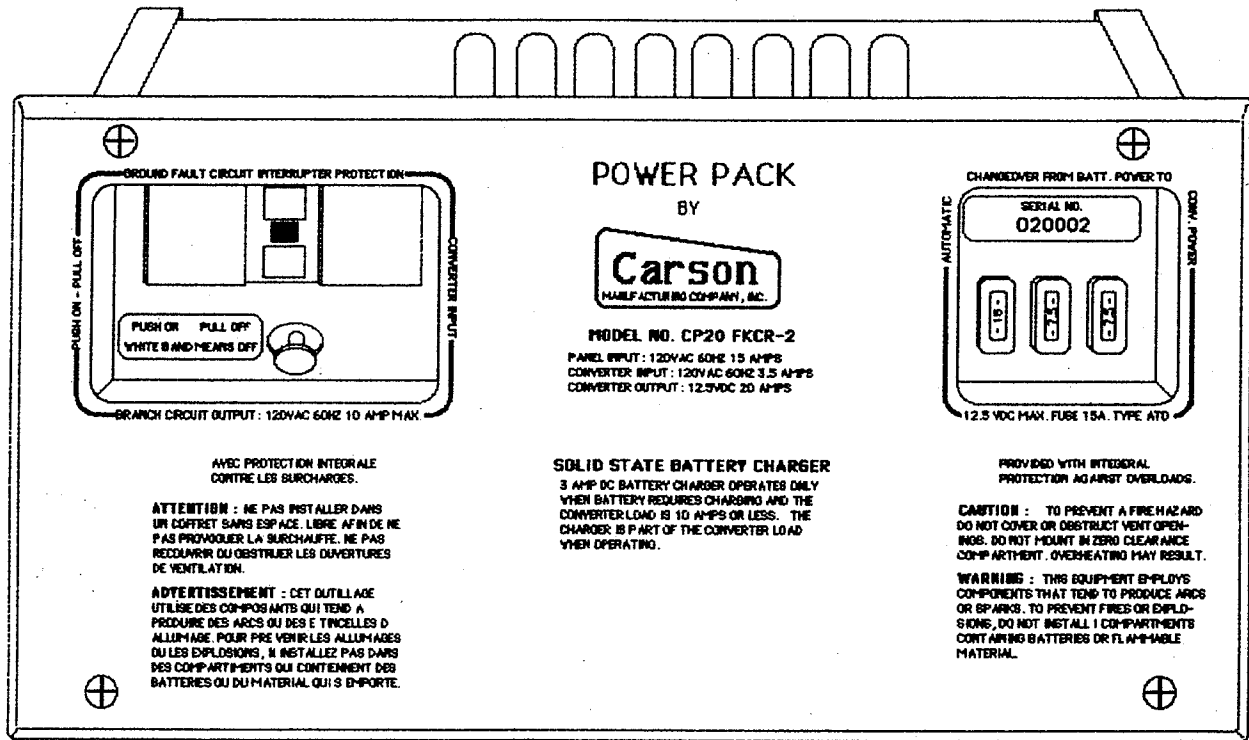


OWNER'S MANUAL

CR-2

CP-20FK-2 SERIES POWER PACK SYSTEMS



120 VAC LOAD CENTER / 12.5 VDC POWER CONVERTER

FEATURES

- Flush mounting provides for easy installation and accessibility.
- Rear, side, and bottom knockouts are provided to facilitate bench wiring.
- All 120VAC push-pull circuit breakers, GFCI protectors, DC selector switches, and 12.5VDC fuses are recessed to prevent accidental breakage and tripping.
- All models meet Underwriters Laboratories Standard No. 458 specifications and comply with the 1987 NEC Code.
- Power Packs equipped with integral battery chargers automatically switch from battery to converter power.
- Solid-State 12VDC battery charger has positive, 100% shut-off for a fully charged battery.
- Transformers have integral protectors sensitive to excessive temperatures and current.
- Three position DC selector switch is conveniently located.

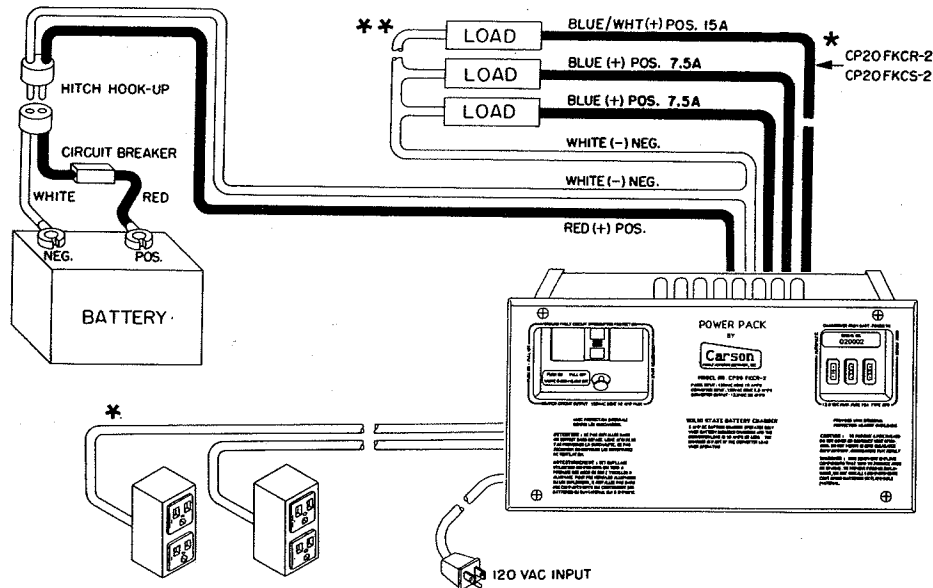
Carson

MANUFACTURING COMPANY, INC.

CHARACTERISTICS	CP20 FKCR-2	CP20 FKNR-2	CP20 FKCS-2	CP20 FKNS-2
PANEL INPUT POWER	120VAC 60HZ 15A*		120VAC 60HZ 30A	
CONV. INPUT POWER	ALL MODELS - 120VAC 60HZ 3.5A			
CONV. OUTPUT POWER	ALL MODELS - 12.5VDC 20A			
AC BRANCH PROTECTION	ONE 15AMP CIRCUIT BREAKER		TWO 15AMP CIRCUIT BREAKERS	
DC BRANCH PROTECTION	FUSED, 15A & 2-7.5A	FUSED, 2-15A	FUSED, 15A & 2-7.5A	FUSED, 2-15A
BATTERY CHARGER-3AMP	YES**	NO	YES**	NO
UNIT WEIGHT	ALL MODELS - 17 LBS.			

*THESE MODELS EQUIPPED WITH GFCI PROTECTION. UNITS COMPLY WITH 1987 NEC'S ARTICLE NO. 551-8(e).

**BATTERY CHARGER IS PART OF CONVERTER LOAD. CHARGER OPERATES ONLY WHEN BATTERY NEEDS CHARGING AND CONVERTER LOAD IS 10 AMPS OR LESS.

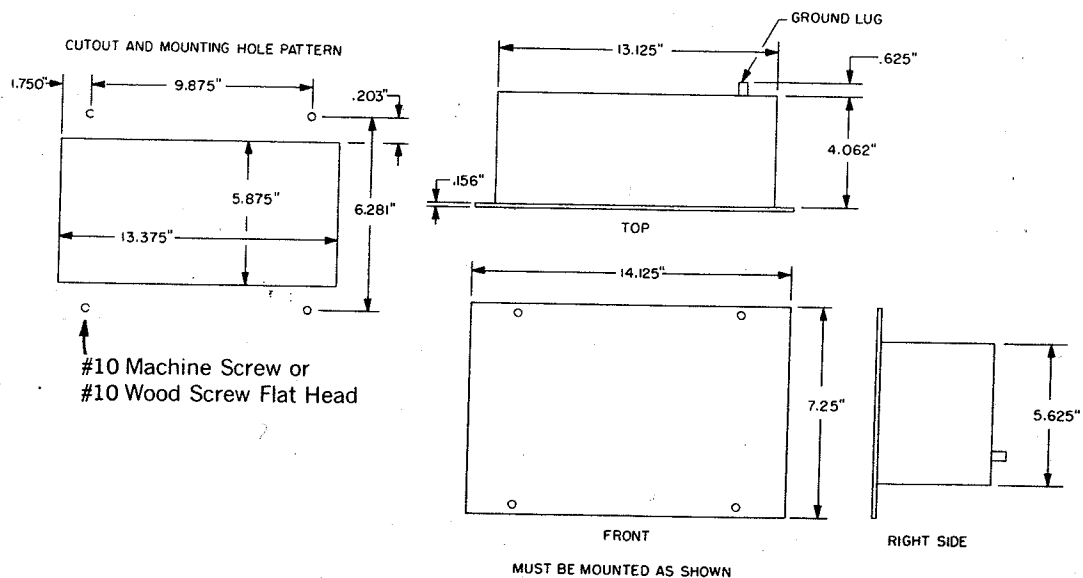


TYPICAL INTERCONNECTION

*Number of branches varies with CP model.

**Number of loads is established by the customer. Total load (amps) must not exceed branch rating.

MOUNTING DIMENSIONS



OPERATION AND CARE

1. The Power Pack should be installed as depicted in Figure No. 1. to ensure proper operation and cooling. In addition to the mounting holes, four .250" holes must be drilled into the mounting surface to accomodate the screws which secure the front cover to the Power Pack. Two wood strips, cut to the length of the Power Pack (13.375" inches) should be positioned behind the mounting surface. Wood screws are inserted through the case and mounting surface into the wood strips (see Fig. 1). The combined thickness of the mounting surface and wood strips should not exceed 1.5 inches. **CAUTION: IT MUST NOT BE INSTALLED IN COMPARTMENTS OR LOCATIONS CONTAINING BATTERIES OR FLAMMABLE MATERIAL (PARTICULARLY LIQUIDS SUCH AS GASOLINE OR KEROSENE).**

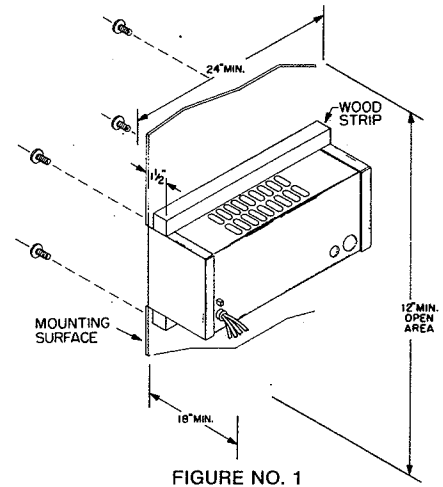


FIGURE NO. 1

2. WHEN PERFORMING ELECTRICAL MAINTENANCE, REMOVE THE A.C. INPUT POWER LINE FROM THE VEHICLE TO PREVENT POSSIBLE ELECTRICAL SHOCK OR DAMAGE TO THE POWER PACK.
3. Do not allow the Power Pack to become wet.
4. D.C. powered radio and stereo equipment, 12 Volt televisions, unfiltered fluorescent 12 Volt lighting, and TV signal booster should be connected directly to the RV battery.
5. Insure that the 120 VAC input and the AC branch output circuit are properly grounded to the Power Pack chassis using the chassis lugs provided.
6. Insure that the battery positive and negative terminals are properly connected to the Power Pack (the red wire is positive + and the white is negative -).
7. Do not short circuit the converter output leads (AC or DC).
8. CP-20FKCR-2 and CP-20FKCS-2 Power Packs have integral battery chargers and will automatically switch from battery to converter power when a source of 120VAC 60HZ is applied to the power supply assembly.

CP-20FKNR-2 and CP-20FKNS-2 Power Packs have a DC selector switch that is located on the right-hand side. These switches provide the following functions:

- | | |
|-----------------|---|
| OFF position - | There is no 12.5 VDC output (NOTE: The 120 VAC branch circuit(s) is/are live if the circuit breaker(s) is/are pushed in). |
| CONV position - | The converter provides a 12.5 VDC output to the DC branch circuits. This is the position that should normally be utilized when the recreational vehicle is connected to a source of 120VAC 60 HZ. |
| BATT position - | The storage battery provides a 12VDC output to the DC branch circuits. Use this position when 120VAC 60 HZ is not available. |

9. The AC circuit breaker(s) on the left side of Power Pack control 120VAC to:

The D.C. power converter

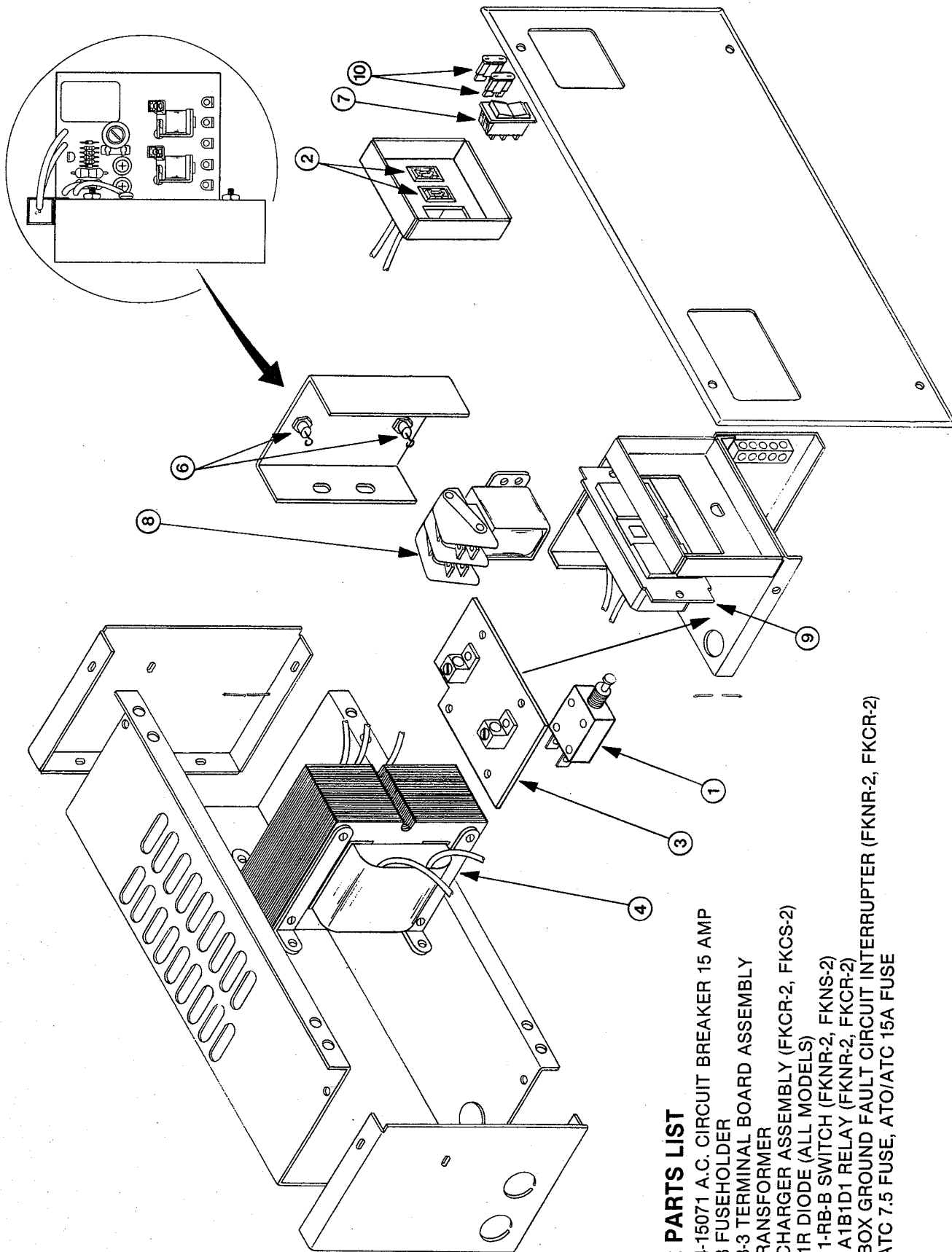
The A.C. branch circuits

The breaker is "on" when the button is pushed in, and "off" when the button is pulled out (white band showing).

10. Never replace a fuse with one rated higher than that supplied with the unit. If fuses blow repeatedly when the total load is less than the branch rating, one of the following conditions has probably occurred:

- (1) A defect has developed in the load (appliance, lights, etc.)
- (2) A wiring short has developed

11. Battery Charger operation (optional) — The battery charger will charge the battery only when the battery requires charging and the following conditions exist: (a) 120VAC is applied to the Power Pack and the AC circuit breakers are on (pushed in) - (b) the converter D.C. load is 10 amps or less for CP-20.



CP-20-2 PARTS LIST

1. 752-004-15071 A.C. CIRCUIT BREAKER 15 AMP
2. CP3408 FUSEHOLDER
3. CP3523-3 TERMINAL BOARD ASSEMBLY
4. 7259 TRANSFORMER
5. CP-20 CHARGER ASSEMBLY (FKCR-2, FKCS-2)
6. MR2001R DIODE (ALL MODELS)
7. B-RC911-RB-B SWITCH (FKNR-2, FKNS-2)
8. S86R11A1B1D1 RELAY (FKNR-2, FKCR-2)
9. 7677B-BOX GROUND FAULT CIRCUIT INTERRUPTER (FKNR-2, FKCR-2)
10. ATO/ATC 7.5 FUSE, ATO/ATC 15A FUSE

Figure 1 is a schematic diagram of a 120VAC branch circuit. The input line consists of a BLACK wire and a WHITE wire, both labeled 15A and 120VAC 60HZ. These wires are connected to the LINE terminals of a GFCI (Ground Fault Circuit Interrupter). The GFCI is shown as a rectangular box with four terminals: two on the left for the input and two on the right for the output. The output of the GFCI is connected to a branch circuit. The branch circuit has two parallel paths, each containing a 15A circuit breaker (K1) and a normally open (N.O.) switch. The branch circuit is grounded to CHASSIS GND. The output of the branch circuit is labeled BRANCH OUTPUT 120VAC 60HZ 10A MAX, with BLACK and WHITE wires. A meter (A) is connected in series with the branch output.

INPUT
120VAC 60HZ
30A

15A

15A

CHASSIS GND.

YELL WHT WHT BLK

BRANCH CKT#1
120VAC
60HZ
10A MAX.

BRANCH CKT#2
120VAC
60HZ
10A MAX.

[illegible]

RED - (BATT +)

15A FUSE

BLUE - (LOAD +)

15A FUSE

WHITE - (GND -)

C

SCHEMATIC FOR CP20-2