The NEW FREEDOM e-GEN power system from Xantrex is the result of intense research, impeccable design, meticulous engineering, rigorous testing and most importantly – passion to create the best system!

- **POWERFUL**
- **SAFE**
- **RELIABLE**

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- **Longest** runtime
- **Fastest** recharge times
- **Eliminates** nuisances, noise, smell, and vibration of a generator
- **Safest** system
- **Longest** life
The FREEDOM e-GEN is a fully integrated system that offers the most reliable AC and DC power to run an air conditioner and other high power loads in all climate conditions and precise battery management for accurately charging lithium ion batteries from multiple sources. The most compelling benefit is the freedom and confidence it offers RVers to enjoy dry camping adventures without worrying about batteries or power.

**Safest System**

- Lithium ion iron phosphate (LiFePO4) is the safest chemistry on the market today
- Ion extinguish (ION-EXT) feature will stop thermal runaway
- Reserve capacity warning to recharge
- Individual cell management makes sure each cell is treated safely
- Separate thermal controls for charging and discharging
- Battery management system controls all charging sources

**Longest Run Time and Efficiency**

- “A” grade lithium cells – not readily available in the USA
- Silver and copper throughout BMS and battery – others use aluminum (65% of copper) and nickel (22% of copper) to save cost

**Fastest-Engine Recharge Time**

- Proven advanced technology alternator for high output at idle
- Low drag coefficient for maximum fuel economy
- Optimal thermal design for long life
- 280 A capacity; 180 A idle

**Longest Battery Life**

- Iron phosphate (LiFePO4) chemistry has twice the cycle life and calendar life than nickel cobalt based chemistries (NMC/NCA)
- LiFePO4 can be left at 100% state-of-charge (SOC) without degrading. NMC cannot or the battery will degrade rapidly
- No cell is ever overcharged!
- A-grade cells naturally have more pure materials and lower impedance and will last longer
- Temperature control protects the battery from charging and discharging at unsafe temperatures which will degrade the battery

**Optional Solar Integration**

- Easily integrate solar panels and solar charge controller to the FREEDOM e-GEN
- Variety of options for solar panels and charge controllers

**Lithium Ion Battery**

- Power to weight ratio is 7 times more than lead acid based batteries
- Safest lithium ion chemistry

**Intelligent Battery Management System**

- Reserve cranking power to jump-start vehicle batteries if needed
- Always charged and ready regardless of the length of inactivity

**Multi-Stage Voltage Regulator**

- Offers precise voltage control for the auxiliary alternator
- Monitors and responds to changing temperature conditions, including reduction or discontinuation of charging voltage and current, should a catastrophic over-temperature condition occur at the alternator or the batteries

**FREEDOM SW Inverter/Charger**

- The heart of the electrical system, powers all electronics & appliances including air conditioners
- Features the most advanced battery charging algorithms
- Wide operating temperature range (14°F to 140°F) for all climate conditions
- Remote system monitoring via tablet, laptop or a smart phone

**FREEDOM SW Combox**

- Safe and secure renewable system
- Multi-stage battery charging
- Battery-separate thermal controls
- Battery management system controls all charging sources

**AIR CONDITIONER**

- Power electronics such as:
  - Proprietary control to safely get the most charging current to the battery during idle!
  - Best-in-Class output at idle and cruising speeds increasing battery life and ability to re-charge
  - 280 A capacity; 180 A idle

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ABOUT XANTREX

- **35+ Years** of designing, engineering & manufacturing AC power solutions
- **One of the first** to manufacture inverters for RV manufacturers back in the 90s
- Launched the **first inverter/charger** for RVs in 1992
- Home to North America’s **largest & most advanced** inverter testing lab

- Xantrex inverters go through **H.A.L.T.** (Highly Accelerated Life Testing), an extremely effective **product evaluation** method that our engineers use to validate the robustness of each electronic / mechanical design
- Products are subjected to **extreme thermal and mechanical stresses** which allows us to identify and correct any subtle design issues early in the product development stage resulting in **improved reliability** and performance