



## ELECTRICAL ALIGNMENT (in following order)

Before commencing alignment ensure dial pointer is set mechanically opposite first calibration point at extreme left hand end of dial with variable cap. Plates, C1, C2 fully meshed.

Turn on radio and allow a 15 minute warm up.

### 1. I.F. - BC. A.M. 455 Kcs. Band Switch on BC.

Connect AC output meter across speaker voice coil.

- 1st Connect Sig. Gen. at 455 Kcs. to stator lug C2 R.F. (center section) (use .01 isolating capacitor) and chassis. Set variable capacitor to 1500 Kcs.
- 2nd Adjust 455 Kcs. I.F. transformers at top and bottom doing T5 - L22, L21 then T4 - L20, L19, for maximum output.

### 2. I.F. - F.M. 10.7 Mcs. Band Switch on F.M.

Connect AC output meter across speaker voice coil.  
Connect 0 - 5 DC voltmeter (20K ohm/volt) between chassis and junction of R19 and R20 (marked X on schematic).

- 1st Connect standard Sig. Gen. at 10.7 Mcs. to grid of first I.F. stage (term #1 of 6BA6) (use .01 isolating capacitor) and chassis.
  - 2nd Adjust 10.7 Mcs. I.F. Transformers at bottom and top doing T2 - L15, L16 then T3 - L17 (on bottom) for maximum output. (Reduce Sig. Gen. output so that DC voltage on meter does not exceed 1 volt.)
  - 3rd Set level of Sig. Gen. to .25 volts on D.C. meter and adjust T3 - L18 (on top) for minimum audio signal on AC output meter.
- NOTE: To ensure proper adjustment, turn top core (L18) fully out, and then slowly in until point of minimum audio signal is found. The ratio detector circuit is now properly adjusted.
- 4th Connect Sig. Gen. to stator lug C1 R.F. (Center Section)(use .01 isolating cap.) and chassis.
  - 5th Adjust 10.7 Mcs. I.F. Transformers at bottom and top doing T1 - L13, L14 T2 - L15, L16 for maximum DC voltage (reduce Sig. Gen. output so that DC voltage on meter does not exceed 1 volt.)
  - 6th Repeat section 1 on A.M. I.F. to correct any small changes due to alignment of F.M. I.F.
  - 7th Repeat 5th part section 2. F.M. I.F. is now properly aligned.

### 3. R.F. BC. 1500 and 600 Kcs.. Band Switch on BC.

Connect Sig. Gen. to one side of F.M. Antenna Terminal (using 200 mfd. Dummy Ant.) and chassis. Dial at 1500 Kcs., peak C8, C7, C6. Dial and Sig. Gen. at 600 Kcs. rock dial adjusting C9 for max. sig. Retrim C8, C7, C6 at 1500 Kcs.

### 4. R.F. F.M. Band Switch on F.M.

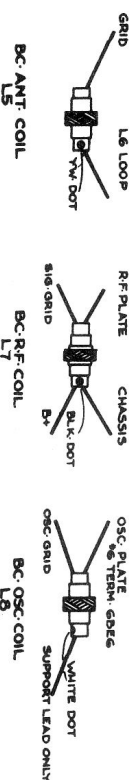
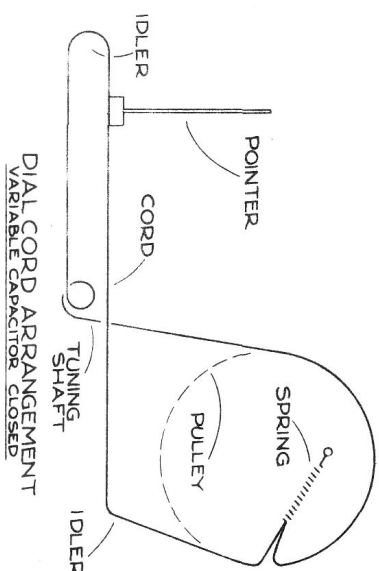
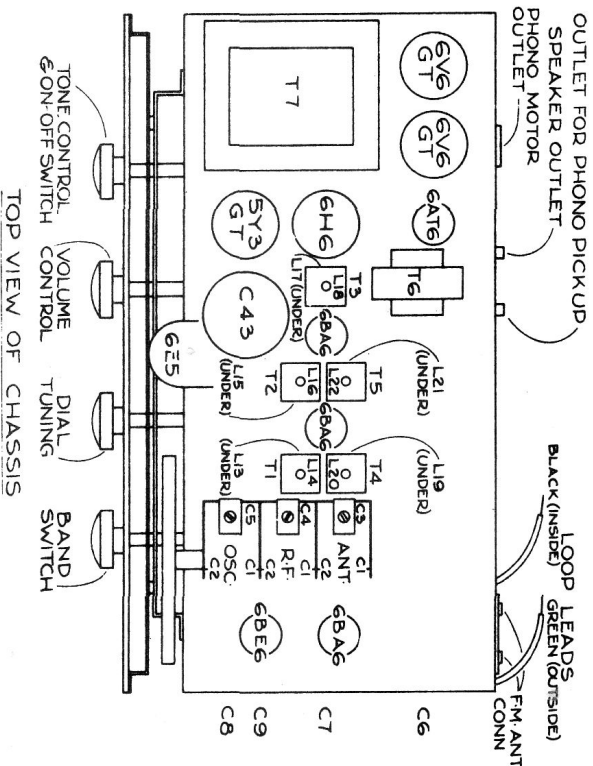
Connect F.M. Sig. Gen. across F.M. Antenna terminals (using 400 ohm carbon resistor, dummy ant. in hi-side of Sig. Gen. lead). Set Sig. Gen. deviation at 50 Kcs. Dial and F.M. Sig. Gen. at 103 Mcs. peak C5, C4, C3.

If no F.M. Sig. Gen. available, tune to highest freq. local station. Check calibration. If incorrect, correct with C5 (Osc.), peaking C4 and C3 after any adjustment of C5.

## SPECIAL NOTES

All R.F. Alignment (Sec. 3 & 4) must be done with base plate on chassis.

In replacing any capacitor or resistor it is imperative that the same value, tolerance and type be used and installed in the same manner and exact location.



# Sparton 9149 & 10549 AM/FM Receivers