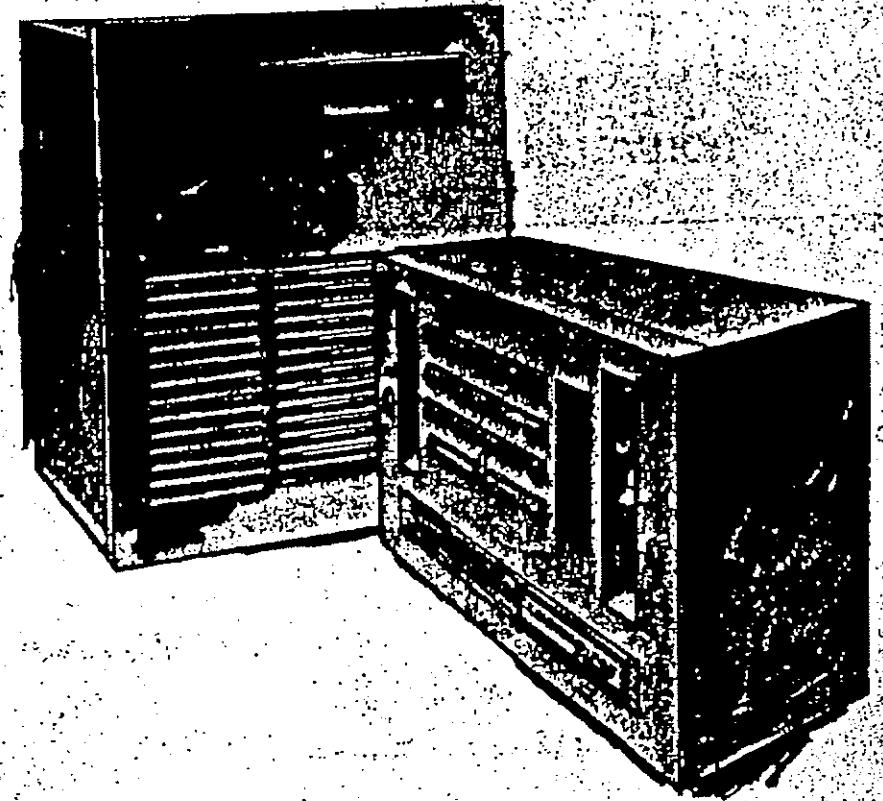


OWNERS MANUAL

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B Basler Electric
Highland, Illinois

BOX 286 HIGHLAND, ILLINOIS 62249 PHONE 618-654-2341 TWX 618-696-2522



LECTRO-PAK

RV CONVERTER

by Basler

*CARSON MFG.
INDEX 141-257-3171
257-3171
500 P. K. ext*

STATE

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TROUBLE SHOOTING GUIDE

CONTINUED

- C. Begin to turn on equipment, one piece at a time.
- D. When fuse blows, shut off all equipment. Install another fuse. Return to the piece of equipment that blew the fuse. Turn it on. If the fuse blows, there is a short in that particular piece of equipment, and it should be repaired. If the fuse does not blow when that piece of equipment is turned on, the circuit is overloaded and the 12 VDC power load must be redistributed. If knowledge of electrical systems is limited and repairs are to be performed by more qualified persons and cannot be made immediately, do not use all equipment simultaneously until the problem is solved.

VII. Circuit breaker trips . . .

This is brought about either by an overload or a short in the 120 VAC circuits. Methods for determining which is the case are as follows:

- A. Cut off all 120 VAC equipment.
- B. Begin to turn on equipment one piece at a time.
- C. When breaker trips, shut off all equipment. Reset breaker and return to the piece of equipment that tripped the breaker. Turn it on. If the breaker trips, there is a short in that particular piece of equipment, and it should be repaired. If the breaker does not trip when that piece of equipment is turned on, the circuit is overloaded; and the 120 VAC power load must be redistributed. If knowledge of electrical systems is limited and repairs are to be performed by more qualified persons and cannot be made immediately, do not use all equipment simultaneously until the problem is solved.

VIII. Relay chatters (PC models) when vehicle is connected to 120 VAC causing intermittent 12 VDC power . . .

- A. Check wire connections on relay.
- B. Using an AC voltmeter, check AC line voltage; it must be 90 VAC or more.
- C. If relay is defective, return converter section for repair. (See Section I-D).

IX. Stereo/radio hum . . .

- A. In PC models stereo/radio should be operated off yellow output circuit. See pin reference chart for polarity of connections on the circuit.
- B. In PCM model stereo/radio operates directly off the battery. The line must be fused.

TROUBLE SHOOTING GUIDE

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- 3. Test for defective diodes. Remove the hex nut from the diode threaded stud and carefully pull free from mounting. It is not necessary to unsolder the wire from the diode terminal eye. Using a multimeter set to read resistance (1 ohm scale), measure the resistance across the diode in one direction (plus on the anode and negative on the cathode) and then reverse the meter leads and measure (100K scale) in that direction. A good diode will read a low resistance (approximately 1 ohm) in the direction of the arrow and an extremely high resistance in the other direction. A defective diode will more than likely appear open (infinite) or shorted (no resistance) when measured in either direction.
(See Figure 1)

E. PCM Models—Due to the compactness of the unit, a power on test is not possible. Check the diode as follows:

- 1. This diode assembly is an encapsulated unit consisting of three diodes.
- 2. Disconnect power and remove the front panel and the spade lugs on the diode assembly terminals. It may be necessary to remove the duplex 120 VAC receptacle and the switch box above the diode set.
- 3. Using a multimeter, measure the resistance (See I-D-3) from the yellow terminals to the red terminal and yellow to the unmarked terminal (See Figure 2).

F. Disconnect 120 VAC power supply cord and remove AC service panel. Check for loose connections in the AC service panel department.

II. 12 VDC appliances operated properly on converter power but not on battery power . . .

- A. PCM models require manual switching; be sure the switch is in the "Battery Power Mode."
- B. Using a voltmeter, check to see that the battery is not discharged. Examine the battery terminals making certain there is no acid buildup and that all connections are good.
- C. Check relay as in I-D-1 and 2.
- D. Examine converter for loose connections.

III. Converter overcharging battery subsequently causing excessive water usage . . .

- A. Overcharging can occur when remaining on 120 VAC for extended periods when the battery size is less than 60 amp hours. Recommended battery size is 84 amp hour or larger.
- B. High voltage . . . See Section IV.

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IV. High voltage—12 VDC circuits . . .

High voltage can be caused by high AC in-line voltage, high output voltage from the converter transformer, or by a capacitor serving as a filter in a piece of equipment in the 12V appliances or equipment.

- A. Check the AC line voltage; if over 130 VAC, disconnect and run off the battery.
- B. If the AC line voltage is not excessive, the converter transformer could be putting out too much voltage. In PC models, remove the converter chassis as explained in I-D and disconnect from the vehicle. This is accomplished by disconnecting the harness from the converter at the six-way housings on the rear of the unit. Plug the converter cord back into 120 VAC extension cord and measure the DC output at the converter output housings. In PCM models disconnect the harness from the converter and test the DC voltage at the converter output housing by applying 120 VAC through the power supply cord connected to the service panel. Both PC and PCM models have an output connector pin chart on the converter next to the housings to determine proper polarity. (See Figure 1 and 2) If the transformer voltage is excessive, the unit should be returned to the factory for repair. In PC models return only the converter. In PCM models return the entire unit.
- C. If AC line voltage and converter voltage are not excessive, high DC voltage may be caused by a capacitor in one of the DC appliances. Some 12 VDC motors contain a capacitor for filtering. It is possible that this capacitor can cause high voltage. If this is the case, please contact Basler for assistance.

V. Converter will not charge battery . . .

- A. Make sure battery is in good condition and does not have any bad cells.
- B. Check battery terminals for good connections.
- C. Check battery diode (See I-D-3 and I-E).
- D. Check charge lines for break.

VI. Fuses blow . . .

This is brought about either by an overload or a short in the 12 VDC electrical system. Methods for determining which is the case are as follows:

- A. Cut off all 12V electrical equipment.
- B. Install a good fuse.

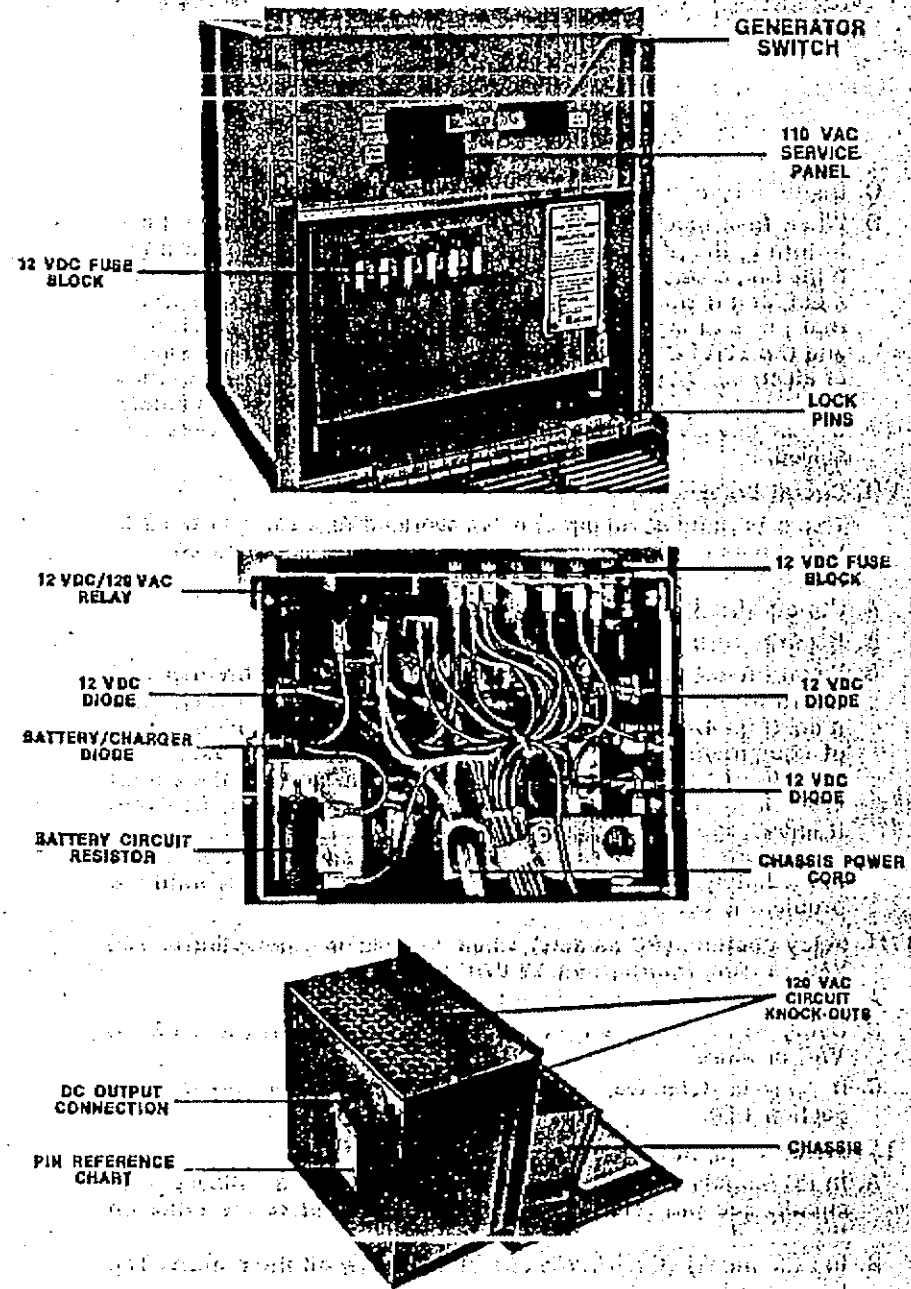
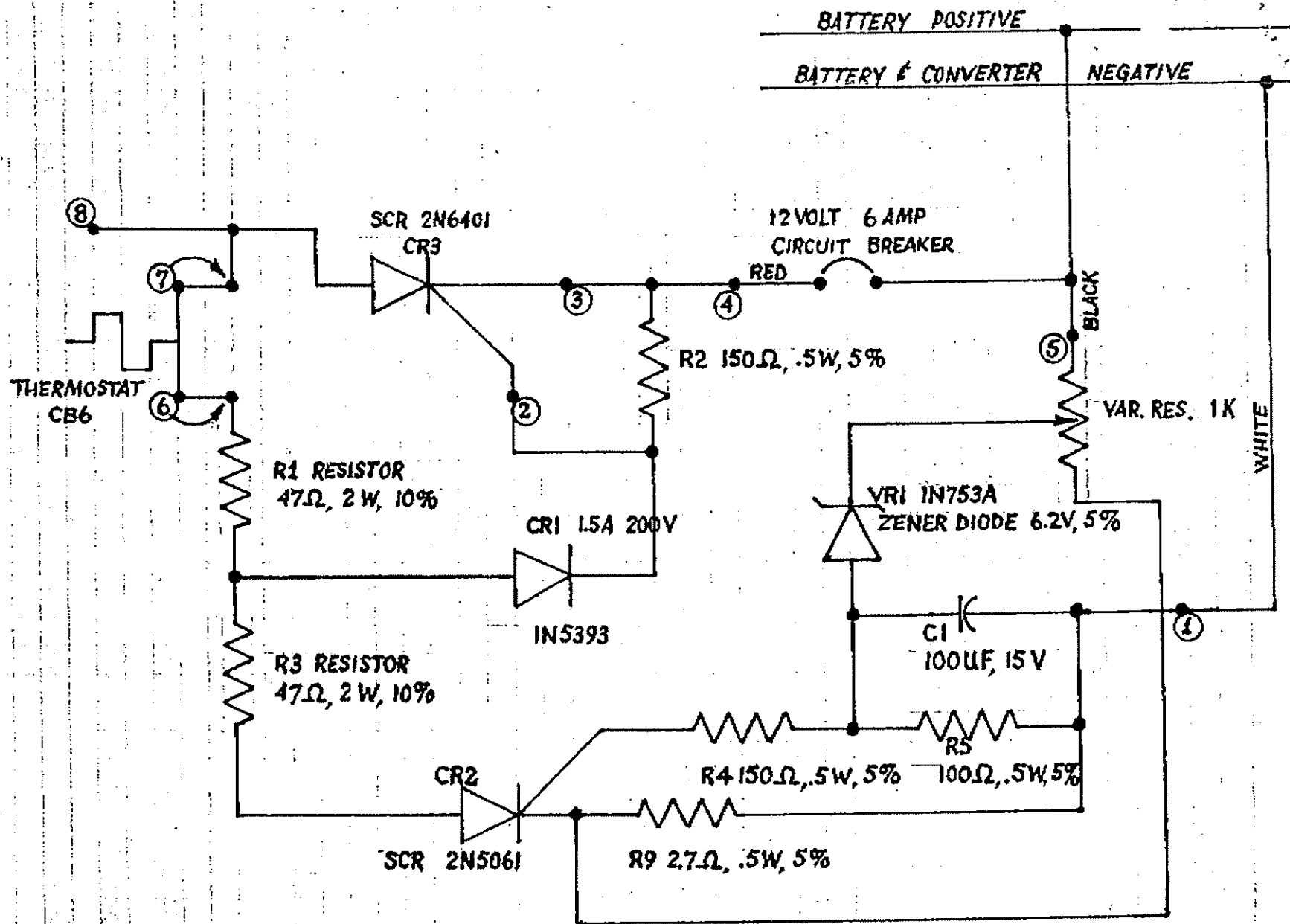


Figure 1—PC Model



CHARGER CIRCUIT FOR ES-15, CP-15, & CP-20

DELTR0
27368-63
DPDT # 20241-83
USE
5X847 KIT

DELTR0
27367-63 # 20239-83
SPDT
USE
3X745 KIT

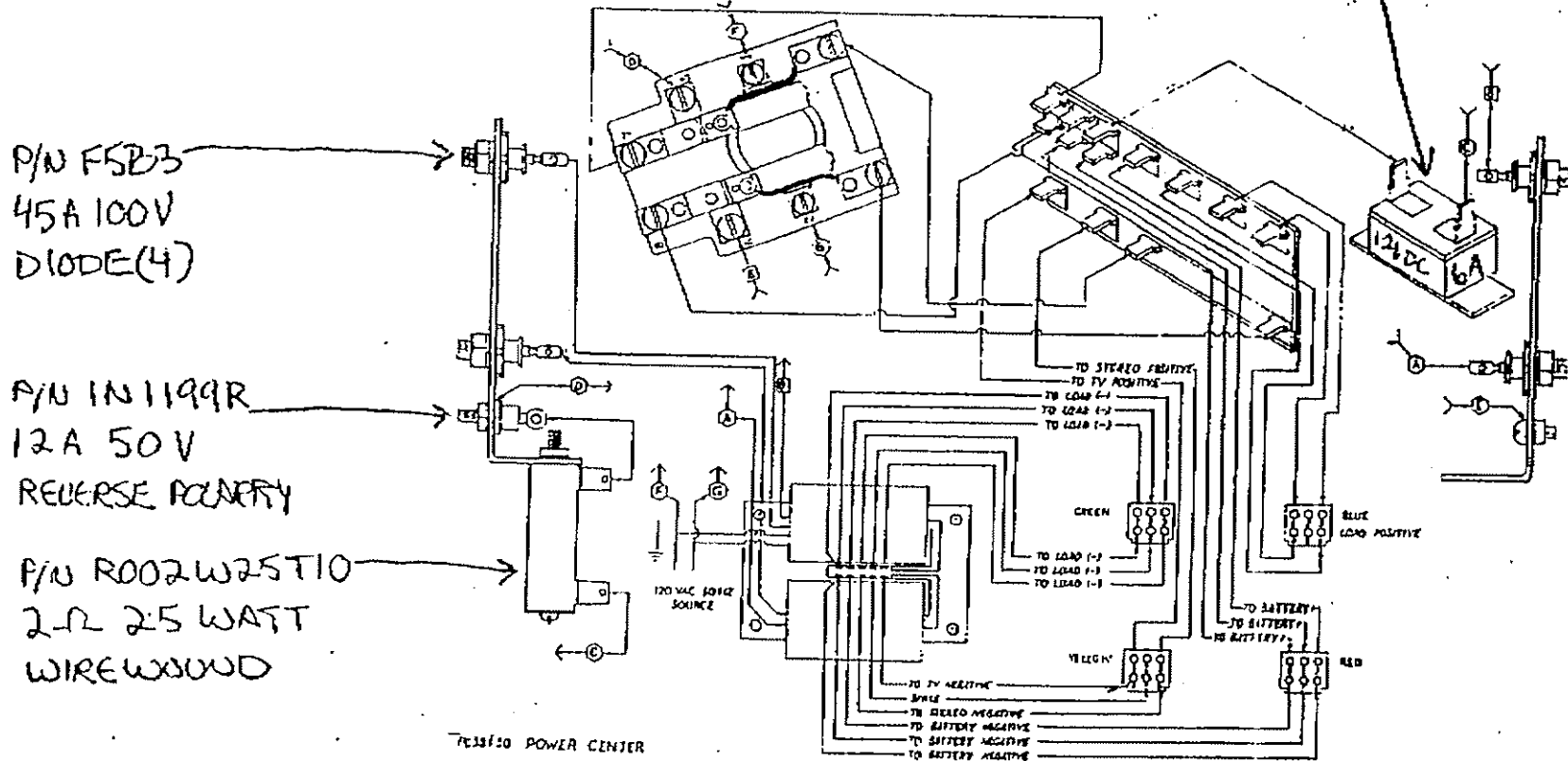
*12306-B01
CIRCUIT BREAKER

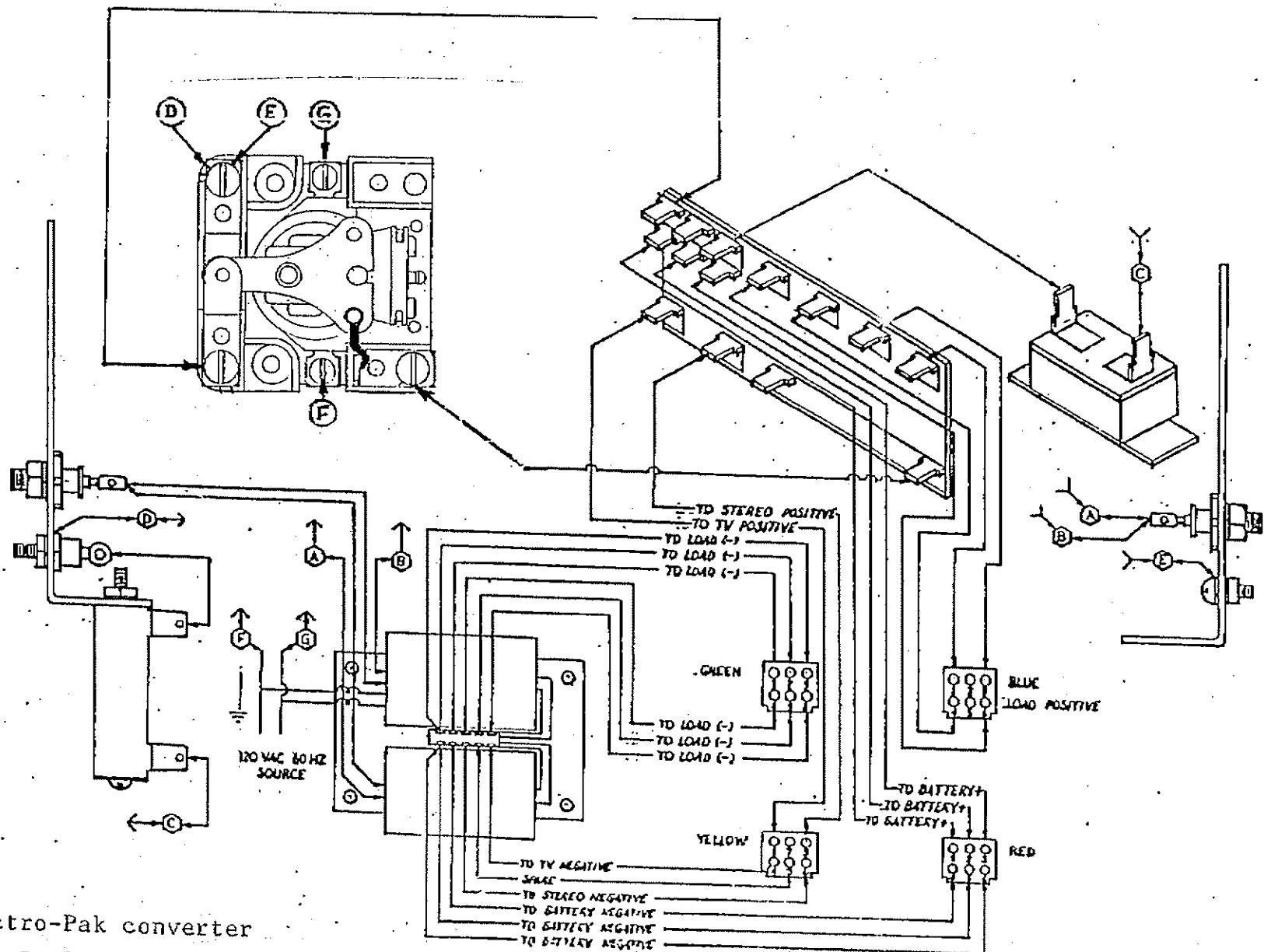
P/N F5B3
45A 100V
DIODE(4)

P/N IN1199R
12A 50V
REVERSE POLARITY

P/N R002W25T10
2-Ω 25 WATT
WIRESOUND

PC3150 POWER CENTER



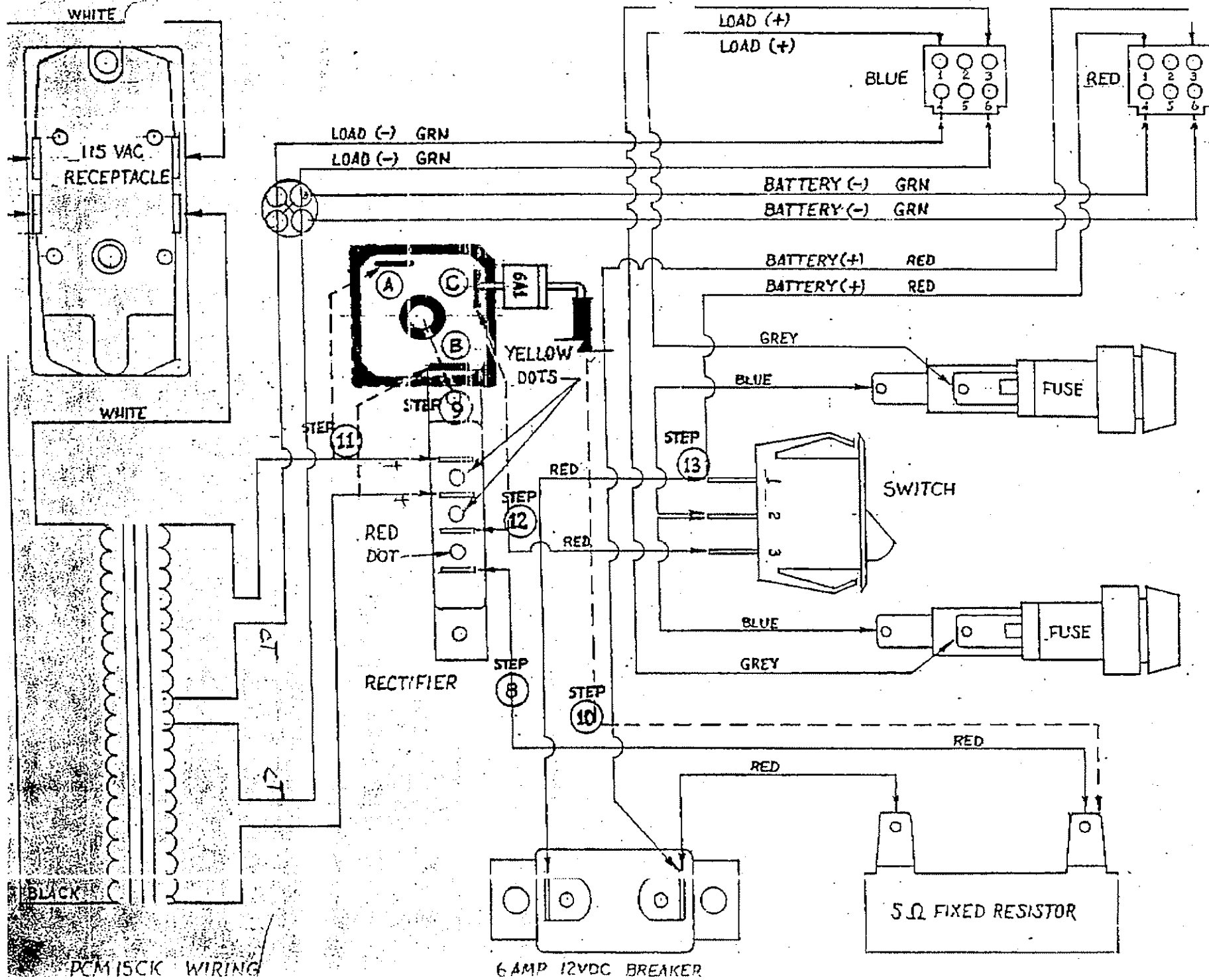


PC25 Lectro-Pak converter
 Mfgd, by Basler Electric Co.
 (model shown with SPDT relay)

PROCEDURE FOR INSTALLING 82-0042KIT REPLACEMENT DIODE ASSEMBLY

1. Disconnect 120VAC power cord servicing recreational vehicle.
2. Disconnect wire to positive terminal of RV battery.
3. Disconnect nylon plugs at rear of Lectro-Pak enclosure.
4. Remove front cover for access to internal wiring.
5. Disconnect AC wiring, remove mounting screws, remove Lectro-Pak from mounting hole.
6. Remove convenience receptacle (remove two hex head screws-leave wiring intact-push receptacle to one side to gain access to encapsulated diode assembly).
7. Remove fuseholder/switch assembly by removing the two hex head screws at top and side of enclosure. Disconnect the blue wires from the fuseholders and the red wires from the switch.
8. Remove and discard red wire connecting the encapsulated diode assembly and ceramic wire wound resistor. Remove remaining wires from the diode assembly. Remove the encapsulated diode assembly.
9. Enlarge the top screw hole that was holding the diode assembly to the enclosure to 5/32" diameter and mount the 82-0042KIT as shown in the wiring diagram. Use the hardware provided.
10. Connect the black wire extending from the assembly to the 1/4" quick connect terminal on the ceramic resistor.
11. Connect transformer leads to terminals A & B of the diode assembly.
12. Connect the single red wire previously removed from the rocker switch to terminal C and the switch (terminal 3).
13. Connect the remaining red wires to the rocker switch (terminal 1).
14. Connect the blue wires to the fuseholder assemblies.
15. Re-install fuseholder/switch assembly back into the Lectro-Pak.
16. Re-install convenience receptacle back into the Lectro-Pak.
17. Re-install the Lectro-Pak into the mounting hole.
18. Connect AC wiring and ground connections.
19. Install the front cover and re-attach nylon plugs into appropriate harnesses at rear of Lectro-Pak.
20. Re-attach wiring to the positive terminal of RV battery.
21. Connect power cord to 120VAC and check unit for proper operation.

Wiring diagram-schematic on reverse side.



PCM 15CK WIRING

6 AMP 12VDC BREAKER

5 Ω FIXED RESISTOR