

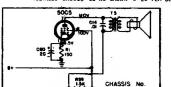
NOTES: CHASSIS NO. V-2180-1

SWITCH SHOWN AS VIEWED FROM FRONT OF SET.

3. ALL CAPACITANCE VALUES IN MFO AND ALL RESISTANCE VALUES IN OHMS UNLESS OTHERWISE SPECIFIED.

4-ALL VOLTAGES MEASURED FROM CHASSIS (GND.) USING A 20,000 OHM/VOLT METER VOLTAGES SHOULD BE AS SHOWN \$\frac{1}{2}\$ 20 PER CENT.

V-2180-75



Differences in audio output and power supply circuit of V-2180-78

The following changes are incorporated in later production of the V-2180-1 chassis:

To reduce hum modulation on strong signals, C36 located in the grid circuit of the 6BJ6 FM RF amplifier is changed to .005 mfd, C38 connected between the grid of the 12AT7 mixer stage and the selector switch (SW2) is changed to .005 mfd, C10 connected from terminal #3 of the 2nd FM IF transformer (T3) to the selector switch (SW2) is changed to 800 mmf, and R29 connected between terminal #3 of the 2nd FM IF transformer (T3) and the AVC line is changed to 10,000 ohms.

power supply cir
An 800 mmf capacitor (C62) is added becuit of V-2180-78. tween the shaft of the selector switch (SW2) and ground to reduce local oscillator radiation

In later production, these models used Chassis V-2180-7 or V-2180-7S, which are very similar to the circuit shown. Model H-354C7 is a phono-combination using Chassis V-2180-2 with a 50L6GT output tube, but similar to the circuit on this page. Model H-357ClO combination employes Chassis V-2180-5 with an AC power supply, but other parts of the circuit are similar to the one shown on this page. The alignment on the next page is applicable to all these sets.

CHASSIS V-2180-1 AND H-351T7

## Westinghouse Electric, Models H-350T7 and H-351T7, Chassis V-2180-1

## ALIGNMENT BROADCAST BAND

Connect an output meter across the speaker voice coil.

While making the following adjustments, keep the volume control set for maximum output and the signal generator output attenuated to avoid AVC action.

Check the dial pointer position by meshing the tuning capacitor plates completely and seeing that the dial pointer is set on the end mark of the dial scale.

| Step | Connect Signal Generator to —                              | Signal<br>Generator ,<br>Frequency | Radio<br>Dial<br>Setting | Adjust  |
|------|--|------------------------------------|--------------------------|---|
| 1    | Set the band switch to AM                                  |                                    |                          |   |
| 2    | Stator of tuning capacitor (A) through a 0.1 mfd capacitor | 455 kc.                            | minimum<br>capacity      | Pri. and sec. of T7 and T6 for max. output in order given |

NOTE: If the I-F transformers are badly mis-aligned, it may be impossible to obtain sufficient output using the above system. In this event, it will be necessary to align each transformer separately. Start with the last I-F transformer and work forward, connecting the signal generator to the control grid of the tube preceding the transformer under alignment.

| 3 | Radiated signal (no actual connection) | 1615 kc. | minimum<br>capacity | AM osc. trimmer (D) for max. output                       |
|---|--|----------|---------------------|---|
| 4 | Radiated signal (no actual connection) | 1400 kc. | tune to signal      | AM ant. trimmer (B) for max. output (rock-in) adjustment) |

## FM BAND

Do not align the FM circuits until all AM adjustments have been completed.

| Step | Connect Signal Generator to —   | Signal<br>Generator<br>Frequency | Radio<br>Dial<br>Setting | Adjust  |  |  |  |
|------|---|----------------------------------|--------------------------|---|--|--|--|
| 1    | Set the band switch to FM   |                                  |                          |   |  |  |  |
| 2    | Connect two 100,000 ohm resistors (the resistances must be equal within 5 per cent) between pin No. 7 of the 12AL5 tube and ground as shown on the schematic diagram. |                                  |                          |   |  |  |  |
| 3    | Connect a V.T.V.M. between points "X" and "Y" (see schematic diagram).  |                                  |                          |   |  |  |  |
| 4    | Pin No. 2 of 12AT7 through a 0.1 mfd mica capacitor   | 10.7 mc.                         | minimum<br>capacity      | Sec. of T4 for zero (use medium strength signal)              |  |  |  |
| 5    | Connect the V.T.V.M. between point "Z" and ground.  |                                  |                          |   |  |  |  |
| 6    | Same as step 4  | 10.7 mc.                         | minimum<br>capacity      | Pri. of T4 and pri. and sec. of T3 and T2 for maximum voltage |  |  |  |
| 7    | Reconnect the V.T.V.M. between points "X" and "Y" and increase the signal strength 10 times.  |                                  |                          |   |  |  |  |
| 8    | Same as step 4  | 10.7 mc.                         | minimum<br>capacity      | Recheck sec. of T4 for zero voltage                           |  |  |  |
| 9    | Reconnect the V.T.V.M. between point "Z" and ground.  |                                  |                          |   |  |  |  |
| 10   | Same as step 4  | 10.7 mc.                         | min. cap.                | Pri. of T4 for maximum voltage                                |  |  |  |
| 11   | Remove the two 100,000 ohm resistors that were inserted in step 2.  |                                  |                          |   |  |  |  |
| 12   | FM ant. terminal through a 300 ohm<br>non-inductive resistor  | 98 mc.                           | 98 mc.                   | FM osc. core for maximum voltage                              |  |  |  |
| 13   | Same as step 12   | 98 mc.                           | 98 mc.                   | FM R-F trimmer (C46) for maximum voltage                      |  |  |  |
| 14   | Same as step 12   | 105 mc.                          | tune to signal           | FM R-F core for maximum voltage                               |  |  |  |
| 15   | Same as step 12   | 90 mc.                           | tune to signal           | FM R-F trimmer (C46) for maximum voltage (rock-in)            |  |  |  |
| 16   | Recheck steps 14 and 15 for tracking.   |                                  |                          |   |  |  |  |

