xantrex

t 1-800-394-0440 (toll free in North America)
1-604-422-2777 (direct)
f 1-604-420-2145
e customerservice@xantrex.com

www.xantrex.com

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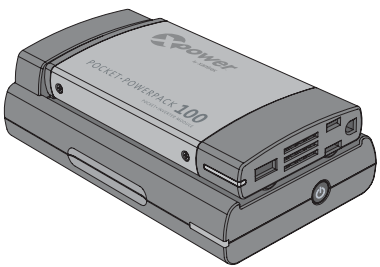
XPower Pocket Powerpack 100



Owner's Guide

About Xantrex

Xantrex Technology Inc. is a world-leading supplier of advanced power electronics and controls with products from 50 watt mobile units to one MW utility-scale systems for wind, solar, batteries, fuel cells, microturbines, and backup power applications in both grid-connected and stand-alone systems. Xantrex products include inverters, battery chargers, programmable power supplies, and variable speed drives that convert, supply, control, clean, and distribute electrical power.

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XPower Pocket Powerpack 100 Owner's Guide

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Date and Revision

August 2005 Revision A

Part Number

975-0249-01-01

Contact Information

Telephone:	1 800 394 0440 (toll free North America) 1 360 925 5097 (direct)
Fax:	1 360 925 5143 (direct)
Email:	customerservice@xantrex.com
Web:	www.xantrex.com

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1 Introduction

Thank you for purchasing the XPower Pocket Powerpack 100. This product is part of a family of advanced high-performance power inverters from Xantrex, the leader in high-frequency inverter design.

The XPower Pocket Powerpack 100 has two separate modules:

1. An inverter module

   Connected to the 12 V DC outlet in your vehicle, the XPower Inverter efficiently and reliably powers a wide variety of loads through both the AC outlet and USB port.

2. A Powerpack module

   When 12 V DC power is not available, the Powerpack module can provide power to the inverter. The Powerpack has a nickel metal hydride (NiMH) battery you can recharge using household electricity or 12 V DC power from a vehicle DC outlet.

The XPower Pocket Powerpack 100 uses reliable solid state power electronics for years of safe, trouble-free operation and includes automatic safety monitoring circuitry to protect it, and your battery, from inadvertent overload conditions.

Read this guide before operating or charging the XPower Pocket Powerpack 100, and save it for future reference. The main topics in the guide are:

2 Important Safety Information

Misusing or incorrectly connecting the XPower Pocket Powerpack 100 may damage the equipment or create hazardous conditions for users. Read the following safety instructions and pay special attention to all Caution and Warning statements in the guide.

Warnings identify conditions that may result in personal injury or loss of life.

Cautions identify conditions or practices that may damage the unit or other equipment.

Warnings and Cautions

WARNING

Keep the XPower Pocket Powerpack 100 out of reach of children and pets. The inverter generates the same potentially lethal AC power as a normal household wall outlet. Treat the outlet with respect!

WARNING

The inverter housing may become uncomfortably warm, reaching 140° F (60° C) under extended high power operation. During operation, keep it away from materials that may be affected by high temperatures.

WARNING

Do not use the XPower Pocket Powerpack 100 in the presence of flammable fumes or gases, such as in the bilge of a gasoline powered boat, or near propane tanks. Do not use the XPower Pocket Powerpack 100 in an enclosure containing automotive-type, lead-acid batteries. These batteries, unlike sealed batteries, vent explosive hydrogen gas, which can be ignited by sparks from electrical connections.

WARNING: Shock hazard

Use caution when inserting an AC plug into the three-prong AC outlet. The prongs of an AC plug can become bent from misuse. If an AC plug is improperly inserted into the AC outlet, a bent prong can slip outside the inverter and become a shock hazard.

WARNING: Shock hazard

Grip the inverter carefully when inserting or removing an AC plug. Keep your fingers clear of the AC outlet. Ensure that your fingers do not contact the prongs of an AC plug when the plug is partially inside the inverter.

WARNING: Fire hazard

- Never charge the Powerpack unattended.
- Charge the Powerpack in an isolated area, away from other flammable materials.
- Let the Powerpack cool down to ambient temperature before charging.
- Storing the Powerpack at temperatures over 170 °F (77 °C) for over two hours may cause damage to battery and possible fire.

WARNING: Personal Injury

- The cells inside the Powerpack contain toxic substances. Do not use the Powerpack if the casing is broken or if it emits an unusual odor, produces excessive heat, or leaks. Avoid contact with any substance that leaks from the Powerpack.
- Do not attempt to open the Powerpack. Do not insert any object into the Powerpack or use any device to pry at the casing.

WARNING: Fire and shock hazard

Do not insert any object into the Powerpack’s ports or openings.

CAUTION: AC output non-sinusoidal

Some chargers for small nickel-cadmium batteries can be damaged if connected to the XPower Pocket Powerpack 100. Do not use the XPower Pocket Powerpack 100 with the following appliances:

- Small battery-operated appliances like rechargeable flashlights, some rechargeable shavers, and night lights that are plugged directly into an AC receptacle to recharge.
- Battery chargers used in hand power tools. These chargers display a warning label stating that dangerous voltages are present at the charger battery terminals.

CAUTION

Do not connect live AC power to the XPower Pocket Powerpack 100’s AC outlets. This will damage the inverter, and the damage is not covered by warranty.

Do not connect any AC load that has its neutral conductor connected to ground to the XPower Inverter.

Additional Safety Guidelines

- Do not insert foreign objects in the AC outlet or other openings.
- Never connect the XPower Pocket Powerpack 100 to power utility AC distribution wiring.
- Do not use the XPower Pocket Powerpack 100 in temperatures over 100° F (40° C).
- Do not expose the XPower Pocket Powerpack 100 to water, rain, snow, or spray.

Failure to follow these safety guidelines may cause personal injury and/or damage to the XPower Pocket Powerpack 100. It may also void your product warranty.

3 Safety Features

These advanced safety features are built into the XPower Pocket Powerpack 100:

- Electronic overload protection
- User-replaceable 10 A fuse
- Low battery voltage shutdown
- High-input voltage protection
- Over-temperature protection
- Output short circuit protection.

4 Features and Accessories

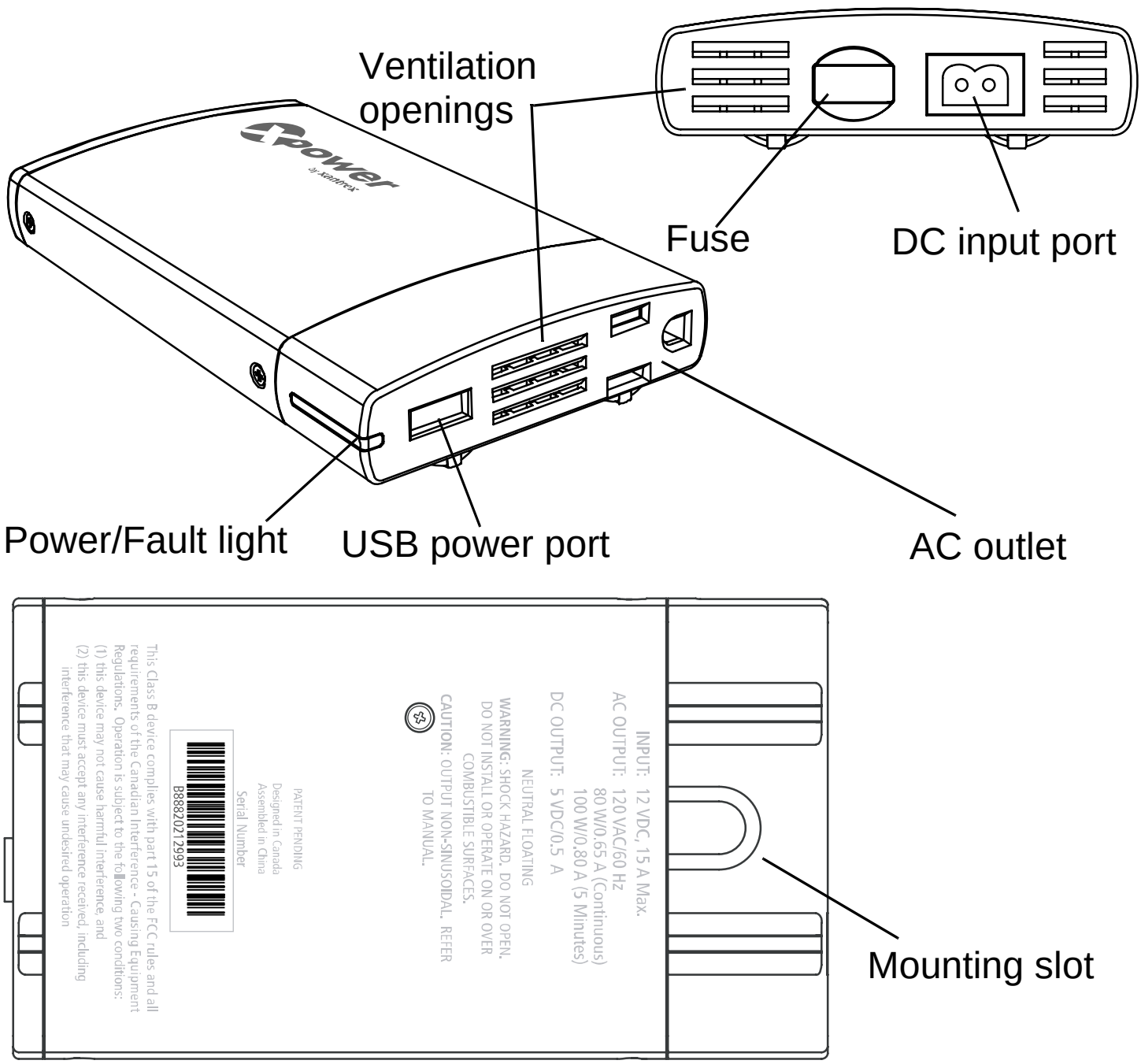

Figure 1 XPower Inverter Module Features

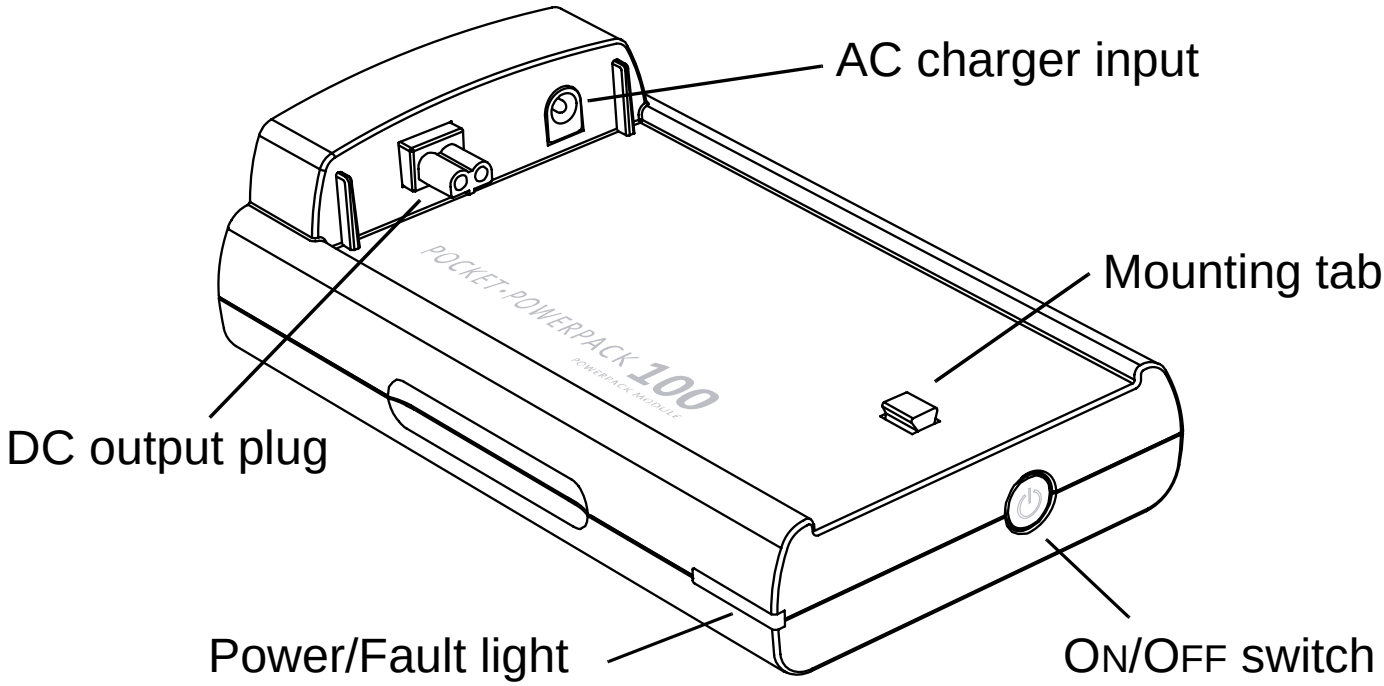

Figure 2 Powerpack Module Features

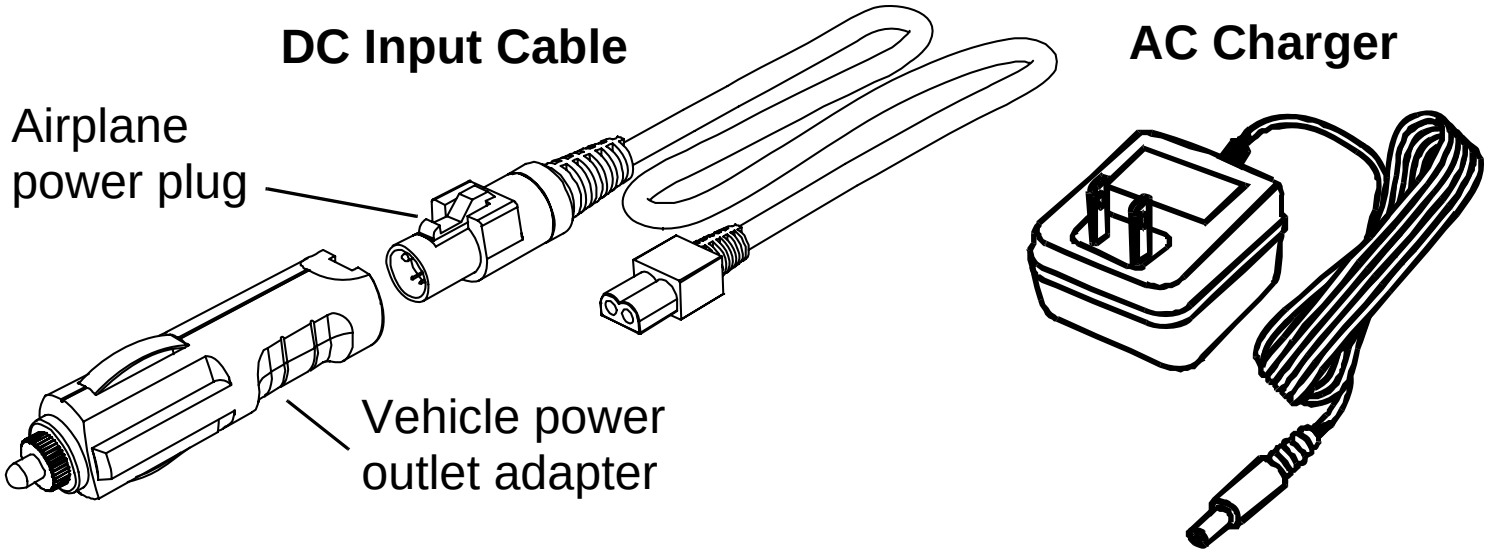

Figure 3 Inverter Accessories

5 Using the Inverter

Through its AC outlet, the XPower Pocket Powerpack 100 is capable of powering most 120 V AC products that use 100 W or less. The XPower Pocket Powerpack 100 can also power or charge most consumer electronics that have USB power ports.

The XPower Pocket Powerpack 100’s AC output waveform, called “modified sine wave,” is designed to function similarly to the sine wave shape of utility power.

You can operate the inverter module in two configurations:

- By itself, connected to 12 V DC power with the DC input cable.
- Connected to the Powerpack module, making it a fully portable unit.

Using the Inverter Module with DC Input Cable

Using the Vehicle Power Outlet Adapter

Due to the limitations of 12 V outlets in automobiles or boats, the inverter module should only be used to supply AC power to products that require 100 W (about 0.8 A) or less.

1. Attach the power outlet adapter to the DC input cable. See Figure 4 on page 15.
2. Plug the DC input cable into the DC input port on the inverter module. Align the plug and port correctly. See Figure 4.

CAUTION: Reverse polarity damage

When plugging in the DC cable, ensure that the plug aligns with the DC cable port. Failure to do so will result in reverse polarity and a blown fuse.

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3. Insert the power outlet adapter into the vehicle's 12 V outlet.

4. Plug the device you want to operate into the inverter module. See “Inverter Operation” on page 20.
5. When the inverter module is not in use, unplug it from the 12 V outlet to prevent slight discharge of the battery.

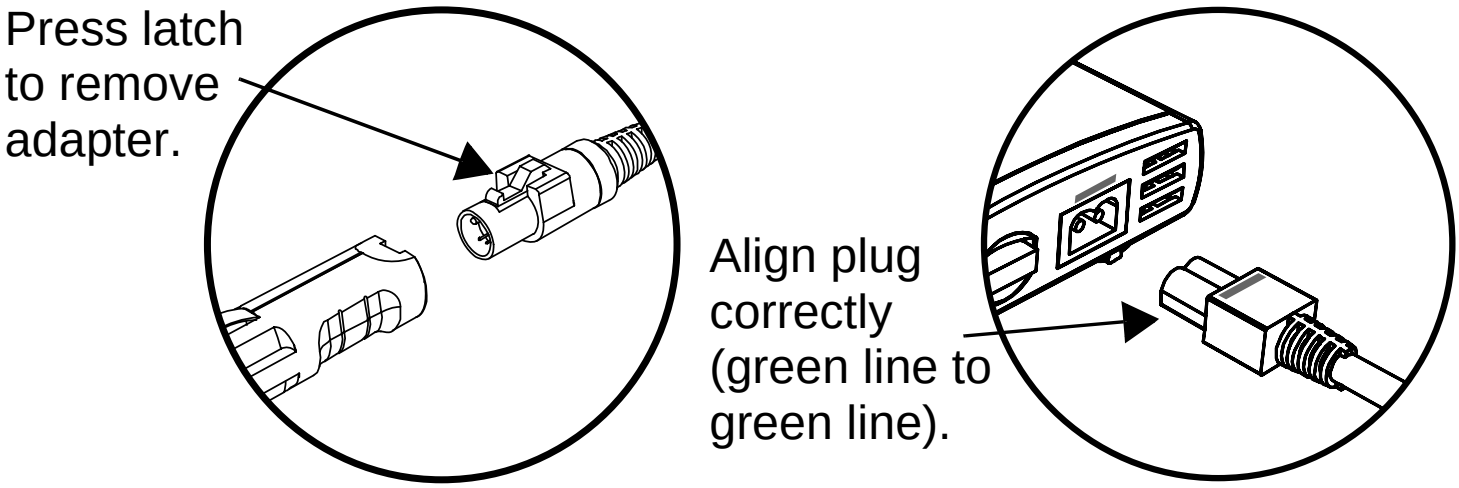

Figure 4 Connecting the Adapter and DC Cable

Using the Airplane Power Plug

1. Plug the DC input cable into the DC input port on the inverter module. Observe correct polarity. See Figure 4.

CAUTION: Reverse polarity damage

When plugging in the DC cable, ensure that the plug aligns with the DC cable port. Failure to do so will result in reverse polarity and a blown fuse.

---

2. Insert the airplane power plug into the 12 V outlet.
3. Plug the device you want to operate into the inverter module. See “Inverter Operation” on page 20.

Airline Compatibility

Table 1 provides a list of airlines, aircraft, and passenger classes that have DC power sockets compatible with the XPower Pocket Powerpack 100.

Table 1 Airline Compatibility

Airline	Aircraft	Passenger Class
Air Canada	A330, A340	Business Class
Air China	747-400	Business Class
Air France	A330-200	1st Class, Business
American	DC-10	1st Class, Business
American	727-200, 737-800, 767-300, MD-80, MD-11	All Classes
Cathay Pacific	747-400, 777-200, A330	All Classes
Continental	767-200, 767-400	Business Class
Delta	737-800, 767-400	All Classes
Qantas	747-400	1st Class, Business
Swiss Air	MD-11	1st Class, Business
United	767-300	1st Class
Virgin	747-200, A340-300	1st Class

Using the Inverter with Powerpack

The Powerpack is designed to connect to the inverter module and provide power to operate or charge devices that consume 100 W or less.

To use the Powerpack:

1. Connect the inverter module to the Powerpack, ensuring that the mounting tab on the Powerpack slides into the slot underneath the inverter. Insert the DC output plug on the Powerpack into the inverter's DC input port. See Figure 5.

   When the inverter module is connected to the Powerpack, rest the two components on a flat surface.
2. Press the ON/OFF switch to turn the Powerpack on.

   The LEDs on the Powerpack and the inverter module illuminate blue.
3. Plug the device you want to operate into the inverter. See "Inverter Operation" on page 20.
4. When not in use, press the ON/OFF switch to turn the Powerpack off.

When the battery in the Powerpack has discharged below 10%, the LED will illuminate red, indicating that the battery needs to be recharged.

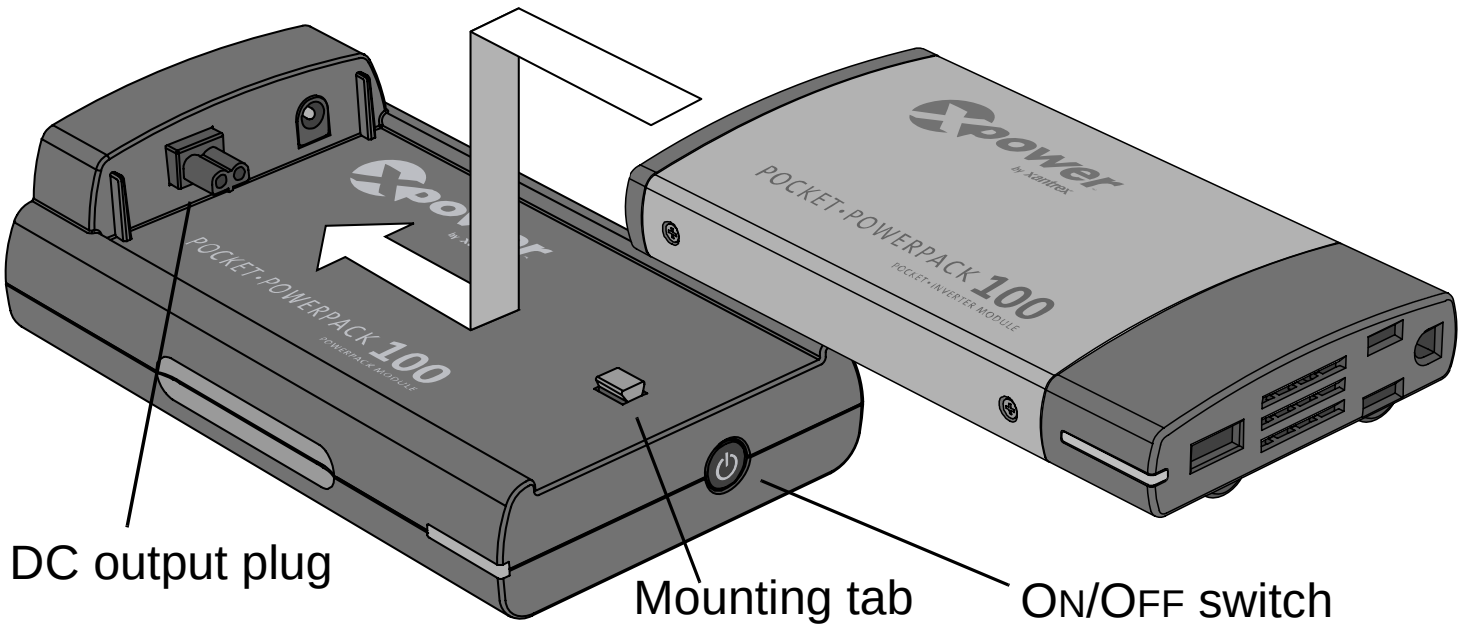

Figure 5 Connecting the Inverter and Powerpack

6 Inverter Operation

Operation with the DC Input Cable

Follow these procedures and guidelines when using the inverter module as a stand-alone unit.

1. When the DC input cable is properly connected to a 12 V outlet, the light on the inverter module will glow blue, indicating the inverter is ready.
2. Plug the product(s) you want to operate into the AC outlet or USB port and switch them on (if necessary).

Operating Guidelines

- As the battery is used, its voltage begins to fall. When the inverter senses that the voltage at its DC input has dropped to 10.5 V, the inverter automatically shuts down and the light glows red, indicating a fault. This prevents the battery from being damaged. Turn off any devices that the inverter is powering.

Important: Vehicle batteries are designed to provide brief periods of very high current needed for engine starting. They are not intended for constant deep discharge. Regularly operating the inverter module from a vehicle battery until low-voltage shutdown occurs will shorten the life of the battery.

- If an AC product rated higher than 100 W is plugged into the XPower Pocket Powerpack 100, the inverter will shut down. The red fault light comes on.
- Appliances such as televisions and devices with motors consume much more power than their average rating when they are switched on. Although the XPower Pocket Powerpack 100 can supply surge power of up to 160W, some devices may exceed its surge capability and shut down the inverter.
- If the XPower Pocket Powerpack 100 exceeds a safe operating temperature, due to insufficient ventilation or a high-temperature environment, it automatically shuts down. The red fault light comes on.

- Should a defective battery charging system cause the battery voltage to rise to dangerously high levels, the XPower Pocket Powerpack 100 automatically shuts down. The red fault light comes on.

CAUTION

Although the XPower Pocket Powerpack 100 incorporates protection against over-voltage, it may still be damaged if the input voltage exceeds 16 V.

- In the event of an overload, low battery voltage or overheating, the XPower Pocket Powerpack 100 automatically shuts down.

Vehicle Battery Operating Time

Operating time will vary depending on the charge level of the vehicle battery, its capacity and the power level drawn by the particular AC load, USB load, or combination of both. With a typical vehicle battery and a 80 W load, an operating time of 4 to 5 hours or more can be expected.

When using a vehicle battery as a power source, it is strongly recommended to start the vehicle every hour or two to recharge the battery before its capacity drops too low. The inverter module can operate while the engine is running, but the normal voltage drop that occurs during starting of the engine may trigger the inverter's low voltage shutdown feature.

Operation with the Powerpack

Follow these procedures and guidelines when using the inverter module with the Powerpack.

1. When the inverter module is connected to the Powerpack, the LEDs on both modules will glow blue, indicating the inverter is ready and the Powerpack is charged.
2. Plug the product(s) you want to operate into the AC outlet or USB port and switch them on (if necessary).

If the LED on the Powerpack glows red, it has been discharged below 10% and needs to be recharged. See "Recharging the Powerpack" on page 26.

Device Run Times

Typical portable devices that can be used with the XPower Pocket Powerpack 100 are listed in Table 2.

Table 2 Device Run Times

Device	Watts	Run Time (hours)
Laptop computer	10	2.5 hours
Portable cooler	20	2
Video game console	25	1

Interference with Electronic Equipment

Generally, most AC products operate with the XPower Pocket Powerpack 100 just as they would with household AC power. Below is information concerning two possible exceptions.

Buzzing Sound in Audio Systems and Radios

Some inexpensive stereo systems and AM-FM radios have inadequate internal power supply filtering and “buzz” slightly when powered by the XPower Pocket Powerpack 100. Generally, the only solution is an audio product with a higher quality filter.

Television Interference

The XPower Pocket Powerpack 100 is shielded to minimize its interference with TV signals. However, with weak TV signals interference may be visible in the form of lines scrolling across the screen. The following should minimize or eliminate the problem:

- Increase the distance between the XPower Pocket Powerpack 100 and the TV, antenna and cables.
- Adjust the orientation of the XPower Pocket Powerpack 100, television, antenna and cables.
- Maximize TV signal strength by using a better antenna and use shielded antenna cable where possible.

Recharging the Powerpack

When household AC power is available, the Powerpack can be recharged using the AC Charger.

You can also charge the Powerpack using the inverter module with the DC input cable while you drive your vehicle.

To recharge the Powerpack using household power:

1. If the inverter module is connected to the Powerpack, disconnect any devices plugged into the inverter and disconnect the inverter from the Powerpack.
2. Plug the AC Charger into the Powerpack AC charger input.
3. Plug the other end of the AC Charger into a standard AC wall outlet. See Figure 6.
4. While the Powerpack is recharging, the blue LED flashes every two seconds. When the Powerpack is fully charged, the blue LED glows steadily.
   A typical recharge may take up to 11 hours.

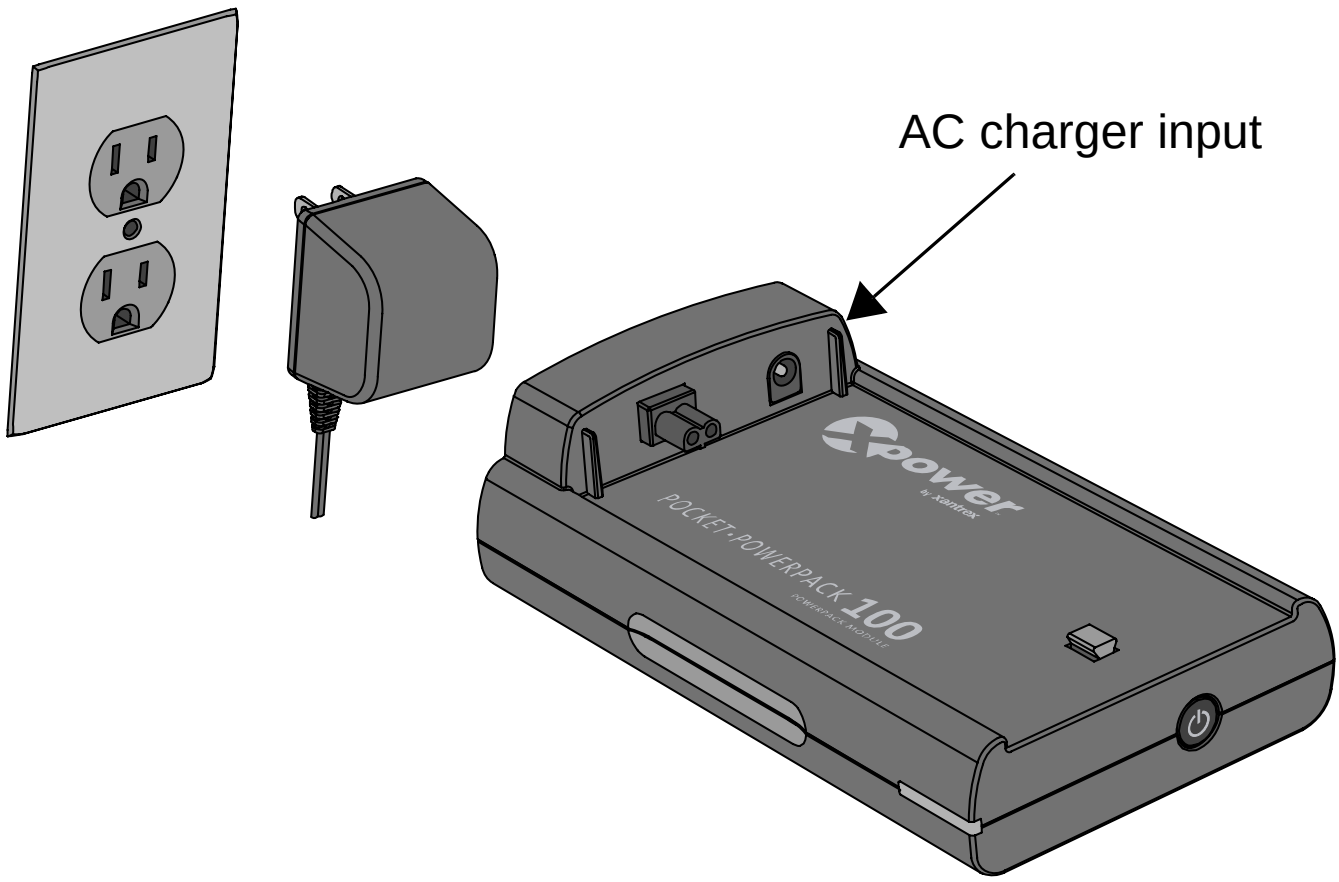

Figure 6 Charging the Powerpack with AC Power

To recharge the Powerpack using a vehicle's 12 V outlet:

1. If the inverter module is connected to the Powerpack, disconnect any devices plugged into the inverter and disconnect the inverter from the Powerpack.
2. If necessary, attach the vehicle power outlet adapter to the DC input cable. See Figure 4 on page 15.
3. Plug the DC input cable into the DC input port on the inverter module. Align the plug and port correctly. See Figure 4.

CAUTION: Reverse polarity damage

When plugging in the DC cable, ensure that the plug aligns with the DC cable port. Failure to do so will result in reverse polarity and a blown fuse.

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4. Plug the AC Charger into the AC charger input on the Powerpack.
5. Plug the other end of the AC Charger into the inverter module.

6. Insert the DC input cable into the vehicle or airplane 12 V outlet. See Figure 7.

   While the Powerpack is recharging, the blue LED flashes every two seconds. When the Powerpack is fully charged, the blue LED glows steadily.

   A typical recharge may take up to 11 hours.

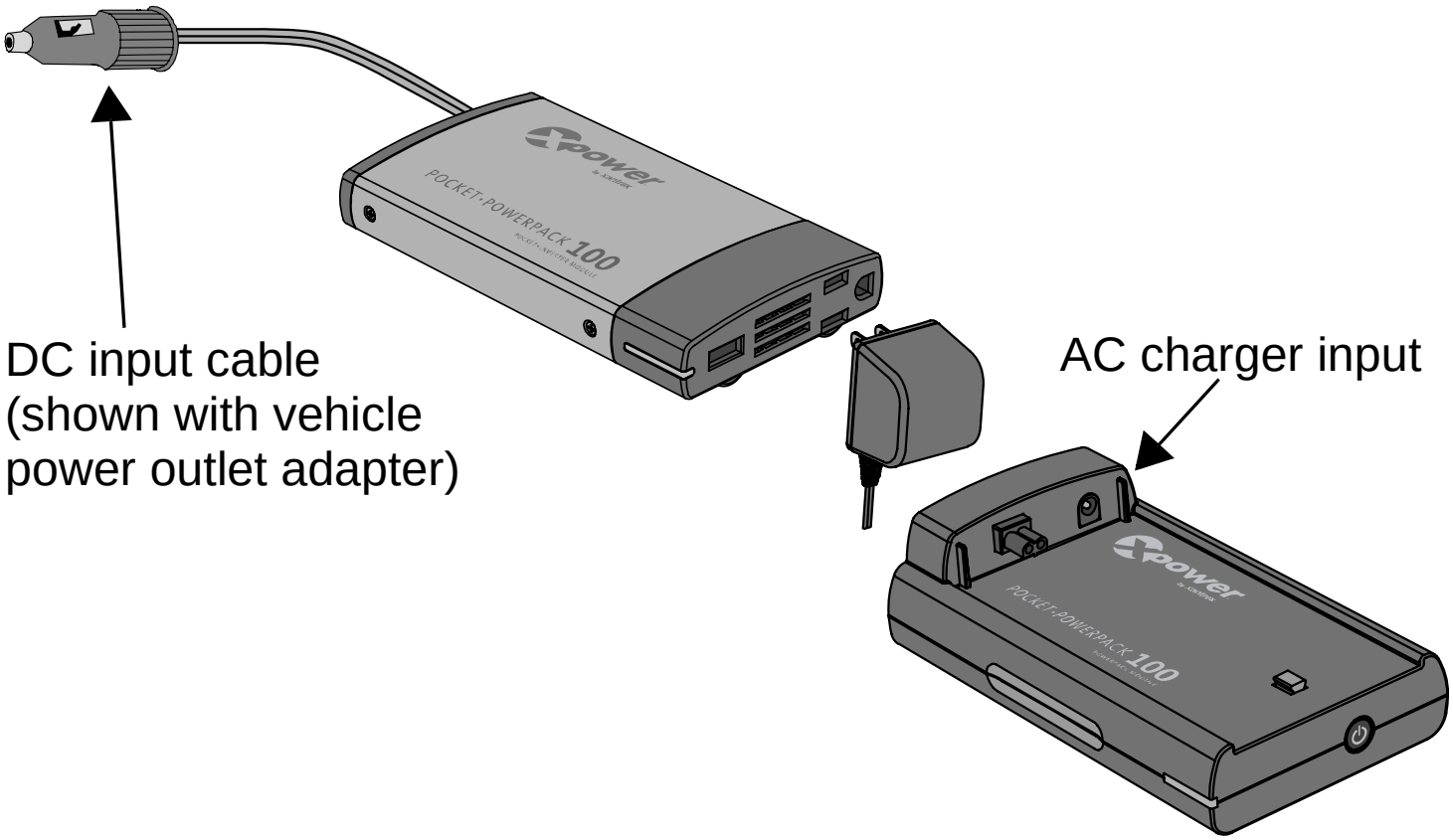

Figure 7 Charging the Powerpack from a Vehicle

7 Troubleshooting

General

PROBLEM: Measured inverter output is too low.

Possible cause	Remedy
Standard “average-reading” AC voltmeter used to measure output voltage, resulting in an apparent reading 5 to 15 V too low.	Inverter’s “modified sine wave” output requires “true RMS” voltmeter for accurate measurements.
Vehicle battery or Powerpack voltage is too low.	Recharge vehicle battery or Powerpack.

Inverter Powered by DC Input Cable

PROBLEM: AC product will not operate, no inverter lights are ON.

Possible cause	Remedy
Vehicle battery is defective.	Check battery and replace if required.
Loose connections.	Check connections.
Fuse is blown.	Replace fuse (see page 35).

PROBLEM: AC product will not operate, red light ON.

Possible cause	Remedy
AC product(s) connected are rated at more than the inverter’s continuous power rating; overload shutdown has occurred.	Use a product with a power rating less than the inverter’s continuous power rating.
AC product is rated less than the inverter’s continuous power rating; high starting surge has caused overload shutdown.	Product exceeds inverter’s surge capability. Use a product with starting surge power within the inverter’s capability.

Possible cause	Remedy
Vehicle battery is discharged.	Recharge battery.
The inverter has overheated due to poor ventilation and has shut down.	Unplug DC cable and allow inverter to cool 15 minutes. Remove objects covering unit. Move the inverter to a cooler place. Reduce load if continuous operation is required. Restart.

Inverter Powered by Powerpack

PROBLEM: AC product will not operate, lights on inverter and Powerpack are OFF.

Possible cause	Remedy
Powerpack is turned off.	Turn the Powerpack on.
Powerpack is discharged.	Recharge the Powerpack.

Possible cause	Remedy
Powerpack internal fuse is blown.	Return to dealer.
Powerpack has shut down from overload or over-temperature.	Unplug inverter from Powerpack. Reduce load and allow Powerpack to cool.

PROBLEM: AC product will not operate, blue Powerpack light is ON, inverter light is OFF.

Possible cause	Remedy
Inverter fuse is blown.	Replace fuse.

PROBLEM: AC product will not operate, red lights on inverter and Powerpack are ON.

Possible cause	Remedy
Battery capacity is low.	Recharge the Powerpack.

PROBLEM: AC product will not operate, red inverter light is ON; blue Powerpack light is ON.

Possible cause	Remedy
AC product(s) connected are rated at more than the inverter's continuous power rating; overload shutdown has occurred.	Use a product with a power rating less than the inverter's continuous power rating.
AC product is rated less than the inverter's continuous power rating; high starting surge has caused overload shutdown.	Product exceeds inverter's surge capability. Use a product with starting surge power within the inverter's capability.
The inverter has overheated due to poor ventilation and has shut down.	Unplug DC cable and allow inverter to cool 15 minutes. Remove objects covering unit. Move the inverter to a cooler place. Reduce load if continuous operation is required. Restart.

Replacing the Fuse

The XPower Inverter has a replaceable 10 A fuse. Remove the blown fuse from the back of the unit and replace it with a Littelfuse Mini® fuse, Littelfuse catalog number 297 010.

Battery Recycling

At the end of the Powerpack's useful life, you should dispose of your Ni-MH batteries through an approved recycling program. You can return the Powerpack to your dealer (if they offer a battery recycling service) or to an authorized collection site in your area.

For more information, see the Powerpacks FAQ at **www.xantrex.com**.

8 Specifications

Specifications are subject to change without notice.

Electrical Specifications

AC Power Output

AC output voltage (nominal)	120 V AC
Continuous AC output power	80 W
5 minutes AC output power	100 W
Maximum AC output surge power	160 W
AC output frequency	60 ± 4 Hz
AC output waveform	Modified sine wave

USB Power Output

DC output voltage	5 V DC
DC output current (max.)	0.5 A DC

DC Power	
DC input voltage	13.2 VDC
Battery drain with no AC load (at 12 V input)	0.25 A
Efficiency (maximum)	90%
Low battery shutdown point (nominal)	10.5 V
High battery shutdown point (nominal)	15.5 V

Powerpack	
DC output voltage range	10–15.5 VDC
DC output current	15 A maximum
Battery capacity	3.3 Ah
Low battery shutdown point (nominal)	10 V

Physical Specifications

Inverter	
Ambient operating temperature range	0 °C–40 °C (32 °F–104 °F)
Dimensions (L × W × H)	5 1/2 × 3 1/8 × 3/4" (140 × 80 × 20 mm)
Weight	0.5 lb. (227 g)

Powerpack	
Ambient operating temperature range	0 °C–40 °C (32 °F–104 °F)
Dimensions (L × W × H)	6 1/2 × 4 × 2" (165 × 100 × 50 mm)
Weight	1.9 lb. (861 g)

Accessories

AC Charger (1000 mA)	Part # 074-1004-01
DC Cable with car/plane connector	Part # 808-0103

9 Warranty and Return

Warranty

What does this warranty cover? This Limited Warranty is provided by Xantrex Technology, Inc. ("Xantrex") and covers defects in workmanship and materials in your XPower Inverter. This warranty period lasts for 1 year from the date of purchase at the point of sale to you, the original end user customer. You require proof of purchase to make warranty claims.

What will Xantrex do? Xantrex will, at its option, repair or replace the defective product free of charge, provided that you notify Xantrex of the product defect within the Warranty Period, and provided that Xantrex through inspection establishes the existence of such a defect and that it is covered by this Limited Warranty.

Xantrex will, at its option, use new and/or reconditioned parts in performing warranty repair and building replacement products. Xantrex reserves the right to use parts or products of original or improved design in the repair or replacement. If Xantrex repairs or replaces a product, its warranty continues for the remaining portion of the original Warranty Period or 90 days from the date of the return

shipment to the customer, whichever is greater. All replaced products and all parts removed from repaired products become the property of Xantrex.

Xantrex covers both parts and labor necessary to repair the product, and return shipment to the customer via a Xantrex-selected non-expedited surface freight within the contiguous United States and Canada. Alaska and Hawaii are excluded. Contact Xantrex Customer Service for details on freight policy for return shipments outside of the contiguous United States and Canada.

How do you get service? If your product requires troubleshooting or warranty service, contact your merchant. If you are unable to contact your merchant, or the merchant is unable to provide service, contact Xantrex directly at:

Telephone:	1 800 394 0440 (toll free North America)
	1 360 925 5097 (direct)
Fax:	1 360 925 5143 (direct)
Email:	customerservice@xantrex.com

Direct returns may be performed according to the Xantrex Return Material Authorization Policy described in your product manual. For some products, Xantrex maintains a

network of regional Authorized Service Centers. Call Xantrex or check our website to see if your product can be repaired at one of these facilities.

What proof of purchase is required? In any warranty claim, dated proof of purchase must accompany the product and the product must not have been disassembled or modified without prior written authorization by Xantrex.

Proof of purchase may be in any one of the following forms:

- The dated purchase receipt from the original purchase of the product at point of sale to the end user, or
- The dated dealer invoice or purchase receipt showing original equipment manufacturer (OEM) status, or
- The dated invoice or purchase receipt showing the product exchanged under warranty

What does this warranty not cover? This Limited Warranty does not cover normal wear and tear of the product or costs related to the removal, installation, or troubleshooting of the customer's electrical systems. This warranty does not apply to and Xantrex will not be responsible for any defect in or damage to:

a) the product if it has been misused, neglected, improperly installed, physically damaged or altered, either internally or externally, or damaged from improper use or use in an unsuitable environment;

b) the product if it has been subjected to fire, water, generalized corrosion, biological infestations, or input voltage that creates operating conditions beyond the maximum or minimum limits listed in the Xantrex product specifications including high input voltage from generators and lightning strikes;

c) the product if repairs have been done to it other than by Xantrex or its authorized service centers (hereafter "ASCs");

d) the product if it is used as a component part of a product expressly warranted by another manufacturer;

e) the product if its original identification (trade-mark, serial number) markings have been defaced, altered, or removed.

Disclaimer

Product

THIS LIMITED WARRANTY IS THE SOLE AND EXCLUSIVE WARRANTY PROVIDED BY XANTREX IN CONNECTION WITH YOUR XANTREX PRODUCT AND IS, WHERE PERMITTED BY LAW, IN LIEU OF ALL OTHER WARRANTIES, CONDITIONS, GUARANTEES, REPRESENTATIONS, OBLIGATIONS AND LIABILITIES, EXPRESS OR IMPLIED, STATUTORY OR OTHERWISE IN CONNECTION WITH THE PRODUCT, HOWEVER ARISING (WHETHER BY CONTRACT, TORT, NEGLIGENCE, PRINCIPLES OF MANUFACTURER'S LIABILITY, OPERATION OF LAW, CONDUCT, STATEMENT OR OTHERWISE), INCLUDING WITHOUT RESTRICTION ANY IMPLIED WARRANTY OR CONDITION OF QUALITY, MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE. ANY IMPLIED WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE TO THE EXTENT REQUIRED UNDER APPLICABLE LAW TO APPLY TO THE PRODUCT SHALL BE LIMITED IN DURATION TO THE PERIOD STIPULATED UNDER THIS LIMITED WARRANTY.

IN NO EVENT WILL XANTREX BE LIABLE FOR ANY SPECIAL, DIRECT, INDIRECT, INCIDENTAL OR CONSEQUENTIAL DAMAGES, LOSSES, COSTS OR

EXPENSES HOWEVER ARISING WHETHER IN CONTRACT OR TORT INCLUDING WITHOUT RESTRICTION ANY ECONOMIC LOSSES OF ANY KIND, ANY LOSS OR DAMAGE TO PROPERTY, ANY PERSONAL INJURY, ANY DAMAGE OR INJURY ARISING FROM OR AS A RESULT OF MISUSE OR ABUSE, OR THE INCORRECT INSTALLATION, INTEGRATION OR OPERATION OF THE PRODUCT.

Exclusions

If this product is a consumer product, federal law does not allow an exclusion of implied warranties. To the extent you are entitled to implied warranties under federal law, to the extent permitted by applicable law they are limited to the duration of this Limited Warranty. Some states and provinces do not allow limitations or exclusions on implied warranties or on the duration of an implied warranty or on the limitation or exclusion of incidental or consequential damages, so the above limitation(s) or exclusion(s) may not apply to you. This Limited Warranty gives you specific legal rights. You may have other rights which may vary from state to state or province to province.

Warning: Limitations On Use

Please refer to your product manual for limitations on uses of the product.

SPECIFICALLY, PLEASE NOTE THAT THE XPOWER INVERTER SHOULD NOT BE USED IN CONNECTION WITH LIFE SUPPORT SYSTEMS OR OTHER MEDICAL EQUIPMENT OR DEVICES. WITHOUT LIMITING THE GENERALITY OF THE FOREGOING, XANTREX MAKES NO REPRESENTATIONS OR WARRANTIES REGARDING THE USE OF THE XANTREX XPOWER INVERTER IN CONNECTION WITH LIFE SUPPORT SYSTEMS OR OTHER MEDICAL EQUIPMENT OR DEVICES.

Please note that the XPower Inverter is not intended for use as an uninterruptible power supply and Xantrex makes no warranty or representation in connection with any use of the product for such purposes.

Return Material Authorization Policy

Before returning a product directly to Xantrex you must obtain a Return Material Authorization (RMA) number and the correct factory "Ship To" address. Products must also be shipped prepaid. Product shipments will be refused and returned at your expense if they are unauthorized, returned without an RMA number clearly marked on the outside of the shipping box, if they are shipped collect, or if they are shipped to the wrong location.

When you contact Xantrex to obtain service, please have your instruction manual ready for reference and be prepared to supply:

- The serial number of your product
- Information about the installation and use of the unit
- Information about the failure and/or reason for the return
- A copy of your dated proof of purchase

Return Procedure

1. Package the unit safely, preferably using the original box and packing materials. Please ensure that your product is shipped fully insured in the original packaging or equivalent. This warranty will not apply where the product is damaged due to improper packaging.
2. Include the following:
   - The RMA number supplied by Xantrex Technology, Inc. clearly marked on the outside of the box.
   - A return address where the unit can be shipped. Post office boxes are not acceptable.
   - A contact telephone number where you can be reached during work hours.
   - A brief description of the problem.
3. Ship the unit prepaid to the address provided by your Xantrex customer service representative.

If you are returning a product from outside of the USA or Canada In addition to the above, you MUST include return freight funds and are fully responsible for all documents, duties, tariffs, and deposits.

If you are returning a product to a Xantrex Authorized Service Center (ASC) A Xantrex return material authorization (RMA) number is not required. However, you must contact the ASC prior to returning the product or presenting the unit to verify any return procedures that may apply to that particular facility.

Out of Warranty Service

If the warranty period for your XPower Inverter has expired, if the unit was damaged by misuse or incorrect installation, if other conditions of the warranty have not been met, or if no dated proof of purchase is available, your inverter may be serviced or replaced for a flat fee.

To return your XPower Inverter for out of warranty service, contact Xantrex Customer Service for a Return Material Authorization (RMA) number and follow the other steps outlined in “Return Procedure” on page 47.

Payment options such as credit card or money order will be explained by the Customer Service Representative. In cases where the minimum flat fee does not apply, as with incomplete units or units with excessive damage, an additional fee will be charged. If applicable, you will be contacted by Customer Service once your unit has been received.