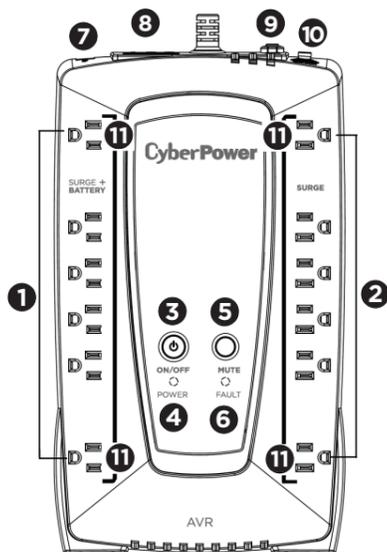


## AVR UPS SERIES AVRG750U / AVRG900U USER MANUAL



### FEATURES

- |  |                                   |
|--|-----------------------------------|
| 1. Battery and Surge Protected Outlets | 7. USB Port                       |
| 2. Full-Time Surge Protection Outlets  | 8. Communication Protection Ports |
| 3. Power Switch                        | 9. Circuit Breaker                |
| 4. Power On Indicator                  | 10. Ground Screw                  |
| 5. Mute Button                         | 11. Widely-Spaced Outlets         |
| 6. Fault Indicator                     |                                   |

### PRODUCT REGISTRATION

Thank you for purchasing a CyberPower product. This UPS is designed to provide unsurpassed power protection, operation, and performance during the lifetime of the product. Please take a few minutes to register your product at: [www.CyberPowerSystems.com/registration](http://www.CyberPowerSystems.com/registration). Registration certifies your product's warranty, confirms your ownership in the event of a product loss or theft, and entitles you to free technical support. Register your product now to receive the benefits of CyberPower ownership.

Cyber Power Systems (USA), Inc.

4241 12th Avenue East, Suite 400 | Shakopee, MN 55379 | [CyberPowerSystems.com](http://CyberPowerSystems.com)

### INSTALLING YOUR UPS SYSTEM - continued

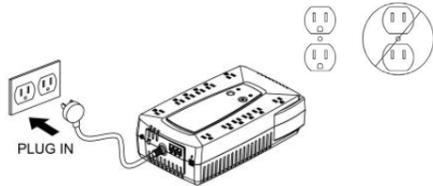
#### DETERMINE THE POWER REQUIREMENTS OF YOUR EQUIPMENT

- Ensure that the equipment plugged into the UPS does not exceed the UPS unit's rated capacity (750VA/450W for AVRG750U and 900VA/480W for AVRG900U). If the rated capacities of the unit are exceeded, an overload condition may occur and cause the UPS unit to shut down or the circuit breaker to trip.
- There are many factors that can affect the amount of power that your electronic equipment will require. For optimal system performance keep the load below 80% of the unit's rated capacity.

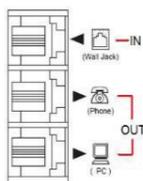
#### HARDWARE INSTALLATION GUIDE

- Your new UPS may be used immediately upon receipt. However, after receiving a new UPS, to ensure the battery's maximum charge capacity, it is recommended that you charge the battery for at least 8 hours. Your UPS is equipped with an auto charge feature. When the UPS is plugged into an AC outlet, the battery will automatically charge whether the UPS is turned on or turned off.
- With the UPS unit turned off and unplugged, connect your computer, monitor, and any other peripherals requiring battery backup into the battery power supplied outlets. Plug the other peripheral equipment (e.g., printer, scanner, speakers, etc.) into the full time surge protection outlets. **DO NOT plug a laser printer, paper shredder, copier, space heater, vacuum cleaner, sump pump or other large electrical device into the "Battery and Surge Protected Outlets". The power demands of these devices will overload and possibly damage the unit.**
- To protect a fax, phone, or modem line, connect a telephone cable from the wall jack outlet to the IN jack of the UPS. Connect a telephone cable from one of the UPS OUT jacks to the modem port on the computer. The other UPS OUT jack can be used to protect a telephone or fax machine.

- Plug the UPS into a 2-pole, 3-wire grounded receptacle (wall outlet). Make sure the wall branch outlet is protected by a fuse or circuit breaker and does not service equipment with large electrical demands (e.g. air conditioner, refrigerator, copier, etc.). The warranty prohibits the use of extension cords, outlet strips, and surge strips in conjunction with the UPS unit.



- Press the power switch to turn the unit on. The Power On indicator light will illuminate green and the unit will emit one long and one short "beep".
- If an overload is detected, an audible alarm will sound and the unit will emit one long beep. To correct this, turn the UPS off and unplug at least one piece of equipment from the battery power supplied outlets. Make sure the circuit breaker is depressed and then turn the UPS on.
- To maintain optimal battery charge, leave the UPS plugged into an AC outlet at all times.
- To store the UPS for an extended period of time, cover it and store with the battery fully charged. While in storage, recharge the battery every three months to ensure optimal battery life.
- Ensure the wall outlet and UPS are located near the equipment being attached for proper accessibility.



### IMPORTANT SAFETY WARNINGS (SAVE THESE INSTRUCTIONS)

This manual contains important safety instructions. Please read and follow all instructions carefully during installation and operation of the unit. Read this manual thoroughly before attempting to unpack, install, or operate your UPS.

**CAUTION!** To prevent the risk of fire or electric shock, install in a temperature and humidity controlled indoor area free of conductive contaminants. (Please see specifications for acceptable temperature and humidity range).

**CAUTION!** To reduce the risk of electric shock, do not remove the cover except to service the battery. Turn off and unplug the unit before servicing the batteries. There are no user-serviceable parts inside except for the battery.

**CAUTION!** Hazardous live parts inside can be energized by the battery even when the AC input power is disconnected.

**CAUTION!** The UPS must be connected to an AC power outlet with fuse or circuit breaker protection. Do not plug into an outlet that is not grounded. If you need to de-energize this equipment, turn off and unplug the unit.

**CAUTION!** To avoid electric shock, turn off the unit and unplug it from the AC power source before installing a computer component.

**CAUTION!** To reduce the risk of fire, connect only to a circuit provided with 20 amperes maximum branch circuit over current protection in accordance with the National Electric Code, ANSI/NFPA 70.

**CAUTION!** Not for use in a computer room as defined in the Standard for the Protection of Electronic Computer / Data Processing Equipment, ANSI/NFPA 75.

**CAUTION!** Do not dispose of batteries in a fire. The batteries may explode.

**CAUTION!** Do not open or mutilate batteries. Released electrolyte is harmful to the skin and eyes. It may be toxic.

**DO NOT USE FOR MEDICAL OR LIFE SUPPORT EQUIPMENT!** CyberPower Systems does not sell products for life support or medical applications. DO NOT use in any circumstance that would affect operation and safety of life support equipment, any medical applications or patient care.

**DO NOT USE WITH OR NEAR AQUARIUMS!** To reduce the risk of fire or electric shock, do not use with or near an aquarium. Condensation from the aquarium can cause the unit to short out.

**DO NOT USE THE UPS ON ANY TRANSPORTATION!** To reduce the risk of fire or electric shock, do not use the unit on any transportation such as airplanes or ships. The effect of shock or vibration caused during transit and the damp environment can cause the unit to short out.

### INSTALLING YOUR UPS SYSTEM

#### UNPACKING

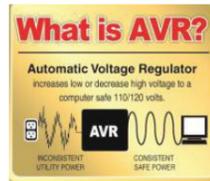
Inspect the UPS upon receipt. The box should contain the following:

- UPS unit
- User's manual
- USB device cable

PowerPanel® Personal software is available on our website. Please visit [www.cyberpowersystems.com](http://www.cyberpowersystems.com) and go to the Software Section for a free download.

#### AUTOMATIC VOLTAGE REGULATOR

The AVRG750U/AVRG900U stabilizes inconsistent utility power to nominal levels that are safe for equipment. Unstable utility power can be damaging to important data and hardware. With Automatic Voltage Regulation (AVR), damaging voltage levels are corrected to safe levels. AVR automatically increases low utility power or decreases high utility power to a consistent and safe 110/120 volts.



### BASIC OPERATION

- Battery and Surge Protected Outlets** - The unit has six battery powered and surge protected outlets to ensure temporary uninterrupted operation of your equipment during a power failure. **DO NOT plug a laser printer, paper shredder, copier, space heater, vacuum cleaner, sump pump or other large electrical device into the Battery and Surge Protected Outlets. The power demands of these devices will overload and possibly damage the unit.**
- Full-Time Surge Protection Outlets** - The unit has six surge suppression outlets
- Power Switch** - Used as the master on/off switch for equipment connected to the battery power supplied outlets. To turn the UPS ON, press the power button for approximately 2 seconds - you will hear a constant tone (1 second) - and release after a short beep. To turn the UPS OFF, press the power button for approximately 2 seconds - you will hear a constant tone (1 second) - and release after two short beeps.
- Power On Indicator** - This LED is illuminated when the utility power is normal and the UPS outlets are providing power, free of surges and spikes.
- Mute Button** - Press the button for 2 seconds to enable (beeps once) or disable (beeps twice) the audible alarm.
- Fault Indicator** - This LED is illuminated if there is a problem with the UPS.
- USB Port** - The USB port allows connection and communication between the USB port on the computer and the UPS unit.
- Communication Protection Ports** - Communication protection ports will protect any standard modem, fax, or telephone line (RJ11)
- Circuit Breaker** - Located on the side of the UPS, the circuit breaker serves to provide overload and fault protection.
- Ground Screw** - The ground screw is used for any equipment that needs a chassis ground connection.
- Widely-Spaced Outlets** - The UPS unit has four widely-spaced outlets. AC power adapters can be plugged into the UPS without overlapping or blocking adjacent outlets.

### REPLACING THE BATTERY

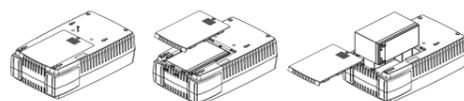
Replacement of batteries located in an **OPERATOR ACCESS AREA**

- When replacing batteries, replace with the same number of the following battery: CyberPower / RB1270B for AVRG750U; RB1290A for AVRG900U
- CAUTION!** Risk of Energy Hazard, 12V, maximum 9 Ampere hour battery. Before replacing batteries, remove conductive jewelry such as chains, wrist watches, and rings. High energy through conductive materials could cause severe burns.
- CAUTION!** Do not dispose of batteries in a fire. The batteries may explode.
- CAUTION!** Do not open or mutilate batteries. Released material is harmful to the skin and eyes. It may be toxic.

**CAUTION - RISK OF EXPLOSION IF BATTERY IS REPLACED BY AN INCORRECT TYPE. DISPOSE OF USED BATTERIES ACCORDING TO LOCAL REGULATIONS**

#### TO REPLACE THE BATTERY

- Turn off and unplug all connected equipment.
- Unplug it from the AC power source.
- Turn the UPS upside down.
- Remove the 1 retaining screw.
- Slide the battery compartment cover completely off of the unit.
- Remove the battery from the compartment.
- Disconnect the battery wires from the battery.



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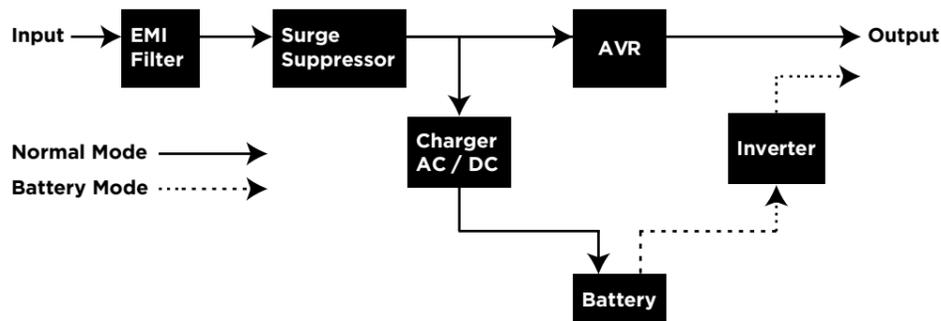
REPLACING THE BATTERY - continued

8. Install the replacement battery by connecting the red wire and black wire to the positive (+) and negative (-) terminal of the battery.
9. Put the battery back into the compartment.
10. Slide back the battery compartment cover and tighten the retaining screw.
11. Charge the unit for 8 hours to fully charge the battery.

REMINDER:

Batteries are considered HAZARDOUS WASTE and must be disposed of properly. Most retailers that sell lead acid batteries collect used batteries for recycling, as required by local regulations

SYSTEM FUNCTION BLOCK DIAGRAM



TROUBLESHOOTING

Problem	Possible Cause	Solution
Full-time surge protection outlets stop providing power to equipment. Circuit breaker button is projecting from the side of the unit.	Circuit breaker has been tripped due to an overload.	Turn the UPS off and unplug at least one piece of equipment. Wait 10 seconds, reset the circuit breaker by pressing the button, and then turn the UPS on.
The UPS does not perform expected runtime.	Battery not fully charged.	Recharge the battery by leaving the UPS plugged in.
	Battery is worn out.	Contact CyberPower Systems about replacement batteries at: <a href="http://cyberpowersystems.com/support">cyberpowersystems.com/support</a> .
The UPS will not turn on.	The on/off switch is designed to prevent damage from rapidly turning it off and on.	Turn the UPS off. Wait 10 seconds and then turn the UPS on.
	The unit is not connected to an AC outlet.	The unit must be connected to a 120V 60Hz outlet.
	The battery is worn out.	Contact CyberPower Systems about replacement batteries at: <a href="http://cyberpowersystems.com/support">cyberpowersystems.com/support</a> .
	Mechanical problem.	Contact CyberPower Systems at: <a href="http://cyberpowersystems.com/support">cyberpowersystems.com/support</a> .
	The frequency is outside of the operating range of 57-63Hz.	Turn the UPS off. Make sure the frequency range is within 57-63Hz. Or you can turn the UPS on in battery mode.

TECHNICAL SPECIFICATIONS

Model	AVRG750U	AVRG900U
Capacity	750VA / 450W	900VA / 480W
Nominal Input Voltage	120Vac	
Input Frequency	60 Hz ± 3 Hz	
On-Battery Output Voltage	120Vac ± 5%	
Automatic Voltage Regulator (AVR)	Yes	
On-Battery Output Frequency	60Hz +/- 1%	
Max. Load for UPS Outlets	750VA / 450W	900VA / 480W
Max. Load for Full-Time Surge Protection Outlets	12 Amps	
On-Battery Output Wave Form	Simulated Sine Wave	
Operating Temperature	+ 32°F to 104°F / 0°C to 40°C	
Operating Relative Humidity	0 to 90% non-condensing	
Size (W x H x D)	12.2" x 7" x 3.5"	
Net Weight	13.44 lbs	14.04 lbs
Typical Battery Recharge Time	8 hours typical from total discharge	
Typical Battery Life	3 to 6 years, depending on number of discharge/recharge cycles	
Recommended Battery	Sealed Maintenance-Free Lead Acid Battery	
Safety Approvals	UL1778(UPS), cUL107., FCC/DoC Class B	

TROUBLESHOOTING - continued

Problem	Possible Cause	Solution
PowerPanel® Personal is inactive (all icons are gray).	The USB cable is not connected.	Connect the USB cable to the UPS unit and an open USB port on the back of the computer.
	The USB cable is connected to a bad USB port.	Check for a different USB port and plug the cable in.
	The unit is not providing battery power.	Shutdown your computer and turn the UPS off. Wait 10 seconds and turn the UPS back on. This should reset the unit.

Additional troubleshooting information can be found at "Support" at [www.CyberPowerSystems.com](http://www.CyberPowerSystems.com)

DEFINITIONS FOR LED INDICATORS & AUDIBLE ALARMS

POWER	FAULT	ALARM	CONDITION
On	Off	Off	Normal
On*	Off	Beep twice every 30 seconds	Utility Failure - The UPS is providing power to battery power-supplied outlets from its battery.
On*	Off	Rapid beeping every 1/2 second	Utility Failure - The UPS is providing battery power. Rapid beeping indicates the unit will run out of power soon
On/Off	Flash once every 5 seconds	Constant tone	Battery Mode or AC/Utility Power Mode Overload Fault - Occurs when connected equipment exceeds the rating of battery outlets of the unit. Please unplug at least one piece of equipment from battery outlets.
Off	Flash once every 5 seconds	Constant tone	Battery Output Short Fault - Please unplug at least one piece of equipment from battery outlets and turn on the UPS again. If the fault still exists, please contact CyberPower Systems for support.
On	Flash 3 times every 5 seconds	Constant tone	Charger Fault - Contact CyberPower Systems for support.

\* The Power On LED will flash when UPS alarm is beeping.

CYBERPOWER GREENPOWER UPS™ TECHNOLOGY

Advanced Energy-Saving Patented Bypass Technology

CyberPower's patented GreenPower UPS™ with Bypass Technology reduces UPS energy costs by up to 75% compared to conventional UPS models. Even when utility power is normal, conventional UPS models constantly pass power through a transformer. By contrast, under normal conditions the advanced circuitry of a GreenPower UPS™ bypasses the transformer. As a result, the power efficiency is significantly increased while decreasing waste heat, using less energy, and reducing energy costs. When an abnormal power condition occurs, the GreenPower UPS™ automatically runs power through its transformer to regulate voltage and provide "safe" power. Since utility power is normal over 88% of the time, the GreenPower UPS™ operates primarily in its efficient bypass mode. The GreenPower UPS™ is also manufactured in accordance with the Restriction on Hazardous Substances (RoHS) directive making it one of the most environmentally-friendly on the market today.



FCC COMPLIANCE STATEMENT

This device complies with part 15 of the FCC rules. Operation is subject to the following two conditions: (1) this device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation. Note: This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment to an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

Warning: Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.



Canadian Compliance Statement  
CAN ICES-3 (B)/NMB-3(B)

LIMITED WARRANTY AND CONNECTED EQUIPMENT GUARANTEE

Please visit [www.CyberPowerSystems.com](http://www.CyberPowerSystems.com) for a copy of the Limited Warranty and Connected Equipment Guarantee.

Where Can I Get More Information?

The application of the United Nations Convention of Contracts for the International Sale of Goods is expressly excluded. CyberPower is the warrantor under this Limited Warranty. For further information please feel free to contact CyberPower at: Cyber Power Systems (USA), Inc. 4241 12th Ave E., STE 400, Shakopee, MN 55379; call us at (877) 297-6937; or submit a web ticket online at [cyberpowersystems.com/support](http://cyberpowersystems.com/support).

Cyber Power Systems (USA), Inc. encourages environmentally sound methods for disposal and recycling of its UPS products. Please dispose and/or recycle your UPS and batteries in accordance to the local regulations of your state.

WARNING: This product can expose you to chemicals including bisphenol A (BPA) and styrene, which is known to the State of California to cause reproductive harm and cancer. For more information, go to [www.P65Warnings.ca.gov](http://www.P65Warnings.ca.gov).

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