ALIGNMENT AND TROUBLESHOOTING

The following procedures are given in the order performed during the factory alignment for the receiver. For home servicing, only partial alignment may be necessary. Read all procedures carefully before commencing either partial or complete alignment. See Figures 7, 8, and 9 for component placement. The following equipment is recommended for complete alignment.

1. R.F. Signal Generator (3 to 30 mc).

2. Vacuum Tube Voltmeter (VTVM).

RECEIVER ALIGNMENT:

Receiver alignment involves the adjustment of the antenna coils L101 through L105; the Mixer coils L201 through L205; and the I.F. coupling transformers T201, T301, and T401.

1. After allowing approximately ten minutes for warm-up, rotate the Main Tuning Dial until the 0 is aligned with the red indicator line.

2. Rotate the DIAL SET control until the 0 on the white scale, and 28.5 on the green scale, are aligned with the red indicator line.

3. Set the SIDEBAND SELECTOR switch to the NORMAL position.

4. Set BAND switch to band being aligned.

5. Set AGC switch to FAST position.

6. Set VFO CONTROL switch to XCV-R position.

7. Set SELECTIVITY switch to 2.7 position.

8. Set R.F. GAIN control to full clockwise position.

9. Set A.F. GAIN control to normal operating audio level.

10. Set PRESELECTOR control to the approximate frequency for the band being aligned.

11. Set FUNCTION SWITCH to ON position.

12. With a 50 ohm dummy load connected to the antenna input jack, or the receiving antenna connected to the jack, adjust T401, T301 and T201 for maximum noise (see Figure 7).

13. Switch the SIDEBAND SELECTOR switch to AM position.

14. Re-adjust T301 for maximum noise. Switch back to NORMAL position.

15. Disconnect the dummy load or antenna, and connect the R.F. Signal Generator output to the antenna input jack.

16. Set the R.F. Signal Generator output level to 10 microvolts.

17. Using the chart below, adjust the antenna and Mixer coils for maximum signal. When properly adjusted, the receiver S-Meter should read approximately S7 to S9 with 10 microvolts input. When the input level is reduced to approximately 1/10 microvolt, the signal should still be audible (see Figure 7).

R.F. Signal Generator Frequency	Antenna Coils	Mixer Coils
3800	L101	L201
7100	L102	L202
14200	L103	L203
21300	L104	L204
28500	L105	L205

ALTERNATE METHOD OF RECEIVER ALIGNMENT:

If an R.F. Signal Generator is not available, an alternate method of aligning the receiver is to use the built-in 100 kc crystal calibrator. Prior to commencing the alignment, check the calibrator against WWV. To align the receiver using the calibrator, set the FUNCTION SWITCH to CAL 100 kc, and proceed with the alignment as described above.

CRYSTAL CALIBRATOR FREQUENCY ADJUSTMENT:

The WWV signal, which is used to adjust the built-in 100 kc calibrator, can be received using the 600-R interconnected with the 600-T or Swan Transceiver; the Model 508 External VFO connected to the 600-R; or the Model 330 General Coverage Tuned. Otherwise, an outside source, such as