

# Xantrex Lithium-ion Batteries Quickstart Guide

http://www.xantrex.com

# Xantrex™

880-0450-12  
880-0600-12  
880-0630-12  
880-0300-24  
880-0150-51



Xantrex BMS (required)  
881-0405-12, 881-0405-24, 881-0405-51

## ⚠ DANGER

**HAZARD OF FIRE, ELECTRIC SHOCK, EXPLOSION, OR ARC FLASH**  
This Xantrex Lithium-ion Batteries Quickstart Guide is in addition to, and incorporates by reference, the relevant product manuals for each product in the power system. After reviewing this guide, you must read the relevant product manuals. Unless specified, information on safety information before proceeding. Your attention is drawn to the primary information received with the product. Ensure you are familiar with that information before proceeding.

**Failure to follow these instructions will result in death or serious injury.**

**Exclusion for Documentation**  
UNLESS SPECIFICALLY AGREED TO IN WRITING, SELLER, (A) MAKES NO WARRANTY AS TO THE ACCURACY, SUFFICIENCY OR COMPLETENESS OF ANY INFORMATION, INCLUDING THIS DOCUMENT, 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 SUCH INFORMATION. THE USE OF ANY LANGUAGE OTHER THAN ENGLISH, ALTHOUGH STEPS HAVE BEEN TAKEN TO MAINTAIN THE ACCURACY OF THE TRANSLATION, THE ACCURACY CANNOT BE GUARANTEED. APPROVED CONTENT IS CONTAINED WITH THE ENGLISH LANGUAGE VERSION.

**Contact Information**  
Xantrex, Inc.  
1000 S. 7th Street, Suite 100  
Culpeper, VA 22701  
Customer Service (US): 880-0450-12  
http://www.xantrex.com/power\_products-support/  
http://www.xantrex.com

## 2

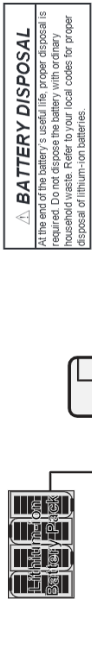
### IMPORTANT

**ON FIRST USE:** Perform a full charge, discharge, and charge cycle to ensure maximum battery life. For information, see the *Battery Storage Guide* (doc number 975-7005-01-01).

### Introduction

The Xantrex Lithium-ion Batteries are lithium iron phosphate (LiFePO<sub>4</sub>) chemistry batteries used in conjunction with the Xantrex Battery Management System (BMS) unit which protects the batteries and monitors state-of-charge (SoC), voltage, current, and temperature.

Each Lithium-ion battery pack is connected to a matching Xantrex BMS via an Anderson DIN connector.



**BATTERY DISPOSAL**  
At the end of the battery's useful life, proper disposal is required. Do not dispose the battery with ordinary household waste. Refer to your local codes for proper disposal of lithium-ion batteries.

## 1

### Important Safety Information

**READ AND SAVE THESE INSTRUCTIONS**  
Certain configuration steps shall only be performed by qualified personnel in consultation with your local utility and/or an authorized dealer. Servicing of batteries and the BMS shall only be performed by supervised personnel having training, knowledge, and experience in:  
• applying applicable installation codes  
• analyzing and reducing the hazards involved in performing electrical work  
• installing and configuring lithium-ion batteries  
No responsibility is assumed by Xantrex, LLC for any consequences arising out of the use of the material.



An example of an arc flash event could be a direct short circuit at a load in riding between the positive and negative of an energized circuit.

## ⚠ DANGER

**HAZARD OF FIRE, ELECTRIC SHOCK, EXPLOSION, OR ARC FLASH**  
• Apply appropriate personal protective equipment (PPE) and follow safe electrical work practices. See NFPA 70C or CSA Z462.  
• Equipment must only be installed and serviced by qualified electrical personnel.  
• Always use a properly rated voltage sensing device to confirm all circuits are de-energized.  
• Do not short-circuit the battery.  
• Do not attempt to open or dismantle the lithium-ion battery. If the battery is damaged, do not touch the exposed area with large amount of clean water and seek medical help.  
• Upon disposal, do not crush, puncture, drop, disassemble, dispose of in fire, or similar actions.

**Failure to follow these instructions will result in death or serious injury.**

# Xantrex™

A MISSION CRITICAL ELECTRONICS BRAND

## ⚠ WARNING

**HAZARD OF FIRE, ELECTRIC SHOCK, EXPLOSION, BURN, OR PERSONAL INJURY**  
• Do not connect other battery types to the system DC bus or the system DC bus.  
• Do not connect any of the equipment to rain, snow, or liquids of any type. Products are designed for indoor use only.  
• Do not operate the battery or other equipment with damaged or substituted wiring.  
• Do not replace the battery fuses or any other fuses in the system by yourself. Seek qualified assistance.  
• Do not obstruct the air ventilation openings on the system devices. Do not install or operate any of the system devices in compartment containing flammable materials or in locations that require gnlion-protected equipment.  
• Do not allow the battery to become damaged. If it can release harmful gases. In such a case, ventilate the area, then proceed with caution, but never enter the vicinity immediately.

**Failure to follow these instructions can result in death or serious injury.**

## NOTICE

**RISK OF EQUIPMENT DAMAGE**  
• Do not physically modify the system devices, wiring harness, and accessories.  
• Do not alter the factory settings on any of the system devices including the BMS.  
• Do not disconnect the Xantrex Battery or the BMS from the system or any serviceable parts.  
• Do not operate or store the battery outside of the specified environmental limits.  
• Do not charge the battery in ambient temperature below freezing.  
• Do not allow the battery to be completely depleted.  
• Do not allow the battery to be exposed to moisture, salt, or other corrosive substances.  
• Components which can be recycled must be recycled and those that cannot be recycled must be disposed of according to local, regional, and national environmental regulations.

**Failure to follow these instructions can result in damage to equipment and may void the warranty.**

## 4

### Specifications

**NOTE:** Specifications are subject to change without prior notice.

Feature	880-0450-12	880-0600-12	880-0630-12	880-0300-24	880-0150-51
Nominal Capacity	450Ah	800Ah	630Ah	300Ah	150Ah
Nominal Voltage	12.8V	12.8V	12.8V	25.6V	51.2V
Charging Voltage	14.6V	14.6V	14.6V	29.2V	58.4V
Float Voltage	13.4V	13.4V	13.4V	26.8V	53.6V
Low Battery Cutoff Voltage	11.6V	11.6V	11.6V	23.2V	46.4V
Max Pulse Discharge Current	4500A	8000A	6000A	3000A	1500A
Recommended Charge Current	225A	300A	300A	150A	75A
Recommended Charge Current <sub>nominal</sub>	400A	400A	300A	300A	150A
Max Discharge Current <sub>nominal</sub>	<10mΩ	<10mΩ	<30mΩ	<10mΩ	<25A
Internal Impedance	130mΩ (59k)	160mΩ (72.8k)	144mΩ (65.3k)	160mΩ (72.8k)	160mΩ (72.8k)
Weight	0-45°C (32-113°F)	0-45°C (32-113°F)	0-45°C (32-113°F)	0-45°C (32-113°F)	0-45°C (32-113°F)
Charging Temperature	-20-85°C (-4-131°F)				
Discharging Temperature	-20-85°C (-4-131°F)				
L x W x H	610 x 330 x 282 mm (24.1 x 13.1 x 11.2 in)				
Cycle Life at 100% Discharge	2000-3000 Cycles				
Storage Temperature	<17.0mΩ, -20 to 35°C (-4 to 95°F) <31.0mΩ, -10 to 39°C (14 to 102°F)				
Humidity Range	45 to 75%RH				
Recommended Storage	15 to 35°C (59 to 95°F), 45 to 75% RH				
Long Term Storage	This battery needs to be stored for > 2 months (the charge loss of the BMS). Refer to the Battery Storage Guide (doc number 975-7005-01-01) for more information. Additionally, the battery needs at least one charge and discharge cycle every six months.				