

## GENERAL INFORMATION

The Parallax Power Supply 5400 series power converter is a solid-state electronic power supply and is maintenance-free. These revolutionary RV power converters utilize technology developed for power supplies in computers that provides a clean and stable, voltage-regulated output while also providing safety features designed to help protect the converter against over-temperature and output overload.

The Parallax 5400 series electronic power converter has been tested to comply with stringent safety standards and is Intertek/ETL listed.

Refer installation and servicing of this product to qualified service personnel. Technical or service information is provided solely for use by licensed electricians and certified RV technicians. No endorsement of technical expertise is expressed and/or implied. User assumes all liabilities arising from use of this information.

## CONVERTER OPERATION

The Parallax 5400 series electronic power converter is designed to supply the nominal 12-volt filtered DC power for all 12-volt operated devices encountered in RV service. Although the converter is an excellent battery charger, the converter does not require a battery to be connected to it for proper operation.

**Caution:** *When installing a battery, always verify wiring polarity. Connecting a battery with reverse-polarity wiring will blow the power converter main fuses located on the front of the converter.*

If the 12-volt load exceeds the converter output rating, the output voltage will drop to prevent any further increase in current. Turn off some DC lights or appliances and the output voltage will automatically recover. The same will occur if the converter exceeds safe operating temperature limits. Check to see that the converter's air circulation is not blocked, or turn off some of the 12-volt load.

If any 12-volt appliance fails to operate, check your RV's 12-volt distribution fuse location and inspect all fuses. If a fuse is open or "blown", replace it with the same size fuse (never install a larger fuse). If the fuse opens again, have an electrician or certified RV technician locate the circuit trouble. Replace blown fuses with Littelfuse type 257, Bussman type ATC, or Possing Electronic type ATP fuses only.

If the 5400 series DC power converter is not working, first confirm the RV supply or "shoreline" cord is plugged into a live circuit. Then check all the 120-volt breakers in the panelboard to make sure they are "on". If a breaker is tripped, follow the instructions below to reset the breaker. If the breaker trips again, consult an electrician or certified RV technician.

## BATTERY CHARGER PERFORMANCE

The National Electric Code requires that power converters for RV service use be

marked with an average charge rate, as part of the total continuous output rating. Average charge rate will depend on several variables such as condition of the battery, temperature, and the length of time the battery is connected to the converter. In actual RV use, the engine alternator and on board generators are also possible sources of charging currents.

With all of these variables, it is difficult to determine the average charge rate from the converter. In most cases, the average charge rate will be very small, in the order of a few hundred milliamps (1 AMPERE=1,000 MILLIAMPS). Your Parallax 5400 series power converter is capable of delivering its full-rated output to the battery (if needed), but the current taken by the RV battery system will taper off to a few hundred milliamps when the battery is at full charge.

## CONVERTER COOLING SYSTEM

The 5400 series electronic fan cooling system contributes to long converter life and trouble-free operation. The fan operates continuously, and the airflow required is necessary to properly cool the converter components. The associated "air sound" generated may be audible in quiet environments.

## TempAssure™ (Patent US 7,245,109)

Your 5400 system may include the (optional) **TempAssure™** module and sensor cable. When properly installed, the **TempAssure™** system employs technology that allows the output voltage of the converter to be varied by the temperature of the RV's "house" battery system. The benefit of this feature helps to provide a more appropriate charging voltage for the "house" battery system exposed to varying ambient temperatures. For example, in cold climates the output voltage of the converter will be increased, which results in a more fully charged and maintained battery. In hot climates the output voltage of the converter will automatically lower, which will aid in reducing excessive out-gassing of the battery caused by the battery requiring a lower "float" voltage.

Also with the addition of the **TempAssure™** module and sensor cable, the 5400 series converter will automatically start out in a "boost" mode for the first 4 hours of operation every time the 5400 series converter is powered "on". The output voltage of a **TempAssure™** equipped 5400 series converter will still be temperature compensated, even while in "boost" mode.

Your RV manufacturer's installation may also allow you to manually trigger the "boost" function by pressing a switch. (optional wiring configuration)

While the 5400 series converter with the addition of the (optional) **TempAssure™** module is designed to provide a better means of charging and maintaining the "house" battery, Parallax Power Supply strongly recommends proper battery maintenance be performed by the owner on non-maintenance free batteries following the battery manufacturer's recommendations.

DO NOT allow the battery cell plates on non-maintenance free batteries to become exposed to the air. Poor battery performance will result.

Parallax Power Supply will not be responsible for battery failure resulting from improper battery maintenance.

## MOUNTING LOCATION

The 5400 series converter is designed for indoor use only.

DO NOT mount in harsh environments; avoid areas where high levels of dust, dirt, or moisture may occur.

DO NOT mount the power converter in battery compartments or in areas where flammable materials are stored.

## MOUNTING CLEARANCES

DO NOT mount in zero-clearance compartments; overheating and thermal shut down will result.

## INPUT SUPPLY REQUIREMENTS

Connect to a 120 VAC 60HZ 2-wire with ground supply. DO NOT use circuit protection larger than 20-ampere.

## BATTERY WIRING

This converter can deliver its entire DC output amperage capacity toward battery charging or 12 volt system use. An appropriate wire gauge and over-current protection (fuse or breaker) for battery wiring rated to safely carry the entire output amperage capacity of this converter is recommended.

*WIRING FOR THE BATTERY OR CONVERTER TO THE RV 12-VOLT SYSTEM MUST USE 90°C MINIMUM INSULATION RATING.*

## WARRANTY INFORMATION

Reference the enclosed **Parallax Power Supply Warranty Policy** or download the policy at: <http://www.parallaxpower.com/warranty>

## Parallax Power Supply

Phone: (800) 443-4859 ▪ Fax: (765) 608-5235



## Powering the RV Adventure

# 5400 SERIES POWER CONVERTER OWNER OPERATION GUIDE

Visit our website at [www.parallaxpower.com](http://www.parallaxpower.com)

Congratulations on the purchase of your new Parallax Power Supply product!

The Parallax 5400 series electronic switch mode power converters have been designed to give safe, reliable, and maintenance-free service.

We hope it provides many years of enjoyment.



*Listed for RV use in the U.S.A. and Canada*