

particularly true at the higher frequencies. The longer the line, and the higher the frequency, the more important SWR becomes. However, in mobile installations the transmission line seldom exceeds 20 feet in length, and an SWR of even 4 to 1 adds very little to power loss. The only time SWR will indicate a low figure is when the antenna presents a load close to 50 ohms, but many mobile antennas will have a base impedance as low as 15 or 20 ohms at their resonant frequency. In such a case, SWR will indicate 3 or 4 to 1, and yet the system will be radiating efficiently.

4. The really important factor in your mobile antenna is that it should be carefully tuned to resonance at the desired frequency. The fallacy in using an SWR bridge lies in the fact that it is sometimes possible to reduce the SWR reading by detuning the antenna. Field strength may actually be reduced in an effort to bring SWR down. Since field strength is the primary goal, we recommend a Field Strength Meter for antenna tuning.

5. For antenna adjustments, the Swan 270B may be loaded lightly to about 100 ma. cathode current instead of the usual 200-300 ma. This will limit tube dissipation during adjustments, and will also help reduce interference on the frequency. In any case, do not leave the transmitter on for very long at one time. Turn it on just long enough to tune and load, and get a field strength reading.

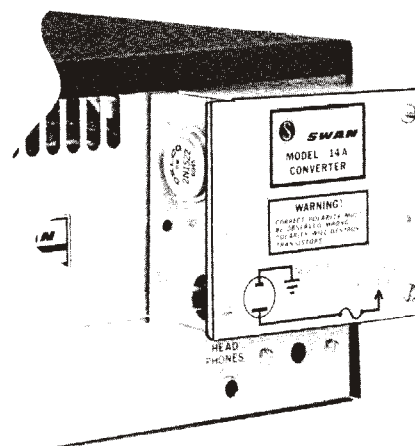
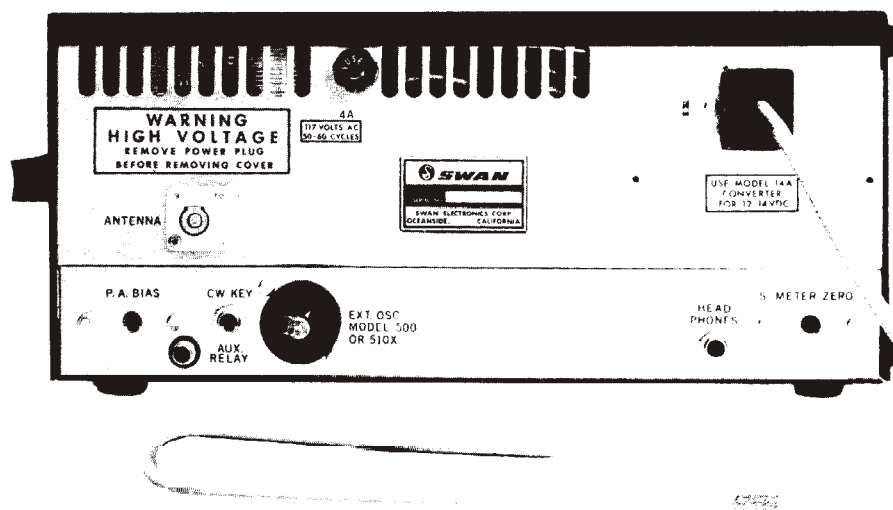
Start out with the antenna whip at about the center of its adjustment range. Set the VFO to the desired operating

frequency and then adjust P. A. TUNE for dip, and P. A. LOAD for 100 ma. Then observe the field strength reading. The Field Strength Meter may be set on top of the dash, on the hood, or at an elevated location some distance from the car.

Change the whip length a half inch, or so, at a time, retune the P. A. for 100 ma. loading each time, and check field strength. Continue this procedure until the point of maximum field strength is found. This adjustment will be most critical on 75 meters, somewhat less critical on 40, until on 10 meters the adjustment will be quite broad. After tuning the antenna to resonance, load the P. A. to full power.

MICROPHONE

The microphone input is designed for high impedance microphones only. The choice of microphone is important for good speech quality, and should be given serious consideration. The crystal lattice filter in the transceiver provides all the restriction necessary on audio response, and further restriction in the microphone is not required. It is more important to have a microphone with a smooth, flat response throughout the speech range. The microphone plug must be a standard 1/4 inch diameter three contact type. The tip connection is for push-to-talk relay control, the ring connector is the microphone terminal, and the sleeve is the common chassis ground. The microphone manufacturer's instructions should be followed in connecting the microphone cable to the plug. Either a hand-held or desk type microphone with push-to-talk control will provide a suitable installation.



MODEL 270B WITH
14A DC CONVERTER INSTALLED

FIG. 5. SWAN CYGNET MODEL 270B REAR VIEW