

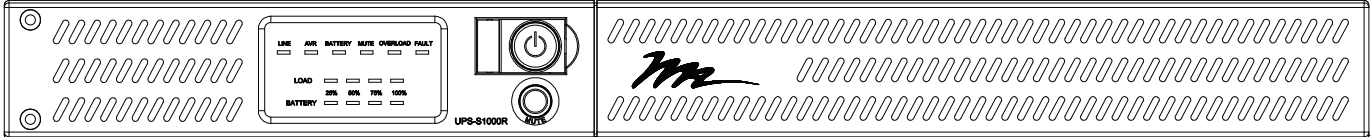
USER MANUAL

STANDARD UPS SERIES

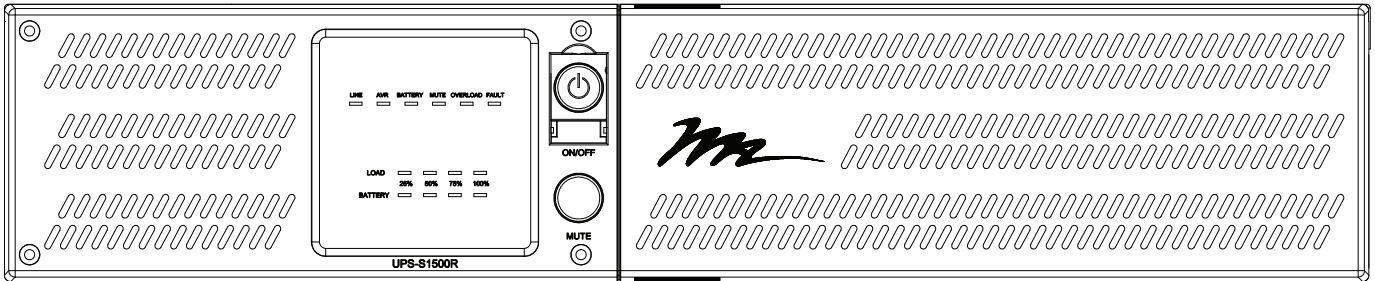
RACKMOUNT UNINTERRUPTIBLE POWER SUPPLY



UPS-S500R/S1000R



UPS-S1500R/S2200R



THANK YOU

Thank you for purchasing the Standard UPS Series rackmount UPS. The UPS provides battery backup during power outages, automatic voltage regulation during periods of inconsistent utility power and surge protection.

IMPORTANT

Please read this manual before removing the UPS from the shipping carton and before making any connections to and operating your UPS.



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## IMPORTANT SAFETY INSTRUCTIONS SAVE THESE INSTRUCTIONS



Please read and follow all instructions carefully during installation and operation of this unit. Read this manual thoroughly before attempting to unpack, install or operate.



The lightning flash with the arrowhead symbol, within an equilateral triangle is intended to alert the user to the presence of uninsulated dangerous voltage within the product's enclosure that may be of sufficient magnitude to constitute a risk of electric shock to persons.



The exclamation point within an equilateral triangle is intended to alert the user to the presence of important operating and maintenance (servicing) instructions in the literature accompanying the appliance.



**CAUTION:** The UPS must be connected to a grounded AC power outlet with fuse or circuit breaker protection.



**CAUTION:** The battery can energize hazardous live parts inside the unit, even when the AC input power is disconnected.



**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 avoid electric shock, turn off the unit and unplug it from the AC power before servicing the battery.



**CAUTION:** To reduce the risk of electric shock, do not remove the cover, except to service the battery. There are no serviceable parts inside, except for the battery.



**CAUTION:** Do not use for medical or life support equipment. Do not use in any circumstance that would affect operation or safety of any life support equipment, with any medical applications, or patient care.



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



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



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



**CAUTION:** To avoid electrical shock, turn off the unit and unplug it from the AC power before installing a component.



**CAUTION:** Do not plug the machine into an outlet that is not grounded. If you need to de-energize this equipment, turn off and unplug the unit.



**CAUTION:** Before replacing batteries, remove conductive jewelry such as chains, wrist watches and rings. High energy through conductive materials could cause severe burns.



**CAUTION:** (Only required for unit with HB flame class battery) 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:** Ensure the wall outlet and UPS are located near the equipment being attached for proper accessibility.



## CONSIGNES DE SÉCURITÉ IMPORTANTES CONSERVER CES INSTRUCTIONS



S'il vous plaît lire et suivre attentivement les instructions lors de l'installation et le fonctionnement de cet appareil. Lisez ce manuel soigneusement avant de débiller, installer ou utiliser.



L'éclair avec le symbole de flèche dans un triangle équilatéral est destiné à alerter l'utilisateur de la présence d'une tension dangereuse non isolée dans l'enceinte du produit qui peut être d'une ampleur suffisante pour constituer un risque de choc électrique pour les personnes



Le point d'exclamation dans un triangle équilatéral est destiné à alerter l'utilisateur de la présence d'importants instructions d'opération et de maintenance (entretien) dans la documentation accompagnant l'appareil



**ATTENTION:** L'onduleur doit être branché sur une prise de courant alternatif protégée par un fusible ou un disjoncteur.



**ATTENTION:** Même lorsque le cordon d'alimentation est débranché, les parties internes peuvent recevoir suffisamment de courant de la batterie pour être dangereuses.



**ATTENTION:** Pour éviter les risque d'incendie ou de choc électrique, l'appareil doit être installé dans un local libre de contaminants conducteurs et dont la température et l'humidité sont contrôlées (reportez-vous aux spécifications techniques pour prendre connaissance des plages de température et d'humidité acceptables).



**ATTENTION:** Pour éviter la décharge électrique, éteignez arrêtez l'unité et débranchez-la de la source de courant alternatif avant d'entretenir la batterie.



**ATTENTION:** Pour réduire le risque de choc électrique, ne pas enlever le couvercle, à l'exception de réparer la batterie. Il n'y a pas de pièces réparables par l'intérieur, sauf pour la batterie.



**ATTENTION:** Ne pas utiliser pour l'équipement de soutien médical ou de la vie. Ne pas utiliser en toute circonstance susceptible d'affecter fonctionnement ou la sécurité de tout le matériel de soutien de la vie, avec toutes les applications médicales ou les soins aux patients.



**ATTENTION:** N'ouvrez pas ou ne mutilez pas les batteries. Le matériel libéré est nocif à la peau et aux yeux et peut être toxique.



**ATTENTION:** Ne vous débarrassez pas des batteries dans un feu. Les batteries peuvent éclater.



**ATTENTION:** Pour réduire le risque d'incendie, relie seulement à un circuit équipé de 20 ampères de branche de circuit de protection maximum de surintensité selon le code électrique national, ANSI/NFPA 70.



**ATTENTION:** Pour éviter les risques de choc électrique, éteignez l'appareil et débranchez l'alimentation avant d'installer un composant quelconque.



**ATTENTION:** Ne le branchez pas sur une prise de courant sans mise à la terre. Si vous souhaitez mettre l'appareil hors tension, éteignez-le avant de le débrancher.



**ATTENTION:** Avant de remplacer des batteries, enlever conducteur bijoux tels que des chaînes, des montres-bracelet et des anneaux. La haute énergie par les matériaux conducteurs a pu causer les brûlures graves.



**ATTENTION:** (Seulement requis pour l'unité avec HB batterie de classe de la flamme) Ne pas utiliser dans une salle informatique tel que défini dans la norme pour la protection des équipements informatiques/traitement des données, ANSI/NFPA 75.



**ATTENTION:** Assurer la prise murale et UPS sont situés près de l'équipement étant fixé pour bonne accessibilité.

## FCC WARNING

**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:

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

**WARNING:** A shielded-type power cord is required in order to meet FCC emission limits and also to prevent interference to the nearby radio and television reception. It is essential that only the supplied power cord be used. Use only shielded cables to connect I/O devices to this equipment.

**WARNING:** Any changes or modifications not expressly approved by the guarantee of this device could void the user's authority to operate the equipment.

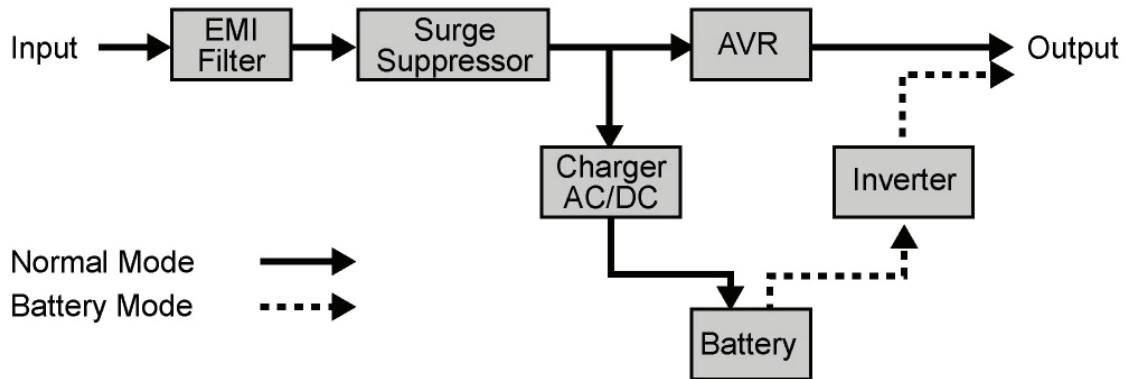
**REMARQUE:** Cet appareil a subi des tests de contrôle et a été déclaré conforme aux limites imposées aux appareils numériques de Classe B par la section 15 de la réglementation FCC. Ces limites ont été établies pour assurer une protection raisonnable contre les interférences indésirables lorsque l'appareil fonctionne dans un environnement résidentiel. Cet appareil génère, exploite et peut émettre un rayonnement de fréquence radio. En outre, en cas d'installation et d'utilisation non conforme aux instructions, il risque de provoquer des interférences indésirables avec les transmissions radio. Rien ne garantit qu'aucune interférence ne se produira dans une installation donnée. Si l'utilisation de cet appareil provoque des interférences indésirables avec la réception radio ou télévision (ce que vous pouvez déterminer en l'éteignant, puis en le rallumant), il est recommandé d'essayer d'y remédier en prenant une ou plusieurs des mesures suivantes :

1. Réorientez ou déplacez l'antenne de réception.
2. Augmentez la distance entre l'appareil et le récepteur.
3. Branchez l'appareil sur une prise de courant située sur un circuit différent de celui du récepteur.
4. Contactez votre détaillant ou un technicien qualifié en réparation radio/télévision. Si un accessoire spécifique est nécessaire pour assurer la conformité de l'appareil, cela doit être précisé dans les instructions.

**ATTENTION:** Un cordon d'alimentation blindé est nécessaire pour respecter les limites d'émission fixées par la FCC et pour empêcher les interférences avec les récepteurs radio ou télévision placés à proximité. Il est impératif de n'utiliser que le cordon d'alimentation fourni. Ne connectez de périphériques d'entrée/sortie à cet appareil qu'avec des câbles blindés.

**ATTENTION:** Toute modification apportée à ce produit qui n'est pas expressément approuvée par la garantie peut priver l'utilisateur de son droit d'utiliser l'appareil.

## CIRCUIT DIAGRAM



## UNPACKING AND PARTS LIST

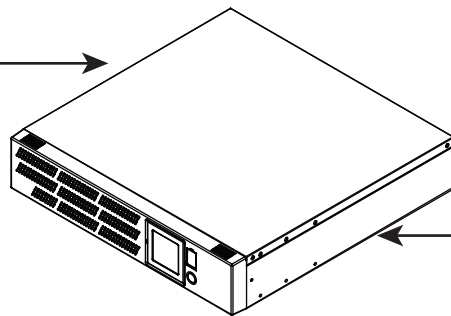


**CAUTION:** DO NOT LIFT THE UPS WHILE HOLDING THE FRONT FACE OF THE UNIT. THIS MAY DAMAGE THE UNIT. ALWAYS LIFT THE UPS BY HOLDING IT BY BOTH SIDES.



**ATTENTION:** NE SOULEVEZ PAS L'UPS PAR LE FRONT DE L'UNITÉ COMME CELA PEUT ENTRAÎNER DOMMAGES. TOUJOURS SOULEVER UNITÉ DES DEUX CÔTÉS.

LIFT OUT OF BOX  
WHILE HOLDING  
BOTH SIDES OF  
UPS



LIFT OUT OF BOX  
WHILE HOLDING  
BOTH SIDES OF  
UPS

The UPS is very heavy and should be handled by two (2) people. After the product is removed from its shipping carton, inspect the UPS before installing and operating. The shipping carton should contain the following items:

(1) UPS unit; (1) User's Manual; (2) Rack ears; (8) 10-32 Rack ear screws, for 1U models, (12) for 2U models; (2) Rackmount handles; (installation of handles is optional); (5) 8-32 Rackmount handle screws (installation of handles is optional); (1) Middle Atlantic Power Manager Software CD, (1) USB Cable, (1) EPO Cable

## INSTALLATION AND MOUNTING



**CAUTION: THIS UNIT IS HEAVY, LIFT CAREFULLY**



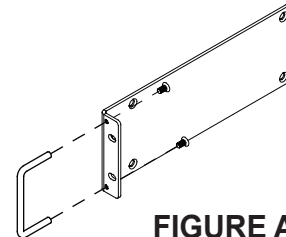
**ATTENTION: CET APPAREIL EST LOURD,  
SOULEVEZ AVEC ATTENTION**



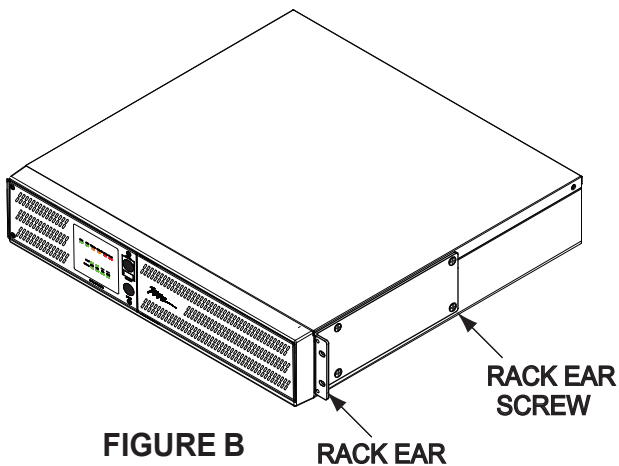
**NOTE:** Installation of handles is optional.

1) If using the provided handles install them now using provided 8-32 screws. (FIGURE A)

**NOTE:** The handles cannot be installed after the unit is rack-mounted.



**FIGURE A**



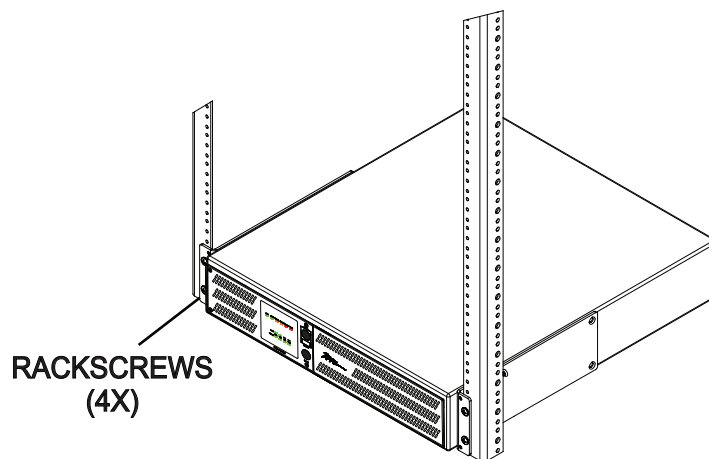
**FIGURE B**

2) Install ears as shown using provided 10-32 screws. (FIGURE B)

3) Determine mounting location.

4) Carefully lift the unit to the mounting position constantly supporting the bottom.

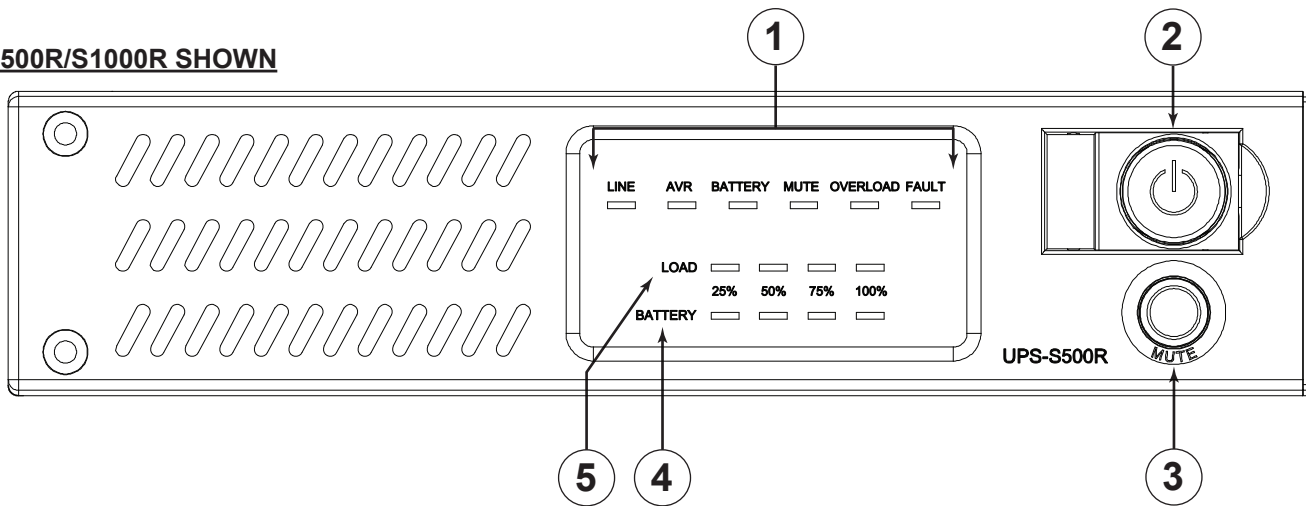
5) Install the front of the unit to the rackrail. (FIGURE C)



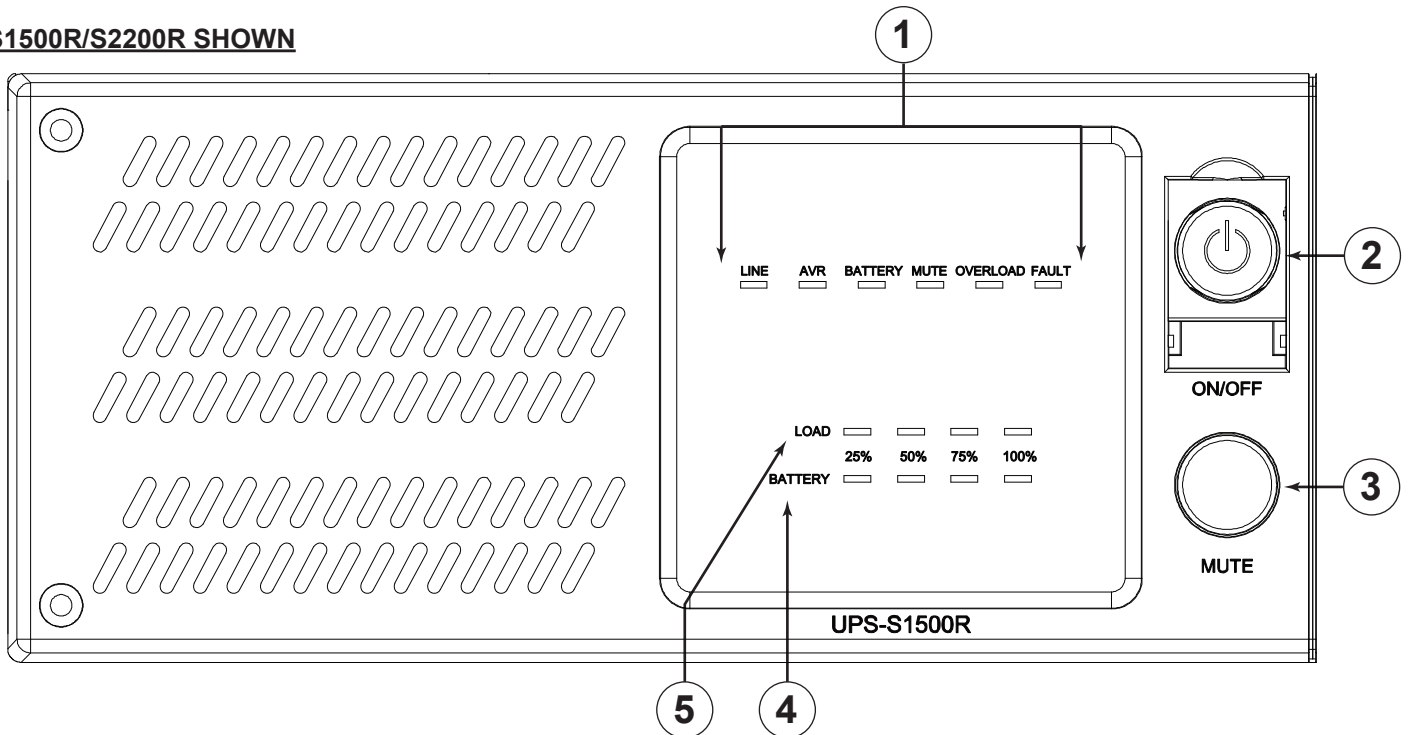
**FIGURE C**

## FRONT PANEL DESCRIPTIONS

### UPS-S500R/S1000R SHOWN



### UPS-S1500R/S2200R SHOWN



#### ① LED STATUS DISPLAY:

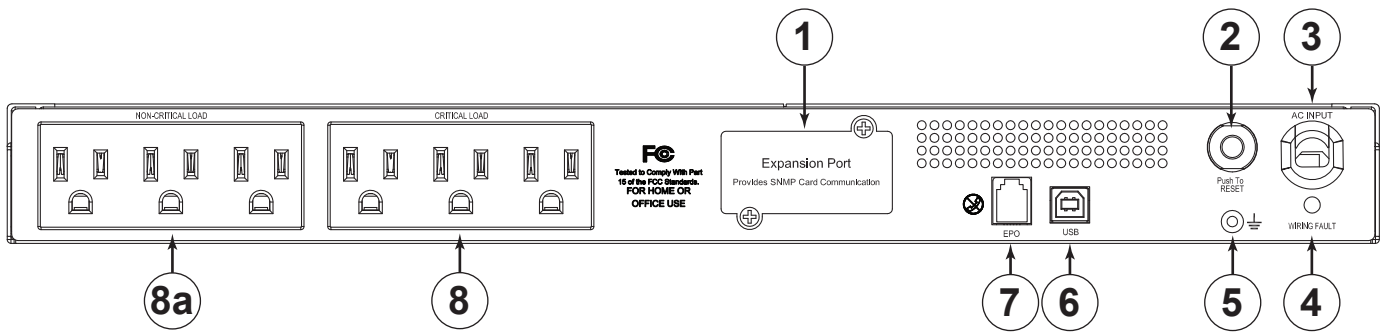
- a. **LINE** - Illuminates green when power is supplied by the AC mains. The LED will be off when the unit is battery back up mode.
- b. **AVR** - Illuminates green to indicate that the UPS is boosting the line voltage.
- c. **BATTERY** - Illuminates orange to indicate that the UPS is in battery backup mode. The LED is off when in line-interactive mode.
- d. **MUTE** - Illuminates orange to indicate that the audible alarm is muted.
- e. **OVERLOAD** - Illuminates red when in an overloaded (over-current) condition.
- f. **FAULT** - Illuminates red to indicate an internal fault with the UPS. Contact MAP Technical Support. (1-800-266-7225 x1593)



## FRONT PANEL DESCRIPTIONS (CONTINUED)

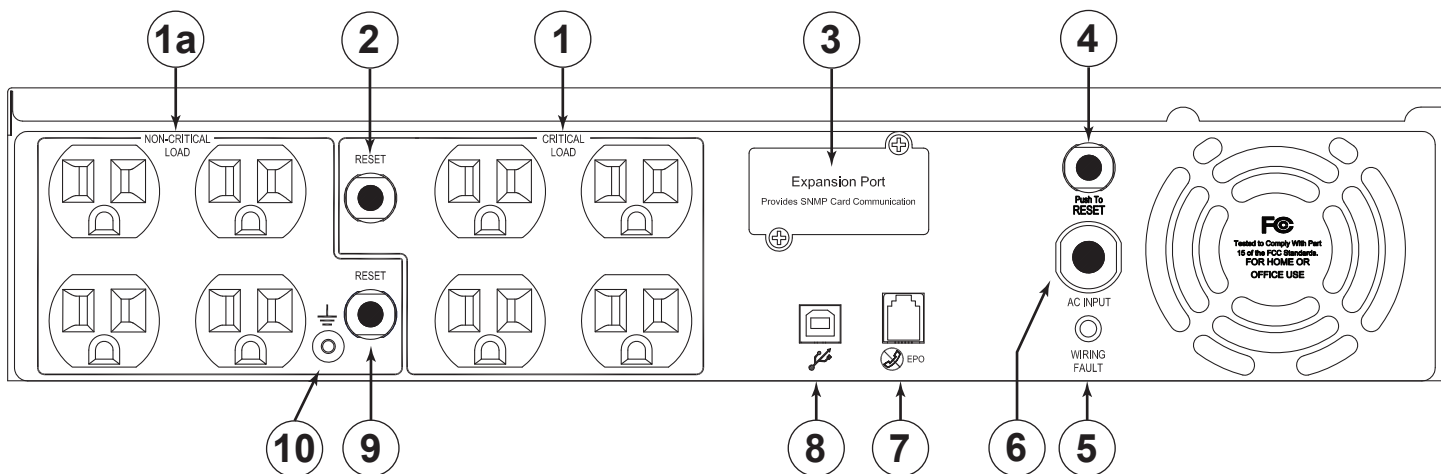
- ② **POWER ON/OFF PUSH BUTTON** : Press to turn on or off.
- ③ **MUTE PUSH BUTTON**: Press and hold for 2 seconds to mute the audible alarm. The 'Mute' LED will illuminate. Press and hold again to enable the audible alarm.
- ④ **BATTERY BAR GRAPH**: Indicates the approximate amount of battery capacity remaining in 25% increments. A fully charged battery will have all four LEDs illuminated green.
- ⑤ **LOAD BAR GRAPH**: Indicates the approximate percentage of load current drawn in 25% increments. A fully loaded UPS will have all four LEDs illuminated green.

## UPS-S500R/S1000R REAR PANEL DESCRIPTIONS



- ① **EXPANSION PORT:** Slot for optional Network Interface Card (NIC). Part Number UPS-IPCARD. Refer to the instructions with the UPS-IPCARD for configuration.
- ② **AC OUTPUT CIRCUIT BREAKERS:** Resettable circuit breakers provides AC output overload protection.
- ③ **INPUT POWER CORD:** Heavy-duty permanently attached power cord, connects UPS to mains power.
- ④ **WIRING FAULT LED:** Red LED that will illuminate if there is mis-wired input voltage such as an open ground, or reversed polarity.
- ⑤ **GROUND/BONDING STUD**
- ⑥ **USB PORT:** Connects the UPS directly to your computer for configuration.
- ⑦ **EPO (EMERGENCY POWER OFF) PORT:** The EPO port may be used to connect the UPS to a contact closure switch or control system to enable emergency shutdown (see page 12).
- ⑧ **AC OUTLETS (BANK CONTROLLED):** All AC outlets provide connected equipment with AC line power, surge protection and line noise filtering during normal operation. Automatic voltage regulation boosts low voltage without using battery power. All outlets provide battery power during blackouts and severe brownout or severe high voltage conditions. The non-critical load outlets (8a) can be configured to automatically shut down during a power outage event providing longer up-time for equipment plugged into the critical load outlets.

## UPS-S1500R/S2200R REAR PANEL DESCRIPTIONS



- 1 AC OUTLETS (BANK CONTROLLED):** All AC outlets provide connected equipment with AC line power, surge protection and line noise filtering during normal operation. Automatic voltage regulation boosts low voltage without using battery power. All outlets provide battery power during blackouts and severe brownout or severe high voltage conditions. The non-critical load outlets (**1a**) can be configured to automatically shut down during a power outage event providing longer up-time for equipment plugged into the critical load outlets.
- 2 AC OUTPUT CIRCUIT BREAKERS (CRITICAL LOAD BANK):** Resettable circuit breakers provides AC output overload protection.
- 3 EXPANSION PORT:** Slot for optional Network Interface Card (NIC). Part Number UPS-IPCARD. Refer to the instructions with the UPS-IPCARD for configuration.
- 4 AC OUTPUT CIRCUIT BREAKERS (ALL OUTLETS):** Resettable circuit breakers provides AC output overload protection.
- 5 WIRING FAULT LED:** Red LED that will illuminate if there is mis-wired input voltage such as an open ground, or reversed polarity.
- 6 INPUT POWER CORD:** Heavy-duty permanently attached power cord, connects UPS to mains power.
- 7 EPO (EMERGENCY POWER OFF) PORT:** The EPO port may be used to connect the UPS to a contact closure switch or control system to enable emergency shutdown (see page 12).
- 8 USB PORT:** Connects the UPS directly to your computer for configuration.
- 9 AC OUTPUT CIRCUIT BREAKERS (NON-CRITICAL LOAD BANK):** Resettable circuit breakers provides AC output overload protection.
- 10 GROUNDING/BONDING STUD**

## BATTERY CHARGING

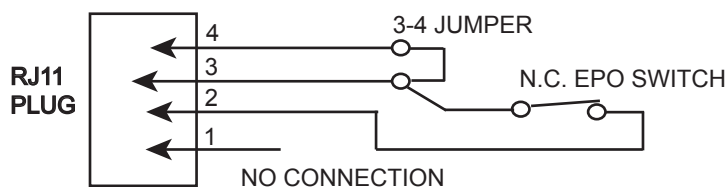
The UPS is shipped from the factory with its internal battery fully charged. However, the battery may lose some charge during shipping and storage. Recharging the battery for at least eight hours is recommended to ensure that the battery's maximum charge capacity is achieved.

The UPS is equipped with an auto-charge feature. When the UPS is plugged into mains AC supply voltage, the battery will automatically recharge (the battery will charge with the UPS either turned on or off). To maintain optimal battery charge, leave the UPS plugged into an AC outlet at all times.

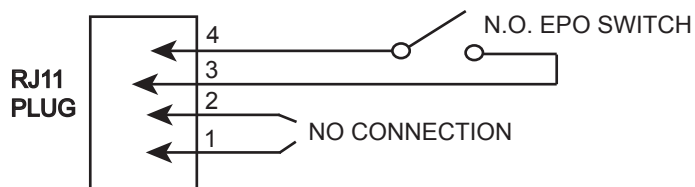
## EPO (EMERGENCY POWER OFF) PORT CONNECTION

This feature is for those applications that require connection to an Emergency Power Off (EPO) circuit in case of fire or other emergency situation. When the UPS is connected to this circuit, it enables emergency shutdown of the UPS's inverter. Using the supplied gray cable, connect the EPO port of your UPS to a user-supplied normally closed or normally open switch according to the circuit diagram shown below. Press the Power switch to turn on the UPS after making the connections.

OPTION 1: USER SUPPLIED NORMALLY CLOSED SWITCH






OPTION 2: USER SUPPLIED NORMALLY OPEN SWITCH






## ESTIMATED RUNTIMES

MODEL	UPS-S500R Series	UPS-S1000R Series
ESTIMATED RUNTIME (Full Load)	3 MINUTES	3 MINUTES
ESTIMATED RUNTIME (Half Load)	12 MINUTES	13 MINUTES
MODEL	UPS-S1500R Series	UPS-S2200R Series
ESTIMATED RUNTIME (Full Load)	6 MINUTES	4 MINUTES
ESTIMATED RUNTIME (Half Load)	18 MINUTES	13 MINUTES

## BATTERY REPLACEMENT WARNINGS

-  **CAUTION:** RISK OF EXPLOSION IF BATTERY IS REPLACED BY AN INCORRECT TYPE.
-  **CAUTION:** Risk of Energy Hazard, 24 V, maximum 18 Ampere-hour batteries. Before replacing batteries, remove conductive jewelry such as chains, wrist watches, and rings. High energy through conductive materials could cause severe burns (UPS-S1500R/UPS-S2200R).
-  **CAUTION:** Risk of Energy Hazard, 24 V, maximum 16 Ampere-hour batteries. Before replacing batteries, remove conductive jewelry such as chains, wrist watches, and rings. High energy through conductive materials could cause severe burns (UPS-S500R/UPS-S1000R).

## AVERTISSEMENTS DE REMPLACEMENT DE BATTERIE

-  **ATTENTION:** RISQUE D'EXPLOSION SI LA BATTERIE DE REMPLACEMENT PAR UN TYPE INCORRECT.
-  **ATTENTION:** Risques d'énergie danger, 24 V, maximaux 18 ampère-heure batterie. Avant de remplacer des batteries, enlever conducteur bijoux tels que des chaînes, des montres-bracelet et des anneaux. La haute énergie par les matériaux conducteurs a pu causer les brûlures graves (UPS-S1500R/UPS-S2200R).
-  **ATTENTION:** Risques d'énergie danger, 24 V, maximaux 16 ampère-heure batterie. Avant de remplacer des batteries, enlever conducteur bijoux tels que des chaînes, des montres-bracelet et des anneaux. La haute énergie par les matériaux conducteurs a pu causer les brûlures graves (UPS-S500R/UPS-S1000R).

## UPS-S500R/S1000R SERIES BATTERY REPLACEMENT

1) Power off the unit and disconnect it from its AC power source.

2) Gently remove the front panel. (FIGURE D)

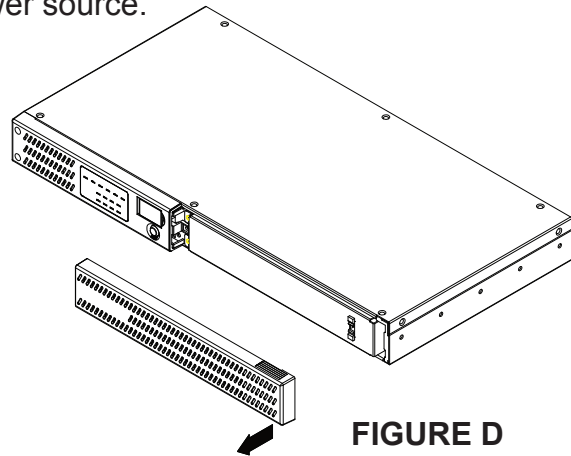


FIGURE D

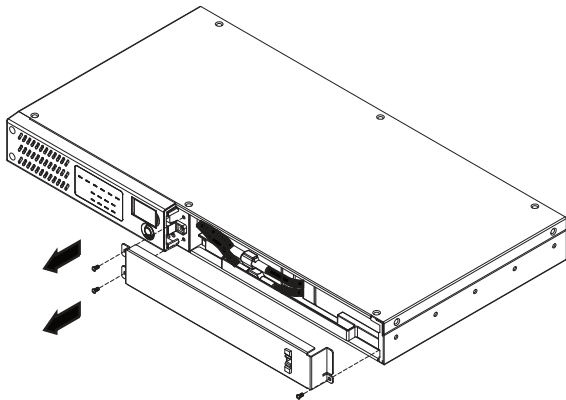


FIGURE E

3) Remove the battery access panel. Three screws for the UPS-S500R, two for the UPS-S1000R. (FIGURE E)

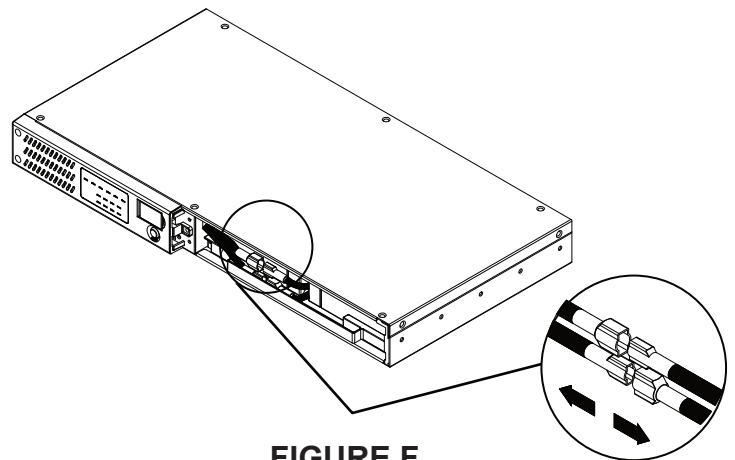


FIGURE F

4) Disconnect the wires from the UPS to the battery. (FIGURE F)

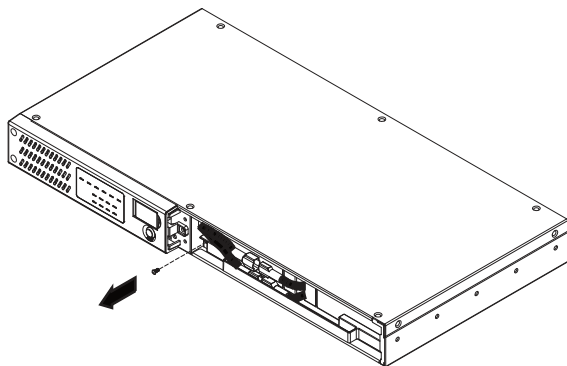


FIGURE G

5) Remove the one screw that secures the battery to the UPS. (FIGURE G)

6) Remove the battery. Replace by performing the previous steps in reverse. (FIGURE H)

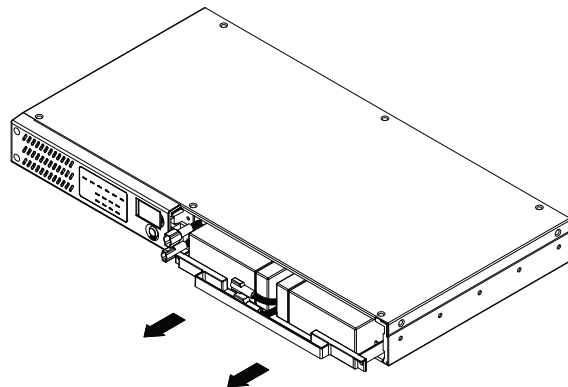


FIGURE H

## UPS-S1500R/S2200R SERIES BATTERY REPLACEMENT

1) Power off the unit and disconnect it from its AC power source.

2) Gently remove the front panel. (FIGURE I)

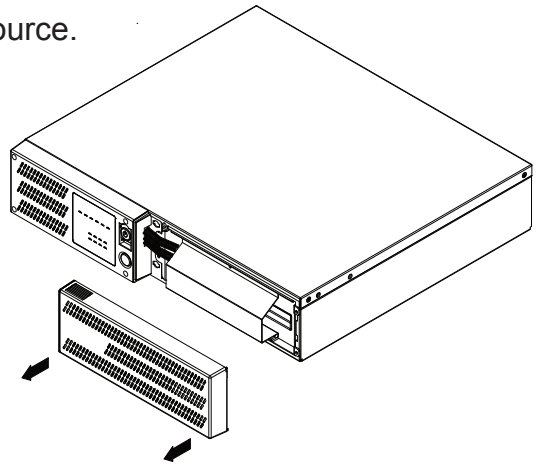


FIGURE I

3) Remove the two screws affixing the battery access panel. Disconnect the wires from the UPS to the battery. (FIGURE J)

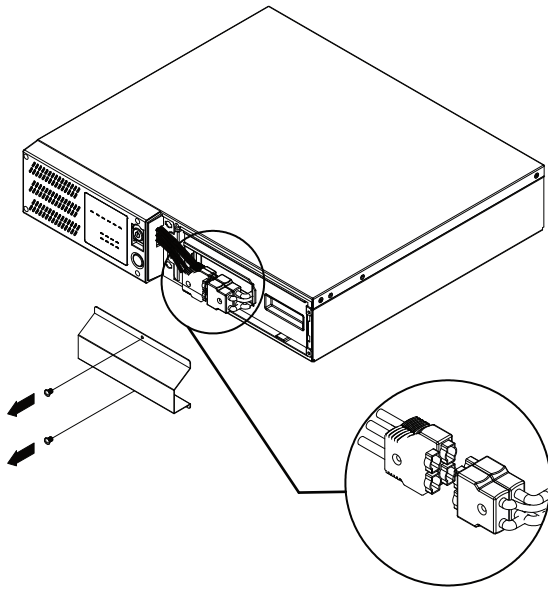


FIGURE J

4) Remove the four screws that secures the battery to the UPS. (FIGURE K)

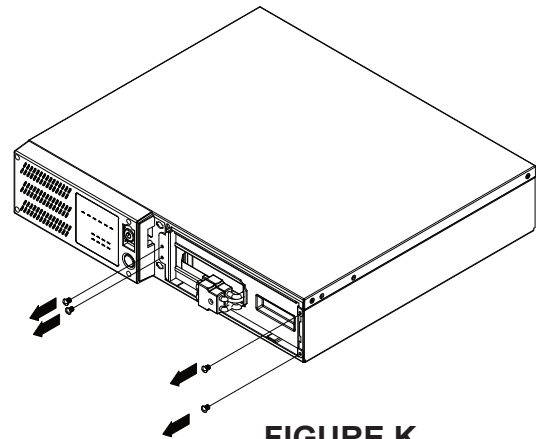


FIGURE K

5) Remove the battery. Replace by performing the previous steps in reverse. (FIGURE L)

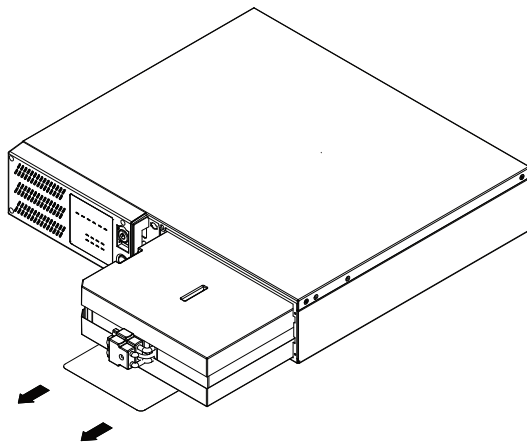


FIGURE L

## TROUBLESHOOTING

Problem	Possible Cause	Solution
Outlets do not provide power to equipment.	<ol style="list-style-type: none"> <li>1. Circuit breaker has tripped due to an overload.</li> <li>2. Batteries are discharged</li> <li>3. Unit has been damaged by a surge or spike.</li> <li>4. Non critical outlets have turned off automatically due to an overload.</li> </ol>	<ol style="list-style-type: none"> <li>1. Turn the UPS off and unplug at least one piece of equipment. Wait 10 seconds, reset the circuit breaker, and then turn on the UPS.</li> <li>2. Recharge the unit for at least 8 hours.</li> <li>3. Contact Middle Atlantic Products at 1-800-266-7225.</li> <li>4. Push the bottom Reset button to turn on the Non critical outlets.</li> </ol>
The UPS does not perform the expected runtime.	<ol style="list-style-type: none"> <li>1. Battery is not fully charged.</li> <li>2. Battery is degraded.</li> </ol>	<ol style="list-style-type: none"> <li>1. Recharge the battery by leaving the UPS plugged in.</li> <li>2. Contact Middle Atlantic Products about replacement batteries at 1-800-266-7225.</li> </ol>
The UPS will not turn on.	<ol style="list-style-type: none"> <li>1. The on/off switch is designed to prevent damage by rapidly turning it on and off.</li> <li>2. The UPS is not connected to an AC outlet.</li> <li>3. The battery is degraded.</li> <li>4. Mechanical problem.</li> </ol>	<ol style="list-style-type: none"> <li>1. Turn the UPS off. Wait 10 seconds and then turn the UPS on.</li> <li>2. The UPS must be connected to a 110/120V outlet.</li> <li>3. Contact Middle Atlantic Products about replacement batteries at 1-800-266-7225.</li> <li>4. Contact Middle Atlantic Products at 1-800-266-7225.</li> </ol>
Middle Atlantic Power Manager software is inactive	<ol style="list-style-type: none"> <li>1. The cable is connected to the wrong port.</li> <li>2. The unit is not providing battery power.</li> </ol>	<ol style="list-style-type: none"> <li>1. Connect the cable to the UPS. You must use the cable that came with the UPS.</li> <li>2. Shutdown your computer and turn the UPS off. Wait 10 seconds and turn the UPS back on. This should reset the unit.</li> </ol>



## TECHNICAL SPECIFICATIONS UPS-S500R/UPS-S1000R SERIES

MODEL	UPS-S500R Series	UPS-S1000R Series
Capacity (VA)	500	1000
Capacity (Watts)	300	600
<b>INPUT</b>		
Cord Length & Plug Type	10ft. & NEMA 5-15P	
Input Voltage Range	90 VAC - 140 VAC	
Input Frequency Range	60 Hz +/- 3 Hz (auto sensing)	
<b>OUTPUT</b>		
On Battery Output Voltage	Simulated Sine Wave at 120 VAC +/- 10%	
On Battery Output Frequency	60 Hz +/- 1%	
Transfer Time (Typical)	8 ms	
Overload Protection	On Utility: Circuit Breaker, On Battery: Internal Current Limiting	
<b>SURGE PROTECTION AND FILTERING</b>		
Lighting/Surge Protection	Single Mode, L - N	
<b>PHYSICAL</b>		
Output Receptacles	(6) NEMA 5-15R	(6) NEMA 5-15R
Dimensions: in. (cm)	1U, 17.05 x 1.75 x 9.05 (43.3 x 4.4 x 23)	1U, 17.05 x 1.75 x 15.35 (43.3 x 4.4 x 39)
Weight: Lb. (Kg)	18 (8.2)	32 (15)
<b>BATTERY</b>		
Sealed Maintenance Free Lead Acid Battery	UPS-S500R: 6V/7.0AH x 2 UPS-S1000R: 6V/7.0AH x 4	

## TECHNICAL SPECIFICATIONS UPS-S1500R/UPS-S2200R SERIES

MODEL	UPS-S1500R Series	UPS-S2200R Series
Capacity (VA)	1500	2000
Capacity (Watts)	900	1320
<b>INPUT</b>		
Cord Length & Plug Type	10ft. & NEMA 5-15P	10ft. & NEMA 5-20P
Input Voltage Range	90 VAC - 140 VAC	
Input Frequency Range	60 Hz +/- 3 Hz (auto sensing)	
<b>OUTPUT</b>		
On Battery Output Voltage	Simulated Sine Wave at 120 VAC +/- 10%	
On Battery Output Frequency	60 Hz +/- 1%	
Transfer Time (Typical)	8 ms	
Overload Protection	On Utility: Circuit Breaker, On Battery: Internal Current Limiting	
<b>SURGE PROTECTION AND FILTERING</b>		
Lighting/Surge Protection	Single Mode, L - N	
<b>PHYSICAL</b>		
Output Receptacles	(8) NEMA 5-15R	(8) NEMA 5-20R
Dimensions: in. (cm)	2U, 17.05" x 3.5" x 15.25" (43.3 x 8.8 x 38.7)	
Weight: Lb. (Kg)	48 (21.9)	52.7 (23.9)
<b>BATTERY</b>		
Sealed Maintenance Free Lead Acid Battery	UPS-S1500R: 12V/7.0AH x 4 UPS-S2200R: 12V/9.0AH x 4	

## TECHNICAL SPECIFICATIONS (ALL MODELS)

MODELS	All Models
<b>Warning Diagnostics</b>	
Indicators	Power On, Wiring Fault, LED Display (Using Battery, AVR, Load Level, Battery Level)
Audible Alarms	On Battery, Low Battery, Overload
<b>Environmental</b>	
Operating Temperature	32° F to 104° F (0° C to 40° C)
Operating Relative Humidity	0 to 95% Non-Condensing
<b>Communication</b>	
Power Manager™ Software	Windows 98/ME/NT/2000/XP/Vista/7
<b>Management</b>	
Auto-Charger/Auto-Restart	Yes
Built-in USB Interface	Yes

### NOTE:

- A simulated sine wave may cause certain loads to behave inconsistently.
- Middle Atlantic does not recommend that equipment with active power factor correction be used with Standard UPS products due to incompatibility issues. Please refer to the user manual or specification sheet of the equipment being used verify power supply characteristics.

## WARRANTY

### WARRANTY

Middle Atlantic Products, Inc. (the "Company") warrants the UPS Series Uninterruptible Power Supply product to be free from defects in material or workmanship under normal use and conditions for a period of (3) three years from date of shipment by the Company, with the following exception: the internal battery is covered for (2) two years.

The Company's entire liability to the purchaser, and the purchaser's (or any other party's) sole and exclusive remedy, under this warranty shall be limited, at the Company's option, to either (a) return of and refund of the price paid for, or (b) repair or replacement at the Company's factory of the products purchased, or any part or parts thereof, which the Company has determined to be defective after inspection thereof at the Company's factory. This warranty does not cover damage due to acts of God, accident, misuse, abuse or negligence by parties other than the Company, or any modification or alteration of the products. In addition, this warranty does not cover damage due to improper handling, assembly, installation or maintenance.

THIS WARRANTY IS IN LIEU OF ALL OTHER WARRANTIES OF ANY KIND, EITHER EXPRESSED OR IMPLIED, INCLUDING, BUT NOT LIMITED TO, IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE.

TO THE MAXIMUM EXTENT PERMITTED BY APPLICABLE LAW, IN NO EVENT SHALL THE COMPANY BE LIABLE FOR ANY SPECIAL, INCIDENTAL, INDIRECT, OR CONSEQUENTIAL DAMAGES WHATSOEVER (INCLUDING, WITHOUT LIMITATION, DAMAGES FOR LOSS OF BUSINESS PROFITS, BUSINESS INTERRUPTION OR ANY OTHER PECUNIARY LOSS) ARISING OUT OF THE USE OF THE PRODUCTS PURCHASED, EVEN IF THE COMPANY HAS BEEN ADVISED OF THE POSSIBILITY OF SUCH DAMAGES. THE COMPANY'S LIABILITY TO THE PURCHASER (OR ANY OTHER PARTY) HEREUNDER, IF ANY, SHALL IN NO EVENT EXCEED THE PURCHASE PRICE OF THE PRODUCTS PAID TO THE COMPANY.

#### Middle Atlantic Products

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#### Factory Distribution

USA: NJ - CA - IL Canada: ON - BC

At Middle Atlantic Products we are always listening. Your comments are welcome.

## WARRANTY REGISTRATION

### IMPORTANT NOTE

Please register your purchase.

<http://www2.middleatlantic.com/ups/warranty/registration.aspx>



**Middle Atlantic Products**

what great systems are built on™

middleatlantic.com ■ 800.266.7225