

Section 5
MAINTENANCE

5.3.11. RF ALIGNMENT BANDS 4-7.

(a) Connect signal generator and VTVM as in step 5.3.9.(a). Set bandswitch to band 4.

(b) Set dial to read 4.0 mc. Set signal generator to zero beat at 4.0 mc with BFO. Turn BFO off. Adjust tuning cores marked 4.0 (in L104, L107 and L111) for maximum indication.

(c) Set bandswitch to band 7. Set dial to read 7.0 mc. Set signal generator to zero beat at 7.0 mc with BFO. Turn BFO off. Tune trimmer capacitors marked 7.0 (C108, C120 and C128) for maximum indication.

(d) Repeat tuning procedures at 4.0 mc and 7.0 mc until no further increase in output can be obtained.

5.3.12. RF ALIGNMENT BANDS 8-15.

(a) Connect signal generator and VTVM as in step 5.3.9.(a).

(b) Set bandswitch to band 8. Set dial to 8.0 mc. Set signal generator to zero beat with BFO at 8.0 mc. Turn BFO off. Adjust tuning cores marked 8 (L105, L108 and L112) for maximum indication.

(c) Set bandswitch to band 15. Set dial to read 15.0 mc. Set signal generator to zero beat with BFO at 15.0 mc. Turn BFO off. Tune trimmer capacitors marked 15 (C110, C122 and C130) for maximum indication.

(d) Repeat tuning procedures at 8.0 mc and 15.0 mc until no further increase in output can be obtained.

5.3.13. RF ALIGNMENT BANDS 16-30.

(a) Connect signal generator and VTVM as in step 5.3.9.(a).

(b) Set bandswitch to band 16. Set dial to 16.0 mc. Set signal generator to zero beat with BFO at 16.0 mc. Turn BFO off. Adjust tuning cores marked 16 (in L106, L109 and L113) for a maximum indication.

(c) Set bandswitch to band 30. Set dial to 30.0 mc. Set signal generator to zero beat with BFO at 30.0 mc. Turn BFO off. Adjust trimmer capacitors C124, C132 and ANT TRIM for a maximum indication.

(d) Repeat tuning procedures at 16.0 and 30.0 mc until no further increase in output can be obtained.

5.3.14. RF ALIGNMENT BAND 1.

(a) Connect signal generator and VTVM as in step 5.3.9.(a).

(b) Set bandswitch to band 1. Set dial to 0.6 mc. Set generator to zero beat with BFO at 0.6 mc. Turn BFO off. Adjust core in L114 so that it is in approximately the same position in the inductor as the cores in L116 and L118. Adjust cores marked 0.6 (in L101 and L110) for a maximum indication. Adjust trimmer capacitor marked 0.6 (C140) for a maximum indication.

NOTE

TWO PEAKS MAY BE FOUND WHEN TUNING C140. USE THE PEAK THAT REQUIRES THE HIGHER VALUE OF CAPACITANCE. Refer to C140 in figure 5-1.

(c) Set dial to 1.4 mc. Set signal generator to zero beat with BFO at 1.4 mc. Turn BFO off. Tune trimmers marked 1.4 (C102 and C119) for a maximum indication. Adjust core marked 1.4 (in L115) for a maximum indication.

(d) Repeat tuning procedures at 0.6 and 1.4 mc until no further increase in output can be obtained.

5.3.15. VFO ALIGNMENT.

(a) GENERAL. - During manufacture of the VFO the frequency-determining elements are hermetically sealed within the outer cylindrical cover while they are being held at a high temperature. This drives out practically all moisture and creates a partial vacuum within the sealed compartment. Because of the method of fabrication and the efficiency of design, it is quite unlikely that the VFO will become misaligned through normal use or treatment. However, if it does become sufficiently misaligned, as indicated by the procedure outlined in paragraph 5.3.8.(b)(3), it must be returned to the factory for permanent alignment. Because alignment procedure involves breaking of the hermetic seal by removal of a small plug, the future stability of the VFO will be seriously impaired if conditions under which it was manufactured are not duplicated during alignment. Therefore, it is possible to align the VFO only temporarily without sending it back to the factory. If the VFO is