

should register at 47700 kc. (47.7 mc.). In lieu of this set signal generator to image frequency, 45400 kc. (45.4 mc.), increase generator output considerably, and check for response on VTVM. Though much weaker, this response should be readable with high generator output level.

6. Set receiver dial pointer to 54.0 mc. Swing signal generator frequency between 53 and 55 mc., with output reduced to that used in step 5. Note signal generator frequency when signal is tuned, i.e., when VTVM "peaks."
7. If in step 6, signal generator frequency is 54.0 mc., proceed to step 9. If signal generator frequency is lower than 54.0 mc., increase capacity of C52 (on top of oscillator section of ganged tuning capacitor) by no more than 1 uuf (9 degrees rotation) and repeat steps 5 and 6. If signal generator frequency (in step 6) is higher than 54.0 mc., decrease capacity of C52 by no more than 1 uuf (9 degrees rotation) and repeat steps 5 and 6.
8. Repeat steps 5, 6, and 7 until signal generator frequency of 50.0 mc. and 54.0 mc corresponds exactly with the 50.0 and 54.0 mc. setting of the dial pointer.

#### NOTE

If the tracking does not improve, but gets worse as steps 5, 6, and 7 are continually repeated, capacitor C52 is being turned in the wrong direction, i.e., clockwise when rotation should be counter-clockwise, or vice-versa. Minimum capacity occurs when the "slot" on C52 is toward the rear of the chassis.

9. Set the receiver dial pointer to 50.0 mc. Set the signal generator to the same frequency ("peak" generator on VTVM). Keeping signal generator output as low as possible, peak transformer T9 and coil L7 for maximum meter reading. The position of the slug in T9 should be approximately between the coil and link windings.

#### CAUTION

Correct slug setting of antenna coil of T9 corresponds with the second VTVM peak reading as the slug enters from the open end of the coil.

#### NOTE

Tuning of L7 will pull oscillator frequency (T10) slightly. To compensate, tune signal generator slightly to one side ( $\pm$  10.0 kc.) of alignment frequency, and re-peak L7 and T9. If meter reading increases, continue this procedure until no further increase can be obtained. If meter reading decreases, adjust signal generator frequency to opposite side of original frequency, and adjust L7 as described, until no further increase in VTVM reading is obtained. L7 may also be tuned by noting the amount of noise increase from the receiver, when peaking the coil, in the absence of a signal.

10. Using a crystal calibrator, repeat steps 5, 6, 7, and 8, while "zero-beating" the signal generator against the proper crystal calibrator harmonic.
11. Disconnect the signal generator and VTVM. Set the dial pointer to 50.0 mc. Adjust the S-meter potentiometer R56 for zero meter reading.