

OPERATION

Before connecting any cables to the Swan 700 CX perform the following steps:

1. Locate the P.A. compartment and remove the packing material from the P.A. tubes.
2. Rotate the CAL-REC-TRANS-CW-TUNE switch on the lower left of the front panel counterclockwise to REC.
3. Rotate the AF GAIN control counterclockwise to OFF.
4. Connect wire from earth ground to ground stud provided on rear of chassis.
5. Connect a 50 to 75 ohm antenna feed-line to the coaxial connector on the rear chassis panel.
6. Connect the power supply cable to the Jones connector on the rear chassis.
7. Connect the power supply to the proper voltage source.

WARNING

Dangerous high voltage is present on the plate of the power amplifier whenever the power supply is energized. Never turn power on when the power amplifier cover is removed. High voltage is also present at Pin eight of the power plug.

RECEIVER

In RECEIVE position, or at any time when the transmitter is not in TRANSMIT, all circuits used in transmitting are disabled through the relay controlled circuits, K1, K2. The relays are energized for transmitting and de-energized for receiving. Relay K2, when de-energized, allows signals from the transmitting tank circuit and antenna to be fed to the receiver RF Amplifier, V6, where they are amplified and then fed to the control grid of the Receiver Mixer, V7. The local oscillator signal from the VFO Amplifier is now used to heterodyne the received signal to the IF frequency. All IF amplification is accomplished at this frequency, nominally 5500.0 kc, through V8 and V9 IF amplifiers. In the Product Detector V10A, the IF signal is heterodyned with the carrier frequency generated by Carrier Oscillator, Q3. The resultant audio signal is then put through a noise clipper network which is in or out of circuit by selection of ANL switch. The signal is then amplified by V10B, which then couples to V11, the AGC Amplifier, and V12, the output audio stage.

RECEIVER OPERATION

1. Rotate the AF GAIN control clockwise to about the 3 o'clock position. The power switch

will operate applying filament, relay, bias, medium, and 800 volt high voltage to the transceiver.

2. Wait approximately one minute to allow the tube filaments to reach operating temperature. During this period, perform the following steps:

- a. Rotate the BANDSWITCH to desired band.
- b. Rotate MIC. GAIN fully counterclockwise.
- c. Rotate CAR. BAL. control to the mid-scale position, with white dot on knob aligned with the long index mark on the panel.
- d. Preset PA PLATE control to mid-position.
- e. Preset PA GRID control to mid-position.
- f. Preset PA LOAD FINE to mid-position.
- g. Preset PA LOAD COARSE to position 1.
- h. Set tuning dial to desired frequency.
- i. Set RF GAIN control to approximately 3 o'clock position.

3. Carefully adjust the PA GRID and the PA PLATE controls for maximum receiver noise.

NOTE: The PA GRID control resonates the transmitter driver stages and the receiver RF amplifier plate circuit. The PA PLATE and PA LOAD controls adjust the input and output capacitors in the transmitter power amplifier final plate circuit, as well as the receiver RF amplifier grid circuit. Proper adjustment of these controls in the receiver position will result in approximately resonant conditions in the transmitter stages.

RECEIVER TUNING

The tuning dial of the 700-CX has a green tinted scale reading from zero to 450 which is used on 40, 20 and 15 meters. Above the green scale is a separate calibration for 80 meters, reading from 3500 to 4000KC. Below the green scale is the 10 meter scale, reading from 28 to 29.7 MC.

Precise tuning of a single sideband signal is very important. Do not be satisfied to merely tune until the voice can be understood, but take the extra care of setting the dial to the exact spot where the voice sounds natural. Above all, avoid the habit of tuning so that the voice is pitched higher than normal. This is an unfortunate habit practiced by quite a number of operators. The following points help to explain the effects of mistuning:

1. If you tune so the received voice is higher than normal pitch, you will then transmit off frequency, and your voice will sound lower than normal pitch to the other station. He will