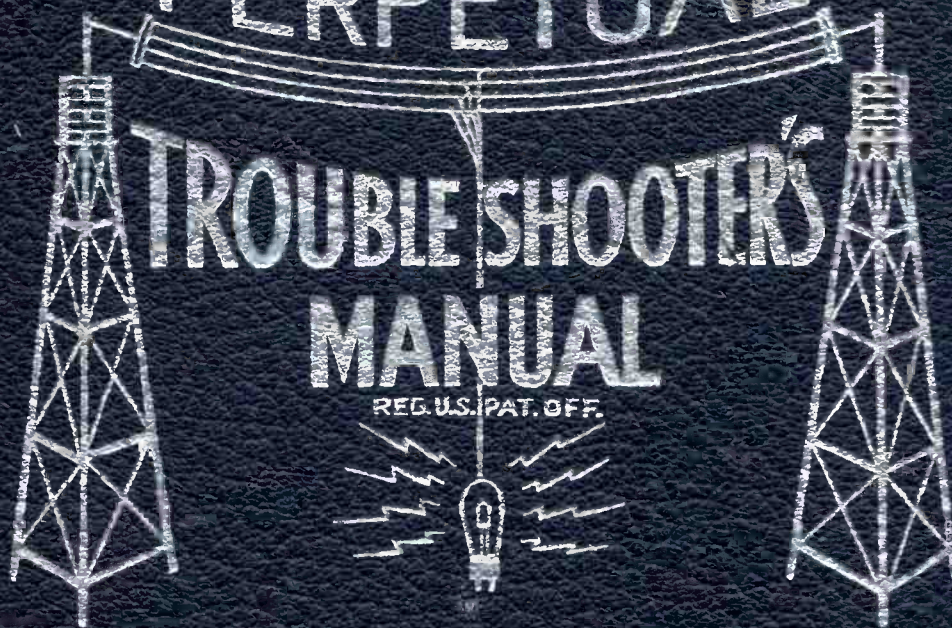
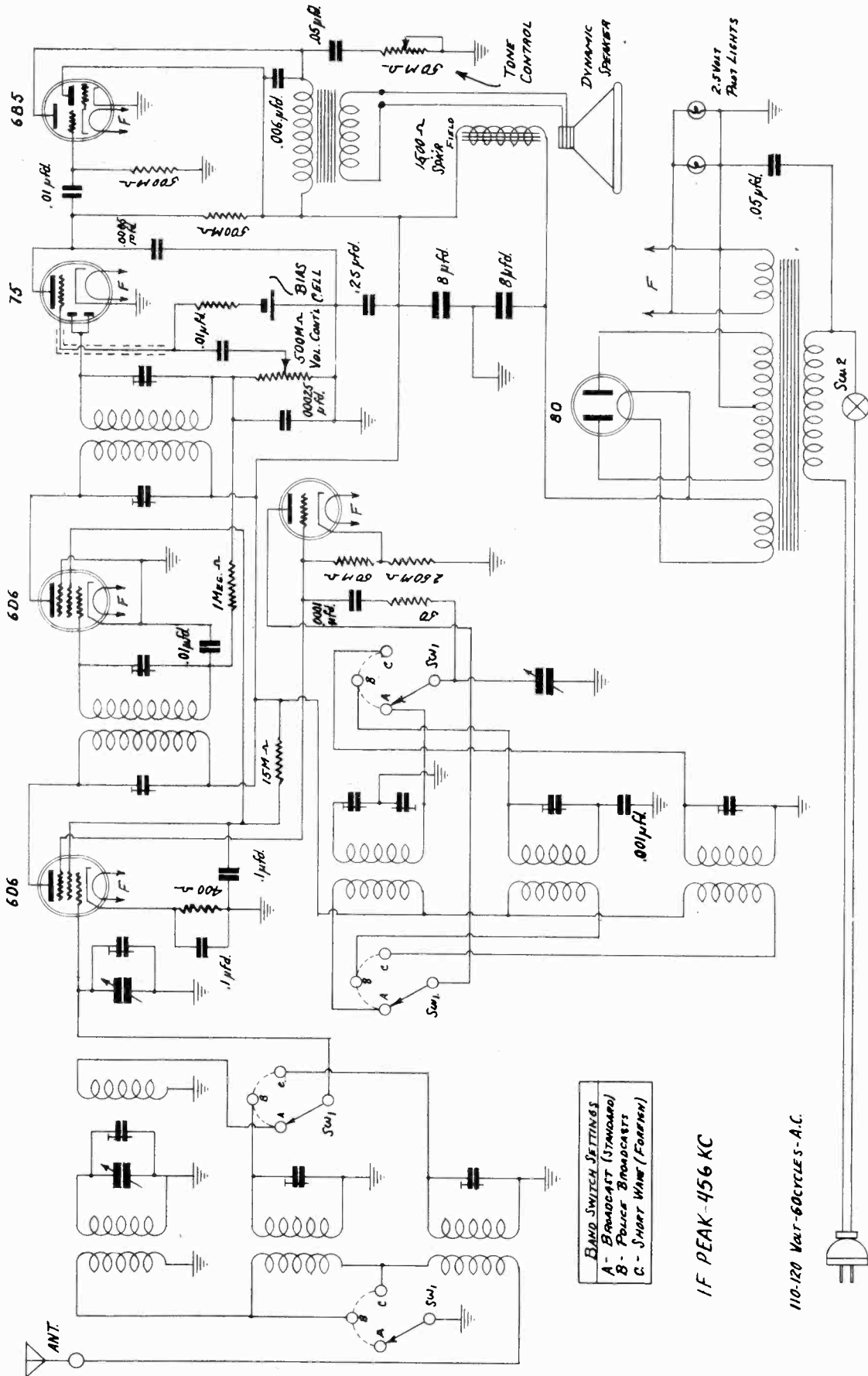


VOLUME XIII

PERPETUAL



JOHN F. RIDER



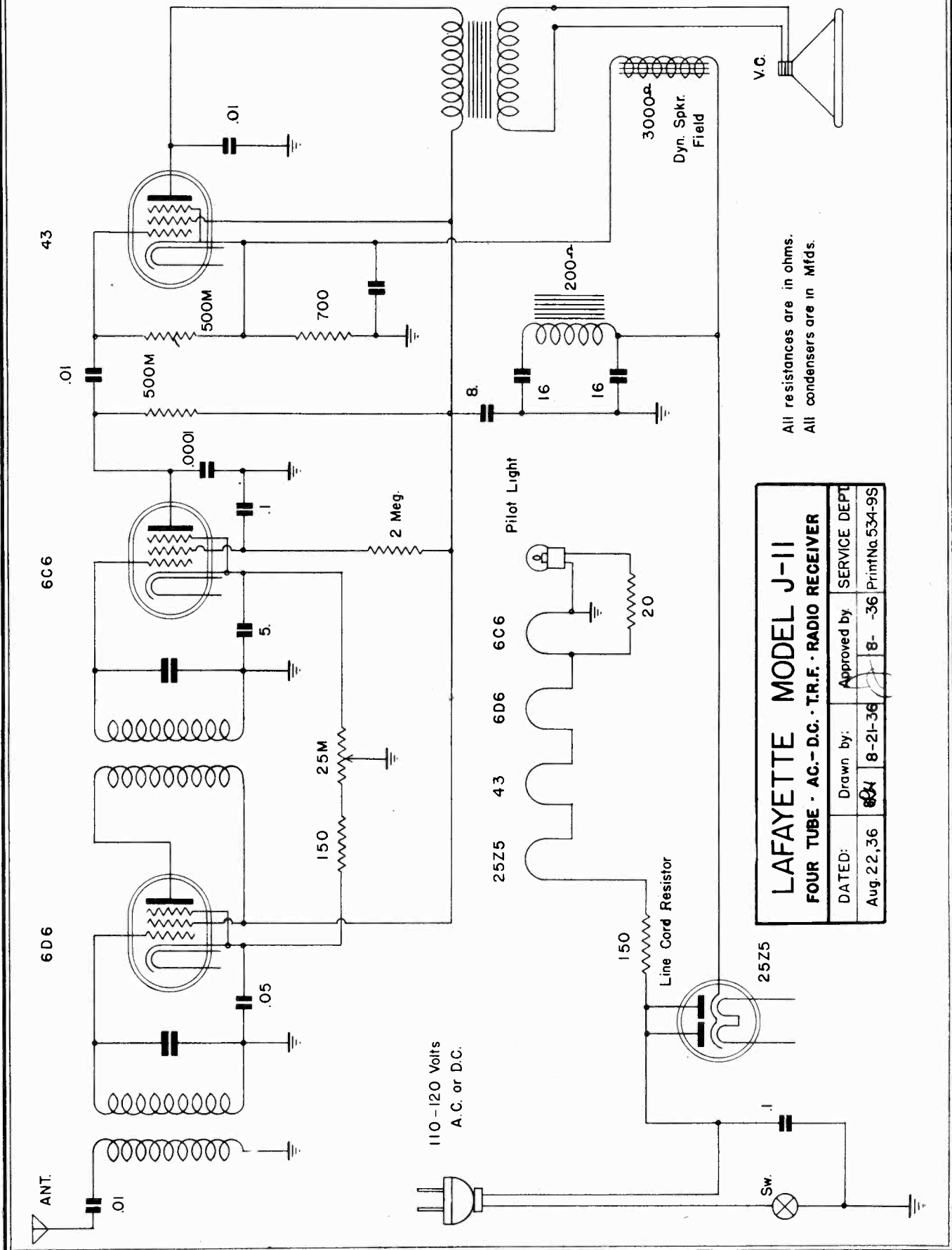
BAND SWITCH SETTINGS
 A - Broadcast (Standard)
 B - Police Broadcasts
 C - Short Wave (Foreign)

IF PEAK - 456 KC

110-120 Volt-60cycles-A.C.

Lafayette Radio Receiver - Model D-8
3 BAND SUPERHETRODYNE

DATE	DRAWN BY	CHECKED BY	PRINT
July 3, 1936	EWH		No. 523



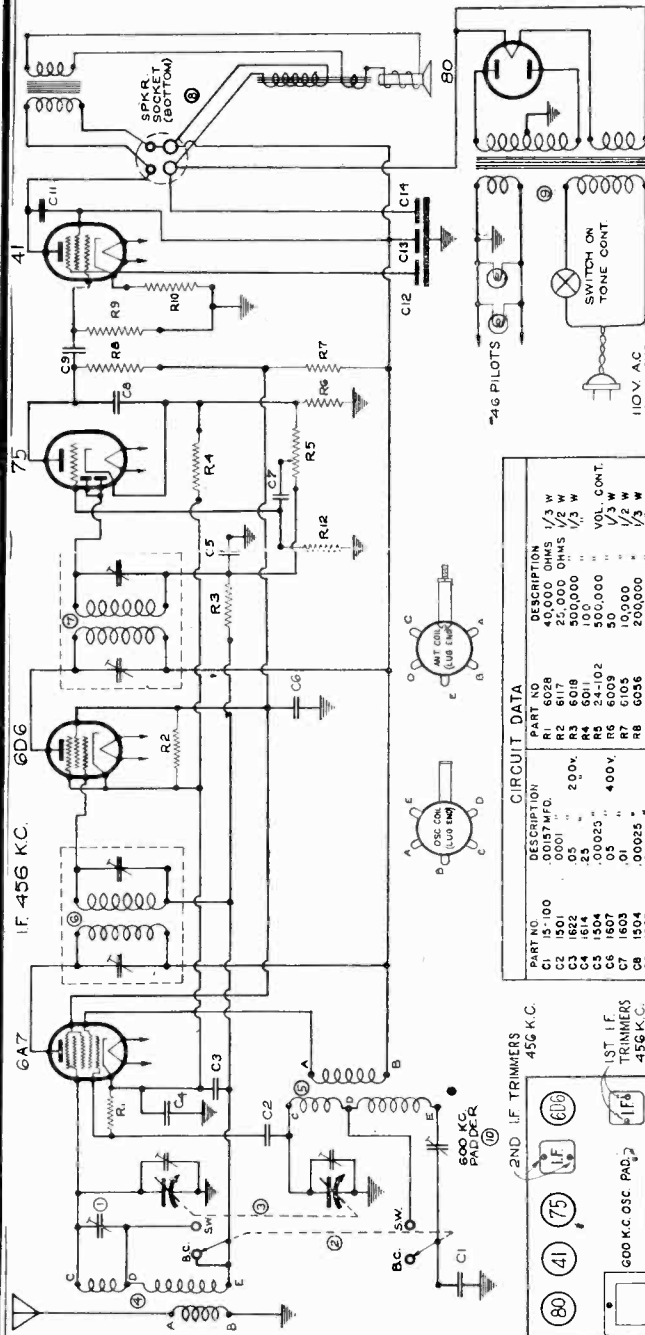
All resistances are in ohms.
All condensers are in Mfds.

LAFAYETTE MODEL J-11			
FOUR TUBE - AC.-D.C. - T.R.F. - RADIO RECEIVER			
DATED:	Drawn by:	Approved by:	SERVICE DEPT
Aug. 22, 36	804	8-21-36	8-36
			Print No. 534-9S

LAFAYETTE RADIO MFG. CO.

This receiver is a 5 tube Alternated Current operated superheterodyne. The tubes used are a 6A7 as oscillator modulator, a 6D6 as I.F. Amplifier, a 75 as AVC and Audio rectifier and audio voltage amplifier, a 41 as power audio amplifier and an 80 as a power rectifier.

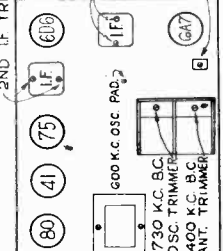
The receiver is made to cover two tuning bands, the standard broadcast band which ranges from 1730 KC to 535 KC and the middle or police band which has a frequency range of from 6.4 MC to 21 MC.



CIRCUIT DATA

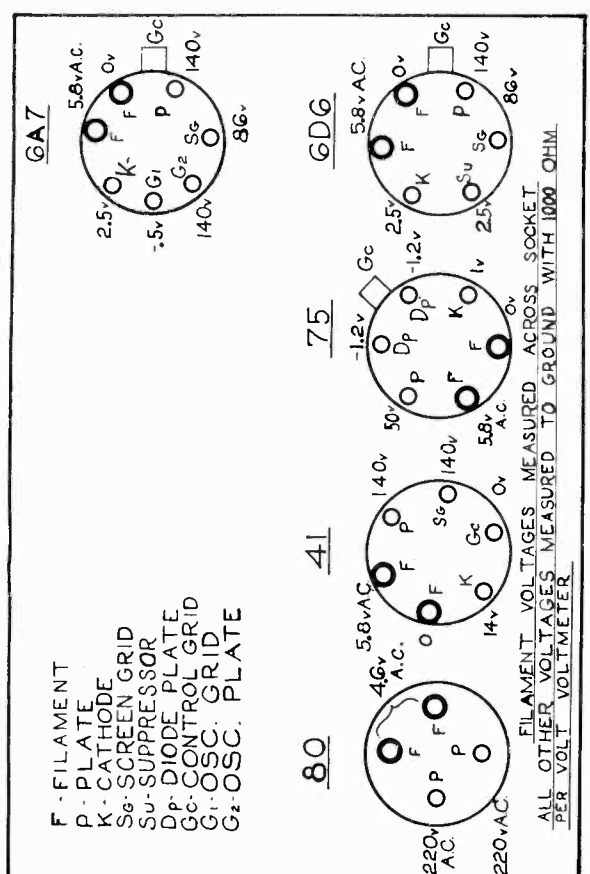
PART NO.	DESCRIPTION	PART NO.	DESCRIPTION
C1	5-100	R1	450,000 OHMS 1/3 W
C2	0.0017 MFD.	R2	500,000 OHMS 1/2 W
C3	182	R3	500,000 OHMS 1/2 W
C4	1614	R4	100 VOL. CONT.
C5	1504	R5	500,000 OHMS 1/2 W
C6	1807	R6	24-102
C7	1804	R7	50
C8	1804	R8	6009
C9	1804	R9	6095
C10	1804	R10	500,000 OHMS 1/2 W
C11	1804	R11	500,000 OHMS 1/2 W
C12	1804	R12	1.0 MEG
C13	1804	R13	100
C14	1804	R14	100
C15	1804	R15	100
C16	1804	R16	100
C17	1804	R17	100
C18	1804	R18	100
C19	1804	R19	100
C20	1804	R20	100
C21	1804	R21	100
C22	1804	R22	100
C23	1804	R23	100
C24	1804	R24	100
C25	1804	R25	100
C26	1804	R26	100
C27	1804	R27	100
C28	1804	R28	100
C29	1804	R29	100
C30	1804	R30	100
C31	1804	R31	100
C32	1804	R32	100
C33	1804	R33	100
C34	1804	R34	100
C35	1804	R35	100
C36	1804	R36	100
C37	1804	R37	100
C38	1804	R38	100
C39	1804	R39	100
C40	1804	R40	100
C41	1804	R41	100
C42	1804	R42	100
C43	1804	R43	100
C44	1804	R44	100
C45	1804	R45	100
C46	1804	R46	100
C47	1804	R47	100
C48	1804	R48	100
C49	1804	R49	100
C50	1804	R50	100
C51	1804	R51	100
C52	1804	R52	100
C53	1804	R53	100
C54	1804	R54	100
C55	1804	R55	100
C56	1804	R56	100
C57	1804	R57	100
C58	1804	R58	100
C59	1804	R59	100
C60	1804	R60	100
C61	1804	R61	100
C62	1804	R62	100
C63	1804	R63	100
C64	1804	R64	100
C65	1804	R65	100
C66	1804	R66	100
C67	1804	R67	100
C68	1804	R68	100
C69	1804	R69	100
C70	1804	R70	100
C71	1804	R71	100
C72	1804	R72	100
C73	1804	R73	100
C74	1804	R74	100
C75	1804	R75	100
C76	1804	R76	100
C77	1804	R77	100
C78	1804	R78	100
C79	1804	R79	100
C80	1804	R80	100
C81	1804	R81	100
C82	1804	R82	100
C83	1804	R83	100
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C86	1804	R86	100
C87	1804	R87	100
C88	1804	R88	100
C89	1804	R89	100
C90	1804	R90	100
C91	1804	R91	100
C92	1804	R92	100
C93	1804	R93	100
C94	1804	R94	100
C95	1804	R95	100
C96	1804	R96	100
C97	1804	R97	100
C98	1804	R98	100
C99	1804	R99	100
C100	1804	R100	100

TUBE LOCATION.



Connect the signal generator to the grid cap of the 6A7 tube through a .1 M.F. condenser. Connect the ground of the generator to the ground lead of the receiver. With the wave switch on broadcast position and the dial set to about 1000 K.C., feed in a 456 K.C. signal. Adjust the trimmers on top of the first and second I.F. transformers until the maximum output is obtained. Connect output meter thru a .5 mi dummy. total resistance 7000 ohms to speaker plug. This aligns the I.F. Leaving the wave switch on broadcast position turn the dial to the extreme high frequency end. Feed a 1730 K.C. signal to the receiver antenna lead through a .00025 M.F. mica condenser. Adjust the 1730 K.C. broadcast oscillator trimmer until maximum output is shown. Then adjust the 1400 K.C. broadcast and tune in this signal on the receiver. Then adjust the 1400 K.C. broadcast antenna trimmer to maximum output. Set the generator to 600 K.C. and adjust the 600 K.C. broadcast oscillator pad to maximum output while tuning the receiver back and forth across the signal from the generator. This completes the alignment of the broadcast band.

The short wave band is aligned while feeding a 6.0 M.C. signal to the receiver antenna lead through a .00025 M.F. mica condenser. Turn the wave switch to short wave position and tune in the 6.0 M.C. signal. Adjust the 6.0 M.C. short wave trimmer to maximum output.

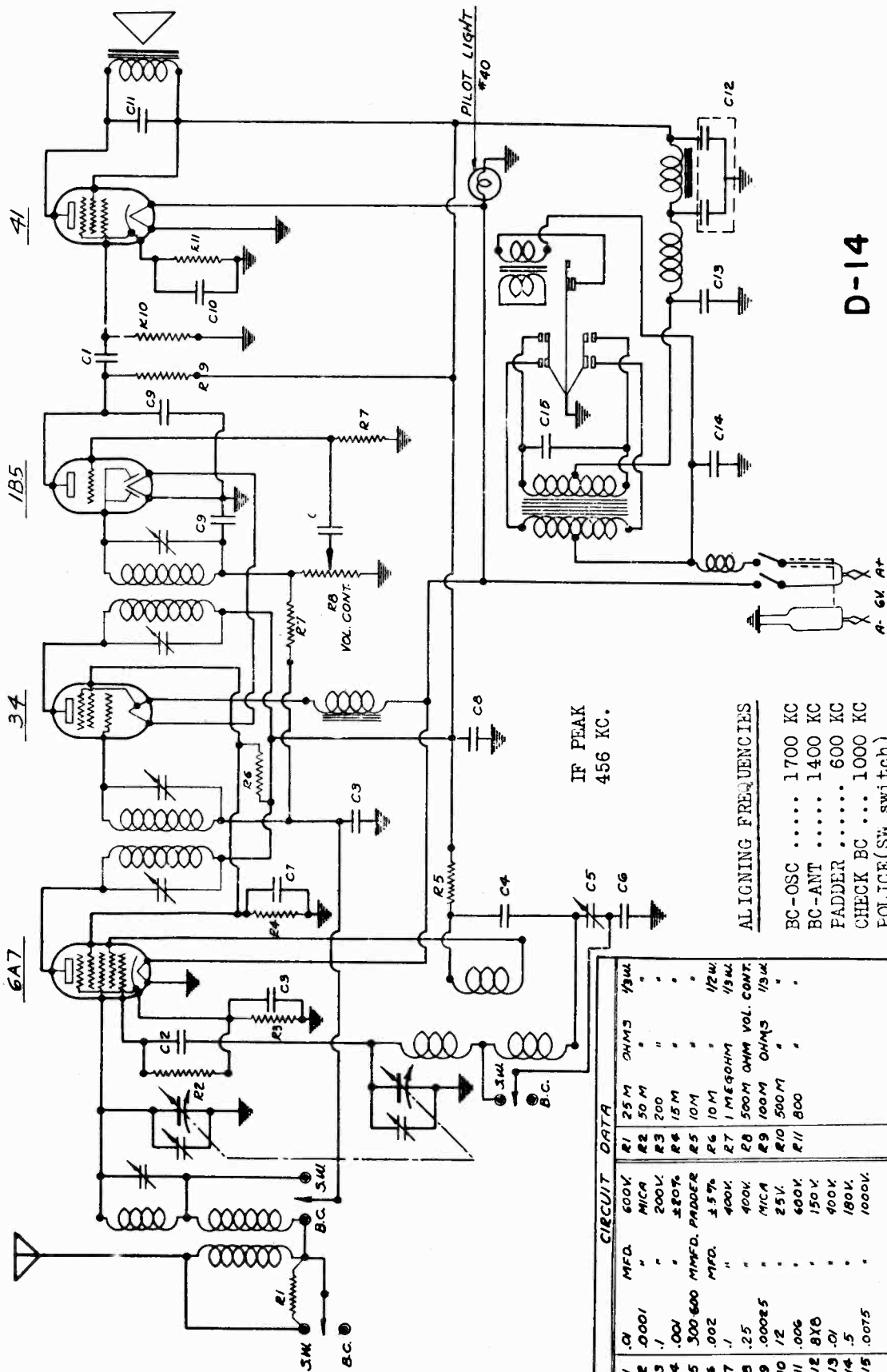


80 41 75 6D6 6A7

F - FILAMENT
P - PLATE
K - CATHODE
Sg - SCREEN GRID
Su - SUPPRESSOR
Dp - DIODE PLATE
Gc - CONTROL GRID
G1 - OSC. GRID
G2 - OSC. PLATE

FILAMENT VOLTAGES MEASURED ACROSS SOCKET.
ALL OTHER VOLTAGES MEASURED TO GROUND WITH 1000 OHM PER VOLT VOLTMETER.

LAFAYETTE RADIO MFG. CO.



D-14

ALIGNING FREQUENCIES
 BC-OSC 1700 KC
 BC-ANT 1400 KC
 PADDER 600 KC
 CHECK BC ... 1000 KC
 POLICE(SW switch)
 6 MC

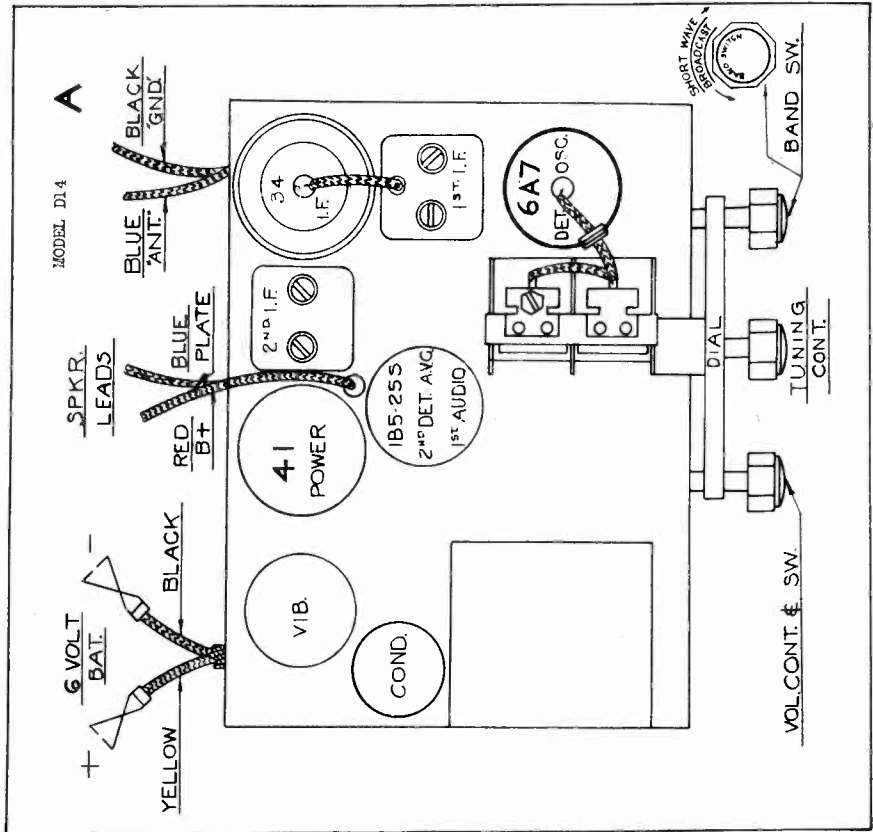
CIRCUIT DATA	
C1	25 M OHMS 1/32W
C2	600K
C3	MICA
C4	200V
C5	±20%
C6	300-600 MIMFD. PADDER
C7	±5%
C8	400V
C9	MICA
C10	25V
C11	600V
C12	150V
C13	400V
C14	180V
C15	1000V
R1	25 M OHMS
R2	50 M "
R3	200 "
R4	15 M "
R5	10 M "
R6	10 M "
R7	1 MEG OHM
R8	500 M OHM VOL. CONT.
R9	100 M OHMS
R10	500 M "
R11	800 "

LAFAYETTE RADIO MFG. CO.

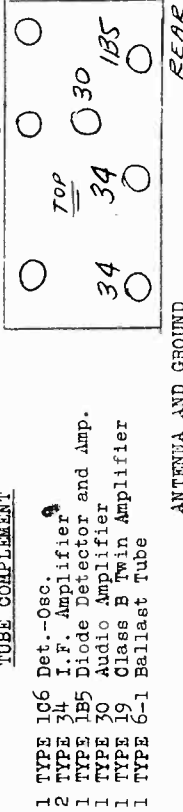
MODEL D-14
MODEL C-17

For aligning the police band, set test oscillator to 4.2 megacycles and switch to the police band position on the set. With the condenser rotated to this frequency setting as indicated on the dial, adjust oscillator trimmer located on the right side of the chassis, second position from the front. Set test oscillator to 4.0 megacycles and rotate condenser to the corresponding dial reading. Now adjust antenna trimmer located on the front of the chassis, center position to resonance. Then set oscillator to 2.0 megacycles and rotate the condenser to the 2 megacycle reading. Adjust paddler located on top of chassis, first position from the front.

The short wave band is aligned by setting the condenser to 15 megacycles and adjust the oscillator trimmer located on the right side of the chassis, third position from the front to resonance with a 15 megacycle signal from the test oscillator. At the same time adjust the antenna trimmer located in front of the chassis, third position from the left.



INSTRUCTIONS AND SERVICE NOTES FOR THE MODEL C-17
2 AND 3 VOLT BATTERY SUPERTHERODYNE
Frequency Range - 540 - 1500 Kilocycles, 1.5-4.2 Megacycles and 5.6-15 Megacycles.
/C6 REWIND 6-1 19



TUBE COMPLEMENT
1 TYPE 1C6 Det.-Osc.
1 TYPE 34 I.F. Amplifier
1 TYPE 1B5 Diode Detector and Amp.
1 TYPE 30 Audio Amplifier
1 TYPE 19 Class B Twin Amplifier
1 TYPE 6-1 Ballast Tube

ANTENNA AND GROUND
For best reception, an antenna 75 to 100 feet long and erected high and clear of surrounding objects should be used.
A good ground connection is essential with this receiver, preferably to a water pipe with the ground wire as short as possible.

BATTERY CONNECTIONS
Red Lead A+2 or 3 Volts
Blue Lead B+135 Volts
Black Lead B-(connected to A-)
Black Lead A-

"C" BATTERY CONNECTIONS
"C" battery should be connected to leads extending from the top of the chassis. Provision is made for mounting "C" battery within the cabinet.

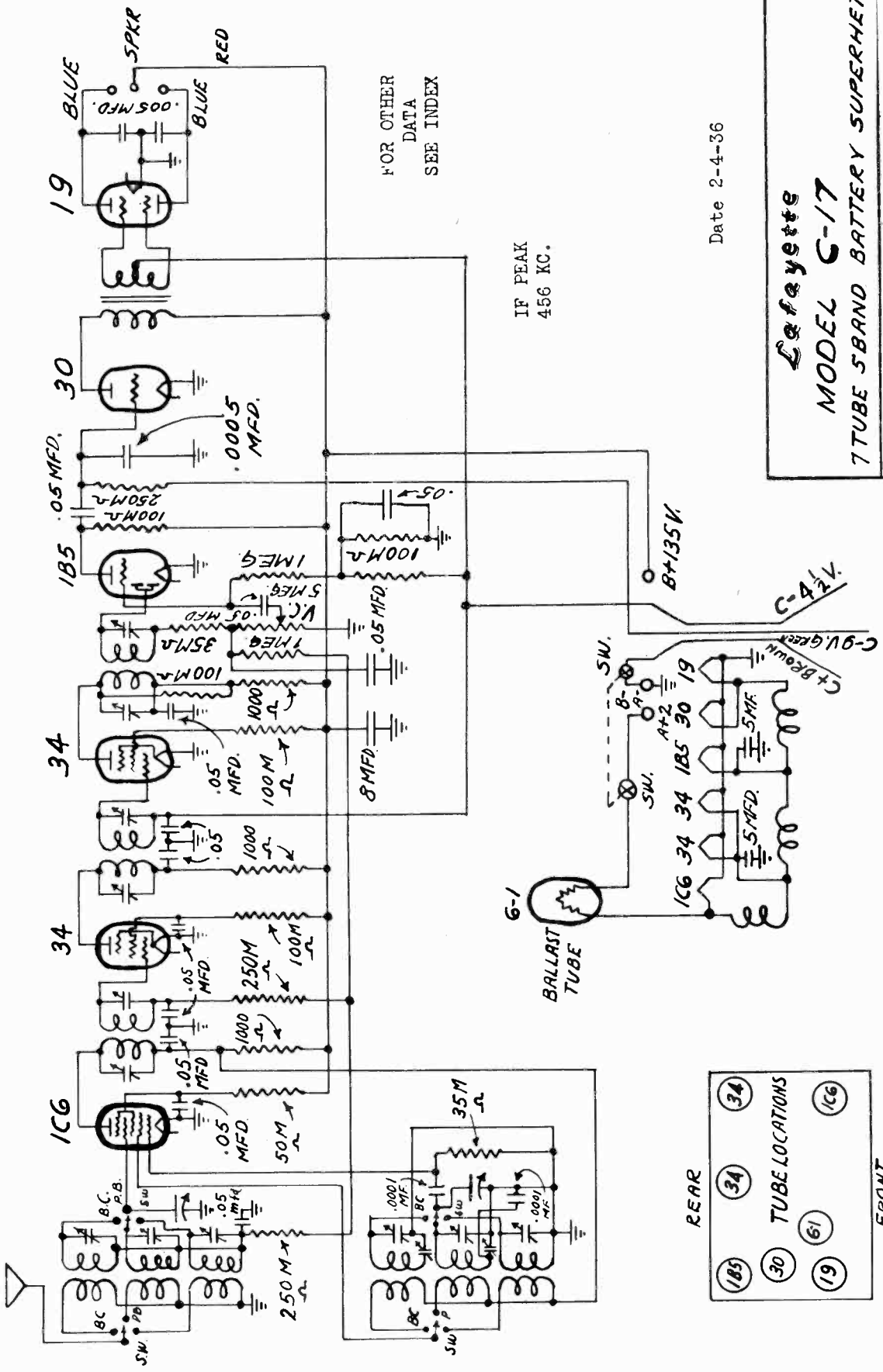
On models using a tapped "9" volt "C" battery, three leads are connected as follows: Brown wire to C4, yellow wire -3 volts and the green wire to -9 volts. On models using a tapped 22½ volt battery, four leads from the chassis are connected as follows: Black wire to C4, green wire to -3 volts, orange wire to -4½ volts and red wire to -9 volts.

Use a test oscillator and connect an output meter from plate to plate of the 19 output tube.
I.F. ALIGNMENT - Connect the oscillator through a .00025 condenser to the grid of the 1C6 tube and set the oscillator to 456 kilocycles. Peak each I.F. stage to resonance as indicated by maximum output or the output meter.

R.F. ALIGNMENT - With the wave change switch in the broadcast position, set oscillator to 1500 kilocycles and connect in series with a .00025 condenser to the antenna of the receiver. Rotate the variable condenser to the 1500 setting of the dial and adjust the trimmer condenser of the broadcast oscillator to resonance. This trimmer is located on the right side of the chassis, third position from the front. Reset the test oscillator to 1400 kilocycles and adjust antenna trimmer located in front of the chassis, first position from the left. Now set oscillator to 600 kilocycles and adjust paddler located on top of the chassis, second from the front. Check alignment at 1000 kilo.

MODEL C-17

LAFAYETTE RADIO MFG. CO.

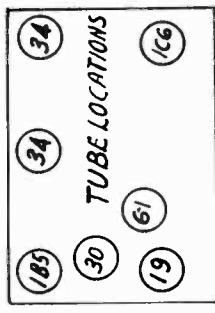


Lafayette
 MODEL C-17
 7 TUBE 5 BAND BATTERY SUPERHET

Date 2-4-36

FOR OTHER DATA
 SEE INDEX

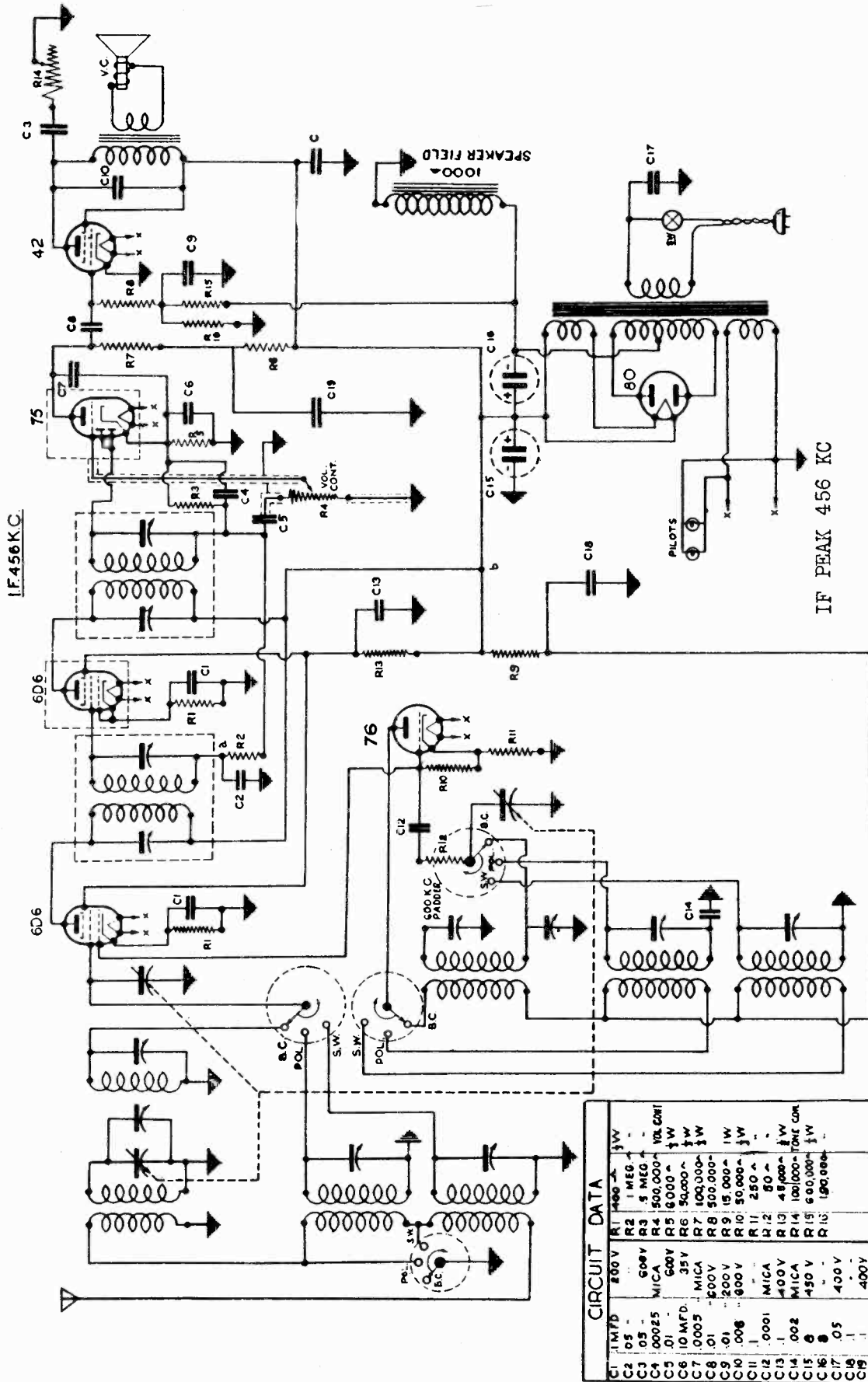
IF PEAK
 456 KC.



Top View of Chassis

LAFAYETTE RADIO MFG. CO.

MODEL D-20

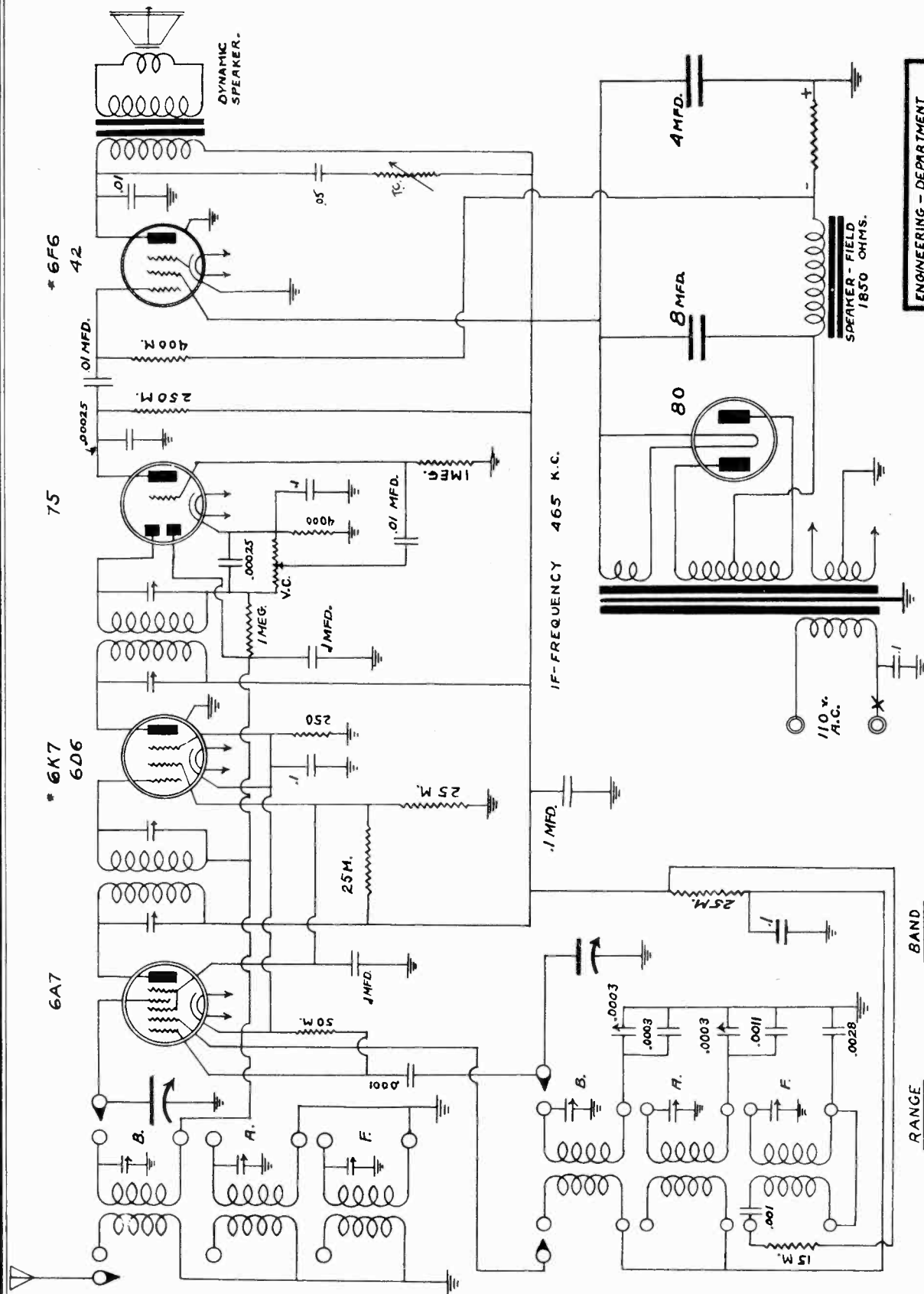


CIRCUIT DATA

C1	1MFD	200V	R1	1400 Ω	1W
C2	.05	500V	R2	1 MEG	-
C3	.05	500V	R3	5 MEG	-
C4	.00025	MICA	R4	500,000 Ω	VOL CONT
C5	.01	500V	R5	6000 Ω	1W
C6	10 MFD	35V	R6	50,000 Ω	1W
C7	.0005	MICA	R7	100,000 Ω	1W
C8	.01	500V	R8	500,000 Ω	1W
C9	.01	200V	R9	15,000 Ω	1W
C10	.006	600V	R10	50,000 Ω	1W
C11	.0001	MICA	R11	250 Ω	-
C12	.002	400V	R12	80 Ω	-
C13	.002	450V	R13	45,000 Ω	1W
C14	.002	MICA	R14	100,000 Ω	1W
C15	.05	450V	R15	60,000 Ω	1W
C16	.05	400V	R16	180,000 Ω	-
C17	.05	400V			
C18	.05	400V			
C19	.05	400V			

ALIGNMENT

- (1) IF 456 kc.
- (2) BC-Osc. & dial - 1400 kc. in front of range SW.)
- (3) Preselector trim. in center at (6) Middle Wave Band - 2 trims. on front of chassis - 1400 kc.
- (4) Adj. trim. on top of gang cond. top of SW coils, on top of chassis - 4000 kc.
- (5) Padder 600 kc (right end of chassis).
- (6) SW coils - 15 mc.
- (7) SW pos. - 2 trims. at bases of SW coils - 15 mc.

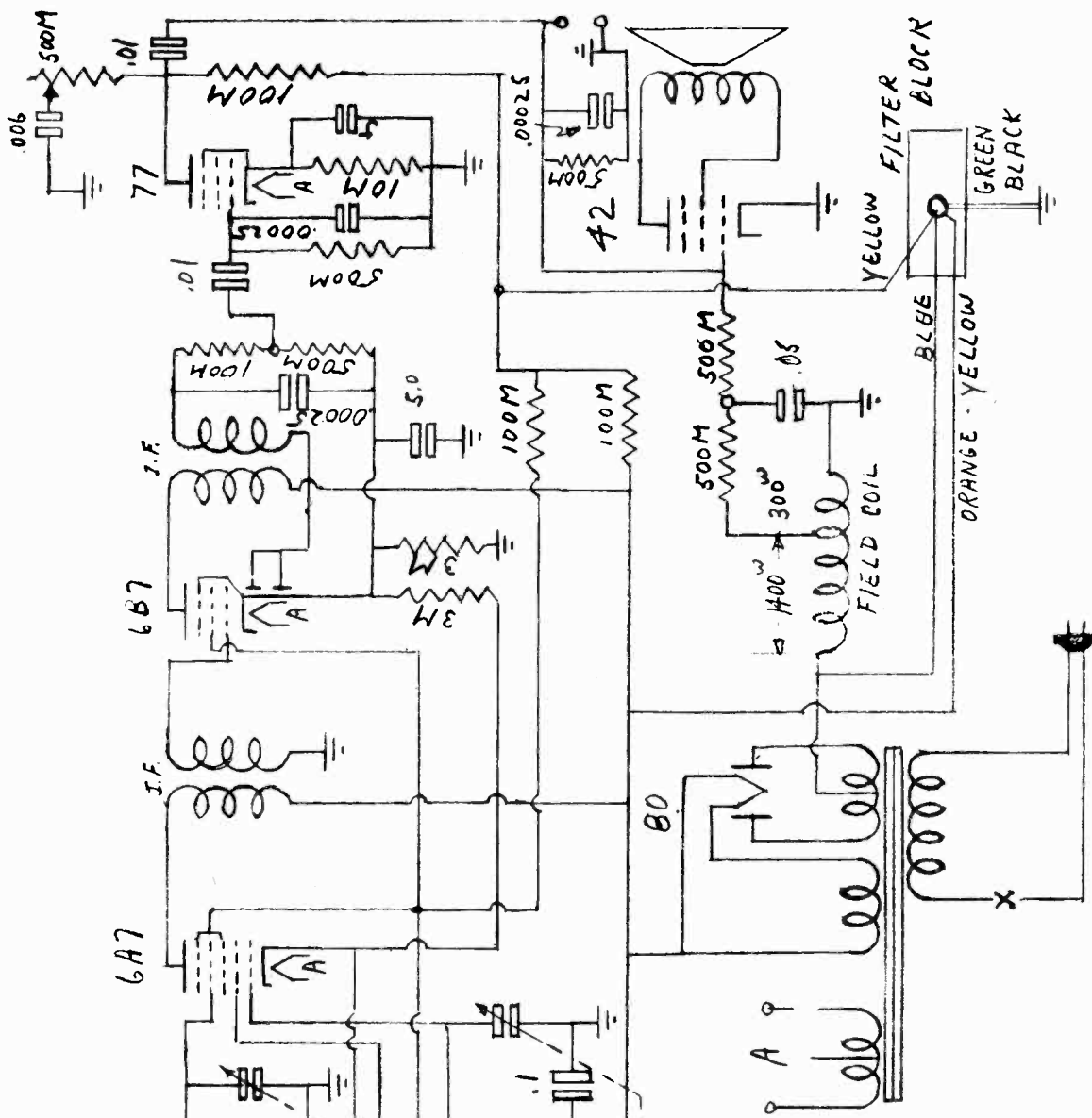


ENGINEERING - DEPARTMENT
 APR. BY *J. W. J.*
 37-SERIES
 321 -

* NOTE: - IN CHASSIS OF SERIES M2 THE 6D6 AND 42 IS REPLACED BY 6K7 AND 6F6 RESPECTIVELY.

RANGE BAND
 540-1750 K.C. B
 1750-5800 K.C. A
 58 - 18.0 M.C. F
 IN LONG-WAVE MODELS BAND 1750-5800 K.C. IS REPLACED BY 750-2100 METERS.

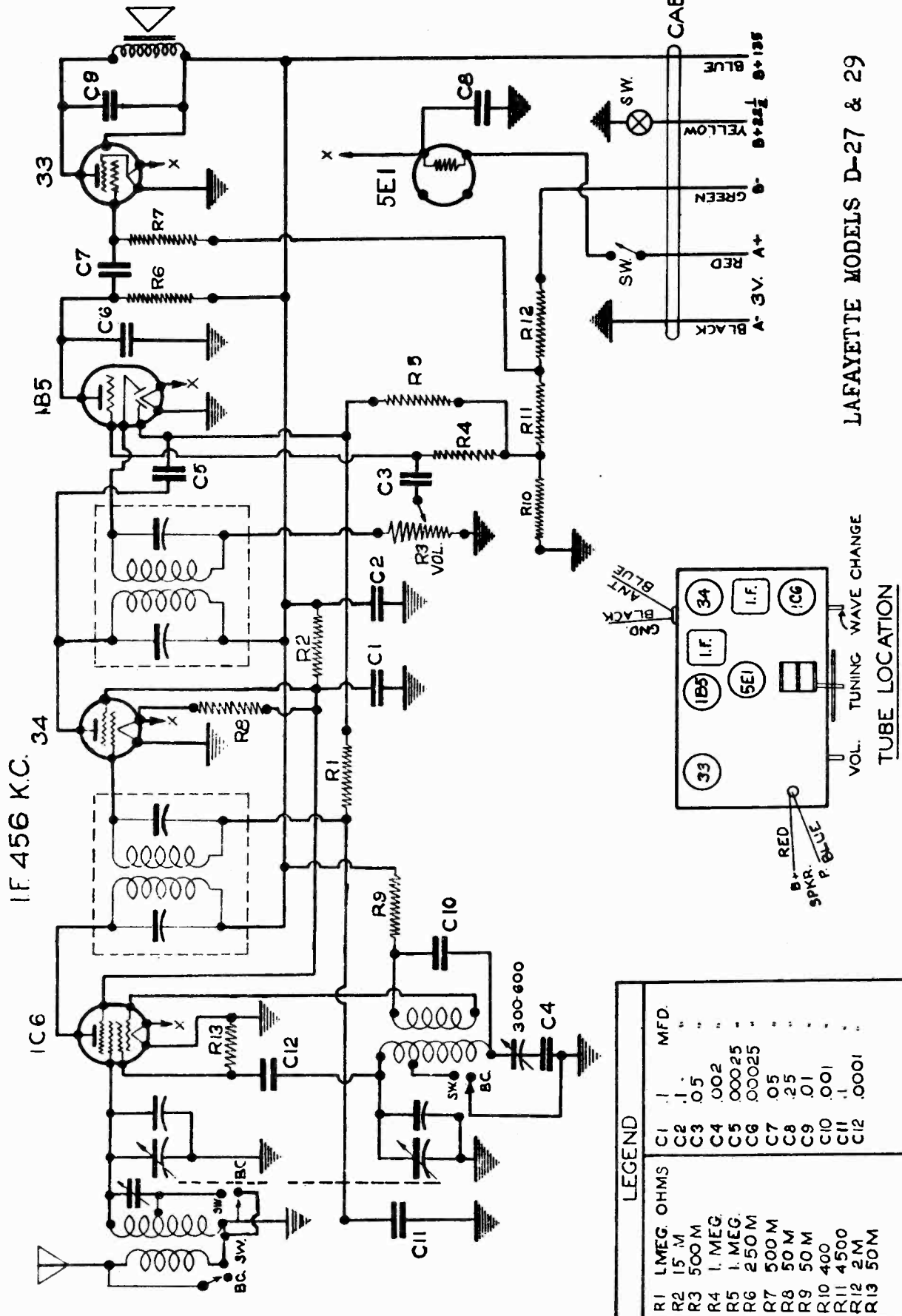
LAFAYETTE RADIO MFG. CO.



TUBE	PLATE	SCREEN	K	FIL.
78	250	50	25	5.8
6A7 RF	250	50	23	5.8
6A7 ISC	250		GRID+9	5.8
6B7	250	50	12.5	5.8
77	100	130	7.5	5.8
42	225	250	0	5.8
80				4.85

I.F. - 175 KC.

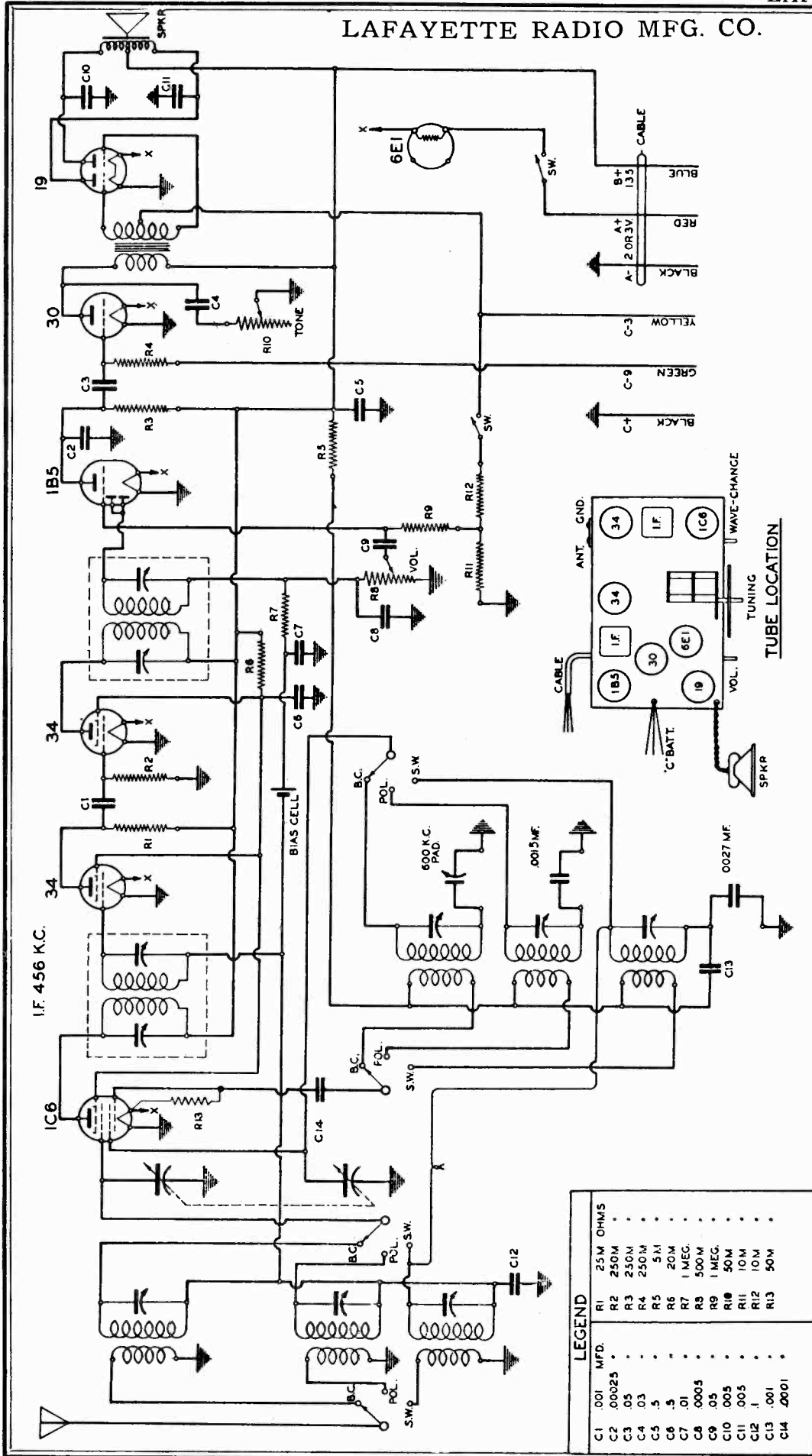
LAFAYETTE - C22 F.D. 4-8-35



LAFAYETTE MODELS D-27 & 29

LAFAYETTE RADIO MFG. CO.

MODEL D-28



ALIGNMENT

IF: 456 kc.
 BC-OSC: 1700 kc. Trimmer located on right side of chassis, 2nd pos. from front.
 BC-ANT: 1400 kc. Trimmer located under chassis.

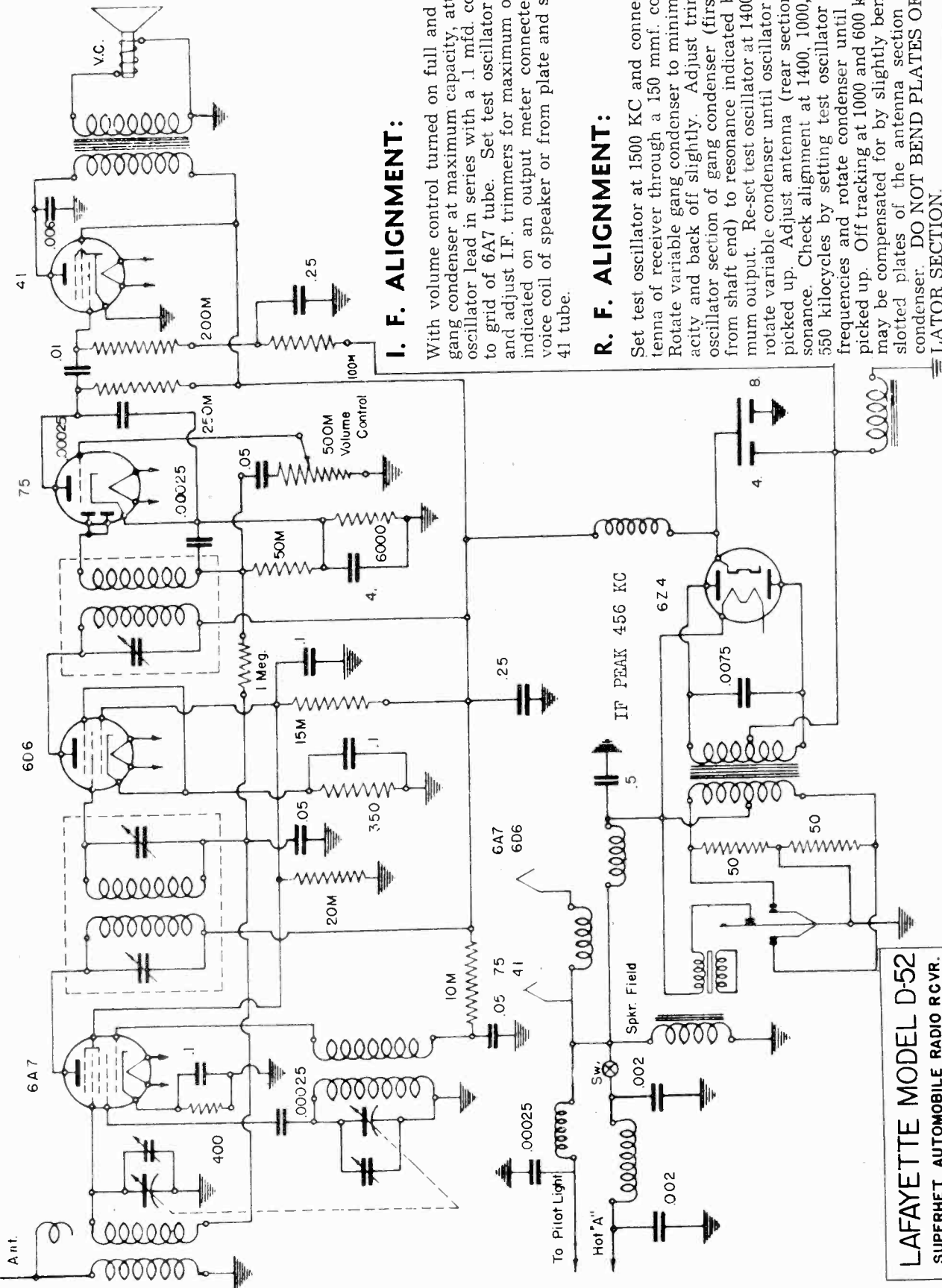
PADDER: 600 kc. Located on top of chassis.

CHECK BC at 1000 kc.
 POLICE: Osc. trim 5 mc., on right side of chassis, 1st position from front.
 Ant. trim. 5 mc, on front of chassis, left position.

SW: Osc. trim, 18 mc, on right side of chassis, 3rd position from front.

SW: Ant. trim 16 mc, thru right-hand hold in front of chassis.

LAFAYETTE RADIO MFG. CO.



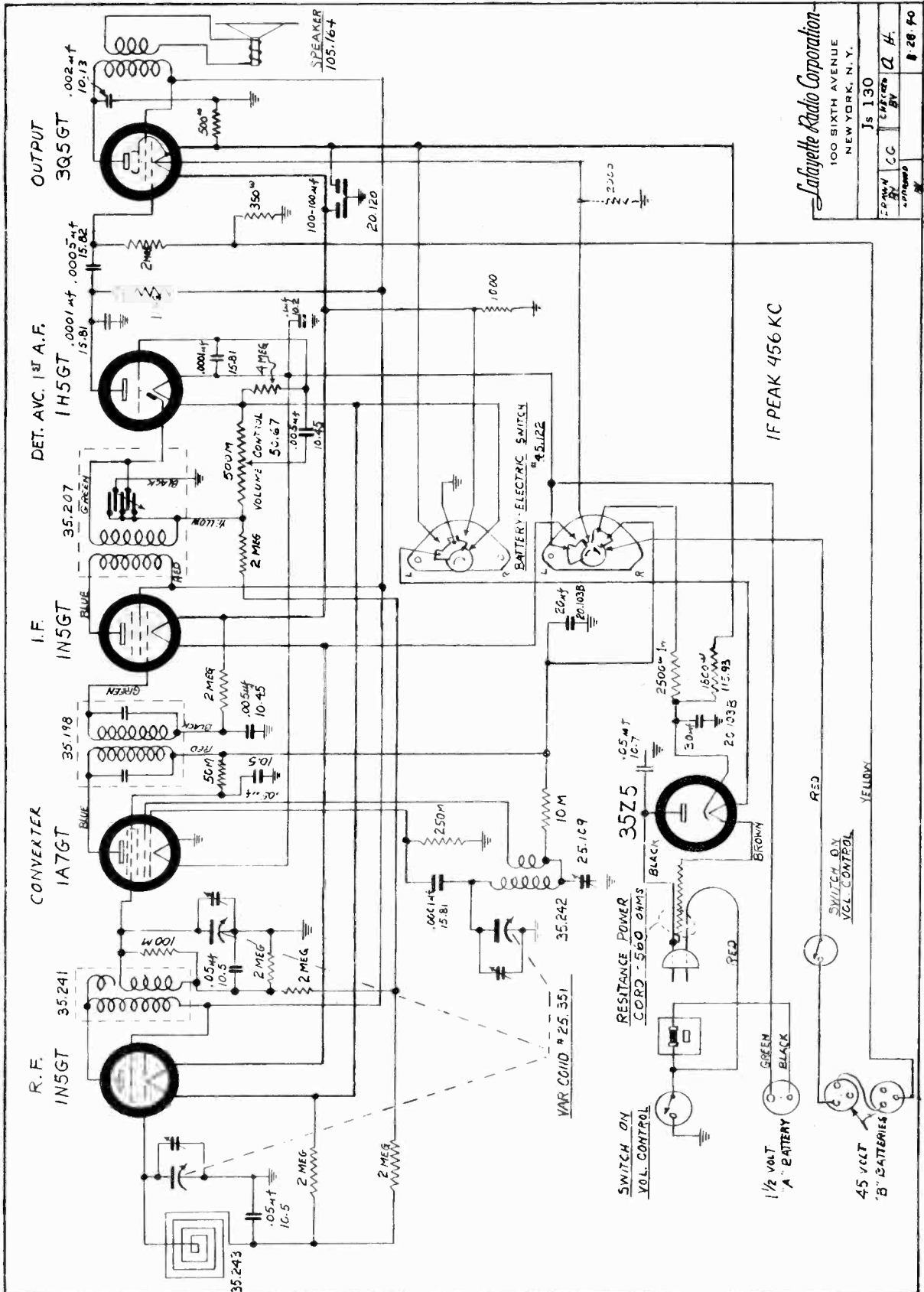
I. F. ALIGNMENT:

With volume control turned on full and variable gang condenser at maximum capacity, attach test oscillator lead in series with a .1 mfd. condenser to grid of 6A7 tube. Set test oscillator 456 KC and adjust I.F. trimmers for maximum output as indicated on an output meter connected across voice coil of speaker or from plate and screen of 41 tube.

R. F. ALIGNMENT:

Set test oscillator at 1500 KC and connect to antenna of receiver through a 150 mmf. condenser. Rotate variable gang condenser to minimum capacity and back off slightly. Adjust trimmer on oscillator section of gang condenser (first section from shaft end) to resonance indicated by maximum output. Re-set test oscillator at 1400 KC and rotate variable condenser until oscillator signal is picked up. Adjust antenna (rear section) to resonance. Check alignment at 1400, 1000, 600 and 550 kilocycles by setting test oscillator to these frequencies and rotate condenser until signal is picked up. Off tracking at 1000 and 600 kilocycles may be compensated for by slightly bending the slotted plates of the antenna section of gang condenser. **DO NOT BEND PLATES OF OSCILLATOR SECTION.**

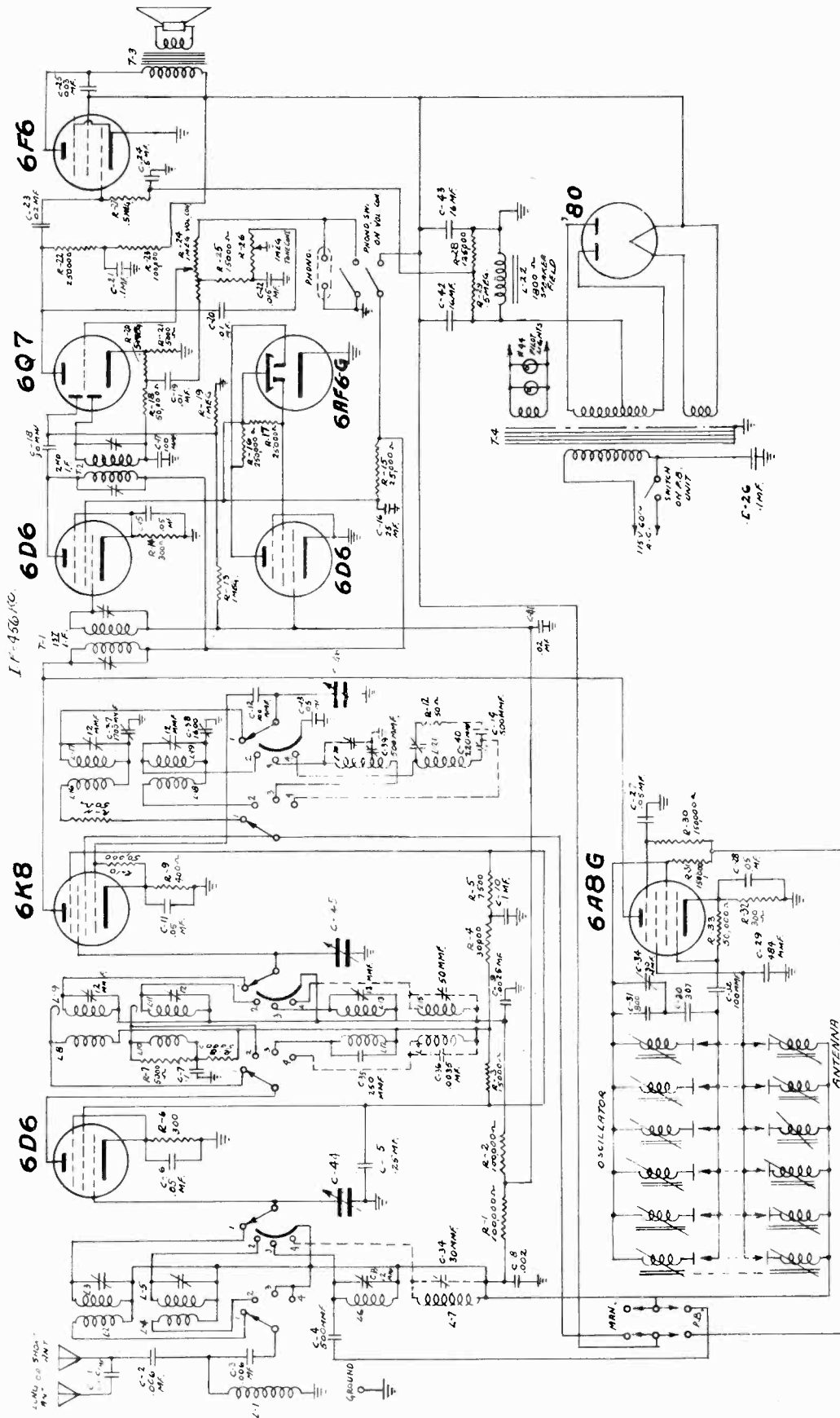
LAFAYETTE MODEL D-52
SUPERHET AUTOMOBILE RADIO RCVR.



Lafayette Radio Corporation
 100 SIXTH AVENUE
 NEW YORK, N. Y.

Model	Js 130
Part	CC
Price	\$12.41
Part No.	105.164
Page	13-13

LAFAYETTE RADIO MFG. CO

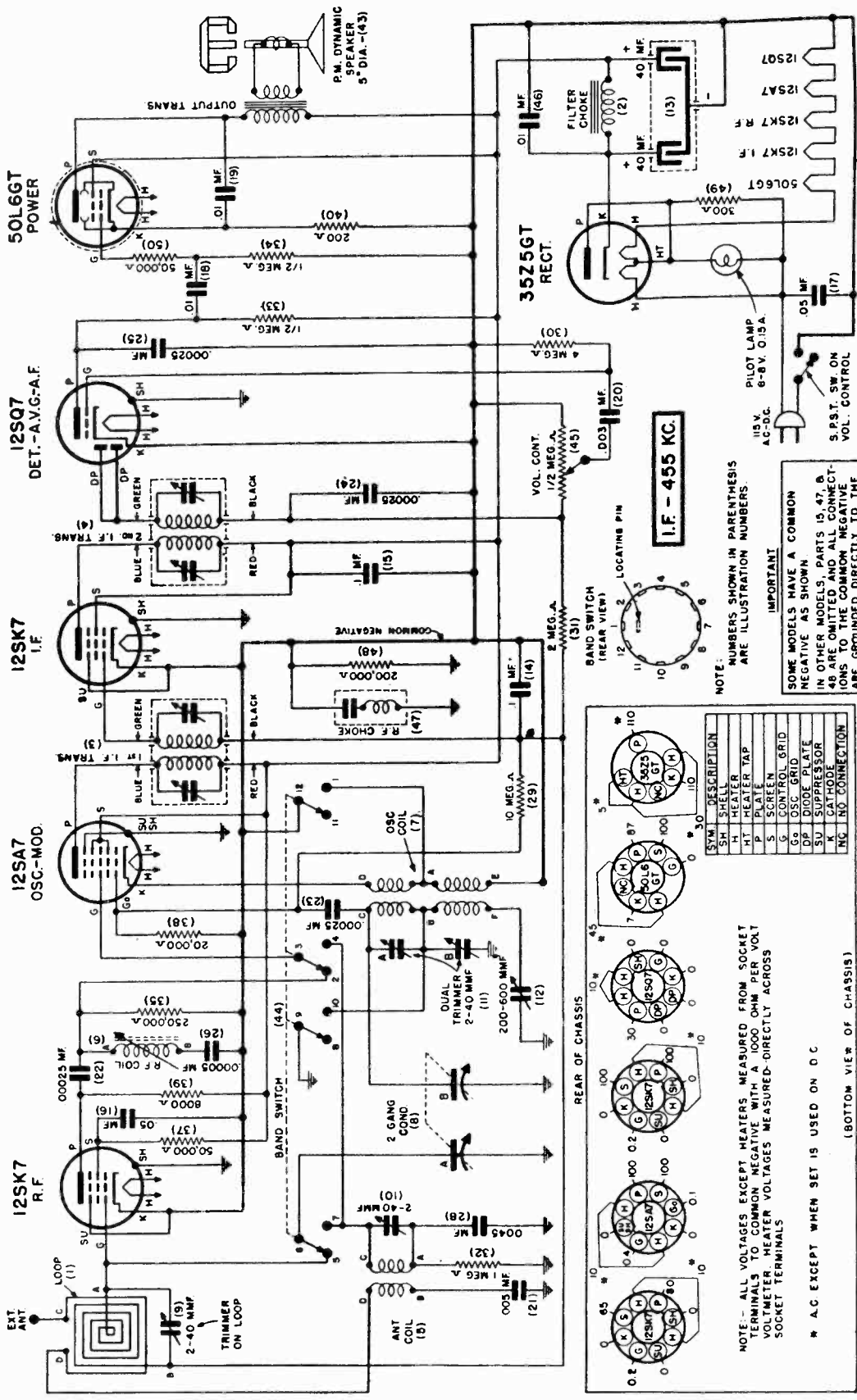


9 TUBE A.C. RECEIVER
USED ON -
3 BAND 399-C31 4BAND 4990
BNW BY
W.L.

NOTE:
 BAND SWITCH SHORT CIRCUITS COILS OF LOWER FREQUENCY THAN THE ONE IN USE.

BAND 1 - 23 MC. TO 7.2 MC. OR 13 METERS TO 4.75 METERS
 BAND 2 - 7.4 MC. TO 2.94 MC. OR 40.5 METERS TO 128.25 METERS
 BAND 3 - 1720 KC. TO 547.5 KC. OR 175 METERS TO 550 METERS
 BAND 4 - 375 KC. TO 137.5 KC. OR 800 METERS TO 2200 METERS - USE ON MODEL #4990 ONLY

LAFAYETTE RADIO MFG. CO.



RESISTOR LIST:

Resistor 6984	1 Meg.	Ohm	1/3 Watt	.19	
Resistor 6984	250,000	Ohm	1/3 Watt	.19	
Resistor 2155	Carbon	250,000	Ohm	1/3 Watt	.19
Resistor 6979	Carbon	50,000	Ohm	1/3 Watt	.19
Resistor 9337	Carbon	8,000	Ohm	1/3 Watt	.19
Resistor 9337	Carbon	200	Ohm	1/3 Watt	.19
Resistor 11860	Resistor	220 Volt	Ext. Line Cord	1.50	
Resistor 11861	Resistor	125 Volt	Ext. Line Cord	1.50	
Resistor 12046	Speaker	P.M. Dynamic	3"	2.70	
Switch 12034	Band	(4 Pole - 2 Pos.)		.75	
Control 9468	Vol. Control	With S.P.S.T. Switch		.75	
Condenser 12312	Tubular	.01 Mfd.	400 Volt	\$.017	
Choke 12312	Tubular	.2 Mfd.	400 Volt with Choke	.26	
Resistor 1255	Carbon	200,000	Ohm	1/3 Watt	.19

CONDENSER LIST:

Tubular	1 Mfd.	200 Volt	.33	
Tubular	05 Mfd.	200 Volt	.20	
Tubular	05 Mfd.	400 Volt	.18	
Tubular	01 Mfd.	400 Volt	.17	
Tubular	01 Mfd.	400 Volt	.17	
Tubular	01 Mfd.	400 Volt	.17	
Mica	.00025 Mfd.		.21	
Mica	.00025 Mfd.		.21	
Mica	.00025 Mfd.		.21	
Mica	.00005 Mfd.		.21	
Mica	.00005 Mfd.		.21	
Mica	.00005 Mfd.		.21	
Mica	.00005 Mfd.		.21	
Carbon	4 Mfg.	Ohm	1/3 Watt	.19
Carbon	2 Mfg.	Ohm	1/3 Watt	.19
Carbon	1 Mfg.	Ohm	1/3 Watt	.19

TUBULAR PARTS LIST:

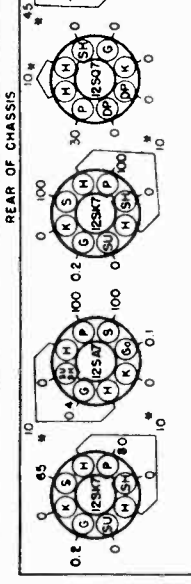
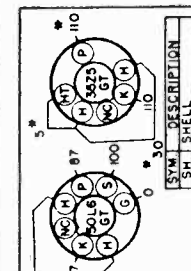
1151	Condenser
1147	Condenser
9458	Condenser
9458	Condenser
1368	Condenser
9458	Condenser
9458	Condenser
9458	Condenser
1544	Condenser
1544	Condenser
1544	Condenser
1628	Condenser
1628	Condenser
1628	Condenser
1628	Condenser
2705	Resistor
7988	Resistor

VOLTAGE TABLE (BOTTOM VIEW OF CHASSIS)

Part No.	Part Name	Description	List Price
1	220-40 Mfd.	Loop Filter	\$0.75
2	115V. 0.5A	F. Transformer	.80
3	115V. 0.5A	F. Transformer	.80
4	200-600 Mmf.	Antenna	.55
5	12036	Coil	.50
6	12040	Coil	.50
7	12028	Oscillator	1.70
8	12040	Tuning (2 Gang)	.21
9	1597	Trimmer (Loop 2-40 Mmf.)	.21
10	1597	Trimmer (Coil Ant.)	.21
11	12000	Trimmer (Dual)	.25
12	3287	Condenser	.45
13	12001	Tubular Dry Elec. 150 V 40-40 Mfd.	.75

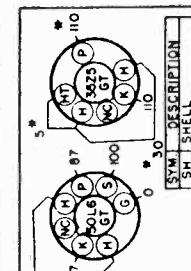
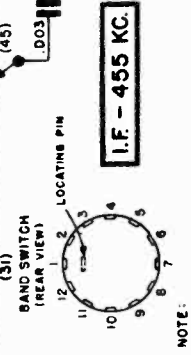
NOTE: ALL VOLTAGES EXCEPT HEATER VOLTAGES MEASURED FROM SOCKET TERMINALS TO COMMON NEGATIVE WITH A 1000 OHM PER VOLT VOLTMETER. HEATER VOLTAGES MEASURED DIRECTLY ACROSS SOCKET TERMINALS.

* A.C. EXCEPT WHEN SET IS USED ON O.C.



IMPORTANT NOTE: NUMBERS SHOWN IN PARENTHESES ARE ILLUSTRATION NUMBERS.

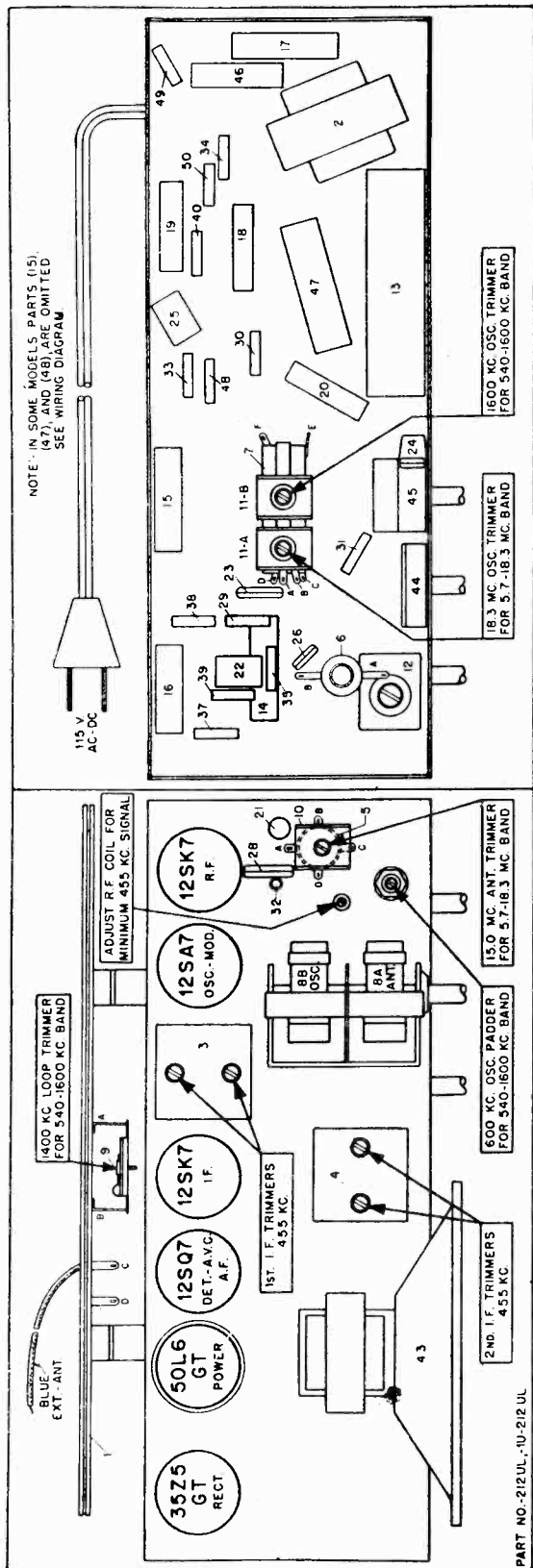
SOME MODELS HAVE A COMMON NEGATIVE AS SHOWN. IN OTHER MODELS, PARTS 15, 47 & 49 ON THIS CHASSIS COMMON NEGATIVE ARE GROUNDING DIRECTLY TO THE CHASSIS.



RESISTOR LIST (CONT.):

Resistor 6984	1 Meg.	Ohm	1/3 Watt	.19	
Resistor 6984	250,000	Ohm	1/3 Watt	.19	
Resistor 2155	Carbon	250,000	Ohm	1/3 Watt	.19
Resistor 6979	Carbon	50,000	Ohm	1/3 Watt	.19
Resistor 9337	Carbon	8,000	Ohm	1/3 Watt	.19
Resistor 9337	Carbon	200	Ohm	1/3 Watt	.19
Resistor 11860	Resistor	220 Volt	Ext. Line Cord	1.50	
Resistor 11861	Resistor	125 Volt	Ext. Line Cord	1.50	
Resistor 12046	Speaker	P.M. Dynamic	3"	2.70	
Switch 12034	Band	(4 Pole - 2 Pos.)		.75	
Control 9468	Vol. Control	With S.P.S.T. Switch		.75	
Condenser 12312	Tubular	.01 Mfd.	400 Volt	\$.017	
Choke 12312	Tubular	.2 Mfd.	400 Volt with Choke	.26	
Resistor 1255	Carbon	200,000	Ohm	1/3 Watt	.19

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ALIGNMENT PROCEDURE

For alignment procedure read tabulations from left to right. If more than one adjustment is required on any one band, make the adjustment marked (1) first, (2) next, (3) third. IMPORTANT: BEFORE ALIGNING, PLACE LOOP ANTENNA IN THE SAME POSITION IT WILL BE IN WHEN THE SET IS IN THE CABINET.

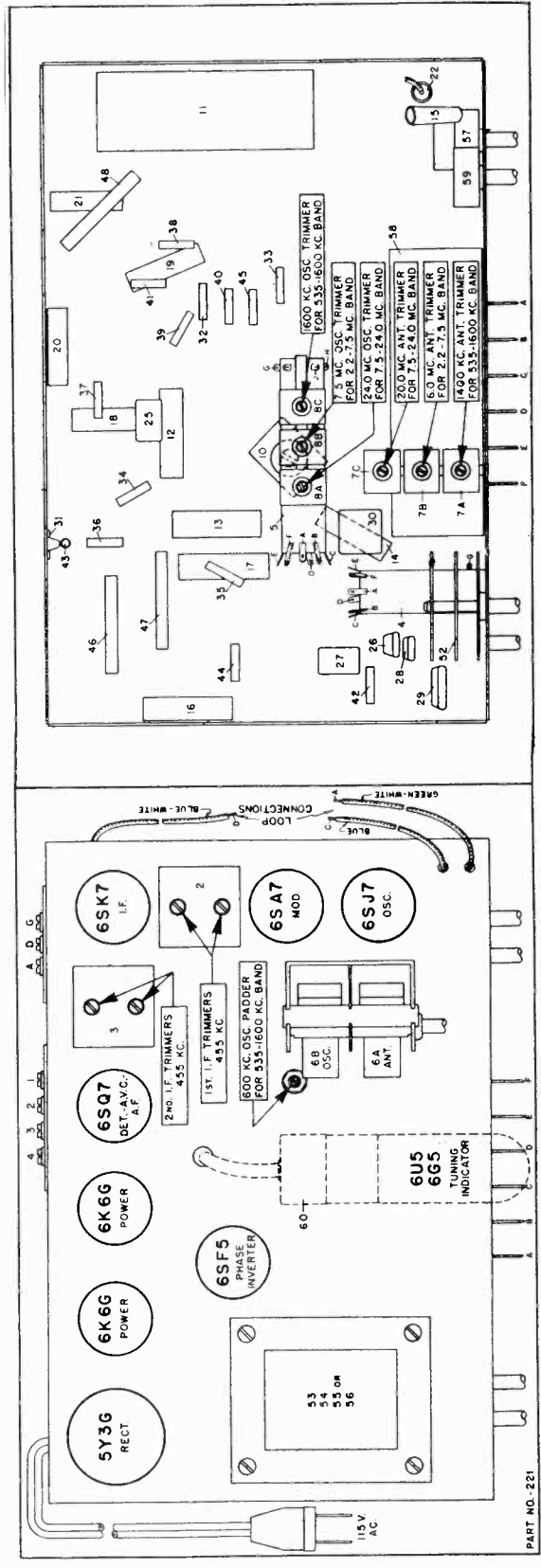
When adjusting 1600 kilocycle oscillator trimmer 600 K.C. R.F. trimmer and 1400 kilocycle antenna trimmer, do not connect test oscillator to loop. Couple test oscillator to receiver loop by: (a) Make a loop consisting of five to ten turns of No. 20 to 30 size wire wound on a three inch form and attach across output of test oscillator. (b) Place test oscillator loop near set loop—BE SURE THAT NEITHER MOVES WHILE ALIGNING.

Place band switch for operation on:	Set receiver dial to:	Adjust test oscillator frequency to:	Use dummy antenna in test oscillator consisting of:	TEST OSCILLATOR	
				Attach output of test oscillator to:	Refer to parts layout diagram for location of trimmers mentioned below:
1600 to 540 K.C. Band	Any point where interfering signal is received	Exactly 455 K.C.	0.2 Mfd. condenser	High slide to right, cap of 12SA7 tube, low slide to frame of condenser through 01 Mfd. condenser.	Adjust each of the second I.F. transformer trimmer for maximum output, then adjust each of the first I.F. transformer trimmers for maximum output.
	1 Rotate gang condenser to Maximum Capacity	Exactly 455 K.C.	None	Use Small Loop to couple test oscillator to receiver loop. Low slide to frame of condenser through 01 Mfd. condenser.	Adjust R.F. coil for minimum 455 K.C. signal.
	2 Exactly 1600 K.C.	Exactly 1600 K.C.	None	Use Small Loop to couple test oscillator to receiver loop. Loop to top of condenser through 01 Mfd. condenser.	Adjust 1600 K.C. oscillator trimmer for maximum output
	3 Approx. 1400 K.C.	Approx. 1400 K.C.	None	Use Small Loop to couple test oscillator to receiver loop. Loop to top of condenser through 01 Mfd. condenser.	While rocking gang condenser adjust 1400 K.C. loop trimmer for maximum output.
5.7 to 18.3 M.C. Band	4 Approx. 600 K.C.	Approx. 600 K.C.	None	Use Small Loop to couple test oscillator to receiver loop. Low slide to frame of condenser through 01 Mfd. condenser.	While rocking gang condenser adjust 600 K.C. oscillator (padder for maximum output).
	1 Exactly 18.3 M.C.	Exactly 18.3 M.C.	400 Ohm carbon resistor	High side to Blue Ant. Lead, Low side to frame of Mfd. condenser.	Adjust 18.3 M.C. oscillator trimmer for maximum output—the sure to use peak. Then screw down trimmer (add capacity) until the second peak maximum capacity, which is the proper one to use is tuned in.
	2 Approx. 13 M.C.	Approx. 13 M.C.	400 Ohm	High side to Blue Ant. Lead, Low side to frame of gang condenser.	While rocking gang condenser adjust 13 M.C. antenna trimmer for maximum output.

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When adjusting 1600 kilocycle oscillator trimmer, 600 K.C. Padder and 1400 kilocycle antenna trimmer, do not connect, test oscillator to loop. Couple test oscillator to receiver loop by: (a) Make a loop consisting of five to ten turns of No. 20 to 30 size wire wound on a three inch form and attach across output of test oscillator. (b) Place test oscillator loop near set loop—**BE SURE THAT NEITHER MOVES WHILE ALIGNING.**

Place band switch for operation on:	Set receiver dial to:	Adjust test oscillator frequency to	Use dummy antenna in series with output of test oscillator consisting of:	Attach output of test oscillator to:	Refer to parts layout diagram for location of trimmers mentioned below:
I. F. alignment use any band position	Any point where no interfering signal is received	Exactly 455 K.C.	0.2 Mfd. condenser	High side to grid cap of 6SA7 tube. Do not remove cap.	Adjust each of the second I.F. transformer trimmers for maximum output—then adjust each of the first I.F. transformer trimmers for maximum output.
1600 to 535 K.C. Band Using Loop Aerial	1 Exactly 1600 K.C.	Exactly 1600 K.C.	None	Use Small Loop to couple test oscillator to receiver loop.	Adjust 1600 K. C. oscillator trimmer for maximum output.
	2 APPROX. 1400 K.C.	APPROX. 1400 K.C.	None	Use Small Loop to couple test oscillator to receiver loop.	While rocking gang condenser adjust 1400 K. C. loop antenna trimmer for maximum output.
	3 APPROX. 600 K.C.	APPROX. 600 K.C.	None	Use Small Loop to couple test oscillator to receiver loop.	While rocking gang condenser adjust 600 K. C. loop oscillator padder for maximum output.
2.2 to 7.6 M.C. Band	1 Exactly 7.6 M.C.	Exactly 7.6 M.C.	400 Ohm carbon resistor	Receiver antenna "A", post	Adjust 7.6 M. C. oscillator trimmer for maximum output.
	2 APPROX. 6 M.C.	APPROX. 6 M.C.	400 Ohm carbon resistor	Receiver antenna "A", post	While rocking gang condenser adjust 6 M. C. antenna trimmer for maximum output.
7.4 to 24 M.C. Band	1 Exactly 24 M.C.	Exactly 24 M.C.	400 Ohm carbon resistor	Receiver antenna "A", post	Adjust 24 M. C. oscillator trimmer for maximum output—be sure to use proper peak. If more than one peak is noticed, back off trimmer to minimum capacity, then screw down trimmer (add capacity) until the second peak—which is the proper one to use is noted.
	2 APPROX. 20 M.C.	APPROX. 20 M.C.	400 Ohm carbon resistor	Receiver antenna "A", post	While rocking gang condenser adjust 20 M. C. antenna trimmer for maximum output.



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CONDENSERS

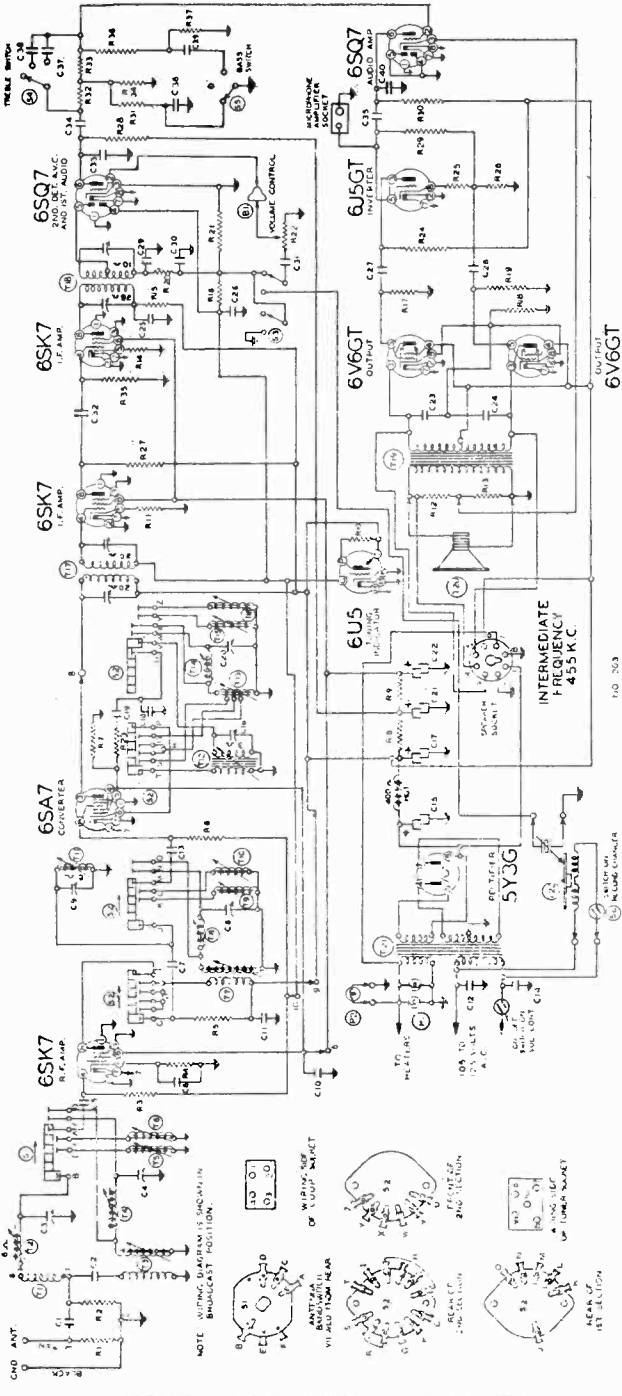
- R28 130172 250M ohm—1/2 W.
- R29 130172 500M ohm—1/2 W.
- R30 130172 250M ohm—1/2 W.
- R31 130172 40M ohm—1/2 W.
- R32 130172 150M ohm—1/2 W.
- R33 130172 350M ohm—1/2 W.
- R34 130172 250M ohm—1/2 W.
- R35 130220 100M ohm—1/2 W.
- R36 130880 150M ohm—1/2 W.
- R37 1303 300M ohm—1/2 W.

- C1 1292 .0005 mica
- C2 10047 .002 x 600 V.
- C3 124143 B.C. antenna trimmer
- C4 124143 9 mc. antenna trimmer
- C5 1292 .0005 mica tubular
- C6 10020 1 x 200 V.
- C7 129168 .00001 mica R.F. trimmer
- C8 124138 9 mc. R.F. trimmer
- C9 124139 B.C. R.F. trimmer
- C10 10074 1 x 400 V.
- C11 10074 1 x 400 V.
- C12 10061 .02 x 600 V.
- C13 1292 .0005 mica
- C14 10061 .02 x 600 V.
- C15 19112 30.0 mid. lyric x 450 w.v.
- C16 124144 B.C. oscillator trimmer
- C17 19112 30.0 mid. lyric x 450 w.v.
- C18 129167 .0002 silver mica
- C19 129165 .00005 mica
- C20 124145 9 mc. oscillator trimmer
- C21 19112 10.0 mid. lyric
- C22 19669 16 mid x 350 v.v.
- C23 10065 .05 x 600 V.
- C24 10065 .05 x 600 V.
- C25 1001 1 x 400 V.
- C26 10022 .05 x 200 V.
- C27 10013 .05 x 400 V.
- C28 1009 .05 x 200 V.
- C29 129161 .0001 mica
- C30 129161 .0001 mica
- C31 10020 1 x 200 V.
- C32 1292 .0005 mica
- C33 12912 .00025 mica
- C34 1001 1 x 400 V.
- C35 10013 .05 x 400 V.
- C36 100118 .08 x 600 V.
- C37 12936 .0003 mica
- C38 129166 .000125 mica
- C39 10037 .003 x 600 V.
- C40 12912 .00025 mica

C4 and C3 in same unit
C15, C17 and C21 in same unit

PARTS

- T1 111209 Loop antenna assembly
- T2 11195 B.C. antenna coil
- T3 11190 9 mc. antenna coil
- T4 11189 6 mc. antenna coil
- T5 11191 12 mc. antenna coil
- T6 11192 15 mc. antenna coil
- T7 10959 9 mc. R.F. coil
- T8 10958 6 mc. R.F. coil
- T9 10960 12 mc. R.F. coil
- T10 10961 15 mc. R.F. coil
- T11 10962 B.C. R.F. coil
- T12 10161 B.C. Oscillator coil
- T13 10157 9 mc. oscillator coil
- T14 10156 6 mc. oscillator coil
- T15 10158 12 mc. oscillator coil
- T16 10159 15 mc. oscillator coil
- T17 108477B Input I.F. coil—455 kc.
- T18 108130E Output I.F. coil—455 kc.



- R18 130317 250 ohm—2 watt
- R19 1303 500M ohm—1/2 W.
- R20 130220 100M ohm—1/2 W.
- R21 130238 400M ohm—1/2 W.
- R22 101234 500M ohm—1/2 W.
- R23 130174 50 ohm—1/2 W.
- R24 13094 50M ohm—1/2 W.
- R25 130218 5M ohm—1/2 W.
- R26 13094 50M ohm—1/2 W.
- R27 13073 15M ohm—1/2 W.

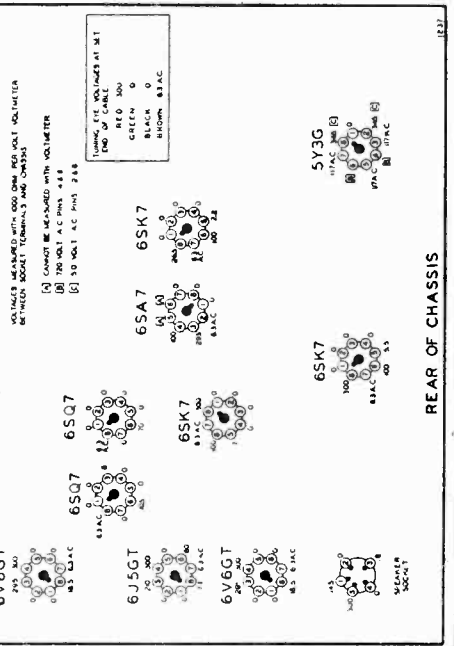
TECHNICAL DATA

- Power Consumption Radio Only - - - - 120 Watts
- Power Output - - - - 10 Watts Undistorted
- Sensitivity for 500 Milliwatt Output: 10 Microvolts Average
- Selectivity - 27 KC Broad at 1000 Times Signal at 1000 KC
- Tuning Frequency Range Broadcast Band - 540 to 1600 KC
- 49M Band - - - 5.9 to 6.1 MC
- 31M Band - - - 9.1 to 10 MC
- 25M Band - - - 11.4 to 12.1 MC
- 19M Band - - - 14.9 to 15.4 MC
- Intermediate Frequency - - - - 455 KC
- Speaker - - - - 12 in. Electro Dynamic

RESISTORS

- R9 130319 10M ohm—2 watt
- R10 1 megohm in tuning indicator cable
- R11 130200 700 ohm—1/2 W.
- R12 13082 10M ohm—1/2 W.
- R13 130235 1500 ohm—1/2 W.
- R14 130235 1500 ohm—1/2 W.
- R15 130192 2M ohm—1/2 W.
- R16 13019 1 megohm—1/2 W.
- R17 1303 500M ohm—1/2 W.
- R1 130232 25M ohm—1/2 W.
- R2 130232 25M ohm—1/2 W.
- R3 13019 1 megohm—1/2 W.
- R4 130218 5M ohm—1/2 W.
- R5 13019 1 megohm—1/2 W.
- R6 130232 25M ohm—1/2 W.
- R7 130232 25M ohm—1/2 W.
- R8 130318 6M ohm—2 watt

BOTTOM VIEW OF CHASSIS

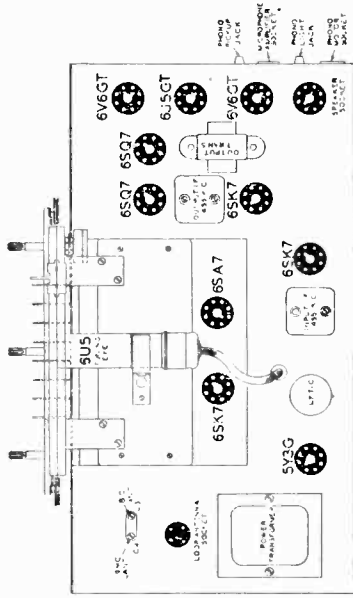


MODEL 1102

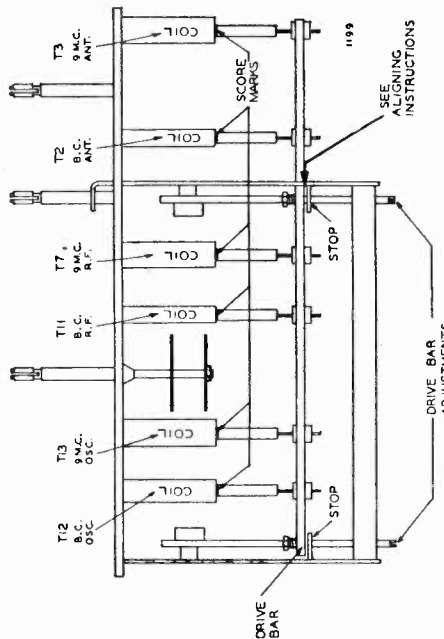
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BAND	SIGNAL GENERATOR Frequency Setting	Dummy Antenna	Connection to Radio	Position of Band Switch	Dial Pointer Setting	Trimmers Adjusted in Order Shown	Trimmer Function	Adjustment
I. F.	455 Kc.	.1 MFD.	Grid of 6SK7 (I.F.)	Broadcast	Set Dial at 1600 Kc.	Two Trimmers on Top	Output I. F.	Adjust to maximum output
I. F.	455 Kc.	.1 MFD.	Grid of 6SA7	Broadcast	Set Dial at 1600 Kc.	Two Trimmers on Top	Input I. F.	Adjust to maximum output
31 METER BAND	9.6 Mc.	400 ohms	Antenna lead	31M	Set Dial at 9.6 Mc.	(See Trimmer View) C20 (See Trimmer View) C8 (See Trimmer on Top) C4	Osc. R. F. Ant.	Adjust to maximum output
49 METER BAND	6.1 Mc.	400 ohms	Antenna lead	49M	Set Dial at 6.1 Mc.	(See Trimmer View) T14 (See Trimmer View) T8 (See Trimmer View) T4	Osc. R. F. Ant.	Adjust to maximum output
25 METER BAND	11.8 Mc.	400 ohms	Antenna lead	25M	Set Dial at 11.8 Mc.	(See Trimmer View) T15 (See Trimmer View) T9 (See Trimmer View) T5	Osc. R. F. Ant.	Adjust to maximum output
19 METER BAND	15.2 Mc.	400 ohms	Antenna lead	19M	Set Dial at 15.2 Mc.	(See Trimmer View) T16 (See Trimmer View) T10 (See Trimmer View) T6	Osc. R. F. Ant.	Adjust to maximum output
BROADCAST BAND	1600 Kc.	200 mmf.	Antenna lead	Broadcast	Set Dial at 1600 Kc.	(See Trimmer View) C16 (See Trimmer View) C9 (See Trimmer on Top) C3	Osc. R. F. Ant.	Adjust to maximum output
BROADCAST BAND	1400 Kc.	200 mmf.	Antenna lead	Broadcast	Set Dial at 1400 Kc.	Rotate Core T11 Rotate Core T2 (See Iron Core Adjustment View)	R. F. Ant.	Adjust to maximum output

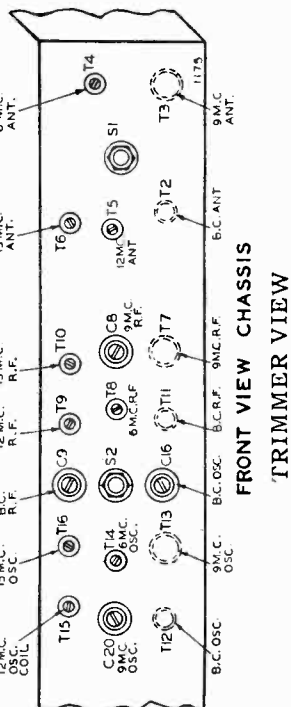
• Dummy antennas—1 mf., 200 mmf., and 400 ohms.



CHASSIS VIEW



IRON CORE ADJUSTMENT VIEW



FRONT VIEW CHASSIS TRIMMER VIEW

Aligning Instructions

First refer to the "Iron Core Adjustment View" now turn the tuning knob until the drive bar comes within 1/64 to 1/32 from the stops. (A piece of blotting paper is about the right thickness and will serve as a gauge). The clearance of the bar must be the same at both stops. If far off you can raise one drive screw gently and equalize them. Minor adjustments may be made with the drive bar adjustments.

Next rotate each iron core until the fine score marks are even with the edge of the coil forms.

You are now ready to continue with the trimmer adjustments as shown on the alignment chart.

Should it ever be necessary to replace a broken or lost pushbutton you will notice they are made in two parts, a clear front and a brown body. To separate the two portions first take off the escutcheon. Push the button in—

Replacing Pushbuttons

Next push the brown body of the button back until it snaps free from the clear front. You can now lift the clear portion off and take out the brown body. To replace the pushbutton, reverse the procedure.