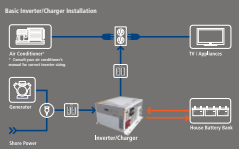




Inverter Selection Worksheet

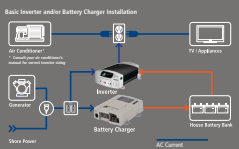


This worksheet will help you determine the inverter size and battery bank capacity you need to operate common appliances using a standard 12 volt marine battery system.

To determine the correct inverter size required, you must first estimate the total wattage of the appliances you wish to power. Many appliances and power tools have their wattage rating indicated on the packaging. Wattage ratings can also be obtained by using this formula:

Watts (W) = Volts (V) x Amperes (A) x Power Factor (PF)

For example, a microwave rated at 7 amps using 115 volts will consume 800 watts. Many appliances and power tools have their wattage ratings indicated on the packaging. Wattage ratings can also be obtained by using this formula:



To determine the correct inverter size required, you must first estimate the total wattage of the appliances you wish to power. Many appliances and power tools have their wattage rating indicated on the packaging. Wattage ratings can also be obtained by using this formula:

Watts (W) = Volts (V) x Amperes (A) x Power Factor (PF)

For example, a microwave rated at 7 amps using 115 volts will consume 800 watts. Many appliances and power tools have their wattage ratings indicated on the packaging. Wattage ratings can also be obtained by using this formula:

About Xantrex



Why Choose Xantrex?

**H.A.L.T. - A NEW BENCHMARK IN PRODUCT QUALITY**

H.A.L.T. (Highly Accelerated Life Testing) is an extremely effective product evaluation method that our engineers use to test the robustness of each electronic design.

In this test, products are subjected to extreme thermal and mechanical conditions to accurately predict how, where and when product degradation may occur and its anticipated life span.

Allowing us to identify and correct subtle design problems early in the development cycle.

**STRICT REGULATORY STANDARDS**

- Xantrex certifies its products to comply with various regulatory testing standards to indicate that its products meet or exceed the applicable national and/or international requirements for safety, quality, efficiency and environmental.
- Examples of regulatory marks you will find on Xantrex products:

**MANUFACTURING EXPERTISE**

- Over 25 years of experience in manufacturing marine power products
- World class research, engineering and product development capabilities.
- One of the widest assortments of advanced onboard power products.
- Proud possessor of over 100 innovative product patents globally.

**xantrex**  
Smart choice for power

www.xantrex.com

Smart choice for power



**Marine Power Solutions**

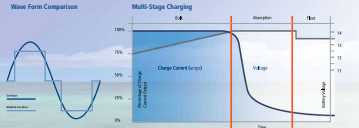
INVERTERS

INVERTER/CHARGERS

BATTERY CHARGERS

ACCESSORIES

Frequently Asked Questions



- Battery Charger FAQs**
- Q: What are the benefits of Multi-Stage Battery Charging?**  
A: Advanced multi-stage battery charging ensures the batteries for your offshore equipment will be charged to full capacity. Multi-stage charging results in faster charging rates and less stress on the batteries. Multi-stage charging also maximizes the amount of time that full power is available to the battery's electrolyte, resulting in longer battery life.
  - Q: What are the advantages of Power Factor Corrected Charging (PFC)?**  
A: A charger's power factor rating can be included in its ability to effectively maintain AC power flow into the battery. Power supplied by the charger to operate at its peak efficiency is more available. As power available to a microwave, TV and other AC loads in the vessel is enhanced.
  - Q: What types of batteries should I use?**  
A: Xantrex recommends using only high quality energy storage batteries for marine applications. Deep-cycle batteries are designed specifically for a deep discharge and a long charge life. The best choice is a marine battery for marine applications.
- Inverter FAQs**
- Q: What inverter size do I need?**  
A: Choosing the right inverter size depends on the power requirements of the appliances you expect to operate at any given time. This should consider both the continuous and surge power ratings of the appliances. The continuous rating should be enough to handle all the loads that may be connected to the inverter. The surge rating should be capable of handling the startup surge of all loads that may start at the same time. Loads typically use surge power for only a few seconds. Calculate your specific requirements by using the "Inverter Selection Worksheet."
  - Q: How long can I operate my inverter?**  
A: The length of time you can operate an inverter depends on the surge load capacity of your battery bank. This data is obtained by using the "Inverter Selection Worksheet."
  - Q: Do I need to install my inverter near my batteries?**  
A: Ideally, an inverter should be installed within 10 feet of the battery bank. If you increase this distance, you will need to use thick DC cables to compensate for a drop in charge and to avoid overheating DC conductors.
  - Q: Can I install my inverter/charger in a positive engine compartment?**  
A: Generally Xantrex inverter/chargers are not positive engine compartment. However, they should not be installed in a positive engine compartment.
- Wave Form Comparison**
- Q: What type of environmental conditions must I consider when installing an inverter/charger?**  
A: Most Xantrex inverter/chargers meet the requirements for a wide range of environments. However, the units are designed to withstand altitudes from 0 to 10,000 feet above sea level. The units also require a flow of fresh air to operate properly.
  - Q: What is automatic AC transfer switching?**  
A: All Xantrex inverter/chargers incorporate an automatic transfer switch. This switch senses when available AC power is present and transfers loads from the inverter to the shore's AC power. This switch also allows the inverter to sense an emergency when connected to incoming AC power. Power will not be transferred to AC until the inverter has been fully recharged. This switch also allows the inverter to sense an emergency when connected to incoming AC power. Power will not be transferred to AC until the inverter has been fully recharged.
  - Q: Can I power my computer with an inverter?**  
A: Both low-voltage and modified sine wave inverters can power a computer. However, surge protection and surge protection can only be provided by the shore power.