

### ALIGNMENT INSTRUCTIONS

- 1) Allow chassis and equipment to be used at least 15 minutes for warm-up.
- 2) Maintain output of signal generator at a point no higher than required to produce a usable reading and use only insulated alignment tools for adjusting.
- 3) Use an isolation transformer between the chassis and the AC line, if available. If no isolation transformer is to be used, insert a .1 mfd. capacitor in series with the signal generator output cable to prevent shock and to protect the equipment.

#### FM IF ALIGNMENT USING AM SIGNAL GENERATOR AND VTVM

|    | SIGNAL GENERATOR COUPLING                                       | SIGNAL GEN. FREQ. | RADIO DIAL SETTING        | CONNECT VTVM                           | ADJUST             | REMARKS  |
|----|---|-------------------|---------------------------|--|--------------------|--|
| 1. | TO PIN 8 (CATHODE) OF 12DT8 THROUGH A 50 MMF (REMOTE ANT. HANK) | 10.7MC (UNMOD.)   | POINT OF NON-INTERFERENCE | DC PROBE TO POINT<br>COMMON TO CHASSIS | T3, S2 S1B<br>S1A. | ADJUST FOR MAXIMUM DEFLECTION.   |
| 2. | "   | "                 | "                         | DC PROBE TO POINT<br>COMMON TO POINT   | T4                 | ADJUST FOR ZERO READING. A POSITIVE AND NEGATIVE READING WILL BE OBTAINED ON EITHER SIDE OF THE CORRECT SETTING.<br>PROCEED WITH STEP 5. |

#### FM IF ALIGNMENT USING FM SIGNAL GENERATOR AND OSCILLOSCOPE

FREQUENCY MODULATE THE IF SIGNAL WITH A 60 CYCLE SINE WAVE TO A TOTAL DEVIATION OF 450 KC. ADJUST THE OSCILLOSCOPE INTERNAL HORIZONTAL DEFLECTION VOLTAGE TO 120 CYCLES, AND SYNCHRONIZE IT WITH THE 60 CYCLE SINE WAVE.

|    | SIGNAL GENERATOR COUPLING                                       | SIGNAL GEN. FREQ.          | RADIO DIAL SETTING        | CONNECT SCOPE                            | ADJUST              | REMARKS   |
|----|---|----------------------------|---------------------------|--|---------------------|---|
| 3. | TO PIN 8 (CATHODE) OF 12DT8 THROUGH A 50 MMF (REMOTE ANT. HANK) | 10.7MC (450 KC TOTAL DEV.) | POINT OF NON-INTERFERENCE | VERT AMP TO POINT<br>LOW SIDE TO CHASSIS | T3, S2 S1B,<br>S1A. | DISCONNECT STABILIZING CAPACITOR 2MFD. ADJUST FOR CURVE OF MAXIMUM AMPLITUDE AND SYMMETRY SIMILAR TO FIG. 1.  |
| 4. | "   | "                          | "                         | VERT. AMP TO POINT<br>LOW SIDE TO POINT  | T4                  | RECONNECT STABILIZING CAPACITOR 2MFD. ADJUST SO THAT 10.7MC OCCURS AT CENTER OF CROSSOVER LINES SIMILAR TO FIG. 2. SLIGHTLY RETOUCH T3 FOR MAX. AMPLITUDE AND STRAIGHTNESS OF CROSSOVER LINES. PROCEED WITH STEP 5. |

#### FM RF ALIGNMENT

|    | SIGNAL GENERATOR COUPLING                                       | SIGNAL GEN. FREQ. | RADIO DIAL SETTING | CONNECT VTVM                           | ADJUST       | REMARKS  |
|----|---|-------------------|--------------------|--|--------------|--|
| 5. | TO PIN 8 (CATHODE) OF 12DT8 THROUGH A 50 MMF (REMOTE ANT. HANK) | 108MC             | 108MC (SLUGS OUT)  | DC PROBE TO POINT<br>COMMON TO CHASSIS | T1, T2       | ADJUST FOR MAXIMUM DEFLECTION.   |
| 6. | "   | 88MC              | 88MC (SLUGS IN)    | "                                      | PADDER FLAPS | MOVE PADDER FLAPS CLOSER OR FURTHER FROM OSC. & RF COILS FOR MAX. DEFLECTION. REPEAT STEPS 5 & 6. FOR HIGHEST READING. |

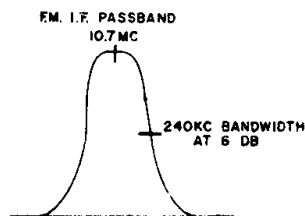


FIG. 1

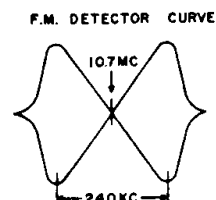


FIG. 2

# EMERSON RADIO Model G-1707

