

## CP685AVR-G / CP825AVR-G User's Manual

K01-000064-00

### 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. There are no user serviceable parts inside except for 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 servicing the battery or 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.

**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, safety of any life support equipment or with 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.

### INSTALLING YOUR UPS SYSTEM

#### UNPACKING

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

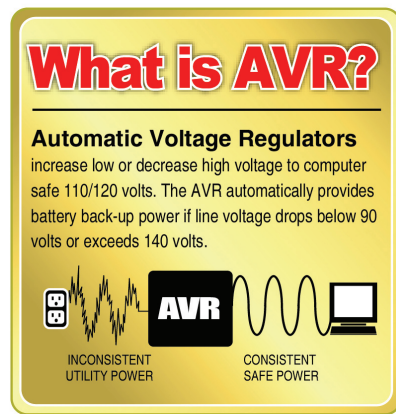
(1) UPS unit; (1) User's manual; (1) PowerPanel® Personal Edition software CD; (1) USB device cable; (1) Telephone cable; (1) Warranty registration card; (1) Coaxial Cable

#### WHAT IS AVR?

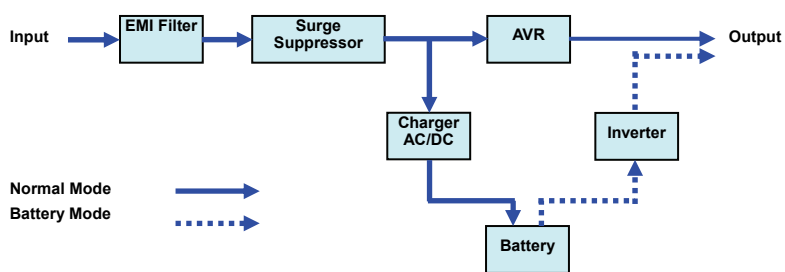
The CP685AVR-G / CP825AVR-G provide complete power protection from utility power that is not always consistent. The CP685AVR-G / CP825AVR-G feature 890 Joules / 1030 Joules of surge protection, and provide long lasting battery backup during power outages. The CP685AVR-G / CP825AVR-G ensure consistent power to your computer system and include software that will automatically save your open files and shutdown your computer system during a utility power loss.

#### AUTOMATIC VOLTAGE REGULATOR

The CP685AVR-G / CP825AVR-G stabilize utility power voltage levels that can be inconsistent. The incoming utility power may be damaging to important data files and hardware, but with Automatic Voltage Regulation, the computer will not experience damaging voltage levels. An Automatic Voltage Regulator automatically increases low or decreases high voltage to a consistent, computer safe 110v/120v. The unit's powerful battery will provide power only if the incoming voltage drops below 90v or increases above 140v.



#### SYSTEM FUNCTIONAL BLOCK DIAGRAM

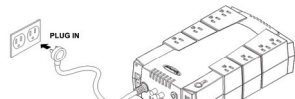


#### HOW TO DETERMINE THE POWER REQUIREMENTS OF YOUR EQUIPMENT

- Ensure that the equipment plugged into the outlet does not exceed the UPS unit's rated capacity (685VA/390W for CP685AVR-G, 825VA/450W for CP825AVR-G). 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 computer system will require. It is suggested that the load you will be placing on the outlet not exceed 80% of the unit's capacity.

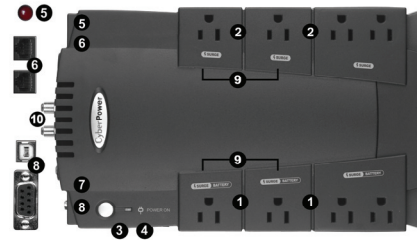
#### HARDWARE INSTALLATION GUIDE

- Your new UPS may be used immediately upon receipt. However, **recharging the battery for at least 8 hours** is recommended to ensure that the battery's maximum charge capacity is achieved. A loss of charge may occur during shipping and storage. To recharge the battery, simply leave the unit plugged into an AC outlet.
- With the UPS unit off and unplugged, connect your computer, monitor, and any other peripherals requiring battery backup into the battery power supplied outlets. Plug your other peripheral equipment (printer, scanner, speakers) into the full-time surge protection outlets. **DO NOT plug a laser printer, paper shredder, copier, space heater, vacuum, sump pump or other large electrical device into battery and surge protected outlets. The power demands of these devices will overload and possibly damage the unit.**
- To protect a network connection from surges, connect a network cable into the IN jack of the UPS. Then connect a network cable from the OUT jack on the UPS to the network device.
- Plug the UPS into a 2 pole, 3 wire grounding 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.
- Press the power switch to turn the unit on. The power on indicator light will illuminate and the unit will "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 your UPS for an extended period, cover it and store with the battery fully charged. While in storage recharge the battery every three months to ensure battery life.



### BASIC OPERATION

#### DESCRIPTION



#### ① Battery and Surge Protected Outlets

The unit has four battery powered/surge suppression outlets for connected equipment to ensure temporary uninterrupted operation of your equipment during a power failure. (**DO NOT plug a laser printer, paper shredder, copier, space heater, vacuum, sump pump or other large electrical device into battery and surge protected outlets. The power demands of these devices will overload and possibly damage the unit.**)

#### ② Full-Time Surge Protection Outlets

The unit has four surge suppression outlets which are always on.

#### ③ Power Switch

Press the power button to turn the UPS ON or OFF.

#### ④ 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.

#### ⑤ Electrical Wiring Fault Indicator

This LED indicator will illuminate to warn the user that a wiring problem exists, such as bad ground, missing ground or reversed wiring. If this is illuminated, it is recommended to disconnect all electrical equipment from the outlet and have an electrician verify the outlet is properly wired. The unit will not provide surge protection without being plugged into a grounded and properly wired wall outlet.

#### ⑥ Communication Protection Ports

Communication protection ports will protect any standard modem, fax, telephone line, network or Ethernet connection (RJ11/RJ45).

#### ⑦ Circuit Breaker

Located on the side of the UPS, the circuit breaker serves to provide overload and fault protection.

#### ⑧ USB Port and DB-9 Contact Closure Port to PC

The ports allow connection and communication between the USB or DB-9 port on the computer and the UPS unit. The UPS communicates its status to the PowerPanel® Personal Edition software. The DB9 interface is compatible with Power Management provided by Windows® NT/2000/2003/XP and the USB interface is compatible with the Power Management provided by Windows Vista, OS X, and Linux..

**Note: Only one of the ports, USB or DB-9, can be used to communicate with your computer at one time.**

**Note: To install PowerPanel® Personal Edition Software the computer will need Microsoft® Internet Explore 6.0 or higher installed.**

**Note: If using the DB-9 port, users need to order the standard RS-232 cable. If you have any questions, email CyberPower technical support for help. [tech@cyberpowersystems.com](mailto:tech@cyberpowersystems.com)**

#### ⑨ Outlets Designed for AC Adapters

The unit has four outlets spaced to allow AC power adapter blocks to be plugged into the UPS without blocking adjacent outlets.

#### ⑩ Coax/Cable/DSS Surge Protection

The Coax/Cable/DSS surge protection ports will protect any cable modem, CATV converter, or DSS receiver.

#### REPLACING THE BATTERY

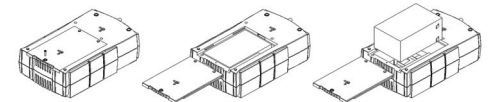
Replacement of batteries located in an **OPERATOR ACCESS AREA**.

- When replacing batteries, replace with the same number of the following battery: BP8-12 / BB for CP685AVR-G; HR1234W / BB for CP825AVR-G.
- CAUTION!** Risk of Energy Hazard, 12 V, maximum 8(BP8-12 for CP685AVR-G) or 9(HR1234W for CP825AVR-G) Ampere-hour battery. Before replacing batteries, remove conductive jewelry such as chains, wrist watches, and rings.
- 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.
- Install the replacement battery by connecting the red wire and black wire to the positive (+) and negative (-) terminal of the battery.
- Put the battery back into the compartment.
- Slide back the battery compartment cover and tighten the retaining screw.
- Charge the unit for 4 – 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.

### TROUBLE SHOOTING

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 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 depressing 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="mailto:tech@cyberpowersystems.com">tech@cyberpowersystems.com</a>
The UPS will not turn on.	The on/off switch is designed to prevent damage by 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 110/120v 60Hz outlet.
	The battery is worn out.	Contact CyberPower Systems about replacement batteries at <a href="mailto:tech@cyberpowersystems.com">tech@cyberpowersystems.com</a>
PowerPanel® Personal Edition is inactive (all icons are gray).	Mechanical problem.	Contact CyberPower Systems at <a href="mailto:tech@cyberpowersystems.com">tech@cyberpowersystems.com</a>
	The USB / serial cable is not connected.	Connect the USB / serial cable to the UPS unit and an open USB / serial port on the back of the computer. You must use the cable that came with the unit.
	The USB / serial cable is connected to the wrong port.	Check the back of the computer for an additional USB / serial port. Move the cable to this port.
	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.
The serial cable is not the cable that was included with the UPS unit.	If you are using a serial cable you must use a CyberPower serial cable. If you need this cable please contact technical support. <a href="mailto:tech@cyberpowersystems.com">tech@cyberpowersystems.com</a>	

Additional troubleshooting information can be found at [www.cyberpowersystems.com/support.htm](http://www.cyberpowersystems.com/support.htm)

## TECHNICAL SPECIFICATIONS

Model	CP685AVR-G	CP825AVR-G
Capacity	685VA / 390W	825VA / 450W
Input Voltage on Utility	90V to 140V	
Input Frequency	57 Hz to 63 Hz	
On-Battery Output Voltage	120Vac ± 5%	
Transfer Time	4ms Typical	
Max. Load for UPS Outlets (4 Outlets)	685VA / 390W	825VA / 450W
Max. Load for Full-Time Surge Protection outlets (8 Outlets)	12 Amps	
On-Battery Output Wave Form	Simulated Sine Wave Form	
Operating Temperature	+ 32°F to 104° F / 0° C to 40° C	
Operating Relative Humidity	0 to 90% NON-CONDENSING	
Size (L x W x H)	11" x 6 5/8" x 3 1/2" / 28cm x 16.9cm x 8.7cm	
Net Weight	13.2 lbs	13.7 lbs
Battery Type	12V, 8Ah (BP8-12 / BB)	12V, 9Ah (HR1234W / BB)
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	

### EXPECTED RUNTIME IN MINUTES

(Due to the differences in computer components, the runtime will vary.)

Model	iMac G4	Desktop PC with LCD Monitor	Desktop PC with 15" Monitor	Desktop PC with 17" Monitor	Desktop PC with 21" Monitor
<b>CP685AVR-G</b>	70 minutes	45 minutes	28 minutes	22 minutes	16 minutes
<b>CP825AVR-G</b>	85 minutes	52 minutes	36 minutes	28 minutes	20 minutes

## DEFINITIONS FOR ILLUMINATED LED INDICATORS

Power ON	Wiring Fault	Alarm	CONDITION
On	Off	Off	Normal
On	On/Off	Two Beeps	<b>Utility Failure-</b> The UPS is providing power to battery power-supplied outlets from its battery.
On	On/Off	Rapid Beeps	<b>Utility Failure-</b> The UPS is providing battery power. Rapid beeps indicate the unit will run out of power shortly.
Off	Off	Long Beep	<b>System Overload-</b> Occurs when connected equipment exceeds the rating of unit. Turn the UPS off, unplug at least one piece of equipment, wait 10 seconds, reset the circuit breaker and turn the unit on.
Off	On/Off	Long Beep	<b>Battery Overload-</b> Occurs when connected equipment exceeds the rating of battery outlets of the unit. Turn the UPS off, unplug at least one piece of equipment from battery outlets, wait 10 seconds, reset the circuit breaker and turn the unit on.
On/Off	On	None	<b>Electrical Wiring Fault-</b> This indicates a wiring problem with the AC outlet such as bad ground, missing ground, or reversed wiring. User is advised to disconnect all electrical equipment from the outlet and have an electrician check the outlet to insure proper wiring.

## CYBERPOWER GREENPOWER UPS TECHNOLOGY

Our new UPS circuit is designed to save energy operating in GreenPower Bypass Mode. A traditional UPS circuit with AVR provides normal output voltage through the Relay and AVR transformer. The current travels first through the transformer conducting energy and generating heat. This heat creates energy dissipation resulting in a "Power Loss" or consumption of utility power and higher utility bills. CyberPower's GreenPower Circuit Design is a solution to this "Power Loss." When the Utility Power is operating normally, our Green Power UPS works in Bypass Mode. Our GreenPower design conducts power only through the Relay and still provides normal output voltage. Bypassing the transformer reduces power consumption thereby conserving energy and saving money. When the utility power is abnormal the UPS will operate under Battery or AVR Mode. Under these conditions, Green Power UPS and a traditional UPS would operate in approximately the same manner.

On average the CyberPower GreenPower Technology will work in its money/energy saving Bypass Mode 88% of the time.



## Limited Warranty and Connected Equipment Guarantee

Read the following terms and conditions carefully before using the CyberPower CP685AVR-G / CP825AVR-G (the "Product"). By using the Product you consent to be bound by and become a party to the terms and conditions of this Limited Warranty and Connected Equipment Guarantee (together referred to as this "Warranty"). If you do not agree to the terms and conditions of this Warranty, you should return the Product for a full refund prior to using it.

### Who is Providing this Warranty?

CyberPower Systems (USA), Inc. ("CyberPower") provides this Limited Warranty.

### What Does This Warranty Cover?

This warranty covers defects in materials and workmanship in the Product under normal use and conditions. It also covers equipment that was connected to the Product and damaged because of the failure of the Product.

### What is the Period of Coverage?

This warranty covers the Product for three years and connected equipment for as long as you own the Product.

### Who is Covered?

This warranty only covers the original purchaser. Coverage ends if you sell or otherwise transfer the Product.

### How Do You Get Service?

1. Call us at (877) 297-6937 or write to us at Cyber Power Systems (USA), Inc., 4241 12<sup>th</sup> Ave. E., STE 400, Shakopee, MN 55379 or send us an e-mail message at [claims@cyberpowersystems.com](mailto:claims@cyberpowersystems.com) for instructions.
2. When you contact CyberPower, identify the Product, the Purchase Date, and the item(s) of Connected Equipment. Have information on all applicable insurance or other resources of recovery/payment that are available to the Initial Customer and Request a Claim Number.
3. You must provide a purchase receipt (or other proof of the original purchase) and provide a description of the defect.
4. Pack and ship the product to CyberPower and, if requested, the item(s) of Connected Equipment, a repair cost estimate for the damage to the Connected Equipment, and all claim forms that CyberPower provides to you. Show the Claim Number on the shipping label or include it with the product. **You must prepay all shipping costs, you are responsible for packaging and shipment, and you must pay the cost of the repair estimate.**

### How Long Do I Have To Make A Claim?

All claims must be made within ten days of the occurrence.

### What Will We Do To Correct Problems?

CyberPower will inspect and examine the Product.

If the Product is defective in material or workmanship, CyberPower will repair or replace it at CyberPower's expense, or, if CyberPower is unable to or decides not to repair or replace the Product (if defective) within a reasonable time, CyberPower will refund to you the full purchase price you paid for the Product (purchase receipt showing price paid is required).

If it appears that our Product failed to protect any equipment plugged into it, we will also send you forms for making your claim for the connected equipment. We will repair or replace the equipment that was damaged because of the failure of our Product or pay you the fair market value (NOT REPLACEMENT COST) of the equipment at the time of the damage. We will use Orion Blue Book, or another a third-party valuation guide, or eBay, craigslist, or other source to establish that amount. Our maximum liability is limited to \$125,000 for the CP685AVR-G and \$200,000 for the CP825AVR-G.

### Who Pays For Shipping?

We pay when we send items to you; you pay when you send items to us.

### What Are Some Things This Warranty Does Not Cover?

1. This Warranty does not cover any software that was damaged or needs to be replaced due to the failure of the Product or any data that is lost as a result of the failure or the restoration of data or records, or the reinstallation of software.
2. This Warranty does not cover or apply to: misuse, modification, operation or storage outside environmental limits of the Product or the equipment connected to it, nor for damage while in transit or in storage, nor if there has been improper operation or maintenance, or use with items not designed or intended for use with the Product, such as laser printers, appliances, aquariums, medical or life support devices, etc.

### What Other Limitations Apply?

1. This Warranty does not apply unless the Product and the equipment that was connected to it were connected to properly wired and grounded outlets (including compliance with electrical and safety codes of the most current electrical code), without the use of any adapters or other connectors.
2. The Product must have been plugged directly into the power source and the equipment connected to the Product must be directly connected to the Product and not "daisy-chained" together in serial fashion with any extension cords, another Product or device similar to the Product, surge suppressor, or power tap. Any such installation voids the Limited Warranty.
3. The Product and equipment connected to it must have been used properly in a suitable and proper environment and in conformance with any license, instruction manual, or warnings provided with the Product and the equipment connected to it.
4. The Product must have been used at all times within the limitations on the Product's VA capacity.

### What are the Limitations?

The sole and exclusive remedies of the Initial Customer are those provided by this Warranty.

The Product was designed to eliminate disrupting and damaging effects of momentary (less than 1ms) voltage spikes or impulses from lightning or other power transients. If it can be shown that a voltage spike lasting longer than 1ms has occurred, the occurrence will be deemed outside the rated capabilities of the Product and the Limited Warranty is void. CyberPower Does Not Cover or Undertake Any Liability in Any Event for Any of the Following:

1. Loss of or damage to data, records, or software or the restoration of data or records, or the reinstallation of software.
2. Damage from causes other than AC Power Line Transients, spikes, or surges on properly installed, grounded and code-compliant 120 volt power lines in the United States and Canada; transients, surges or spikes on standard telephone land lines, PBX telephone equipment lines or Base 10T Ethernet lines, when properly installed and connected. (This exclusion applies, for example, to fluctuations in data transmission or reception, by CATV or RF transmission or fluctuations, or by transients in such transmission.)
3. Damage from any circumstance described as excluded above with respect to the Product.
4. Damages from fire, flood, wind, rain, rising water, leakage or breakage of plumbing, abuse, misuse or alteration of either the product or the Connected Equipment.
5. CyberPower excludes any liability for personal injury under the Limited Warranty and Connected Equipment Guarantee. CyberPower excludes any liability for direct, indirect, special, incidental or consequential damages, whether for damage to or loss of property [EXCEPT FOR (AND ONLY FOR) the specific limited agreement of CyberPower to provide certain warranty benefits regarding "Connected Equipment" under this Warranty], loss of profits, business interruption, or loss of information or data. NOTE: Some States or Provinces do not allow the exclusion or limitation of incidental or consequential damages, so the above limitation may not apply to you.
6. The Product is not for use in high-risk activities or with aquariums. The Product is not designed or intended for use in hazardous environments requiring fail-safe performance, or for use in any circumstance in which the failure of the Product could lead directly to death, personal injury, or severe physical or property damage, or that would affect operation or safety of any medical or life support device (collectively, "High Risk Activities"). CyberPower expressly disclaims any express or implied warranty of fitness for High Risk Activities or with aquariums. CyberPower does not authorize use of any Product in any High Risk Activities or with Aquariums. **ANY SUCH USE IS IMPROPER AND IS A MISUSE OF THE PRODUCT.**

### What is the Fine Print?

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 12<sup>th</sup> Ave E., STE 400, Shakopee, MN 55379; call us at (877) 297-6937; or send us an e-mail message at [claims@cyberpowersystems.com](mailto:claims@cyberpowersystems.com).

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