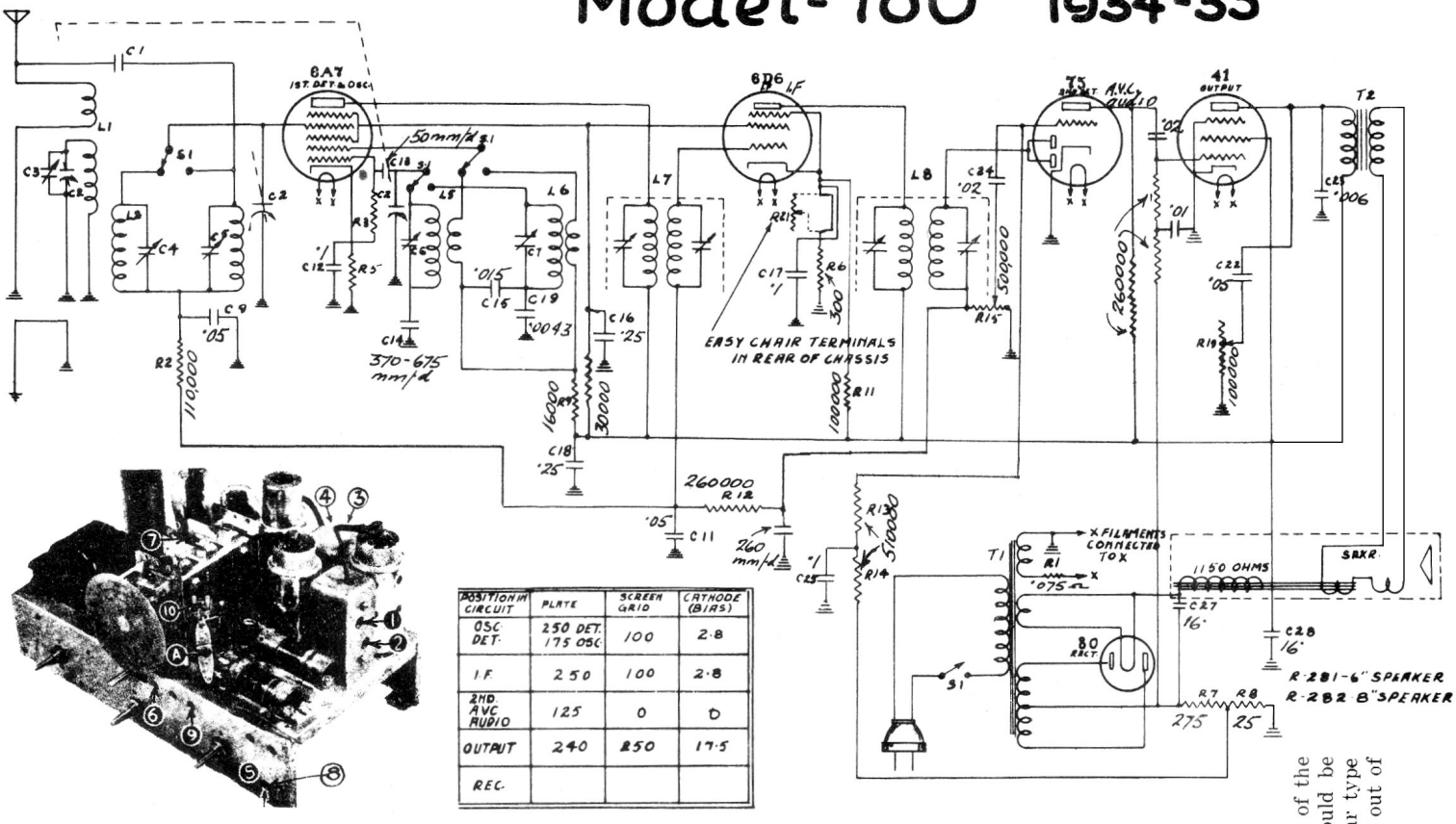
Model-180 1934-35



POSITION IN CIRCUIT	PLATE	SCREEN GRID	CATHODE (BIAS)
OSC. DET.	250 DET. 175 OSC.	100	2.8
I.F.	250	100	2.8
2ND. A.V.C. AUDIO	125	0	0
OUTPUT	240	250	17.5
REC.			

I. F. ALIGNMENT

1. Set the test oscillator to **exactly** 370 k.c. Connect the output leads of oscillator from the 6-A-7 control grid to ground and set the range switch (right-hand knob) to the broadcast position (clockwise). Carefully adjust the I. F. transformer trimmers Nos. 1, 2, 3, and 4 for maximum output meter deflection. Repeat the four adjustments since the adjustment of each trimmer has some effect on the others.

BROADCAST BAND ALIGNMENT

To calibrate the set, turn its dial to the exact frequency setting of the signal (either a station or the oscillator) then carefully adjust trimmer No. 5 (broadcast oscillator shunt trimmer) until the signal is tuned in with maximum volume at its correct frequency setting.

VERY IMPORTANT: In aligning all but the I. F. stage it is absolutely necessary to have a 400 to 500 ohm resistor in series with the antenna lead to the oscillator. **Do not omit this resistor or the alignment will be incorrect.**

Set the test oscillator to approximately 1400 k.c. and carefully tune the receiver to the signal. Adjust trimmer No. 6 (broadcast detector shunt trimmer) and trimmer No. 7 (broadcast pre-selector shunt trimmer) for maximum meter reading. Retune the receiver and check the adjustments. Do not touch trimmer No. 5 since this will change the calibration. Set the test oscillator to 600 k.c. and tune the receiver to the signal. Adjust trimmer No. 8 (broadcast oscillator padding trimmer) to get maximum output meter deflection. Retune the receiver dial to a peak and readjust the trimmer. Continue this procedure of adjusting the trimmer and retuning the set until the output meter reading cannot be increased. **This procedure must be followed or the receiver will not be properly aligned.**

With a 1400 k.c. test oscillator signal, check alignment of trimmers No. 6 and 7.

SHORT-WAVE BAND ALIGNMENT

1. Turn the receiver range switch to the short-wave band position (counter-clockwise).

2. Set the test oscillator to give a 20 meter (15,000 k.c.) signal. If your oscillator cannot reach this frequency, use the second harmonic of 7,500 k.c., the third harmonic of 5,000 k.c., or the fourth harmonic of 3,500 k.c.. all of which will give a 15,000 k.c. signal (or 20 metres).

3. To calibrate this point, turn the receiver dial to 15 meters on the inner dial scale and adjust trimmer No. 9 (shortwave oscillator shunt trimmer) to give maximum output. Generally two peaks will be found. Align on the peak secured with the trimmer screw farthest out. Then adjust trimmer No. 10 (short-wave detector shunt trimmer) to a peak. After this is done, try detuning No. 10 in either direction and retune the receiver dial. If this gives a higher output, continue detuning No. 10 and retuning the dial until the maximum output meter reading is reached. If this procedure results in a lower output, detune the trimmer in the opposite direction and retune the dial, etc.

IMPORTANT: The antenna coupling condenser marked "A" in the diagram is adjusted to a definite capacity at the factory and should not require any further adjustment. Therefore, do not adjust trimmer "A" unless it is found that trimmer No. 10 will not peak or if maximum output is obtained with No. 10 either all the way out or all the way in. If it is necessary to adjust trimmer "A", turn its adjusting screw all the way in and then turn it out just far enough to give a satisfactory peak on No. 10 when trimmer No. 10's adjusting screw is almost all the way out.

Always readjust No. 10 after adjusting trimmer "A".

4. Tune the receiver to about 21 meters, and check for the image signal which should be weaker than the 20 meter signal. If the image is as strong as the signal it shows that trimmer No. 10 is not properly adjusted. No signal at 21 meters but one at 19 meters shows that trimmer No. 9 is aligned on the image frequency and thus both No. 9 and 10 must be readjusted at the proper frequency.

Note: After completing the alignment, all of the trimmers except the padding trimmers should be locked in place with Ambroid or some similar type cement in order that they will not be jarred out of adjustment.

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DATA SHEET STEWART-WARNER -24.