

# Owner's Guide

# xantrex

t 1-800-670-0707 (toll free) t 604-422-2777 f 604-420-2145 e customerservice@xantrex.com

www.xantrex.com

XPower Inverter 175 PLUS 400 PLUS 700 PLUS



400 PLUS model shown



# XPower Inverter 175 Plus, 400 Plus, 700 Plus

**Owner's Manual** 

#### **About Xantrex**

Xantrex Technology Inc. is a world-leading supplier of advanced power electronics and controls with products from 50 watt mobile units to 1 MW utility-scale systems for wind, solar, batteries, fuel cells, microturbines and backup power applications in both grid-connected and standalone systems. Xantrex products include inverters, battery chargers, programmable power supplies, and variable speed drives that convert, supply, control, clean, and distribute electrical power.

#### **Trademarks**

XPower is a trademark of Xantrex International. Xantrex is a registered trademark of Xantrex International.

Other trademarks, registered trademarks, and product names are the property of their respective owners, and are used herein for identification purposes only.

# **Notice of Copyright**

XPower 175 Plus, 400 Plus, 700 Plus Inverter Owner's Manual © December 2002 Xantrex International reserved.

<sup>&</sup>lt;sup>11</sup>Download from Www.Somanuals.com. All Manuals Search And Download.

#### **Disclaimer**

WITHOUT LIMITING THE GENERALITY OF THE FOREGOING, UNLESS SPECIFICALLY AGREED TO BY IT IN WRITING XANTREX

- a) MAKES NO WARRANTY AS TO THE ACCURACY, SUFFICIENCY OR SUITABILITY OF ANY TECHNICAL OR OTHER INFORMATION PROVIDED IN MANUALS OR OTHER DOCUMENTATION PROVIDED BY IT IN CONNECTION WITH THE PRODUCT; AND
- b) ASSUMES NO RESPONSIBILITY OR LIABILITY FOR LOSSES, DAMAGES, COSTS OR EXPENSES, WHETHER SPECIAL, DIRECT, INDIRECT, CONSEQUENTIAL OR INCIDENTAL, WHICH MIGHT ARISE OUT OF THE USE OF SUICH INFORMATION

THE USE OF ANY SUCH INFORMATION WILL BE ENTIRELY AT THE USER'S RISK.

#### **Date and Revision**

December 2002, Revision 1

#### Part Number

445-0215-01-01

#### **Contact Information**

Web: www.xantrex.com

Email: CustomerService@xantrex.com

Phone: 604 422-2777

Phone: 1-800-670-0707 (Toll Free North America)

Fax: 604 420-2145



# **Table of Contents**

1. Introduction	. 7
About the XPower Plus Inverters	. 7
About This Guide	. 8
2. Important Safety Information	. 9
Warnings and Cautions	. 9
Additional Safety Guidelines	12
3. XPower Features	13
AC (Front) Panel	13
DC (Back) Panel	16
4. Connecting the XPower Plus Inverters	21
Choosing a Location	21
Connecting the XPower 175 Plus and	
XPower 400 Plus for Loads Under 150 Watts	23
Connecting the XPower 400 Plus and	
XPower 700 Plus for Loads Over 150 Watts	24

5. Operating the XPower Inverter	28
Operating Conditions and Guidelines	28
6. Maintaining Battery Condition	32
7. Troubleshooting	34
Common Problems	35
Troubleshooting Reference	36
8. Specifications	41
9. Limited Warranty	43
10. Other Xantrex Products	51

# 1 Introduction

Thank you for purchasing an XPower Plus Inverter. The XPower 175 Plus, XPower 400 Plus, and XPower 700 Plus are part of a family of ultra compact and highly portable power inverters from Xantrex Technology Inc., the leader in high-frequency inverter design.

## About the XPower Plus Inverters

Connected to the 12 volt outlet in your vehicle, boat, RV, or directly from a dedicated 12 volt battery (400 and 700 watt only), the XPower efficiently and reliably powers a wide variety of household AC products such as portable stereos, laptop computers, TVs, VCRs, and other similar products.

The XPower employs reliable solid state power electronics for years of safe, trouble-free operation, and includes the following automatic features to ensure safe and trouble-free operation:

- Low battery alarm
- Low voltage shutdown
- High voltage shutdown
- Overload shutdown
- Over temperature shutdown
- · Short circuit protection

## **About This Guide**

To get the best performance from your XPower inverter, Xantrex recommends that you read this guide before connecting and using the inverter, and then save it for future reference.

# This guide contains:

- Important safety information
- Instructions for connecting the inverter
- Operating guidelines
- Troubleshooting guidelines
- Warranty and service information

 $<sup>^{8}</sup>$  Download from Www.Somanuals.com. All Manuals Search And Download.

# 2 Important Safety Information

Misusing or incorrectly connecting the XPower 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 XPower or other equipment.

# Warnings and Cautions



# Warning! Shock Hazard

Keep children away from the XPower inverter. The inverter generates the same potentially lethal AC power as a normal household wall outlet.



# Warning! Heated Surface

The XPower housing may become uncomfortably warm, reaching 140° F (60° C) under extended high power operation. Ensure that at least 2 inches (5 cm) of air surround the inverter. During operation, keep it away from materials that may be affected by high temperatures.



# Warning! Explosion Hazard.

Do not use the XPower 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 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.



#### Caution!

Some chargers for small nickel-cadmium batteries can be damaged if connected to the XPower. Do not use the inverter 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's AC outlets. The inverter will be damaged even if it is switched OFF.

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

# **Additional Safety Guidelines**

- Do not insert foreign objects in the XPower outlets.
- Never connect the inverter to power utility AC distribution wiring.
- Do not use the XPower in temperatures over 104° F (40° C).
- Do not expose the XPower to water, rain, snow, or spray.

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

 $<sup>^{12}\!\!</sup>$ bownload from Www.Somanuals.com. All Manuals Search And Download.

# 3 XPower Features

This section describes the main features of the XPower inverters.

# AC (Front) Panel

Figure 1 shows the AC panel of the XPower 175 Plus inverter.

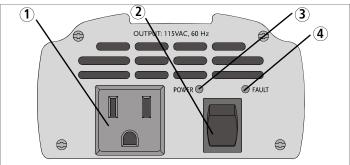


Figure 1 AC Panel of XPower 175 Plus

Figure 2 shows the AC panel of the XPower 400 Plus and XPower 700 Plus inverters.

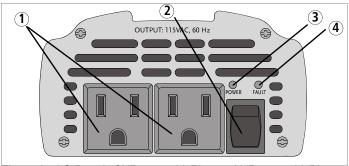


Figure 2 AC Panel of XPower 400 Plus and XPower 700 Plus

# (1) AC Outlets

**XPower 175 Plus** An AC receptacle is located on one end of the XPower 175 Plus. You can plug in any 120-volt appliances with a combined total power consumption of 150 watts or less when the inverter is turned on.

<sup>14</sup>Download from Www.Somanuals.com. All Manuals Search And Download.

**XPower 400 Plus** Two AC receptacles are located on one end of the XPower 400 Plus. You can plug in any 120-volt appliances with a combined total power consumption of 320 watts or less when the inverter is turned on.

**XPower 700 Plus** Two AC receptacles are located on one end of the XPower 700 Plus. You can plug in any 120-volt appliances with a combined total power consumption of 560 watts or less when the inverter is turned on.

- 2 On/Off Switch When the On/Off switch is on, AC power is available at the outlet.
- 3 POWER Light The green POWER light indicates that AC power is present at the outlet and that the XPower is operating normally.
- 4 FAULT Light The red FAULT light indicates that the inverter has shut down. Shutdown is caused by low or high battery voltage, overload, or excessively high temperatures.

**Audible Alarm** An audible alarm warns of an impending low voltage shutdown.

**Ventilation Openings** To prevent overheating, ensure that the ventilation openings on the front and back panels are kept clear.

# DC (Back) Panel

Figure 3 shows the DC panel of the XPower 175 Plus inverter.

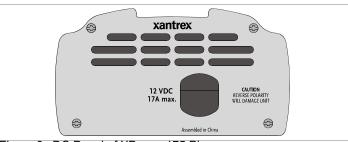


Figure 3 DC Panel of XPower 175 Plus

<sup>16</sup> Download from Www.Somanuals.com. All Manuals Search And Download.

Figure 4 shows the DC panel of the XPower 400 Plus and XPower 700 Plus inverters.

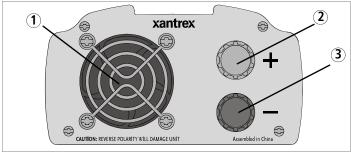


Figure 4 DC Panel of XPower 400 Plus and XPower 700 Plus

1 Fan and Ventilation Openings: The cooling fan on the XPower 400 Plus and XPower 700 Plus units are designed to operate only when output power is greater than approximately 100 watts. When the inverter is turned on, the fan may operate momentarily. The ventilation openings should not be covered at any time the inverter is operating.

Download from Www.Somanuals.com. All Manuals Search And Download! 7

2 Positive and 3 Negative Cabling Terminals: For XPower 400 Plus and XPower 700 Plus, you connect the ring terminals on the power cables to these terminals. To ensure correct polarity, red must be connected to red and black must be connected to black.

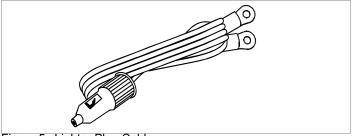


Figure 5 Lighter Plug Cable

 $<sup>^{1}8\!</sup>$ bownload from Www.Somanuals.com. All Manuals Search And Download.

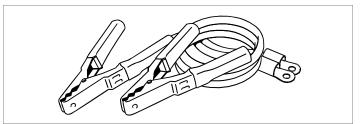


Figure 6 Cable for Direct Connection to 12 Volt Battery



#### Caution!

The XPower 175 Plus can not power loads over 150 watts, so it is not equipped with cabling terminals and can not be run from a 12 volt battery.

# **Types of Connections**

Product	Lighter Plug Connection	Cable Clamps/Battery Connection
XPower 175 Plus	Available - A cable is permanently attached to the inverter. Figure 5.	Not Available
XPower 400 Plus	Available - You must connect a separate lighter plug cable (included). Figure 5.	Available - You must connect a separate cable clamp cable (included). Figure 6.
XPower 700 Plus	Not Available	Available - You must connect a separate cable clamp cable (included). Figure 6.

 $<sup>2\</sup>Phi$  bownload from Www.Somanuals.com. All Manuals Search And Download.

# 4 Connecting the XPower Plus Inverters



#### Caution!

The XPower must only be connected to a battery that has a nominal output of 12 volts. It will not operate if connected to a 6 volt battery and may be damaged if connected to a battery with 16 volts or more.

#### Note:

The XPower 700 Plus can not be powered from the lighter socket of a vehicle.

# **Choosing a Location**

For the best performance, place the inverter on a flat surface in a location that is:

Download from Www.Somanuals.com. All Manuals Search And Download. 1

Dry Do not allow water or other liquids to splash on the inverter

Cool

Ambient temperatures should be between
32° F and 104° F (0° C and 40° C) - the cooler
the better within this range. Keep the inverter
away from heating vents.

Well ventilated Allow at least 2 inches (5 cm) of clearance all around the inverter, and keep the ventilation openings clear.

Safe Do not install the XPower in a compartment with batteries or flammable liquids, such as gasoline, or explosive vapors.

Clean and free of dust/dirt This is especially important if the XPower is used in a work environment.

<sup>&</sup>lt;sup>2</sup>Download from Www.Somanuals.com. All Manuals Search And Download.

# Connecting the XPower 175 Plus and XPower 400 Plus for Loads Under 150 Watts

Follow these steps to connect the XPower 175 Plus or XPower 400 Plus inverter:

- Place the inverter on a flat surface like the floor of your vehicle
- 2. Make sure the On/Off switch on the front panel is off.
- 3. The XPower 175 Plus has a power cord with lighter plug hard-wired into it, so you do not need to complete this step. If you have a XPower 400 Plus, take the power cord equipped with the lighter plug (Figure 5) and place the ring terminals over the two cabling terminals on the back of the inverter. (The cabling terminals are shown in Figure 4.))



#### Caution!

Make sure you connect red to red and black to black, and make sure you screw the nuts on tightly.

- 4. Place the inverter's lighter plug in the vehicle's cigarette lighter socket or a 12 volt outlet.
- Turn on the front panel On/Off switch.
   The green POWER light indicates that the XPower is operating normally and that AC power is available at the outlet.
- 6. Plug in the AC appliance you want to operate.
- 7. If you disconnect the battery, turn the inverter off first.

# Connecting the XPower 400 Plus and XPower 700 Plus for Loads Over 150 Watts

You must connect the XPower 400 Plus or XPower 700 Plus directly to a 12-volt battery if you are going to operate loads greater than 150 watts continuously. When the inverter is connected this way, you can operate loads of any size up to 320 watts continuously with a XPower 400 Plus and 560 watts continuously with a XPower 700 Plus.

<sup>24</sup>Download from Www.Somanuals.com. All Manuals Search And Download.



# Warning!

Batteries contain corrosive materials and present an electrical shock hazard. To prevent irritation and burns, wear protective eyewear and clothing when you install the inverter or work with the batteries. Take special care to ensure that metal tools and personal metal objects like rings and bracelets do not contact the battery terminals.

Follow these steps to make a direct battery connection:

- 1. Place the inverter on a flat surface.
- 2. Make sure the On/Off switch on the front panel is off.



# **Caution!** Reverse Polarity

Power connections of the 12 volts DC battery to the XPower must be positive to positive and negative to negative.

A reverse polarity connection (positive to negative) will blow a fuse in the inverter and may permanently damage the unit. Damage caused by a reverse polarity connection is not covered by your warranty.

3. Take the cables equipped with battery clips on one end (Figure 6) and place the ring terminals over the two cabling terminals on the back of the inverter. (The cabling terminals are shown in Figure 4.))



#### Caution!

Make sure you connect red to red and black to black, and make sure you screw the nuts on tightly.

- 4. Fasten the positive (red) clip to the positive battery post, and then fasten the negative (black) clip to the negative battery post.
- Turn on the front panel On/Off switch.
   The green POWER light indicates that AC power is available at the outlets and that the inverter is operating normally.
- 6. Plug in the AC loads you want to operate.
- 7. If you disconnect the battery, turn the inverter off first.

# 5 Operating the XPower Inverter

This section explains how to operate the XPower 175 Plus, XPower 400 Plus and XPower 700 Plus most efficiently.

# **Operating Conditions and Guidelines**

This section describes normal operation as well as conditions that trigger an alarm or automatically shut down the XPower.

Normal Operation When you connect the inverter to the vehicle's cigarette lighter or directly to the 12 volt outlet and turn on the On/Off switch, the green **POWER** light illuminates and AC power is available at the outlets. You can now plug in your AC products and switch them on one at a time.

Low Battery Alarm and Shutdown As the battery discharges, its voltage decreases. When the XPower senses that the voltage at its DC input has dropped to 10.7 volts, it sounds an alarm. If you ignore the alarm, and the DC input voltage drops below 10.0 volts, the inverter shuts down all loads to save the battery from further discharge. The red FAULT light comes on.

 $<sup>^{2}8</sup>$ Download from Www.Somanuals.com. All Manuals Search And Download.

**Overload Shutdown** If you connect an AC load that is rated too high (see Table 1 on page 30) or a load that draws excessive surge power, the XPower shuts down. The red **FAULT** light comes on.

Over Temperature Shutdown The XPower shuts down automatically if it exceeds its safe operating temperature. The red FAULT light comes on.

**High Input Voltage Shutdown** If a defective battery charging system causes the battery voltage to rise to dangerously high levels, the XPower shuts down automatically. The red **FAULT** light comes on.

# Shutting the Inverter Off

- If you are going to disconnect the battery, turn the inverter off first.
- Turn the inverter off using the front panel On/Off switch.

# **Operating Normal Loads**

The XPower is capable of continuously powering most 120-volt AC products with the following power rating maximums:

Table 1 Power and Surge Ratings

Inverter	5 minute Max. Power Rating	Continuous Power Rating	Surge Rating Maximum
XPower 175 Plus	175 watts	150 watts	300 watts
XPower 400 Plus	400 watts	320 watts	600 watts
XPower 700 Plus	700 watts	560 watts	1000 watts

The inverter's AC ("modified-sine wave") output waveform, is designed to function similarly to the sine wave shape of utility power. Most AC products correctly rated for the power rating maximums listed above or less will operate normally with the XPower inverter.

# **Operating Loads With High Surge Requirements**

The power, or wattage, rating of AC loads is the average amount of power they use. Some appliances consume more power than their power rating when they are first turned on. TVs, monitors, and electric motors are some products that have high surge requirements at start up. The XPower inverters can supply momentary surge power that is higher than its maximum power rating, some products rated less than power rating maximum for your inverter may exceed its surge capability and trigger an overload shutdown. If this problem occurs when attempting to operate several AC products at the same time, try first switching on the inverter with all AC products switched off, then one by one switch each on, starting with the high surge product first.

# 6 Maintaining Battery Condition

The battery operating time of the XPower depends on the charge level of the battery, battery capacity, and the amount of power drawn by the AC loads you are operating. With a typical vehicle battery, you can expect the following:

**Table 1 Battery Operating Times** 

Inverter	Load	Sample Appliance	Operating Time
XPower 175 Plus	50 watts	CD player	6-8 hours
XPower 400 Plus	100 watts	small TV	3-4 hours
XPower 700 Plus	100 watts	small TV	3-4 hours

Here are some guidelines that will help to preserve your battery:

 Vehicle batteries are not designed for repeated deepdischarge cycles, and constantly recharging a vehicle's

<sup>&</sup>lt;sup>3</sup>Download from Www.Somanuals.com. All Manuals Search And Download.

battery will shorten its life. Therefore, when you are using a vehicle battery as a power source, start the vehicle every hour or two to recharge the battery.

- The XPower will operate while the engine is running, but the voltage drop that occurs when the engine starts may trigger a low voltage shutdown.
- 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 XPower from a vehicle battery until the low voltage alarm sounds will shorten the life of the battery. Consider connecting the XPower to a separate deep discharge type battery if you will be frequently running electrical products for extended periods of time.
- If you are not going to use the XPower for more than a week, turn off the On/Off switch. The inverter draws less than 0.25 amps when the On/Off switch is on and no load is connected, but it will eventually discharge the battery.

# 7 Troubleshooting

This section will help you identify the source of most problems that can occur with the XPower inverter.

If you have a problem with the inverter, please review this section before contacting Xantrex Customer Service. If you are unable to solve a problem and need to contact Xantrex, please prepare for the call by writing down the following details:

- Inverter's serial number
- How long the inverter has been in use
- Where it is installed
- Appliances operating when the problem occurred
- A brief description of the problem

### **Common Problems**



# Warning! Electrical Shock and Burn Hazard

Do not dismantle the XPower. It does not contain any user-serviceable parts. Attempting to service the inverter yourself could result in an electrical shock or burn.

## **Buzz in Audio Systems**

Some inexpensive stereo systems have inadequate internal power supply filtering and buzz slightly when powered by the XPower. The best solution is to use an audio system with a good quality filter.

#### **Television Interference**

The XPower is shielded to minimize interference with TV signals. If TV signals are weak, you may see interference in the form of lines scrolling across the screen. Try one of these suggestions to minimize or eliminate the problem:

- Use an extension cord to increase the distance between the XPower and the TV, antenna, and cables.
- Adjust the orientation of the XPower, television, antenna, and cables
- Maximize TV signal strength by using a better antenna, and use shielded antenna cable where possible.
- Try a different TV. Different models vary considerably in their susceptibility to interference.

#### **Troubleshooting Reference**

This section describes problems, their symptoms, possible causes, and specific remedies.

 $<sup>^{3}</sup>$ bownload from Www.Somanuals.com. All Manuals Search And Download.

#### The AC load will not operate. No inverter lights are on.

Possible Cause	Suggested Remedy
Battery is defective.	Check battery and replace if required.
The inverter has been connected with reverse DC input polarity.	Check connection to battery. The inverter has likely been damaged and needs to be repaired. Have the unit repaired (not covered under warranty).
Loose cable connections.	Check cables and connections. Tighten as required.

#### Inverter will run some small loads, but not larger ones.

Possible Cause	Suggested Remedy
Voltage drop across DC cables.	Shorten cables or use heavier cables.

### Measured inverter output is too low.

Possible Cause	Suggested Remedy
A standard "average-reading" AC voltmeter has been used to measure output voltage, resulting in an apparent reading 5-15 volts too low.	For accurate measurement, the XPower modified sine wave output requires a "true RMS" voltmeter for accurate measurements.
The battery voltage is too low.	Recharge the battery.

#### Alarm is sounding.

Possible Cause	Suggested Remedy
Low voltage shutdown or thermal shutdown has occurred.	Shorten cables or use heavier cables. Recharge battery. Allow unit to cool. Improve air circulation around unit. Locate units in a cooler environment. Reduce load if continuous operation is required.

 $<sup>^{3}</sup>$ Download from Www.Somanuals.com. All Manuals Search And Download.

#### Battery run time is less than expected.

Possible Cause	Suggested Remedy
The AC product power consumption is higher than rated.	Use a larger battery to make up for the increased power requirement.
The battery is old or defective.	Replace the battery.
The battery is not being charged properly.	Some chargers are not able to fully recharge a battery. Make sure that you use a powerful charger.
Power dissipation in DC cables.	Use shorter/heavier DC cables.

The AC load will not operate. The FAULT light is on.		
Possible Cause	Suggested Remedy	
The 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 (see Table 1 on page 30).	

Possible Cause	Suggested Remedy
The AC product(s) connected are rated at less than the inverter's continuous power rating; high starting surge has caused overload shutdown.	The product exceeds the inverter's surge capability. Use a product with a starting surge power within the XPower's capability.
Battery is discharged (alarm is sounding).	Recharge battery.
The inverter has overheated due to poor ventilation and has shutdown (alarm is sounding).	Switch inverter OFF and allow to cool for 15 minutes. Clear blocked fan or remove objects covering unit. Move the inverter to a cooler place. Reduce load if continuous operation is required.
Input voltage is greater than 15 volts.	Verify the charging system is properly regulated and the battery is 12 volts nominal.

<sup>&</sup>lt;sup>40</sup>Download from Www.Somanuals.com. All Manuals Search And Download.

### 8 Specifications

Specifications are subject to change without notice.

Table 1 XPower Plus Specifications

	XPower 175 Plus	XPower 400 Plus	XPower 700 Plus
AC output voltage (nominal)	120 volts AC	120 volts AC	120 volts AC
DC input voltage range	10–15 volts DC	10–15 volts DC	10–15 volts DC
Continuous AC output power	150 watts	320 watts	560 watts
5 minutes AC output power	175 watts	400 watts	700 watts
Maximum AC output surge power	300 watts	600 watts	1000 watts
AC output frequency	$60 \pm 4 \text{ Hz}$	$60 \pm 4 \text{ Hz}$	$60 \pm 4 \text{ Hz}$
AC output waveform	Modified Sine Wave	Modified Sine Wave	Modified Sine Wave
Battery drain with no AC load (at 12 V input)	0.15 amps	0.20 amps	0.25 amps

Download from Www.Somanuals.com. All Manuals Search And Download. 1

	XPower 175 Plus	XPower 400 Plus	XPower 700 Plus
Efficiency (maximum)	90%	90%	90%
Ambient operating temperature range	32° F – 104° F 0° C – 40° C	32° F – 104° F 0° C – 40° C	32° F – 104° F 0° C – 40° C
Low battery alarm (nominal)	10.7 volts	10.7 volts	10.7 volts
Low battery shutdown (nominal)	10.0 volts	10.0 volts	10.0 volts
High battery shutdown point (nominal)	15.0 volts	15.0 volts	15.0 volts
Dimensions (L x W x H)	5 1/8 x 4 1/8 x 2 1/4 in 130 x 105 x 56 mm	5 7/8 x 4 1/8 x 2 1/4 in 149 x 105 x 56 mm	7 1/4 x 4 1/8 x 2 1/4 in 186 x 105 x 56 mm
Weight	1 lb 3 oz. 550 grams	1 lb 6 oz. 655 grams	1 lb 14 oz. 900 grams

 $<sup>^{42}</sup>$ Download from Www.Somanuals.com. All Manuals Search And Download.

## 9 Limited Warranty

# What does this warranty cover and how long does it last?

This Limited Warranty is provided by Xantrex Technology, Inc. ("Xantrex") and covers defects in workmanship and materials in your **XPower Plus Inverter.** This warranty lasts for a Warranty Period of **1** (one) year from the date of purchase at point of sale to you, the original end user customer

#### 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:

Phone: 604 422 2777
Toll Free North America: 1 800 670 0707

Fax: 604 420 2145

Email: customerservice@xantrex.com

 $<sup>^{44}</sup>$ Download from Www.Somanuals.com. All Manuals Search And Download.

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.

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:

- 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;
- the product if it has been subjected to fire, water, generalized corrosion, biological infestations, and high input voltage from lightning strikes;
- the product if repairs have been done to it other than by Xantrex or its authorized service centers (hereafter "ASCs");
- 4. the product if it is used as a component part of a product expressly warranted by another manufacturer;
- 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

 $<sup>^{46}\!\!</sup>$ Download from Www.Somanuals.com. All Manuals Search And Download.

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 user manual for limitations on uses of the product. Specifically, please note that this power supply is not intended for use in connection with life support systems and Xantrex makes no warranty or representation in connection with any use of the product for such purposes.

 $^{4}8$ Download from Www.Somanuals.com. All Manuals Search And Download.

#### **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 operating 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

#### When you ship:

 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

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.

 $^{50}$ Download from Www.Somanuals.com. All Manuals Search And Download.

#### **Out of Warranty Service**

If the warranty period for your **XPower Plus Inverter** has expired, if the inverter 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 Plus 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 Material Authorization Policy" on page 49.

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 inverters or inverters with excessive damage, an additional fee will be charged. If applicable, you will be contacted by Customer Service once your inverter has been received.

#### 10 Other Xantrex Products

To see the range of products offered by Xantrex, visit our web site at <a href="http://www.xantrex.com">http://www.xantrex.com</a>

Free Manuals Download Website

http://myh66.com

http://usermanuals.us

http://www.somanuals.com

http://www.4manuals.cc

http://www.manual-lib.com

http://www.404manual.com

http://www.luxmanual.com

http://aubethermostatmanual.com

Golf course search by state

http://golfingnear.com

Email search by domain

http://emailbydomain.com

Auto manuals search

http://auto.somanuals.com

TV manuals search

http://tv.somanuals.com