

## 500 SERIES POWERCENTER

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Congratulations on the purchase of your new RV. We hope you have many years of enjoyment. Your new RV is equipped with the latest, most advanced 120-volt to 12-volt power converter system available today. The Parallax Power Supply L.L.C. 500 series electronic switch mode power converters have been designed to give you many years of trouble-free service.

These revolutionary RV power converters utilize technology developed for power supplies in computers that eliminates the loud, inefficient power converters of yesteryear.

If you have any comments, contact Parallax Power Supply L.L.C.'s Customer Service Representative at the address, fax or phone number below.

### **Parallax Power Supply, L.L.C.**

425 Sycamore St.  
Anderson, IN 46016  
(800) 443-4859  
FAX: (765) 608-5235

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### **GENERAL INFORMATION**

The 500 series power converter is a solid-state electronic power supply and is maintenance free. It is so self-sufficient and quiet that you should not even know it is working except for the cycling of the cooling fan when necessary. If any 12-volt appliance fails to operate, first check your RV's 12-volt distribution fuseblock located behind the decorative front door in the lower section of the converter 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 or Bussmann type ATC fuses only.

If the 500 series 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 your RV distribution panel to make sure they are "on". If a breaker is tripped, follow the instructions to reset the breaker. If the breaker trips again, consult an electrician or certified RV technician.

The 500 series power converted is UL listed to Underwriters Laboratories safety standards and has been built with safety in mind. It is output short-circuit protected and also FCC Class B certified to minimize interference with other electrical equipment as some power converters do. Some interference however can occur from accumulations of multiple sources.

### **MOUNTING LOCATION**

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**Qualified service personnel should install the 500 series meeting all applicable codes and standards.**

*The 500 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.*

### **(HORIZONTAL MOUNTING ONLY)**

Mount to a vertical Surface with the front of the converter open to the living area of the RV.

### **Input supply Requirements**

Connect to a 120/240 VAC 60HZ 4 wire grounded supply to the supplied 50-ampere, 2 pole circuit breaker.

### **Mounting Clearances**

Provide a minimum of 22 inches clearance to the front of the converter. Leave 2" MIN. for fan air intake located in the lower right end of converter.

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

### **CONVERTER COOLING SYSTEM**

The 500 electronic fan cooling system is the key to long life and trouble free operation. The fan is thermostatically controlled and is never on more than is required to cool the electronic components in the converter. You may never hear the fan operate.

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## CONVERTER OPERATION

The Parallax Power Supply L.L.C. 500 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(s) always observe polarity. Connecting a battery reverse-polarity will blow the power converter main fuses located to the right of the 12-volt DC distribution fuseblock. Turn off the converter AC input prior to changing the main fuses.

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 lights or appliances and the output voltage will automatically restore. 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.

## 120/240 VOLT AC PANELBOARD

The AC panelboard section of the series 500 is located behind the decorative door in the upper section. This panel contains the 120 VAC branch circuit breakers for your RV. One of the breakers controls the 120-volt power to the 12-volt converter section located in the lower half of the 500. This breaker may also control another branch circuit. Check the label next to each breaker for what each branch circuit breaker controls.

The 120 volt circuits may be turned on by flipping the breaker handle to the "on" position or off by flipping the handle to the "off" position. To reset a tripped breaker, move handle to off then on.

## 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(s), temperature, and the length of time the battery(s) are connected to the converter. In actual RV use the engine alternator and on board generators are also possible sources of charging currents.

With all 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 Power Components L.L.C. 500 series power converter is capable of delivering its full rated output to the battery(s) if needed, but will taper off to a few hundred milliamps when the battery(s) are at full charge.

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## CONVERTER TO BATTERY WIRING

The battery supply wire from Fuse block input buss to the battery must be of adequate size and rating and must be protected within 18 inches of the battery with an appropriately rated fuse or breaker.

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## Converter Operation (Non Option T)

The Parallax 500 Series (**non Option T**) has been factory set at a nominal 13.8 volts output for battery charging. On non-maintenance free batteries check the water level often. Check the water level more frequently in periods of hot weather. Do not allow the battery cell plates to become exposed to the air. Poor battery performance will result. Parallax recommends disconnecting batteries during extended periods of inactive use or storage following the battery manufacturer's recommendations for proper maintenance.

*Note: Timer components cannot be added to a non-"T" converter section. Converter section would have to be changed to a "T" option unit.*

## Timer (Option T on nameplate label)

If your converter is equipped with the timer option the output voltage has been factory set a nominal 14.1-volts DC output voltage for rapid battery charging. The optional timer circuit is designed to lower the converter output voltage to approximately 13.5 volts 13 hours after the shoreline power has been applied. This abrupt drop in output voltage is designed to minimize over charging the RV battery(s) during extended periods of operation on shoreline power.

## ***When the AC power is disconnected the timer will reset.***

*The next time AC power is applied the battery voltage will again shift up to the 14.1 volt setting for another 13 hours, only to again drop to the nominal 13.5 volt point.*

This method of over charge control works well on good batteries that are properly maintained according to the manufacturers recommended maintenance instructions.

## STORAGE BATTERY MAINTENANCE

**WARNING-** Before inspecting or servicing storage battery(s) read and follow battery manufacturer's cautions and directions.

The following suggestions plus those of the battery manufacturer will help keep your battery in good condition.

1. Maintain proper water level at all times.
2. When 120 VAC is connected to the power center, check water level at least once a week in hot weather or when battery is charged and discharged frequently.
3. If 120 VAC is not connected to the power center, it should be reconnected once a month for 8 hours to recharge battery.
4. If you store your battery outside of RV, a battery charger should be connected to it one a month to recharge battery.
5. Do not allow battery to remain in a discharged condition-it will become sulfated and will not accept a proper charge.

### **Some situations which may indicate need for battery replacement are:**

1. Loss of more water in one cell than others.
2. Continuous loss of water in all cells—perhaps accompanied by overheating or extreme gassing and bubbling.
3. A marked difference in the specific gravity reading between cells.

## Warranty Statement

Parallax Power Supply L.L.C. warrants its products to be free from defects in material or workmanship under normal use and service and limits the remedies to repair or replacement.

This warranty extends for two years from the date of purchase and is valid only to the original owner and within the continental limits of the United States and Canada.

You may download the entire Parallax Power Supply Warranty Policy at:  
[http://www.parallaxpower.com/warranty\\_policy](http://www.parallaxpower.com/warranty_policy)

If a problem should occur with your Parallax Power Components L.L.C. converter within the first twenty-four months after purchase, please contact a dealer that handles warranty on your brand of RV. NO user serviceable parts inside.

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425 Sycamore St.  
Anderson, IN 46016,  
Phone (800) 443-4859  
Fax (765) 608-5235

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Anderson, IN 46016  
PHONE: 800-443-4859  
Fax: 765-608-5235

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## OWNER'S OPERATION/WARRANTY MANUAL

For a **special offer** concerning  
**Extended Warranty Coverage,**

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

