

(b) Adjust short wave antenna trimmer (Adjustment "Z") to resonance (see Fig 3, bottom view)

BROADCAST BAND ALIGNMENT:

535 to 1750 Kilocycles

1. With band changing switch in the broadcast position, extreme left of its rotation and with external oscillator connected in series with "Dummy 2" to antenna and ground leads make following adjustments:

(a) Set external oscillator and dial on radio to 1400 K C and adjust broadcast oscillator trimmer to resonance (Adjustment "Y"), (see bottom view of Chassis, Fig 3) Tune gang condenser slowly back and forth while making this adjustment.

(b) Re-set external oscillator to 600 K.C., and adjust broadcast series pad (adjustment "X") to resonance by rotating condenser to approximately 600 K.C., rocking it slowly to and fro until by adjusting series pad maximum output is attained. This adjustment is located on the front flange of the chassis (See bottom view of chassis, Fig 3)

(c) Repeat adjustment "a" and "b" until sensitivity is at its maximum, also check to see that radio tunes to 1750 K.C.

(d) Check for tracking and sensitivity at 1400, 1000, and 600 kilocycles. Under no circumstances bend plates of variable condenser sections to correct tracking.

PROCEDURE FOR SETTING THE AUTOMATIC LEVERS:

There are six levers on the dial by means of which six stations may be selected.

Press down any one of the six levers. Holding it down, tune in by means of tuning knob No. 3 any one of your favorite stations. Turn the tuning knob very slowly back and forth until signal is clearest. The station will then be accurately tuned in. Adjust the volume by means of the volume control knob to the desired intensity.

Release this lever and press down any other lever. Hold this lever down and tune in by means of knob No. 3 another favorite station.

Follow this procedure until stations have been set on all the levers.

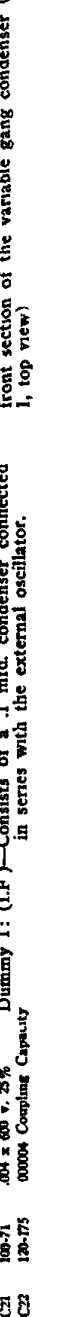
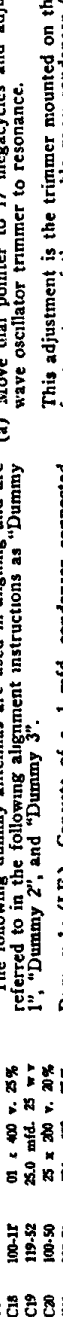
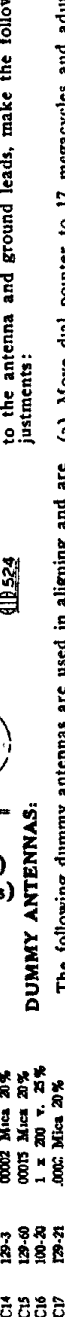
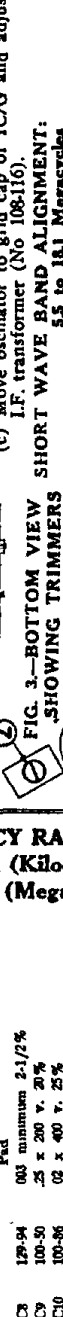
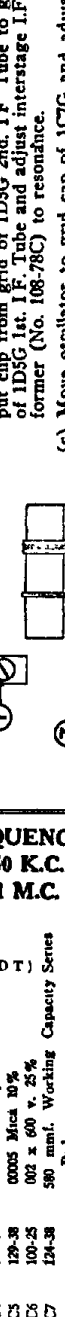
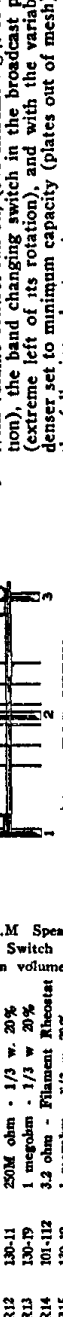
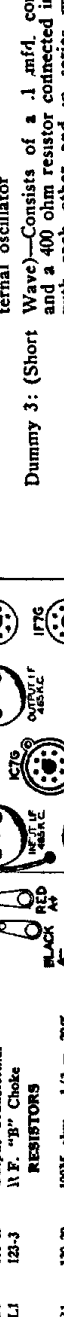
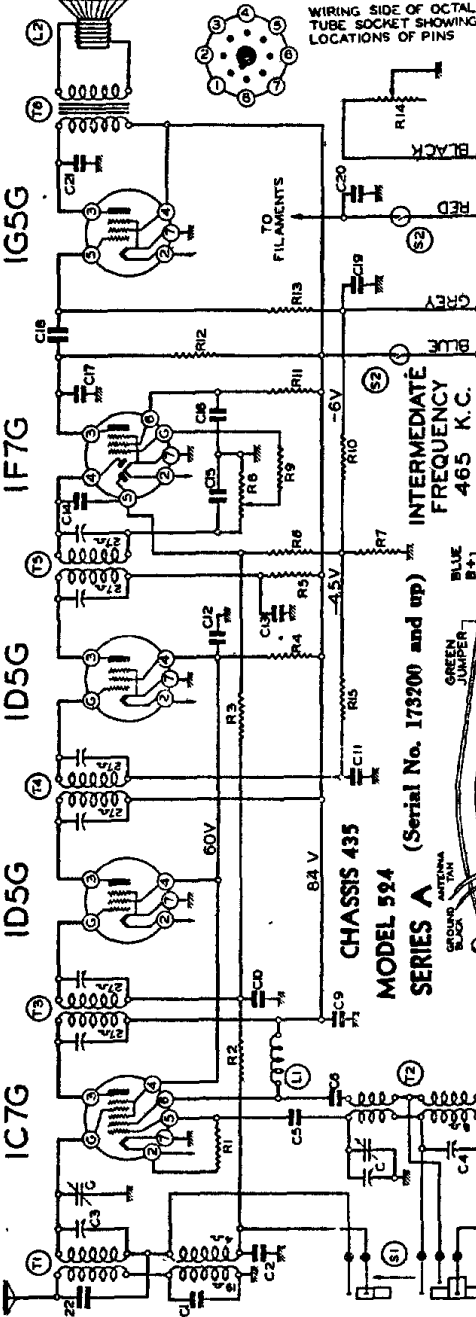
Rotate the tuning knob (No. 3) to the right (clockwise) as far as it will turn. Now remove from the right side of the cabinet the metal button, and, with a screw driver inserted through the hole, tighten the reset locking adjustment screw "5", (see Fig. 1). It is VERY IMPORTANT that this locking screw is turned until it is ABSOLUTELY TIGHT.

This screw will lock in place all the stations you have selected on the levers. (Note: Reset Lock Screw "5" is loose when radio is shipped from factory).

If you should desire to change any station you selected to another, loosen the reset locking screw "5" four or five complete turns; select the new station as explained. (Note: If the dial mechanism works hard when setting up a new station for one of the automatic tuner levers, it is due to the locking screw being too tight. Loosen the reset locking screw "5" until the dial mechanism works freely with the tuner lever pressed down).

BE SURE TO RETIGHTEN THE RESET LOCK SCREW, otherwise the stations will not stay adjusted to the levers.

Volts taken from different points of circuit to chassis are measured with volume control full on, all tubes in their sockets and speaker connected, with a volt meter having a resistance of 1000 ohms per volt



ALIGNING I. F. TRANSFORMERS: (465 K.C.):

Part No 108-79C Output I. F. Transformer

Part No. 108-78C Interstage I. F. Transformer

Part No. 108-116 Input I. F. Transformer

These I.F. transformers have two adjustments, both of which are accessible from the top of chassis (see Fig. 1 Top View)

1 With volume control full on, (the extreme right of its rotation), the band changing switch in the broadcast position, (extreme left of its rotation), and with the variable condenser set to minimum capacity (plates out of mesh), make the following adjustments:

(a) Connect external oscillator set at 465 kilocycles, in series with "Dummy 1", to the control grid cap of the type 1D5G 2nd. I.F. Tube and adjust the output I.F. transformer (No. 108-79C) to resonance.

(b) With "Dummy 1" still connected, move oscillator output clip from grid of 1D5G 2nd. I.F. Tube to grid cap of 1D5G 1st. I.F. Tube and adjust interstage I.F. transformer (No. 108-78C) to resonance.

(c) Move oscillator to grid cap of 1C7G and adjust input I.F. transformer (No. 108-116).

SHORT WAVE BAND ALIGNMENT:

5.5 to 18.1 Megacycles

1 With band changing switch in the short wave position, extreme right of its rotation, and with external oscillator set at 17 megacycles and connected in series with "Dummy 3" to the antenna and ground leads, make the following adjustments:

(a) Move dial pointer to 17 megacycles and adjust short wave oscillator trimmer to resonance.

This adjustment is the trimmer mounted on the top of front section of the variable gang condenser (see Fig. 1, top view)

FIG. 1—TOP VIEW

FREQUENCY RANGE
535 to 1750 K.C. (Kilocycles)
5.5 to 18.1 M.C. (Megacycles)

FIG. 3.—BOTTOM VIEW SHOWING TRIMMERS

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DUMMY ANTENNAS:

The following dummy antennas are used in aligning and are referred to in the following alignment instructions as "Dummy 1", "Dummy 2", and "Dummy 3".

Dummy 1: (I.F.)—Consists of a .1 mfd. condenser connected in series with the external oscillator.

Part	Description	Value
T1	BC - SW Antenna coil complete	100K ohm - 1/3 w. 20%
T2	BC - SW Oscillator coil complete	100K ohm - 1/3 w. 20%
T3	Input I.F. Complete - 465 Kc.	1 megohm - 1/3 w. 20%
T4	Interstage I.F. Complete - 465 Kc.	750 ohm - 1/3 w. 20%
T5	Output I.F. Complete	3000 ohm - 1/3 w. 20%
T6	Output Transformer	1 megohm - 1/3 w. 20%
T7	11 F. "B" Choke	300 ohm - 1/3 w. 10%
L1	RESISTORS	
R1	100K ohm - 1/3 w. 20%	
R2	100K ohm - 1/3 w. 20%	
R3	100K ohm - 1/3 w. 20%	
R4	100K ohm - 1/3 w. 20%	
R5	100K ohm - 1/3 w. 20%	
R6	100K ohm - 1/3 w. 20%	
R7	100K ohm - 1/3 w. 20%	
R8	100K ohm - 1/3 w. 20%	
R9	100K ohm - 1/3 w. 20%	
R10	100K ohm - 1/3 w. 20%	
R11	100K ohm - 1/3 w. 20%	
R12	100K ohm - 1/3 w. 20%	
R13	100K ohm - 1/3 w. 20%	
R14	100K ohm - 1/3 w. 20%	
R15	100K ohm - 1/3 w. 20%	

Part	Description	Value
C	2 gang variable condenser	
C1	.001 mica 10%	
C2	.05 x 200 v. 25%	
C3	.05 x 200 v. 25%	
C4	2.20 mfd. Adj. Cond.	
C5	2.20 mfd. Adj. Cond.	
C6	.0005 Mica 10%	
C7	.002 x 600 v. 25%	
C8	.002 x 600 v. 25%	
C9	.002 x 600 v. 25%	
C10	.002 x 600 v. 25%	
C11	.002 x 600 v. 25%	
C12	.002 x 600 v. 25%	
C13	.002 x 600 v. 25%	
C14	.002 x 600 v. 25%	
C15	.002 x 600 v. 25%	
C16	.002 x 600 v. 25%	
C17	.002 x 600 v. 25%	
C18	.002 x 600 v. 25%	
C19	.002 x 600 v. 25%	
C20	.002 x 600 v. 25%	
C21	.002 x 600 v. 25%	
C22	.002 x 600 v. 25%	

Part	Description	Value
S1	114-115 6" P.M. Speaker	
S2	125-48 Hand Switch	
S3	On-on switch on volume control - (D.P.D.T.)	

Part	Description	Value
W	Wiring	
X	Wiring	
Y	Wiring	
Z	Wiring	

Part	Description	Value
1	100K ohm - 1/3 w. 20%	
2	100K ohm - 1/3 w. 20%	
3	100K ohm - 1/3 w. 20%	
4	100K ohm - 1/3 w. 20%	
5	100K ohm - 1/3 w. 20%	
6	100K ohm - 1/3 w. 20%	
7	100K ohm - 1/3 w. 20%	
8	100K ohm - 1/3 w. 20%	
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Part	Description	Value
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98	100K ohm - 1/3 w. 20%	
99	100K ohm - 1/3 w. 20%	
100	100K ohm - 1/3 w. 20%	

C18	100-1F	01 ± 400 v. 25%	res
C19	119-52	25.0 mfd. 25 v	1
C20	100-50	25 ± 200 v. 20%	D
C21	100-71	.004 ± 600 v. 25%	
C22	120-775	000004 Coupling Capacity	