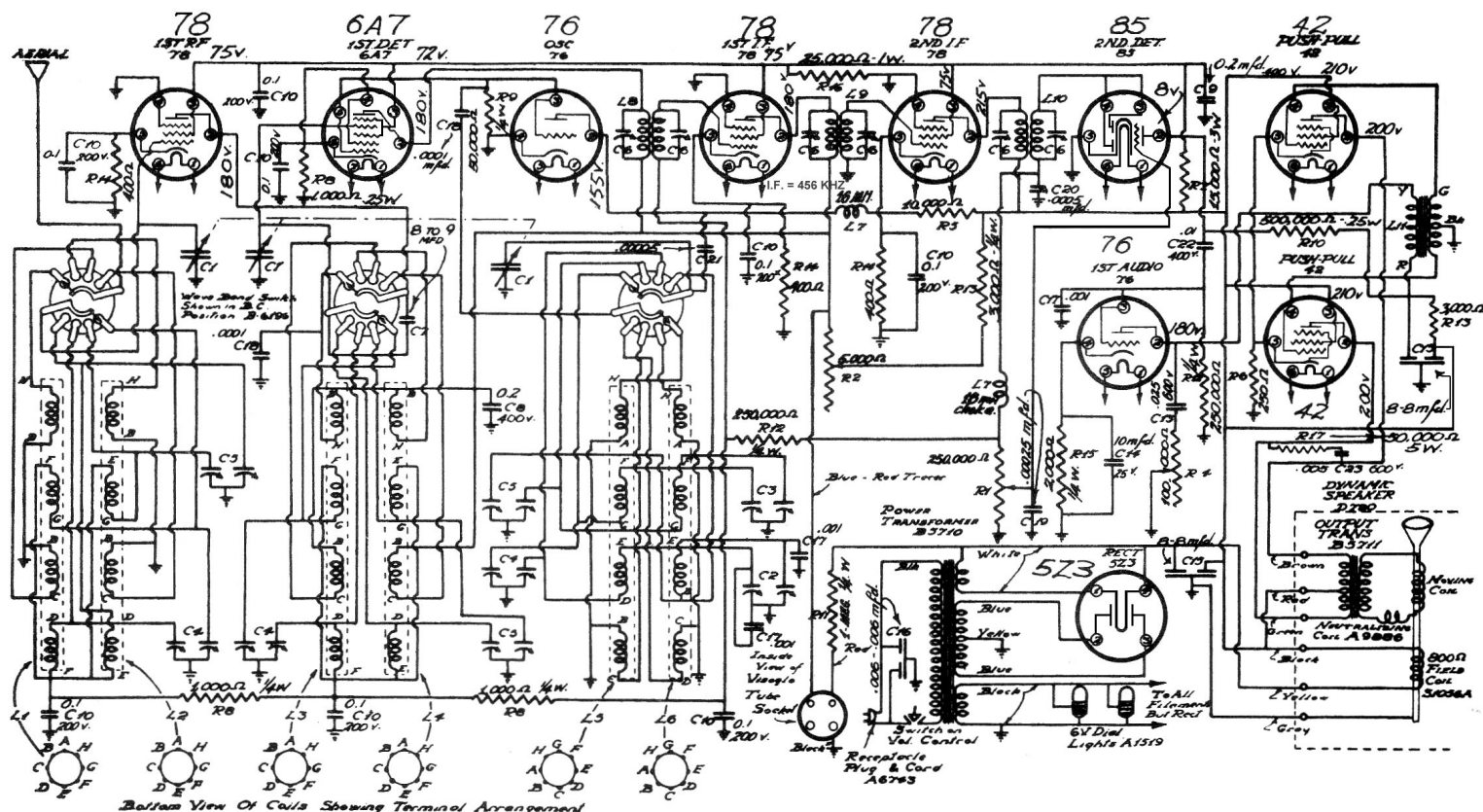


Sparton Model 604 A.C. Receiver



ALIGNMENT PROCEDURE--Model 604

The step by step alignment procedure must be rigidly adhered to if the original degree of sensitivity and selectivity of the receiver are to be maintained.

The names of the various trimmer condensers referred to below by number are as follows:

C-6	I.F. Trimmer Condensers	C4-5	B.C. Band Oscillator Trimmer
C4-1	B.C. Band Ant. Trimmer	C5-5	No. 1 S.W. Band Oscillator Trimmer
C5-1	No. 1 S.W. Band Ant. Trimmer	C4-6	No. 2 S.W. Band Oscillator Trimmer
C4-2	No. 2 S.W. Band Ant. Trimmer	C5-6	No. 3 S.W. Band Oscillator Trimmer
C5-2	No. 3 S.W. Band Ant. Trimmer	C3-1	B.C. Band Oscillator Padding Condenser
C1-3	B.C. Band R.F. Trimmer	C3-2	No. 1 S.W. Band Oscillator Padding Condenser
C5-3	No. 1 S.W. Band R.F. Trimmer	C2-1	No. 2 S.W. Band Oscillator Padding Condenser
C4-4	No. 2 S.W. Band R.F. Trimmer	C2-2	No. 3 S.W. Band Oscillator Padding Condenser
C5-4	No. 3 S.W. Band R.F. Trimmer		

Figures 1 and 2 show location of these trimmers on the chassis.

NOTE—With condenser plates flush, the dial pointer should read exactly 540 K.C. The pointer can be adjusted to this position by loosening the hex-head binding nut on the station selector shaft.

1. INTERMEDIATE FREQUENCY ALIGNMENT.

(a) Connect output of oscillator to grid of type 6A7 converter tube and ground of chassis. Connect the output meter across the voice coil of the speaker.

(b) Adjust frequency of oscillator to exactly 456 K.C.

(c) Turn Volume Control to the full on position and reduce oscillator output until output meter reading is approximately 2/3 reading.

(d) Adjust trimmer condensers C-6 (see Fig. 1—6 trimmers in all) until output meter reading is at maximum. If the trimmer adjustments increase the output meter reading to an off-scale value, reduce the oscillator output to bring the needle on scale again, and continue to adjust for a maximum. Repeat the adjustment of the six C-6 condensers several times for a maximum reading on the meter.

NOTE—For satisfactory alignment of the I.F. stages, set selector switch in the broadcast position and set dial at about 1000 K.C.

2. OSCILLATOR AND R. F. ADJUSTMENTS

Connect oscillator to antenna.

(a) Broadcast Band.

Adjust condenser C4-5 so that with oscillator set at 1500 K.C. the receiver dial pointer reads exactly 1500. Adjust condenser C3-1 so that with oscillator set at 600 K.C. the dial pointer with signal tuned in reads exactly 600. Repeat adjustment of both C3-1 and C4-5 several times. With oscillator set at 1500 again and signal tuned in on receiver adjust condensers C4-1 and C4-3 for maximum output meter reading. The oscillator calibration has an allowable error of ± 5 K.C. at 600 K.C.

(b) No. 1 short wave band.

Repeat the above adjustment on No. 1 S.W. Band—trimming oscillator condenser C5-5 at 3000 K.C. and padding condenser C3-2 at 1500 K.C. Adjust condensers C5-1 and C5-3 at 3000 K.C. for maximum output meter reading.

(c) Repeat again on No. 2 S.W. Band—trimming oscillator condenser C4-6 at 7200 K.C. and padding condenser C2-1 at 3600 K.C. Trim condensers C4-2 and C4-4 for maximum output meter reading at 7200 K.C.

(d) Repeat adjustment again for No. 3 S.W. Band—trimming oscillator condenser C5-6 at 15000 K.C. and padding condenser C2-2 at 9000 K.C. Adjust condensers C5-2 and C5-4 for maximum output meter reading at 15000 K.C.

WARNING—In aligning the short wave bands of this receiver, for a given frequency signal from the oscillator, two signals might be heard on the receiver, apart in frequency by 900 K.C. The signal to which the receiver must be aligned is the signal of highest frequency. Aligning to the lower frequency signal or spurious "image" will effect a distinct loss in sensitivity of the receiver.

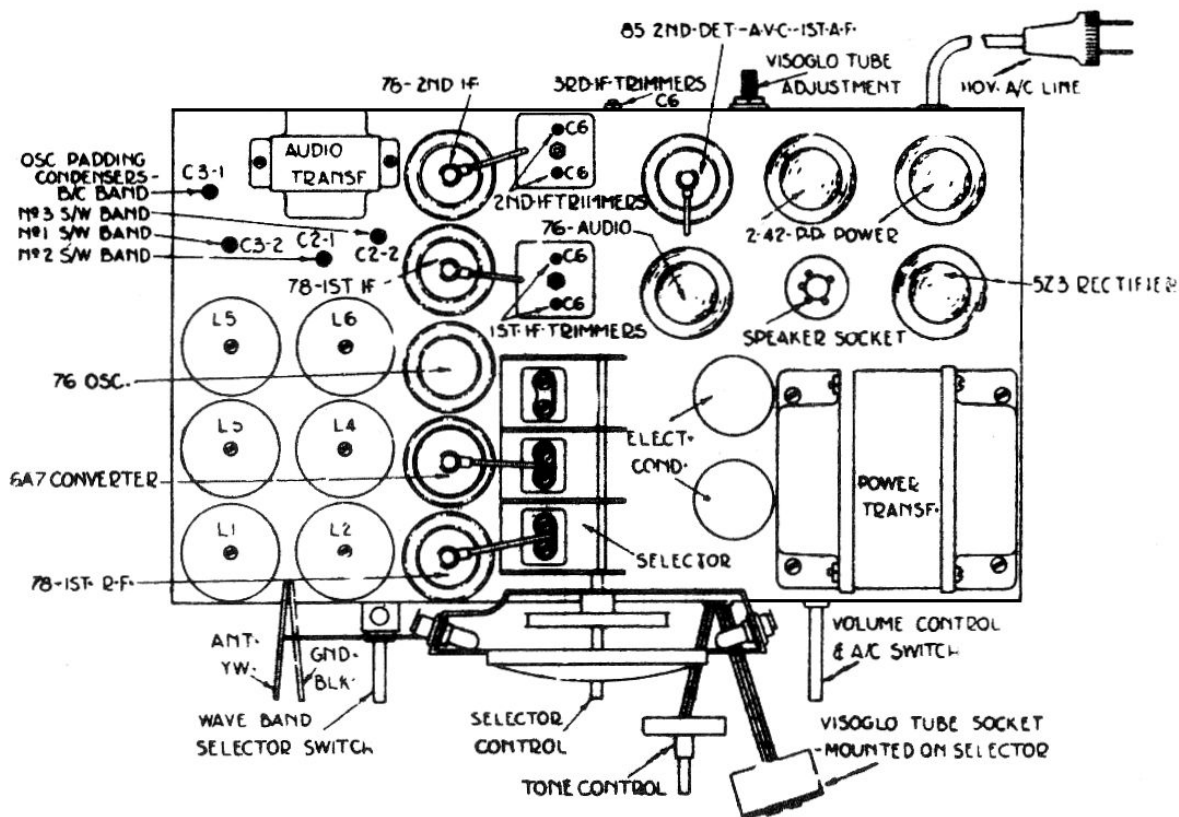


Fig. 1—Top View of Model 604 Chassis.

Chassis Layouts

Model 604

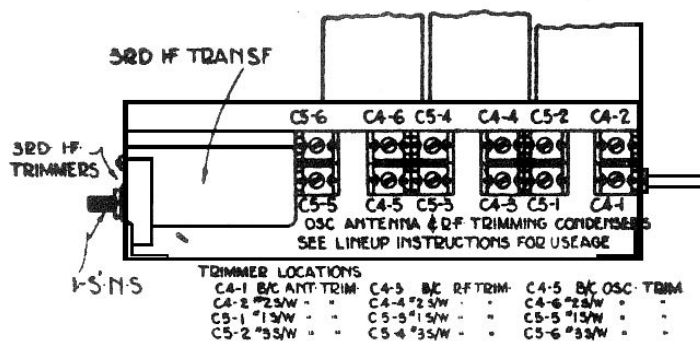


Fig. 2

End View of Chassis (Base Plate
Removed) Showing Trimmer
Condensers