Time	8 Hours
Operating Temperature	0° to 40°C (32° to 104°F)
Storage Temperature	-5° to 45°C (23° to 113°F)
Operating / Storage Relative Humidity	0 to 95% non-condensing
Size (H x W x D)	37.1 x 8.6 x 33.3 cm (14.6 x 3.4 x 13.1 inch)
Weight	1000 VA 10 kg (22 lbs) 1500 VA 11 kg (25 lbs)
Shipping Weight	1000 VA 11 kg (25 lbs) 1500 VA 12 kg (28 lbs)
EMI Classification	EN 50091-1, EN 60950, EN 50091-2, EN 61000-3-2, EN 6100-3-3, EN 55022 Class B
On Battery Run-Time	See http://www.apc.com/product

LIMITED 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 must have the original unit back due to the assignment of asset tags and set depreciation schedules must declare such a need at first contact with an APC Technical Support representative. APC will ship the replacement unit once the defective unit has been received by the repair department, or cross-ship upon the receipt of a valid credit card number. The customer pays for shipping the unit to APC. APC pays ground freight transportation costs to ship the replacement unit to the customer.

TRANSFER VOLTAGE AND SENSITIVITY ADJUSTMENT

In situations where the Back-UPS or connected equipment appears too sensitive to input voltage, it may be necessary to adjust the transfer voltage. This is a simple task requiring use of the front panel pushbutton. To adjust the transfer voltage, proceed as follows:

1. Plug the Back-UPS into the utility power source. The Back-UPS will be in a Standby Mode (no indicators lit, no power to Battery Backup outlets).
2. Press the front panel pushbutton fully inward for 10 seconds. All indicators on the Back-UPS will flash to acknowledge going into Programming Mode.
3. The Back-UPS will then indicate its current Lower Transfer Voltage, as shown in the following table.

Indicators Lit	Lower Transfer Voltage Sensitivity	Use When
1	155 Vac Low	Use only for extreme conditions of low input voltage. Not recommended for computer loads.
2	165 Vac Medium	Back-UPS frequently goes On Battery due to low input voltage.
3	175 Vac High (factory default)	Connected equipment is sensitive to low voltage (recommended).

4. To select 155 volts as the Lower Transfer Voltage, press the push button until 1 indicator is flashing.
5. To select 165 volts as the Lower Transfer Voltage, press the push button until 2 indicators are flashing.
6. To select 175 volts as the Lower Transfer Voltage, press the push button until 3 indicators are flashing.

Once in Programming Mode, if the pushbutton is not pressed within 5 seconds,

CONTACT INFORMATION

Technical Support	**http://www.apc.com/support**
Internet	**http://www.apc.com** **esupport@apcc.com**
Asia-Pacific	**(+65) 3896 823**
China	**(+86) (10) 8529 9888**
Europe / Middle East / Africa	**+ 353 91 702020**
USA / Canada	**+ 1 401 789 5735**
Worldwide	**+1.401.789.5735**