ARROWS ◄—— ON OPERATION SWITCH AND CONTROLS INDICATE CLOCKWISE ROTATION OF SHAFT.

ANTENNA SWITCH (S1) SHOWN IN EXTERNAL POSITION (REMOVE ANTENNA PLUG FOR LOOP ANTENNA OPERATION).

WAVEBAND SWITCH (S2) PHONO - SW2A - SW2 - SW3 - MW - LW SHOWN IN PHONO POSITION (EXTREME LEFT).

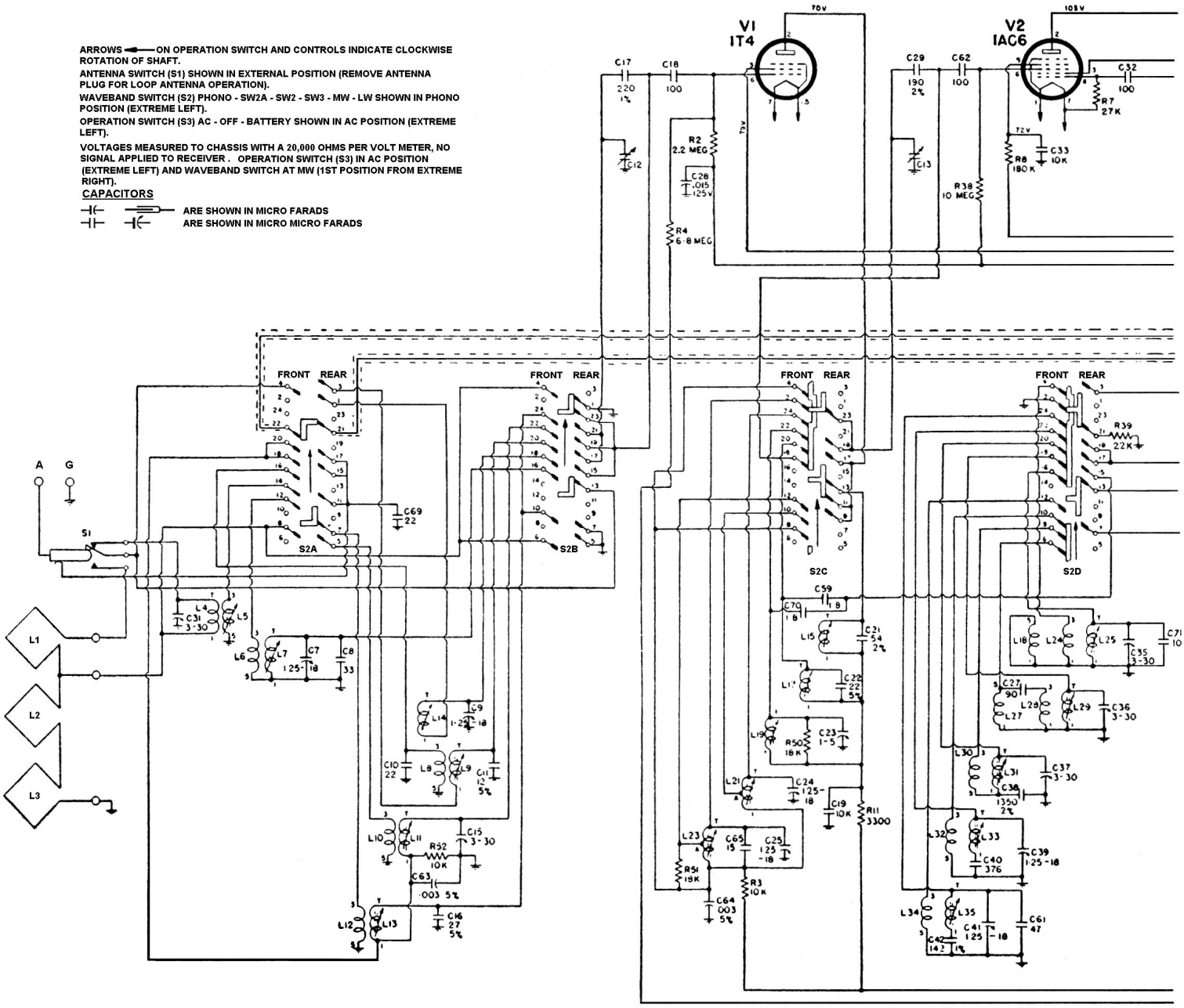
OPERATION SWITCH (S3) AC - OFF - BATTERY SHOWN IN AC POSITION (EXTREME LEFT).

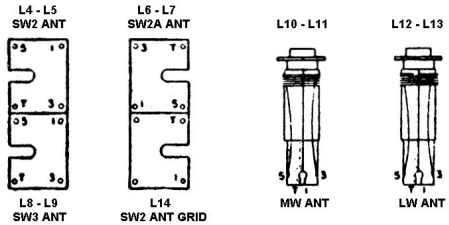
VOLTAGES MEASURED TO CHASSIS WITH A 20,000 OHMS PER VOLT METER, NO SIGNAL APPLIED TO RECEIVER . OPERATION SWITCH (S3) IN AC POSITION (EXTREME LEFT) AND WAVEBAND SWITCH AT MW (1ST POSITION FROM EXTREME RIGHT).

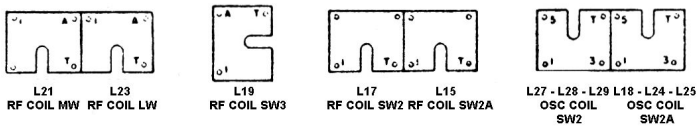
CAPACITORS

ARE SHOWN IN MICRO FARADS

ARE SHOWN IN MICRO MICRO FARADS







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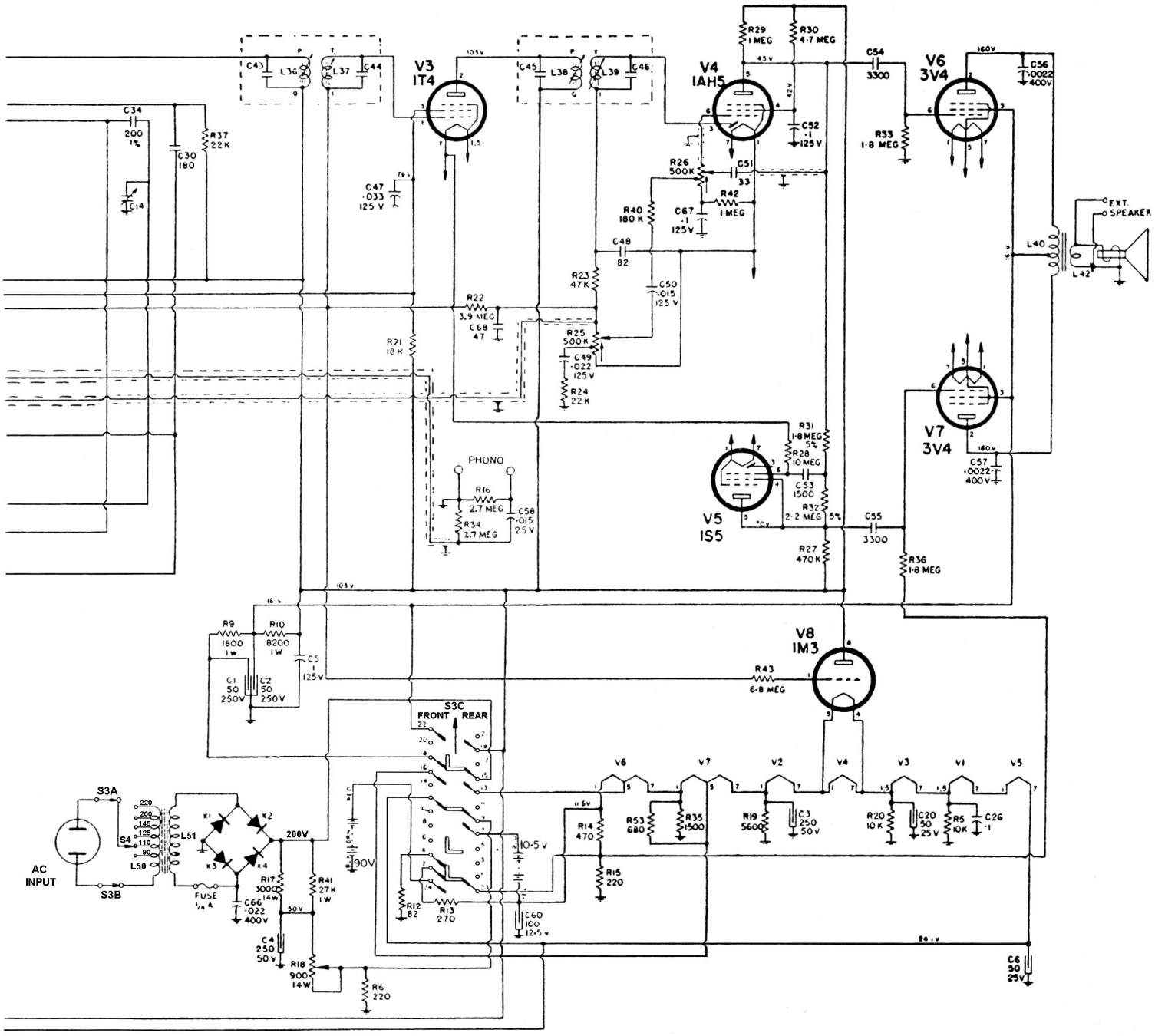
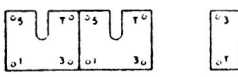
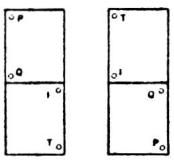
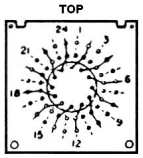




L34 - L35
OSC COIL LW





NUMBERING OF S2 AND S3 AS VIEWED FROM FRONT OF SET

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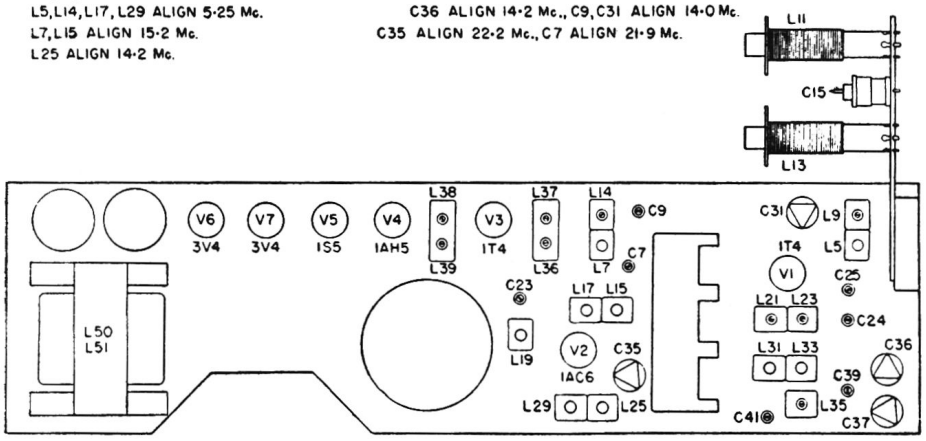
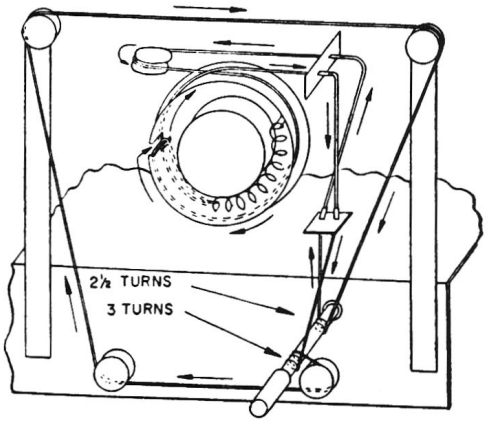
L36-L37, L38-L39 ALIGN 455 Kc.
LI3, L23, L35 ALIGN 159 Kc.
LII, L21, L33 ALIGN 550 Kc.
L31, L9, L19 ALIGN 1·7 Mc
L5, LI4, LI7, L29 ALIGN 5·25 Mc.
L7, LI5 ALIGN 15·2 Mc.
L25 ALIGN 14·2 Mc.

C25, C41 ALIGN 400 Kc.
C24, C39 ALIGN 1630 Kc., CI5 ALIGN 1600 Kc
C23, C37 ALIGN 5·1 Mc.
C36 ALIGN 14·2 Mc., C9, C31 ALIGN 14·0 Mc.
C35 ALIGN 22·2 Mc., C7 ALIGN 21·9 Mc.



GANG CONDENSER AT MAXIMUM CAPACITY (CLOSED)
DIAL DRUM IN POSITION SHOWN
LENGTH OF DIAL CORD APPROX. 46¼"
DIAL POINTER AT LOW FREQUENCY END OF DIAL



ALIGNMENT OF RECEIVER

EQUIPMENT REQUIRED:

Signal Generator: Capable of supplying modulated frequencies from 150 Kc. — 22 Mc.

Output Indicator: A power output meter or a high resistance AC voltmeter.

ALIGNMENT PROCEDURE AND EQUIPMENT CONNECTIONS:

Signal Generator: Allow a sufficient length of time after the generator has been switched on for it to become thermally stable before making any tests. Always be sure to use the specified capacitor in series with the signal generator output lead connections as listed in the alignment procedure chart. Connect the return lead of the signal generator to (or near) the ground terminal of the receiver.

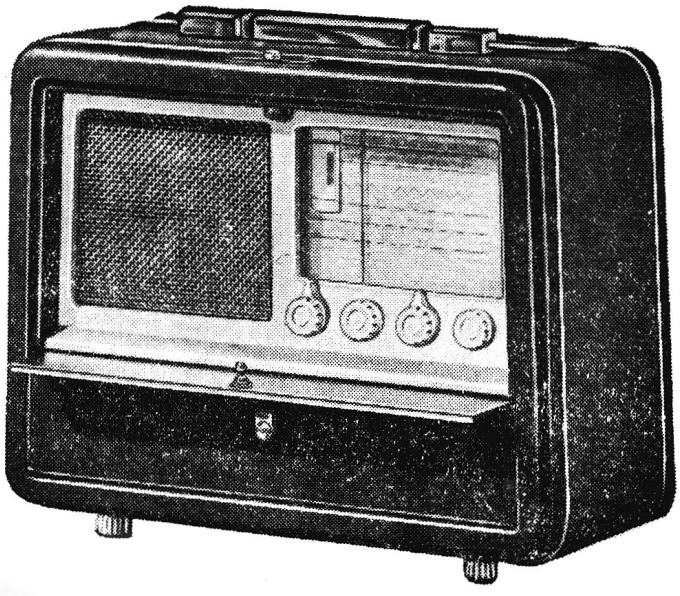
Output Indicator: If a power output meter is used adjust it for 4 ohms impedance and connect it across the secondary of the output transformer in place of the speaker voice coil. Do not exceed 50 milliwatts during alignment. If an AC voltmeter is used connect it across the voice coil and do not exceed .4 volts during alignment. As the reading of the test meter increases with alignment regulate the signal generator attenuator to keep the output below the above limits.

RECEIVER:

1. Set the line voltage switch at the rear of the chassis to 110V.
2. Set AC/Battery switch to AC (counter clockwise) position.
3. Set tone control to high (full clockwise) position.
4. Set Volume Control to maximum (full clockwise) position.

NOTE 1. On all bands, the oscillator frequency equals the tuning plus the I.F. frequency, except band S.W.2A where the oscillator frequency equals the tuning minus the I.F. frequency.

NOTE 2. Receiver Antenna circuits to be aligned with chassis in cabinet, loops connected and batteries in place.



TRANSFORMERS and COILS

Number	Description	Part No.
L1	Loop Antenna, S.W.	070-294
L2, L3	Loop Antenna, L.W. and M.W.	Part of Cabinet
L4, L5	Antenna Coil, S.W.2	060-246
L6, L7	Antenna Coil, S.W.2A	060-245
L8, L9	Antenna Coil, S.W.3	060-247
L10, L11	Antenna Coil, M.W.	060-257
L12, L13	Antenna Coil, L.W.	060-258
L14	Antenna Coil, R.F. S.W.2	060-248
L15	R.F. Coil, S.W. 2A	060-249
L17	R.F. Coil, S.W. 2	060-250
L18, L24, L25	Oscillator Coil, S.W. 2A	060-253
L19	R.F. Coil, S.W. 3	060-251
L21	R.F. Coil, M.W.	060-234
L23	R.F. Coil, L.W.	060-252
L27, L28, L29	Oscillator Coil, S.W.2	060-254
L30, L31	Oscillator Coil, S.W.3	060-255
L32, L33	Oscillator Coil, M.W.	060-201
L34, L35	Oscillator Coil, L.W.	060-256
L36, L37	1st I.F. Transformer	060-095
L38, L39	2nd I.F. Transformer	060-095
L40, L42	Output Transformer	050-238
L50, L51	Power Transformer	050-239

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I.F., OSCILLATOR AND R.F. CIRCUITS

Operation Steps	SIGNAL GENERATOR	RECEIVER				
	Output Connections to Receiver	Frequency	Band Switch	Tuning Condenser	See Note	Adjust in Stated Order for Maximum Output
1	To stator of centre section of tuning gang through .05 mf condenser	455 Kc.	Pos. 5	Min.		2nd I.F. Transformer L39, L38
2	To stator of centre section of tuning gang through .05 mf condenser	455 Kc.	Pos. 5	Min.	A	1st I.F. Transformer L36, L37
3	To stator of rear section of tuning gang through .05 mf condenser	159 Kc.	Pos. 6	159 Kc.		Osc. Coil L.W. L35 R.F. Coil L.W. L23
4	To stator of rear section of tuning gang through .05 mf condenser	400 Kc.	Pos. 6	400 Kc.	B	Osc. Trimmer L.W. C41 R.F. Trimmer L.W. C25
5	To stator of rear section of tuning gang through .05 mf condenser	550 Kc.	Pos. 5	550 Kc.		Osc. Coil M.W. L33 R.F. Coil M.W. L21
6	To stator of rear section of tuning gang through .05 mf condenser	1630 Kc.	Pos. 5	1630 Kc.	C	Osc. Trimmer M.W. C39 R.F. Trimmer M.W. C24
7	To stator of rear section of tuning gang through .05 mf condenser	1.7 Mc.	Pos. 4	1.7 Mc.		Osc. Coil S.W. 3 L31 R.F. Coil S.W. 3 L19
8	To stator of rear section of tuning gang through .05 mf condenser	5.1 Mc.	Pos. 4	5.1 Mc.	D	Osc. Trimmer S.W. 3 C37 R.F. Trimmer S.W. 3 C23
9	To stator of rear section of tuning gang through .05 mf condenser	5.25 Mc.	Pos. 3	5.25 Mc.		Osc. Coil S.W. 2 L29 R.F. Coil S.W. 2 L17
10	To stator of rear section of tuning gang through .05 mf condenser	14.2 Mc.	Pos. 3	14.2 Mc.	E, M	Osc. Trimmer S.W. 2 C36
11	To stator of rear section of tuning gang through .05 mf condenser	14.2 Mc.	Pos. 2	14.2 Mc.	F	Osc. Coil S.W. 2A L25
12	To stator of rear section of tuning gang through .05 mf condenser	22.2 Mc.	Pos. 2	22.2 Mc.	G, N	Osc. Trimmer S.W. 2A C35
13	To stator of rear section of tuning gang through .05 mf condenser	15.2 Mc.	Pos. 2	15.2 Mc.	H	R.F. Coil S.W. 2A L15

ANTENNA CIRCUITS

14	No connection — signal radiated by proximity of signal generator to receiver	159 Kc.	Pos. 6	159 Kc.		Ant. Coil L.W. L13
15	No connection — signal radiated by proximity of signal generator to receiver	550 Kc.	Pos. 5	550 Kc.		Ant. Coil M.W. L11
16	No connection — signal radiated by proximity of signal generator to receiver	1600 Kc.	Pos. 5	1600 Kc.	I	Ant. Trimmer M.W. C15
17	No connection — signal radiated by proximity of signal generator to receiver	1.7 Mc.	Pos. 4	1.7 Mc.		Ant. Coil S.W. 3 L9
18	No connection — signal radiated by proximity of signal generator to receiver	5.25 Mc.	Pos. 3	5.25 Mc.		Ant. Grid Coil S.W. 2 L14
19	No connection — signal radiated by proximity of signal generator to receiver	14.0 Mc.	Pos. 3	14.0 Mc.	J	Ant. Grid Trimmer S.W. 2 C9
20	To Antenna Terminal through .05 mf condenser and dummy load**	5.25 Mc.	Pos. 3	5.25 Mc.		Ant. Coil S.W. 2 L5
21	To Antenna Terminal through .05 mf condenser and dummy load**	14.0 Mc.	Pos. 3	14.0 Mc.	K	Ant. Trimmer S.W. 2 C31
22	No connection — signal radiated by proximity of signal generator to receiver	15.2 Mc.	Pos. 2	15.2 Mc.		Ant. Coil S.W. 2A L7
23	No connection — signal radiated by proximity of signal generator to receiver	21.9 Mc.	Pos. 2	21.9 Mc.	L	Ant. Trimmer S.W. 2A C7

** Use Antenna Plug to actuate Antenna — Loop Switch.

NOTE A — After step 2 readjust L38.
B — Repeat steps 3 and 4 for maximum output.
C — Repeat steps 5 and 6 for maximum output.
D — Repeat steps 7 and 8 for maximum output.
E — Repeat steps 9 and 10 for maximum output.
F — First screw out iron core of L15 to top of can.
G — Repeat steps 11 and 12 for maximum output.
H — Screw in L15 adjust on first peak.

NOTE I — Repeat steps 15 and 16 for maximum output.
J — Repeat steps 18 and 19 for maximum output.
K — Repeat steps 20 and 21 for maximum output.
L — Repeat steps 22 and 23 for maximum output.
M — Adjust to 1st peak from minimum capacity position.
N — Adjust to 1st peak from maximum capacity position.