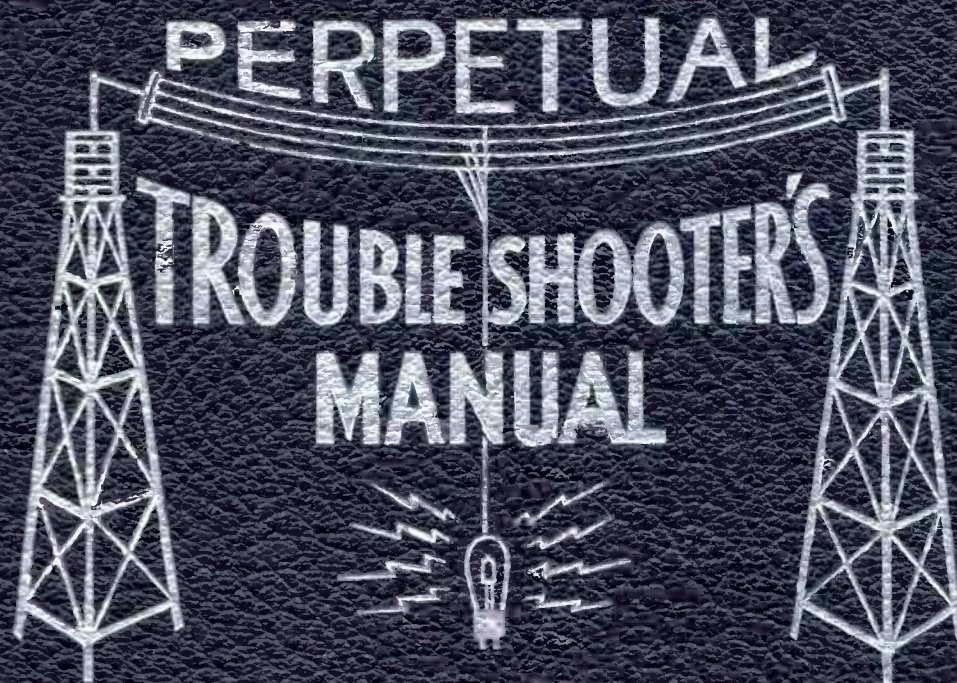


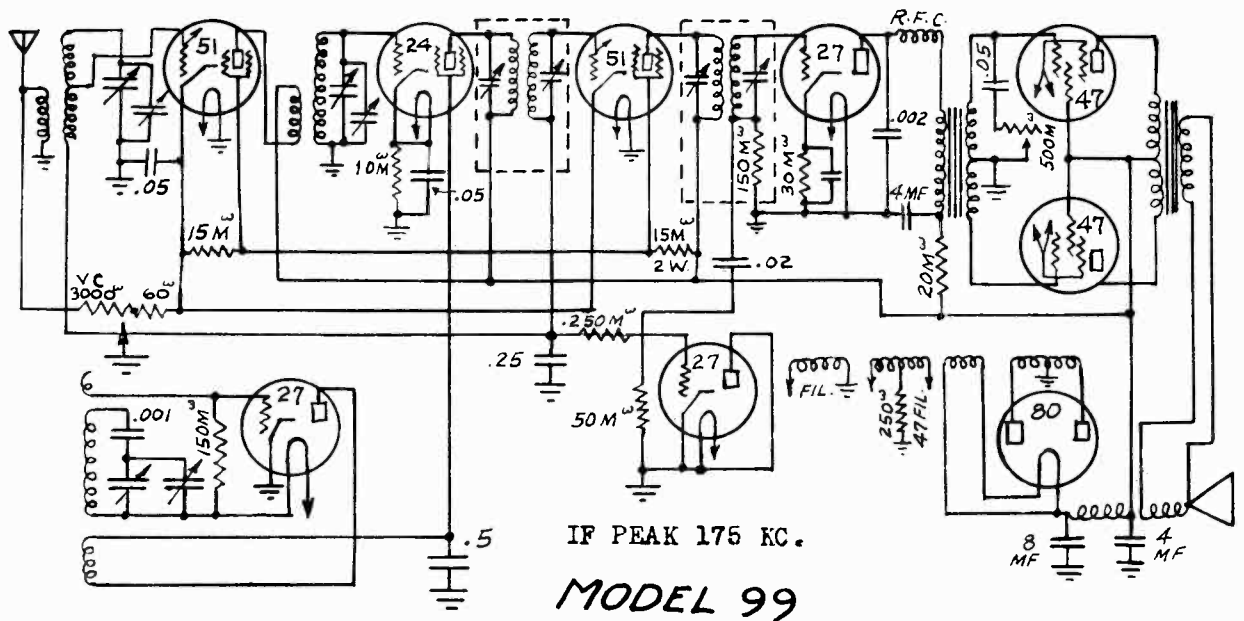
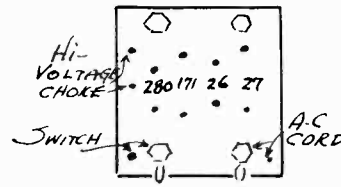
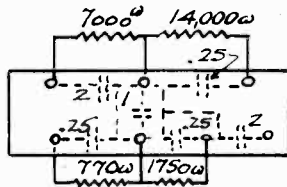
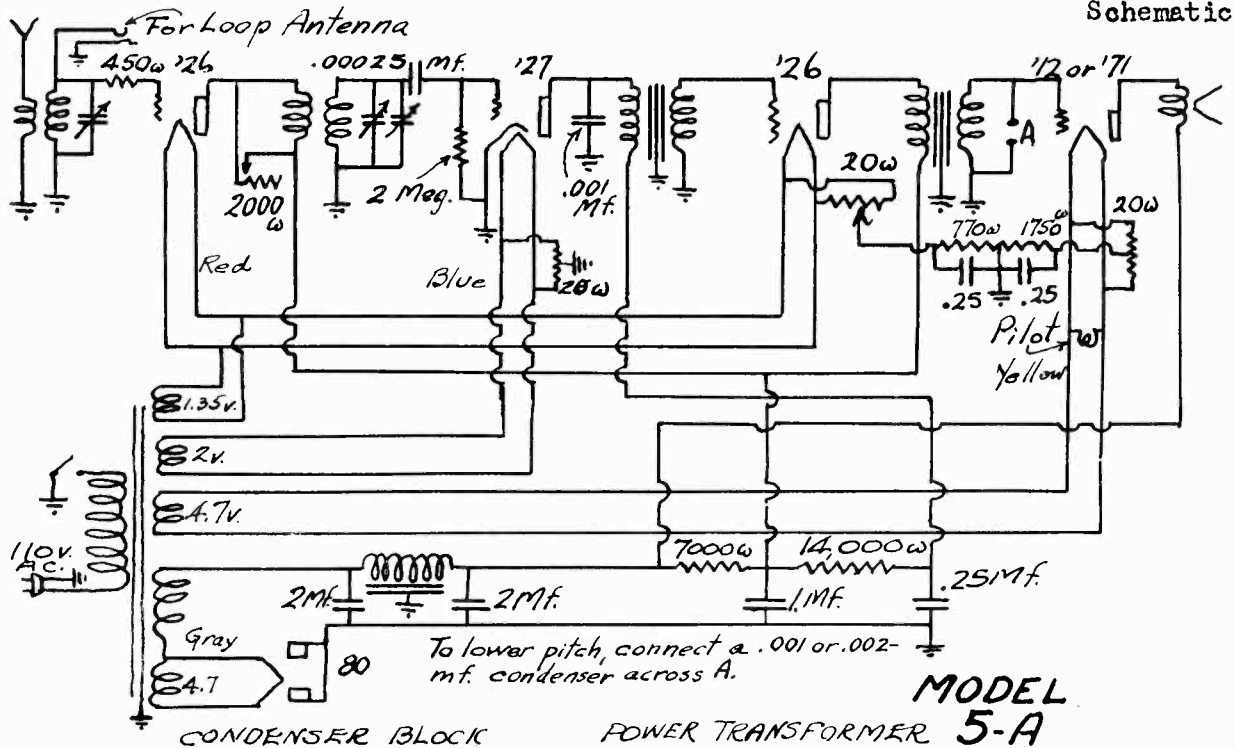
**VOLUME V**



**JOHN F. RIDER**

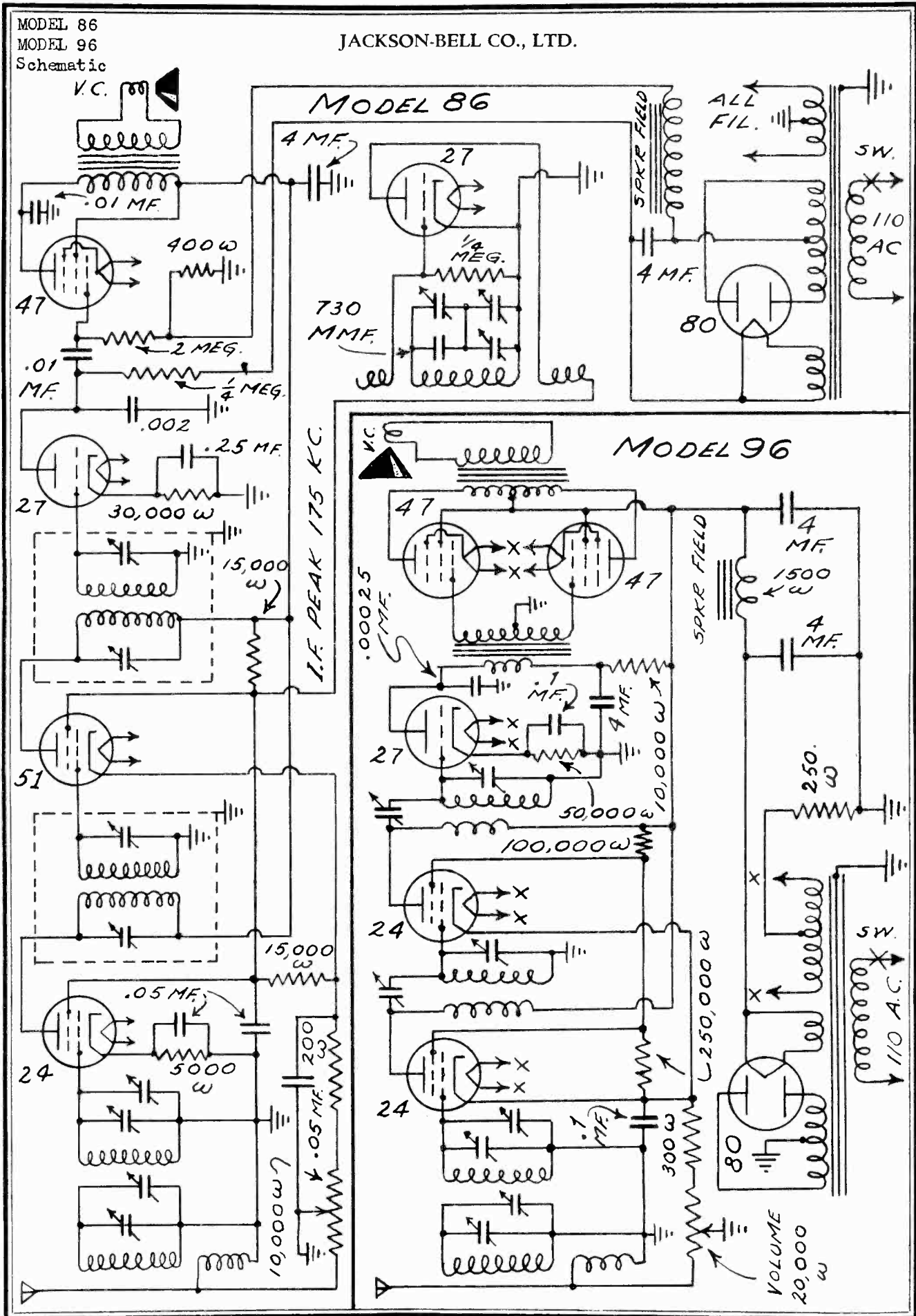
JACKSON-BELL CO., LTD.

MODEL 5-A  
Schematic  
MODEL 99  
Schematic



MODEL 86  
MODEL 96  
Schematic

JACKSON-BELL CO., LTD.



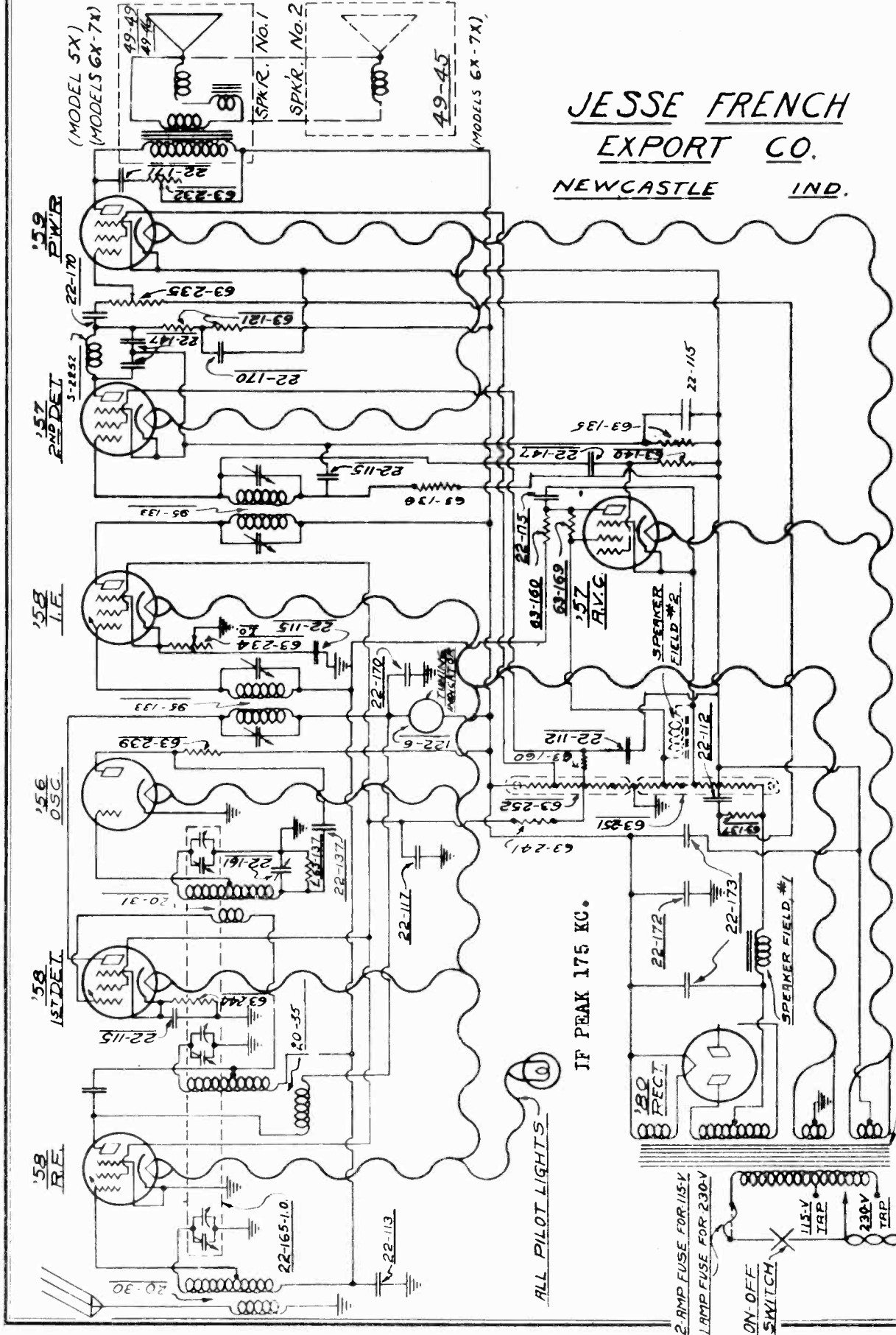
JESSE FRENCH EXPORT CO.

MODEL 5X, 6X, 7X  
Schematic

# JESSE FRENCH EXPORT CO.

NEWCASTLE IND.

MODELS 5X - 6X - 7X



NOTE:  
TUNING INDICATOR 122-6  
NOT USED ON MODEL 5X)

95-197 60~  
95-196 25~

TP-115-0R-230V-VOLT. AC

ALL PILOT LIGHTS

IF PEAK 175 KC.

2 AMP FUSE FOR 115V  
LAMP FUSE FOR 230V

ON-OFF SWITCH

MODEL 5X, 6X, 7X  
Socket, Voltage  
Parts List

JESSE FRENCH EXPORT CO

SOCKET VOLTAGES

MODELS 5X 6X 7X

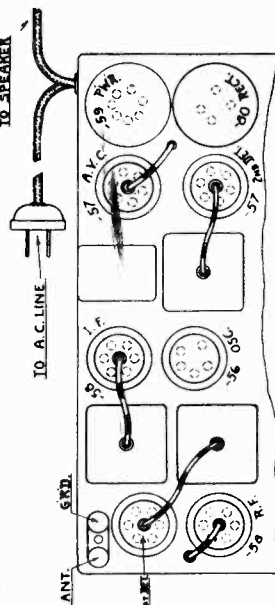
Tube Type	Position	Fil. Volt.	Plate Volt.	Cath. Volt.	Screen Volt.	Supp. Volt.	Plate Current
Z-56	R.F.	2.4	190	0	95	0	7.
Z-58	1st Det.	2.4	190	2.3	95	2.3	4.
Z-56	Osc.	2.4	100	0	-	-	4.
Z-56	I.F.	2.4	190	0	90	0	2.
Z-57	2nd Det.	2.4	90	-60	70	-60	.2
Z-57	A.V.C.	2.4	-10	-65	-2	-65	0
Z-59	Power	2.4	175	-70	165	-70	25
Z-80	Rect.	5.	350	-	-	-	36

Line 115 Volts

All Controls Maximum

(All readings, with exception of heaters, taken from socket connections to ground. Use 1,000 ohm per volt D. C. meter.)

BALANCE I.F. frequency at 175 K.C. Condenser gang at 1500 K.C. and oscillator ped-der at 600 K.C.



Condensers

22-112	.1 mfd 300 volt. (2nd Detector Screen & Power Grid)	.25
22-113	.5 " " " " (R.F. 1st Detector & I.F. Grid Return)	.35
*22-115	.1 " 200 volt. (Four used, see below)	.35
22-117	.5 " " " " (R.F. 1st Detector, & I.F. Screen)	.50
22-137	.05 " 400 volt. (Oscillator Plate)	.25
22-147	.0005* 600 volt. (2nd Detector Plate & A.V.C. Screen)	.45
22-161	Padder	.45
22-165	Three Gang Variable	3.50
22-170	.1 mfd 400 volt. (R.F. & 1st Detector Plate, 2nd Detector Plate)	.35
22-171	.05 " 600 volt. (Tone Control)	.25
22-172	2. " 450 volt. (Filter)	.60
22-173	8. " 500 volt. (Filter)	1.25
22-175	.002 " 600 volt. (A.V.C. Plate)	.25

Resistors

65-121	100M ohm 1 Watt. (2nd Detector Cathode)	.25
65-135	25M " " " " (2nd Detector Cathode)	.25
65-137	250M " " " " (Oscillator & Power Grid)	.25
65-140	1 Meg " " " " (A.V.C. Screen)	.25
65-160	100M " " " " (A.V.C. Plate)	.25
65-169	400M " " " " (A.V.C. Grid)	.25
65-232	Manual Tone Control	.75
65-234	Manual Sensitivity Control	.75
65-235	Manual Volume Control	1.25
65-239	24M ohm 1 Watt. (Oscillator Plate)	.25
65-241	5M " " " " (R.F., 1st DET., I.F. Screen)	.25
65-244	500 " " " " (1st Detector Cathode)	.25
65-251	Voltage Divider. (six tap)	.65
65-252	Voltage Divider. (five tap)	.60

\*22-115 R. F., 1st Detector, I. F. Grid Return, A.V.C. Plate, A.V.C. Cathode, 1st Detector Cathode, R.F. Cathode, and Acoustic Filter.

Coils and Chokes

20-30	Antenna Coil	.75
20-31	Oscillator Coil	.85
20-35	Detector Coil	1.00
95-133	1st & 2nd I. F. Transformer	1.25
S-2252	Plate Choke and Bracket	.50

Miscellaneous

46-46	Large Knob	.20
46-62	Small Knob	.10
49-43	Dynamic Speaker for Models 6X and 7X without transformer	6.00
49-46	Dynamic Speaker for Model 5X with transformer	8.00
49-49	Dynamic Speaker for Model 5X with transformer	7.00
52-32	Speaker Multicord	.35
57-343	Ecutechon Plate	.50
78-56	59 Seven Prong Socket	.15
78-57	56 Five Prong Socket	.15
78-58	58 Six Prong Socket	.15
78-59	57 Six Prong Socket	.15
78-60	60 Four Prong Socket	.15
95-146	115 volt 25 cycle Power Transformer	5.50
95-147	115 volt 60 cycle Power Transformer	3.75
126-109	Tube Shield	.10
136-2	2 amp Fuse	.06

PARTS AND PRICES  
MODELS 5X 6X 7X  
CHASSIS 2037

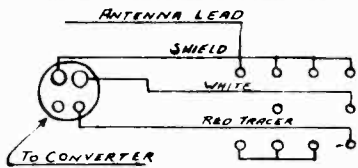
Dial and Meter Assembly

11-3	Pulley String	per ft.	\$.10
26-36	Dial Drum Strip		.10
61-19	Tuning Shaft Pulley (small idler)		.05
61-22	Tuning Shaft Pulley (large idler)		.01
80-65	Dial Drum Pulley Tension Spring		.01
80-69	Volume and Tone Control Tension Spring		.12
100-18	2 1/2 volt Pilot Lamp		2.00
122-5	Shadow Meter		.35
S-2242	Volume Control Dial Assembly		.35
S-2243	Tone Control Dial Assembly		.35

KINGSTON PRODUCTS CORP.

MODEL "Gypsy"  
Schematic  
MODEL 55  
Schematic

GIPSY Auto KIT CABLE & PLUG



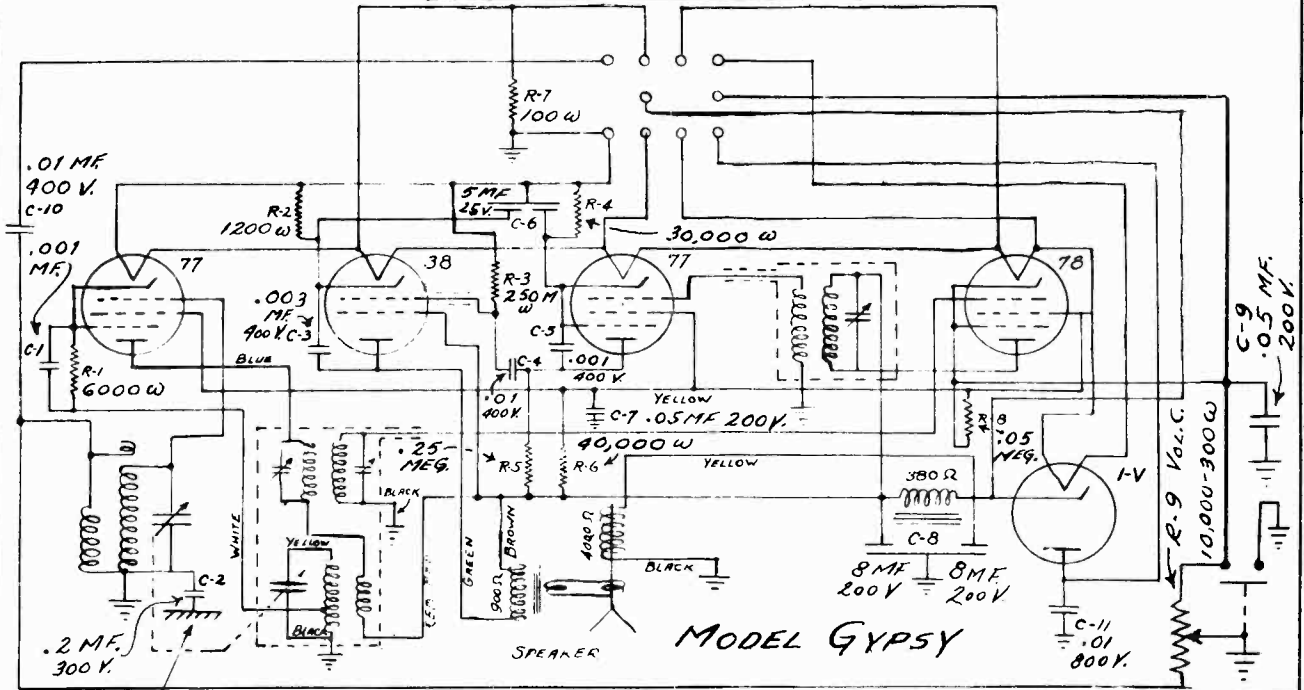
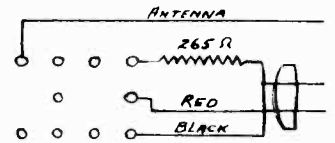
CHANGE NOTES

ITEM	WAS	SERIAL #
R-1	1200 R	A-189
R-4	50,000 R	A-189
R-2	1100 R	A-189
C-2	.1 MFD.	A-189
C-9	.1 "	A-189
C-7	.1 "	A-189

ITEM	WAS	SERIAL #
OSC. COIL	TRANS. CHANGE	A-189
R-7	ADDED	
C-11	.02 - 400V	

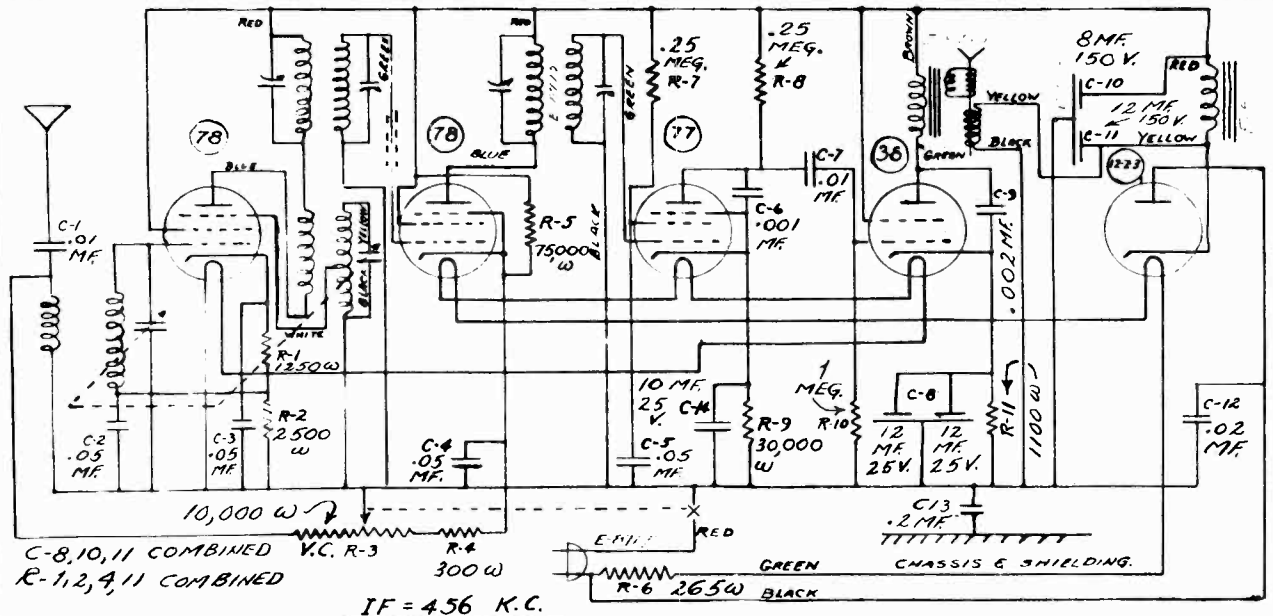
110V. AC-DC CABLE & PLUG



MODEL GYPSY

KINGSTON PRODUCTS CORP. Kokomo, IND.  
DRAWN BY F.H.D. PART CIRCUIT - MODEL 33  
TRACED BY \_\_\_\_\_  
CHECKED BY G.W.S.  
DATE 2-13-34  
MATERIAL \_\_\_\_\_  
SCALE \_\_\_\_\_

KINGSTON PRODUCTS CORP. Kokomo, IND.  
DRAWN BY F.H.D. PART WIRING DIAGRAM  
TRACED BY \_\_\_\_\_  
CHECKED BY G.W.S.  
DATE 9-22-33  
MATERIAL \_\_\_\_\_  
SCALE \_\_\_\_\_

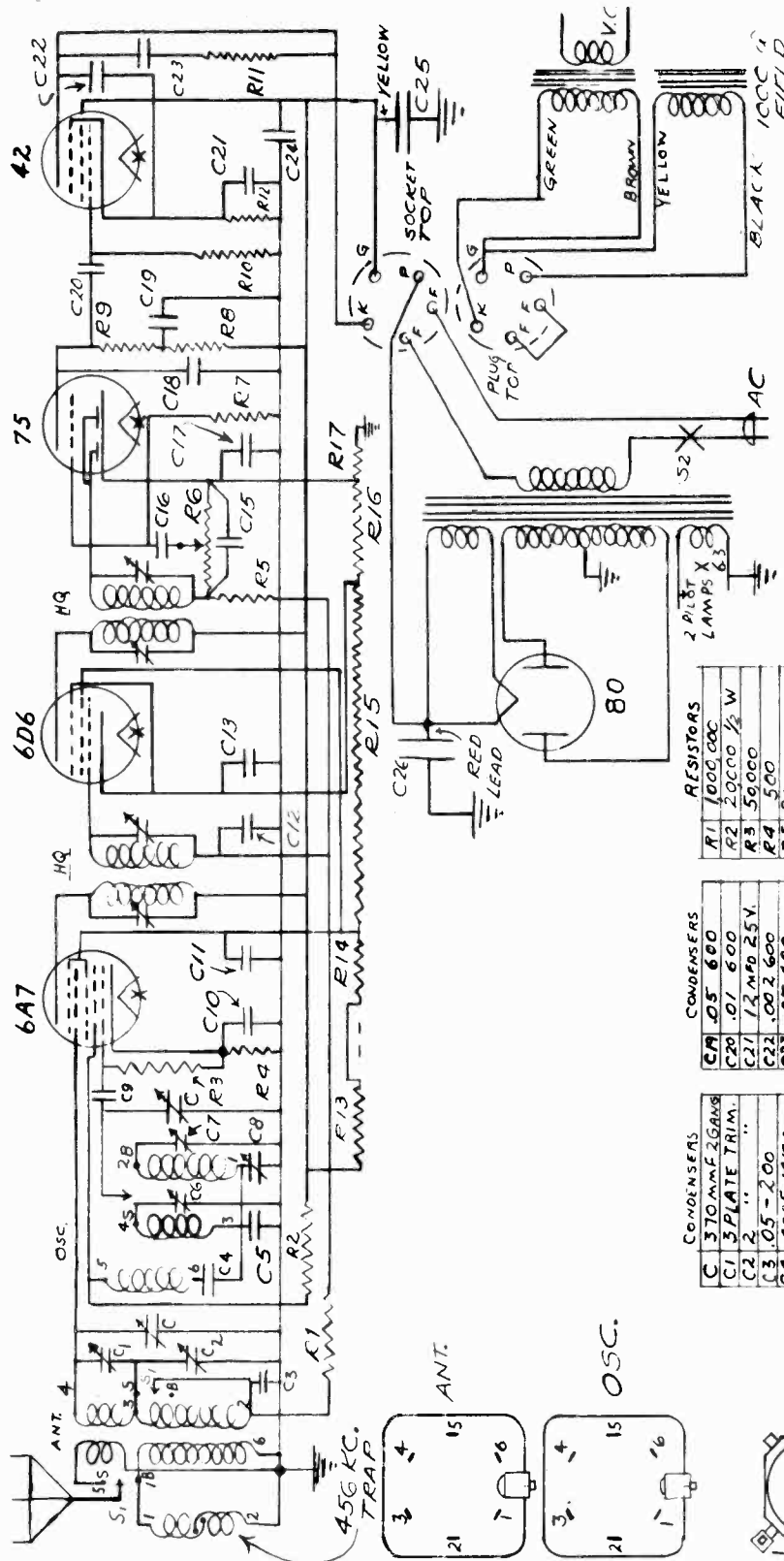


C-8,10,11 COMBINED V.C. R-3  
R-1,2,4,11 COMBINED

IF = 456 K.C.

MODEL 500-A, 500  
Schematic

KINGSTON PRODUCTS CORP.



456 KC-IF  
RANGE-B 1560-540 KC  
RANGE-S 18.5-50 METERS

KINGSTON PRODUCTS CORP. KCMO, MO., IND.	
DESIGNED BY G.W.S.	PART 500 CIRCUIT DIAGRAM
CHECKED BY	MOO. 500-A
DATE 7-26-34	
MATERIAL	
SCALE	8 1/2" X 11" NO. E17140

CONDENSERS	
C	370 MMF 25 GMS
C1	5 PLATE TRIM.
C2	2 "
C3	.05-2.00
C4	.0025 MICA
C5	.004 MICA
C6	2 PLATE TRIM.
C7	2
C8	500 MMF PAPER
C9	0005 MICA
C10	.05-20C
C11	.2 400
C12	.05-2.00
C13	.1-2.00
C15	.0005 600
C16	.01 600
C17	.25 200
C18	.001 600

RESISTORS	
R1	1000 600
R2	20000 1/2 W
R3	50000
R4	500
R5	200000
R6	500000 Vol. +
R7	500000
R8	100000
R9	500000
R10	1000000
R11	5000
R12	400
R13	3000
R14	3500
R15	6500
R16	100
R17	5C

CONDENSERS	
CA	.05 600
C20	.01 600
C21	12 MFD 25V.
C22	.002 600
C23	.05 600
C24	.2 400
C25	6 MFD 350 X
C26	6 MFD 350 X

CONDENSERS	
S1	3 P.D.T. SWITCH
S2	AC SWITCH +

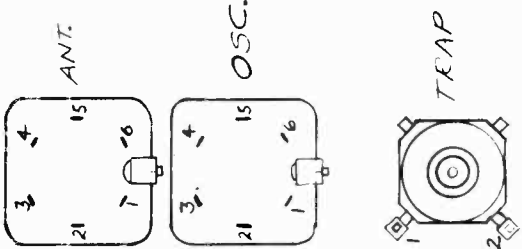
  

RESISTORS	
R15	500000
R16	100
R17	5C

CANDOHM

+ - COMBINE SWITCH + VOLUME

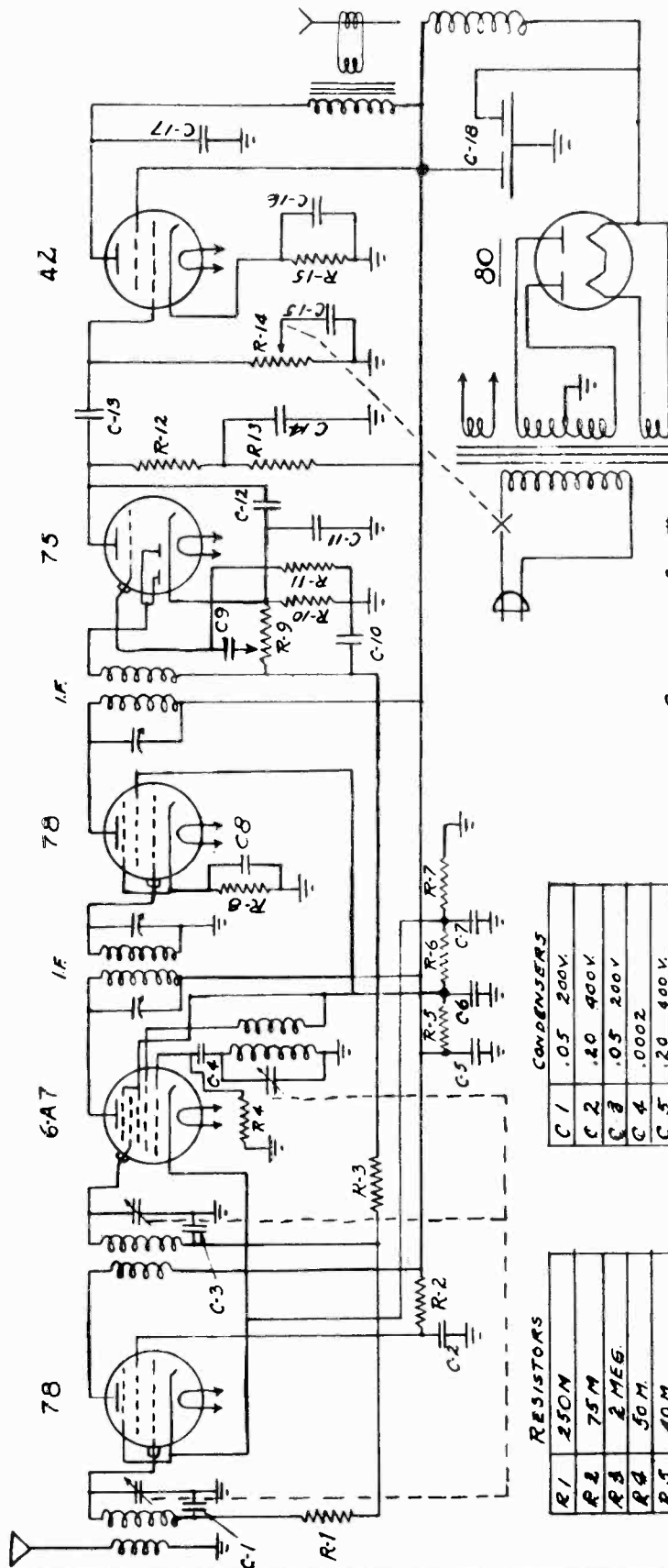
X - COMMON



KINGSTON PRODUCTS CO.

MODEL 600-A, 600-B,  
610-B

Schematic



CHANGES - SER.#

A	WAS .0001	C-1100
B	ADDED	"
C	ADDED	"
D	I.F. CHANGED.	"

I.F. = 182.5 K.C. BELOW #C-1100  
I.F. = 172.5 K.C. ABOVE #C-1100

ⓐ

KINGSTON PRODUCTS CORP. KOKOMO, IND.	
DRAWN BY	PAT. CIRCUIT DIAGRAM
TRACED BY	
CHECKED	MODELS 600-A 600-B
DATE	2-10-34
MATERIAL	W.P.O.
REVISION	NO. E-8905

CONDENSERS

C 1	.05 200V
C 2	.20 400V
C 3	.05 200V
C 4	.0002
C 5	.20 400V
C 6	.20 400V
C 7	.20 200V
C 8	.05 200V
C 9	.01 400V
C 10	.0005 400V
C 11	.20 200V
C 12	.0005
C 13	.01 600V
C 14	.05 400V
C 15	.01 200V
C 16	70. ELEC.
C 17	.001 500K
C 18	6-6 ELEC.
C 19	.05 600

RESISTORS

R 1	250M
R 2	75M
R 3	2 MEG.
R 4	50M
R 5	40M
R 6	50M
R 7	250Ω
R 8	2500Ω
R 9	500M V.C.
R 10	5M
R 11	500M
R 12	250M
R 13	100M
R 14	500M - T.C.
R 15	500Ω
R 16	25 M.

ⓑ

ⓒ

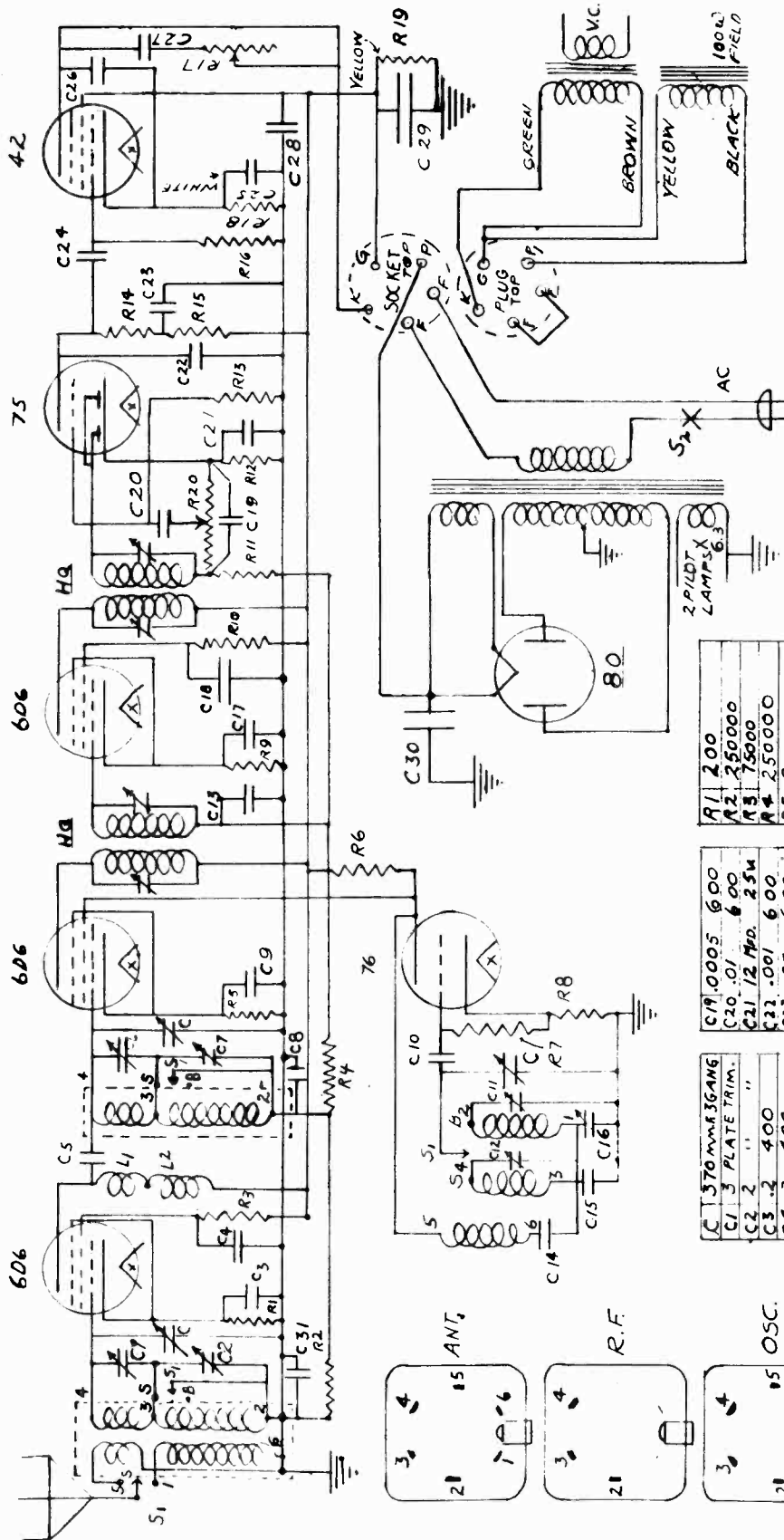


MODEL 700, 700-A

700-B

Schematic

KINGSTON PRODUCTS CO.



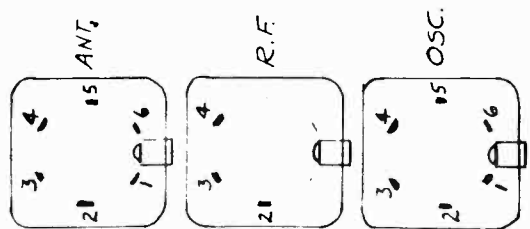
456 K.C.I.F.  
 RANGE-B- 1560-540 KC  
 RANGE-S- 185-50 METERS

C1	370MM3GANG	C19	0.005	600
C2	2	C20	.01	600
C3	2	C21	12 MFD.	25V
C4	2	C22	.001	600
C5	000005 MICA	C23	.05	600
C6	3 PLATE TRIM.	C24	.01	600
C7	2	C25	12 MFD.	5V.X
C8	.05-2.00	C26	.004	800
C9	.05-2.00	C27	.05	600
C10	0.0005 MICA	C28	4	400
C11	2 PLATE TRIM.	C29	10 MFD.	350VX
C12	2	C30	10 MFD.	450V.
C13	.05-2.00	C31	.05	200
C14	.0025 MICA			
C15	.004			
C16	500MMF. PADDER			
C17	.05-2.00			
C18	2 KPC			

R1	200
R2	250000
R3	15000
R4	250000
R5	2000
R6	20000 1/2 W
R7	3000
R8	500
R9	50000
R10	30000
R11	200000
R12	3000
R13	500000
R14	300000
R15	100000
R16	100000
R17	100000
R18	10000
R19	10000

S1	WAVECHANGE SW.
S2	AC SWITCH
L1	AF PLATE CHoke
L2	..
L3	..
L4	..
L5	..
L6	..
L7	..
L8	..
L9	..
L10	..
L11	..
L12	..
L13	..
L14	..
L15	..
L16	..
L17	..
L18	..
L19	..
L20	..
L21	..
L22	..
L23	..
L24	..
L25	..
L26	..
L27	..
L28	..
L29	..
L30	..
L31	..
L32	..
L33	..
L34	..
L35	..
L36	..
L37	..
L38	..
L39	..
L40	..
L41	..
L42	..
L43	..
L44	..
L45	..
L46	..
L47	..
L48	..
L49	..
L50	..

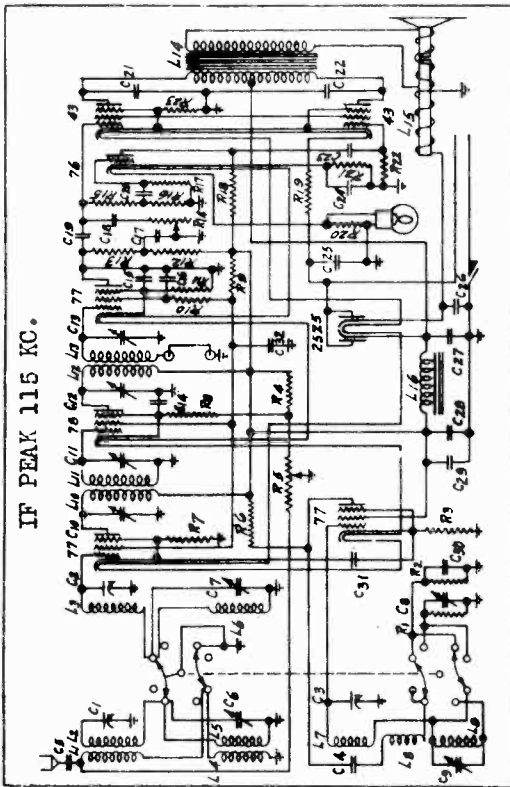
KINGSTON PRODUCTS CORP. KOKOMO IND.	
DRAWN BY G.W.S	PART 700 CIRCUIT DIAGRAM
CHECKED BY	MOD 700-A 700-B
DATE 7-25-34	
MATERIAL	NO. 1
SCALE	ENGR. F.A.D.
	NO. E717141



CANDOHM  
 X COMMON  
 COMBINES WITH TOWE

LAFAYETTE RADIO & TELEVISION CORP.

MODEL AM-8  
Schematic, Parts List  
MODEL AM-10  
Schematic, Parts List



IF PEAK 115 KC.

PART NO.	RESISTORS	MODEL AM-10	VALUES	QTY.
R1	1042	25,000 Ohm Long Wave Oscillator Grid		292
R2	1042	25,000 Ohm Broadcast Oscillator Grid		292
R3	1042	500 Ohm Oscillator Cathode		289
R4	1042	75,000 Ohm Volume Control & Switch		289
R5	1296	10,000 Ohm Volume Control & Switch		289
R6	941	20,000 Ohm Oscillator Plate Feed		343
R7	919	5,000 Ohm First Detector Cathode		343
R8	1022	40,000 Ohm S.F. Cathode		269
R9	1042	250,000 Ohm Second Detector Servon		269
R10	923	100,000 Ohm Second Detector Cathode		272
R11	923	100,000 Ohm Second Detector Plate		272
R12	923	100,000 Ohm Second Detector Plate		1295
R13	924	250,000 Ohm Servon		1295
R14	1317	250,000 Ohm 75 Grid Leak Resistor		1085
R15	925	500,000 Ohm 43 Grid Leak Resistor		1295
R16	922	75,000 Ohm Push-pull Network Resistor		1085
R17	923	500,000 Ohm 75 Grid Leak Resistor		1295
R18	924	250,000 Ohm 75 Plate Feed Resistor		266
R19	1119	36 Ohm Filament Series Resistor		343
R20	1309	13 Ohm Pilot Light Shunt Resistor		269
R21	920	10,000 Ohm 76 Cathode		272
R22	925	500,000 Ohm 43 Grid Leak Resistor		272
R23	1062	250,000 Ohm 43 Cathode & Grid		272

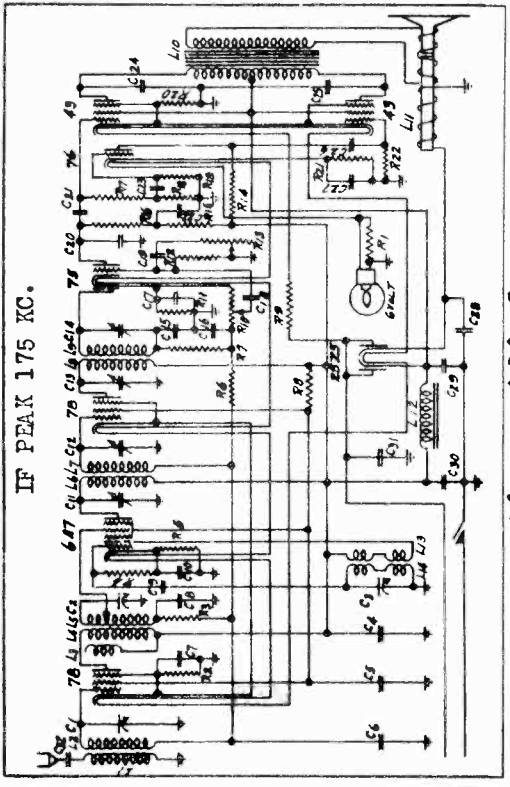
  

PART NO.	CONDENSERS	VALUES	QTY.
C1	833	371 MFD. Presetor Section of 3 Gang Condenser	11
C2	833	371 MFD. Presetor Section of 3 Gang Condenser	12
C3	833	336 MFD. Oscillator Section of 3 Gang Condenser	13
C4	266	1 MFD. B Supply By-pass Condenser	14
C5	272	1 MFD. Screen By-pass Condenser	15
C6	272	1 MFD. S.F. & I.F. Cathode By-pass Condenser	16
C7	272	1 MFD. First Detector By-pass Condenser	17
C8	272	1 MFD. First Detector By-pass Condenser	18
C9	268	.00025 MFD. Oscillator Coupling Condenser	19
C10	272	1 MFD. .6A7 Cathode By-pass Condenser	20
C11	1104	70-200 MFD. First I.F. Primary	11
C12	1105	70-200 MFD. First I.F. Secondary	11
C13	1106	70-200 MFD. Second I.F. Primary	11
C14	1107	70-200 MFD. Second I.F. Secondary	11

PART NO.	INDUCTANCES	VALUES	QTY.
L1	1138	Presetor Primary 450 Turns #36 S.S.E.	1
L2	1138	Presetor Secondary 144 Turns S.S.E.	1
L3	1213	Detector 32 Turns #36 S.S.E.	1
L4	1213	Detector Primary 450 Turns #36 S.S.E.	1
L5	1213	Detector Secondary 91 and 108 Turns #36 S.S.E.	1
L6	1101	8,000 Microhenry First I.F. Primary	1
L7	1101	8,000 Microhenry First I.F. Secondary	1
L8	1101	8,000 Microhenry Second I.F. Primary	1
L9	1101	8,000 Microhenry Second I.F. Secondary	1
L10	1104	45 Push-pull Output Transformer	1
L11	1105	2,500 Ohm Speaker Field	1
L12	1105	20 Hourly Filter Choke	1
L13	1111	Oscillator Primary 35 Turns & 15 Turns #36 S.S.E.	1
L14	1111	Oscillator Secondary 72 Turns & 50 Turns #36 S.S.E.	1

MODEL AM-10



IF PEAK 175 KC.

PART NO.	RESISTORS	MODEL AM-8	VALUES	QTY.
R1	1359	13 Ohm Pilot Light Shunt Resistor		339
R2	1062	250 Ohm R.F. and I.F. Cathode Resistor		372
R3	923	100,000 Ohm Network By-pass Condenser		272
R4	921	40,000 Ohm Oscillator Grid Leak Resistor		289
R5	1042	250 Ohm .6A7 Cathode Resistor		269
R6	926	1 Megohm A.V.C. Network Resistor		269
R7	898	50,000 Ohm A.V.C. Network Filter		272
R8	941	20,000 Ohm 76 & 547 Screen Feed Resistor		343
R9	1119	36 Ohm Filament Series Resistor		343
R10	1319	5,000 Ohm 75 Cathode Resistor		269
R11	1317	5,000 Ohm 75 Grid Leak Resistor		272
R12	925	500,000 Ohm 75 Grid Leak Resistor		1295
R13	924	250,000 Ohm 76 Plate Resistor		1295
R14	924	250,000 Ohm 75 Plate Resistor		1085
R15	924	250,000 Ohm 75 Plate Resistor		1295
R16	925	500,000 Ohm 43 Grid Leak Resistor		1085
R17	925	500,000 Ohm 43 Grid Leak Resistor		1295
R18	922	75,000 Ohm Push-pull Network Resistor		1085
R19	925	500,000 Ohm 76 Cathode Resistor		1295
R20	1062	250,000 Ohm 43 Cathode & Servon Resistor		272
R21	920	10,000 Ohm 76 Cathode Resistor		272
R22	925	500,000 Ohm 43 Grid Leak Resistor		272

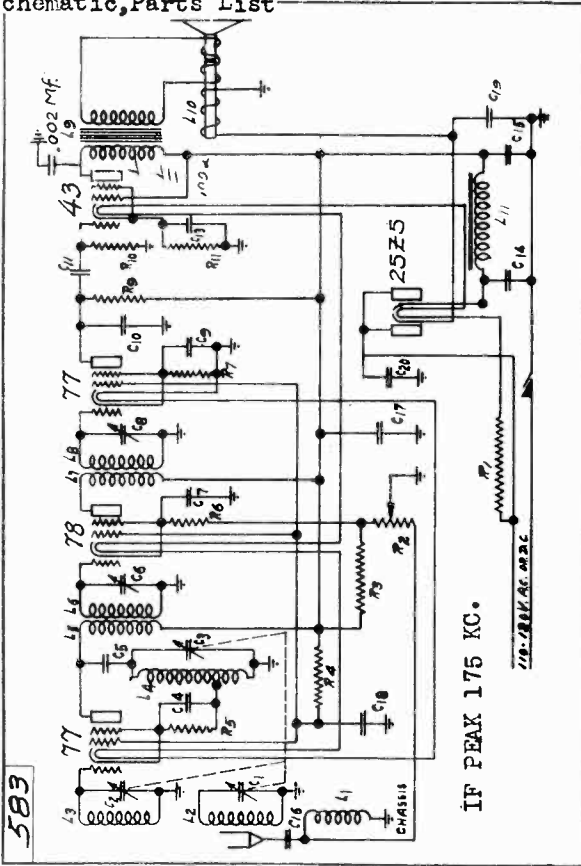
PART NO.	CONDENSERS	VALUES	QTY.
C1	833	371 MFD. Presetor Section of 3 Gang Condenser	3
C2	833	371 MFD. Presetor Section of 3 Gang Condenser	3
C3	833	336 MFD. Oscillator Section of 3 Gang Condenser	3
C4	266	1 MFD. B Supply By-pass Condenser	1
C5	272	1 MFD. Screen By-pass Condenser	1
C6	272	1 MFD. S.F. & I.F. Cathode By-pass Condenser	1
C7	272	1 MFD. First Detector By-pass Condenser	1
C8	272	1 MFD. First Detector By-pass Condenser	1
C9	268	.00025 MFD. Oscillator Coupling Condenser	1
C10	272	1 MFD. .6A7 Cathode By-pass Condenser	1
C11	1104	70-200 MFD. First I.F. Primary	11
C12	1105	70-200 MFD. First I.F. Secondary	11
C13	1106	70-200 MFD. Second I.F. Primary	11
C14	1107	70-200 MFD. Second I.F. Secondary	11

PART NO.	INDUCTANCES	VALUES	QTY.
L1	1138	Presetor Primary 450 Turns #36 S.S.E.	1
L2	1138	Presetor Secondary 144 Turns S.S.E.	1
L3	1213	Detector 32 Turns #36 S.S.E.	1
L4	1213	Detector Primary 450 Turns #36 S.S.E.	1
L5	1213	Detector Secondary 91 and 108 Turns #36 S.S.E.	1
L6	1101	8,000 Microhenry First I.F. Primary	1
L7	1101	8,000 Microhenry First I.F. Secondary	1
L8	1101	8,000 Microhenry Second I.F. Primary	1
L9	1101	8,000 Microhenry Second I.F. Secondary	1
L10	1104	45 Push-pull Output Transformer	1
L11	1105	2,500 Ohm Speaker Field	1
L12	1105	20 Hourly Filter Choke	1
L13	1111	Oscillator Primary 35 Turns & 15 Turns #36 S.S.E.	1
L14	1111	Oscillator Secondary 72 Turns & 50 Turns #36 S.S.E.	1

MODEL AM-8

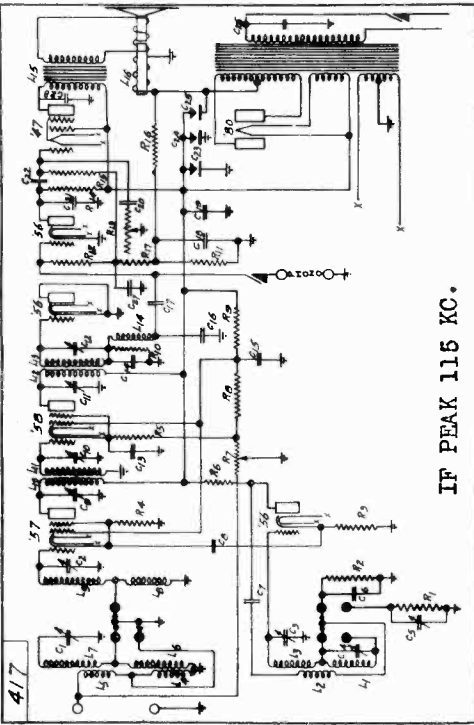
MODEL A-7, M-69, M-70  
Schematic, Parts List LAFAYETTE RADIO & TELEVISION CORP.  
MODEL A-15  
Schematic, Parts List



IF PEAK 175 KC.

MODEL A-15

Part No.	Description	Code
130	130 Ohm Filament Resistor	R1
125	In Power Cord Switch	R2
853	10,000 Ohm Volume Control and	R3
922	75,000 Ohm Resistor I.F. Cath-	R4
921	40,000 Ohm Resistor Screen	R5
919	5,000 Ohm Resistor First De-	R6
1063	500 Ohm Resistor I.F. Cath-	R7
941	20,000 Ohm Resistor Second De-	R8
924	250,000 Ohm Resistor Second De-	R9
925	500,000 Ohm Resistor Output	R10
1063	500 Ohm Resistor 43 Bias	R11
1308	20 Ohm Pilot Light Shunt	R12
833	365 MFD Presetector Section	C1
833	365 MFD Presetector Section	C2
833	350 MFD Oscillator Section	C3
265	.001 MFD First Detector &	C4
264	.000005 MFD Oscillator Coup-	C5
477	75-150 MFD First I.F. Trim-	C6
272A	.1 MFD I.F. Cathode By-pass	C7
183A	75-150 MFD Second I.F. Trim-	C8
183A	5.5 Millihenries R.F. Choke	C9
183A	2,450 Ohm Speaker Field	C10
265	.001 MFD. Second Detector	C11
269A	.01 MFD. Audio Feed Condenser	C12
928	25 MFD. C. Bias By-pass	C13
1063	12 MFD. Voltage Filter Con-	C14
265	4 MFD. Voltage Filter Conden-	C15
287A	.001 MFD. Antenna Series Con-	C16
272A	5 B Shunt Screen By-pass	C17
1063	.1 200 Volt Screen By-pass	C18
272A	4 MFD. Voltage Filter Conden-	C19
272A	.1 MFD. 200 Volt Line By-pass	C20
847	INDUCTANCES	L1
847	Presetector Primary 178 Turns	L2
847	Presetector First Secondary	L3
847	128 Turns #36 S.S.E. U.W.	L4
847	Presetector Second Secondary	L5
847	153 Turns #36 S.S.E. U.W.	L6
938	Oscillator Cou. Coil 98 Turns Tap-	L7
938	ped 15 Turns #36 S.S.E. U.W.	L8
938	First I.F. Primary 650 Turns	L9
938	#36 S.S.E. U.W.	L10
938	First I.F. Secondary 650 Turns	L11
938	#36 S.S.E. U.W.	L12
938	Second I.F. Primary 650 Turns	L13
938	#36 S.S.E. U.W.	L14
938	Second I.F. Secondary 650 Turns	L15
938	#36 S.S.E. U.W.	L16
938	Single #43 Output Transformer	L17
938	3,000 Ohm Speaker Field	L18
938	32 Henry Choke	L19



IF PEAK 115 KC.

MODEL M-69, 70, Also A-7

Part No.	Description	Code
372	.1 MFD I.F. Cathode By-pass Con	C13
339	.0001 MFD Second Detector Cond	C14
272	.1 MFD R.F. and I.F. Screen By-	C15
307	.0005 MFD Filter Condenser R.F.	C16
269	.01 MFD First Audio Feed Con-	C17
183	1 MFD B. By-pass Condenser	C18
269	.01 MFD B. By-pass Condenser	C19
562	.002 MFD First Audio Plate Fil-	C20
269	.01 MFD Second Audio Coupling	C21
721	8 MFD Electrolytic Filter Con-	C22
533	4 MFD Electrolytic Filter Con-	C23
269	.01 MFD Electrolytic Filter Con-	C24
269	.01 MFD Power Line By-pass Con-	C25
272	.1 MFD Power Line Filter Con-	C26
343	.004 MFD Output Plate Filter Con-	C27
343	.004 MFD Output Plate Filter Con-	C28
11	Long Wave Oscillator Secondary	L1
12	Long Wave First Presetector Oscil-	L2
13	Long Wave Oscillator Secondary 95	L3
14	Long Wave First Presetector Primary	L4
15	U.W. 800 Turns #36 S.S.E.	L5
16	U.W. 110 Turns #36 S.S.E. Sec-	L6
17	Long Wave First Presetector Second-	L7
18	ary U.P. 3500 Microhenries	L8
19	Long Wave Second Presetector Second-	L9
19	ary 3500 Microhenries	L10
19	ary 118 Turns #32 P.E.	L11
99	(85,000 Microhenries First I.F. Pri-	L12
99	mary U.W. #16 K.C.	L13
99	(85,000 Microhenries Second I.F. Pri-	L14
99	mary U.W. #16 K.C.	L15
100	(25,000 Microhenries Second I.F. Sec-	L16
100	ondary U.P. #16 K.C.	L17
100	5.5 Millihenries R.F. Choke	L18
100	2,450 Ohm Speaker Field	L19
94	25,000 Ohm Type J Resistor Long	R1
94	Wave Oscillator Grid	R2
279	500 Ohm Type J Resistor Broad-	R3
183	later Cathode	R4
353	500 Ohm Type J Resistor First	R5
278	I.F. Cathode	R6
512	10,000 Ohm Potentiometer Volum	R7
182	Control Voltage Feed	R8
278	20,000 Ohm Type J Resistor R.F.	R9
801	500,000 Ohm Type J Resistor Second	R10
201	Detector Grid	R11
534	500,000 Ohm Type J Resistor C Bias	R12
200	500,000 Ohm Type J Resistor First	R13
200	Audio Grid Bias	R14
200	500,000 Ohm Variable Resistance,	R15
201	500,000 Ohm Type J Resistor First	R16
201	Audio Plate Feed	R17
198	500,000 Ohm Type J Resistor 247	R18
201	1 Megohm Type J Resistor C	R19
201	Bias Network	R20
201	500,000 Ohm Type J Grid Bias Res	R21
547	(365 MFD Presetector Section of	C11
547	Three Gang Condenser	C12
547	(350 MFD Presetector Section of	C13
547	Three Gang Condenser	C14
547	One Plate Long Wave Resiprocal	C15
547	Oscillator Trimmer	C16
547	Four Plate Oscillator Grid Oscil-	C17
547	lator Trimmer	C18
547	.004 MFD Oscillator Feed Con-	C19
547	denser	C20
269	.01 MFD Oscillator Cathode Feed	C21
75	75 - 150 MFD First I.F. Primary	C22
75	Trimmer	C23
75	75 - 150 MFD First I.F. Second-	C24
75	ary Trimmer	C25
75	75 - 150 MFD Second I.F. Primary	C26
75	Trimmer	C27
75	75 - 150 MFD Second I.F. Second-	C28
75	ary Trimmer	C29

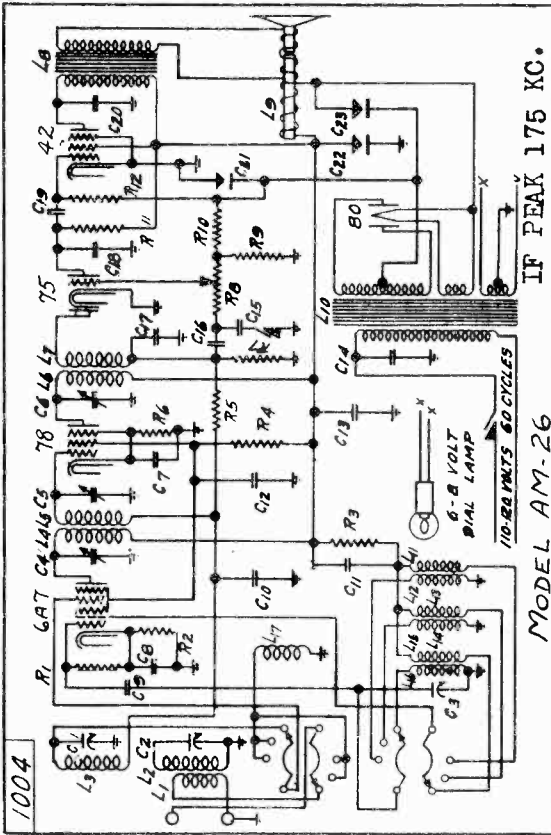
LAFAYETTE RADIO & TELEVISION CORP.

MODEL AM-25

Schematic, Parts List

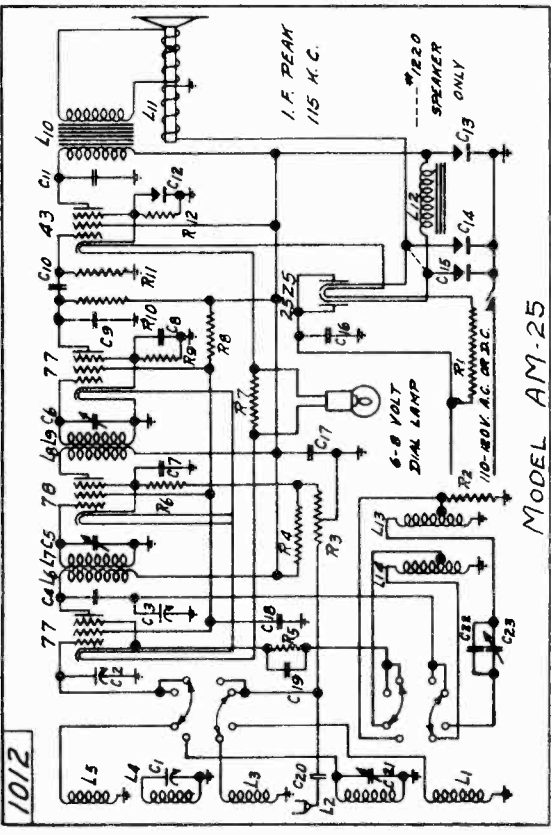
MODEL AM-26

Schematic, Parts List



IF PEAK 175 KC.

MODEL AM-26

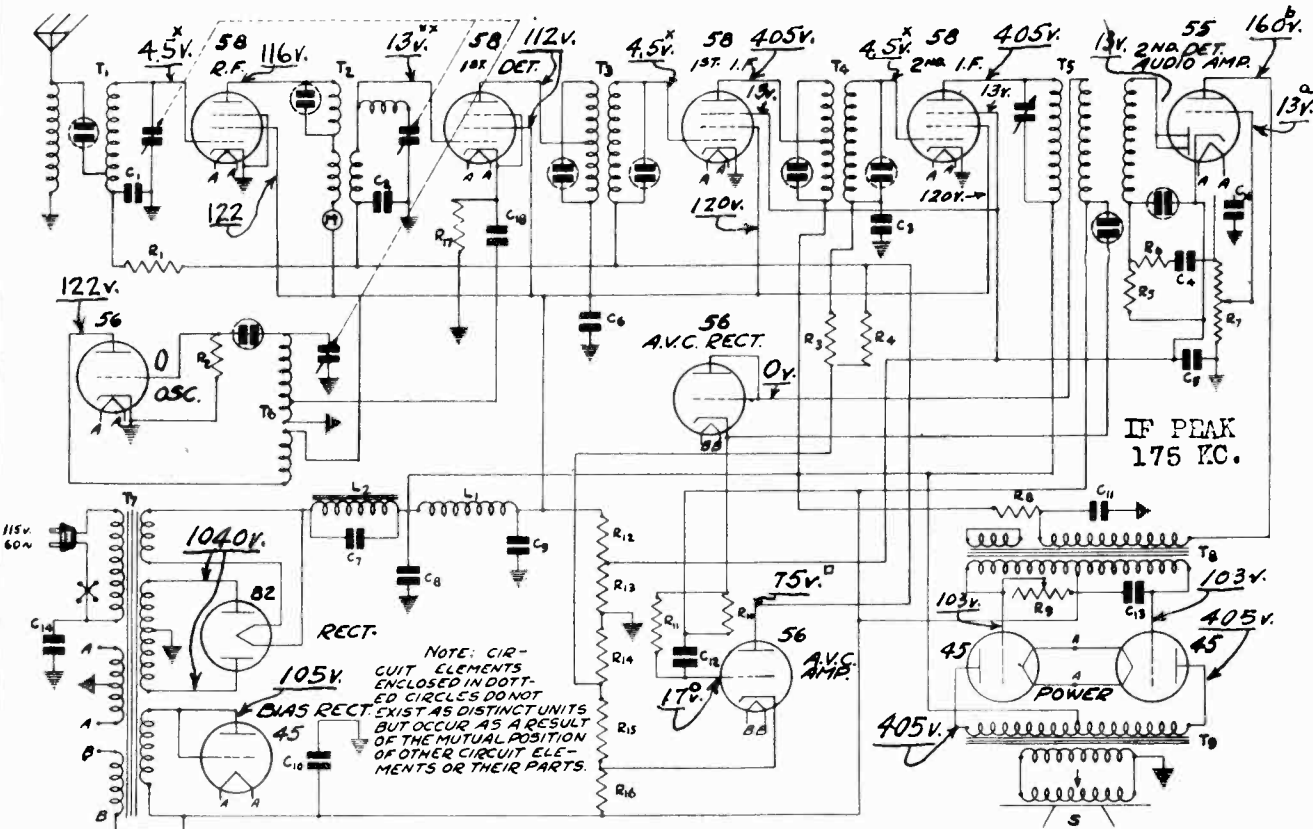


IF PEAK 115 K.C.

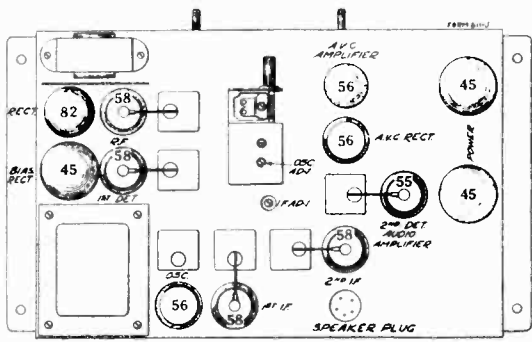
MODEL AM-25

CODE	PART NO.	RESISTORS	CONDENSERS	INDUCTANCES
R1	1125	130 Ohm Resistor in Power Cord A.P.		
R2	1063	500 Ohm Long Wave Oscillator Resistor		
R3	1296	10,000 Ohm Switch		
R4	922	75,000 Ohm Oscillator Resistor		
R5	919	5,000 Ohm Oscillator Resistor		
R6	1003	500 Ohm Cathode Bias Resistor		
R7	1308	20 Ohm Pilot Light Resistor		
R8	921	40,000 Ohm R.F. & I.F. Screen Feed Resistor		
R9	941	20,000 Ohm Second Detector Resistor		
R10	924	250,000 Ohm Second Detector Plate Load Resistor		
R11	925	500,000 Ohm 43 Grid Bias Resistor		
R12	1063	500 Ohm 43 Cathode Bias Resistor		
C1	833	371 MFD. First Preslector Section of 3 Gang		
C2	853	371 MFD. Second Preslector Section of 3 Gang		
C3	833	336 MFD. Oscillator Section of 3 Gang		
C4	1104	70-200 MFD. First I.F. Primary Transformer		
C5	1105	70-200 MFD. First I.F. Secondary Transformer		
C6	849	75-150 MFD. Second I.F. Primary Transformer		
C7	272A	.1 MFD. 200 Volt 78 Cathode By-Pass		
C8	272A	.1 MFD. 200 Volt 6A7 Cathode By-Pass		
C9	264	.00005 MFD. Mica Oscillator Coupling Condenser		
C10	272A	.1 MFD. 200 Volt A.V.C. By-Pass		
C11	272A	.1 MFD. 200 Volt Oscillator By-Pass		
C12	272A	.1 MFD. 200 Volt 6A7 & 78 Screen Grid By-Pass		
C13	569A	.2 MFD. 400 Volt By-Pass		
C14	269A	.01 MFD. 400 Volt Line By-Pass		
C15	343A	.004 MFD. 500 Volt Tone Control Condenser		
C16	269A	.01 MFD. 400 Volt Second Detector Feed		
L1	1475	L.W. Preslector Primary 600 Turns		
L2	1475	Long Wave Preslector Secondary 430 Turns #36 S.S.S.		
L3	847	Broadcast Preslector Primary 178 Turns #36 S.S.S.		
L4	847	Broadcast First Secondary 133 Turns #36 S.S.S.		
L5	847	Broadcast Second Secondary 126 Turns #36 S.S.S.		
L6	1470	Microbony First I.F. Primary 25,000 Turns		
L7	1470	Microbony First I.F. Secondary 25,000 Turns		
L8	1475	25,000 Microbony Second I.F. Primary		
L9	1475	25,000 Microbony Second I.F. Secondary		
L10	163A	#43 Output Transformer 917 Rola 1220 Kuan		
L11	662	5000 Ohm Speaker Field 917 Rola 1220 Kuan		
L12	269A	.01 MFD. 400 Volt Output Plate Filter		
L13	1476	L.W. Oscillator 390 Turns #36 S.S.S. Tapped 20 Turns		
L14	1470	Oscillator 390 Turns #36 S.S.S. Tapped 30 Turns		
L15	922	25 MFD. 25 Volt 43 Cathode		
L16	922	25 MFD. 25 Volt 43 Cathode		
L17	922	25 MFD. 25 Volt 43 Cathode		
L18	1380	Stage 42 Output Transformer		
L19	1380	1,500 Ohm Speaker Field		
L20	1301	Power Transformer (Oilless)		
L21	1444	Foreign Band Oscillator Primary of Turns #36 D.C.C.		
L22	1444	Foreign Band Oscillator Secondary of Turns #24 S.S.C.		
L23	1497	Police Band Oscillator Primary 35 Turns #36 S.S.C.		
L24	1497	Police Band Oscillator Secondary 35 Turns #36 S.S.C.		
L25	1111	Broadcast Oscillator Primary 50 Turns #36 S.S.S.		
L26	1111	Broadcast Oscillator Secondary 120 Turns #36 D.C.C.		
L27	1486	Short Wave Antenna Impedance 75 Turns #36 S.S.S.		
R1	998	50,000 Ohm Oscillator Grid Leak		
R2	1062	250 Ohm 6A7 Cathode Bias		
R3	920	10,000 Ohm Oscillator Feed		
R4	985	50,000 Ohm 6A7 & 78 Screen Grid		
R5	926	1 Mc Ohm A.V.C. Network		
R6	1063	500 Ohm 78 Cathode Bias		
R7	925	500,000 Ohm A.V.C. Network		
R8	1891	500,000 Ohm Volume Control & Switch Bias Network		
R9	1122	40 Ohm Bias Network		
R10	1063	500 Ohm C Bias Network		
R11	923	100,000 Ohm 75 Plate Resistor		
R12	925	500,000 Ohm 42 Grid Resistor		
C1	833	371 MFD. Preslector Section of 3 Gang		
C2	833	371 MFD. Preslector Section of 3 Gang		
C3	833	336 MFD. Oscillator Section of 3 Gang		
C4	1104	70-200 MFD. First I.F. Primary Transformer		
C5	1105	70-200 MFD. First I.F. Secondary Transformer		
C6	849	75-150 MFD. Second I.F. Primary Transformer		
C7	272A	.1 MFD. 200 Volt 78 Cathode By-Pass		
C8	272A	.1 MFD. 200 Volt 6A7 Cathode By-Pass		
C9	264	.00005 MFD. Mica Oscillator Coupling Condenser		
C10	272A	.1 MFD. 200 Volt A.V.C. By-Pass		
C11	272A	.1 MFD. 200 Volt Oscillator By-Pass		
C12	272A	.1 MFD. 200 Volt 6A7 & 78 Screen Grid By-Pass		
C13	569A	.2 MFD. 400 Volt By-Pass		
C14	269A	.01 MFD. 400 Volt Line By-Pass		
C15	343A	.004 MFD. 500 Volt Tone Control Condenser		
C16	269A	.01 MFD. 400 Volt Second Detector Feed		
L1	1106	Antenna Primary 178 Turns #36 S.S.S. Tapped 135 Turns		
L2	1108	Preslector #36 S.S.S.		
L3	1108	Preslector, Second 126 Turns #36 S.S.S.		
L4	1101	8,000 Microhenries First I.F. Primary		
L5	1101	8,000 Microhenries First I.F. Secondary		
L6	1172	6,000 Microhenries Second I.F. Primary		
L7	1172	6,000 Microhenries Second I.F. Secondary		
L8	1380	Stage 42 Output Transformer		
L9	1380	1,500 Ohm Speaker Field		
L10	1301	Power Transformer (Oilless)		
L11	1444	Foreign Band Oscillator Primary of Turns #36 D.C.C.		
L12	1444	Foreign Band Oscillator Secondary of Turns #24 S.S.C.		
L13	1497	Police Band Oscillator Primary 35 Turns #36 S.S.C.		
L14	1497	Police Band Oscillator Secondary 35 Turns #36 S.S.C.		
L15	1111	Broadcast Oscillator Primary 50 Turns #36 S.S.S.		
L16	1111	Broadcast Oscillator Secondary 120 Turns #36 D.C.C.		
L17	1486	Short Wave Antenna Impedance 75 Turns #36 S.S.S.		

MODEL B-51, B-52  
B-53, B-54 LAFAYETTE RADIO & TELEVISION CORP.



\* As read across R-14. \*\* As read across R-17 and R-14. □ As read across R-15, with 100,000 ohm meter  
 ○ As read across R-16. a Vol. Cont. at Minimum.  
 b Triode plate to cathode



RESISTORS

Part No.	Code	Resistance	Type
P-A95204	R1	200,000 ohm	Carbon
P-A95504	R2	.5 megohm	Carbon
P-A95105	R3	1 megohm	Carbon
P-A95504	R4	5 megohm	Carbon
P-B94803	R5	80,000 ohm	Carbon
P-A95104	R6	100,000 ohm	Carbon
P-96008	R7	2 megohm	Vol. Con. & Switch
P-C94403	R8	40,000 ohm	Carbon
P-97006	R9	3 megohm	Tone Control
P-A95204	R10	200,000 ohm	Carbon
P-A95105	R11	1 megohm	Carbon
P-98003	R12	4000 ohm	Armoured Wire Wound
	R13	390 ohm	
P-A94902	R14	9,000 ohm	Carbon
P-A94154	R15	150,000 ohm	Carbon
P-A94353	R16	35,000 ohm	Carbon
P-A95352	R17	3,500 ohm	Carbon

"A" preceding the number signifies .2 watt  
 "B" preceding the number signifies .5 watt  
 "C" preceding the number signifies 1.0 watt

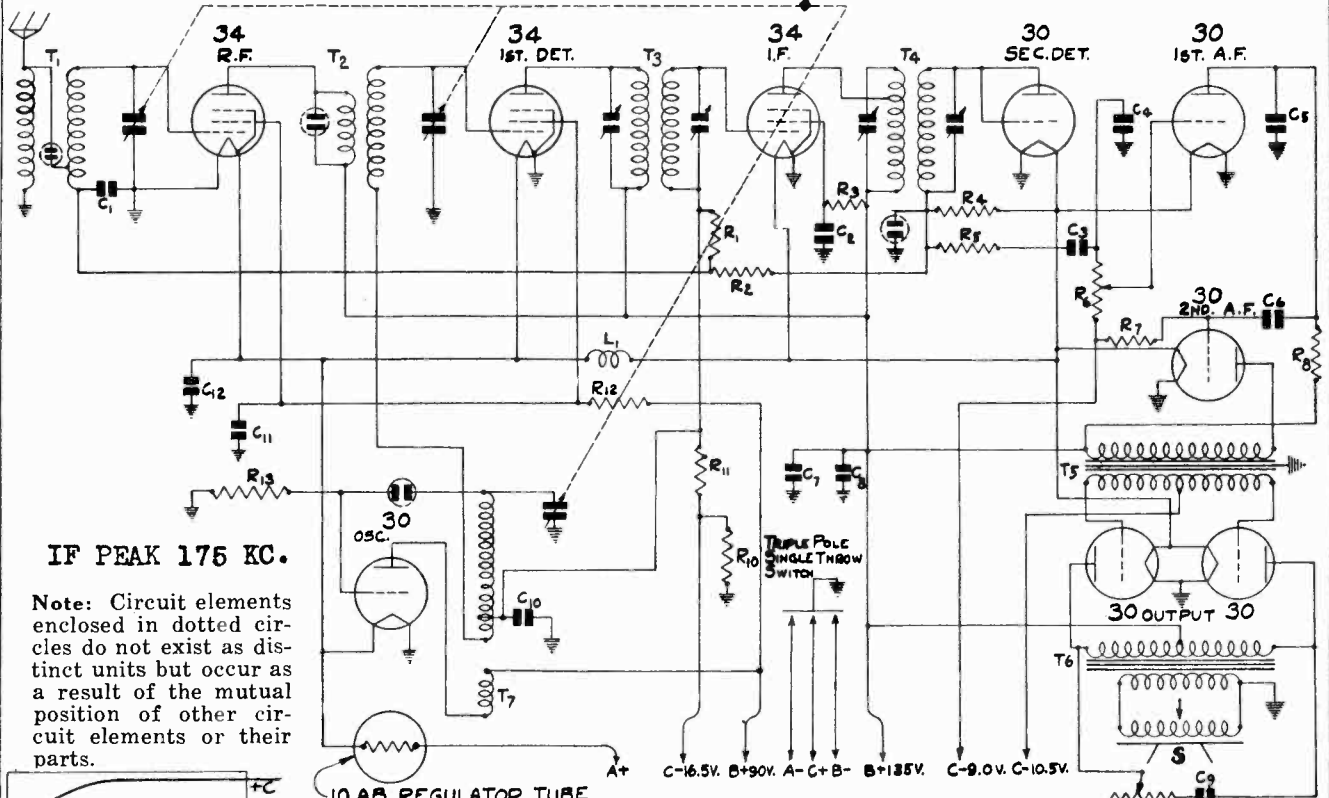
Part No.	Code	Capacity	Voltage	Type	List Price
P-80862	C1	.050 mfd.	200 V.	Tubular	\$0.30
P-80987	C2	.150 mfd.	200 V.	Tubular	.25
P-80862	C3	.050 mfd.	200 V.	Tubular	.30
P-80862	C4	.050 mfd.	200 V.	Tubular	.30
P-80888	C5	.250 mfd.	200 V.	Tubular	.40
P-80888	C6	.250 mfd.	200 V.	Tubular	.40
P-80985	C7	.150 mfd.	200 V. AC	Tubular	.55
P-80984	C8	16.	mfd. 450 V.	Electrolytic Block	4.00
	C9	6.	mfd. 150 V.		
	C10	8.	mfd. 100 V.		
	C11	4.	mfd. 350 V.		
		16 mfd. Section—Term. 3+	Term. 1-		
		6 mfd. Section—Term. 5+	Term. 1-		
		4 mfd. Section—Term. 4+	Term. 1-		
		8 mfd. Section—Term. 6+	Term. 2-		
P-80862	C12	.050 mfd.	200 V.	Tubular	.30
P-80863	C13	.004 mfd.	600 V.	Tubular	.25
P-80997	C14	.010 mfd.	600 V.	Metal Can	.50
P-80919	C16	.00025 mfd.	600 V.	Moulded	.20
P-80914	C18	.002 mfd.	200 V.	Tubular	.20
P-80991		3 Gang Condenser			3.85
P-1922		3rd I. F. Trimmer Condenser			.50

Set the signal generator for 175 K. C. Connect the .25 signal lead from the signal generator to the grid of the 1st detector tube through a .05 mfd. condenser. Turn the tuning condenser rotor until the plates are completely out. The ground lead from the signal generator goes to the ground lead of the receiver. Then adjust the 3rd I. F. primary condenser for maximum output. The .90 adjusting screw for this condenser is reached from the top of the sub-panel and will be seen in back of the tuning condenser.

Next set the signal generator for a signal of exactly 1400 K. C. The antenna lead from the signal generator is, in this instance, connected to the antenna lead of the receiver. Set the dial pointer on the 1400 K. C. mark on the dial scale and adjust the three trimmer condensers on the gang tuning condenser for maximum output, adjusting the oscillator trimmer first.

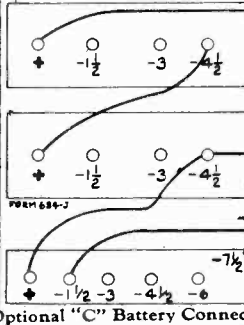
LAFAYETTE RADIO & TELEVISION CORP Schematic, Voltage Socket, Parts List

MODEL B-60



IF PEAK 175 KC.

Note: Circuit elements enclosed in dotted circles do not exist as distinct units but occur as a result of the mutual position of other circuit elements or their parts.



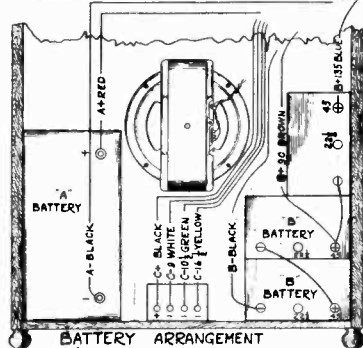
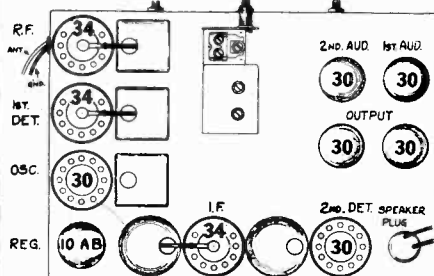
Part No.	Code	Resistance	Type	Part No.	Code	Capacity	Voltage	Type
P-A95504	R1	.5 megohm	Carbon	P-80864	C1	.10 mfd.	200 V.	Tubular
P-A94105	R2	1.0 megohm	Carbon	P-80862	C2	.050 mfd.	200 V.	Tubular
P-A95353	R3	35,000 ohms	Carbon	P-80862	C3	.050 mfd.	200 V.	Tubular
P-A94204	R4	200,000 ohms	Carbon	P-80919	C4	.00025 mfd.	600 V.	Moulded
P-A95104	R5	100,000 ohms	Carbon	P-80919	C5	.00025 mfd.	600 V.	Moulded
P-96009	R6	1 megohm	Volume Control	P-80862	C6	.050 mfd.	200 V.	Tubular
P-A94105	R7	1 megohm	Carbon	P-80968	C7	4.00 mfd.	150 V.	Electrolytic
P-A95104	R8	100,000 ohms	Carbon	P-80862	C8	.050 mfd.	200 V.	Tubular
P-97005	R9	150,000 ohms	Tone Control	P-80940	C9	.02 mfd.	400 V.	Tubular
P-A94153	R10	15,000 ohms	Carbon	P-80981	C10	.01 mfd.	400 V.	Tubular
P-A94405	R11	4 megohms	Carbon	P-80888	C11	.25 mfd.	200 V.	Tubular
P-A94153	R12	15,000 ohms	Carbon	P-80888	C12	.25 mfd.	200 V.	Tubular
P-A95504	R13	.5 megohm	Carbon	P-80980	Three Gang Variable Condenser			

Voltages at Sockets

Antenna Shorted to Ground  
Batteries Up to Rated Voltages. See Fig. 1  
Voltages Read From Negative Filament Terminal

Type of Tube	Function	Across Filament	Plate to Cathode	Screen to Cathode	Grid to Cathode	Normal Plate M. A.
34	R.F.	2.0	135	65	3.0(1)	2.6
34	1st Det.	2.0	135	65	4.5(1)	2.5
30	Osc.	2.0	90		2-4(2)	3.3
34	I.F.	2.0	135	90	4.5(1)	3.0
30	2nd Det.	2.0				
30	1st Audio	2.0	90		9.0(3)	.45
30	2nd Audio	2.0	130		9.0(4)	3.4
30	Output	2.0	135		10.5	2.5

(1) Computed figure—cannot be read because of high resistance circuit.  
(2) Varies with frequency setting. (4) As read at battery.  
(3) Volume Control at minimum.



## MODEL B-60

Alignment  
Parts List

## LAFAYETTE RADIO &amp; TELEVISION CORP.

## Batteries

The batteries and voltages required are shown in Figs. 2 and 3.

The majority of potential complaints on short "B" battery life can be prevented if proper instructions are given to the customer at the time the receiver is installed. The average "B" drain of this receiver under no signal conditions is 18 milliamperes. **A milliammeter in the negative "B" line will quickly determine whether the "B" drain is excessive or normal.**

Two factors directly affect the "B" battery consumption. One is the strength of the station signal. When the signal is weak, little or no automatic volume control action is obtained, and the 34 tubes draw high plate current. As the strength of the incoming signal increases, plate current in these tubes is reduced with a corresponding reduction in total "B" battery current. The other factor is the volume used. As the volume is increased, the "B" battery drain of the output tubes is increased.

As this receiver does not have a pilot lamp, it is easy to forget to turn it off. When this happens, the receiver may be on as long as 24 hours or more. A continuous drain of this kind for a long period will shorten the life of the "B" batteries considerably. **Caution the customer regarding this.**

The "A" Battery consists of any direct current power supply source delivering from 2 to 3 volts. An air cell, 3 volt dry cell bank, and 2 volt storage cell are some of the units which can be used. **Caution—do not use a 6 volt storage battery.**

For the "C" battery a special 22½ volt "C" battery with 9, 10½ and 16½ volt taps, as indicated in Fig. 2, may be used. If such a battery is not available, two standard 4½ volt "C" batteries and a standard 7½ volt "C" battery can be connected as shown in Fig. 3 to supply the necessary voltages.

If the receiver does not operate satisfactorily test the batteries under load. A high resistance meter is required for the "B" and "C" voltages. If any of the batteries are considerably below their rated voltage, new ones should be used. When the "B" batteries are replaced the "C" batteries should also be replaced. The reason for this is that the "C" drain is such that the "C" batteries are run down in about the same time as the "B" batteries.

## Tubes

The tubes used in this receiver are all of the 2 volt series. The 34's are R. F. Pentodes with the suppressor grid tied internally to the cathode. The 30 tube is a general purpose triode. All of these tubes are of the filament or directly heated cathode type. All of them have a 2 volt filament and should not be connected to a power supply not intended for this type of tube. The filaments of both types of tubes take 60 milliamperes at 2 volts and the total "A" drain is therefore 9 times .06 or .54 amperes. The average "B" drain of the receiver under no signal conditions is 18 milliamperes. The tube marked 10AB is a voltage regulator which keeps the filament voltage within safe operating limits over a battery range of 2 to 3 volts.

## Condenser Alignment

Misalignment or mistracking of condensers generally manifests itself in broad tuning and lack of volume at portions or all of the broadcast band. The receivers are all properly aligned at the factory with precision instruments and realignment should not be attempted unless all other possible causes of the faulty operation have first been investigated and unless the service technician has the proper equipment. A signal generator that will provide an accurately calibrated signal of 175 K. C. and accurately calibrated signals over the broadcast band, and an output indicating meter are desirable. The procedure is as follows:

Set the signal generator for 175 K. C. Connect the signal lead from the signal generator to the grid of the 1st detector tube through a .05 mfd. condenser. Turn the tuning condenser rotor until the plates are completely out. The ground lead from the signal generator goes to the ground lead of the receiver. Then adjust the four intermediate frequency condensers for maximum output. The adjusting screws for these condensers are reached from the bottom of the chassis.

Next set the signal generator for a signal of exactly 1400 K. C. The antenna lead from the signal generator is, in this instance, connected to the antenna lead of the receiver. Set the dial pointer on the 1400 K. C. mark on the dial scale and adjust the three trimmer condensers on the gang tuning condenser for maximum output, adjusting the oscillator trimmer first.

The tuning condensers are all adjusted at the factory for the correct relative capacity between the oscillator section and the other two sections. As a rule no adjustment other than at 1400 K. C., as mentioned above, is required. If, after the receiver has been aligned at 1400 K. C., the sensitivity is still low at some portion of the band, adjust the signal generator to that setting and tune for maximum output with the station selector knob on the receiver. Then, without readjusting the trimmers, bend the slotted rotor plates on the front two sections of the gang to obtain maximum output. Care should be taken not to bend these plates too far in an inward direction as the condenser may short as a result.

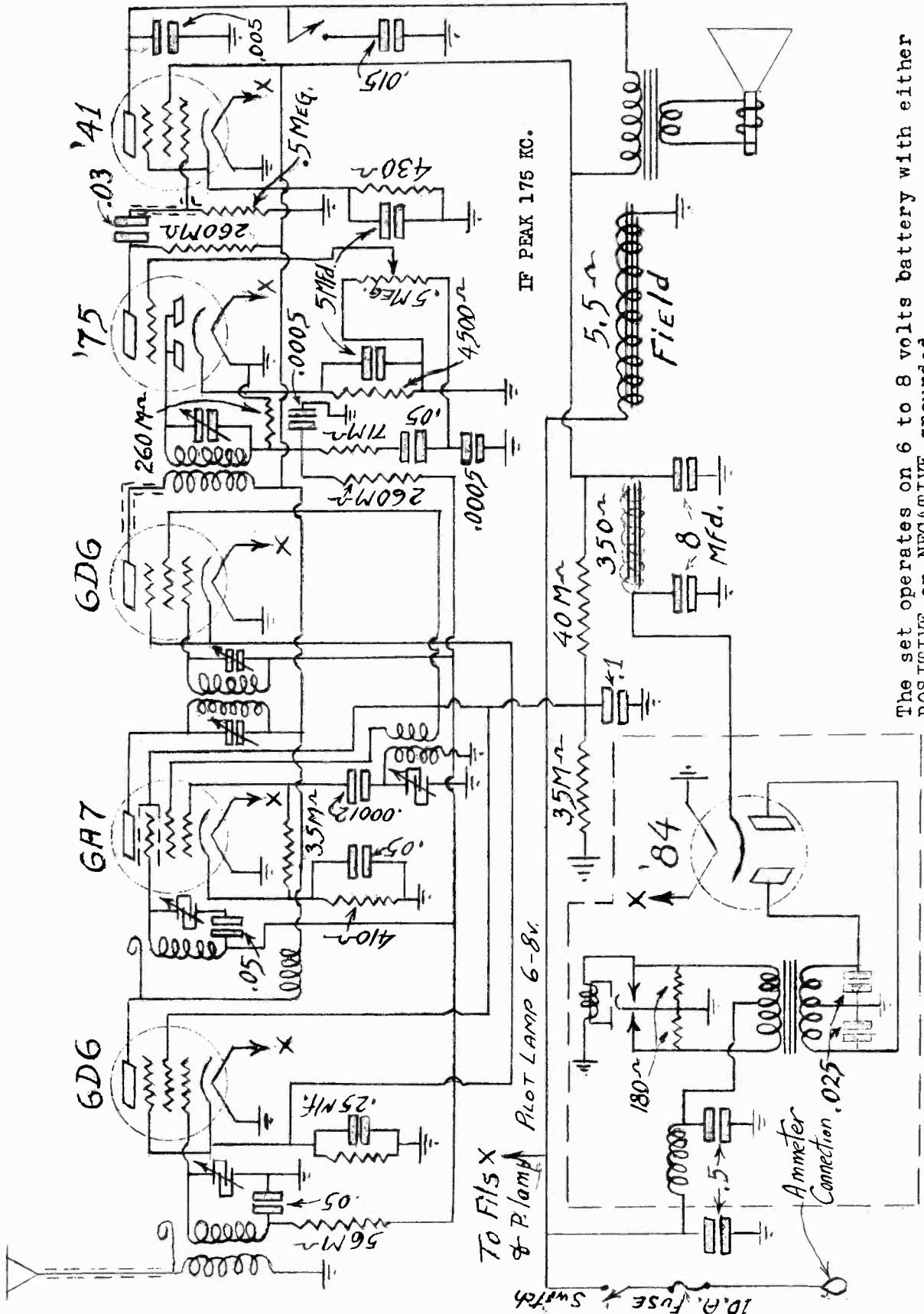
After any adjustment of this nature, set the signal generator again for a signal of 1400 K. C. and check the adjustment of the tuning condenser trimmers at this frequency for maximum output.

REPAIR PARTS LIST FOR 10 TUBE  
BATTERY OPERATED  
SUPERHETERODYNE RECEIVER

When ordering parts be sure and give the part number. Also give the series number which will be found in the License Notice label. If there is a spot of paint on the chassis, give this color.

Part No.	Item
P-1727	No. 30 Socket.....
P-1729	No. 34 Socket.....
P-1832	Reg. Socket.....
P-1640	Spkr. Socket.....
P-20406B	Tube Shield.....
P-20408	Tube Shield Base.....
P-1960	On-Off Switch.....
P-1504	8-Lug Terminal Strip.....
P-20714	Bottom Plate.....
P-5115	Antenna R. F. Transf. Assembly less can....
P-5116	Interstage R. F. Transf. Assembly less can....
P-5117	Oscillator Coil Assembly less can.....
P-40432	Cans for the above assemblies.....
P-5128	1st I. F. Assembly complete with can.....
P-5129	2nd I. F. Assembly complete with can.....
P-5111	Filament Choke.....
P-50589	Audio Input Transformer.....
P-50590	Audio Output Transformer.....
P-70751	9-Wire Battery Cable.....
P-10272	Rubber Mtg. Feet.....
P-1540	Knobs, Plain.....
P-1724	Knob, Indicator.....
P-30342	Grid Cap Only.....
P-10224	Rubber Drive Pinion.....
P-30374	Bushing for Rubber Pinion.....
P-1897	Permanent Magnet Dynamic Speaker.....
P-1627	Tuning Meter.....

LAFAYETTE RADIO & TELEVISION CORP.



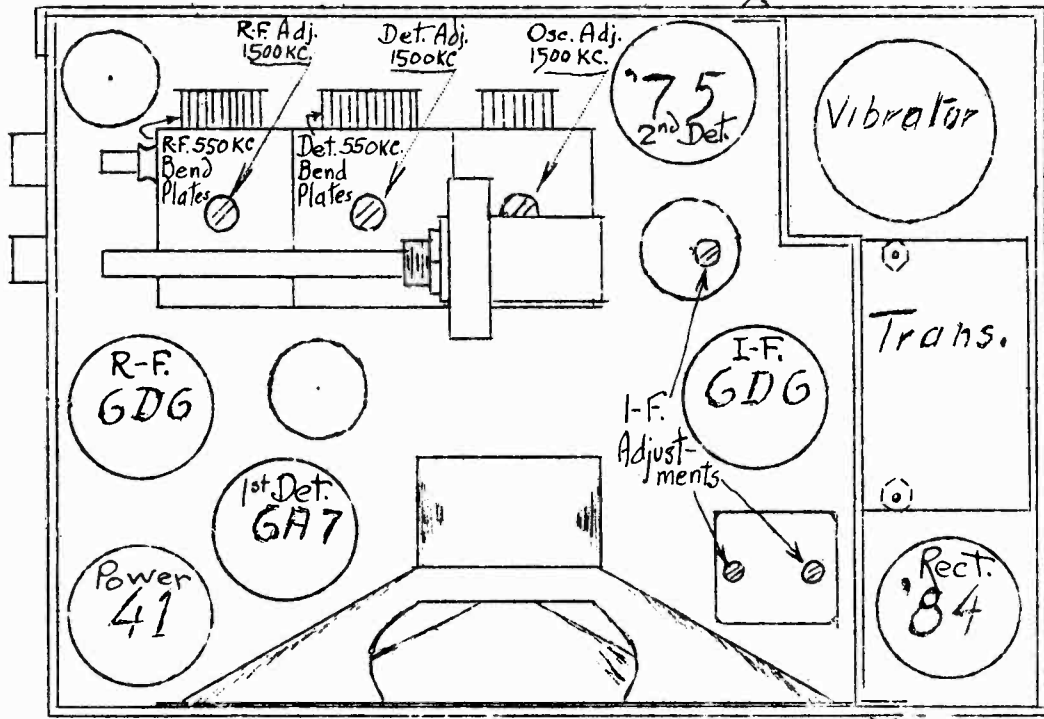
The set operates on 6 to 8 volts battery with either POSITIVE or NEGATIVE grounded.



MODEL LW-10

Socket, Parts  
Alignment

LAFAYETTE RADIO & TELEVISION CORP.



**I-F. Alignment**

Connect test oscillator, set at 175 KC. to Grid of 6A7 and Gnd. Ground stator of oscillator condenser during the adjustment.

**R-F. Alignment**

Connect test oscillator to antenna and ground. Adjust as shown above.

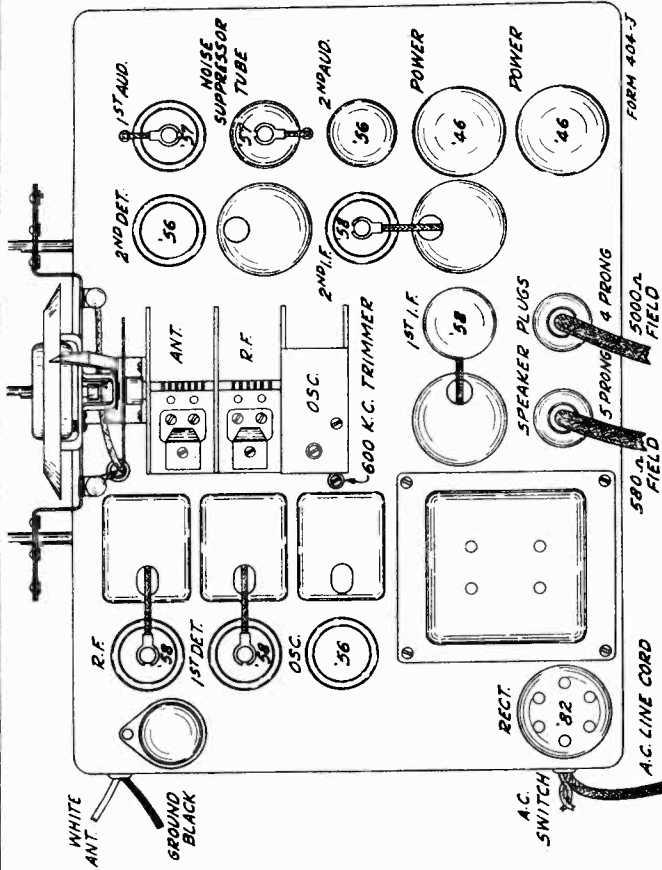
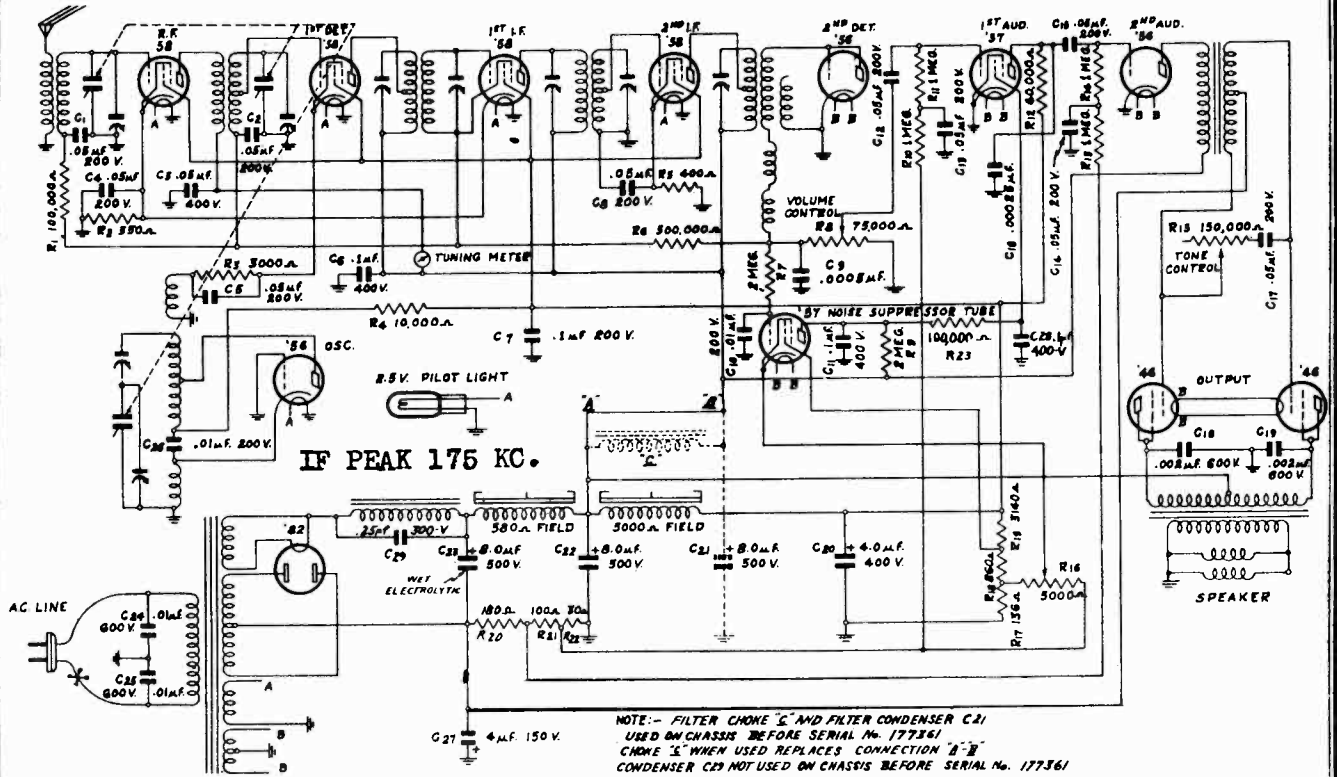
1233.....	Filter Choke.		
1234.....	Dual IF Transformer.		
1235.....	Single I.F. Transformer		
1236.....	Antenna Transformer		
1237.....	Oscillator Coil.		
1238.....	R.F. Transformer		
2206.....	Variable Condenser		
2213.....	.00012 Mica Condenser		
2051.....	.0005 Mica Condenser		
2215.....	Tubular Condenser		
2084.....	Tubular Condenser		
2190.....	Tubular Condenser		
2046.....	Tubular Condenser		
2022.....	Tubular Condenser		
2033.....	Tubular Condenser		
2209.....	Tubular Condenser		
2211.....	5 Mfd -25 Volt Electrolytic Condenser		
2212.....	5 Mfd. Electrolytic Strap.		
2210.....	Dual 8 Mfd. Electrolytic Filter Cond		
2152.....	Generator Condenser.		
2214.....	Ammeter Condenser.		
3276.....	Distributor Suppressor		
3277.....	Spark Plug Suppressor		
5077.....	Antenna Cable		
5081.....	Pilot Light Cable less socket		
7128.....	Speaker		
8401.....	Volume Control & Switch		
8399.....	Fuse Retainer		
8403.....	Pilot Light Socket only		
8407.....	Pilot Light Bulb		
8405.....	Knob, Tone Control		
8404.....	Switch, Tone Control		
9392.....	Mounting Stud		
	Wing Nuts		

**MODEL 640 ELIMINATOR**

1239.....	Power Transformer		
2207.....	.5 120 Volt Metal Clad Cond. with Stud		
2208.....	.025 1000 Volt Metal Clad Cond.		
1163-C.....	R.F. Choke (A circuit)		

LAFAYETTE RADIO & TELEVISION CORP.

MODEL L-1, L-2,  
L-3, L-4  
Schematic  
Voltage



### Voltages at Sockets

**LINE VOLTAGE 115—ANTENNA SHORTED TO GROUND—NOISE SUPPRESSOR AT MAXIMUM CLOCKWISE POSITION**

Type of Tube	Function	Across Filament or Heater	Plate to Cathode	Screen to Cathode	Grid to Cathode	Normal Plate M. A.
58	R.F.	2.4	242	90	4 <sup>(1)</sup>	4
58	1st Det.	2.4	250	86	7 <sup>(1)</sup>	2
56	Osc.	2.4	24		0	8
58	1st I.F. <sup>(2)</sup>	2.4	252	90	4 <sup>(1)</sup>	4
58	2nd I.F. <sup>(2)</sup>	2.4	254	91	3	5.7
56	2nd Det.	2.4	0		0	0
57	1st Audio	2.4	65	55	4 <sup>(3)</sup>	.4
57	NoiseSup.	2.4	55	20	3 <sup>(1)</sup>	0
56	2nd Audio	2.4	255		14 <sup>(4)</sup>	3.3
46	Power	2.4	260	260	34	23
82	Rectifier	2.4	880 volts plate to plate			53 per plate

- (1) Read from cathode to ground.
- (2) If I.F. readings are made with a cord and plug, ground the control grid through a condenser to prevent oscillation and motor boating.
- (3) Read across 30 ohm section of voltage divider.
- (4) Read across 30 ohm and 100 ohm section of voltage divider.

MODEL L-11, L-12  
Schematic,  
Voltage  
Socket  
Trimmers

LAFAYETTE RADIO & TELEVISION CORP.

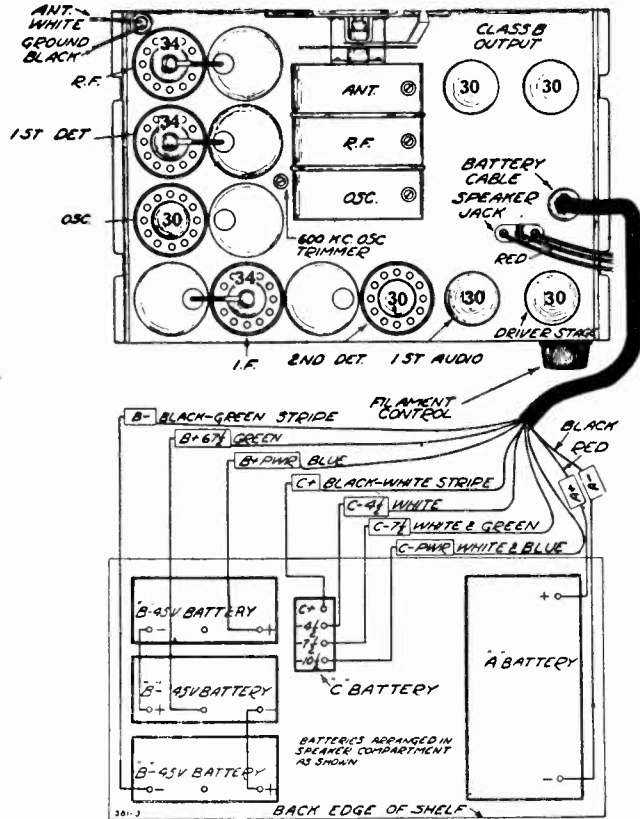


Fig. 2—Tube Arrangement and Battery Connections

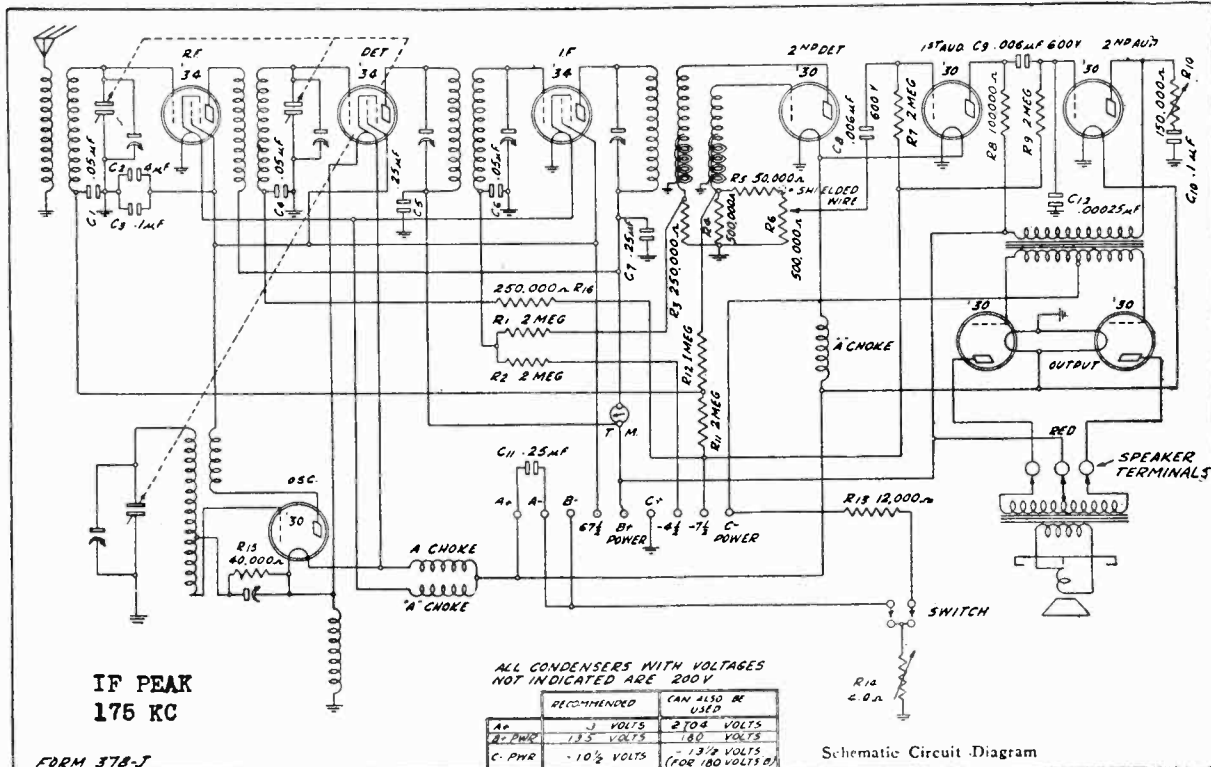
Voltages at Sockets

"B" AND "C" BATTERIES UP TO RATED VOLTAGE—FILAMENT CONTROL KNOB SET SO THAT FILAMENT VOLTAGE IS 2—ANTENNA LEAD SHORTENED TO GROUND—VOLTAGES READ FROM NEGATIVE FILAMENT LEG

Type of Tube	Function	Across Filament	Plate to Cathode	Screen to Cathode	Grid to Cathode	Normal Plate MA
'34	R.F.	2.0	125	65	2.88 <sup>(1)</sup>	2.3
'34	1st Det.	2.0	130	65	7.5 <sup>(1)</sup>	1.4
'30	Osc.	2.0	67		4-15 <sup>(2)</sup>	1.6-4 <sup>(2)</sup>
'34	I.F.	2.0	120	65	2.38 <sup>(1)</sup>	2.4
'30	2nd Det.	2.0	0		0	0
'30	1st Audio	2.0	85		7.5 <sup>(1)</sup>	.5
'30	Driver	2.0	125		7.5 <sup>(1)</sup>	4.0
'30	Output	2.0	130		10.	1.1

(1) Computed figure—cannot be read with ordinary voltmeter because of high resistance in this circuit. See article "Voltages" for further information.

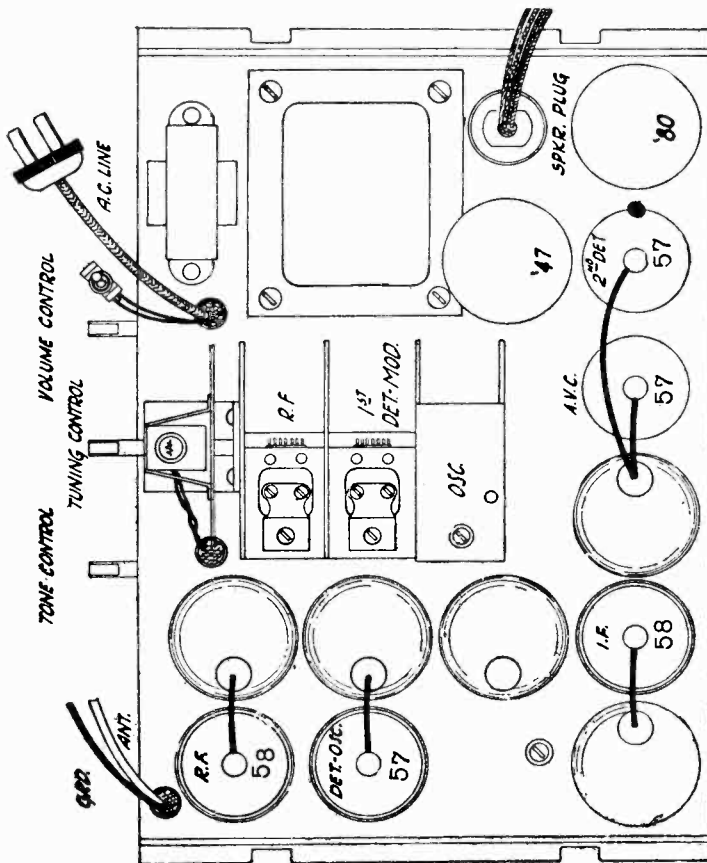
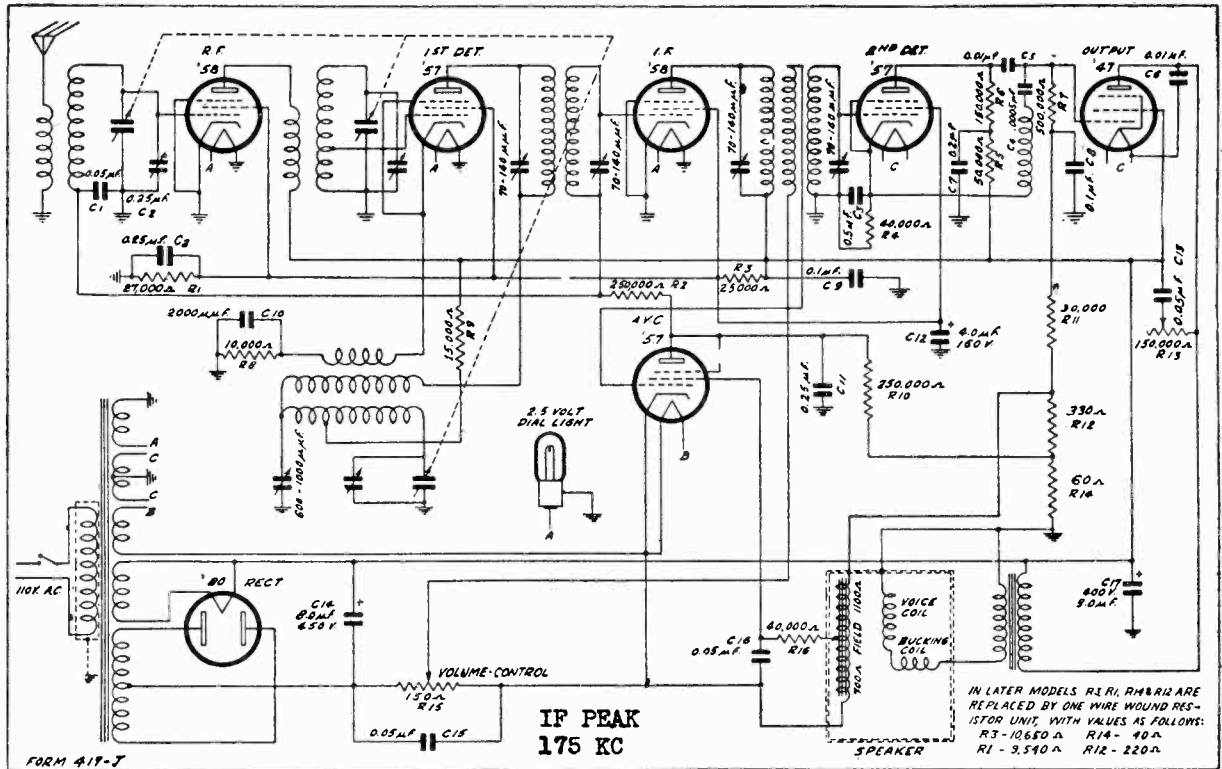
(2) Subject to variation with dial setting.



Schematic Circuit Diagram

LAFAYETTE RADIO & TELEVISION CORP

MODEL L-16, L-17  
L-18, L-19  
Schematic  
Socket, Changes



Change in Later Models

In the first models of this chassis, resistors R-1 and R-3 were carbon resistors of the values as shown in Fig 1. Resistors R-12 and R-14, were in one vitreous enamel unit. The voltages for the sets with these resistors are shown in the voltage chart on Page 4 at the left.

In later models the four above mentioned resistors were replaced by one armored wire wound resistor unit. New values are used as follows:

Code	Resistance
R-12	220 ohms
R-14	40 ohms
R-1	9,540 ohms
R-3	10,650 ohms

The voltages for the sets with the four-section wire wound resistor are shown in the second voltage chart on Page 4 at the right.

Twenty-five Cycle Receivers

The twenty-five cycle receiver differs from the sixty cycle receiver only in the fact that a different power transformer and an additional filter condenser are used. Also, a slight change is made in the power unit wiring. In the twenty-five cycle set, condenser C-17 the dry electrolytic unit is put in parallel with condenser C-14. An 8.0 mfd wet electrolytic condenser is put in place of condenser C-17.

The twenty-five cycle chassis can be operated satisfactorily from a sixty cycle power supply. However, the reverse is not true that is the sixty cycle chassis cannot be operated from a twenty-five cycle power supply.

A 110-220 volt 40-60 cycle power transformer is also available for this model.

MODEL L-16, L-17

L-18, L-19 LAFAYETTE RADIO & TELEVISION CORP.

Alignment, Parts

Voltage

REPAIR PARTS LIST FOR 7 TUBE SUPERHETERODYNE RECEIVER

When ordering parts, the part number and the serial number of chassis must be given. If there is a spot of paint on the chassis be sure to give this color. If this information is not available return the old part to insure getting the correct part.

Part No.	Name	List Price
P-1677	No. 57 Tube Socket	\$.15
P-1678	No. 58 Tube Socket	.15
P-1468	No. 47 Tube Socket	.15
P-1474	No. 80 Tube Socket	.15
P-1479	Speaker Socket	.15
P-40406	Aluminum Tube Shield	.10
P-40425	Tube Shield Base	.10
P-40411	Aluminum Coil Shield—R.F. Coils	.20
P-1476	Three-Lug Insulated Terminal Strip	.10
P-1513	Eleven-Lug Insulated Terminal Strip	.15
P-1054	"On-Off" Switch	.80
P-20529	Drive Shaft	.10
P-10224	Rubber Drive Pinion	.10
P-30374	Brass Bushing for Rubber Pinion	.10
P-10191	Rubber Cushions for Channel Brackets	.10
P-1273	Pilot Lamp 2.5 Volt	.25
P-5062	Antenna R.F. Transformer Assembly	.80
P-5057	Interstage R.F. Transformer Assembly	.95
P-5058	Oscillator Coil Assembly	2.25
P-5059	1st I.F. Transformer Assembly, complete with can	2.50
P-5060	2nd I.F. Transformer Assembly, complete with can	1.75
P-50541	Output Transformer Assembly	1.75
P-50542	Power Transformer, 60 cycle, 110 volt	5.25
P-50543	Power Transformer, 25 cycle, 110 volt	8.50
P-50545	Power Transformer, 40-60 cycle, 110 volt	8.00
P-1497	Pilot Light Bracket and Drive Gear Assembly	.45
P-1383-C	Drive Bracket and Bearing	.30
P-1684	Celluloid Dial Strip	.20

CONDENSERS

Part No.	Code	Capacity	Voltage	Type	List Price
P-80862-C	C-1	.05 mfd.	200 V.	Tubular	\$.30
P-80888-A	C-2	.25 mfd.	200 V.	Tubular	.40

P-80886-C	{ C-3 .5 mfd. 200 V. } Block	1.60
	{ C-7 .2 mfd. 400 V. }	
	{ C-11 .25 mfd. 200 V. }	
P-80867	C-4 .0005 mfd. 600 V.	Molded .25
P-80872-B	C-5 .01 mfd. 600 V.	Tubular .25
P-80872-B	C-6 .01 mfd. 600 V.	Tubular .25
P-80864-D	C-8 .1 mfd. 200 V.	Tubular .25
P-80887-B	C-9 .1 mfd. 400 V.	Tubular .40
P-80914	C-10 .002 mfd. 600 V.	Tubular .20
P-80891-B	C-12 4.0 mfd. 150 V.	Electrolytic .85
P-80890-B	C-13 .05 mfd. 400 V.	Tubular .20
P-80894-B	{ C-14 8.0 mfd. 450 V. } Electro-lytic Block	2.85
	{ C-17 8.0 mfd. 450 V. }	
P-80862-C	C-15 .05 mfd. 200 V.	Tubular .30
P-80862-C	C-16 .05 mfd. 200 V.	Tubular .30
P-80849	C-16 8.0 mfd. 450 V.	Wet Electrolytic (25 Cycle only) 2.20
P-1385-B	600 K.C. Trimmer Condenser	.75
P-80882	Three-Gang Condenser	5.70

RESISTORS

Part No.	Code	Resistance	Wattage	Type	List Price
*P-91003	R-1	27,000 ohms	.5 Watts	Carbon	\$.25
P-90954	R-2	250,000 ohms	.2 Watts	Carbon	.25
*P-91002	R-3	25,000 ohms	1.0 Watts	Carbon	.25
P-90916	R-4	40,000 ohms	.2 Watts	Carbon	.25
P-90941	R-5	50,000 ohms	.2 Watts	Carbon	.25
P-90963	R-6	150,000 ohms	.2 Watts	Carbon	.25
P-90929	R-7	500,000 ohms	.2 Watts	Carbon	.25
P-90930	R-8	10,000 ohms	.2 Watts	Carbon	.20
P-90905	R-9	15,000 ohms	.2 Watts	Carbon	.25
P-90954	R-10	250,000 ohms	.2 Watts	Carbon	.25
P-90956	R-11	30,000 ohms	.2 Watts	Carbon	.25
*P-91040	{ R-12 330 ohms }			Vitreous Enamel	.50
	{ R-14 60 ohms }				
P-90993	R-13	150,000 ohms		Tone Control	.90
P-91041	R-15	150 ohms		Volume Control	.80
P-90916	R-16	40,000 ohms	.2 Watts	Carbon	.25
†P-91048	{ R12 220 ohm 1.0 Watts }			Armored Wire-wound Resistor	1.05
	{ R14 40 ohm .2 Watts }				
	{ R1 9540 ohm 1.0 Watts }				
	{ R3 10650 ohm 2.5 Watts }				

\* Used in early models—in later models these resistors are replaced by resistor P-91048.  
† See above.

Voltages at Sockets

LINE VOLTAGE 115—ANTENNA LEAD SHORTED TO GROUND—VOLUME CONTROL AT MAXIMUM

Type of Tube	Function	Across Filament or Heater	For early Models with 2-section vitreous enamel resistor.				For later Models with 4-section armoured wire-wound resistor.			
			Plate to Cathode	Screen to Cathode	Grid to Cathode	Normal Plate M. A.	Plate to Cathode	Screen to Cathode	Grid to Cathode	Normal Plate M. A.
'58	R.F.	2.4	282	107	4 <sup>(1)</sup>	8.	258	106	2.8 <sup>(1)</sup>	8.0
'57	1st Det.	2.4	270	100	5	.4	250	103	5	.4
'58	I.F. <sup>(2)</sup>	2.4	282	107	4 <sup>(1)</sup>	8.	258	106	2.8 <sup>(1)</sup>	8.0
'57	A.V.C.	2.4	90	40	9.5	0	103	45	10	0
'57	2nd Det.	2.4	207	98	6	.15	190	101	6	.15
'47	Audio	2.4	262	280	24 <sup>(3)</sup>	31	242	260	17 <sup>(3)</sup>	30
'80	Rect.	4.8				30 per plate				34 per plate

(1) Read Across R-14.

(2) If I.F. readings are made with a cord and plug, ground the control grid through a condenser to prevent oscillation.

(3) Read Across R12 and R14.

Condenser Alignment

Misalignment or mistracking of condensers generally manifests itself in broad tuning and lack of volume at portions or all of the broadcast band. The receivers are all properly aligned at the factory with precision instruments and realignment should not be attempted unless all other possible causes of the faulty operation have first been investigated and unless the service technician has the proper equipment. A signal generator that will provide an accurately calibrated signal of 175 K.C. and accurately calibrated signals over the broadcast band, and an output indicating meter are necessary. The procedure is as follows:

Set the signal generator for 175 K.C. Connect the signal lead from the signal generator to the grid of the 1st detector tube through a .05 mfd. condenser. Turn the tuning condenser rotor until the plates are completely out. The ground lead from the signal generator goes to the ground lead of the receiver. Then adjust the four intermediate frequency condensers for maximum output. The adjusting

screws for these condensers are reached from the bottom of the chassis.

Next set the signal generator for a signal of exactly 1400 K.C. The antenna lead from the signal generator, is, in this instance, connected to the antenna lead of the receiver. Set the dial pointer on the 1400 K.C. mark on the dial scale and adjust the three trimmer condensers on the gang tuning condenser for maximum output, adjusting the oscillator trimmer first.

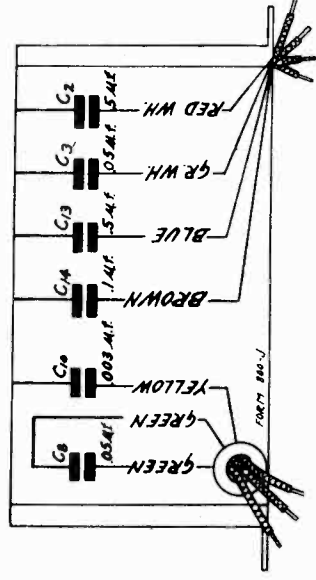
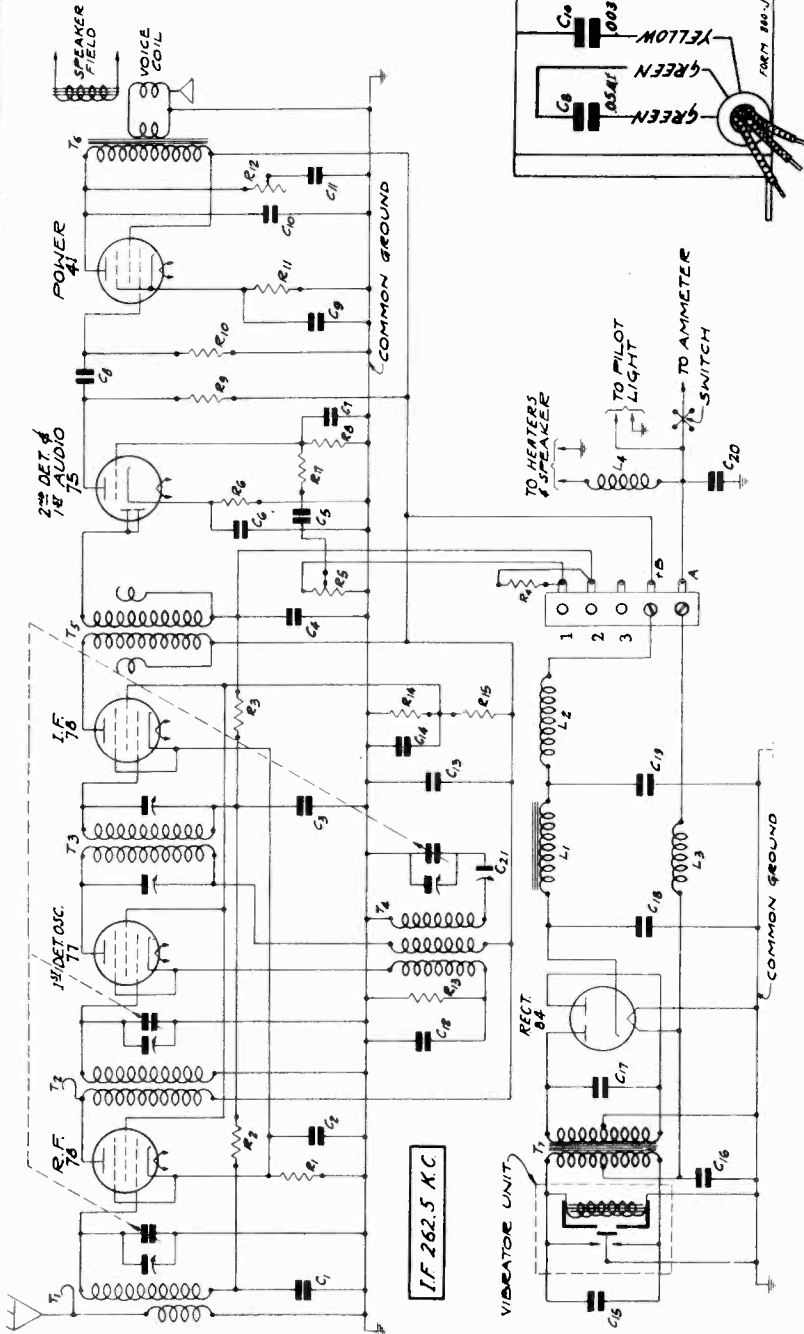
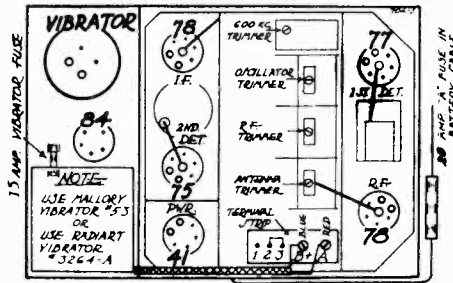
Next set the signal generator for a signal of 600 K.C. and adjust the oscillator 600 K.C. trimmer. The adjusting screw for this condenser is reached from the top of the chassis and is between the I.F. and oscillator coil cans.

A non-metallic screwdriver is necessary for this adjustment. Turn the tuning condenser rotor until maximum output is obtained. Then turn the rotor slowly back and forth over this setting, at the same time adjusting the 600 K.C. trimmer screw until the highest output is obtained.

Then set the signal generator again for a signal of 1400 K.C. and check the adjustment of the tuning condenser trimmers at this frequency for maximum output.

LAFAYETTE RADIO & TELEVISION CORP.

MODEL L-30  
Schematic  
Trimmers  
Voltage  
Socket



VOLTAGES AT SOCKETS

Antenna Disconnected—Battery 6 Volts Under Load

Type of Tube	Function	Across Heater	Plate to Cath.	Screen to Cath.	Cath. to Ground	Normal Plate to Plate M.A.
78	R. F.	5.7	220	100	3.5	5.0
77	1st Det. and Osc.	5.7	220	100	8.0 (1)	1.1 (1)
78	I. F.	5.7	220	100	3.5	5.0
75	2nd Det.	5.7	140 (2)	1.0	1.0	0.3
41	Output	5.7	200	210	15.5	18.0
84	Rect.	5.7				20. per plate

(1) Subject to variation.  
(2) Triode Plate to Cathode—as read with 1,000,000 ohm meter.

Voltages At Sockets

On the following chart are given the voltages at the sockets with all tubes in and the set in operating condition. The antenna should be disconnected.

The voltages can be read with the chassis in the box, by means of an analyzer plug.

If the chassis unit is taken out of the box all of the socket terminals can easily be reached under the chassis with test prods.

If the chassis is taken out, the power unit must also be taken out. Connect a jumper from chassis base to the metal wall of unit to complete the ground circuit.

Connect the Hot side of battery to the battery cable on the chassis and the ground side of the battery to the metal chassis base.

The reading at the battery should be 6 volts with the set operating.

June, 1934

MODEL L-30

Alignment

## LAFAYETTE RADIO &amp; TELEVISION CORP.

**Condenser Alignment**

Misalignment or mistracking of condensers generally manifests itself in broad tuning and lack of volume at portions or all of the broadcast band. The receivers are all properly aligned at the factory with precision instruments and realignment should not be attempted unless all other possible causes of the faulty operation have first been investigated and unless the service technician has the proper equipment. A signal generator that will provide accurately calibrated signals over the broadcast band and accurately calibrated signals at and around 262.5 K. C., the intermediate frequency and an output indicating meter are desirable.

**Do not take the chassis out of the box.** First set the signal generator at approximately 262.5 K. C. Connect the antenna lead from the generator to the control grid of the I. F. 78 tube, through a .05 mfd. condenser. The ground lead of the generator goes to the ground of the receiver. Turn the rotor plates of the tuning condenser completely out and keep the signal weak enough to prevent A. V. C. action. Note from Fig. 1 that the second I. F. transformer is self tuned and cannot be adjusted. Adjust the frequency of the signal generator until the output meter shows maximum output. The intermediate frequency setting of the generator is then correct, although it may be a very small percentage higher or lower than 262.5 K. C.

Next connect the signal lead from the signal generator to the grid of the 1st detector tube through a .05 mfd. condenser. Do not change the signal generator setting. Then adjust the 1st I. F. trimmer-condenser screws for maximum output. There are 2 holes at one end of the chassis box. The 2 trimmer screws can be reached through these holes. **CAUTION**—use an insulated screwdriver to prevent short circuiting to ground.

Now disconnect the signal generator and adjust it to exactly 1400 K. C. The antenna lead from the generator is then connected to the antenna lead of the receiver. Connect the tuning condenser flexible drive shaft to the chassis if it has been disconnected. Turn the station selector knob until the rotor plates are completely in mesh. Then with a screwdriver turn the calibration screw on the back of the control unit, until the pointer is at the lowest frequency mark. This is the large point, 5 points below the 55 mark. Then turn the station selector knob until the pointer on the dial scale is at 1400 K. C.

Then adjust the oscillator R. F. and antenna trimmer condensers on the gang tuning condenser for maximum output, adjusting the oscillator section first. See Fig. 2.

Next, set the signal generator for a signal of 600 K. C. and adjust the oscillator 600 K. C. trimmer. This condenser is mounted on the end of the gang condenser. See Fig. 2.

A non-metallic screwdriver is necessary for this adjustment. Turn the tuning condenser rotor until maximum output is obtained. Then turn the rotor slowly back and forth over this setting, at the same time adjusting the 600 K. C. trimmer screw until the highest output is obtained.

Then set the signal generator again for a signal of 1400 K. C. and check the adjustment of the tuning condenser trimmers at this frequency for maximum output.

If the control unit or flexible shaft is moved after the set has been aligned, the setting of the dial pointer may change. This can be adjusted by turning the control unit calibration screw until the pointer is at the correct setting.

**Adjusting Antenna Trimmer**

After the receiver is installed and the car antenna is connected it will be necessary to adjust the antenna trimmer. Tune in a weak signal between 1200 and 1400 K. C. with the volume control about three-fourths on. Remove the cover of the chassis box. The antenna trimmer is the trimmer condenser closest to the terminal strip—see Fig.

2. Turn the adjusting screw of this condenser up or down until maximum output is obtained. **CAUTION**—Do not turn any of the other trimmer adjusting screws for this adjustment.

**Removing "B" Unit From Box**

Disconnect the "A" and "B+" leads at the terminal strip. On the end of the box at which the "B" unit is located will be found 9 screws around the edge. Remove these 9 screws. The "B" unit and end plate can then be lifted out.

**Replacing the Vibrator**

Note that vibrator unit is of the plug-in type. This unit can be inserted and removed in the same manner as a tube.

**Replacing Chassis Unit**

In replacing the chassis unit be sure that the ground spring near the output transformer makes a good contact with the chassis box. Reverse the procedure as given above for removing this unit.

**Replacing "B" Unit**

When replacing the "B" unit be sure that the ground spring makes a good contact to the partition wall in the chassis box. Reverse the procedure as given above for removing this unit.

**Removing Speaker**

If service work is required on the chassis, it is advisable in some cases to remove the speaker, as this will permit ready access to all of the units and wiring.

The pot magnet is secured to the vertical walls of the chassis base by means of 3 screws, 2 on one side and 1 on the other. Remove these screws. Then carefully lift out the speaker as far as the leads will permit. The yellow field lead and the black secondary lead may then be unsoldered.

**Trouble Shooting and Service****Vibrator Unit**

When servicing this receiver a new vibrator unit should be tried out in the same manner as a new set of tubes would be tried out. These units are plugged in in the same manner as a tube. One or more vibrator units should be kept on hand for replacement purposes.

**"B" Unit**

In case of failure in the "B" unit try out a new vibrator. If this does not remedy the difficulty and the "B" unit cannot be repaired locally it is not necessary to return the entire chassis. Remove the "B" unit from the chassis box as per the instructions in this manual after which this unit may be carefully packed and returned separately.

**Weak Reception**

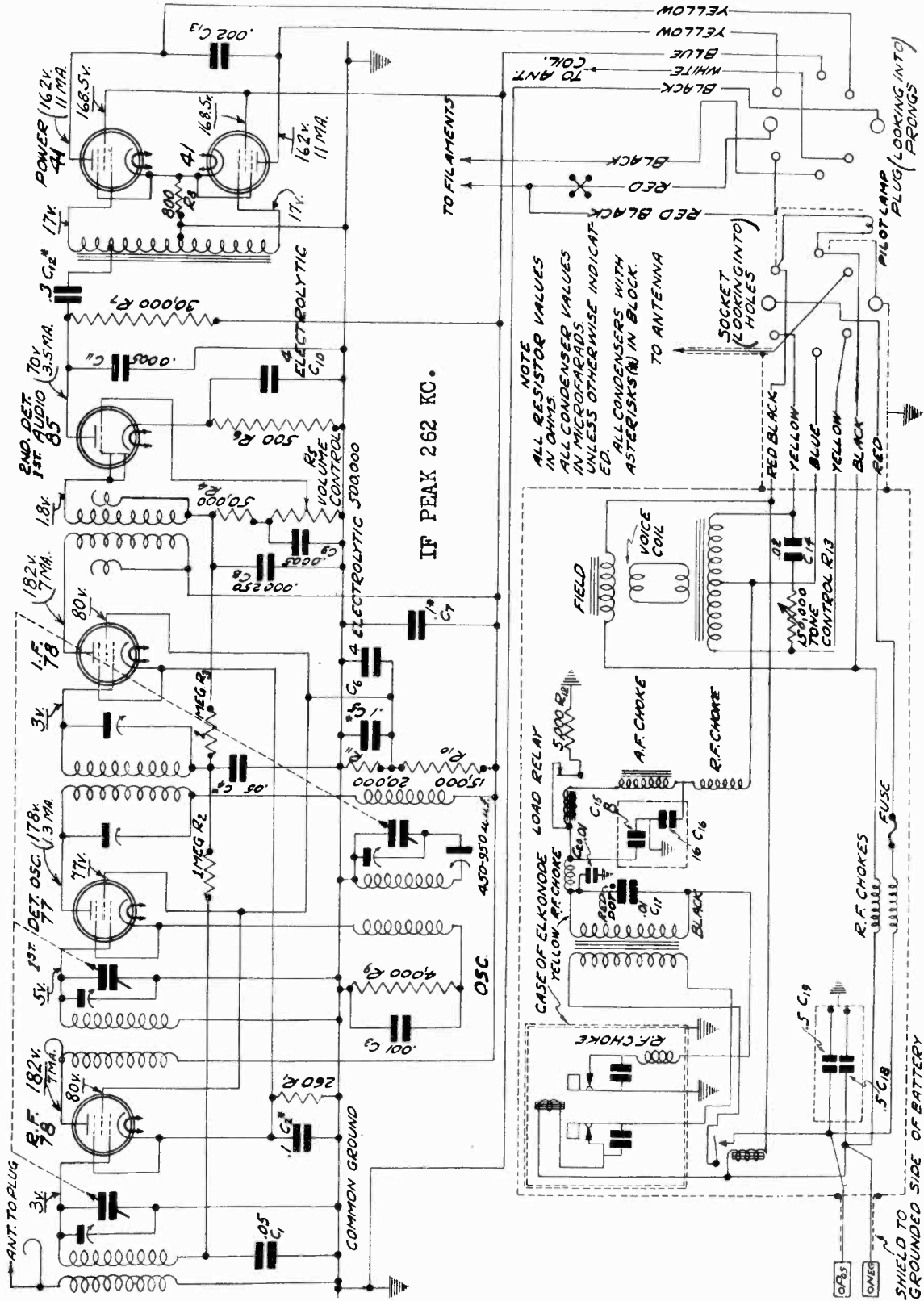
**Defective Tubes**—Try out a new set of tested tubes and note any difference in performance.

**Poor Antenna**—To try out the effectiveness of the antenna used, check the volume against the volume when using a straight length of wire about 15 feet long, run out of the car through one of the windows. If, upon test, the external wire is found to be much superior as far as volume is concerned, the antenna is not satisfactory and will have to be re-vamped or a new one installed. The antenna or lead-in may be too near grounded metal portions of the car frame or body resulting in a high capacity to ground. There may be grounded metal mesh in the car roof. There may be a poor soldered connection between the antenna, lead-in, or antenna lead from the set. The antenna system may be partially grounded at some point.

**Antenna Trimmer not Adjusted**—See Article "Adjusting Antenna Trimmer."

LAFAYETTE RADIO & TELEVISION CORP. Schematic

MODEL S-17762





MODEL S-17762

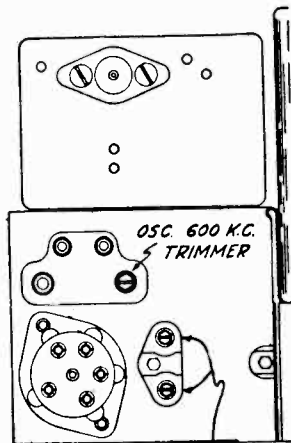
Socket  
Alignment  
Trimmers

## LAFAYETTE RADIO & TELEVISION CORP.

### Condenser Alignment

Misalignment or mistracking of condensers generally manifests itself in broad tuning and lack of volume at portions or all of the broadcast band. The receivers are all properly aligned at the factory with precision instruments and realignment should not be attempted unless all other possible causes of the faulty operation have first been investigated and unless the service technician has the proper equip-

and keep the signal weak enough to prevent A.V.C. action. Note from Fig. 10 that the second I.F. transformer is self tuned and cannot be adjusted. Adjust the frequency of the signal generator until the output meter shows maximum output. The intermediate frequency setting of the generator is then correct, although it may be a very small percentage higher or lower than 262 K.C.



1<sup>ST</sup> I.F. CONDENSERS  
Fig. 12—Location of Trimmers

Next connect the signal lead from the signal generator to the grid of the 1st detector tube through a .05 mfd. condenser. Then adjust the two intermediate frequency condensers for maximum output. The location of the adjusting screws for these condensers is shown in Fig. 12.

Now set the signal generator for a signal of exactly 1400 K.C. The antenna lead from the generator is, in this instance, connected to the antenna lead of the receiver. Connect the flexible drive shaft to the chassis if it has been disconnected. As explained previously, the dial scale should be at the low frequency end stop when the rotor is completely in mesh. Then turn the station selector knob until the dial scale is at 1400 K.C.

Then adjust the three trimmer condensers on the gang tuning condenser for maximum output, adjusting the oscillator section first (section farthest from drive gear).

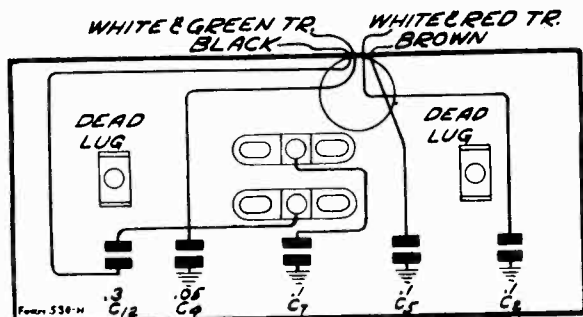
Next set the signal generator for a signal of 600 K.C. and adjust the oscillator 600 K.C. trimmer. The location of this condenser is shown in Fig. 12.

A non-metallic screwdriver is necessary for this adjustment. Turn the tuning condenser rotor until maximum output is obtained. Then turn the rotor slowly back and forth over this setting, at the same time adjusting the 600 K.C. trimmer screw until the highest output is obtained.

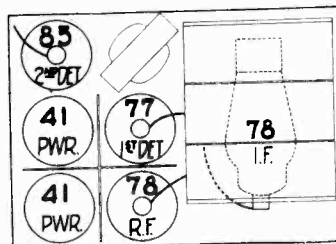
Then set the signal generator again for a signal of 1400 K.C. and check the adjustment of the tuning condenser trimmers at this frequency for maximum output.

ment. A signal generator that will provide accurately calibrated signals over the broadcast band and accurately calibrated signals at and around 262 K.C., the intermediate frequency and an output indicating meter are desirable.

First set the signal generator at approximately 262 K.C. Connect the antenna lead from the generator to the control grid of the I.F. 78 tube, through a .05 mfd. condenser. The ground lead of the generator goes to the ground of the receiver. Turn the rotor plates of the tuning condenser completely out



Condenser Block—Internal Wiring



Location of Tubes

### Trying Out the Set and Adjusting

After the wiring has all been completed and before the chassis is permanently installed, try out the set and adjust the antenna trimmer condenser. The location of the tubes is shown in Fig. 8. Do not start the engine of the car yet.

To adjust the antenna trimmer, tune in a weak signal between 1200 and 1400 KC with the volume control about three-quarters on. On one end of the

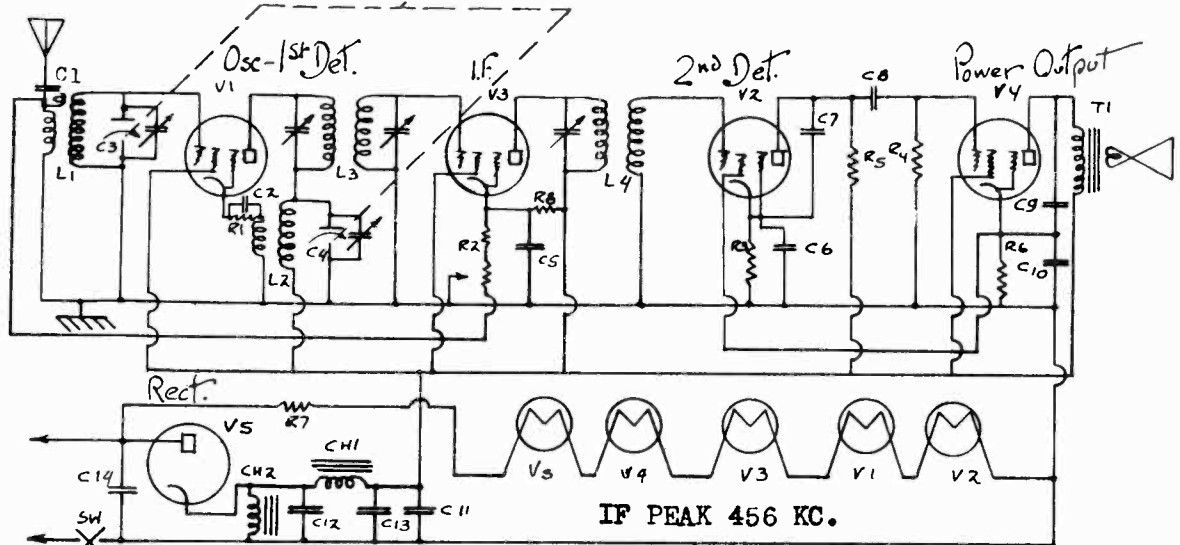
chassis box is a small metal plate. Remove the two screws which hold this plate in place. Directly under the hole in the chassis box is the antenna trimmer condenser screw. Turn this adjusting screw up or down until maximum output is obtained.

If the receiver fails to operate, check the items as given under the article by that name.

MODEL 503-US  
Schematic, Alignment

LANG RADIO CORP. (New Co.)

MODEL UG-5B  
Schematic, Alignment

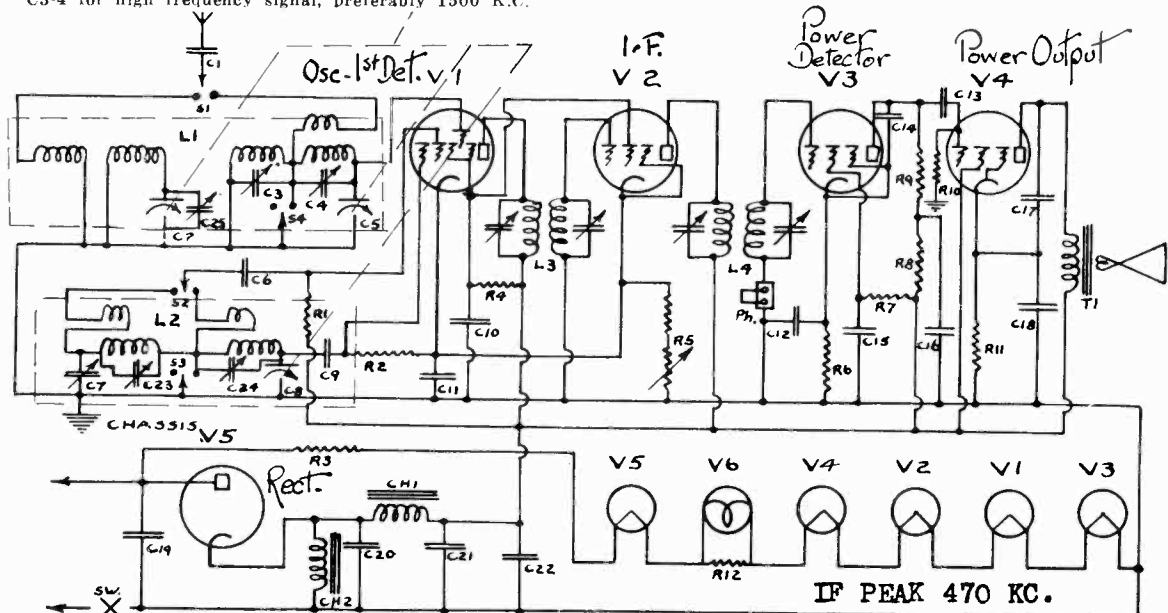


- V1-2-6C6 Tube
- V3-6D6 Tube
- V4-43 Tube
- V5-12Z3 Tube
- C1-2-.002 Condenser
- C3-365 Mmf. Var. Cond.
- C4-456 K.C. Osc. Cond.
- C5-11-14-.05 Condenser
- C6-10-10 Mmf. Condenser

- C7-.00025 Condenser
- C8-9-.01 Condenser
- C12-12 Mmf. Condenser
- C13-8 Mmf. Condenser
- R1-7000 Ohm Resistor
- R2-10M 200 Min. Vol. Cont.
- R3-20M Resistor
- R4-5-1 Meg. Resistor
- R6-700 Ohm Resistor

- R7-205 Ohms Line Cord
- R8-35M Resistor
- L1-Antennae Coil
- L2-Oscillator Coil
- L3-D.T. I.F. 456 Coil
- L4-S.T. I.F. 456 Coil
- CH1-Filter Choke
- CH2-3M Field
- T1-Speaker Transformer

To align the receiver, turn C3-4 out—with R2 fully on, apply 456 signal to grid of V3 and adjust L4—apply 456 signal to V1 and adjust L3—with antennae wire coiled up and capacitatively coupled to the signal. adjust trimmers on C3-4 for high frequency signal, preferably 1500 K.C.



- V1-6A7 Tube
- V2-6D6 Tube
- V3-6C6 Tube
- V4-43 Tube
- V5-12Z3 Tube
- V6-6.3 Volt Pilot Light
- C1-6-.002 mfd. Cond.
- C2-5-8-365 mmfd. Var. Cond.
- C3-4-23-24-25-40 mmfd. Trimmer
- C7-600 mmfd. Trimmer
- C9-.00005 mfd. Cond.
- C10-15-16-19-22-.05 mfd Cond.

- C11-.25 mfd. Cond.
- C12-18-10 mfd. Cond.
- C13-17-.01 mfd. Cond.
- C14-.0005 mfd. Cond.
- C20-12 mfd. Cond.
- C21-8 mfd. Cond.
- CH1-Choke
- CH2-3000 Ohm Speakerfield
- Ph.-Phono
- T1-Speaker Transformer
- S1-2-3-4-Band switch
- SW.-Switch on Volume control

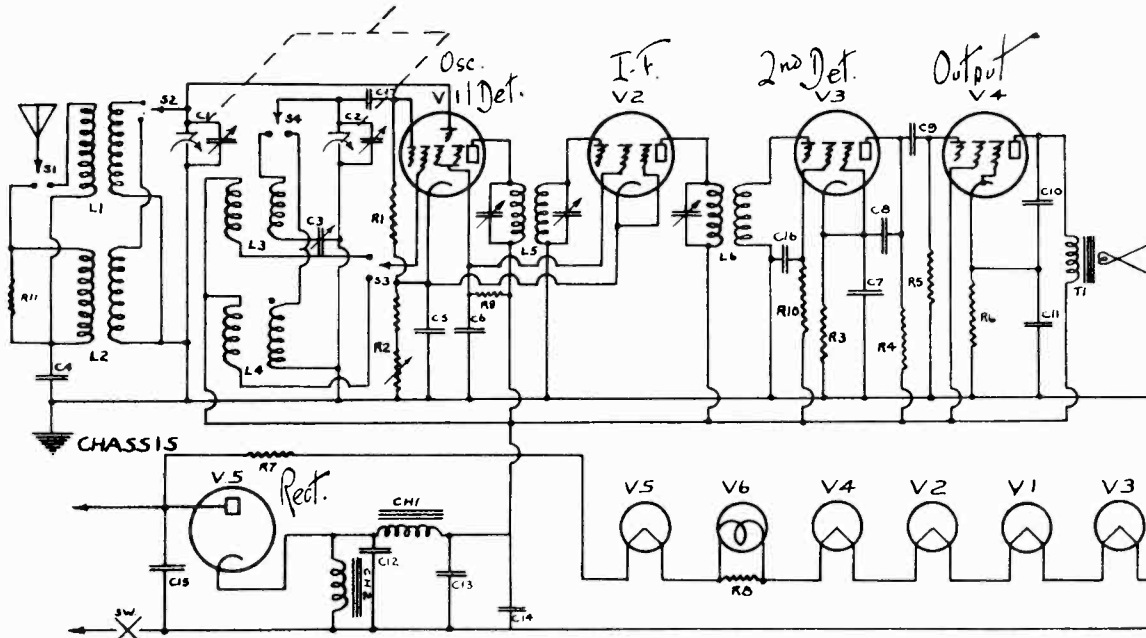
- R1-2-4-20,000 Ohm Resistor
- R3-205 Ohms in line cord
- R5-4M Ohm Vol. Cont. 190 Ohm min.
- R6-50,000 Ohms
- R7-2 Meg Ohm Resistor
- R8-100,000 Ohm resistor
- R9-10-500,000 Ohm resistor
- R11-700 Ohm resistor
- R12-25 Ohm resistor
- L1-Antennae Coil
- L2-Oscillator Coil
- L3-4-D.T. 470 K.C. I.F. Coil

To align the receiver: Turn band switch to shortwave—short C8—apply 470 K.C. to grid of V2 and adjust L4—apply 470 K.C. to grid of V1 and adjust L3—remove short from C8—apply 15,000 K.C. to antennae and adjust C24 and C4—turn band switch to broadcast—apply 1,400 K.C. to antennae and adjust C3, C23, and C25—apply 600 K.C. and adjust C7—readjust C3, C23 and C25 if necessary.

MODEL 502-US  
Schematic, Alignment  
Parts List

LANG RADIO CORP. (New Co.)

IF PEAK 456 KC.



V1—6A7 Tube  
V2—6D6 Tube  
V3—6C6 Tube  
V4—43 Tube  
V5—12Z3 Tube  
V6—6.3 Volt Pilot Light  
C1—2—365 mmfd. Var. Cond.  
C3—600 mmfd. Cond.  
C4—.002 mfd. Cond.  
C5—.25 mfd. Cond.  
C6—14-15-16—.05 mfd. Cond.  
C7—11—10 mfd. Cond.

C8—17—.00025 mfd. Cond.  
C9—10—.01 mfd. Cond.  
C12—12 mfd. Cond.  
C13—8 mfd. Cond.  
CH1—200 Ohm Choke  
CH2—3000 Ohm Speaker Field  
T1—Speaker Transformer  
S1—2-3-4—Band Switch  
SW—Switch on Volume Control  
R1—3-9—20M Ohm Resistor  
R2—4000 Ohm Vol. Control 190 Ohm min.  
R4—5—500M Ohm Resistor

R6—700 Ohm Resistor  
R7—170 Ohm Resistor  
R8—205-Ohms in line cord  
R10—2 meg. Ohm Resistor  
L1—Broadcast Antennae Coil  
L2—Short Wave Antennae Coil  
L3—Broadcast Oscillator Coil  
L4—Short Wave Oscillator Coil  
L5—D.T. I.F. 456 K.C. Coil  
L6—S.T. I.F. 456 K.C. Coil

To align receiver: Turn band switch to broadcast—short C2—apply 456 K.C. to grid of V2 and adjust L6—apply 456 K.C. to grid of V1 and adjust L5—remove short from C2—apply 1400 K.C. to antennae and adjust trimmers on C1, C2—apply 600 K.C. and adjust C3.

540 to 1550 K.C.

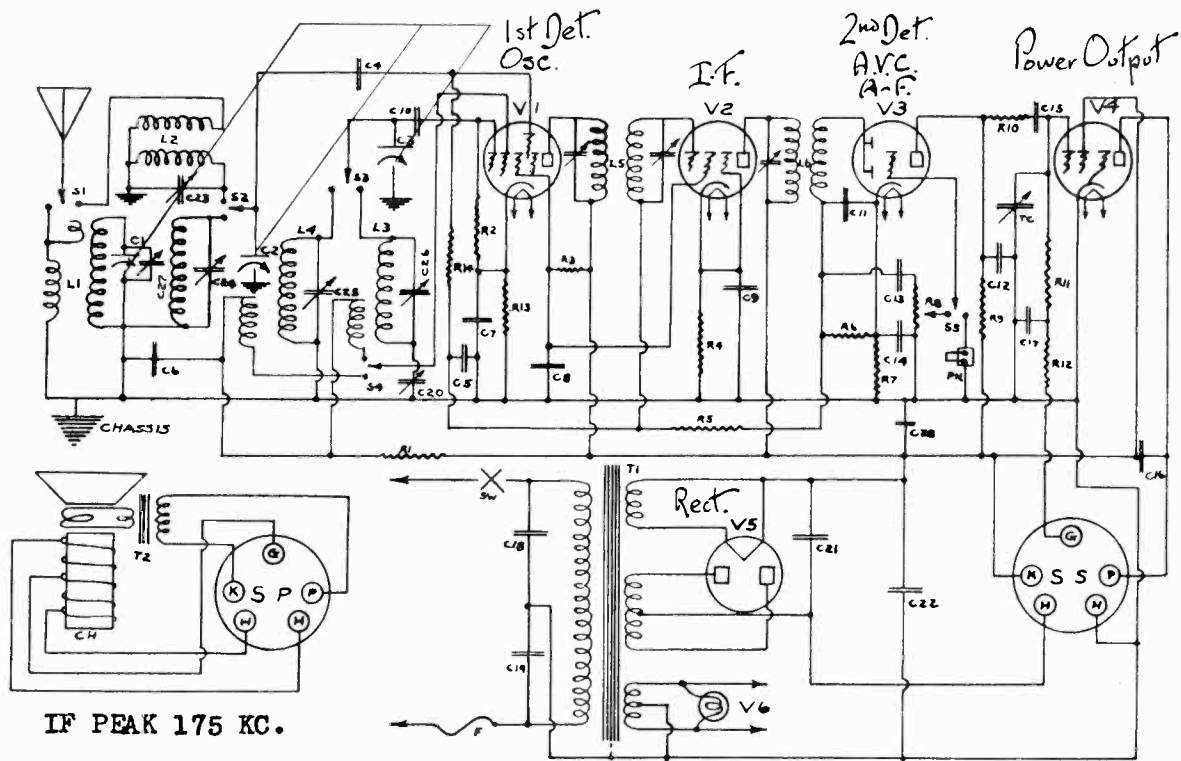
502 US

5,900 to 15,400

This receiver is a five tube Universal dual wave receiver. One band covers the usual broadcasting 540 to 1550 kilocycles, and the other takes in the high frequency broadcasting 5900 to 15400 kilocycles. The high frequency range includes the important international broadcast bands 19, 25, 31 and 49 meters. Tuning and selection of bands are facilitated by the use of colors on the dial. The broadcast band is calibrated in kilocycles, and the high frequency bands are indicated in tan, amateur in red, airplane in blue, and unclassified in white. 49 meter band is from 6.01 to 6.15 megacycles; 31 meter is from 9.5 to 9.6 megacycles; 25 meter is from 11.7 to 11.9 megacycles, and 19 meter is from 15.1 to 15.34 megacycles.

LANG RADIO CORP. (New Co.)

MODEL 503-AS  
Schematic, Parts  
Alignment



- V1—2A7 Tube
- V2—58 Tube
- V3—2A6 Tube
- V4—2A5 Tube
- V5—80 Tube
- V6—2.5 Pilot Light
- C1-2-3—365 mmfd. Var. Cond.
- C4-10—.0001 mfd. Cond.
- C5-6-7-8-9—.05 mfd. Cond.
- C11-12—.00025 mfd. Cond.
- C13-15-18-19—.01 mfd. Cond.
- C23-24-25 26-27—40 mmfd. Cond.
- C28—.1 mfd. Cond.
- C14—.5 mfd. Cond.
- C16—.006 mfd. Cond.
- C17—.25 mfd. Cond.

- C20—1000 mmfd. Cond.
- C21—12 mfd. Cond.
- C22—8 mfd. Cond.
- R1—20,000 Ohms
- R2-10—50,000 Ohms
- R3—25,000 Ohms
- R4—700 Ohms
- R5-14—1 meg.
- R6-11—500,000 Ohms
- R7—3,000 Ohms
- R8—1/2 meg. Volume Control
- R9-12—250,000 Ohms
- R13—300 Ohms
- PH—Phono
- F—Fuse
- SP—Speaker Plug

- SS—Speaker Socket
- T2—Speaker Transformer
- T1—Power Transformer
- TC—Tone Control
- S1-2-3-4—Band Selector Sw.
- L1—Broadcast Antennae Coil
- L2—Shortwave Antennae Coil
- L3—Broadcast Oscillator Coil
- L4—Shortwave Oscillator Coil
- L5—D.T. I.F. 175 K.C. Coil
- L6—S.T. I.F. 175 K.C. Coil
- S5—Phono switch on volume control
- SW—Power switch on tone control
- CH—Speaker Field 1800—Tapped at 300 Ohms

To align the receiver: Turn the band selector switch to broadcast—Short C3—Apply 175 K.C. to grid of V2 and adjust L6—Apply 175K.C. to grid of V1 and adjust L5—Remove short from C3—Apply 1400 K.C. to antennae and adjust C27, C24, C26—Apply 600K.C. and adjust C20—Shift band switch to shortwave—Apply 15 megacycles and adjust C25 to low peak then adjust C23.

540 to 1550 K.C.

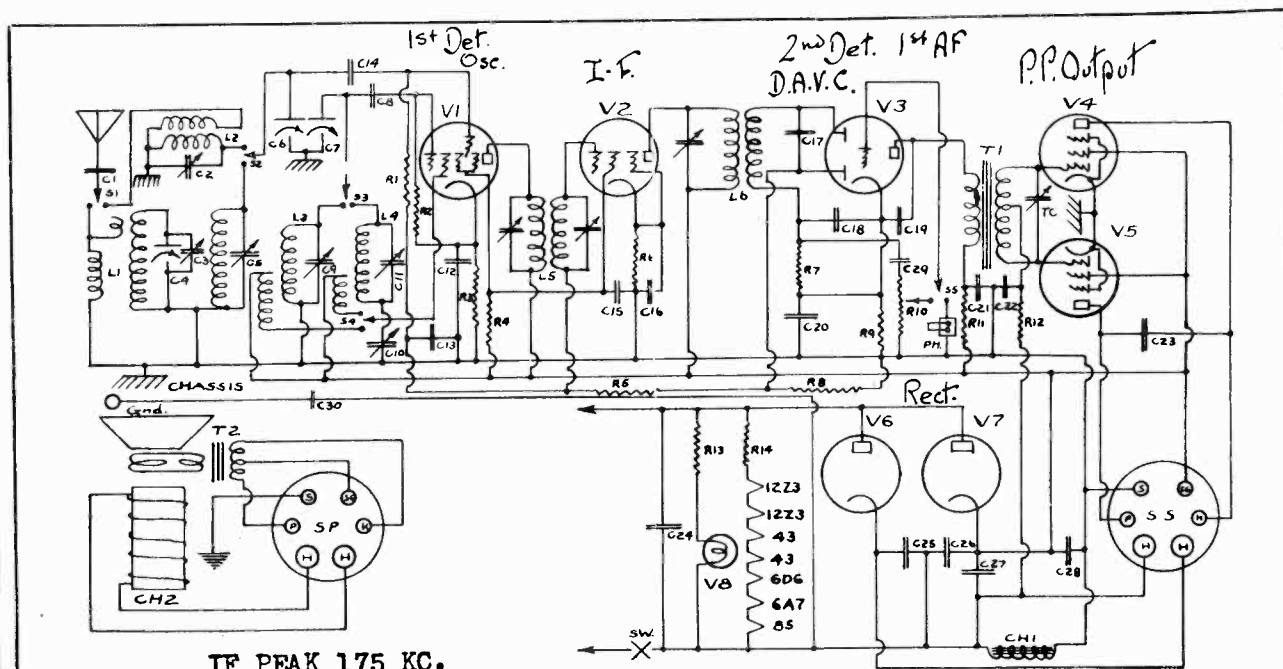
503 AS

5.5 to 17.0 megacycles

This receiver is a five tube A.C. dual wave receiver. One band covers the usual broadcasting 540 to 1550 K.C., and the other takes in the high frequency broadcasting 5500 to 17000 K.C. The high frequency range includes the important international broadcast bands 19, 25, 31, and 49 meters. Tuning and selection of bands are facilitated by the use of "Select-Ur-Band" dial. Movement of the selector switch automatically shifts the mask on dial, so that only proper band can be seen. The broadcast part is calibrated in kilocycles, and the high frequency in megacycles. Broadcast bands are indicated in tan, amateur in red, airplane in blue, and unclassified in white. 49 meter band is from 6.01 to 6.15 megacycles; 31 meter is from 9.5 to 9.6 megacycles; 25 meter is from 11.7 to 11.9 megacycles; and 19 meter is from 15.1 to 15.34 megacycles.

MODEL 703-US  
Schematic, Parts  
Alignment

## LANG RADIO CORP. (New Co.)



IF PEAK 175 KC.

V1—6A7 Tube	C20—5 mfd. Cond.	R10—½ Meg. Volume Control
V2—6D6 Tube	C21—6 mfd. Cond.	PH—Phono
V3—85 Tube	C22—.25 mfd. Cond.	L1—Broadcast Ant. Coil
V4—43 Tube	C23—.006 mfd. Cond.	L2—Shortwave Ant. Coil
V5—43 Tube	C25—28—8 mfd. Cond.	L3—Shortwave Osc. Coil
V6—12Z3 Tube	C26—16 mfd. Cond.	L4—Broadcast Osc. Coil
V7—12Z3 Tube	CH1—370 Ohm Choke	L5—D. T. 175 K C I. F. Coil
V8—6.3 Pilot Light	CH2—Speaker Choke	L6—S. T. 175 K C I. F. Coil
C1—.002 mfd. condenser	R1—5-8 1,000,000 Resistor	T1—Audio Transformer
C2-3-5-9-11—40 mmfd. Trimmer	R2—30,000 Ohm Resistor	T2—Speaker Transformer
C4-6-7—365 mmfd. Variable Cond.	R3—300 Ohm Resistor	TC—Tone Control
C8-14—.0001 mfd. condenser	R4—20,000 Ohm Resistor	S1-2-3-4—Band Selector Switch
C10—1000 mmfd. Trimmer	R6—400 Ohm Resistor	S5—Phono Switch on Volume Control
C12-13-15-16-24-27-30—.05 mfd. cond.	R7-12—250,000 Ohm Resistor	SW—Power Switch on Tone Control
C17—.00005 mfd. Cond.	R11-9—3000 Ohm Resistor	SS—Speaker Socket
C18—.00025 mfd. Cond.	R13—767 Ohm Resistor	SP—Speaker Plug
C19—.001 mfd. Cond.	R14—86 Ohm Resistor	

To align the receiver: Turn the band selector to broadcast—Short C7—apply 175 KC to grid of V2 and adjust L6—apply 175 KC to grid of V1 and adjust L5—Remove short from C7—apply 1400 KC to antennae and adjust C3, 5, 11—apply 600 KC and adjust C10. Shift band switch to shortwave—apply 15 megacycles and adjust C9 to low peak, then adjust C2.

540 to 1550 KC

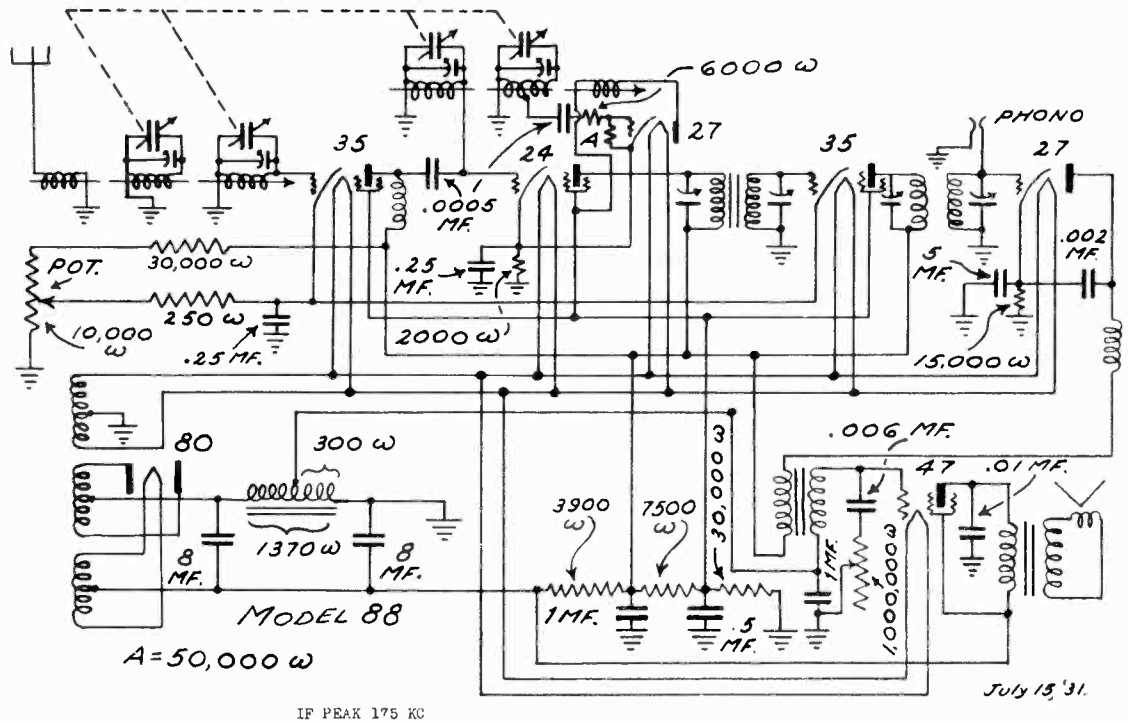
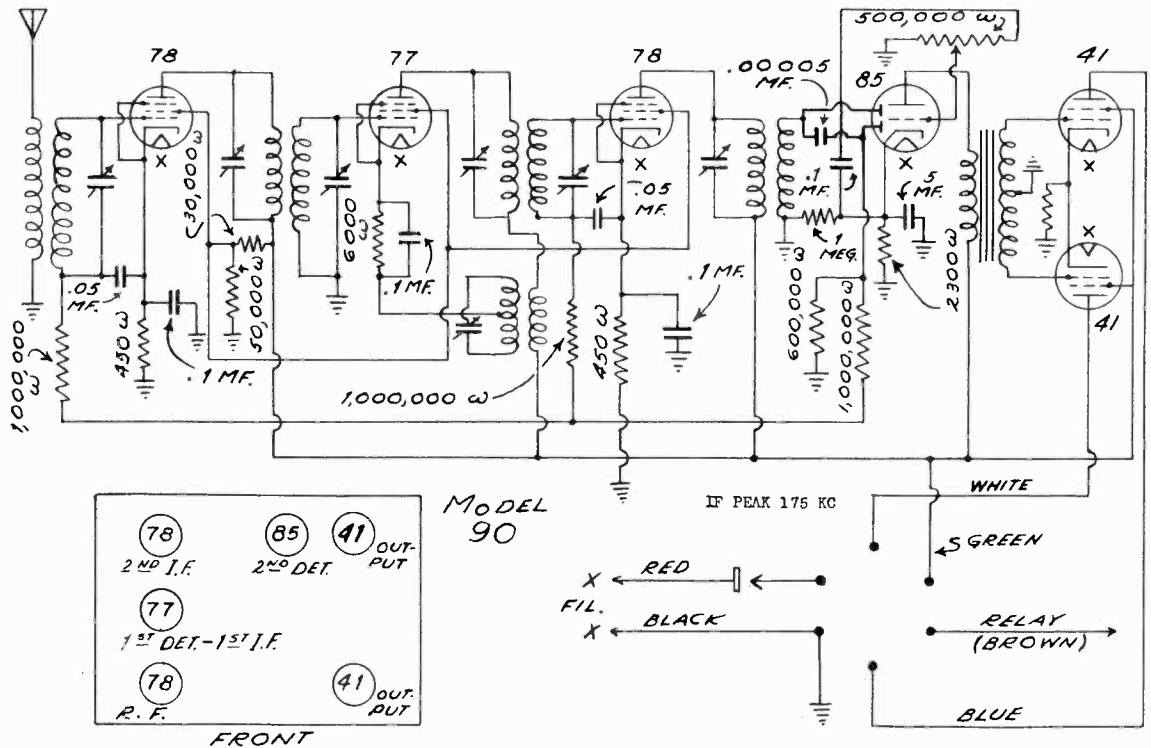
703 US

5.5 to 17.0 Megacycles

This receiver is a seven tube Universal dual wave receiver. One band covers the usual broadcasting 540 to 1550 K. C. and the other takes in the high frequency broadcasting 5500 to 17000 K. C. The high frequency range includes the important international broadcast bands 19, 25, 31, and 49 meters. Tuning and selection of bands are facilitated by the use of the "Select-Ur-Band" dial. Movement of the selector switch automatically shifts the mask on dial, so that only proper band can be seen. The broadcast part is calibrated in kilocycles, and the high frequency in megacycles. Broadcast bands are indicated in tan, amateur in red, airplane in blue, and unclassified in white. 49 meter band is from 6.01 to 6.15 megacycles, 31 meter is from 9.5 to 9.6 megacycles, 25 meter is from 11.7 to 11.9 megacycles and 19 meter is from 15.1 to 15.34 megacycles.

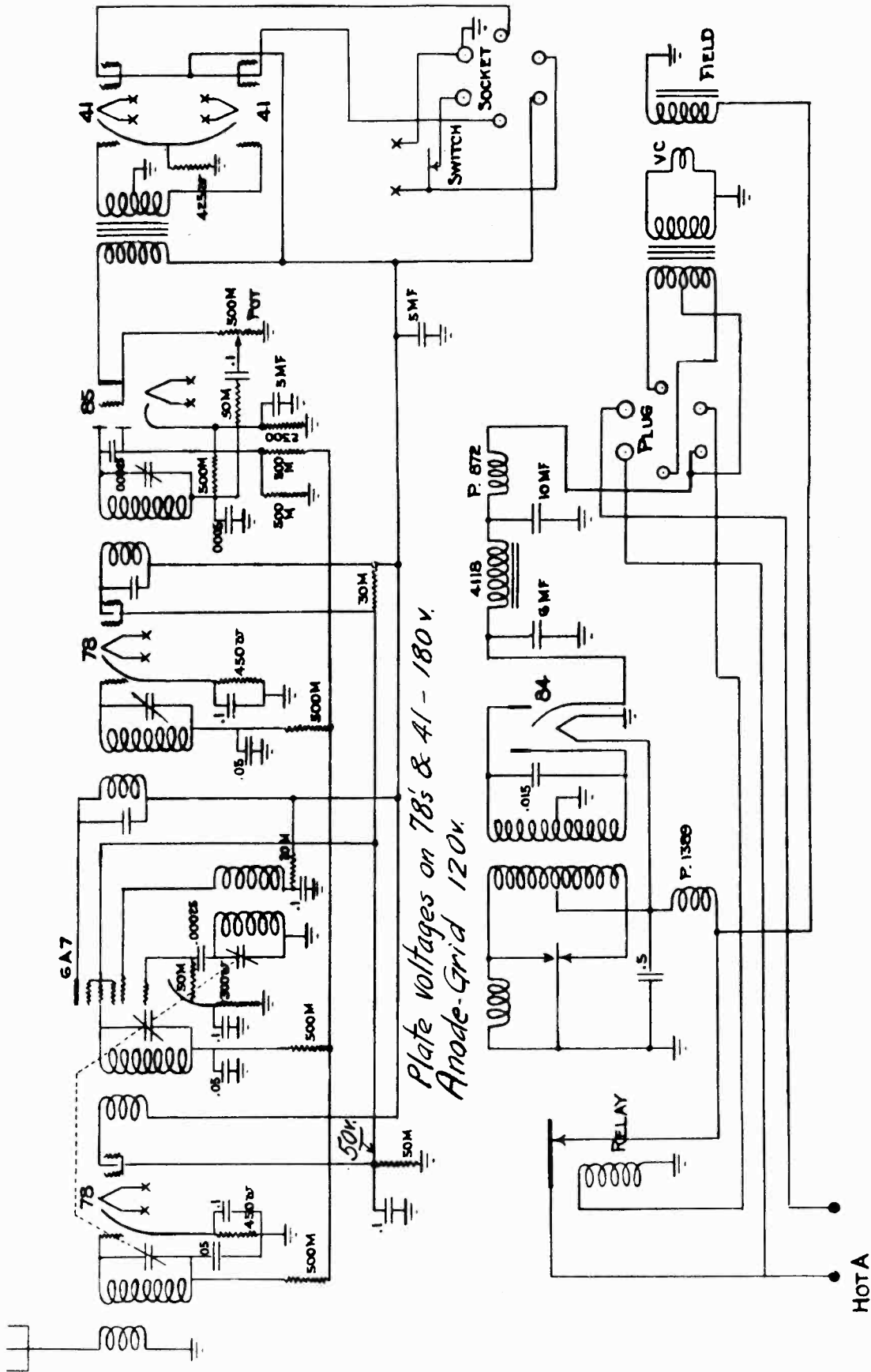
LARKIN CO., INC.

MODEL 88  
Schematic  
MODEL 90  
Schematic, Socket



MODEL 91  
Schematic

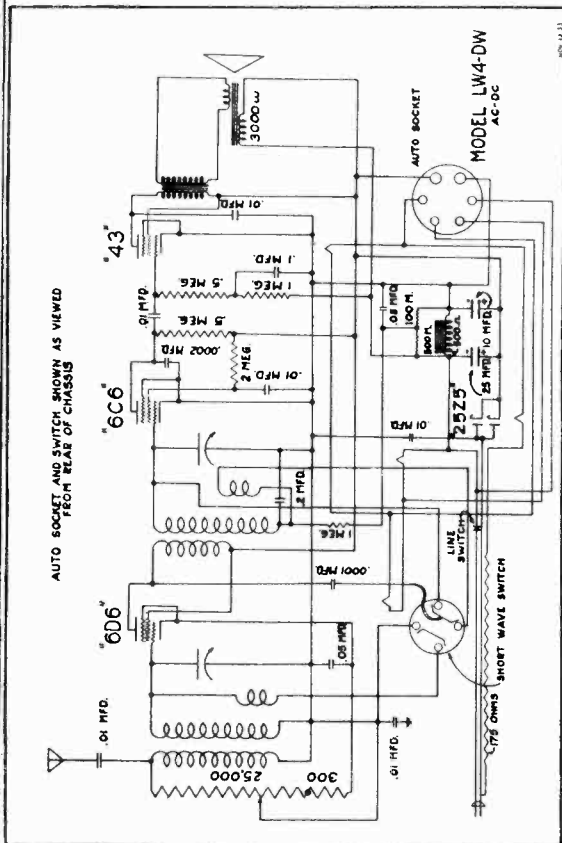
LARKIN CO., INC.



I.F. PEAK 175 K.C.

LEWOL MFG. CORP.

MODEL LW-4  
Schematic, Voltage  
MODEL LW-4-DW  
Schematic, Voltage



CIRCUIT DIAGRAM—DUAL WAVE MODEL

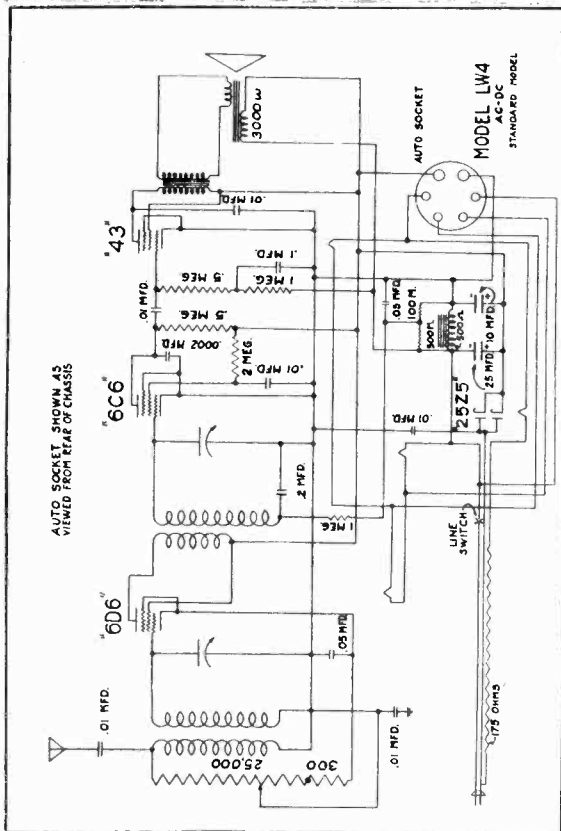
TUBE SOCKET VOLTAGES

Type	Position	Heater	Cathode	Screen	Plate
6D6	R.F.	6	2.5	100	100
6C6	Det.	6	-0-	12*	30*
43	Output	25	-0-	100	100
25Z5	Rectifier	25	100	-----	-----

All voltages measured to -B line (variable condenser frame).  
\* Measurements made with meter having a resistance of about 300,000 ohms.

DUAL WAVE MODEL:

Align condenser trimmers at 1500 Kc with switch on broadcast band position.  
Align short wave at 1712 Kc sliding short wave shunt on antenna coil, with switch on short wave position.



TUBE SOCKET VOLTAGES

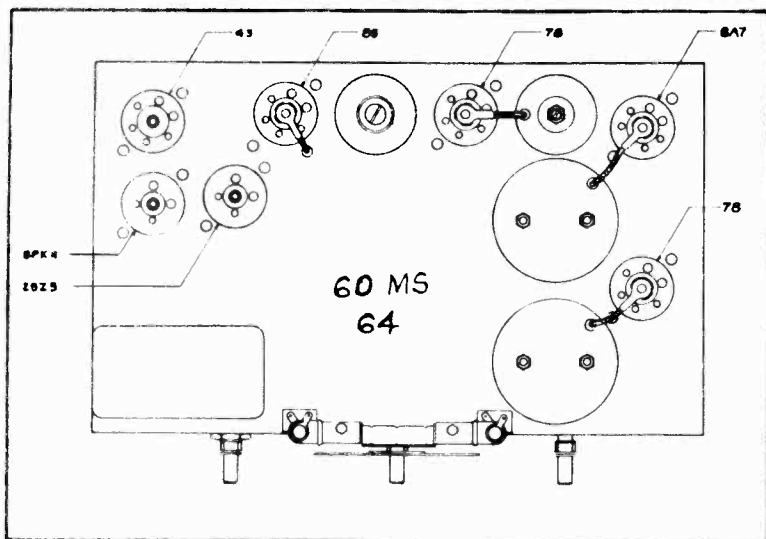
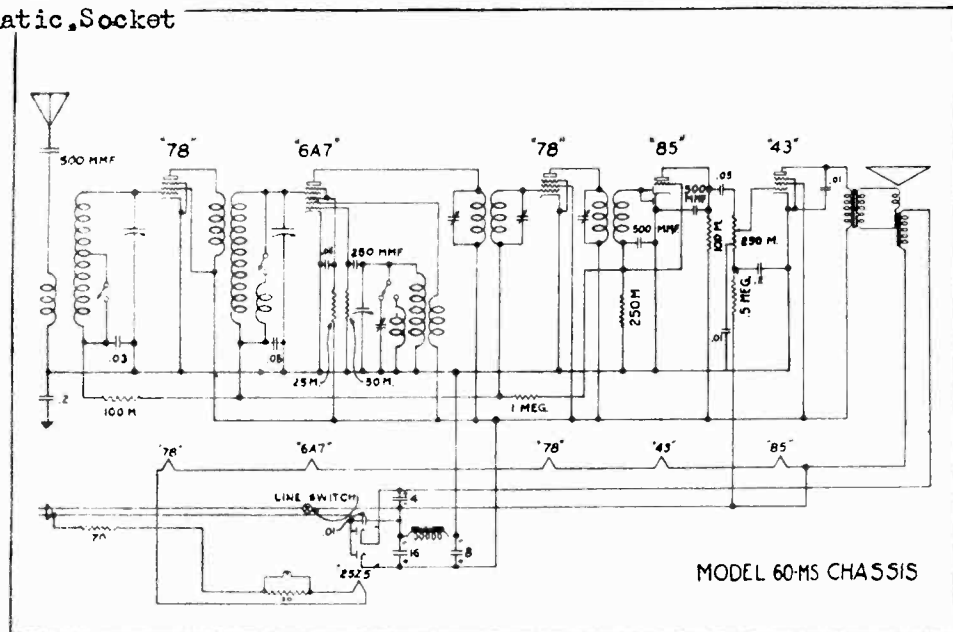
Type	Position	Heater	Cathode	Screen	Plate
6D6	R.F.	6	2.5	100	100
6C6	Det.	6	-0-	12*	30*
43	Output	25	-0-	100	100
25Z5	Rectifier	25	100	-----	-----

All voltages measured to -B line (variable condenser frame).  
\* Measurements made with meter having a resistance of about 300,000 ohms.  
Align condenser trimmers at 1690 Kc and check 1712 Kc.



MODEL 60-MS  
 Socket, Schematic  
 MODEL 64  
 Schematic, Socket

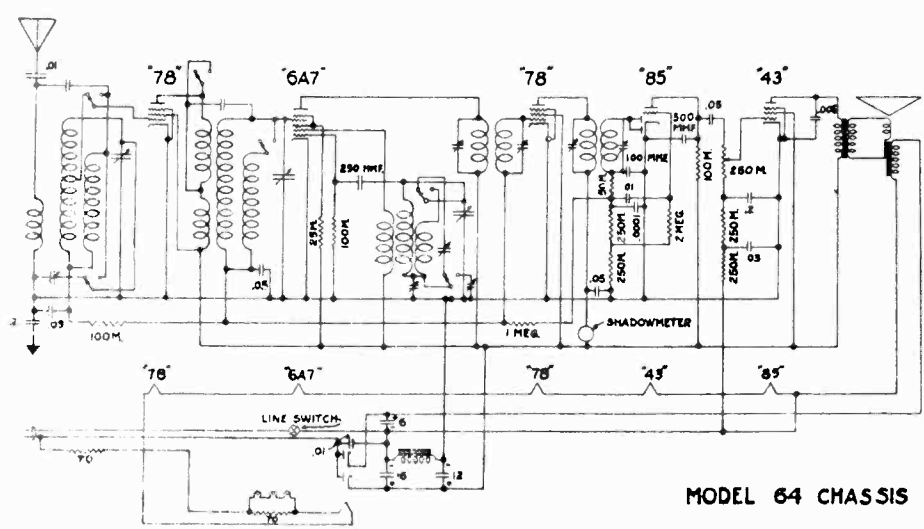
LEWOL MFG. CORP.



Place tubes in sockets as indicated in diagram.

Corresponding numbers will be found on base of tubes.

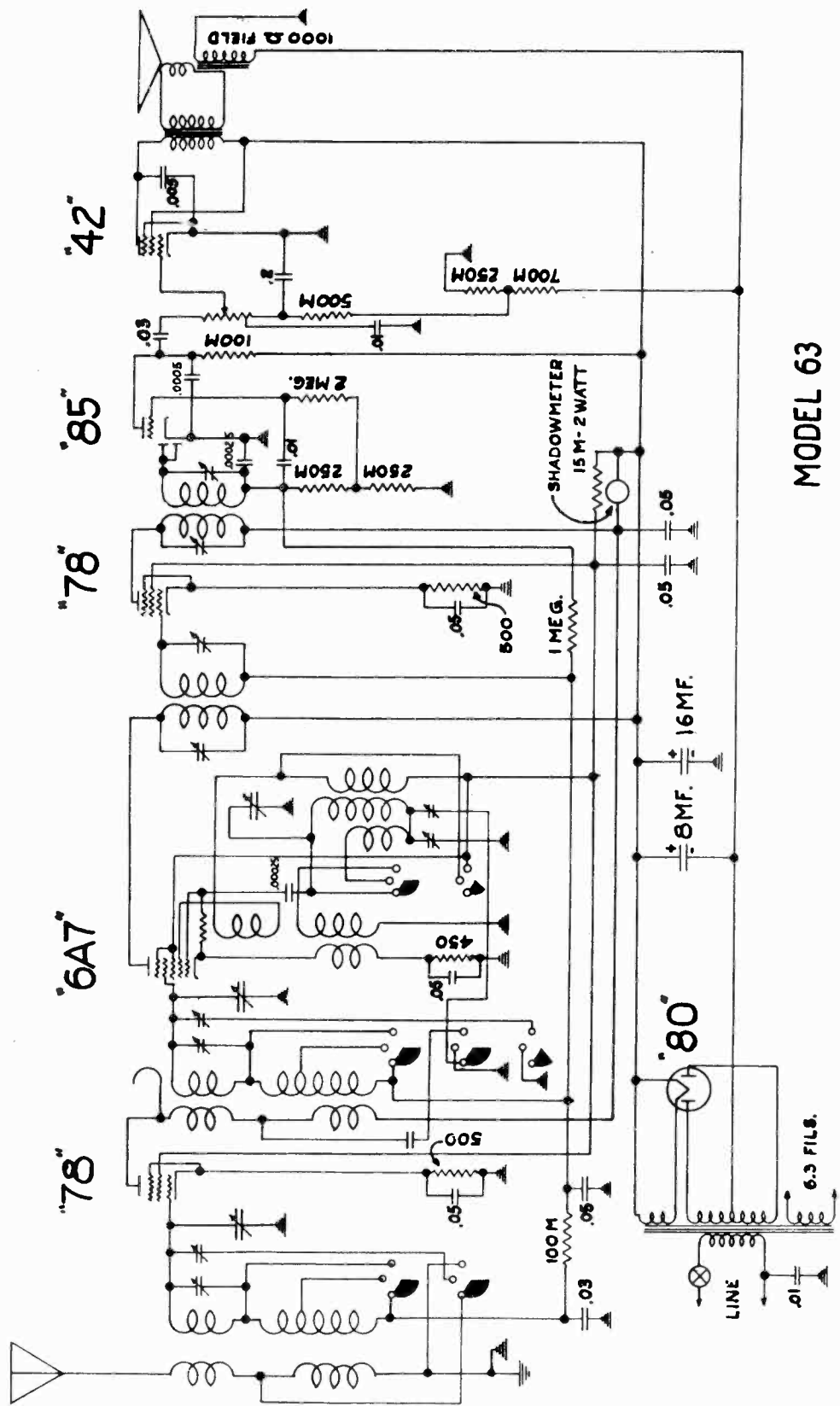
Plug on end of speaker cable should be inserted in "speaker" socket.



The cord which terminates in the wall plug will become warm during the operation of the receiver. This should cause no concern as it is designed to act in this fashion. Be very careful not to cut this cord or lengthen it in any fashion as this will generally impair the operation of the receiver. A ground connection may be tried and left connected or not as trial will dictate. The black wire is the ground lead. UNDER NO CIRCUMSTANCES ATTACH A GROUND WIRE TO THE CHASSIS DIRECT.

LEWOL MFG. CORP.

IF PEAK 262.5 KC.



MODEL 63

MODEL 63  
Alignment  
Voltage

SERIES "63"  
All Wave

TRACKING

Peak IF transformer at 262.5 kc.

Next, align condenser trimmers on broadcast range with switch turned all of the way to the left and dial set at 1500 kc., with a signal of the same frequency. Turn dial to 550 kc., and track with a signal of that frequency by means of a series pad for the broadcast range (inside screw on isolantite base at rear of set).

Turn the frequency change switch to the right one position and turn dial to 4000 kc. Put in a signal of approximately 4000 kc. and move dial, if necessary to maximum response. Adjust the RF and antenna trimmers to resonance for the second band. These are located as follows: with the set inverted and the rear of the chassis nearest the operator, the two trimmers in the furthest right-hand corner are for the antenna coil. The nearer one is for the second band and the further one for the third band. The RF coil trimmers are located toward the center of the rear of the chassis, the left one being the second band and the right being the third band. Oscillator pad is tracked at 1750 kc. (external nut on isolantite base at rear of set).

Again turning the switch one more position to the right which is the third band, track the oscillator trimmer with the dial set at 14,000 kc. and a corresponding signal. Check the alignment at 6000 kc., and if necessary bend the tuning condenser plates slightly. No pad is used here.

TUBE SOCKET VOLTAGES

Type	Position	Heater	Cathode	Screen	Plate	Osc. Plate	Osc. Grid.	Diode	Cont Grid
78	RF	6.3 v.	3.0	100	250	--	--	--	0
6A7	1st Det. & Osc.	6.3 v.	4.5	100	260	100	-6 v.	0	0
78	IF	6.3 v.	3.0	100	250	--	--	--	0
85	2nd Det. & Osc.	6.3 v.	0	--	50	--	--	-1 v.	0
42	Output	6.3	0	260	255	--	--	--	-8 v
80	Rectf.	5.0	260	--	--	--	--	--	--

The above readings taken with a 300 volt 1000 ohm per volt DC voltmeter.

Line voltage 115 volts, 60 cycles AC. All DC voltages taken with respect to chassis ground with switch in first position.