



V80 Value Series Pure Sine Wave Line Interactive UPS

700VA, 1000VA, 1500VA, 2000VA Models

User & Installation Manual

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Important Safety Warning

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.

- To prevent the risk of fire or electric shock, install in a temperature and humidity controlled indoor area free of conductive contaminants. (See the specifications for the acceptable temperature and humidity range.)
- To reduce the risk of overheating the UPS, do not cover the UPS' cooling vents and avoid exposing the unit to direct sunlight or installing the unit near heat emitting appliances such as space heaters or furnaces.
- Do not attach non-computer-related items, such as medical equipment, life-support equipment, microwave ovens, or vacuum cleaners to UPS.
- Do not plug the UPS input into its own output.
- Do not allow liquids or any foreign object to enter the UPS. Do not place beverages or any other liquid-containing vessels on or near the unit.
- In the event of an emergency, press the OFF button and disconnect the power cord from the AC power supply to properly disable the UPS.

Transportation

- Please transport the UPS system only in the original package to protect against shock and impact.

Preparation

- Condensation may occur if the UPS system is moved directly from cold to warm environment. The UPS system must be absolutely dry before being installed. Please allow at least two hours for the UPS system to acclimate the environment.
- Do not install the UPS system near water or in moist environments.
- Do not install the UPS system where it would be exposed to direct sunlight or near heater.
- Do not block ventilation holes in the UPS housing.

Installation

How to determine the power requirements of your equipment

1. Ensure that the equipment plugged into the battery power-supplied outlets does not exceed the UPS unit's rated capacity. If rated unit capacities are exceeded, an overload condition may occur and cause the UPS unit to shut down or the fuse blow.
2. There are many factors that can affect the amount of power that your computer system will require. For optimal system performance keep the load below 80% of the unit's rated capacity.

Hardware Installation Guide

1. 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. Charge loss may occur during shipping and storage. To recharge the battery, simply leave the unit plugged into an AC outlet. The unit will charge in both the on and off position.
2. With the UPS unit off and unplugged, connect the computer, monitor, and any externally powered data storage device.
3. 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.

4. Depress the power switch to turn the unit on. The LCD indicator light will illuminate and the unit will "beep".
5. To maintain optimal battery charge, leave the UPS plugged into an AC outlet at all times.
6. To store your UPS for an extended period, cover it and store with the battery fully charged. Recharge the battery every three months to ensure battery life.

Maintenance, Service, and Faults

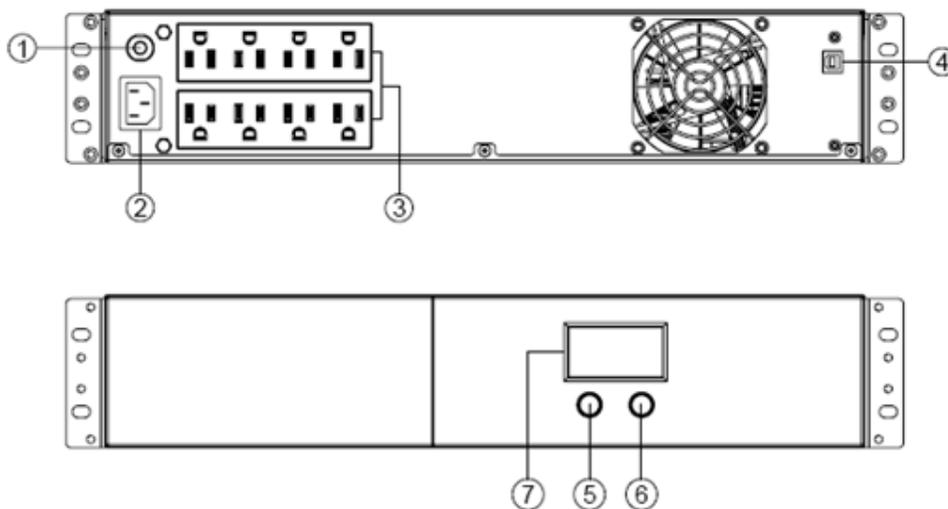
- The UPS system operates with hazardous voltages. Repairs may be carried out only by qualified maintenance personnel.
- **Caution** - risk of electric shock. Even after the unit is disconnected from the mains (building wiring outlet), components inside the UPS system are still connected to the battery and electrically live and dangerous.
- Before carrying out any kind of service and/or maintenance, disconnect the batteries and verify that no current is present and no hazardous voltage exists in the terminals of high capability capacitor such as BUS-capacitors.
- To avoid electrical shock, turn off the unit and unplug it from the AC power source before servicing the battery.
- Only persons are adequately familiar with batteries and with the required precautionary measures may replace batteries and supervise operations. Unauthorized persons must be kept well away from the batteries.
- **Caution** - risk of electric shock. The battery circuit is not isolated from the input voltage. Hazardous voltages may occur between the battery terminals and the ground. Before touching, please verify that no voltage is present!
- Batteries may cause electric shock and have a high short-circuit current. Please take the precautionary measures specified below and any other measures necessary when working with batteries:
 - » Remove wristwatches, rings and other metal objects
 - » Use only tools with insulated grips and handles.
- When changing batteries, install the same number and same type of batteries.
- Do not attempt to dispose of batteries by burning them. This could cause battery explosion.
- Do not open or destroy batteries. Escaping electrolyte can cause injury to the skin and eyes. It may be toxic.
- When replacing batteries, replace with the same type and number of batteries or battery packs.
- Do not dismantle the UPS system.
- A battery can present a risk of electrical shock and high short-circuit current. The following precautions should be observed when working on batteries:
 - » Remove watches, rings, or other metal objects.
 - » Use tools with insulated handles.
 - » Wear rubber gloves and boots.
 - » Do not lay tools or metal parts on top of batteries.
 - » Disconnect charging source prior to connecting or disconnecting battery terminals.
 - » Determine if battery is inadvertently grounded. If inadvertently grounded, remove source from ground. Contact with any part of a grounded battery can result in electrical shock. The likelihood of such shock can be reduced if such grounds are removed during installation and maintenance.

Storage

1. First turn off your UPS and disconnect its power cord from the wall outlet. Disconnect all cables connected to the UPS to avoid battery drain.
2. The UPS should be stored in a cool dry location.
3. Make sure the battery is fully charged before the UPS is stored.
4. For extended storage in moderate climates, the battery should be charged for 12 hours every 3 months by plugging the power cord into the wall receptacle and turning on the main switch. Repeat it every 2 months in high temperature locations.

Basic Operation

Front and Top Panel Description



1. Input Circuit Breaker

The circuit breaker provides optimal overload protection.

2. AC Inlet

Connect to utility power through the input power cord.
(IEC320 C14 for 700VA/1000VA/1500VA, IEC 320 C20 for 2000VA)

3. AC outlet

The UPS provides outlets for connected equipment to insure temporary uninterrupted operation during a power failure and against surges and spikes.

4. USB Port

This port allows connection and communication from the USB port on the computer to the UPS unit.

5. Power On/Off Button

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

6. Setting Button

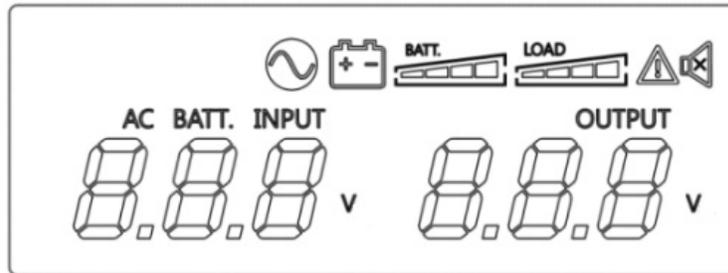
The audible alarm can be turned off/on by pressing this button 3s.

7. LCD Display

The LCD will display the UPS status.

Definitions for Illuminated LCD Indicators

LCD Indicators



Initial	AC INPUT(Voltage) V	AC INPUT 120 V	OUTPUT(Voltage) V	OUTPUT 120 V

	Line mode
	Bat-mode
	Battery capacity
	Load capacity
	Fault
	Sound disable (Press the setting key 3s to disable and enable the buzzer sound)

Troubleshooting

Problem	Possible Causes	Remedy
Abnormal		
Mains normal but not works in AC mode	1. AC Input missing	1. Check AC input connection.
	2. Input Breaker is tripped	2. Unplug the power cord of the UPS then press the circuit breaker knob.
The UPS will not turn on.	The on/off Button 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 100-127V 50/60Hz outlet.
	The battery is worn out.	Contact technical support.
	Mechanical problem.	
Outlets do not provide power to equipment	Circuit breaker is tripped due to overload	Turn the UPS off and unplug at least one piece connected equipment. Unplug the power cord of the UPS then press the circuit breaker knob
	Batteries are discharged	Allow the unit to recharge for at least 4 hours.
	Unit has been damaged by a surge or spike.	Contact technical support.
Alarm code A51	Site Fail: Line and neutral conductors of UPS Input are reversed or the Ground is disconnected.	Check the input plug and socket.
Alarm code A56	Battery low: Battery capacity is low, UPS will turn off soon	1. Shut off non-essential equipment. 2. Save your data and turn off the computer.
Alarm code A64	Overload: Your equipment requires more power than the UPS can provide.	1. Shut off non-essential equipment.
Alarm code A68	Over Temperature	1. Shut off non-essential equipment.

Fault Codes

Fault		
Fault code E09	Output Short : Output circuit short.	1. Shut down the UPS 2. Your attached equipment may have problems, please remove them and check again.
Fault code E14	Overload: Your equipment requires more power than the UPS can provide. It will shutdown.	Shut off non-essential equipment. If this solves the overload problem, the UPS will transfer to normal operation.
Fault code E18	Fan fail : Fan has been damaged.	1.Shut down the UPS 2.Replace the fan
Fault code E19	Over Temperature	1. Shut down the UPS. Restart the UPS to Check the fan for operation and if the ventilation hole has been covered 2. Contact technical support for repair.

Specifications

MODEL NUMBER		V80-700	V80-1000	V80-1500	V80-2000
CAPACITY	Power rating	700VA (420W)	1000VA (600W)	1500VA (900W)	2000VA (1200W)
INPUT	Voltage nominal	120VAC			
	Voltage range	82-148VAC			
	Frequency	50/60Hz auto sensing			
OUTPUT	Voltage	120VAC			
	Waveform	Pure sine wave			
	Transfer time (typical)	2–6ms			
	Efficiency	Up to 96% ECO mode, 93% buck and boost mode			
	Harmonic distortion	2% @ 100% linear load; 5% @ 100% non-linear load			
BATTERY	Battery type	Sealed, maintenance-free lead acid			
	Battery quantity & size	(1) 12V 9AH	(2) 12V 7AH	(2) 12V 9AH	(2) 12V 9AH
	Charging current	1A max			
	Typical recharge	4 hours to 90%			
PHYSICAL	Dimensions (W x D x H)	17.2" x 16.1" x 3.5"			
	Weight	24 lbs	27.3 lbs	36.5 lbs	36.5 lbs
	Line cord (removable)	6ft, 5-15P to C13			6ft, 5-20P to C19
	Receptacles	(8) NEMA 5–15R			
ENVIRONMENT	Operating temperature	32–104°F (0–40°C)			
	Audible noise	< 40dBA		< 45dBA	
	Altitude	11,500 ft above sea level			
APPROVALS	cTUVus, RoHs				
WARRANTY	3 years electronics, 3 years battery warranty (USA and Canada)				
COMMUNICATIONS INTERFACE	USB				
INCLUDED IN BOX	Line cord, tower pedestals, user manual, USB cable				
AVAILABLE OPTIONS	5 year extended warranty, bypass distribution (XBDM), power distribution (XPDU), 4-post rail kit, 2-post shelf kit, wall mount bracket				

Shipping List

1. Line cord
2. Rack Ear
3. User manual
4. USB cable

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. Please have the following information available BEFORE calling the Technical Support Department:
 - Your name and address.
 - The serial number of the unit.
 - Where and when the unit was purchased.
 - All of the model information about your UPS.
 - Any information on the failure, including LED's that may or may not be illuminated.
 - 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, ask 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.
5. Refer to the Warranty statements in this manual for additional details on what is covered.

Xtreme Power Conversion 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 for a period of **three years for V80-Series products** from the date of purchase. XPC Corporation warrants **internal batteries for a period of three years** 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.

Xtreme Power Conversion Load Protection Policy

THIS POLICY IS NOT A WARRANTY. REFER TO **THE XPC CORPORATION, INC. LIMITED WARRANTY** FOR INFORMATION CONCERNING THE WARRANTY FOR YOUR XPC PRODUCT. THE LIMITATIONS AND CONDITIONS CONTAINED IN THIS POLICY DO NOT AFFECT **THE TERMS OF THE XPC LIMITED WARRANTY**.

Definitions:

1. "Product" means a Standard 120, 208, or 240 Volt power protection device that is used in the United States and Canada. This policy does not include custom manufactured products.
2. "Power Disturbance" means an AC power line transient (telephone line or Local Area Network, if applicable), spike or surge.
3. "Connected Equipment" properly connected electronic equipment
4. "Fair Market Value" of damaged Connected Equipment as determined by XPC shall be the lower of (a) the average price the same or similar items are being sold for on eBay, (b) the price list of Orion Blue Book (or if such price list is no longer published, a published or announced price list reasonably selected by XPC), (c) the lowest price the same or similar items can be purchased for in the United States or (d) the total amount of all payment(s) you have or are entitled to receive from insurance, other warranties, extended warranties, a legal liability claim or from other sources or persons for the damaged Connected Equipment.
5. "Purchaser" means the person or entity that originally purchased the Product from an authorized reseller or distributor of XPC Products.

The Purchaser of this Product is protected, for the term of the XPC Limited Warranty, against certain losses caused by a Power Disturbance for properly connected electronic equipment (referred to as the "Connected Equipment") subject to certain terms and conditions provided below.

This policy applies only to the original purchaser of the Product. If the Product is transferred or sold to another person or entity, this policy is void.

Load Protection Policy Dollar and Period Limits

For purchasers that meet the qualifications and conditions set forth in this policy, XPC will provide reimbursement (cost of repair or fair market value as determined by XPC) during the period limits and up to the dollar limits stated as follows:

PRODUCT	DOLLAR LIMIT	PERIOD OF COVERAGE
V80	25,000	Term of XPC Limited Warranty
XST	25,000	Term of XPC Limited Warranty
S70	25,000	Term of XPC Limited Warranty
XPRT 6kVA & 10kVA	50,000	Term of XPC Limited Warranty
P80, P80g	50,000	Term of XPC Limited Warranty
P90, P90L, P90g, P90Lg	50,000	Term of XPC Limited Warranty
T90, T91	50,000	Term of XPC Limited Warranty
TX90, TX90i	50,000	Term of XPC Limited Warranty

This Load Protection Policy is not deemed "first dollar" coverage. XPC's obligation is reduced by any amounts that the Purchaser is entitled to recover, from other sources regarding the Connected Equipment, including, but not limited to, insurance, other warranty, extended warranty, or legal liability, regardless of whether or not the Purchaser makes a claim for recovery.

Eligibility for Coverage Under the Load Protection Policy

1. The Product must be registered on the XPC website, www.xpcc.com, within 10 days of purchase. All required information must be provided, and Purchaser should retain a copy for Purchaser's records. When registering on the website, Purchaser must list all connected equipment that is directly connected to the product. Only those devices registered in that manner will be covered.
2. All Connected Equipment must be UL or CSA approved.
3. The Product must be plugged into a properly wired and grounded outlet. Use of input surge devices, extension cords, adapters, ground wires, or electrical connections not manufactured by XPC voids the XPC Load Protection Policy. No other surge protection device may be connected to the output sockets of the Product. The installation must comply with all applicable electrical and safety codes set forth pursuant to the NEC.
4. The Product must have undeniable physical evidence of a Power Disturbance that directly and proximately caused the damage;
5. The Connected Equipment must have been damaged by a Power Disturbance on a properly installed, grounded, and National Electric Code, ("NEC"), code-compliant 120, 208, 240 Volt AC power line in the United States or Canada, by a Power Disturbance on standard telephone land line or PBX telephone equipment line that is properly installed and connected to an RJ11 port on the Product; or by a Power Disturbance on a standard Local Area Network connection that is properly installed and connected to an RJ45 port on the Product and (d) is directly plugged into, and properly connected to, the Product in its original condition which was properly operated when a Power Disturbance passed through the Product and (i) exhausts the protection capacity of the Product or (ii) damages the Product.
6. The Load Protection Policy does not apply if the Product has been operated in a failure mode or not in compliance with XPC operating instructions in the Product user's manual, or if the Connected Equipment has not been operated in compliance with the instructions and manuals of its manufacturer/vendor.
7. This policy is null and void if, XPC determines, in its sole discretion, that the Product has been tampered with or altered in any way.

What is Not Covered Under the Load Protection Policy:

The following damage is not covered by this Policy:

1. Restoration of lost data and reinstallation of software.
2. Damage from a cause other than AC power-line transients, except for damage due to telephone line, Local Area Network, or CATV transients, which is covered only if the Product offers such protection.
3. DAMAGE CAUSED BY FAILURE TO PROVIDE A SUITABLE INSTALLATION ENVIRONMENT FOR THE PRODUCT (INCLUDING, BUT NOT LIMITED TO, LACK OF A PROPER SAFETY GROUND).
4. Damage caused by the use of the Product for purposes other than those for which it was designed.
5. Damage caused by accidents, or natural disasters, including but not limited to, fire, flood, and wind.
6. Damage caused by abuse, misuse, alteration, modification, or negligence.
7. Any labor costs or travel, room and board expenses associated with the repair and/or restoration of lost or damaged hardware, software or data.

EXCEPT AS EXPRESSLY PROVIDED IN THIS POLICY, XPC SHALL NOT BE LIABLE FOR ANY DAMAGES WHATSOEVER, INCLUDING, BUT NOT LIMITED TO, DIRECT, INDIRECT, SPECIAL, INCIDENTAL, CONSEQUENTIAL, OR MULTIPLE DAMAGES ARISING OUT OF THE USE OF THE PRODUCT OR DAMAGE TO THE CONNECTED EQUIPMENT, REGARDLESS OF THE LEGAL THEORY ON WHICH SUCH CLAIM IS BASED, EVEN IF ADVISED OF THE POSSIBILITY OF SUCH DAMAGE. SUCH DAMAGES INCLUDE, BUT ARE NOT LIMITED TO, LOSS OF PROFITS, LOSS OF SAVINGS OR REVENUE, LOSS OF USE OF THE PRODUCT OR THE CONNECTED EQUIPMENT OR ANY ASSOCIATED EQUIPMENT, LOSS OF SOFTWARE, COST OF CAPITAL, COST OF ANY SUBSTITUTE EQUIPMENT, FACILITIES OR SERVICES, DOWNTIME, THE CLAIMS OF THIRD PARTIES, INCLUDING CUSTOMERS, AND INJURY TO PROPERTY.

Submitting a Load Protection Policy Claim:

1. Any claim under the Load Protection Policy must be made within 10 days of the date of alleged damage to the Connected Equipment.
2. Call the XPC technical support department at 1-800- 582-4524 and obtain a Load Protection Policy Returned Material Authorization (RMA) number. Have information on all applicable insurance or other resources of recovery/payment that is available to the Purchaser and the name of the power utility supplier for the location of the Connected Equipment. XPC will forward to the Purchaser a Load Protection Policy claims form, which must be completed and filed with XPC within 30 days.
 - Mark the Load Protection Policy RMA number on the Product the Purchaser is returning.
 - Pack the Product in its original packaging or similar packing materials if the original packaging has been discarded. Enclose the completed Load Protection Policy claim form and a copy of the Purchaser's original sales receipt for the Product in the box.
 - Mark the RMA number clearly on the outside of the box.
 - Ship the Product (one-way shipping charges paid by the Purchaser) to:

XPC Corporation
230 Yuma Street
Denver, CO 80223
Attn: LPP RMA#

3. XPC will evaluate the Product to determine its level of functionality, and will examine the Product for evidence of damage from a Power Disturbance.
 - If XPCs' evaluation provides no evidence of damage from a Power Disturbance, XPC will send to the Purchaser (i) a report summarizing the tests performed and (ii) a rejection of claim notice.
 - If the Product shows evidence of damage from a Power Disturbance, XPC will request that all Connected Equipment for which a Load Protection Policy claim has been submitted, be sent for evaluation to either XPC or an authorized service center. If it is determined that the Connected Equipment has been damaged by a Power Disturbance, XPC will, in its sole discretion, issue payment to the Purchaser for either the cost of repair of the Connected Equipment or the Fair Market Value of the damaged Connected Equipment, up to the dollar limits stated above. XPC reserves the right to require the Purchaser to transfer title and deliver the Connected Equipment to XPC if it chooses to reimburse the Purchaser for the fair market value of the Connected Equipment. XPCs' maximum liability shall be reduced to reflect all such other payments or sources of recovery, whether applied for or not.
4. If XPC issues payment to the Purchaser to have the Connected Equipment repaired, the repair must be performed at a service center that is authorized by the manufacturer of the Connected Equipment. XPC reserves the right to contact the authorized service center directly to discuss repair costs and damage to the Connected Equipment to determine if it was caused by a Power Disturbance and the right to request that the service center forward the Connected Equipment or components of the Connected Equipment to XPC for inspection
5. Unless modified in writing signed by an officer of XPC and the Purchaser, the terms of this policy are the complete and exclusive agreement between the parties, superseding all prior agreements, oral or written, and all other communications between the parties relating to the subject matter of this agreement. No employee of XPC or any other party is authorized to make any representations beyond those made in this agreement concerning the Load Protection Policy.

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