



LEGACY
POWER CONVERSION



User's Manual
Lineage LI2200 UPS

K01-1120004-00

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Thank you for purchasing a Legacy Power Conversion Product. To enjoy all the features and benefits of this Uninterruptible Power System (UPS), please read and follow all installation and operation instructions completely. This UPS is designed to provide guaranteed power protection for connected electronic equipment. The accompanying SeeUPS2020 software saves data, closes open applications and automatically shuts down your computer system in an intelligent and orderly manner.

IMPORTANT SAFETY WARNINGS

(SAVE THESE INSTRUCTIONS)

This manual contains important instructions that should be followed during installation and maintenance of the UPS and batteries. 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.

CAUTION! The UPS must be connected to an AC power outlet with fuse or circuit breaker protection. **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 UPS.

CAUTION! DO NOT USE FOR MEDICAL OR LIFE SUPPORT EQUIPMENT! Legacy Power Conversion does not sell products for life support or medical applications. **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! The battery can energize hazardous live parts inside 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 reduce the risk of electric shock, do not remove the cover, except to service the battery. No user serviceable parts inside, except for the battery.

CAUTION! To avoid electrical shock, turn off the unit and unplug it from the AC power source before servicing the battery or installing a computer component.

CAUTION! **DO NOT USE WITH OR NEAR AQUARIUMS!** To reduce the risk of fire, do not use with or near aquariums. Condensation from the aquarium can come in contact with metal current contacts and cause the machine to short out.

CAUTION! **DO NOT USE WITH LASER PRINTERS!** The power demands of laser printers are too large for a UPS.


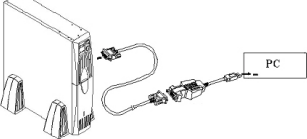

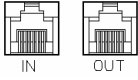

INSTALLING YOUR UPS SYSTEM

UNPACKING

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

- (1) UPS Unit; (1) User's Manual for UPS; (2) Rack mount Brackets; (2) Stands; (1) Telephone Cable
- (1) SeeUPS2020 Software Disk; (1) User's Manual for SeeUPS2020;
- (2) Serial Interface Cable (DB-9); (1) Serial-to-USB cable; (1) Warranty Registration Card.

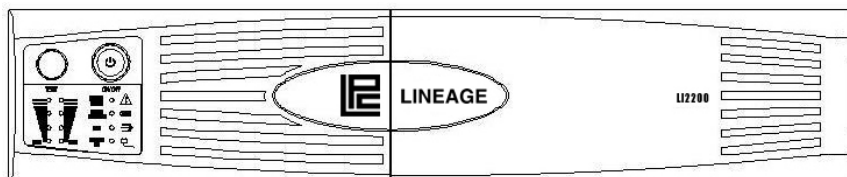
HARDWARE INSTALLATION GUIDE

1. Your new UPS may be used immediately upon receipt. However, **recharging the battery for at least four hours** is recommended to insure 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 as well as the off position.
 
2. If you wish to use the software, connect the enclosed serial interface cable to the serial port on the UPS and an open serial port on the computer. If you would like to use USB interface, please connect the USB adapter with the Serial Cable then connect the USB to your computer.
 
3. With the UPS unit off and unplugged, connect your computer, monitor, and any externally powered data storage device (Zip drive, Jazz drive, Tape drive, etc...) into the battery power supplied outlets. **DO NOT** plug a laser printer, copier, space heater, vacuum, paper shredder or other large electrical device into the UPS. The power demands of these devices will overload and possibly damage the unit.
 
4. **To protect a fax, telephone, modem line or network cable, connect a telephone cable or network cable from the wall jack outlet to the IN jack of the UPS. Then connect a telephone cable or network cable from the OUT jack on the UPS to the modem, computer, telephone, fax machine, or network device.**

5. 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. refrigerator, copier, etc...). Avoid using extension cords. If used, the extension cord must be rated for 15 Amps.
 
6. Depress the power switch to turn the unit on. The power on indicator light will illuminate. 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. Wait 10 seconds. Make sure the circuit breaker is depressed and then turn the UPS on.
7. 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, unplug at least one piece of equipment, wait 10 seconds, check to make sure that the circuit breakers are depressed, and turn the unit on.
8. Your UPS is equipped with an auto-charge feature. When the UPS is plugged into an AC outlet, the battery will automatically recharge.

9. To maintain optimal battery charge, leave the UPS plugged into an AC outlet at all times.
10. To store your UPS for an extended period, cover it and store with the battery fully charged. Recharge the battery every three months to insure battery life.

BASIC OPERATION

FRONT PANEL DESCRIPTION



◆ Power Switch



Press the power button to turn the UPS ON or OFF

◆ Test Switch



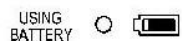
Lineage LI2200 UPS performs a self-test automatically. When powered on. When the UPS passes the test, it returns to on-line operation. If the UPS fails the self-test, please recharge the battery for hours and perform another self-test. If it fails after recharging the battery, please replace the battery.

◆ Wiring Fault Indicator



This LED will illuminate to warn the user that a wiring problem exists within the AC receptacle, such as a bad ground, miss ground or reversed wiring. If illuminated, disconnect all equipment and contact an electrician to insure outlet is properly wired.

◆ Battery Indicator



This illuminates during utility failure, indicating that the battery is supplying power to the battery-power supplied outlets.

◆ AVR Indicator



This LED indicates that the UPS is operating in automatic voltage regulation mode. When the led is illuminated continuously, it indicates input over-voltage and the UPS unit bucks the voltage. When the led is flashed in rotation, it indicates that the UPS unit boosts input voltage.

◆ Power On Indicator



This LED is illuminated when the utility condition is normal and the UPS outlets are providing "clean power", free of surges and spikes.

◆ **Battery Indicators**



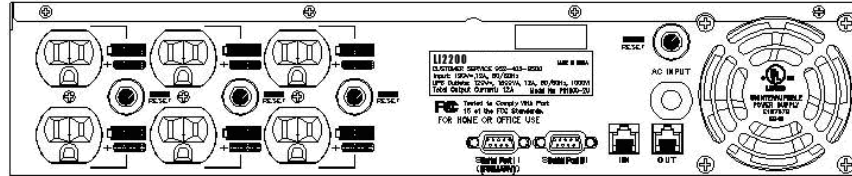
This indicator shows a visual indication of the battery charge. If battery capacity is under 20%, no indicator LED will illuminate and UPS starts beeping.

◆ **Load Level Indicators**



This indicator shows a visual induction of the UPS load. The load indicator LED will turn orange if the load is between 80 and 100%. If the load is under 20%, no indicator LED will illuminate.

REAR PANEL DESCRIPTION

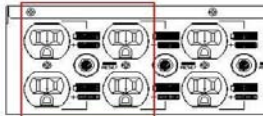


◆ **Circuit Breaker Reset for Overload Protection**



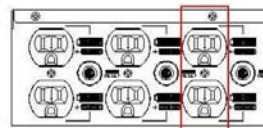
Resettable circuit breakers provide optimal overload protection.

◆ **Battery Backup and surge Protection Outlets**



The UPS provides four battery powered, surge protected and AVR outlets for connected equipment and insures temporary uninterrupted operation of connected equipment during a power failure

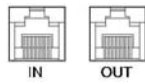
◆ **Individual Backup Power for Critical Load**



The UPS provides two battery powered, surge protected and AVR outlets for the most critical connected equipment and insures temporary uninterrupted operation of connected equipment during a power failure

NOTE: When the the UPS is overloaded, two circuit breakers will be tripped to interrupt power supply to the four battery outlets and leaves the two outlets for critical loads uninterrupted.

• **Communication Protection Ports (RJ11/RJ45)**



Ports protect standard modem, fax, telephone line or network cable.

• **Dual Serial Ports**

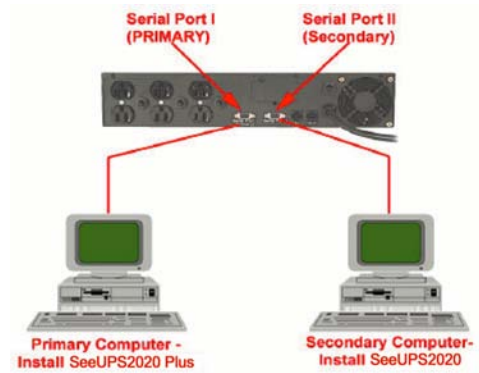


Lineage LI2200 UPS provides two serial ports to allow connection and communication between the UPS and two computers. This allows the simultaneous shutdown of two computer systems.

The Primary computer (with SeeUPS2020 Plus installed) is the computer that you will use to control the UPS and make any changes to the operation of the UPS. The Secondary computer (with SeeUPS2020 installed) is unable to exhibit any control over the UPS.

When there is a power failure, the Primary computer will start to shutdown after a user controlled delay. Once the Primary computer is shutdown, the UPS will signal the secondary computer and initiate a shutdown. The secondary computer will then shutdown. Once the secondary computer has completed its shutdown, the UPS will power off..

SeeUPS2020 will save and close any open files prior to shutting the system down.



BATTERY REPLACEMENT

Contact your dealer or call the number in this manual for information on battery replacement. The order numbers for the battery assembly are **BBAT-LI2200** for LI2200.

Read and follow the IMPORTANT SAFETY INSTRUCTIONS before servicing the battery. Service the battery under the supervision of personnel knowledgeable of batteries and their precautions. **Servicing the battery can only be performed by trained personnel.**

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

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

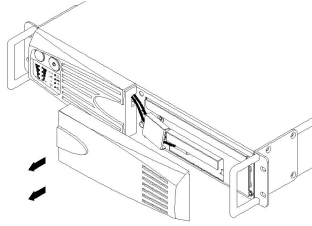
CAUTION! Do not open or mutilate the batteries. Release electrolyte is harmful to the skin and eyes and may be toxic.

CAUTION! A battery can present a high risk of short circuit current and electrical shock.

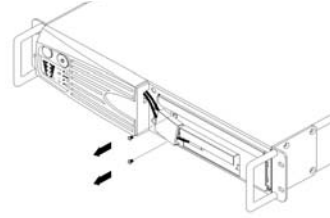
Take the following precautions before replacing the battery:

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 rubber gloves and boots.
5. Determine if the battery is inadvertently grounded. If inadvertently grounded, remove source of ground. **CONTACT WITH 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).

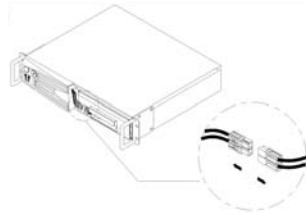
BATTERY REPLACEMENT PROCEDURE:



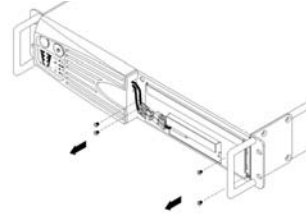
1. Remove the right side front panel.



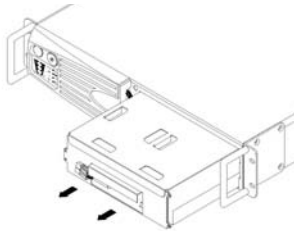
2. Remove the two retaining screws of the cable protection cover then remove the cover.



3. Disconnect the black and red cable.



4. Remove the four retaining screws.









5. Pull the battery pack out from the unit.

6. Slide a new battery pack into the unit. Assemble the screws, cover, cable and front panel in the reverse sequence of above steps.

7. Recharge the unit for 4-8 hours to ensure the UPS performs expected runtime

DEFINITIONS FOR LED INDICATORS

 Power On	 Wiring Fault	 AVR	 Using Battery	 Circuit Breaker	 Alarm	Condition
On	Off	Off	Off	Set	Off	Normal
On	Off	Flash	Off	Set	Off	AVR- Max. boost 15% of input voltage for output regulation while input voltage is from 8% to 30% under nominal.
ON	Off	On	Off	Set	Off	AVR- Max. buck 15% of input voltage for output regulation while input voltage is from 8% to 26% over nominal.
Off	On/Off	Off	On	Set	Two Beeps	Utility Failure- The UPS is providing battery power to the Battery-Power Supplied outlets.
Off	On/Off	Off	On	Set	Rapid Beeps	Utility Failure- The UPS is providing battery power. Rapid beeps indicate the battery will run out of charge within a few minutes.
On/Off	On/Off	On/ Off /Flash	On/Off	Set	Long Beep	Overload- Turn the UPS off and unplug at least one piece of equipment from the UPS. Wait 5 seconds, reset the circuit breaker and restart the UPS.
Off	Off	Off	On	Up	Long Beep	Overload- Turn the UPS off and unplug at least one piece of equipment from the UPS. Wait 5 seconds, reset the circuit breaker and restart the UPS.
On	On/Off	On/ Off /Flash	Off	Set	None	Weak Battery- Recharge the battery for at least 8 hours. If Check Battery is illuminated, contact Legacy Power Conversion for battery replacement information.
Off	Off	Off	Off	Set	Off	Surge Protection Malfunction- Power surge has damaged the unit. Please contact Legacy Power Conversion
On/Off	On	On/ Off /Flash	On/Off	Set/Up	None	Electrical Wiring Fault- Indicates wiring problems such as a bad ground, missed ground or reversed wiring within the AC outlet . User is advised to disconnect all electrical equipment from the outlet and have the outlet checked by an electrician.

TROUBLESHOOTING

Problem	Possible Cause	Solution
Outlets do not provide power to equipment	Circuit breaker is tripped due to overload.	Turn the UPS off and unplug at least one piece of equipment. Wait 10 seconds, reset the circuit breaker and then turn the UPS on.
	Batteries are discharged.	Recharge the unit for at least 4 hours
	Unit has been damaged by a surge or spike.	Recharge the battery by leaving the UPS plugged in.
The UPS does not perform expected runtime.	Battery is not fully charged.	Recharge the battery by leaving the UPS plugged in.
	Battery is slightly worn out.	Contact Legacy Power Conversion about replacement batteries at service@lpc-ups.com or 800-859-5711.
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 has failed.	Contact Legacy Power Conversion about replacement batteries at service@lpc-ups.com or 800-859-5711.
	Mechanical problem.	Contact Legacy Power Conversion at service@lpc-ups.com or 800-859-5711.
SeeUPS2020 is inactive (all icons are gray).	The serial cable is not connected.	Connect the serial cable to the UPS unit and an open serial port of your computer. You must use the cable that came with the unit.
	The serial cable is connected to the wrong port.	Try another serial port of your computer
	The unit is not providing battery power.	Shutdown your computer and turn the UPS off. Wait 10 seconds and turn the UPS on. This should reset the unit.
	The serial cable is not the cable that was provided with the unit.	You must use the cable included with the unit for the software.

TECHNICAL SPECIFICATIONS

Model	LI2200
Capacity (VA)	2200VA
Capacity (Watts)	1500W
Input	
Voltage Range	85 -150Vac
Frequency Range	47 - 63Hz
Output	
On Battery Output Voltage	Pure Sine Wave at 120Vac +/- 5%
On Battery Output Frequency	60Hz +/- 1%
Transfer Time (Typical)	4ms
Overload Protection	On Utility: Circuit Breaker, On Battery: Internal Current Limiting
Surge Protection and Filtering	
Lightning / Surge Protection	Yes
Internet Ready (DSL / Phone / FAX / Modem Protection)	RJ11/RJ45(One In/One Out)
Physical	
Total # of UPS Receptacles	6
Maximum Dimensions(cm)	2U Rack, 43.3x8.8x38.8
Weight (Kg)	32.1
Battery	
Sealed Maintenance Free Lead Acid Battery	12Vdc 9AHx4
Typical Recharge Time	8 Hours
Warning Diagnostics	
Indicators	Power On, Using Battery, AVR, Wiring Fault, Load Level, Battery Level
Audible Alarms	On Battery, Low Battery, Overload
Environmental	
Operating Temperature	+ 32°F to 95°F (0°C to 35°C)
Operating Relative Humidity	0 to 95% NON-CONDENSING
Communication	
SeeUPS2020 Software	Windows 95/98/ME/NT/2000/XP compatible
Management	
Self-Test	Manual Self-Test
Auto-Charger	Yes
Auto-Restart	Yes
USB	Yes

LIMITED WARRANTY

In purchasing the LI2200 in the United States or Canada, the original end user receives a Limited Warranty from Legacy Power Conversion, Inc. (for ease of reading, referred to as "Legacy"). The Limited Warranty is intended to be the original end-user's exclusive rights and remedies.

Limited Warranty. The original end user (referred to as the "Initial Customer") receives an express limited warranty (referred to as the "Limited Warranty") for the LI2200 purchased from Legacy (referred to as the "Product"). The Limited Warranty is for the Product itself. The Limited Warranty is subject to the terms set forth below. Additionally, State or Provincial law may adjust the terms of the Limited Warranty or the State or Province may impose additional obligations, or additional "implied warranties." To the extent necessary to comply with those laws, the terms of the Limited Warranty should be read to adjust to those requirements only to the extent necessary to comply with such local law.

If you are an Initial Customer, you are asked to read the following terms and conditions carefully before using the Product. By using the Product you consent to be bound by and become a party to the Limited Warranty. If you do not agree to the terms and conditions of the Limited Warranty, you should return the Product for a full refund prior to using it.

REGISTRATION

Legacy requests that you complete and return the Warranty Registration Card enclosed with the Product or register the Product at its website (www.lpc-ups.com) to establish that you are the Initial Customer of the Product, and therefore entitled coverage under the Limited Warranty. (Registration is not required for Limited Warranty coverage, but note if you do not complete a registration card you will be required to provide proof of purchase, as described below, to have the benefits of this Limited Warranty.)

LIMITED WARRANTY

Legacy warrants to you, the Initial Purchaser, that the Product will be free from defects in material and workmanship for three years from the date of original purchase, subject to the terms of this Limited Warranty. This Limited Warranty gives you specific rights, and you may have other rights, which vary from State to State or Province to Province.

Any Implied Warranty of Merchantability or for Fitness for a Particular Purpose, if applicable to the Product, is limited in duration to the period of ownership by the Initial Customer. This provision shall NOT create any Implied Warranty or Merchantability or of Fitness for a Particular Purpose that would not otherwise apply to the Product. **NOTE: Some States and Provinces do not allow limitations on how long an implied warranty lasts, so the above limitation may not apply to you.**

To be covered you must still be the owner of the Product at the time of the failure that results in the claim made under this Limited Warranty.

Exclusive Remedies Under Limited Warranty.

Your exclusive remedy and Legacys' sole obligations are as follows for the Product:

If (a) the Legacy Product you purchased and still own is defective in material or workmanship under this Limited Warranty or any applicable warranty imposed by law, and (b) all Limited Warranty requirements have been met, Legacy will repair or replace the Product if it proves to be defective in material or workmanship during the Warranty Period.

Making a Limited Warranty Claim.

To make a Limited Warranty claim on a Product, you must do the following:

1. Complete and return the Legacy Warranty Registration Card, or provide reasonable proof of purchase (for example, a sales receipt) that establishes you as the Initial Customer (the original end-user consumer purchaser) of the Product and prove that the Product was purchased within three (3) years of the event for which you want to make a claim for warranty service.
2. Call Legacy at (608) 565-5878 or (800) 859-5711 (toll free), write to Legacy Power Conversion at N9246 Hwy 80 South, Suite 7, Necedah, WI 54646, or e-mail Legacy at service@lpc-ups.com, within ten (10) days of the event for which you want to make a claim.
3. When you contact Legacy, identify the Product, the Purchase Date, and request Return Materials Authorization (RMA) information from Legacy.
4. Pack and ship the Product to Legacy as instructed in your RMA. Show the RMA code on the shipping label or include it with the Product.

You MUST prepay all shipping costs and you are responsible for packaging and shipment.

Legacy will inspect and examine the Product within ten (10) days of receipt. If the Product is not as warranted, Legacy will repair or replace the Product and return it to you at Legacy's expense, or, if Legacy is unable to or decides not to repair or replace the Product (if defective) within a reasonable time, Legacy will refund to you the full purchase price you paid for the Product (purchase receipt showing price paid is required).

CONDITIONS TO THE LIMITED WARRANTY

The Limited Warranty is the only and the exclusive express warranty of Legacy with respect to the Product. This exclusion of other express warranties applies to written and oral express warranties.

LIMITATION: THE LIMITED WARRANTY DOES NOT COVER

The Limited Warranty is intended to exclusive rights and remedies and replace any other rights, to the extent allowed by law.

As to the Legacy Product, the limited warranty **does not** cover or apply to: misuse, modification, operation or storage outside environmental limits for the Products, in transit, in shipment, or in storage, damage or deterioration, improper operation or maintenance, or use with items or equipment not designed or intended for use with the product.

The Limited Warranty Does Not Apply Unless The Initial Customer:

1. Has properly connected the Product and the Connected Equipment to properly wired and grounded outlets (including compliance with electrical and safety codes of the most current electrical code (ANS/NFPA 70), without the use of any adapters, extension cords or other connectors.
2. Has provided a suitable and proper environment for use and installation of the Product and Connected Equipment.
3. Has properly installed and operated the Legacy Product and Connected equipment.
4. Has operated the Product at all times within the limitations on the Product's VA capacity as stated in this User Manual.

Legacy 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 Ethernet lines, when properly installed and connected.
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.

Exclusion of Consequential and Other Damages.

The sole and exclusive remedies of the Initial Customer are those provided by the Limited Warranty. Legacy excludes any liability for personal injury under the Limited Warranty. Legacy excludes any liability for direct, indirect, special, incidental or consequential damages, whether for damage to or loss of property, loss of profits, business interruption, loss of information or data. This exclusion applies even though damage or loss is caused by negligence or other fault. 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.

DO NOT USE FOR HIGH RISK ACTIVITIES.

Legacy does not sell the Products for use in high-risk activities. The Product is not designed or intended for use in hazardous environments requiring fail-safe performance, including the operation of nuclear facilities, aircraft navigation or communication systems, air traffic control, weapons systems, life support 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 life support device (collectively, "High Risk Activities"). Legacy expressly disclaims any express or implied warranty of fitness for High Risk Activities.

Legacy does not authorize use of any of its products use in any High Risk Activities. **ANY SUCH USE IS IMPROPER AND IS A MISUSE OF LEGACY PRODUCTS.**

The Limited Warranty is governed by the laws of the United States and the State of Wisconsin, without reference to conflict of law principles.

The application of the United Nations Convention of Contracts for the International Sale of Goods is expressly excluded.

Contact Information: Legacy's address is N9246 Hwy 80 South, Necedah, WI 54646 and its phone number is (608) 565-5878 or (800) 859-5711 (toll free). Legacy is the warrantor under this Limited Warranty. You may also contact Legacy on the Internet at www.lpc-ups.com.

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. 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. 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 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.

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



For more information, contact us at:

Legacy Power Conversion, Inc.

N9246 Hwy 80 South, Suite 7

Necedah, WI 54646

Tel: (800) 859-5877

Fax: (608) 565-5879

Email: sales@lpc-ups.com

Web: www.lpc-ups.com

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