

the voltage setting may be excessive. It should not read more than 14.5 volts at normal engine speeds.

POWER SUPPLY INSTALLATION:

- (A) Connect the primary leads from the power supply directly to the battery terminals. Mount the ceramic fuse block with 50 amp. fuse in series with the positive lead. (With positive ground systems, the fuse goes in the negative lead). If possible, drill and tap a hole in the battery post itself for a contact stud. The more intimately the supply is connected to the battery, the less chance there is for voltage transients to reach it. Solder lugs are provided for the ends of the various leads.
- (B) The filament line comes prewired to the Jones plug, and has an in-line 9 amp. fuse. Connect this line to the ignition switch accessory terminal, as recommended in the schematic, Fig. 2. In most cars the 12 volts at this terminal is switched off while twisting the ignition key to start the engine. Thus, the relay in the power supply will also be turned off, and the transistors will not be subjected to the sharp transients put out by the starter motor. NOTE: The car radio is normally connected to the accessory terminal for the same reason. It may be more convenient to locate the 12 volt line going to the car radio, and splice into it with the transceiver filament line. Look for the car radio fuse, and connect to this circuit on the "hot side".

POWER SUPPLY PROTECTION—A Zener diode is installed in the Swan 14-X DC module for added protection. It is an 18 volt Zener which connects across the input terminals of the power supply. It conducts only when the input exceeds 18 volts, thus has no effect on normal operation. Transient voltage pulses which go beyond the 18 volt level will be absorbed by the diode, thus preventing them from reaching the transistors. This protection will be effective so long as the diode is operative. If transients reach a high enough level, or a long enough duration, the diode will eventually fail, and literally burn out. After this, the transistors are on their own, and will most likely fail for the same reason. (See Warranty Policy)

SPEAKER CONNECTIONS: Speaker leads coming from the Jones plug go to an under dash speaker, or to a speaker selector switch which may be installed as illustrated. Another arrangement which works well is to install a rear seat speaker for the car radio, and then connect the front speaker only to the transceiver.

A.C. OPERATION: The 12 volt power supply may be operated from an A.C. line by two methods.

- (A) Detach the D.C. Module, and plug in an A.C. line cord in place of it. Before applying power, disconnect the brown cable wire going to terminal (1) of the A.C. supply and connect a jumper from terminal (1) to (2). Temporarily tape the brown wire to keep it from shorting to ground, since it will be carrying 12 volts D.C. Now the power supply will operate when the A.C. line is plugged in, although the transceiver filaments will still be operating on the battery.

This arrangement will be useful primarily for checking out the A.C. portion of the supply when trouble shooting.

- (B) To operate the transceiver entirely on the A.C. line, it will be necessary to do the following: Disconnect the 5 wire cable going from the transceiver to the A.C. portion of the supply. Replace it temporarily with a 10 wire cable and hook-up as illustrated in the schematic diagram Fig. 4. This is the same cable and speaker hook-up used in the matching cabinet, 117-XC. Using the D.C. supply in this manner will prove useful for portable or emergency operation from the car when A.C. power is available.

If frequent A.C. as well as D.C. operation with the mobile supply is contemplated, both the 5 wire and 10 wire cables may be connected simultaneously to the supply. Thus, when operating on D.C., the 5 wire cable is plugged into the transceiver, and on A.C. operation the 10 wire cable is used.

MATCHING CABINET:

Ordinarily the A.C. supply will be purchased complete in a matching cabinet as either model 117-XC or 230-XC. However, in some cases an owner may have purchased a 117-X or 230-X basic supply only, perhaps in a D.C. supply combination, and he may wish later on to mount it in a matching cabinet. For this purpose the cabinet with speaker and cables is available separately. The basic A.C. supply mounts inside with three screws, and the pre-wired cable connects as shown in the schematic. Connections to the phone jack and speaker have already been made. Two leads from the indicator light must be run through the grommet and soldered to the terminals provided at the bottom of the supply. Refer to the schematic for clarification. The A.C. line cord is also provided with the matching cabinet kit. These line cords are available separately also, and come normally wired and stamped for 117 volts. 230 volt line cords are also available on special order, or the 117 volt line cord may easily be wired for 230 volts by referring to the schematic. Note that the 230 volt line cord will work only with the 230-X basic A.C. supply. The 117 volt line cord will work with either the 117-X or 230-X.

WARRANTY POLICY—The normal guarantee on your Swan power supply is for a period of 90 days from date of purchase, and covers all components, material and workmanship. In the case of transistor failure, however, the warranty on them will be void if inspection proves that high transient voltages from the automobile were responsible. We will do all in our power to be fair and just in this determination. The warranty card must be filled out and mailed to the factory within 10 days from date of purchase. Do not ship a unit to the factory for servicing without prior authorization. Check with your dealer first, as he may be in a position to handle the service work more quickly. This warranty is void if the equipment has been misused or damaged.