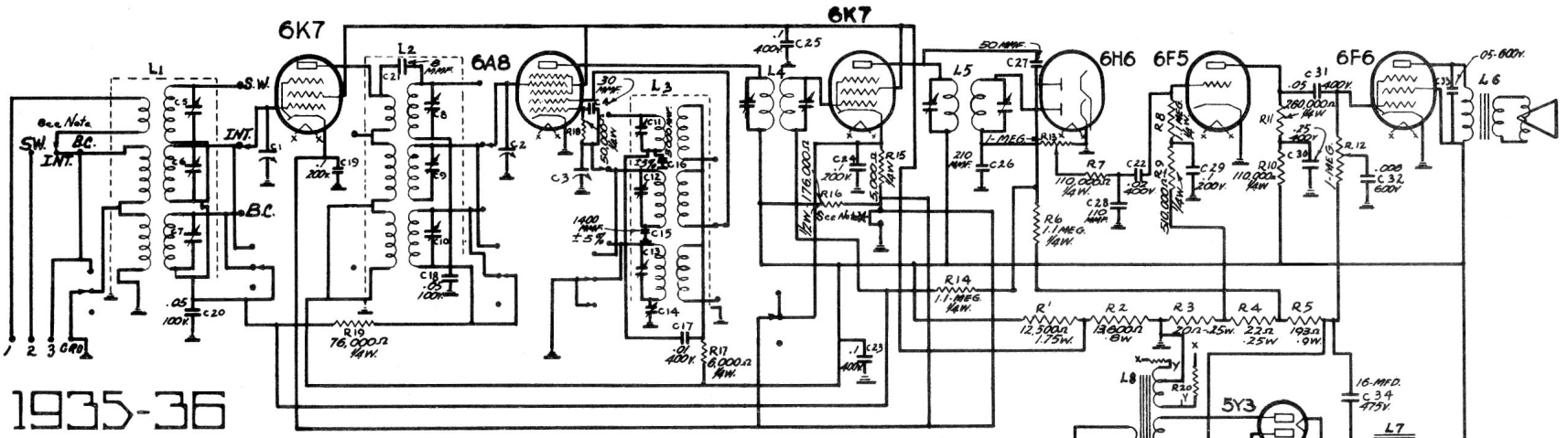


I.F. = 370 K.C.

MODEL R-185

SCHUBERT-CHOPIN AND BEETHOVEN

I. F. ALIGNMENT

Set the test oscillator to exactly 370 k.c., connect the output leads of oscillator through an .02 mfd. coupling condenser to the 6-A-8 control grid to ground. Set the range switch (lower left-hand knob) to the broadcast position (clockwise). Carefully adjust the I.F. transformer trimmer Nos. 10, 11, 12 and 13, for maximum output, beginning with 2nd I.F. trimmers Nos. 12 and 13. Repeat the four adjustments since the adjustment of each trimmer has some effect on the others.

BROADCAST BAND ALIGNMENT

1. Check the position of the dial pointer on the condenser shaft by pushing the rotor plates of the gang condenser to maximum capacity position. The pointer should be set on centre of the black dividing line on 550 k.c. end of dial. Please note that the plates should be pushed with the fingers, and **not** turned by means of the dial drive knob.

2. The range switch (left-hand knob) should be set to the maximum clockwise position, which is the broadcast setting.

3. Connect a standard dummy antenna in series with the test oscillator output and the receiver antenna lead. If a standard dummy antenna is not availaible a 400 ohm, 1 watt carbon resistor may be substituted with fairly good results. THE DUMMY ANTENNA OR 400 OHM RESISTOR MUST REMAIN CONNECTED FOR ALL BROADCAST FREQUENCY ADJUSTMENTS IN ORDER TO SECURE PROPER ALIGNMENT OF THE ANTENNA STAGE. Ground the receiver chassis, and connect the oscillator ground to the chassis.

4. Wherever possible, use a broadcast station signal between 1300 and 1400 k.c. to calibrate the receiver dial. If no such station can be heard, you can use a 1400 k.c. signal from your oscillator, provided that it is properly calibrated. To calibrate the set, turn the dial pointer to the exact frequency setting of the signal, then carefully adjust trimmer No. 7 (broadcast oscillator shunt trimmer) until the signal is tuned in with maximum volume at its correct frequency setting.

5. With the test oscillaor set at 1400 k.c., carefully tune receiver to the signal; adjust trimmer No. 4 (broadcast R.F. trimmer) and trimmer No. 1 (broadcast antenna shunt trimmer) for maximum output meter reading. Retune the receiver and check the adjustments.

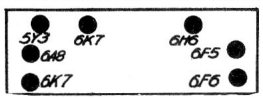
6. Set the test oscillator to approximately 600 k.c., and tune the receiver to the signal. Adjust trimmer No. 14 (broadcast oscillator series pad) to get maximum output meter deflection. Retune the receiver dial pointer to a peak, and readjust the trimmer. Continue this procedure of adjusting the trimmer until the output meter reading cannot be increased. Trimmer No. 14 should also be used to adjust calibration of 550 k.c. end of dial. This procedure must be followed or the receiver will not be properly adjusted.

7. With a 1400 k.c. signal, recheck alignment of trimmers Nos. 1, 4, and 7.

VOLTAGE CHART

TUBE	TUBE FUNCTION	HEATER	PLATE	BIAS	SCREEN GRID
6K7	R.F. AMP.	6.3	250	-3 #	80
6A8	1ST. DET. & OSC.	6.3	250	-3 #	80
6K7	I.F. AMP.	6.3	250	-3 #	80
6H6	2ND. DET.	6.3	0	0	0
6F5	1ST. AUDIO	6.3	100	-1.3 †	0
6F6	POWER OUTPUT	6.3	245	-16.5 #	250
5Y3	RECTIFIER	5	—	—	—

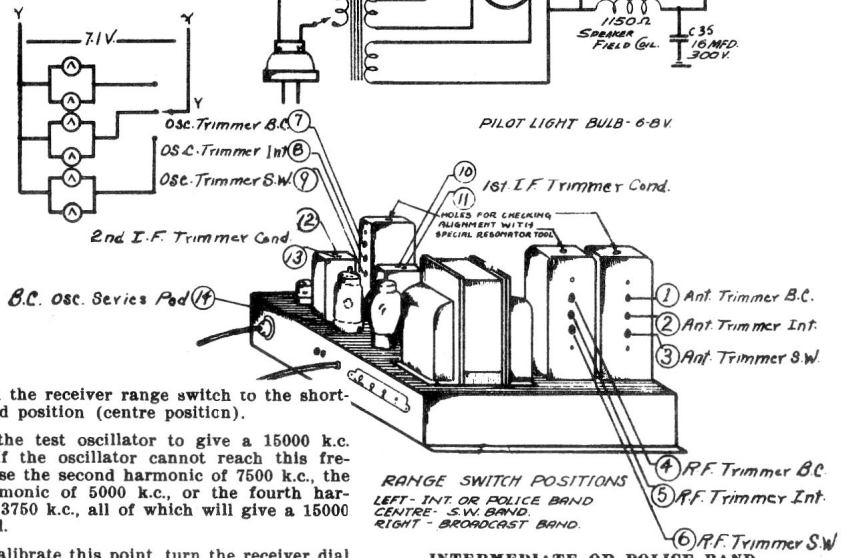
* CATHODE 6V. BROADCAST BAND ONLY. (6A8) OSC. PLATE = 220.
CATHODE 0V. INT. AND S.W. BAND.
≠ MEASURED FROM JCT. BETWEEN R4 & R5 TO CHASSIS.
† MEASURED FROM JCT. BETWEEN R3 & R4 TO CHASSIS.
# MEASURED FROM HIGH SIDE OF R5 TO CHASSIS.
MEASUREMENTS MADE WITH 1000 Ω PER VOLT VOLTMETER.



TUBE LOCATIONS R-185

SHORT-WAVE ALIGNMENT

VERY IMPORTANT—A 400-ohm, 1-watt carbon resistor ONLY must be connected in series with the antenna lead to the oscillator. DO NOT OMIT THIS RESISTOR OR THE ALIGNMENT WILL BE INCORRECT.



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

2. Set the test oscillator to give a 15000 k.c. signal. If the oscillator cannot reach this frequency, use the second harmonic of 7500 k.c., the third harmonic of 5000 k.c., or the fourth harmonic of 3750 k.c., all of which will give a 15000 k.c. signal.

3. To calibrate this point, turn the receiver dial indicator to 15 (15 megacycles or 15,000 k.c.) on short-wave position of dial, and adjust trimmers No. 9 (short-wave 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. 6 (short wave R.F. shunt trimmer) for maximum output. (When adjusting trimmer No. 6 two peaks may be found. The correct one is when trimmer is turned farthest in). Then adjust trimmer No. 3 (short wave antenna shunt trimmer) for maximum output.

4. With a strong 15,000 k.c. signal from the oscillator, tune the receiver to 14260 k.c. and check for the image signal which should be weaker than 15.000 k.c. signal. If the 14260 signal is as strong as the 15,000 it shows that the trimmer No. 6 is not properly adjusted. If no signal is received at 14,260 k.c., but one at 15,740 k.c., it shows that trimmer No. 9 is aligned on wrong frequency, and thus both No. 6 and No. 9 must be readjusted at the proper frequency.

INTERMEDIATE OR POLICE BAND

A 400 ohm resistance for dummy antenna should be used the same as in short-wave band.

1. Turn the receiver range switch to the extreme left position.

2. Set the test oscillator to give a 5000 k.c. signal.

3. To calibrate this point, turn the receiver dial pointer to 50 (500) on middle wave frequency (inside band), and adjust trimmer No. 8 (2nd band oscillator shunt trimmer) to give maximum output. The correct signal will be the one found when the trimmer is screwed the furthest out, or the lowest capacity setting. Adjust trimmers Nos. 5 and 2 for maximum output.

Note—If the 6-A-8-G or 6-K-7G Octal base tubes are interchanged with the 6-A-8 and 6-K-7 type metal tubes, the receiver should be completely realigned, otherwise a very noticeable reduction in sensitivity and selectivity will result.