THE POWER SOURCE™

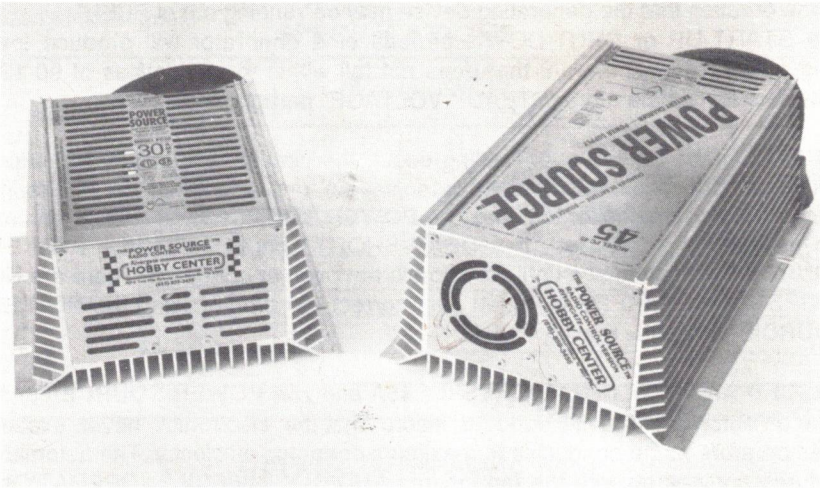
Power Supply/Battery Charger

From *RIVERGATE HOBBY CENTER*

MORE AMPS WITH LESS WEIGHT!

TOTALLY FILTERED AND REGULATED.

PC-15 (15 AMP)
PC-45 (45 AMP)
PC-30 (30 AMP)
PC-75 (75 AMP)



LISTED

LR 98322 TO 38646517

USER INFORMATION

FILTERED AND REGULATED POWER SUPPLY

STEADY VOLTAGE / PURE DC OUTPUT!* Works perfectly when pure DC is needed. No ripple to cause excessive heat build up in batteries or early burnout of motors. When over worked or over crowded A/C circuits just are not 110, the **POWER SOURCE**™wil still produce when the A/C line voltage is 90-130 volts. *98% at full load.

ENGINEERING LANDMARKS

LIGHT WEIGHT! It takes FOUR of the 30 amp PC-30 **POWER SOURCE** unit to equal the weight of ONE of the competitor's 25 amp unit's weight!

SUBCOMPACT SIZE! It takes THREE of the 30 amp (or 15 amp) **POWERSOURCE** ™ units to equal ONE of the competitor's 25 amp unit's size!

LESS HEAT/MORE EFFICIENT! the POWER SOURCE ™generates almost no heat until aprx. 70% load! A competitor's generates almost full temperature at NO LOAD. By design, the PC-30 **POWER SOURCE** ™is 87% EFFICIENT! What does this mean? At full load, a PC-30 dissipates only 51 watts of heat into the multi-finned chassis.

OPERATION! The **POWER SOURCE**™ uses a SWITCHING design that is nearly SILENT when compared to a competitor's 50% LESS EFFICIENT LINEAR power supply that operates with a constant HUM. Some devices or appliances will cause a ticking, buzzing or a singing in the **POWER SOURCE**™ This is NORMAL with a SWITCHING power supply and no two units will produce the exact same sound.

A/C GENERATOR: If or when **POWER SOURCE**™ is driven from A/C current produced from a generator, user MUST take precautions to have the PC disconnected during START-UP or SHUT-DOWN of the generating device. If this practice is not followed, PC's are certain to fail! SHUT-DOWN is also defined as the duration that the generating device may be"running out of FUEL".
The START-UP or SHUT-DOWN periods of a generator will produce low, irregular or "spiked" current that does not fall within the guidelines of 90-130 volts as stated in the afore "STEADY VOLTAGE" paragraph.

PROTECTION! Should over-loading occur, the circuitry will adjust the output voltage accordingly. If the overload is too severe, provided PROPER wire sizing is followed, or remains for too long, the **POWER SOURCE**™will shut-down until the problem is addressed. If a DEAD-SHORT should occur, the **POWER SOURCE**™will shut down until the short is removed or corrected. There are NO FUSES OR BREAKERS to reset! Just correct the problem and the **POWER SOURCE** ™instantly POWERS-BACK-UP!

FORCED AIR COOLING MODELS the 45A and 75A **POWER SOURCE**™units have an automatic fan included to insure that the electronics never exceed a temperature range conducive to maximum operating efficiency. The automatic features engineered with the fan insures AUDIBLY INVISIBLE OPERATION. The fan remains OFF during light load conditions. The fan turns on when internal temperature reaches 45%C and turns off at approximately 43%C.

CAUTION

NEVER allow the ***RIVERGATE HOBBY CENTER*** **POWER SOURCE**™to be used by children! If a child is going to have access to THIS or any other type of equipment we hereby advise that an ADULT/ GUARDIAN with knowledge, understanding and responsibility be there to supervise.
DO NOT allow any probes or foreign objects inside the chassis/case of the **POWER SOURCE**™or any other electrical device or equipment. FAILURE TO OBSERVE these standard procedures can result in serious injury! There are no components in the **POWER SOURCE**™which in normal operation cause arcs or sparks. HOWEVER, the simple act of PLUGGING-IN OR UNPLUGGING the cord on any electrical appliance can cause a spark that could cause an EXPLOSION IF FLAMMABLE LIQUIDS OR VAPORS are present.

WARRANTY

The **POWER SOURCE**™power supply/battery charger is manufactured in the UNITED STATES OF AMERICA and is warranted to be free from defects in material and workmanship for 18 months from the date of retail purchase. Coverage does not include electrical or physical misuse or abuse, including

INFORMATION SUPPLEMENT
for
the POWER SOURCE™
"PC-VO" SERIES
From RIVERGATE HOBBY CENTER

FIXED POWER OUT-PUT: Use of the large terminal / lugs is fully described in the information pamphlet pertaining the four (4) available "PC" **POWER SOURCE**™power supplies. Use PC as directed
After returning the WARRANTY CARD, all information that is provided with the **POWER SOURCE**™units should be kept on file in an accessable location.

VARIABLE OUTPUT: The BANANA-JACK outlets (or output leads) are controlled from the voltage regulating knob. The full "counter clockwise", "click" OFF position is the only position to attain ZERO (0) VDC. In the lowest setting, next to the OFF position, the voltage can be adjusted from 1 VDC through 12 VDC depending on the AMP load applied.

POWER DISTRIBUTION: User awareness is a must here! Available AMPS are determined by the load being applied to BOTH the FIXED terminals and the VARIABLE jacks.

EXAMPLE: A "PC-15-VO" has a total of 15 AMPS available that can be SHARED between the two power outlets and remain within manufacturers output ratings. If 10 AMPS are being drawn on the FIXED voltage lugs, there is only 5 AMPS available to the VARIABLE jacks. The same applies in reverse.

METER: Digital meter monitors only the VARIABLE D/C output function.

FAN: The built-in fan operation is continuous. Should the fan become inoperative, use of the VARIABLE jacks should be terminated due to the excessive heat that could result and unit should be returned for repair. Fan failure would not effect the output performance of the FIXED terminals.

HEAT INFORMATION: As a FIXED power supply, all **POWER SOURCE™** units are extremely efficient as described in the user information. As a VARIABLE power supply, there is a lot of wattage that must be consumed. That power is dissipated in the form of HEAT through the chassis.
There is more heat dissipated at LOW voltage with HIGH amp draw than at HIGH voltage with LOW amp draw. Duration of use will also determine the HEAT dissipation requirements.

WARRANTY: Warranty period for the "PC-VO" series is EIGHTEEN (18) months from the VALIDATED (keep the sales slip) date of purchase on the fixed D/C output and NINE (9) months on the VARIABLE D/C out put. Should there be any discrepancies on warranty cards or purchase date, test code dates will prevail. Return information is contained within the USER information.
NO WARRANTY WORK WILL BE HONORED UNLESS A COMPLETED WARRANTY CARD HAS BEEN TIMELY FILED AT RIVERGATE HOBBY CENTER.

SPECIFICATIONS

input A/C	model	PC-15-VO	PC-30-VO	VO
	volts	90-130 VAC	90-130 VAC	D/C
	watts	210	415	ONLY
output "FIXED" DC	volts	14 VDC thru apx. 85% full load, 12 + VDC @ full load		NA
	amps	15	30	NA
output "VARIABLE" DC	volts	off / 1 - 12 VDC	off / 1 - 12 VDC	off / 1 - 12 VDC
	amps	12 max.	12 max.	12 max.
	meter	volt & amp	volt & amp	volt & amp
	fused	no	yes	yes
	fan	yes	yes	yes
physical	weight	4.50 lbs.	5.75 lbs.	1.5 lbs.
	width	7.25 "	7.25"	7.25"
	height	4.00 "	4.00 "	4.00 "
	length	7.75"	9.75 "	2.5 "
	chassis	aluminum	aluminum	aluminum

WARRANTY (cont.)

improper tightening of the terminal lugs or improper testing. The **POWER SOURCE™** has no user servicable components inside. For service or repair, in or out of warranty, contact:

RIVERGATE HOBBY CENTER, 707-E Two-Mile Parkway, Goodlettsville, Tennessee 37072. (615) 859-3465.

NO WARRANTY WORK WILL BE HONORED UNLESS A COMPLETED WARRANTY CARD HAS BEEN TIMELY FILED AT RIVERGATE HOBBY CENTER.

POWER SOURCE™units returned for inspection or repair may be subject to a $9.50 charge to cover postage and handling costs. Proof of purchase may be required. Under no circumstances will the buyer be entitled to consequential or incidental damages!

SPECIFICATIONS

input	model	PC-15	PC-30	PC-45	PC-75
	volts	90-130 vac			
	watts	210	415	620	1040
output	volts	14vdc 0-apx. 85% load		12vdc @ full load	
	amps	15	30	45	75
physical	fan	no	no	yes	yes
	weight	3.5 lbs	4.0 lbs	6.5 lbs	9.0 lbs
	width	7.25 inches			
	height	4.0 inches			
	length/in.	6.75	6.75	11.25	15.50
	chassis	aluminum			

OUT-PUT TERMINALS / LUGS

The insulation around these connections CAN MELT! If your connection is loose, there will be a build up of heat and damage will likely happen.

If you are using "alligator clips", do not clip onto the lug screw only. This is not a tight connection! Instead, insert the alligator clip nose into the terminal opening and tighten the lug screw against that. You may connect additional clips onto the first one. We suggest that you take two pieces of bare #8 solid copper wire cut 3.5 inches long, bend each in an "L" shape (long side apx. 2", short side apx. 1.5"). Insert the short side of one of these "L" wires into the negative terminal with the long side pointing down and tighten the lug screw. Take the other "L" wire and do the same thing on the positive terminal, except point the long end to the right side, **away from the negative lug.**

With the "L" wires in these positions, alligator clips should not get together. You will also be able to coil the 110 cord back the way the **POWER SOURCE ™**was delivered.

CONNECTING WIRES: In most applications (HOBBY included), the wires that are provided on devices that can be powered from the **POWER SOURCE™**use an AWG wire size of #14 and smaller on the power IN-PUT side. These wires are probably correctly sized by the manufactures for their exact AMP loads. However, these wires may not be large enough to activate the "over-load" circuit in a respective **POWER SOURCE™.**

If a "direct-short" were to occur while using a wire of less AMP rating than the AMP OUT-PUT of the corresponding **POWER SOURCE™**, massive heat build-up in the wire will most likely be followed by COMBUSTION! User must familiarize themselves with their electrical devices and wire accordingly.

AUTOMOTIVE BATTERY CHARGING

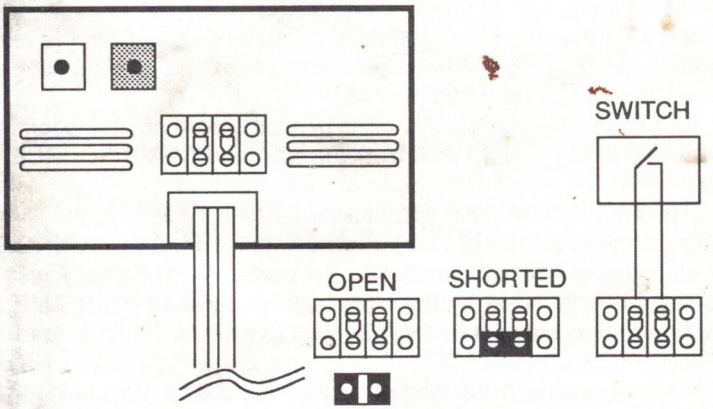
DUAL VOLTAGE BATTERY CHARGER: The single most common complaint-overcharged batteries. The cause generally can be attributed to a single voltage battery charger; that is a battery charger that can not step its voltage down after the batteries reach a full charge state.

Much like a muscle, a battery needs to be exercised to be fully effective. If the battery remains at one level of charge for an extended period of time it will be damaged. If left attached to a charger at the normal charge voltage of approximately 14 volts the battery can swell, overheat and be damaged. In many cases a single voltage charger just will not do, and up until now that was all that was available without spending large sums of money. The new Dual Voltage Power Source from Todd Engineering and Rivergate Hobby center solves this problem.

The new Dual Voltage control on the Power Source gives the customer the advantage of having a higher charge voltage (14 VDC)* for heavy duty or quick charge use, and a safe float voltage (13.2 VDC)* for long-term float use. This will save both the battery and electric system from undue hardships.

As shown in the diagram below, the open setting of the terminal block on the end of the Power Source will result in the lower (13.2 VDC)* output. The shorted terminal block will result in a higher (14 VDC)* output. Also shown is the wiring diagram for a remote non-lighted toggle switch which would allow the user to switch back and forth between voltages as needed.

In addition, with the new ADV-10 option (not shown), the switching is done automatically. The ADV-10 option is easily attached externally to the Power Source. The Power Source charges at 14 VDC* if the batteries are low and drops back to 13.2 VDC after the batteries are completely charged for long-term use. If the batteries become depleted and need a rapid recharge, the Power Source steps back up to 14 VDC* and starts the cycle over again. This is design for those who do not want to have specific control over the charger for specific needs. It is perfect for the customer that does not want to worry about whether his charger is over charging his battery, and does not want the hassles of disconnecting and reconnecting his batteries.



* If using a "vO Series" Power Source, those voltages will be 13.8 VDC / 13 VDC.