



# **Xtreme Value Tower Series (XVT)**

## **User's & Installation Manual**

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## SAFETY INSTRUCTIONS

**ATTENTION:** To safely interact with and enjoy all the features and benefits of these Xtreme Power Conversion Uninterruptible Power Supplies (UPS), please read and follow all installation and operation instructions completely. These UPS are designed to provide power protection for connected electronic equipment.

Please read this manual before installing the XVT-Series UPS models XVT-600, XVT-800, XVT-1200, and XVT-1500 as it provides important information that should be followed during installation and maintenance of the UPS and batteries, allowing you to correctly set up your system for the maximum safety and performance. Included is information on customer support and factory service, if it is required. If you experience a problem with the UPS, please refer to the Troubleshooting section in this manual to correct the problem. If the problem is not corrected, please collect information so that the Technical Support personnel can more effectively assist you.

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

**FCC Notice:** 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 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. 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 technician for help. Any special accessories needed for compliance must be specified in the instruction.

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

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

## **IMPORTANT SAFETY INSTRUCTIONS:**

### **(SAVE THESE INSTRUCTIONS)**

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

**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 UPS cover. Qualified Service Personnel must perform ALL repairs and maintenance. No user serviceable parts inside.

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

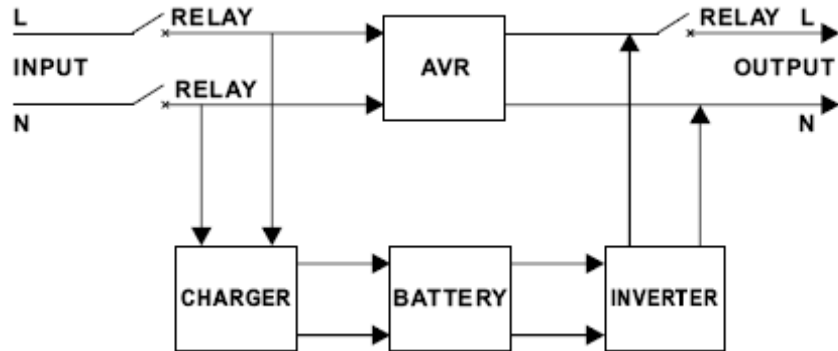
**CAUTION!** UPS must be connected to an AC power outlet with fuse or circuit breaker protection. Do not plug into an AC wall outlet that is not grounded. If you need to de-energize this equipment, turn off and unplug the UPS.

**DO NOT USE FOR MEDICAL OR LIFE SUPPORT EQUIPMENT!** Xtreme Power does not sell products for life support or medical applications. DO NOT use these UPS in any circumstances that would affect operation or safety of any life support equipment or with any medical applications or patient care.

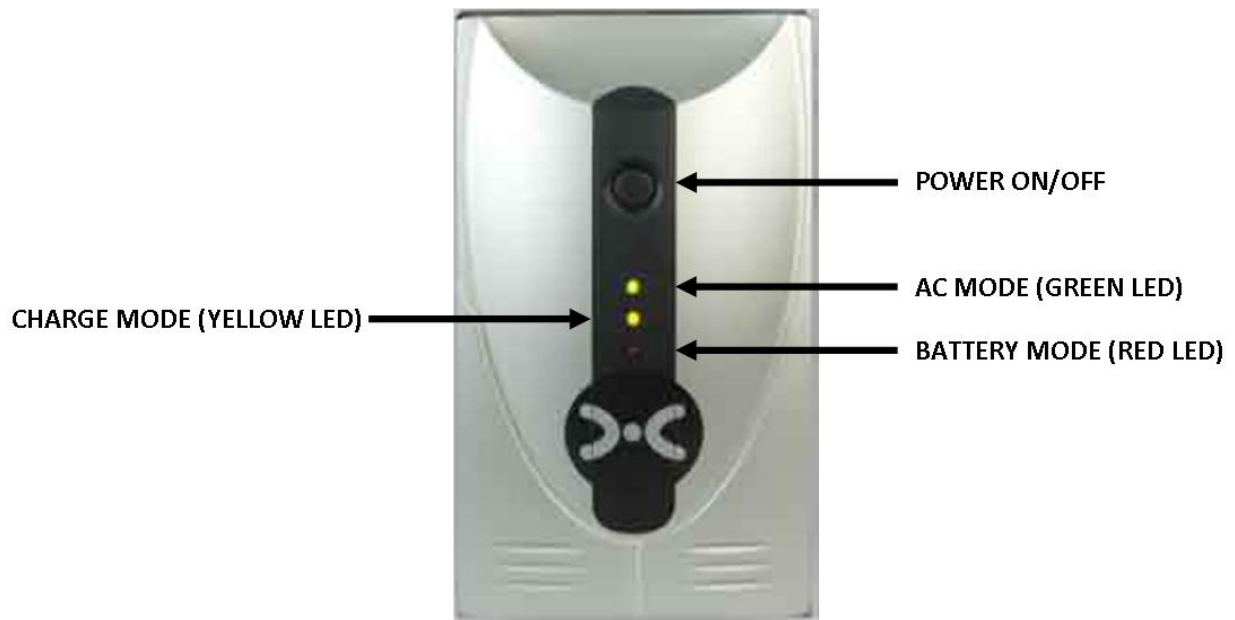
**NOTICE!** Not for use in a computer room as defined in the Standard for Protection of Electronics Computer/Data Processing Equipment.

**NOTICE!** An acceptable outlet (based upon UPS Specifications) shall be installed near the equipment and shall be easily accessible.

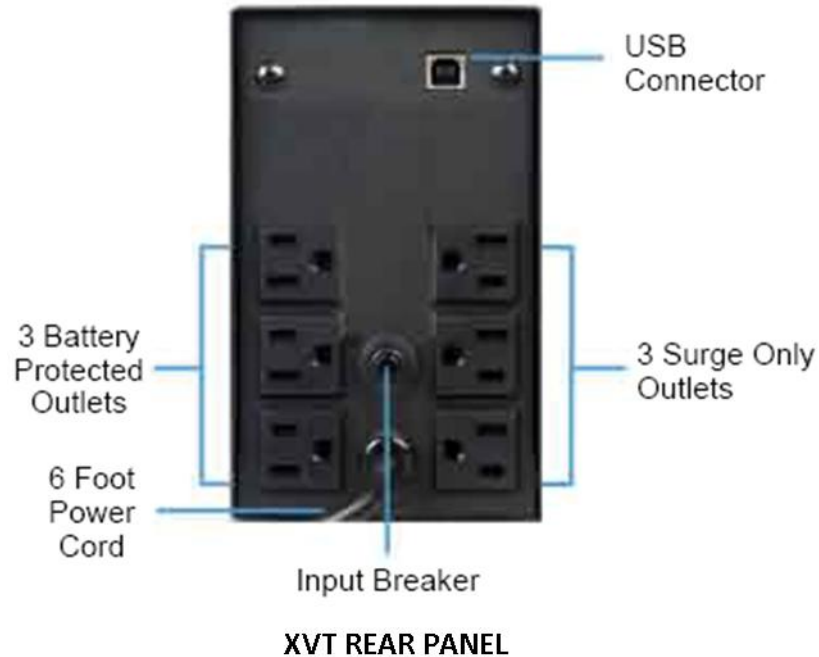
## PRODUCT DESCRIPTION



**UPS Functionality:** The XVT UPS products use Line-Interactive Automatic Voltage Regulation (AVR) UPS technology. Under normal AC power operation, the input power flows through the AVR circuit, regulating the incoming AC power to the output of the UPS and the load connected. If the input power disappears, the Inverter circuit is switched on to provide output from the batteries contained within the UPS.



XVT FRONT PANEL



**Battery/Surge Outlets:** Provides battery-powered/surge outlets for the connected equipment, and insures uninterruptible operation of your equipment during a power failure.

**Power Switch:** Can be used as a master on/off switch for equipment connected to the battery-powered outlets.

**Power On Indicator:** This LED is illuminated when the utility condition is normal and the UPS outlets are providing power, free of surges and spikes.

**Circuit Breaker:** The circuit breaker that provides overload and fault protection.

**USB:** Port/protocol that provides communication between the UPS and PC Network.

## DETERMINING THE POWER REQUIREMENTS OF YOUR EQUIPMENT

1. Make sure the total Volt-Amp (VA) requirements of your connected equipment does not exceed the maximum VA rating for the UPS. The maximum VA ratings are shown in the Specifications section of this document.
2. Ensure that the equipment plugged into the battery-powered outlets does not exceed the UPS rated capacity. If UPS rated capacities are exceeded, an overload condition may occur and cause the UPS to shut down and trip the circuit breaker.
3. If the power requirements of your equipment are listed in values other than Volt-Amps (VA), convert Watts (W) or Amps (A) into VA by doing the calculations below. Note: The equation below only calculates the maximum amount of VA that the equipment can use, not what is typically used by the equipment at any given time. Users should expect usage requirements to be approximately 60% of the value to estimate power requirements:

$$\underline{\hspace{2cm}} \text{ Watts (W) } \times 1.67 = \underline{\hspace{2cm}} \text{ VA or } \underline{\hspace{2cm}} \text{ Amps (A) } \times 120 = \underline{\hspace{2cm}} \text{ VA}$$

Add the totals for all of the equipment and multiply this total by 0.65 to calculate actual power requirements.

**Note:** Many factors can affect the amount of power that your computer system will require. The total load that you will be placing on the battery-powered outlets should not exceed 85% of the UPS capacity.

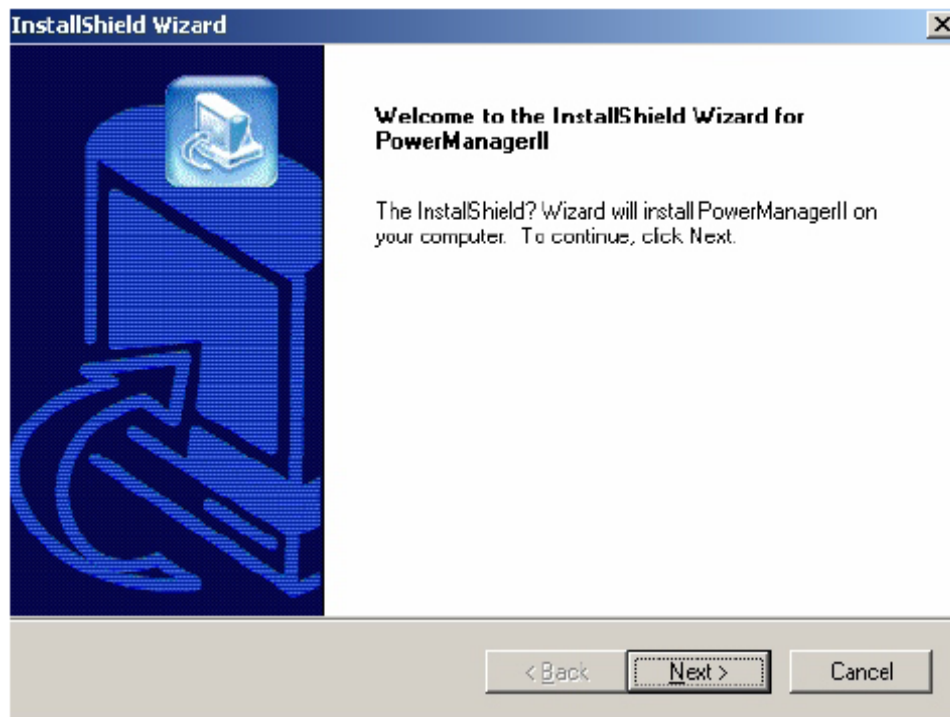
## HARDWARE INSTALLATION GUIDE

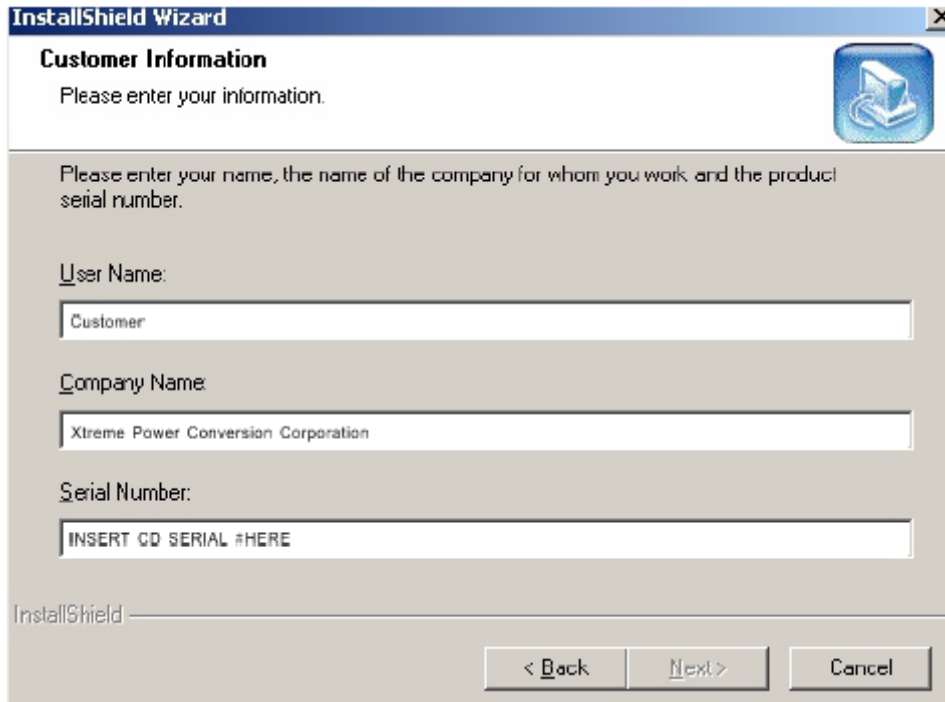
1. Your new UPS may be used immediately upon receipt, however, charging the battery for at least 4 hours is recommended to ensure that the batteries maximum charge capacity is achieved. Charge loss may occur during shipment and storage. To recharge the battery, plug the power cord into the correct type AC wall outlet and turn the power switch on. **Note:** Xtreme Power units will charges the battery with the power switch in either the on or off position.
2. With the UPS off and unplugged, connect your computer, monitor, and/or any other externally powered equipment into the battery power supplied outlets. **DO NOT plug a laser printer, copier, space heater, vacuum, or other large electrical device into the UPS. The power demands of these devices will overload and possibly damage the UPS.**
3. Plug the UPS into a 2 pole, 3 wire grounded receptacle (AC wall outlet) as rated in the Specifications section of this document. Make sure the wall outlet is protected by a fuse or circuit breaker and does not service equipment with large inrush electrical demands (e.g. refrigerator, copier, etc). **Note: DO NOT** use extension cords or power or surge strips on the input or the output of the UPS.

4. Depress the power switch to turn the UPS on. The power on LED indicator, and charging LED will illuminate after the UPS initial test to indicate the UPS is switched "ON".
5. If an overload is detected, an audible alarm will sound and the UPS will emit one long beep every 2-4 seconds. To correct this, turn the UPS off and unplug at least one piece of equipment from the battery-powered outlets. Wait 10 seconds. Make sure the circuit breaker is depressed and then turn the UPS on.
6. Your UPS is equipped with an auto-charge feature. When the UPS is plugged into an AC wall outlet and there is acceptable AC voltage present, the battery will automatically recharge. Charging is controlled by firmware to rapidly charge units to 15VDC (600/800VA units) and 29VDC (1200/1500VA units). After this threshold is met, the XVT places a float charge to maintain battery energy, and the charging light will continue to stay on during this time.
7. To maintain optimal battery charge, leave the UPS plugged into an AC wall outlet with the power switch turned on at all times.
8. To store your UPS for an extended period of time, cover and store it with the battery fully charged. Recharge the battery every two months to maintain battery life.

## QUICKSTART SOFTWARE INSTALLATION GUIDE

1. Locate the USB Cable inside the box.
2. Insert one end of the USB Cable into the UPS and the other into a USB port on your computer.
3. Insert the CD into your computers CD drive.
4. When the software interface requests a serial number, locate and input the serial number from the CD software jacket.
5. Follow the software setup prompts.
6. Quickstart Software Installation Guide.

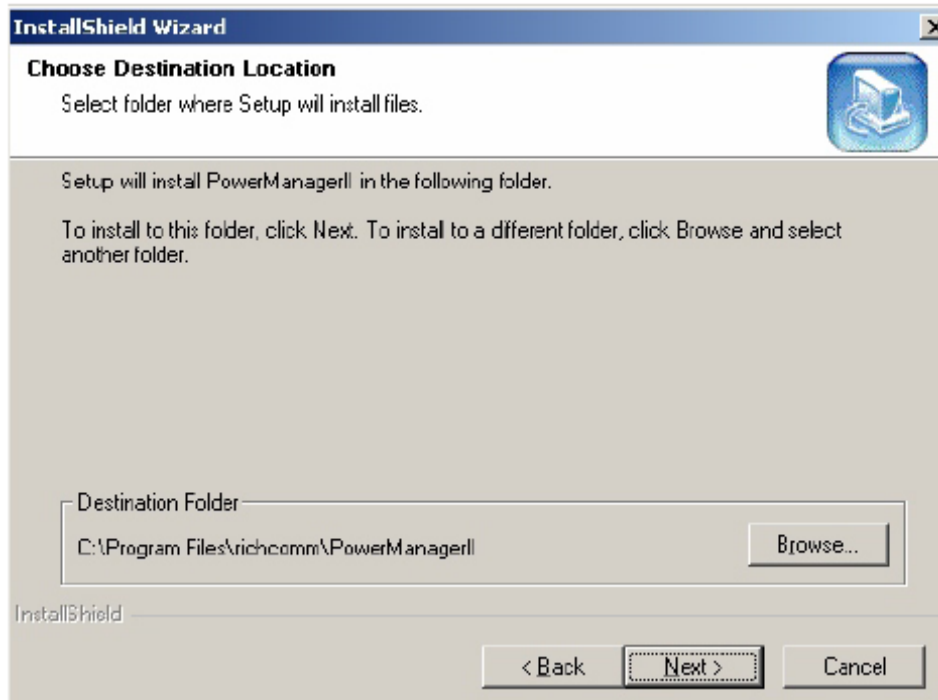




The screenshot shows the 'InstallShield Wizard' window with the 'Customer Information' step. The window title is 'InstallShield Wizard'. The main heading is 'Customer Information' with a sub-heading 'Please enter your information.' and a computer icon. Below this, a message reads: 'Please enter your name, the name of the company for whom you work, and the product serial number.' There are three text input fields: 'User Name' containing 'Customer', 'Company Name' containing 'Xtreme Power Conversion Corporation', and 'Serial Number' containing 'INSERT CD SERIAL #HERE'. At the bottom, there are three buttons: '< Back', 'Next >', and 'Cancel'. The 'Next >' button is highlighted with a dashed border.

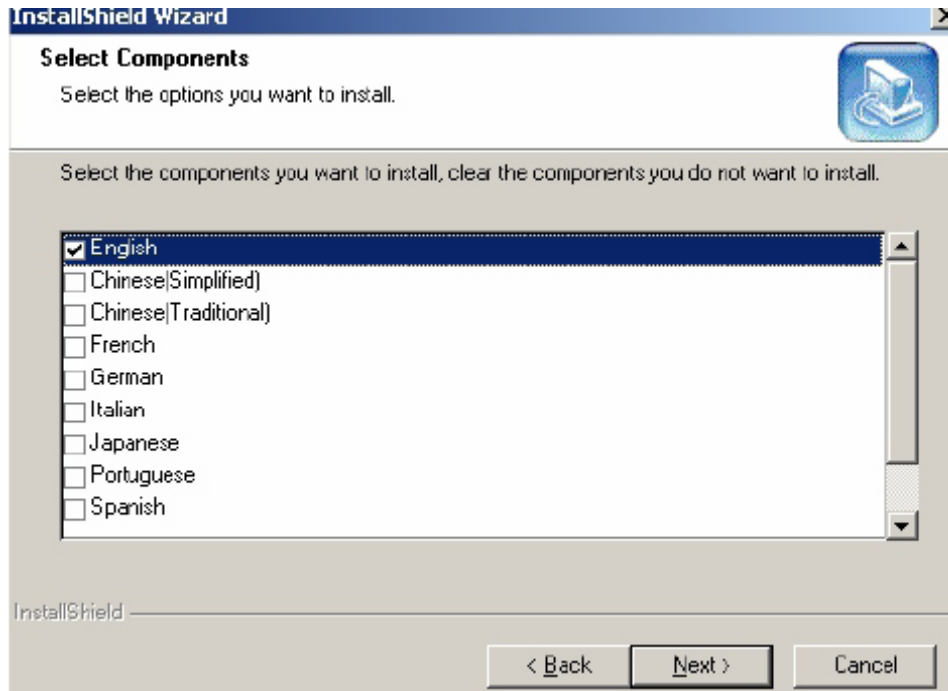
Input user name, company name and serial number into the software interface.

Note: the serial number is on the CD software jacket.

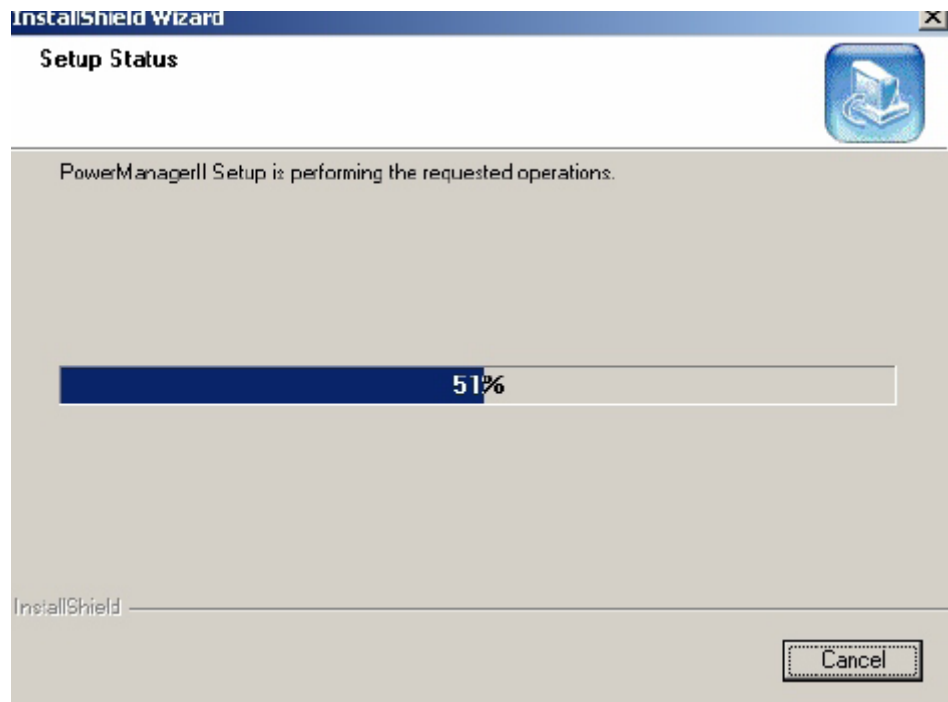


The screenshot shows the 'InstallShield Wizard' window with the 'Choose Destination Location' step. The window title is 'InstallShield Wizard'. The main heading is 'Choose Destination Location' with a sub-heading 'Select folder where Setup will install files.' and a computer icon. Below this, a message reads: 'Setup will install PowerManagerII in the following folder. To install to this folder, click Next. To install to a different folder, click Browse and select another folder.' There is a text input field for 'Destination Folder' containing 'C:\Program Files\richcomm\PowerManagerII' and a 'Browse...' button. At the bottom, there are three buttons: '< Back', 'Next >', and 'Cancel'. The 'Next >' button is highlighted with a dashed border.

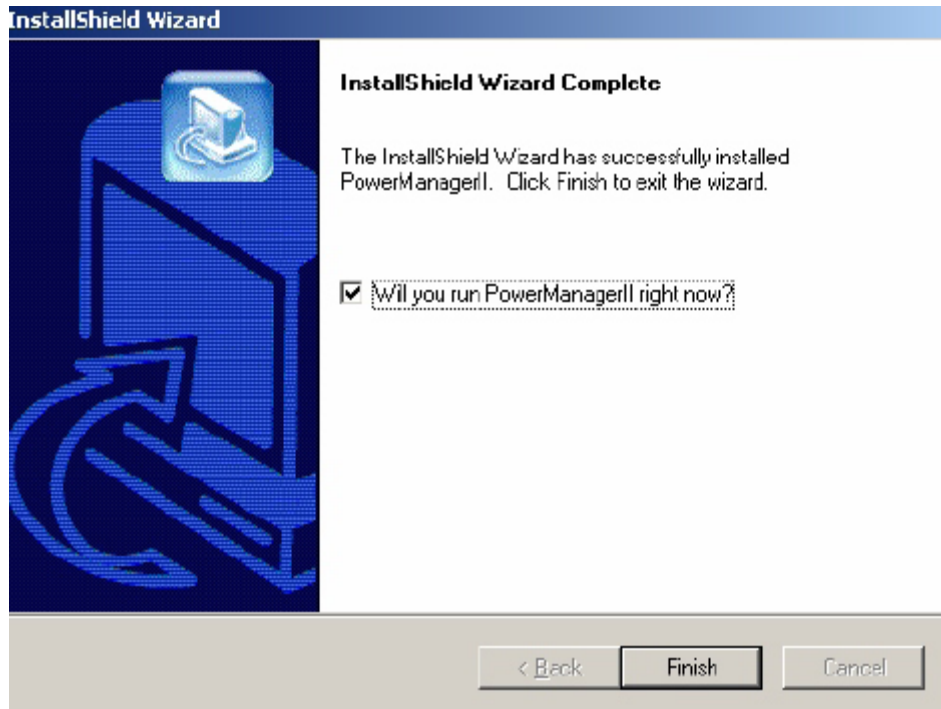
Choose installation location and click "Next"



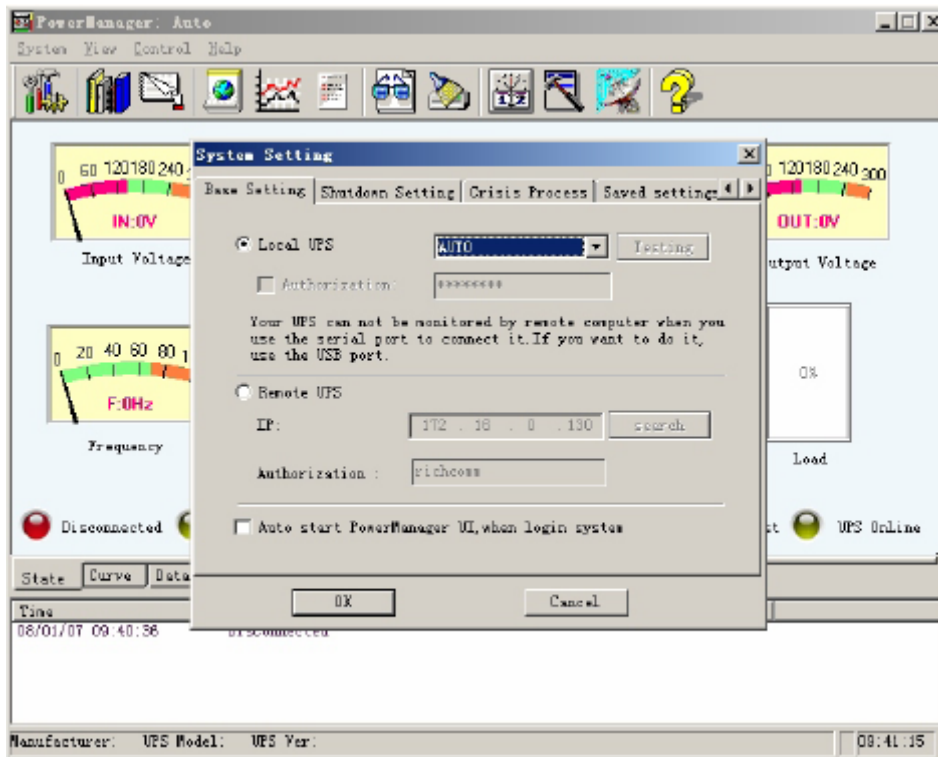
Choose software language and click "Next"



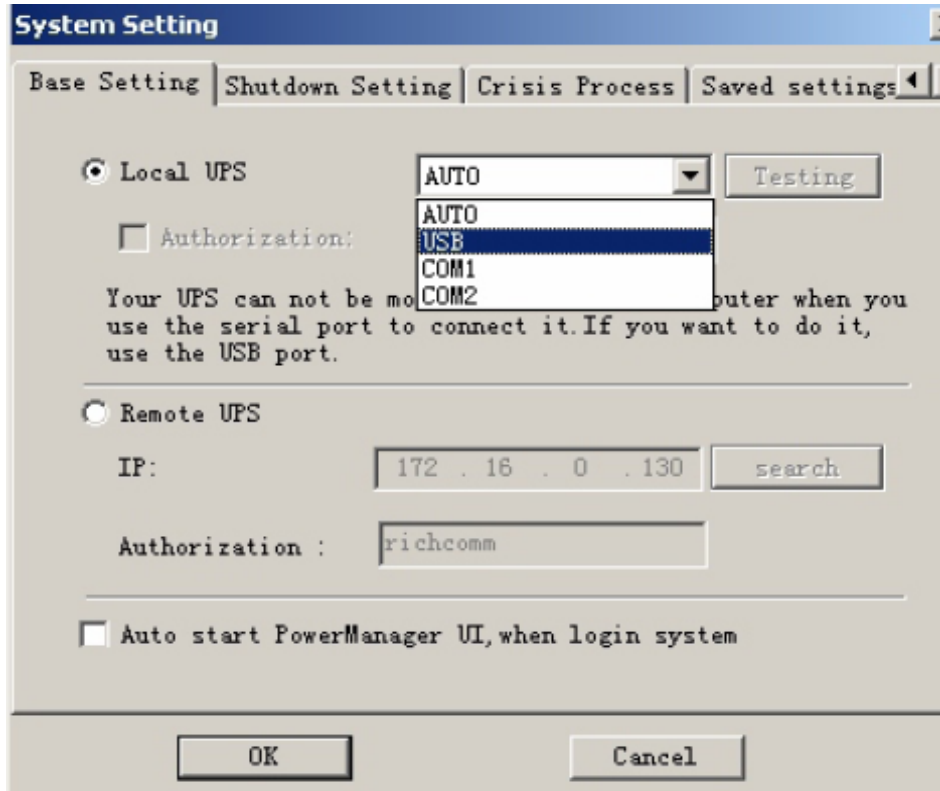
Software will install automatically



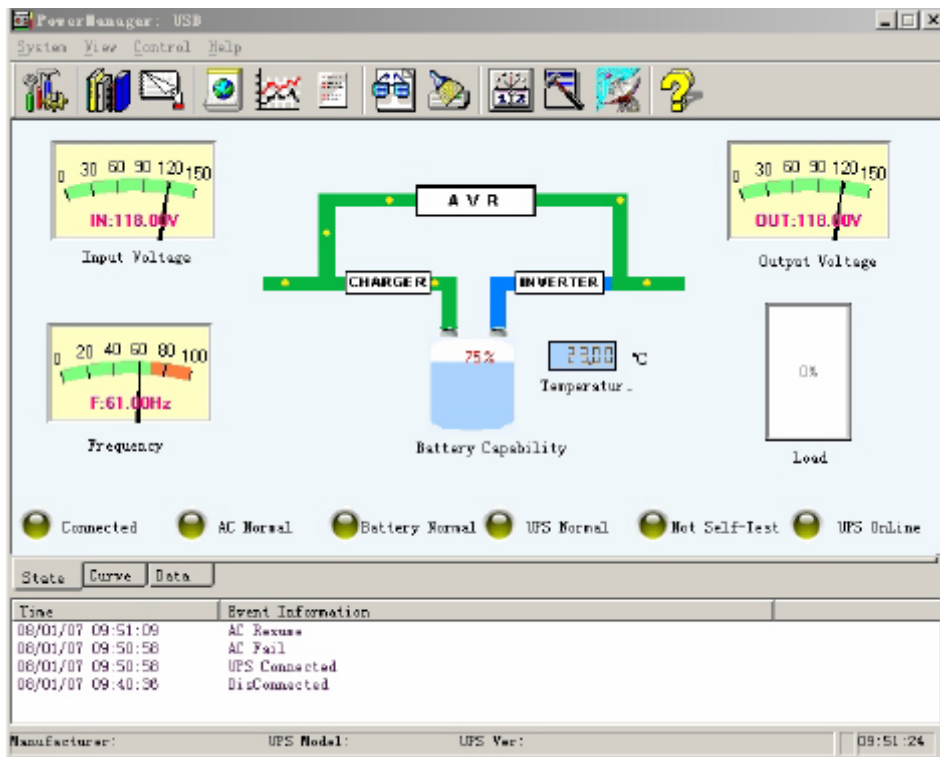
Choose “Will you run Powermanager II right now?” and click “Finish”



After the UPS switches on, please choose the “System Setting” tab from the drop down box



Click "Local UPS" and choose "USB" click "OK"



The UPS is now connected and in normal operation.

## REPLACING THE BATTERY (QUALIFIED SERVICE PERSONNEL ONLY)

**CAUTION!** Read and follow the IMPORTANT SAFETY INSTRUCTIONS before servicing the battery. Service the battery under the supervision of Qualified Service Personnel knowledgeable of batteries and their precautions.

**CAUTION!** Use only the specified type of battery. See your dealer for replacement batteries.

**CAUTION!** The battery may present risk of electrical shock. Do not dispose of batteries in a fire as it may explode. Follow all local ordinances regarding proper disposal of batteries.

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

**CAUTION!** Although the battery system voltage is only 12VDC and 24VDC, the battery can present a high risk of short circuit current and electrical shock. The short circuit current capability of the battery is sufficient to burn wire or tools very rapidly, producing molten metal. Observe these precautions when replacing the battery:

1. Remove all watches, rings or other metal objects.
2. Only use tools with insulated handles.
3. Do not lay tools or metal parts on top of battery or any terminals.
4. Wear protective eye wear (goggles), rubber gloves and boots.
5. Disconnect the charging source before connecting or disconnecting the battery terminals.
6. Determine if the battery is inadvertently grounded. If inadvertently grounded, remove the source of the ground. Contact with a grounded battery can result in electrical shock! The likelihood of such shock will be reduced if such grounds are removed during installation and maintenance (applicable to a UPS and a remote battery supply not having a grounded circuit).

## DEFINITIONS FOR LED INDICATORS

| LED 1 (green) | LED 2 (yellow) | LED 3 (red) | Unit Status         |
|---------------|----------------|-------------|---------------------|
| ON            | *              | OFF         | On AC Power         |
| OFF           | OFF            | FLASH       | On Battery          |
| *             | ON             | *           | Charge              |
| *             | *              | ON          | Overheat            |
|               |                |             | Low Battery         |
|               |                |             | Overload Protection |
|               |                |             | Short Circuit       |

Note: \* means any situation



## ALARMS

| Alarm Indication                               | Unit Status   |
|--|---------------|
| Buzzer every 5 sec                             | DC start      |
| Buzzer every 1 sec                             | Self test     |
| 2 buzzer every 1 sec                           | Low battery   |
| 4 beep every 2.4 sec                           | Overload      |
| 3 buzzer every 1 sec                           | Overheat      |
| Input is off, long beep, power off after 5 sec | Short circuit |

## TROUBLESHOOTING

| PROBLEM  | POSSIBLE CAUSE   | SOLUTION  |
|--|--|---|
| Full-time surge protection outlets stop providing power to equipment | Circuit breaker has tripped due to an overload                                   | Turn the UPS off & unplug at least one piece of equipment. Wait 10 sec, replace the fuse with a fuse of like size & rating, & turn the UPS on |
| The UPS does not supply expected runtime                             | Battery not fully charged  | Recharge the battery for at least 4 hours   |
|  | The battery is defective   | Contact Xtreme Power Conversion about replacement of batteries  |
| 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 sec & then turn the UPS on  |
|  | The UPS is not plugged into an AC wall outlet                                    | Connect the UPS to an 110/120V 60Hz AC wall outlet  |
|  | The battery is defective   | Contact Xtreme Power Conversion about replacement of batteries  |
|  | Mechanical problem   | Contact Xtreme Power Conversion   |
| The UPS shuts down when there is loss of AC power                    | The UPS is not providing battery power   | Shutdown your load & turn the UPS off. Wait 10 sec & turn the UPS back on. This should reset the UPS  |

## SPECIFICATIONS

|             | 120V Model                            | XVT-600  | XVT-800             | XVT-1200            | XVT-1500            |
|-------------|---------------------------------------|--|---------------------|---------------------|---------------------|
| INPUT       | Voltage                               | 94V-144V $\pm$ 5V                                  |                     |                     |                     |
|             | Capacity VA (W)                       | 600 VA (360 W)                                     | 800 VA (480 W)      | 1200 VA (720 W)     | 1440 VA (900 W)     |
|             | Frequency                             | 60HZ $\pm$ 5Hz                                     |                     |                     |                     |
| OUTPUT      | Voltage                               | 105-134 VAC (120V $\pm$ 12%)                       |                     |                     |                     |
|             | Waveform                              | Pure Sine Wave (Typical)                           |                     |                     |                     |
|             | Frequency                             | AC mode-follow utility Battery mode 60 $\pm$ 0.5Hz |                     |                     |                     |
|             | Transfer Time                         | 4ms (Typical)                                      |                     |                     |                     |
|             | Surge Protection                      | 320 Joules   |                     |                     |                     |
|             | Input Protection                      | Compliance with IEEE 587                           |                     |                     |                     |
|             | Short Circuit                         | Breaker  |                     |                     |                     |
| BATTERY     | Battery Type                          | Sealed, Maintenance-free lead acid                 |                     |                     |                     |
|             | Battery Qty & Size                    | (1) 12V 7AH  | (1) 12V 9AH         | (2) 12V 7AH         | (2) 12V 9AH         |
|             | Recharge                              | less than 10 hours to 90% capacity                 |                     |                     |                     |
|             | Backup Time (full load) & (half load) | 3 min (full load) $\geq$ 6 min (50% load)          |                     |                     |                     |
|             | Charge Current                        | 1.5A (Max)   |                     |                     |                     |
| PHYSICAL    | Dimensions                            | W x D x H (inches)                                 | W x D x H (inches)  | W x D x H (inches)  | W x D x H (inches)  |
|             | Product Dimensions                    | 3.7" x 14.6" x 6.2"                                | 3.7" x 14.6" x 6.2" | 4.9" x 16.9" x 8.7" | 4.9" x 16.9" x 8.7" |
|             | Shipping Dimensions                   | 6.1"x 16.2"x 10.2"                                 | 6.1"x 16.2"x 10.2"  | 7.5"x 18.9"x 12.8"  | 7.5"x 18.9"x 12.8"  |
|             | Product Weight                        | 15.3 lbs.  | 16.8 lbs.           | 27.6 lbs.           | 31.3 lbs.           |
|             | Shipping Weight                       | 17.6 lbs.  | 19.2 lbs.           | 29.8 lbs.           | 32.4 lbs.           |
|             | Line Cord (6 ft.)                     | NEMA 5-15P   |                     |                     |                     |
|             | Receptacles                           | (6) NEMA 5-15R (3-SURGE PROTECTED/3-UPS)           |                     |                     |                     |
|             | Communication Interface               | USB Communications                                 |                     |                     |                     |
|             | Bezel Color                           | Brushed Metallic Outer / Black Inner               |                     |                     |                     |
|             | Included in box                       | PowerManager CD, USB cable, Manual                 |                     |                     |                     |
| ENVIRONMENT | Operating Temperature                 | 0-35°C   |                     |                     |                     |
|             | Humidity                              | 0%-90%   |                     |                     |                     |
|             | Audible Noise                         | <45dB  |                     |                     |                     |
|             | Altitude                              | 5000 ft. (1500 m) above sea level                  |                     |                     |                     |
| WARRANTY    | Warranty                              | Two years electronics / One year batteries         |                     |                     |                     |
| APPROVALS   | North America                         | UL cUL FCC   |                     |                     |                     |

|                                    | 120V Model       | XVT-600   | XVT-800 | XVT-1200 | XVT-1500 |
|------------------------------------|------------------|---|---------|----------|----------|
| <b>INDICATORS &amp;<br/>ALARMS</b> | AC Mode          | Green LED on, Orange LED on, Red LED off, no beep             |         |          |          |
|                                    | Charging Battery | Orange LED on   |         |          |          |
|                                    | Battery Mode     | Green LED and Orange LED off, Red LED flash, buzzer slow beep |         |          |          |
|                                    | Battery Low      | Green LED and Orange LED off, Red LED on, buzzer fast beep    |         |          |          |

## SHIPPING LIST

1. (1) UPS
2. (1) User's and Installation Manual
3. (1) Intelligent monitoring software
4. (1) USB computer port cable

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## OBTAINING SERVICE

If the UPS requires Service:

1. Use the TROUBLESHOOTING section in this manual to eliminate obvious causes.
2. Verify there are no circuit breakers tripped.
3. Call your dealer for assistance. If you cannot reach your dealer, or if they cannot resolve the problem, call Xtreme Power Conversion Corp Technical Support at 800.582.4524. Technical support inquiries can also be made at [support@xpcc.com](mailto:support@xpcc.com). Please have the following information available BEFORE calling the Technical Support Department:
  - a. Your name and address.
  - b. The serial number of the unit.
  - c. Where and when the unit was purchased.
  - d. All of the model information about your UPS.
  - e. Any information on the failure, including LED's that may or may not be illuminated.
  - f. A description of the protected equipment, including model numbers if possible.

A technician will ask you for the above information and, if possible, help solve your problem over the phone. In the event that the unit requires factory service, the technician will issue you a Return Material Authorization number (RMA).

If you are returning the UPS to Xtreme Power for service, please follow these procedures:

1. Pack the UPS in its original packaging. If the original packaging is no longer available, as the Technical Support Technician about obtaining a replacement set of packaging material. It is important to pack the UPS properly in order to avoid damage in transit. Never use Styrofoam beads for a packing material.
2. Include a letter with your name, address, daytime phone number, RMA number, a copy of your original sales receipt, and a brief description of the problem.
3. Mark the RMA number on the outside of all packages. Xtreme Power cannot accept any package without the RMA number marked on the outside of the boxes.
4. Return the UPS by insured, prepaid carrier to the address provided by the Technician.

Refer to the Warranty statements in this manual for additional details on what is covered.

## XTREME POWER CONVERSION™ (XPC) CORPORATION LIMITED WARRANTY

Xtreme Power Conversion (XPC) Corporation warrants Xtreme Power Conversion equipment, when properly applied and operated within specified conditions, against faulty materials or workmanship (excluding batteries) for a period of **two years for XVT-Series products** from the date of purchase. XPC Corporation warrants **internal batteries for a period of one year** from the date of purchase. For equipment sites within the United States and Canada, this warranty covers repair or replacement, at the sole discretion of XPC Corporation. The customer is responsible for the costs of shipping the defective product to XPC Corporation. XPC Corporation will pay for ground shipment of the repaired or replacement product. This warranty applies only to the original purchaser.

If equipment provided by XPC Corporation is found to be **Dead-on-Arrival (DOA)**, XPC Corporation will be responsible for the costs of shipping product to and returning equipment from the customer in a timely manner as agreed to with the customer, once the customer has requested and received a **Return Material Authorization (RMA)** number. DOA equipment is defined as equipment that does not properly function according to user documentation when initially received and connected in conjunction with proper procedures as shown in the user documentation or via support provided by XPC Corporation personnel or authorized agents.

This warranty shall be void if (a) the equipment is repaired or modified by anyone other than XPC Corporation or a XPC Corporation approved third party; (b) the equipment is damaged by the customer, is improperly used or stored, is subjected to an adverse operating environment, or is operated outside the limits of its electrical specifications; or (c) the equipment has been used or stored in a manner contrary to the equipment's operating manual, intended use or other written instructions. Any technical advice furnished by XPC Corporation or a XPC Corporation authorized representative before or after delivery with regard to the use or application of Xtreme Power Conversion equipment is furnished on the basis that it represents XPC Corporations best judgment under the situation and circumstances, but it is used at the recipient's sole risk.

EXCEPT AS STATED ABOVE, XPC Corporation DISCLAIMS ALL WARRANTIES, EXPRESSED OR IMPLIED, INCLUDING WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE.

EXCEPT AS STATED ABOVE, IN NO EVENT WILL XPC Corporation BE LIABLE FOR DIRECT, INDIRECT, SPECIAL, INCIDENTAL, OR CONSEQUENTIAL DAMAGES ARISING OUT OF THE USE OF Xtreme Power Conversion EQUIPMENT, including but not limited to, any costs, lost profits or revenue, loss of equipment, loss of use of equipment, loss of software, loss of data, cost of substitutes, or claims by third parties..Purchaser's sole and exclusive remedy for breach of any warranty, expressed or implied, concerning Xtreme Power Conversion equipment, and the only obligation of XPC Corporation under this warranty, shall be the repair or replacement of defective equipment, components, or parts; or, at XPC Corporations sole discretion, refund of the purchase price or substitution of an equivalent replacement product.

