

COMPLETE ALIGNMENT

A.F. SECTION — This section is only applicable to versions not fitted with an integrated circuit.

Output stage quiescent current should be approximately 2 mA at 21°C (70°F) 1 mA at 10°C (50°F) and 4 mA at 32,5°C (90°F). If output transistors are replaced, R21 may have to be reselected to correct quiescent current. **TO MEASURE QUIESCENT CURRENT** disconnect collector of TR15 and measure between collector and P.C. Board common earth.

455 KHz IF.

1. Connect Signal generator to base of interpolation oscillator (TR3) via 10 nF capacitor and tune for maximum deflection on AVC meter. The exact centre frequency is determined by the ceramic filters and may be \pm a few KHz off 455 KHz.
Note: In the absence of an oscilloscope and sweep generator, the bandpass shape can be estimated by sweeping slowly with a normal signal generator whilst noting the output on the AVC meter. Should bandpass be unbalanced, displace generator to drooping side and re-peak to correct this. A slight centre trough is acceptable, as shown in Fig. 3 on the circuit diagram, and is dependent on the selection of the ceramic filters.
2. Adjust slugs in T2 and T3 for maximum output by observing built in AVC meter. To effect fine adjustment the input should be adjusted to give a reading of not more than one division on the AVC meter.
3. Set pre-set potentiometer R28 to give a reading of 4,3V at TP5.
4. Switch mode switch to side band and check that bandpass narrows to approximately half (3 KHz). The sideband bandpass should be smooth and free from troughs.

B.F.O. ADJUSTMENT

1. Establish centre frequency of 455 KHz bandpass on AM position.
2. Displace Signal generator to read centre frequency + 3,5 KHz.
3. Switch to L.S.B. and adjust T4 to give a zero beat in audio.
4. Return Signal generator to centre frequency of AM bandpass again.
5. Switch to U.S.B. and adjust C90 to zero beat.
6. Repeat the foregoing until a separation of approximately 3,5 KHz is established between the zero beats of U.S.B. and L.S.B.
7. To check symmetry, alternate switch between L.S.B. and U.S.B. whilst noting white noise only. The pitch of the noise should remain constant in either position.

2 TO 3 MHz INTERPOLATION ALIGNMENT

(Should be carried out with front panel on)

- (a) This section is aligned with clarify control set to central position by tuning slugs at the low frequency end and trimmers at the high frequency end of the KHz dial, 0 KHz being the 3 MHz alignment point, and 1000 KHz being the 2 MHz alignment point. T1 and C44 are the oscillator adjustments, and inductances L10 and L11 together with trimmer C56 and C67 are the R.F. amplifier adjustments.
- (b) In order to reduce calibration errors which may occur between alignment points, the following procedure should be adopted:
 1. Loosen grub screws holding thumbwheel and calibrated KHz drum on the three-ganged capacitor shaft.
 2. Set tuning capacitor fully closed.
 3. Set clarify control to centre position.
 4. Set KHz drum to read 150 KHz and tighten grub screws.
 5. Set thumbwheel for equal overtravel at ends of scale.
 6. Re-align as in paragraph (a) above.
 7. Check the scale for calibration errors in the intermediate positions and if necessary re-set the KHz drum as in 1, 2, 3 and 5 above as follows:

If the worst error reads below the scale reading, set the KHz drum to read 150 minus twice the error with tuning capacitor fully closed.