INSTALLATION

GENERAL

The installation of the Swan Cygnet is not at all difficult and it involves only the placement of the transceiver in its operational area (fixed or mobile), connection of power (either 117 volts ac, or 12 volts dc), and the connection of an antenna. The following paragraphs are therefore devoted to the installation requirements involving microphones, fixed and mobile operation, and recommended antenna types. Before actual installation, be sure to check for possible shipment damage. Remove the cabinet, (three screws on each side), and check to make sure that all tubes are firmly in place.

FIXED INSTALLATION

Locate the Cygnet in an area which is well ventilated and which provides complete operational freedom of the front panel controls. Connect the ac power cord to the 12 pin Jones connector on the back. If the Cygnet is a 117 volt model, plug the power cord into a standard 117 volt, 50-60 cycle outlet having a capacity of at least 10 amps. If the Cygnet is an Export model, it should first be set to the proper voltage tap: 208, 220, or 240 volts, 50-60 cycles. Remove the cabinet, and locate the terminal strip near the top of the power transformer. There are 3 terminal lugs, and a decal indicates the voltage tap for each. Connection has been made to the 220 volt tap at the factory. If your supply voltage is 208 or 240, unsolder the red colored wire and move it accordingly.

Connect an antenna to the Cygnet which is suitable for the band which is to be used.

FIXED ANTENNAS

A standard PL239 coax connector plug will fit the Cygnet's antenna jack, and 50 or 75 ohm coax cable to the antenna is recommended. RG58 or RG59 is satisfactory for runs up to 50 feet. For longer runs the larger RG8 or RG11 produces less line loss, particularly on 10 meters.

Any of the common antenna systems designed for use on the amateur high frequency bands will work well with the Cygnet. However, the amateur should consider an antenna system which best fits his operational requirements. For example, a rotatable beam antenna is usually best suited on the 20, 15 and 10 meter bands for DX operation, and an inverted "V" or a similar antenna is usually best suited for 80 and 40 meters. Methods for constructing antennas and antenna tuners are described in detail in the ARRL Antenna Handbook and similar publications. It is recommended that these publications be consulted during the design of any antenna system.

MOBILE INSTALLATION

Many different methods of mobile installation are possible, and it is expected that hams will find methods which are best suited for their installation requirements. Swan Electronics has available a Mobile Mounting Kit which is suitable for under-the-dash installations. Figure 4 shows the recommended mounting methods using this kit.

DC CONVERTER, MODEL 14A

For 12-14 volt DC operation in mobile installations, it will be necessary to use the 14-A converter, which plugs directly into the back of the 270B in place of the AC power connector. This accessory is available from your Swan dealer. Refer to installation instructions supplied with the 14-A converter.

MOBILE ANTENNAS

Mobile antenna installations are quite critical since the antenna represents a number of compromises when used on the high frequency bands. Many amateurs lose the efficiency of their mobile antennas through improper tuning. Points to remember about the mobile antenna are:

1. The "Q" of the antenna loading coil should be as high as possible. There are several commercial models available which use high "Q" coils, including the Swan Models 35, 45 and 55 mobile antennas. (Contact your Swan distributor or Swan Electronics for details.)

2. The loading coil must be capable of handling the power of the Model 270 without over heating. In TUNE position, the power output of the transceiver may exceed 150 watts. Wide spaced, heavy wire loading coils are essential.

3. The SWR bridge is a useful instrument, but unfortunately it is quite often misunderstood and over rated in importance. Basically, the SWR bridge will indicate how closely the antenna load impedance matches the transmission line. With long transmission lines, such as will be used in many fixed station installations, it is desirable to keep the impedance match fairly close in order to limit power loss. This is