Most - Often - Needed

1940 RADIO DIAGRAMS

and Servicing Information

Compiled by

M. N. BEITMAN

SUPREME PUBLICATIONS

CHICAGO

VOLUME 3

$2.00

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CHICAGO

MANUAL OF 1940 MOST POPULAR SERVICE DIAGRAMS

Acknowledgement and thanks are given to the following manufacturers for their kind assistance and cooperation.

Air-King Products Co.
Allied Radio Corporation
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Ansley Radio Corporation
Belmont Radio Corporation
Chevrolet Motor Division
Continental Radio and Television Corp.
The Crosley Corporation
Detrola Radio Corporation
DeWald Radio Manufacturing Corp.
Emerson Radio and Phonograph Corp.
Fada Radio and Electric Company
Federal Recorder Company, Inc.
Galvin Manufacturing Corporation
Gamble-Skogmo, Inc.
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INDEX

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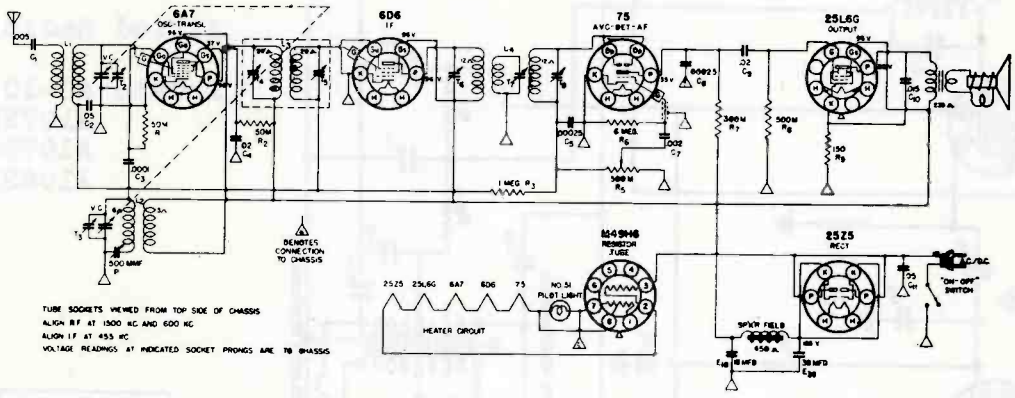
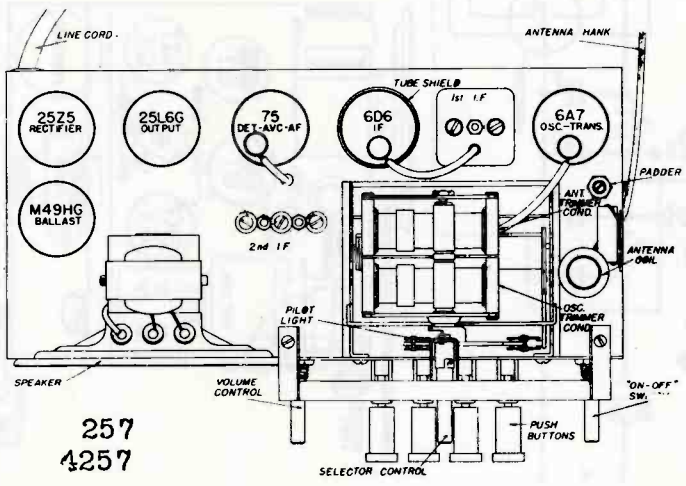
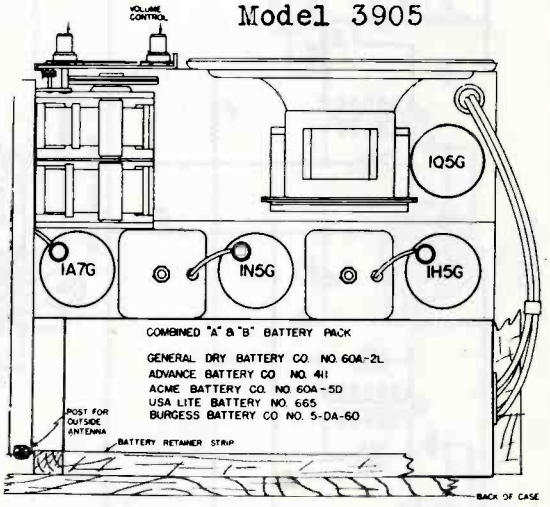
Air-King Products Co. Models 257, 4257

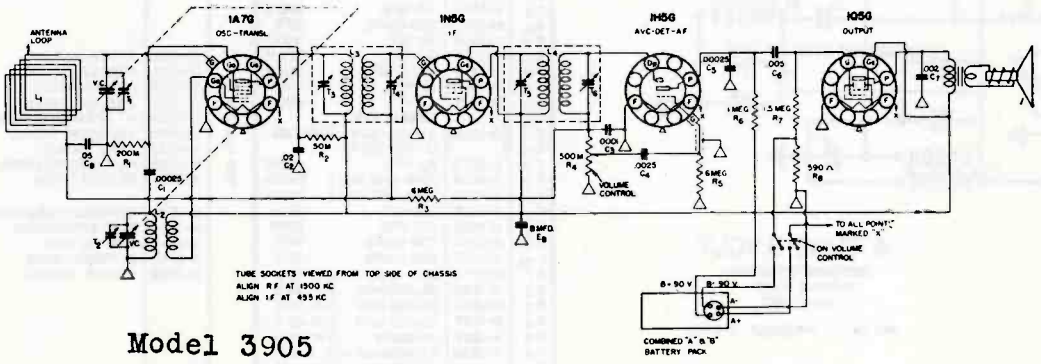




257
4257

Model 3905

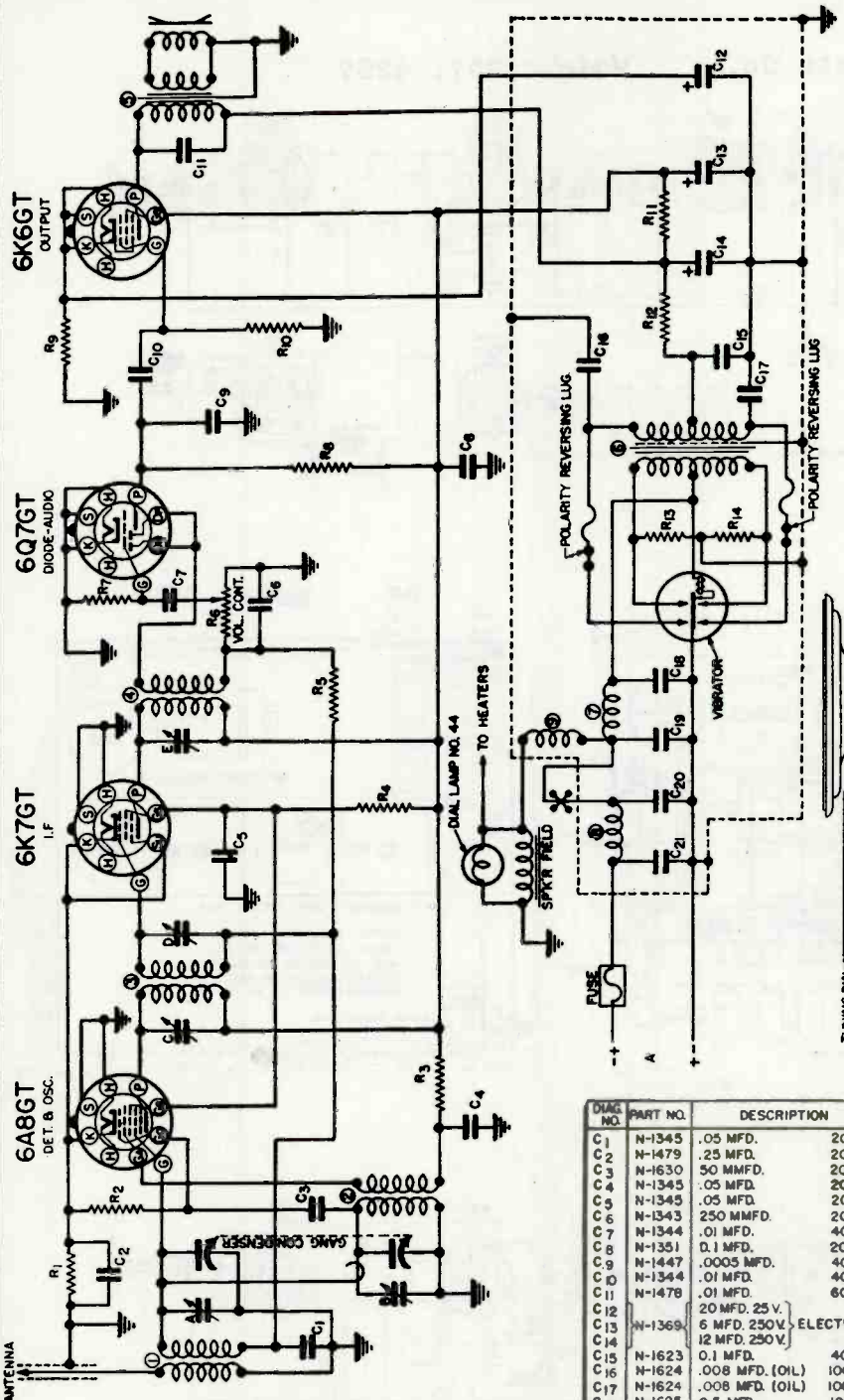




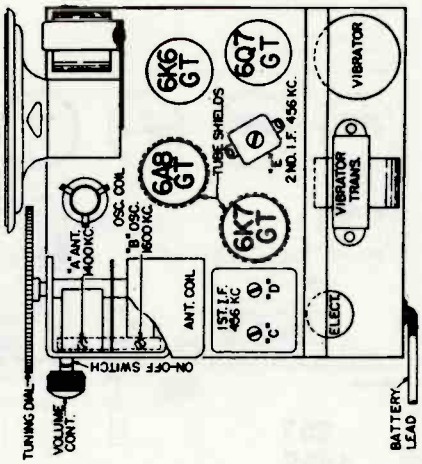
Model 3905

Allied Radio Corp.

Models AU-10
E10725
A10760
A10822



I.F. 456 K.C.



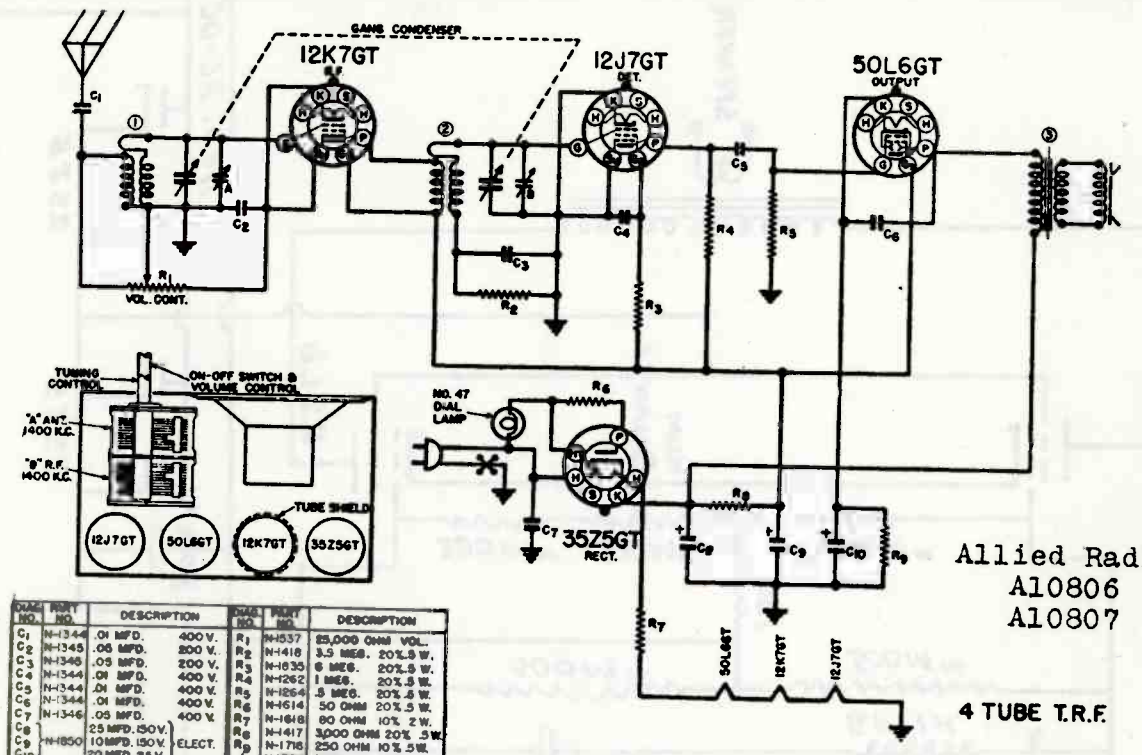
DIAG. NO.	PART NO.	DESCRIPTION		DIAG. NO.	PART NO.	DESCRIPTION	
C 1	N-1345	.05 MFD.	200 V.	R 13	N-1629	100 OHM	1 W. 20%
C 2	N-1479	.25 MFD.	200 V.	R 14	N 1629	100 OHM	1 W. 20%
C 3	N-1630	50 MMFD.	20%				
C 4	N-1345	.05 MFD.	200 V.				
C 5	N-1345	.05 MFD.	200 V.				
C 6	N-1343	250 MMFD.	20%				
C 7	N-1344	.01 MFD.	400 V.				
C 8	N-1351	0.1 MFD.	200 V.	1	N-1249	ANTENNA COIL	
C 9	N-1447	.0005 MFD.	400 V.	2	N-1250	OSCILLATOR COIL	
C 10	N-1344	.01 MFD.	400 V.	3	N-1248	1 ST. I.F. TRANS.	
C 11	N-1478	.01 MFD.	600 V.	4	N-1596	2 ND. I.F. TRANS.	
C 12	N-1369	20 MFD. 25 V.	ELECTRO.	5	N-1235	4" SPEAKER & TRANS.	
C 13		6 MFD. 250 V.		6	N-1540	VIBRATOR TRANS.	
C 14		12 MFD. 250 V.		7	N-1477	HASH CHOKE	
C 15	N-1623	0.1 MFD.	400 V.	8	N-1632	MOTOR NOISE CHOKE	
C 16	N-1624	.008 MFD. (OIL)	1000 V.	9	N-1631	HEATER CHOKE	
C 17	N-1624	.008 MFD. (OIL)	1000 V.				
C 18	N-1625	0.5 MFD.	120 V.		N-1236	VIBRATOR (SYNCHRONOUS)	
C 19	N-1625	0.5 MFD.	120 V.		N-1237	GANG CONDENSER	
C 20	N-1343	250 MMFD.	20%		N-1241	TUNING DIAL	
C 21	N-1343	250 MMFD.	20%		N-1539	BATTERY LEADS	
R 1	N-1473	200 OHM	.5 W. 10%		N-1239	TOGGLE SWITCH	
R 2	N-1260	50,000 OHM	.5 W. 20%				
R 3	N-1627	20,000 OHM	.5 W. 20%				
R 4	N-1627	20,000 OHM	.5 W. 20%				
R 5	N-1262	1 MEGOHM	.5 W. 20%				
R 6	N-1238	0.5 MEGOHM	VOL. CONT.				
R 7	N-1419	6 MEGOHM	.5 W. 20%				
R 8	N-1261	250,000 OHM	.5 W. 20%				
R 9	N-1628	750 OHM	.5 W. 10%				
R 10	N-1264	0.5 MEGOHM	.5 W. 20%				
R 11	N-1258	500 OHM	.5 W. 20%				
R 12	N-1482	250 OHM	.5 W. 20%				

4 TUBE-6 VOLT

SUPERHETERODYNE
SINGLE BAND
AUTO SET

DRN. J.B. APP. 2-25-39

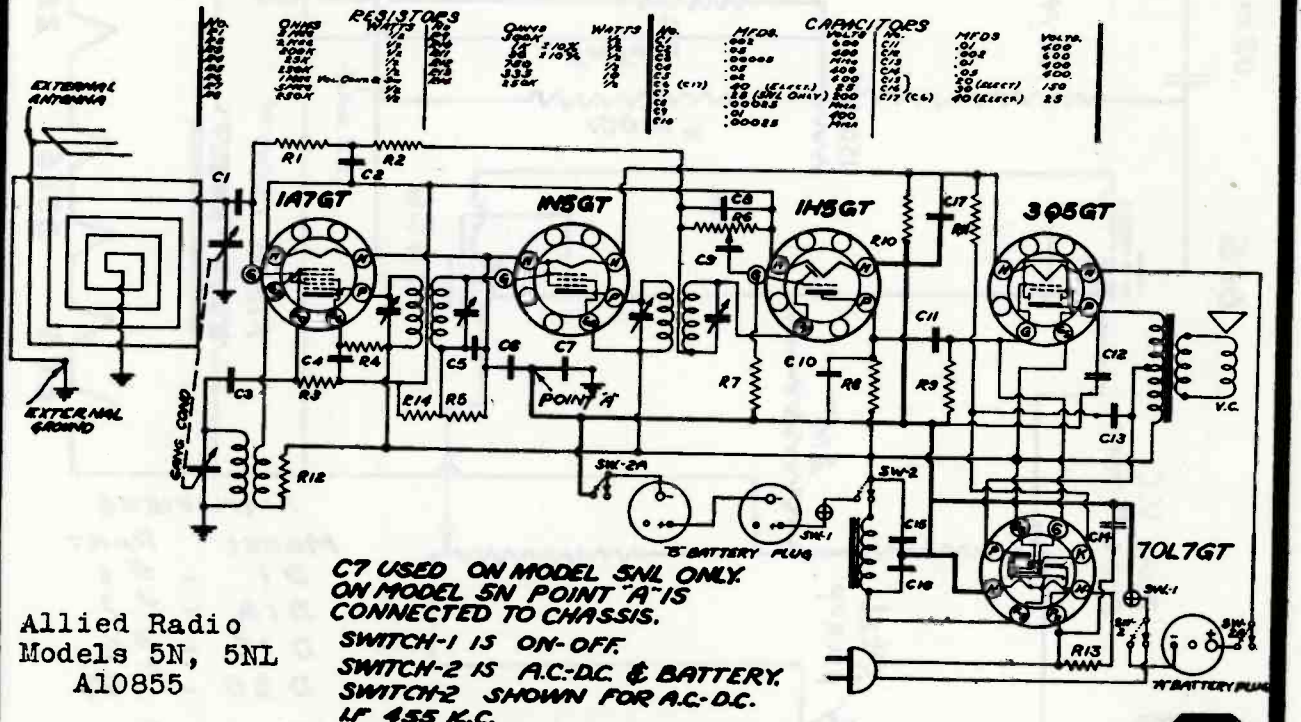
MANUAL OF 1940 MOST POPULAR SERVICE DIAGRAMS



CHAS. NO.	PART NO.	DESCRIPTION		CHAS. NO.	PART NO.	DESCRIPTION
C_1	N-1344	.01 MFD.	400 V.	R_1	N-1537	25,000 OHM VOL.
C_2	N-1345	.05 MFD.	200 V.	R_2	N-1418	3.5 MEG. 20% .5 W.
C_3	N-1346	.05 MFD.	200 V.	R_3	N-1635	6 MEG. 20% .5 W.
C_4	N-1344	.01 MFD.	400 V.	R_4	N-1262	1 MEG. 20% .5 W.
C_5	N-1344	.01 MFD.	400 V.	R_5	N-1264	.5 MEG. 20% .5 W.
C_6	N-1344	.01 MFD.	400 V.	R_6	N-1614	50 OHM 20% .5 W.
C_7	N-1346	.05 MFD.	400 V.	R_7	N-1618	80 OHM 10% 2 W.
C_8		25 MFD. 150 V.		R_8	N-1417	3,000 OHM 20% .5 W.
C_9	N-1850	10 MFD. 150 V.	ELECT.	R_9	N-1716	250 OHM 10% .5 W.
C_{10}		20 MFD. 25 V.		T	N-1790	ANTENNA COIL
	N-1401	GANG CONDENSER		2	N-1791	R.F. COIL
	N-1847			3	N-1648	SPEAKER & TRANS.

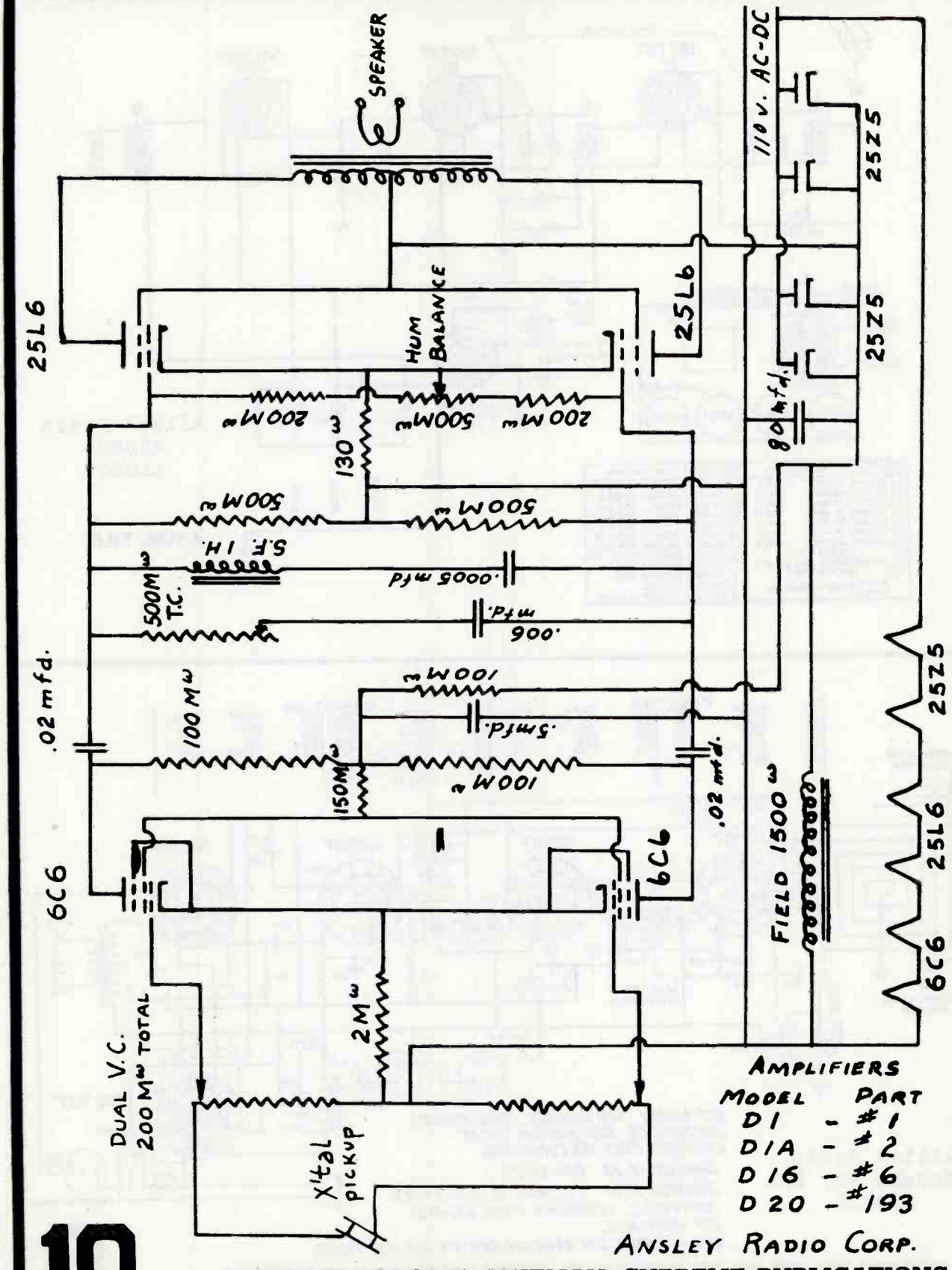
Allied Radio
A10806
A10807

4 TUBE T.R.F.



Allied Radio
Models 5N, 5NL
A10855

C7 USED ON MODEL 5NL ONLY.
ON MODEL 5N POINT "A" IS CONNECTED TO CHASSIS.
SWITCH-1 IS ON-OFF.
SWITCH-2 IS A.C.-D.C. & BATTERY.
SWITCH-2 SHOWN FOR A.C.-D.C.
I.F. 455 K.C.
ON MODEL 5N SWITCH, SWITCH 2A NOT USED.



AMPLIFIERS

MODEL	PART
D1	- #1
D1A	- #2
D16	- #6
D20	- #193

ANSLEY RADIO CORP.

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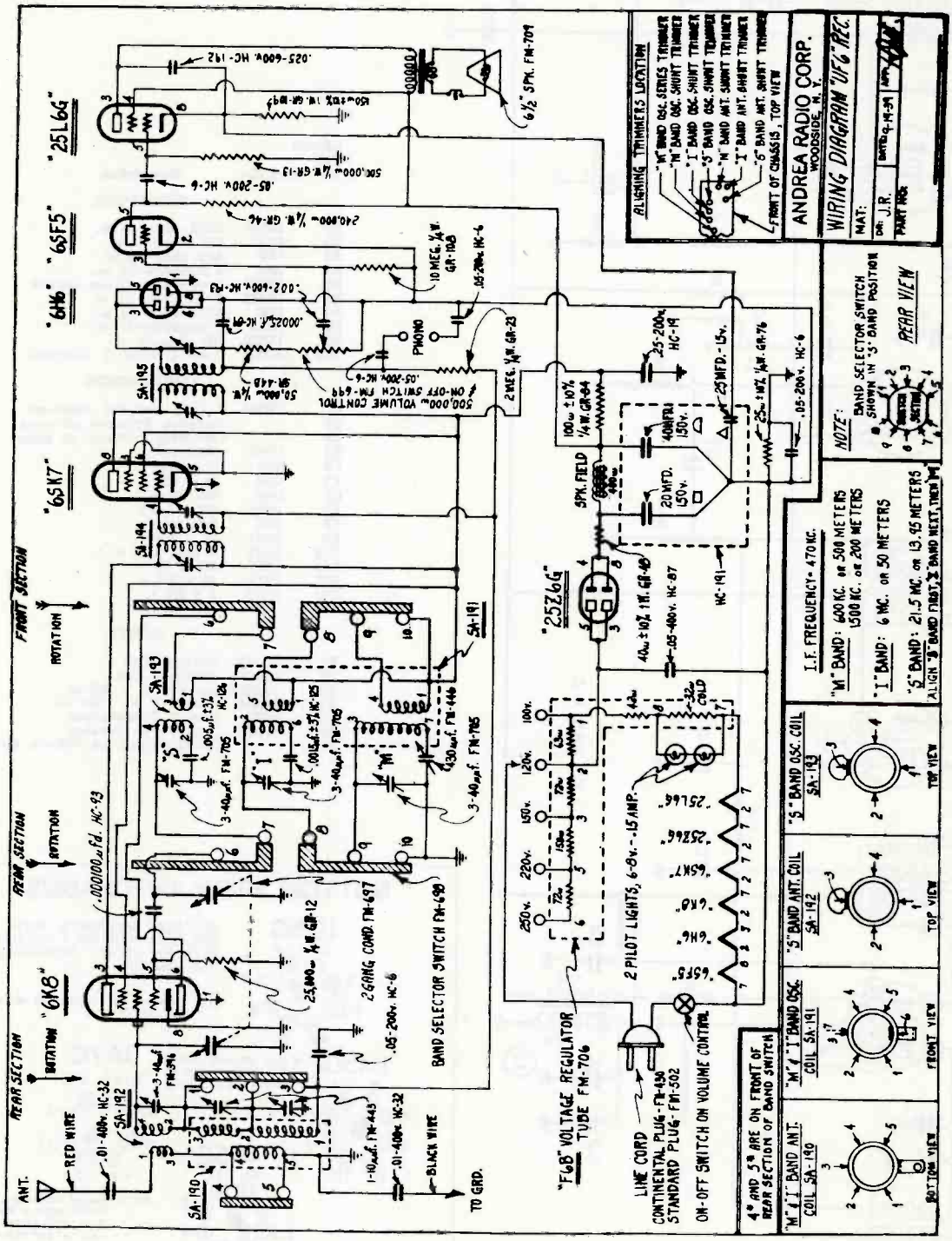
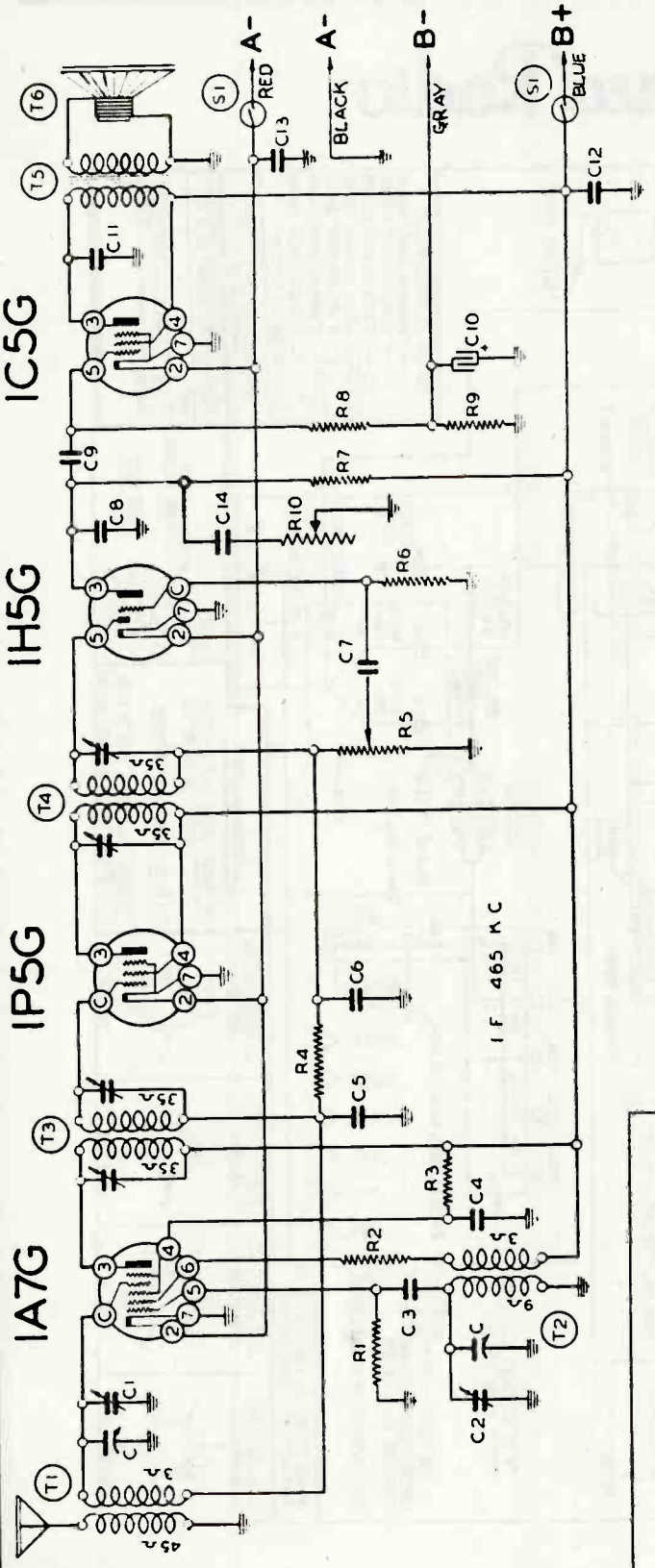
Andrea Radio



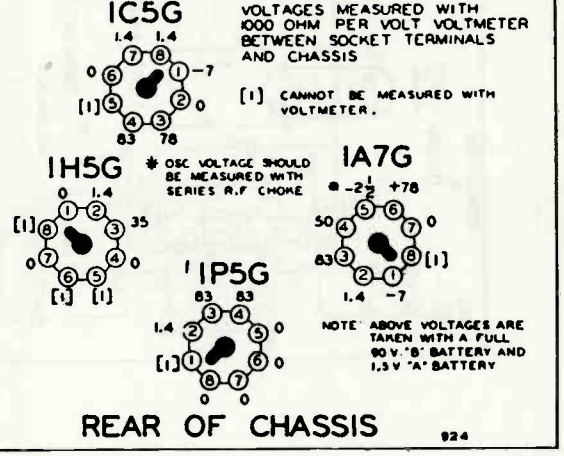


Belmont Radio

Model 460

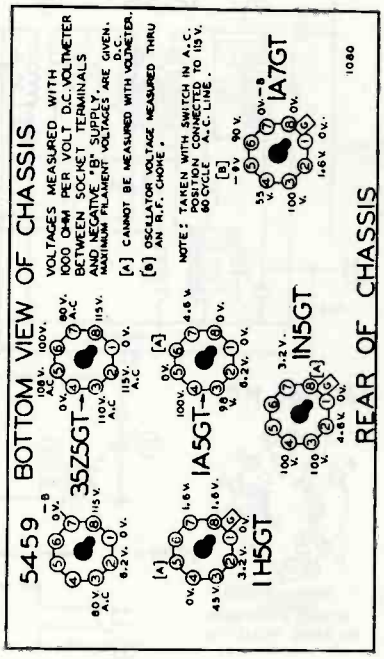
Circuit Ref. No.	Part No.	Description
		RESISTORS
R1	130266	200M ohm—½ w.
R2	13018	4M ohm—½ w.
R3	1307	40M ohm—½ w.
R4	1304	3 megohm—½ w.
R5	101175	1 megohm volume control
R6	130257	5 megohm—½ w.
R7	1303	500M ohm—½ w.
R8	13019	1 megohm—½ w.
R9	130200	700 ohm—½ w.
R10	101119	Tone Control (1 Megohm)
		CONDENSERS
C	102110	2 gang variable condenser
C1		Antenna Trimmer on gang
C2		Oscillator trimmer on gang
C3	12912	.00025 mica
C4	1009	.05 x 200 v.
C5	1009	.05 x 200 v.
C6	1295	.0001 mica
C7	10012	.003 x 600 v.
C8	1295	.0001 mica
C9	10011	.01 x 400 v.
C10	11975	10 mfd. x 25 w. v.
C11	10012	.003 x 600 v.
C12	10064	.25 x 200 v.
C13	10020	.1 x 200 v.
C14	10025	.002 x 600 v.
		PARTS
T1	111132	Antenna Coil
T2	110122	Oscillator Coil
T3	108151B	Input I. F. - 465 kc.
T4	108153	Output I. F. - 465 kc.
T5	10591	Output Transformer
T6	114166	5 in. P. M. Speaker
S1		Off-on switch on Volume control

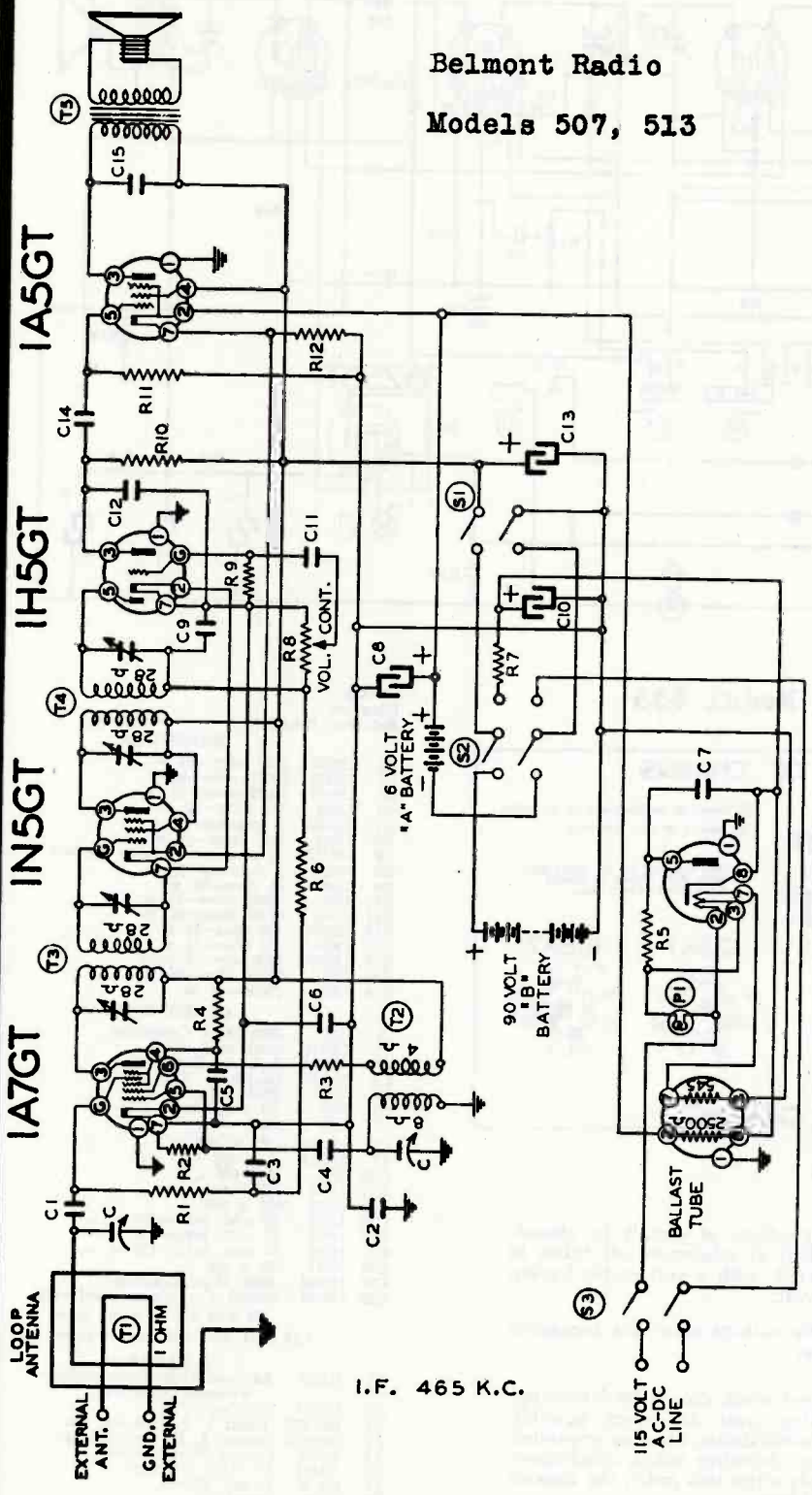
BOTTOM VIEW OF CHASSIS



Belmont Radio

Models 507, 513





Circuit Diagram Ref. No. — Part No.

RESISTORS

R1	13038	2 megohm—½ w.
R2	130266	200M ohm—½ w.
R3	13018	4M ohm—½ w.
R4	130208	40M ohm—½ w.
R5	130215	25 ohm—½ w.
R6	130170	3 megohm—½ w.
R7	130129	2500 ohm—½ w.
R8	101210	1 megohm volume control
R9	130257	5 megohm—½ w.
R10	1303	500M ohm—½ w.
R11	13038	2 megohm—½ w.
R12	13092	1M ohm—½ w.

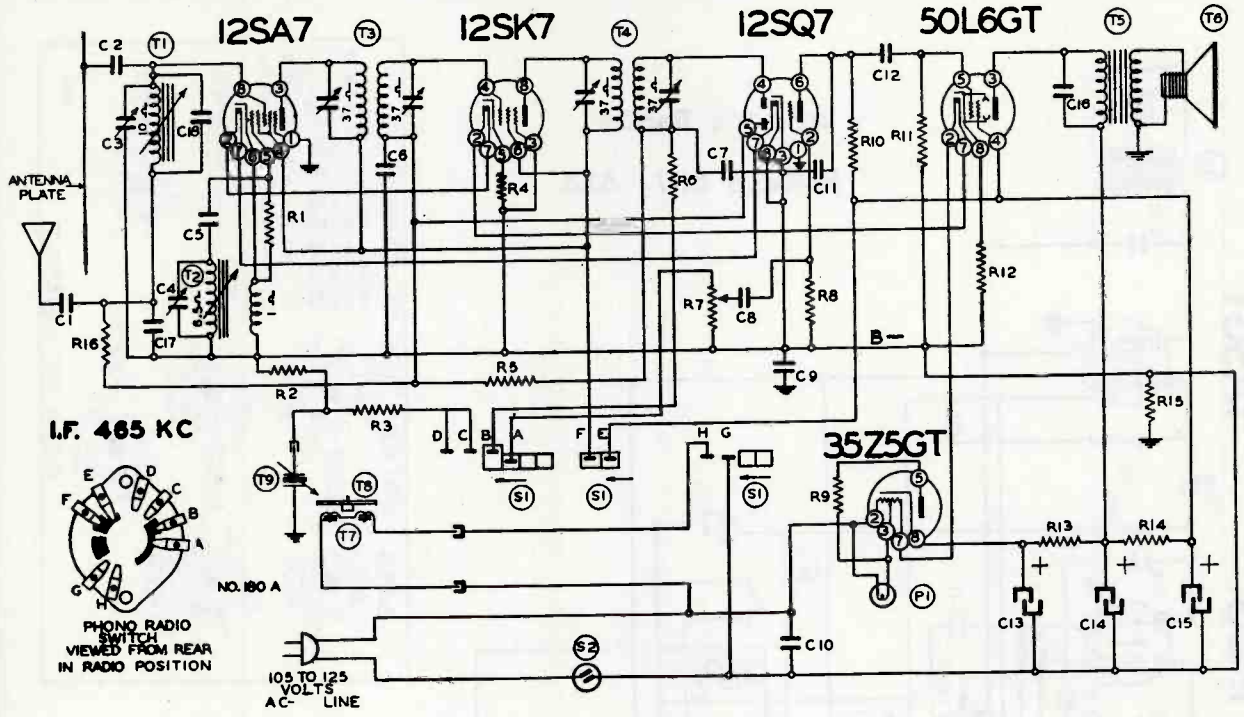
CONDENSERS

C	102125	2 gang variable condenser
C1	12912	.00025
C2	100110	.2 mfd. x 400 v.
C3	1009	.05 x 200 v.
C4	12912	.00025
C5	1009	.05 x 200 v.
C6	10020	.1 x 200 v.
C7	10011	.01 x 400 v.
C8	119104	Lytic 200 mfd. x 6 w. v.
C9	1295	.0001 mfd.
C10	119104	Lytic 40 mfd. x 150 w. v.
C11	10025	.002 x 600 v.
C12	1292	.0005 mfd.
C13	119104	Lytic 20 mfd. x 150 w. v.
C14	10011	.01 x 400 v.
C15	10025	.002 x 600 v.

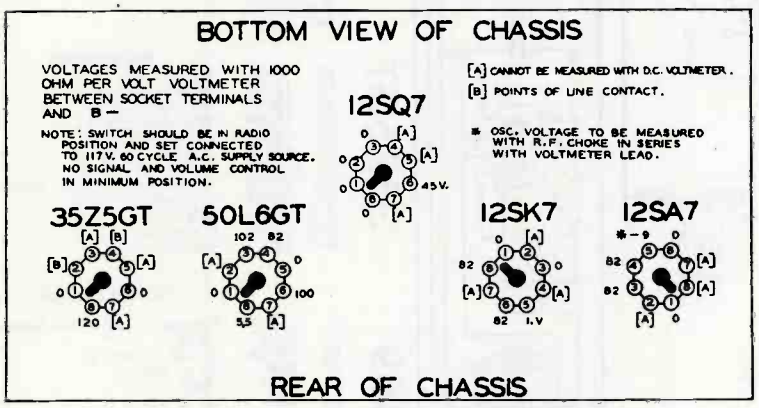
C8, C10 and C13 in same unit

PARTS

T1	111171	Loop Antenna
T2	110144	Oscillator Coil
T3	108171	Input I. F. Coil—465 kc.
T4	108172	Output I. F. Coil—465 kc.
T5	114189	Speaker with output transfor
S1	101210	Switch on volume control
S2	125106	Power Switch
S3	125107	Cut-off switch in line cord
P1	107249	Pilot light T47



Belmont Radio Model 533



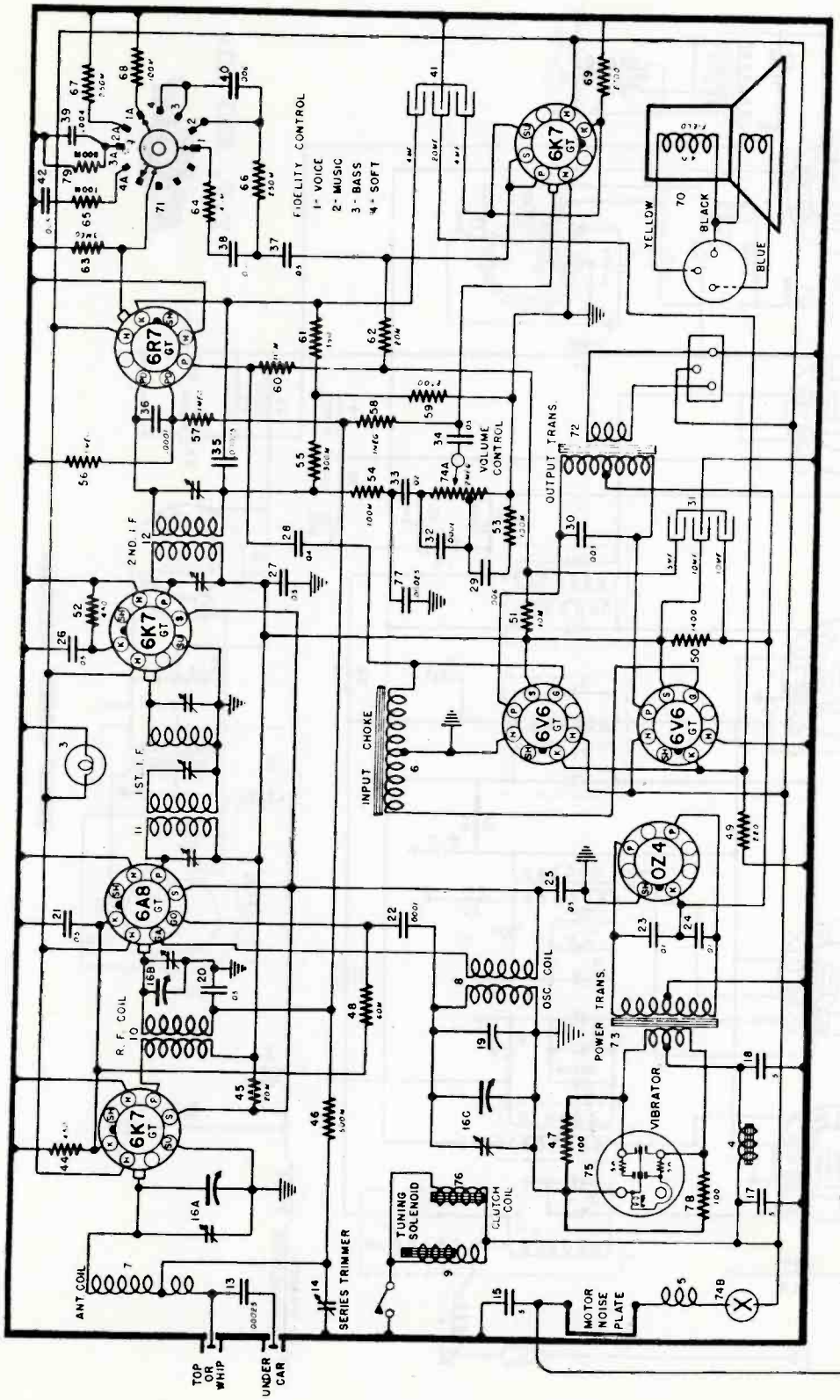
SERVICE NOTES:

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

All voltages as indicated on the voltage chart are measured with 117 volt 60 cycle A.C. line.

CAUTION:—No aligning adjustments should be attempted without first thoroughly checking over all other possible causes of trouble, such as poor installations, open or grounded antenna systems, low line voltage, defective tubes, condensers and resistors. In order to properly align this radio, the chassis should be removed from the cabinet.

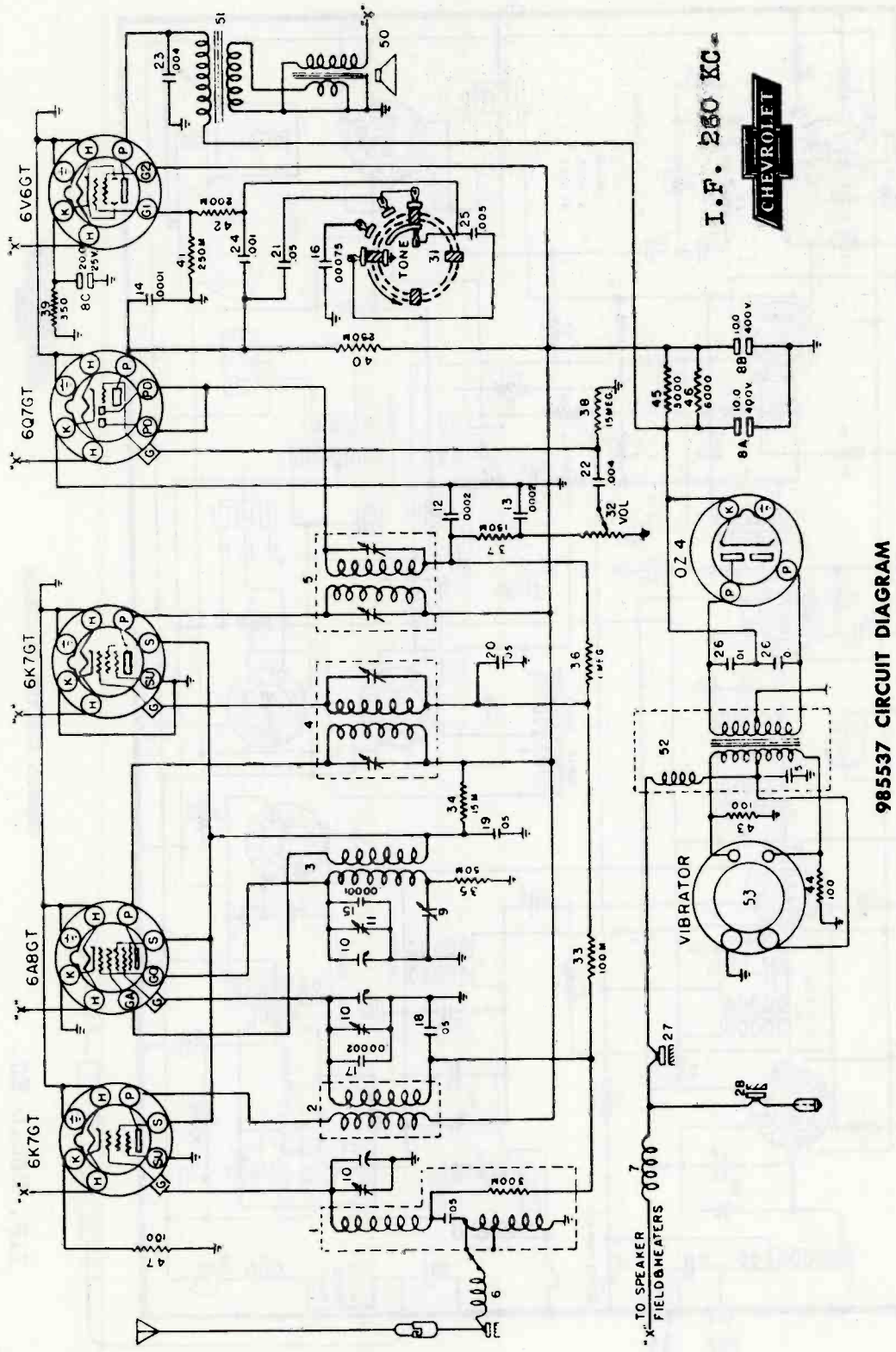
Circuit Diagram Ref. No.	Part No.	Description
		RESISTORS
R1	130176	20M ohm—½ w.
R2	130118	600M ohm—½ w.
R3	130118	600M ohm—½ w.
R4	13056	100 ohm—½ w.
R5	130170	3 megohm—½ w.
R6	13012	50M ohm—½ w.
R7	101217	½ megohm—volume control
R8	130257	5 megohm—½ w.
R9	130215	25 ohm—½ w.
R10	1309	200M ohm—½ w.
R11	13037	750M ohm—½ w.
R12	130166	150 ohm—½ w.
R13	13097	200 ohm—½ w.
R14	130287	1200 ohm—1 watt
R15	1309	200M ohm—½ w.
R16	1309	200M—½ w.
		CONDENSERS
C1	1295	.0001 Mica Condenser
C2	129114	.0003 mfd. mica
C3	124136	Antenna Trimmer
C4	124136	Oscillator Trimmer
C5	1295	.0001 mica
C6	1009	.05 x 200 v.
C7	1295	.0001 mica
C8	10025	.002 x 600 v.
C9	100119	.1 x 400 v.
C10	1001	.1 x 400 v.
C11	12912	.00025 mica
C12	10019	.006 x 600 v.
C13	11994	40 mfd. lytic—150 w. v.
C14	11994	20 mfd. lytic—150 w. v.
C15	11994	20 mfd. lytic—150 w. v.
C16	10011	.01 x 400 v.
C17	129162	.0008 Mica Condenser
C18	129163	.000025 Ceramicon Condenser
		C3 and C4 in same unit
		C13, C14 and C15 are in same unit
		PARTS
T1	112767	Antenna Coil—Permeability assembly complete
T2	112767	Oscillator Coil
T3	108140F	Input I. F. Coil—465 kc.
T4	108145D	Output I. F. Coil—465 kc.
T5	105108	Output Transformer
T6	114193	5" P.M. Speaker
T7	104206	Phono Motor
T8	12228	Turntable
T9	114194	Phono pick up arm
S1	125113	Phono Switch
S2		Switch on volume control
P1	107249	Pilot light T47
		T1 and T2 in same unit

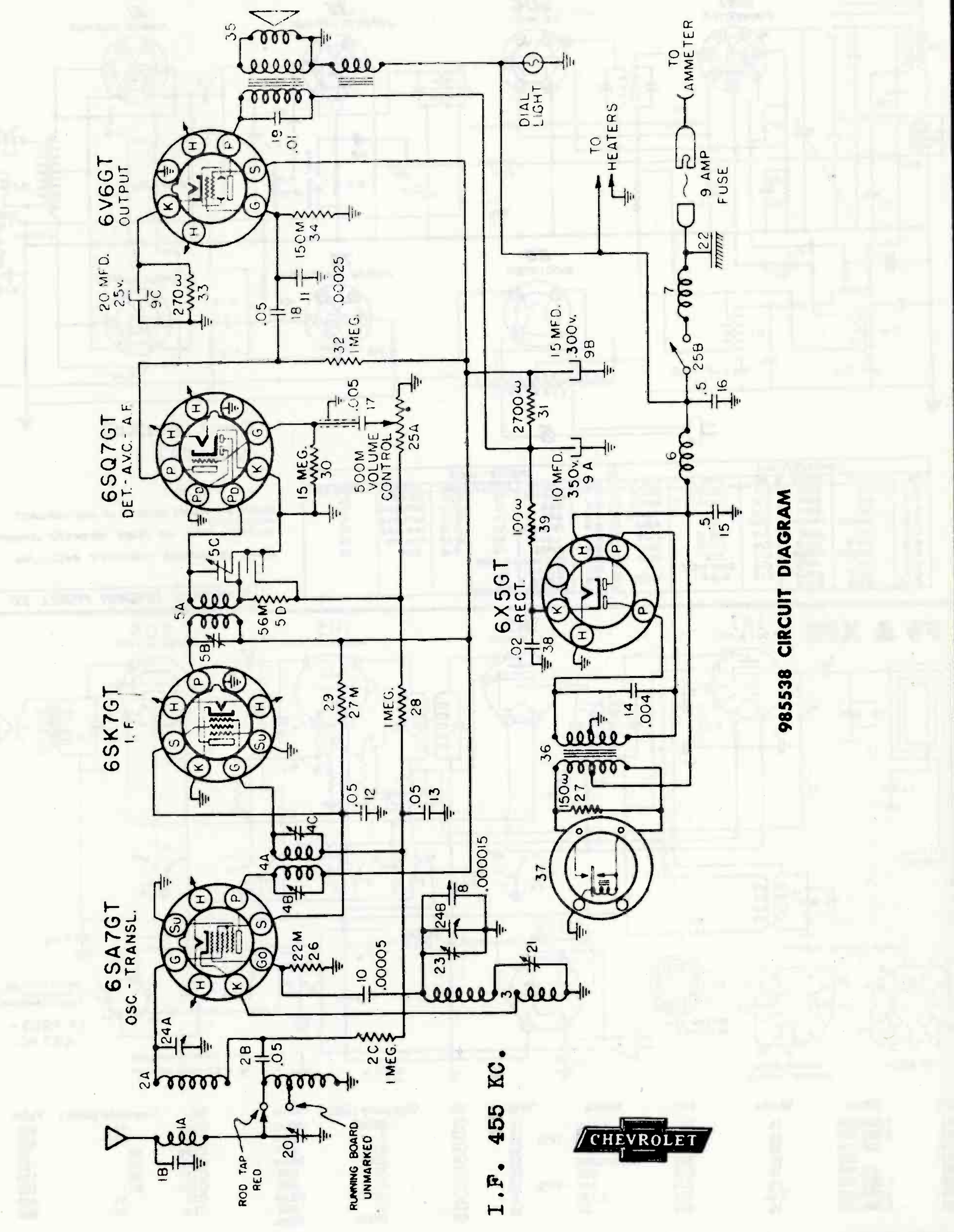


CHEVROLET

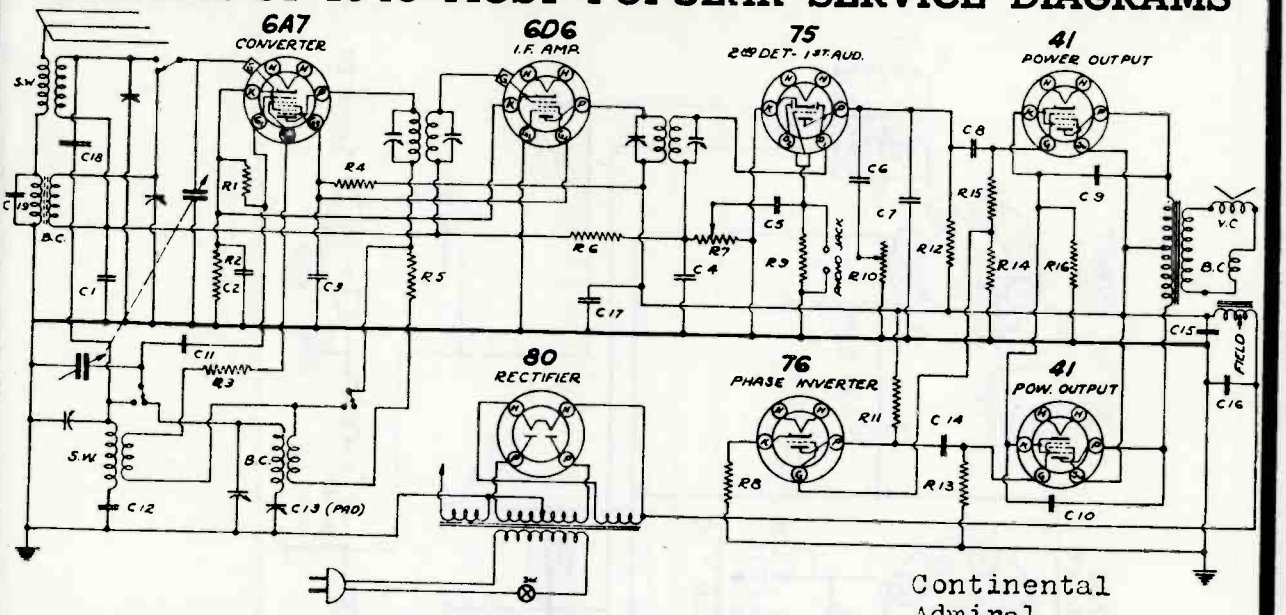
985536 CIRCUIT DIAGRAM

I.F. 262.5 KC.


I.F. 260 KC.
CHEVROLET
985537 CIRCUIT DIAGRAM
6V6GT
6Q7GT
6K7GT
6ABGT
6K7GT
OZ 4
VIBRATOR
TONE
TO SPEAKER FIELD & HEATERS


6SA7GT
OSC. - TRANSL.
6SK7GT
I.F.
6SQ7GT
DET. - A.V.C. - A.F.
6V6GT
OUTPUT
6X5GT
RECT.
DIAL LIGHT
TO HEATERS
TO AMMETER
9 AMP FUSE
500M VOLUME CONTROL
ROD TAP RED
RUNNING BOARD UNMARKED
I.F. 455 KC.
CHEVROLET
985538 CIRCUIT DIAGRAM

MANUAL OF 1940 MOST POPULAR SERVICE DIAGRAMS



Continental
Admiral

I.F. - 455 K.C.

BAND SWITCHES SHOWN IN BROADCAST POSITION
BOTTOM VIEW OF TUBE SOCKETS SHOWN

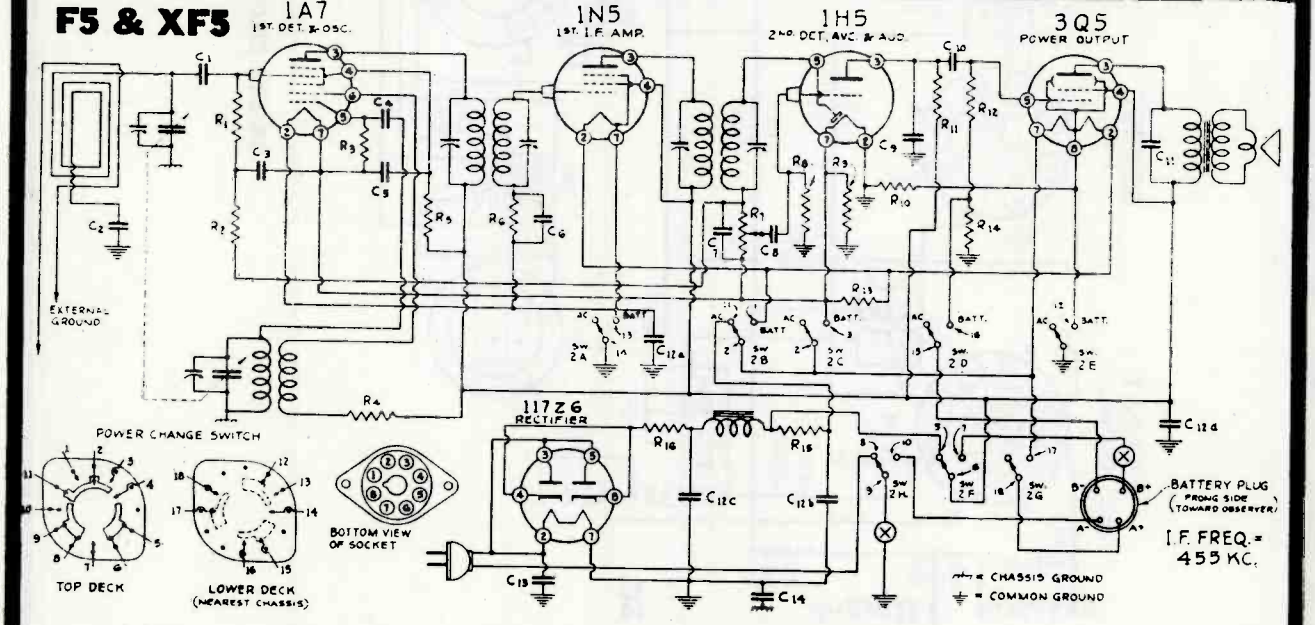
GANG CONDENSER CAPACITY 443 mmfds.

SCHEMATIC DIAGRAM MODEL 7C

CAPACITORS					
No.	MFDS	VOLTS	No.	MFDS	VOLTS
C1	.06	200	C11	.0001	MICA
C2	.25	200	C12	.004 ±5%	MICA
C3	.05	400	C13	300-600 mmfd	PADDER
C4	.00025	MICA	C14	.01	400
C5	.01	400	C15	10.0	350
C6	.005	600	C16	10.0	350
C7	.00025	MICA	C17	.05	400
C8	.01	400	C18	GIMMICK	
C9	.005	600	C19	.0001	MICA
C10	.005	600			

RESISTORS					
No.	OHMS	WATTS	No.	OHMS	WATTS
R1	30,000	½	R11	30,000	½
R2	200	½	R12	250,000	½
R3	250	½	R13	500,000	½
R4	20,000	½	R14	100,000	½
R5	1,000	½	R15	400,000	½
R6	2 MEG	½	R16	300	½
R7	600,000	VOL. CON.			
R8	3,000	½			
R9	5 MEG	½			
R10	500,000	TONE CON.			

F5 & XF5



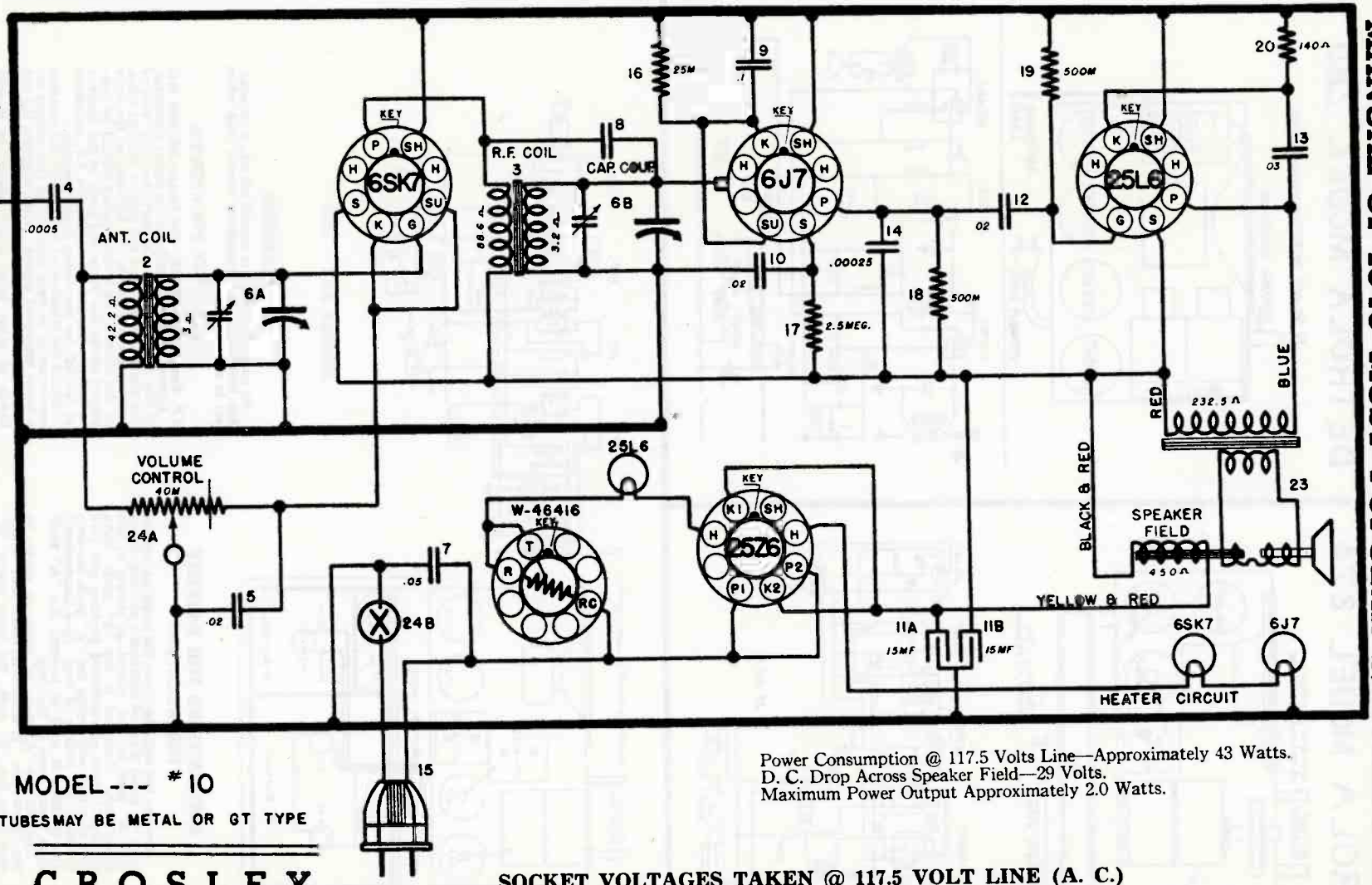
No.	Ohms	Watts
R1	1,000,000	½
R2	1,000,000	½
R3	200,000	½
R4	500	½
R5	30,000	½
R6	5,000,000	½
R7	1,000,000	V.C.
R8	5,000,000	½
R9	110	½
R10	750—10%	½
R11	250,000	½
R12	1,000,000	½
R13	400	½
R14	450—10%	½
R15	2,100	5
R16	30	½

No.	Capacity (Mfd.)	Volts
C1	.00025	Mica
C2	.1	200
C3	.01	200
C4	.0005	Mica
C5	.05	200
C6	.01	200
C7	.00025	Mica
C8	.01	400
C9	.00025	Mica
C10	.01	400
C11	.002	400
C12a	40.	25
C12b	40.	25
C12c	30.	150
C12d	30.	150
C13	.05	400
C14	.25	200

In Model F5 switch points 4, 15, 16, 17 and 18 are not used. Switch points 4 is also not used on Model XF5. Power change switch 2A thru 2H and the pictorial view shown in the "AC-DC" position.

In late models C2 is not used.

COMPILED BY M. N. BEITMAN, SUPREME PUBLICATIONS



MODEL --- #10

TUBES MAY BE METAL OR GT TYPE

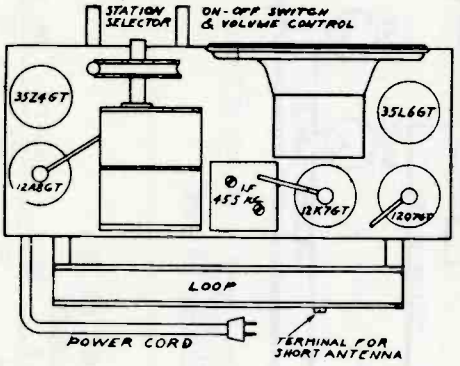
CROSLEY

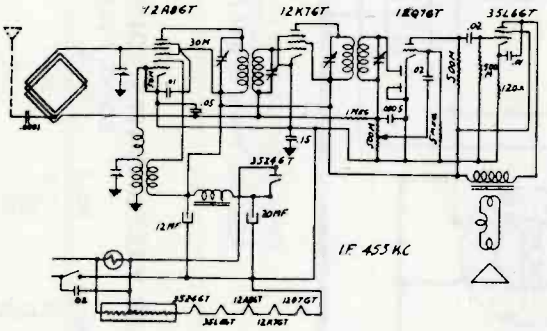
Power Consumption @ 117.5 Volts Line—Approximately 43 Watts.
D. C. Drop Across Speaker Field—29 Volts.
Maximum Power Output Approximately 2.0 Watts.

SOCKET VOLTAGES TAKEN @ 117.5 VOLT LINE (A. C.)

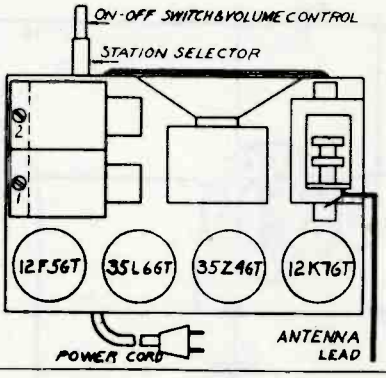
Tube	Function	SOCKET PIN NUMBER No. 1	No. 2	No. 3	No. 4	No. 5	No. 6	No. 7	No. 8
6SK7	R. F. Amplifier	GND.	H	3.0	GRID	3.0	92	H	91
6J7	Detector	GND.	H	20	8	2.0	—	H	2.0
25L6	Output	GND.	H	82	91	GRID	N.C.	H	5.8
25Z6	Rectifier		H	A.C.	120	A.C.		H	120
W-46416	Ballast Resistor—165 Ohms (Cold) Between No. 3 and No. 7 Pins with No. 7 and No. 8 Pins Tied Together.								

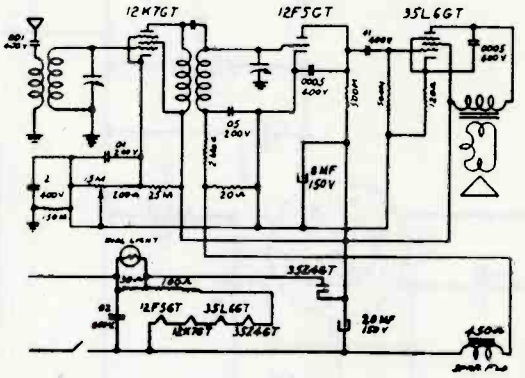
DETROLA MODEL 274

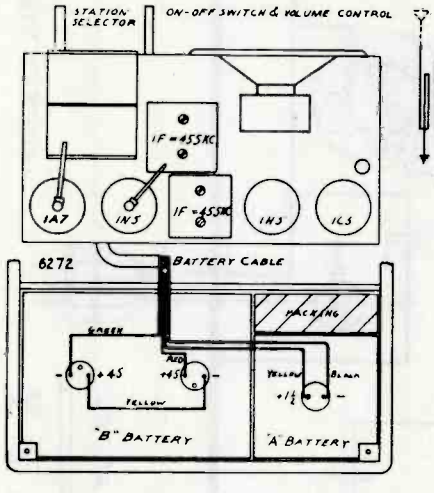


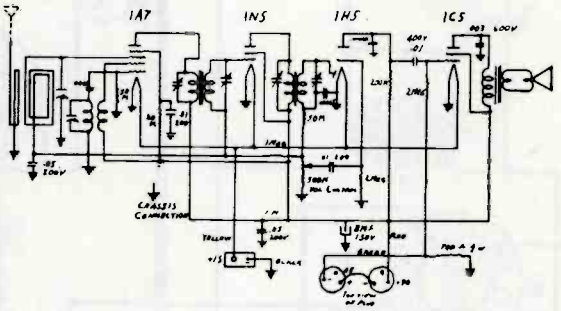


DETROLA MODEL 280









Models 282 - 288

INSTRUCTIONS FOR BATTERY INSTALLATION

Remove the batteries from the shipping carton, save the small piece of cardboard packing. Place the "B" pack in the cabinet as shown in the illustration. Then put in the "A" pack. Take the small piece of cardboard packing and fold to a size that will wedge the "A" pack between the shelf and bottom of case. (See illustration.) The packing is used to prevent the "A" pack from being loose in the case.

Connect the "A" and "B" plugs as shown in the illustration. It makes no difference which socket on the "B" pack, the three prong "B" plugs are inserted.

WARNING

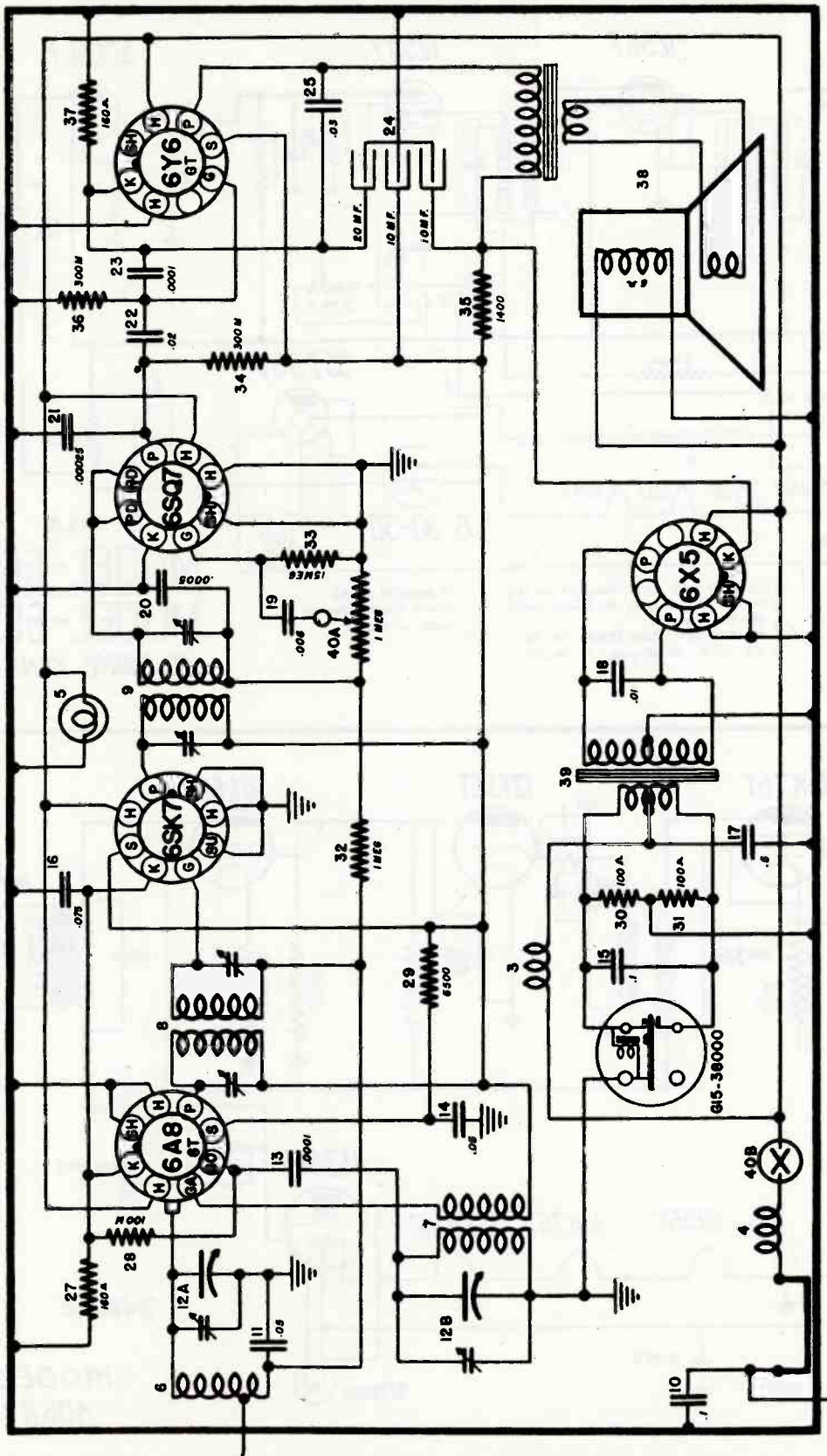
Be sure the switch is turned off when connecting batteries. The semaphore shows gold when set is off.

ALIGNMENT PROCEDURE

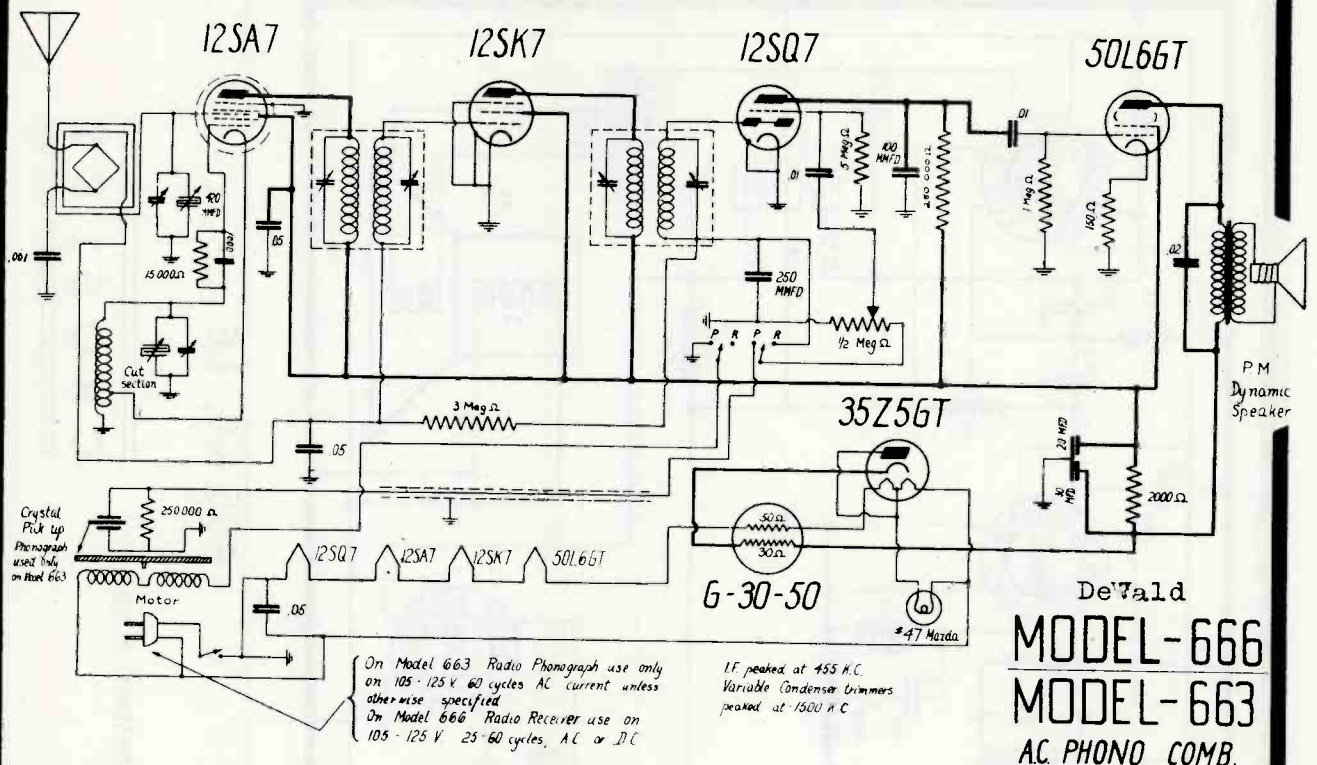
I.F. Frequency 455 KC. Set Range 540-1580 KC.

Connect the test oscillator, or signal generator, to the set as follows: Connect the "hot" side of the signal generator to the grid of the 1A7 tube, and the ground side to the terminal on the back of the chassis. An output meter should be connected across the voice coil leads of the speaker to indicate resonance. Align the I.F. trimmers at 455 KC for maximum meter reading.

Adjust the trimmer on the back of the variable condenser at or near 1400 KC at full volume on a weak broadcast signal. When aligning the set do not set the receiver on or near a metal work bench or other large metal object, as it will affect the tracking of the receiver.



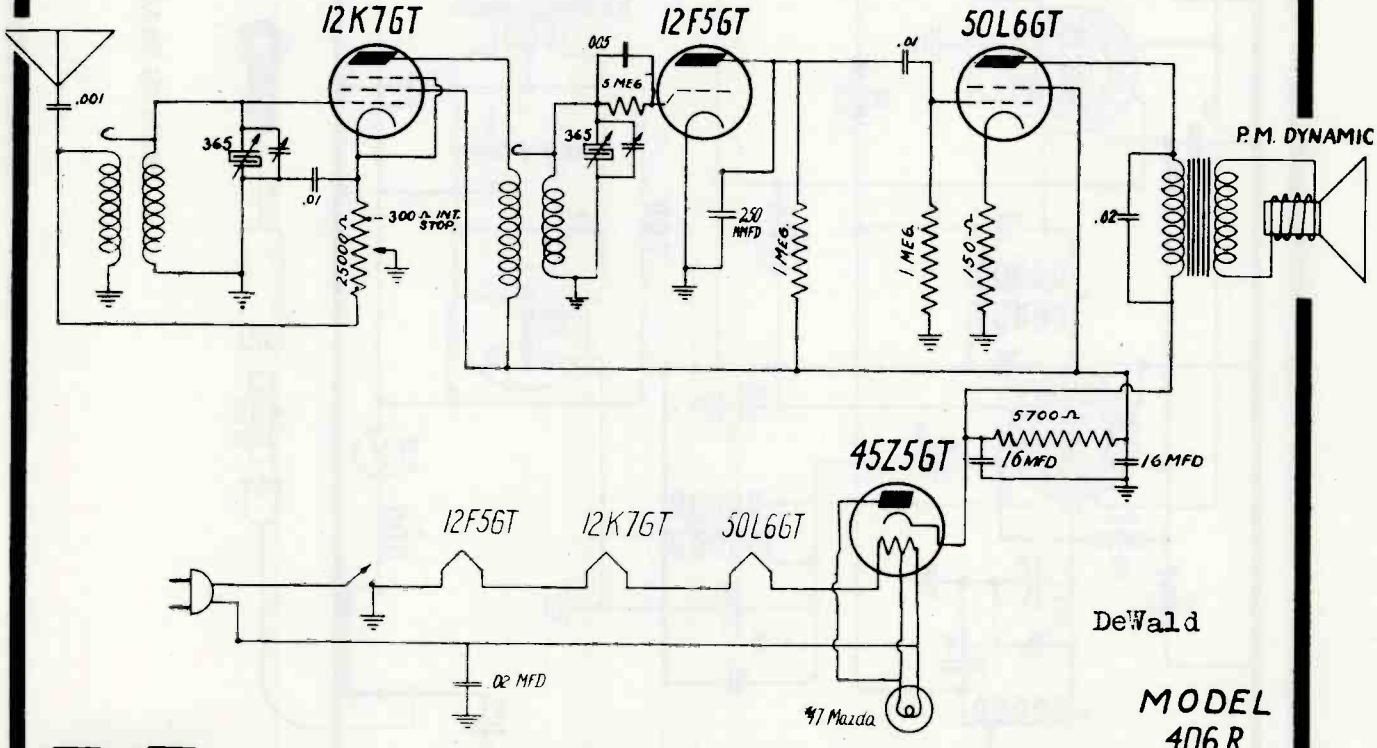
WIRING DIAGRAM—MODEL A-559



DeWald

MODEL-666
MODEL-663

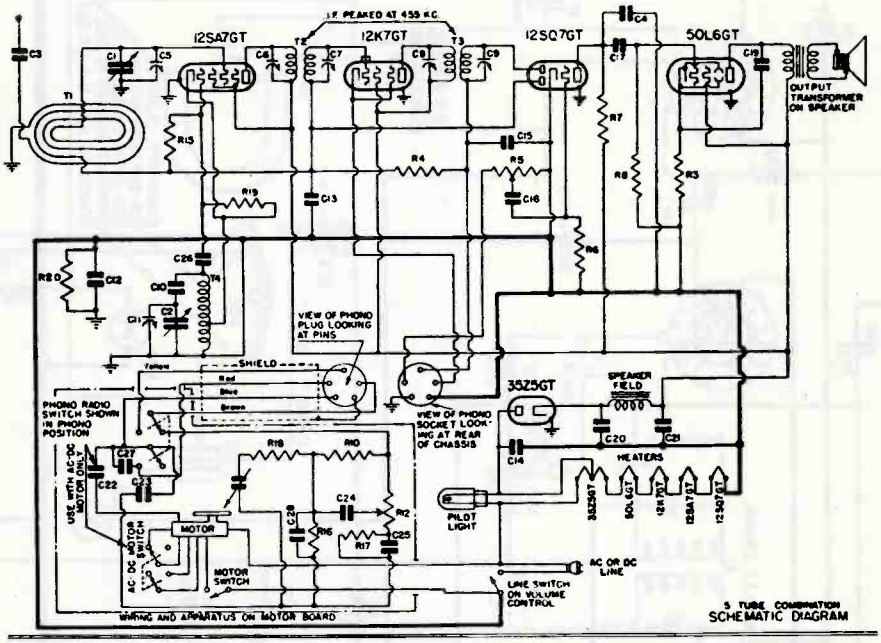
A.C. PHONO COMB.



DeWald

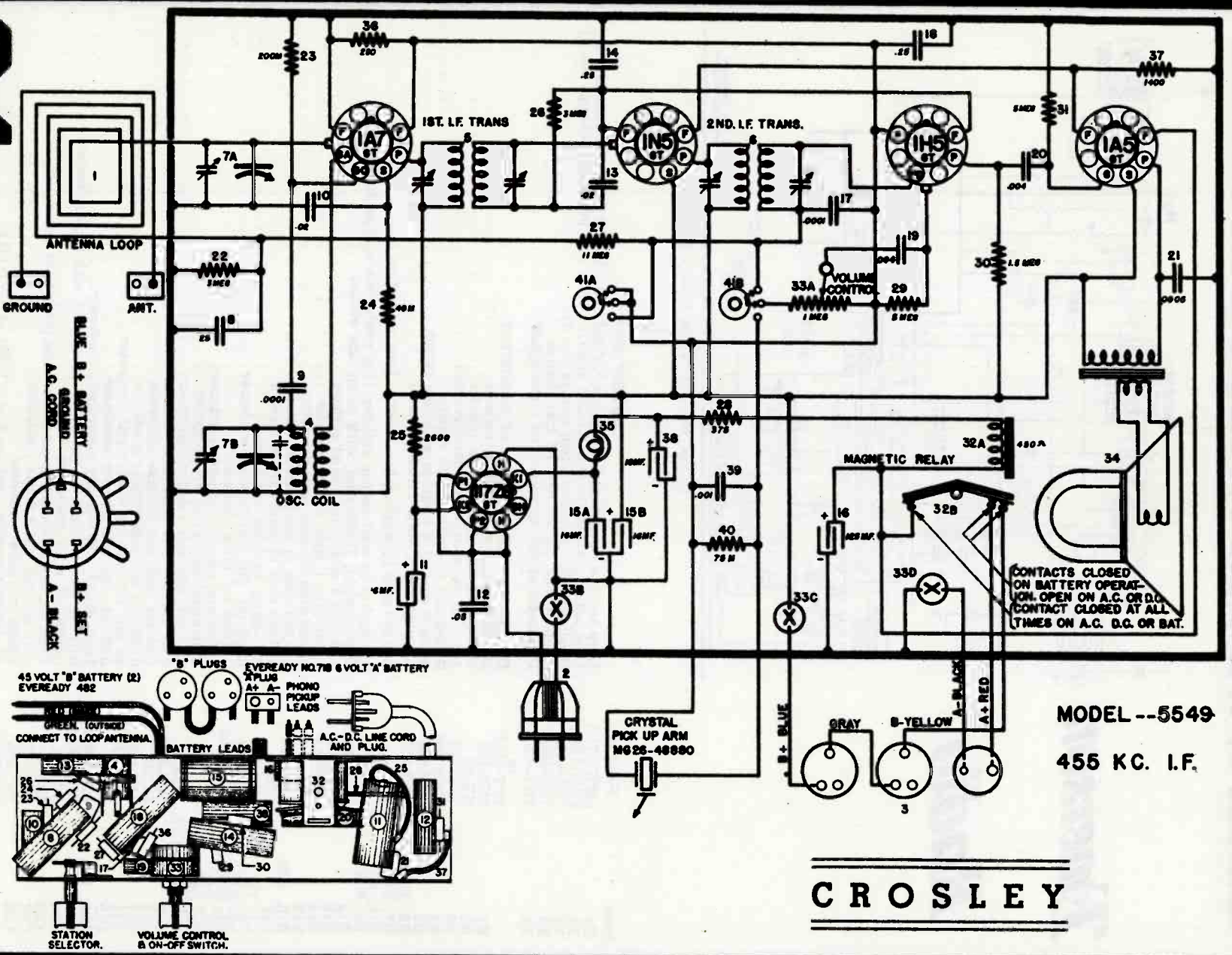
MODEL 406R

Emerson Radio



CV-289, 290 AND CV1-290 WITH 12SA7GT

ITEM	PART NO.	DESCRIPTION
T1	6MW-171B	Loop antenna assembly (for CV-289, CV-291 and CV1-291) (see prod. ch. No. 4)
T1	6VW-188A	Loop antenna assembly (for CV-290 and CV1-290) (see production change No. 4)
T4	7BT-486A	Oscillator coil (see production change No. 2)
T2	7BT-488C	Double-tuned 455 kc first i-f transformer
T3	7BT-489A	Double-tuned 455 kc second i-f transformer
	or	
	7FT-513D	Double-tuned 455 kc second i-f transformer
R1	2CR-193	30,000 ohm ½ watt carbon resistor
R2	KR-53	50,000 ohm ¼ watt carbon resistor
R3	3FR-293	140 ohm ½ watt wire-wound resistor
R4	NNR-220	3 megohm ¼ watt carbon resistor
R5	6VR-364	Volume control .5 megohm with line switch
R6, R15	4XR-327	15 megohm ¼ watt carbon resistor
R7, R8, R11, R18	KR-56	500,000 ohm ¼ watt carbon resistor (see production change No. 6)
R9, R10	KR-57	1 megohm ¼ watt carbon resistor (see production change No. 5)
R12	6VR-366	Tone control, 75,000 ohm, with motor line switch
R13	6RR-375	170 ohm 1 watt wire-wound resistor
R14	4XR-334	2,500 ohm 1 watt carbon resistor
R19	LR-60	20,000 ohm ¼ watt carbon resistor
R16, R20	LR-61	200,000 ohm ¼ watt carbon resistor
R17	KR-54	100,000 ohm ¼ watt carbon resistor
C1, C2	6RC-436	Two-gang variable condenser
C3, C16	3HC-274	0.002 mf, 600 volt tubular condenser
C4, C15, C26	4XC-394A	0.00022 mf mica condenser
†C5, C11		Trimmers, part of variable condenser.
†C6, C7, C8, C9		Trimmers, part of i-f transformers.
C10, C13, C23	BC-12	0.05 mf, 200 volt tubular condenser
C12	3CC-302	0.15 mf, 200 volt tubular condenser
C14	LC-64	0.05 mf, 400 volt tubular condenser
C17	6JC-425	0.024 mf, 400 volt tubular condenser
C18	4XC-404	20 mf, 150 volt dry electrolytic condenser
C19	LC-65	0.02 mf, 400 volt tubular condenser
C20, C21	6JC-426B	Dual 20 mf, 150 volt dry electrolytic condenser
C22	3LC-297A	0.01 mf, 400 volt tubular condenser (used only with a.c.-d.c. motors)
C24	IC-47A	0.0005 mf mica condenser
C25	KC-59	0.006 mf, 400 volt tubular condenser (see production change No. 6)
C27	CCC-127	0.01 mf, 200 volt tubular condenser
C28	NC-70A	0.0002 mf mica condenser
	6JS-368U	4" dynamic speaker (not used on CV-291 or CV1-191)
	6JS-386	6½" permanent magnet dynamic speaker



MODEL--5549

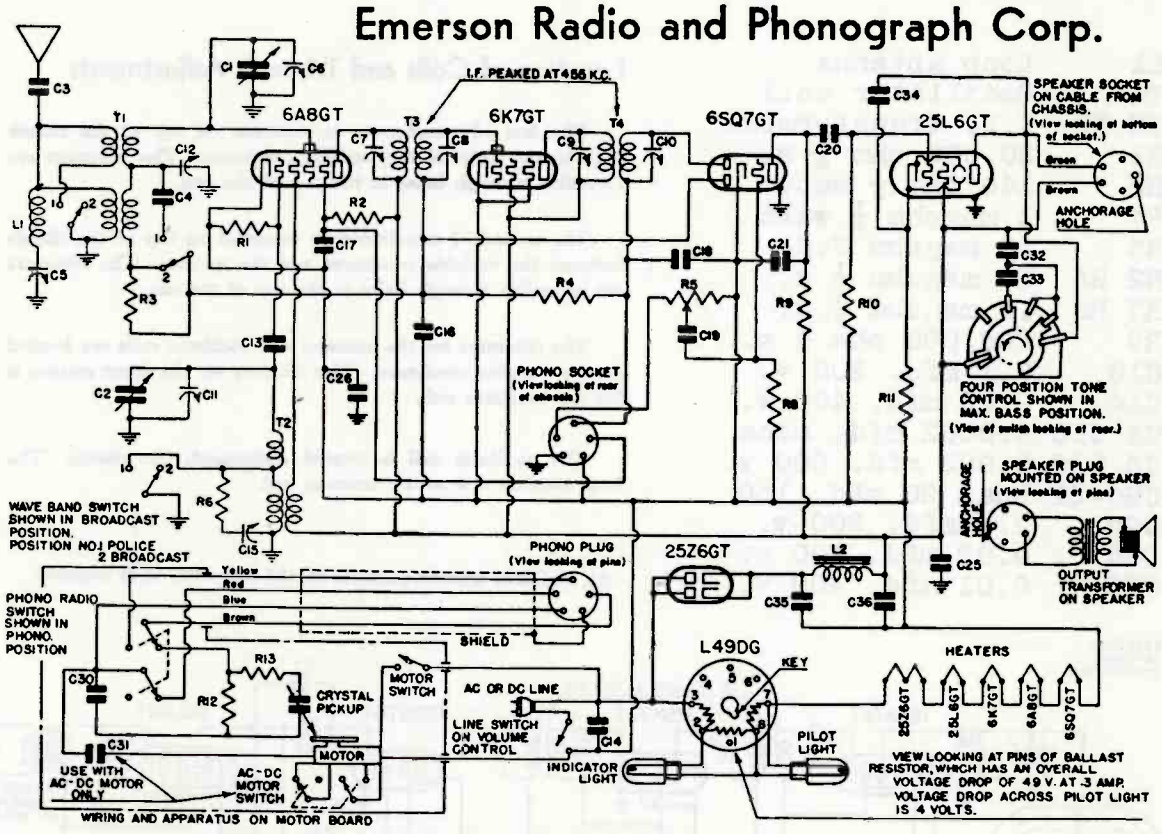
455 KC. I.F.

CROSLEY

MANUAL OF 1940 MOST POPULAR SERVICE DIAGRAMS

MODEL CG-293 (For A.C. Operation Only)
MODEL CG1-293 (For A.C. or D.C. Operation)
MODEL CG-294 (A.C. Automatic Record Changer)
MODEL CG1-294 (A.C.-D.C. Automatic Record Changer)

Emerson Radio and Phonograph Corp.



T1, L1	6GT-468	Two-band antenna coil with 455 kc wave-trap
T2	6GT-469	Two-band oscillator coil
T3	4XT-434CU	455 kc first i-f transformer
T4	4XT-435H	455 kc second i-f transformer
R1, R2	KR-53	50,000 ohm ¼ watt carbon resistor
R3, R6	PR-79	1,000 ohm ¼ watt carbon resistor
R4	NNR-220	3 megohm ¼ watt carbon resistor (see production change no. 2)
R5	6SR-362	Volume control—250,000 ohms with line switch (see production change no. 2)
R8	4XR-327	15 megohm ¼ watt carbon resistor
R9, R10	KR-56	500,000 ohm ¼ watt carbon resistor (see production change no. 1)
R11	3FR-293	140 ohm ⅛ watt wire-wound resistor
R12	KR-55	250,000 ohm ¼ watt carbon resistor
R13	KR-57	1 megohm ¼ watt carbon resistor
——	L-49DG	Plug-in type ballast resistor. Interchangeable with L49D
C1, C2	6GC-428	Two-gang variable condenser
C3	NNC-199	0.001 mf, 600 volt tubular condenser
C4	6GC-429	0.00064 mf mica condenser
C12, C15	6GC-430	Dual trimmer assembly
C13	IIC-133A	0.000025 mf mica condenser
C14	LC-64	0.05 mf, 400 volt tubular condenser
C16, C17 C25, C30	BC-12	0.05 mf, 200 volt tubular condenser
C18, C21	5AC-384	0.0002 mf, 600 volt tubular or mica condenser
C19	3HC-274	0.002 mf, 600 volt tubular condenser
C20	LC-65	0.02 mf, 400 volt tubular condenser
C26	3CC-302	0.15 mf, 200 volt tubular condenser (see production change no. 1)
C31	3LC-297A	0.01 mf, 400 volt molded condenser (for a.c.-d.c. motors only)
C32, C33	ZZC-211	0.03 mf, 200 volt tubular condenser
C34	XXC-207	0.005 mf, 400 volt tubular condenser
C35, C36	6QC-437	Multiple 20 and 40 mf, 150 volt dry electrolytic condenser. C35—20 mf C36—40 mf

Emerson Radio

MODELS: DQ-333 and DQ-334 | MODELS: DQ1-333 and DQ1-334

L1	Loop antenna
T4	Oscillator coil
T2 T3	I.F. transformers
R1	20,000 ohm ¼ w.
R3	140 ohm ½ watt
R4	3 megohm ¼ watt
R5	.5 megohm V.C.
R2 R6	15 megohm ¼ w.
R7 R8	.5 megohm ¼ w.
R9	200,000 ohm ¼ w.
C10	0.1 mfd. 200 v.
C14	0.05 mfd. 400 v.
C4 C15	0.0002 mfd. mica
C3 C16	0.002 mfd. 600 v.
C20-21	Dual 20 mfd. 150
C22	0.2 mfd. 200 v.
C24	0.02 mfd. 400 v.
C25	0.01 mfd. 400 v.

Location of Coils and Trimmer Adjustments

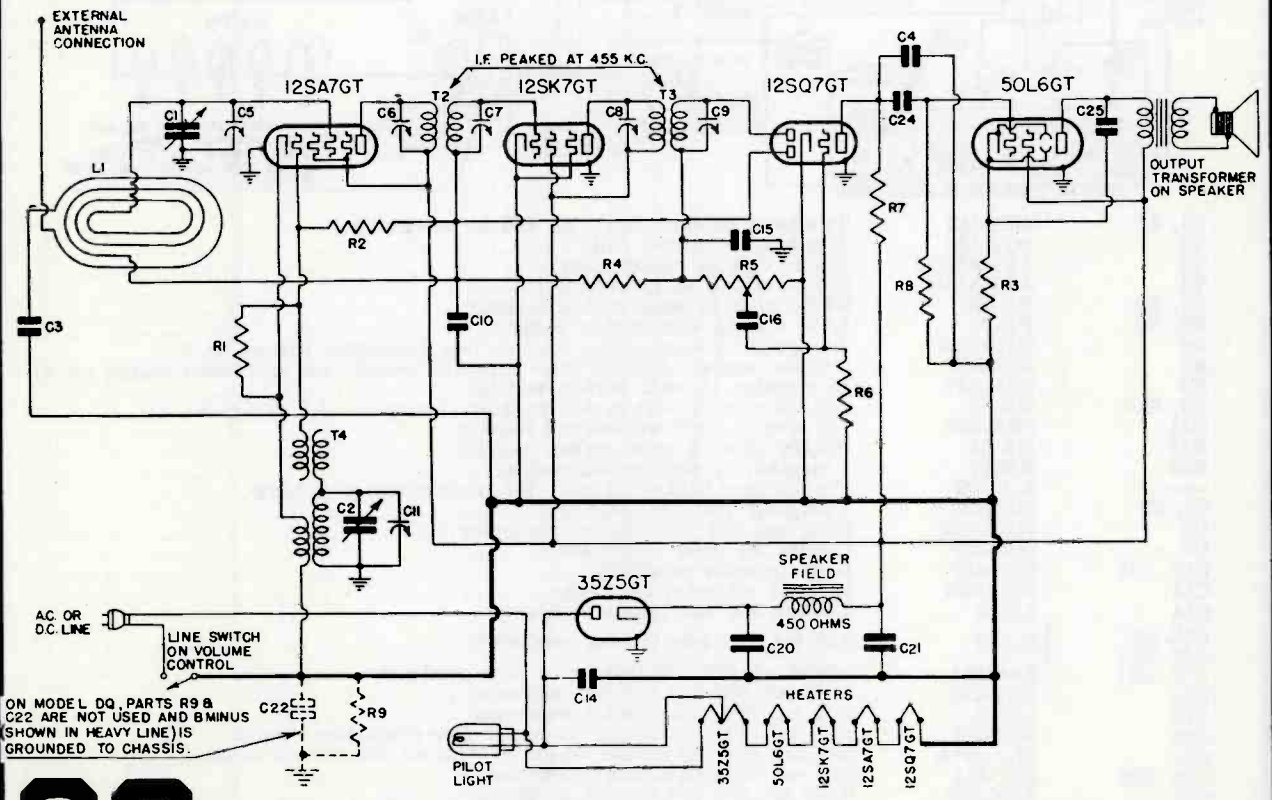
The first i-f transformer is mounted on top of the chassis deck to the right of the variable condenser. The trimmers are accessible through holes in the top of the can.

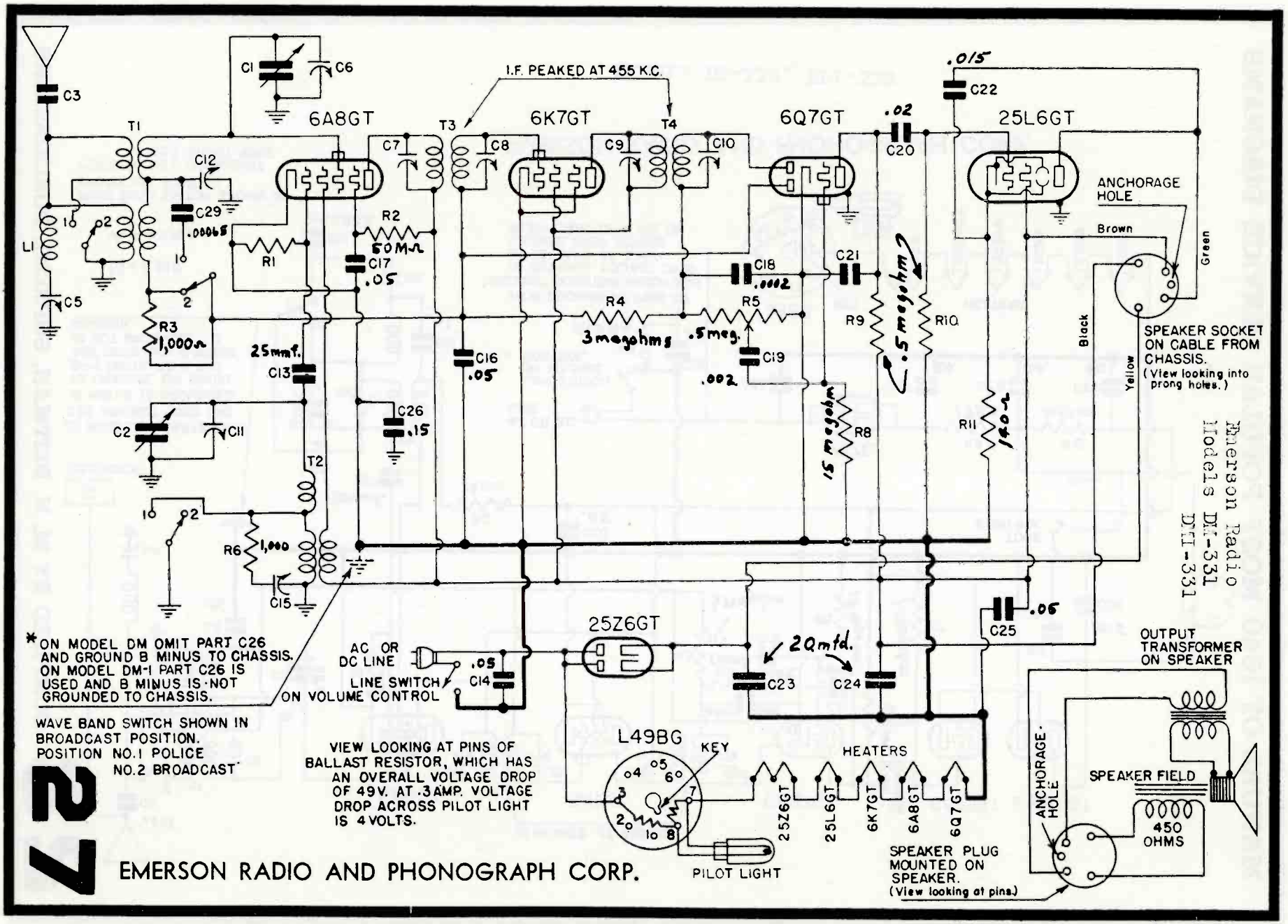
The second i-f transformer is mounted on top of the chassis between the variable condenser and the speaker. The trimmers are accessible through holes in the top of the can.

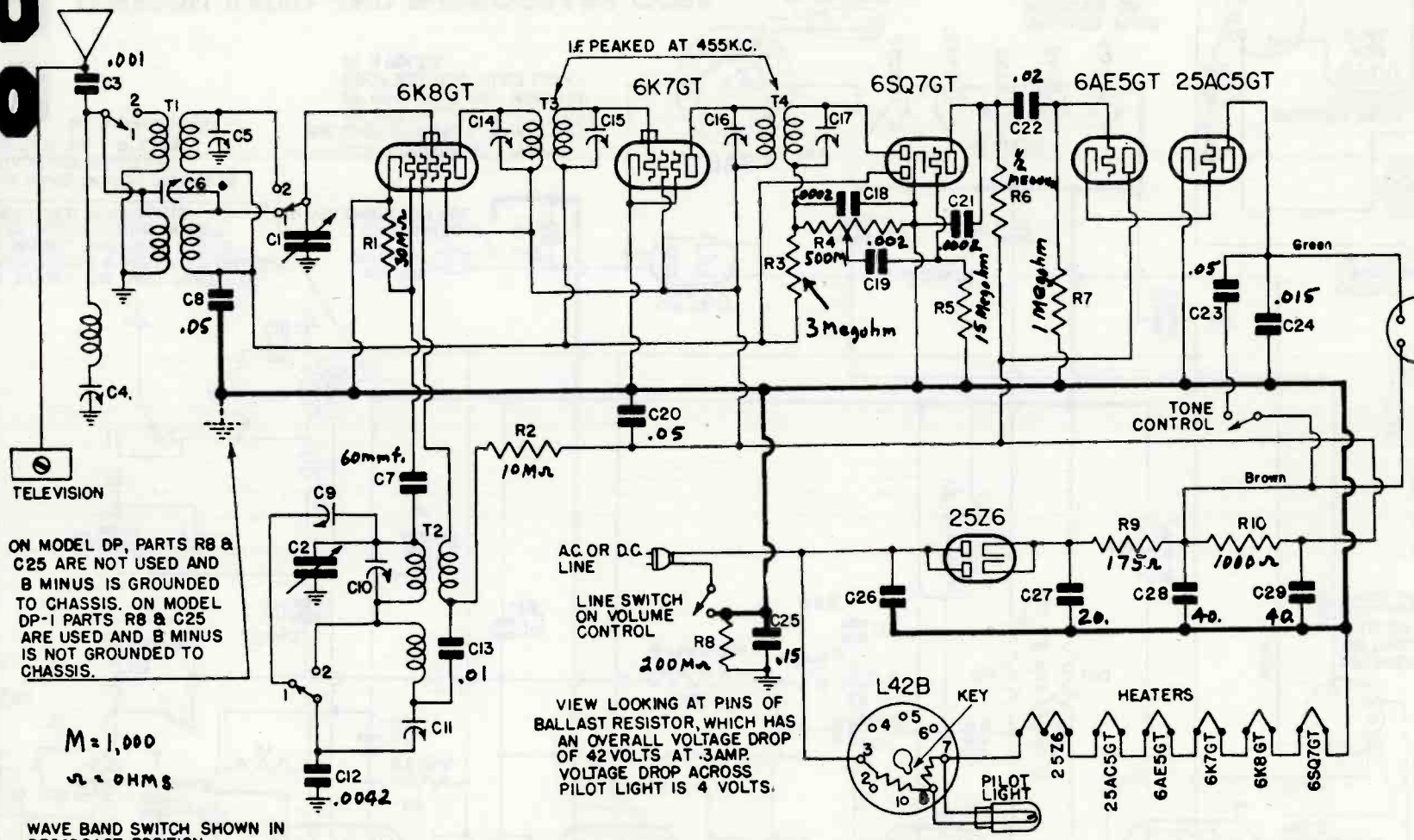
The trimmers for the antenna and oscillator coils are located on the variable condenser. The trimmer on the front section is for the oscillator coil.

The oscillator coil is located underneath the chassis. The loop antenna acts as the antenna coil.

An oscillator with frequencies of 455 and 1400 kc is required.

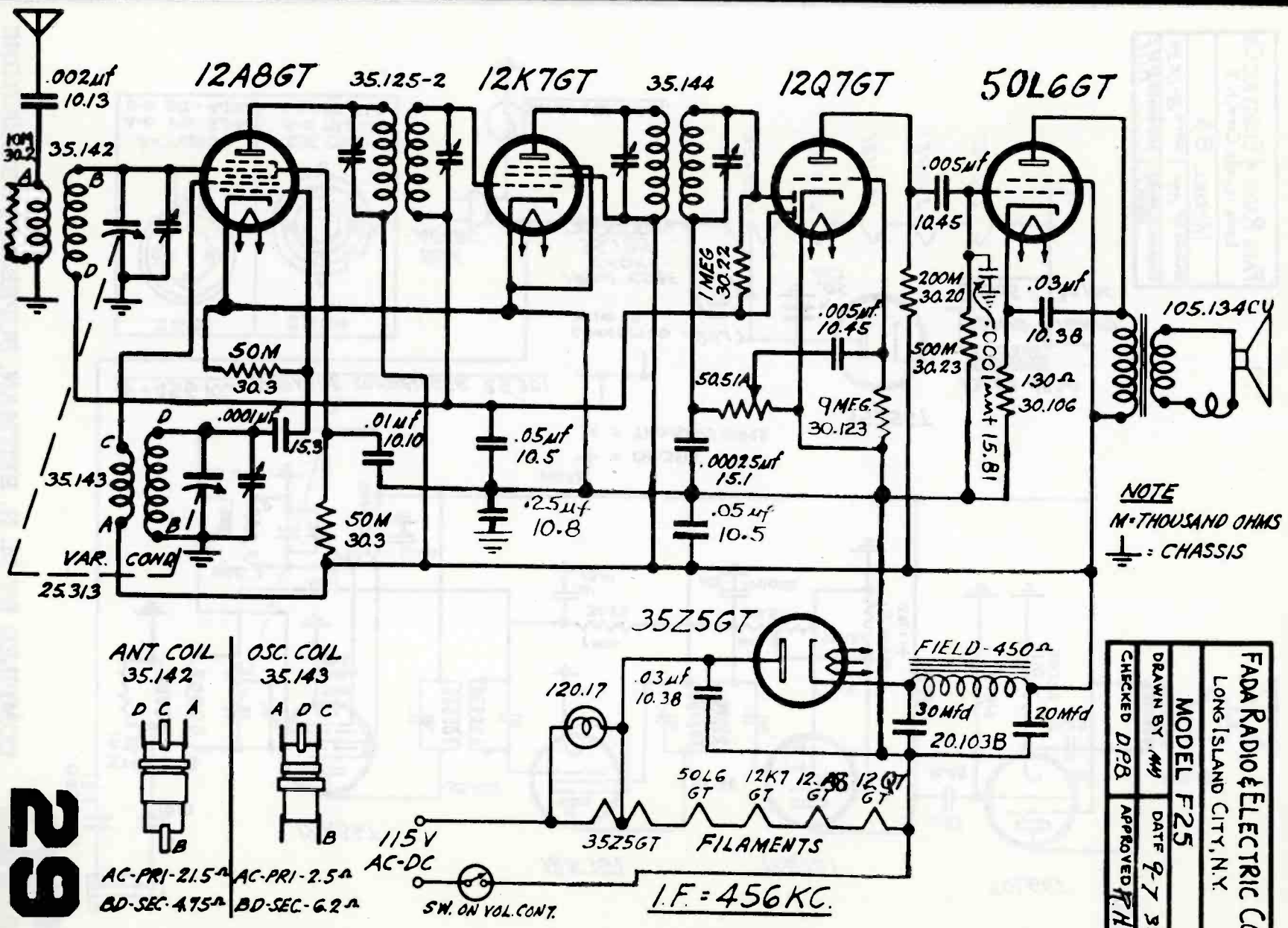



C1
C6
C3
I.F. PEAKED AT 455 K.C.
6A8GT
T1
T3
6K7GT
T4
6Q7GT
.015
C22
.02
C20
25L6GT
C12
C29
.00065
C7
C8
C9
C10
ANCHORAGE HOLE
Brown
Green
L1
C5
R1
R2
50M-Ω
C17
.05
C18
.0002
C21
R4
R5
R9
.5 megohm
R10
SPEAKER SOCKET ON CABLE FROM CHASSIS.
(View looking into prong holes.)
Black
Yellow
R3
1,000Ω
25mmf.
C13
C16
.05
3 megohms
.5meg.
C19
.002
C26
.15
C2
C11
T2
R8
15 megohm
R11
1 meg-Ω
Emerson Radio
Models DM-331
DM1-331
R6
1,000
C15
C25
.05
25Z6GT
AC OR DC LINE
LINE SWITCH ON VOLUME CONTROL
.05
C14
20 mfd.
C23
C24
OUTPUT TRANSFORMER ON SPEAKER
*ON MODEL DM OMIT PART C26 AND GROUND B MINUS TO CHASSIS. ON MODEL DM-1 PART C26 IS USED AND B MINUS IS NOT GROUNDED TO CHASSIS.
WAVE BAND SWITCH SHOWN IN BROADCAST POSITION.
POSITION NO.1 POLICE
NO.2 BROADCAST
VIEW LOOKING AT PINS OF BALLAST RESISTOR, WHICH HAS AN OVERALL VOLTAGE DROP OF 49V. AT .3AMP. VOLTAGE DROP ACROSS PILOT LIGHT IS 4 VOLTS.
L49BG
KEY
HEATERS
25Z6GT
25L6GT
6K7GT
6A8GT
6Q7GT
PILOT LIGHT
SPEAKER FIELD
450 OHMS
ANCHORAGE HOLE
SPEAKER PLUG MOUNTED ON SPEAKER.
(View looking at pins.)
27
EMERSON RADIO AND PHONOGRAPH CORP.



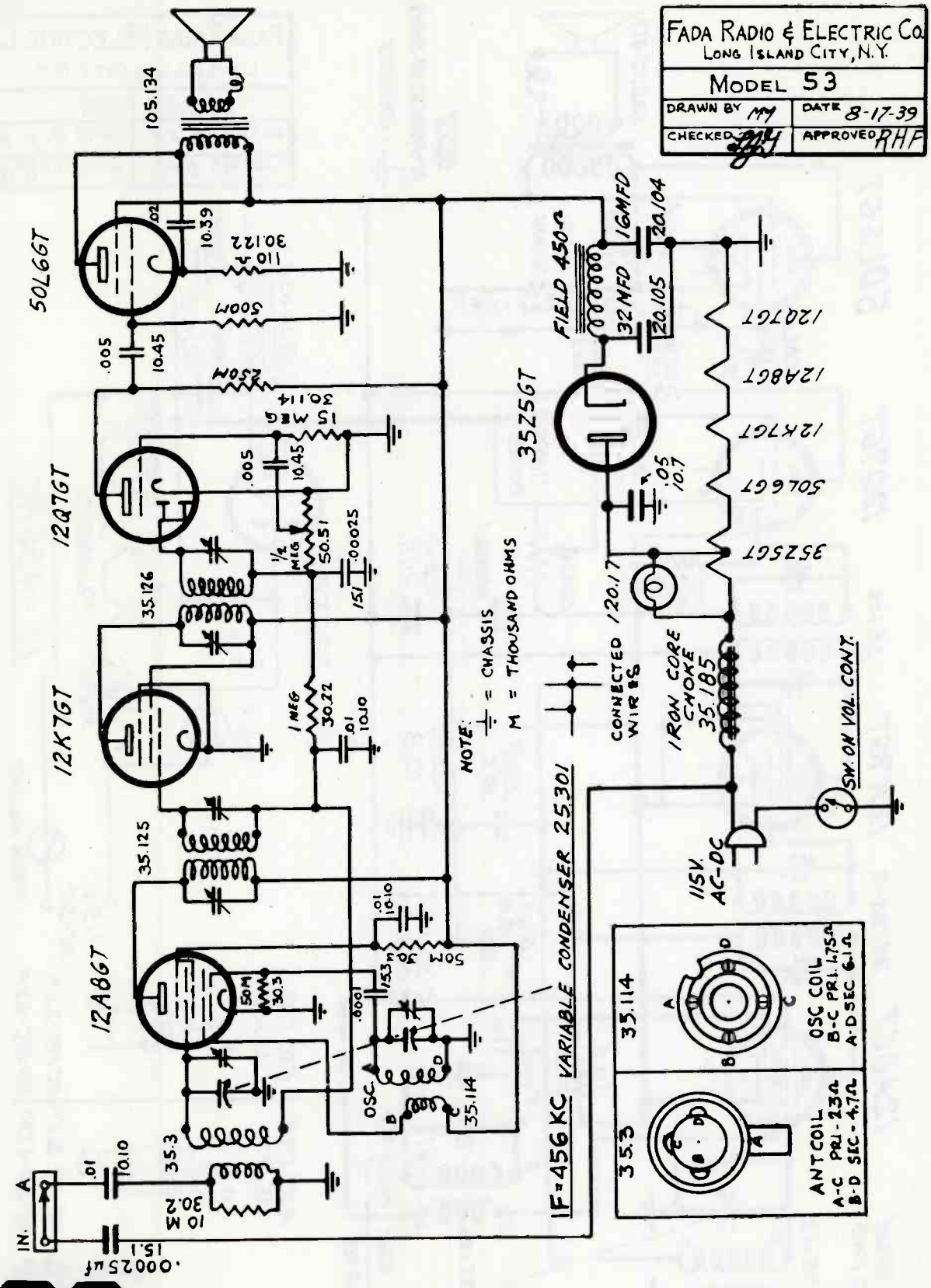
EMERSON RADIO AND PHONOGRAPH CORP.

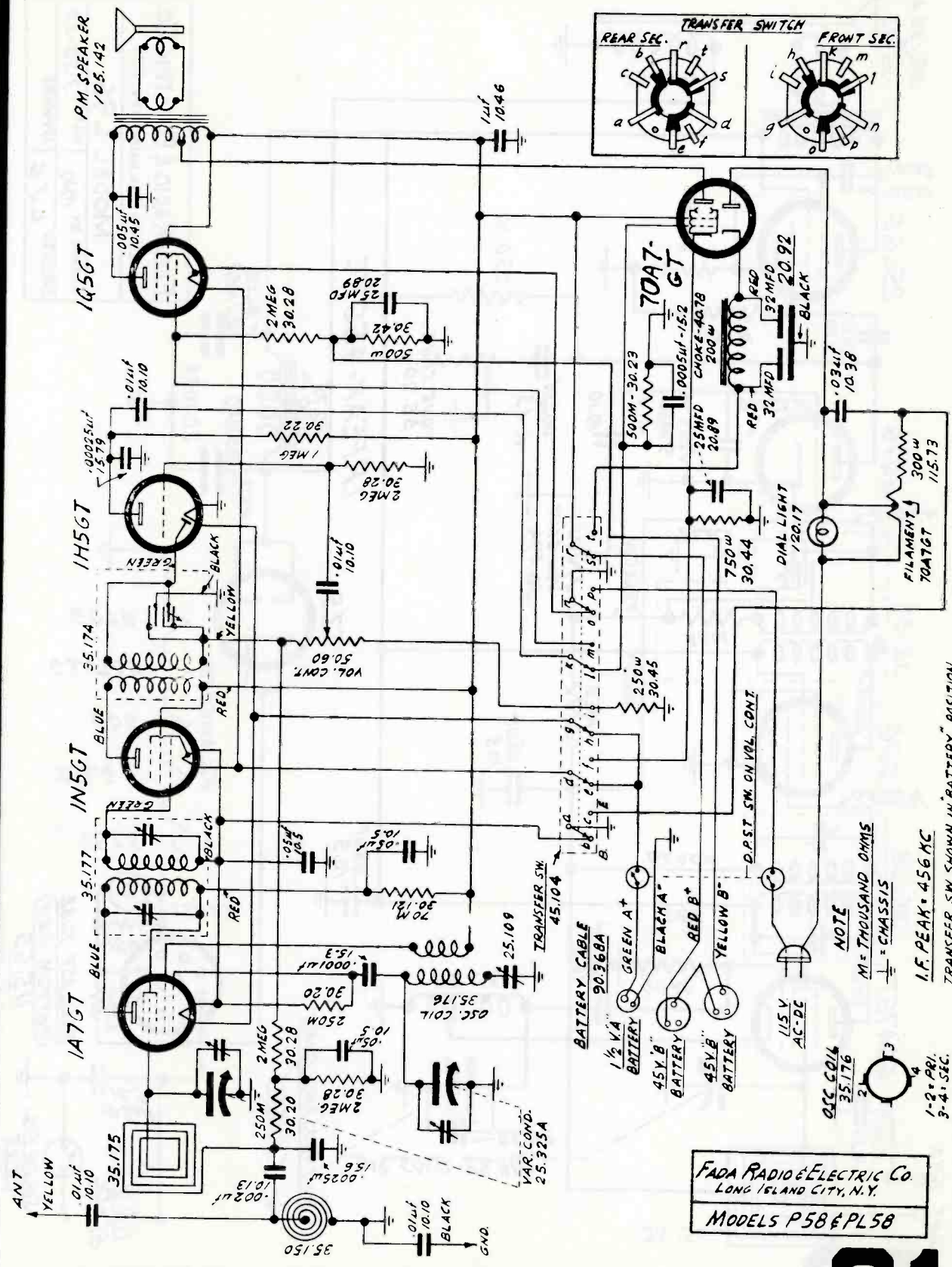
Models DP-332, DP1-332

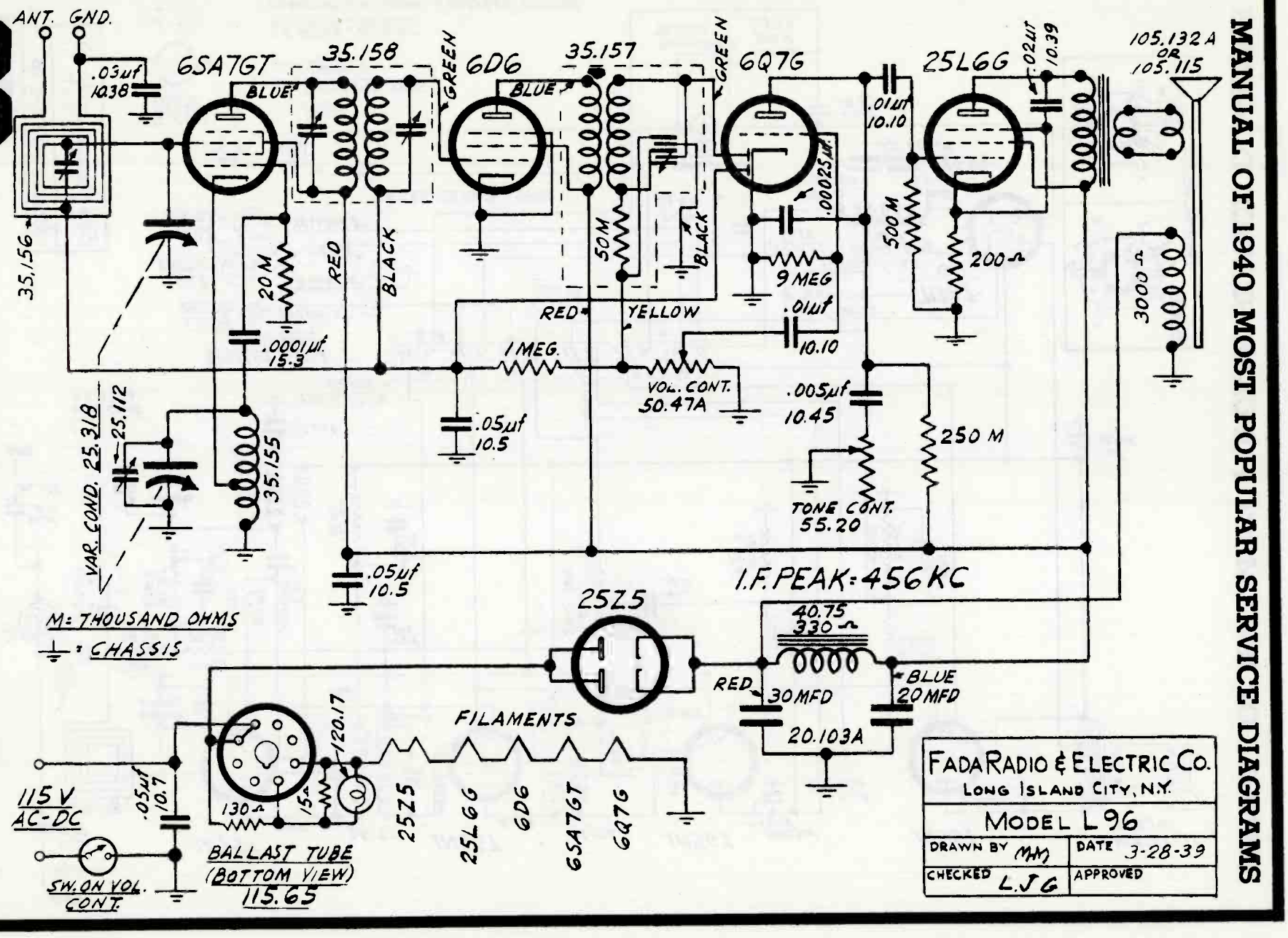


26

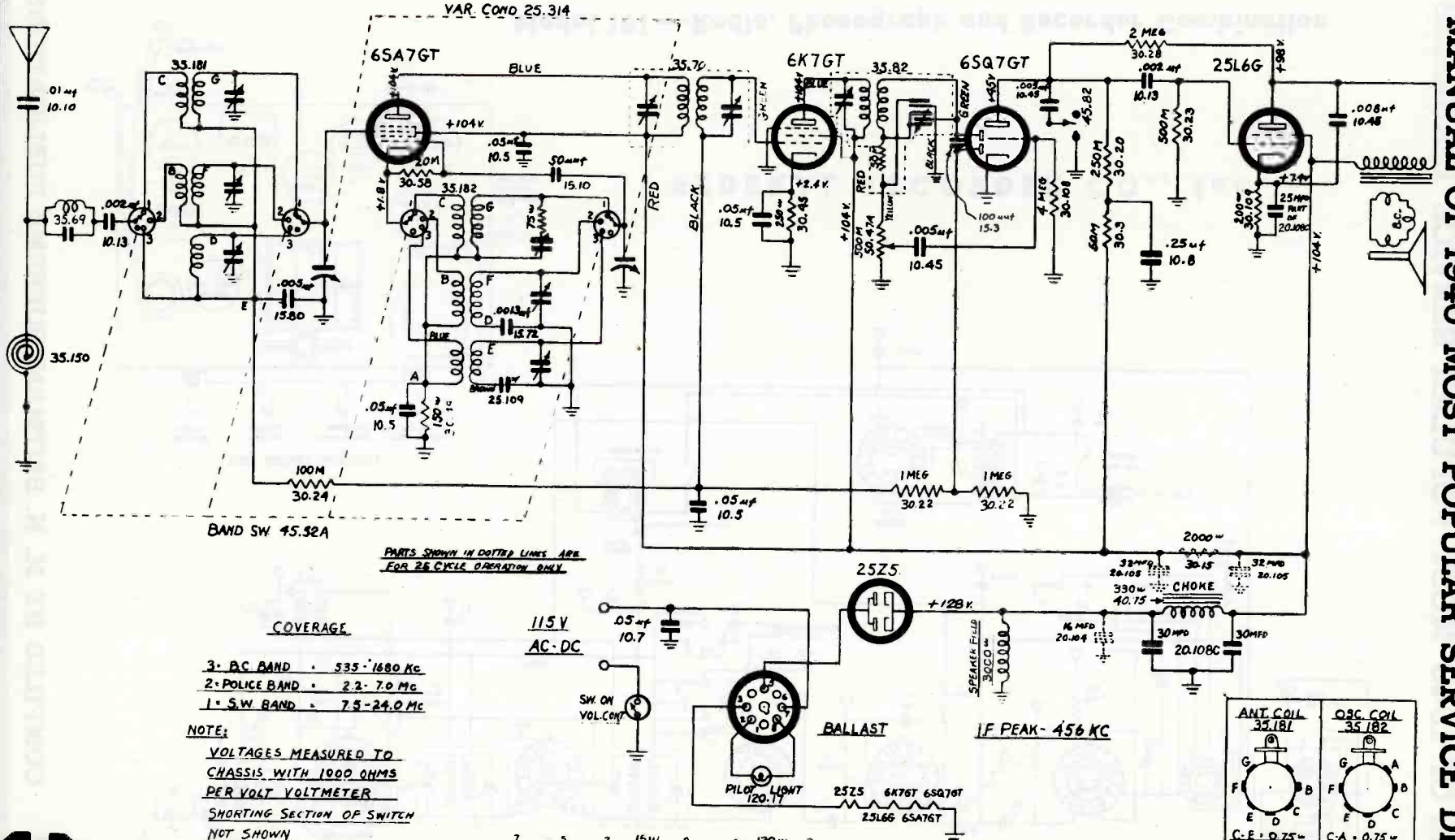
FADA RADIO & ELECTRIC CO.
LONG ISLAND CITY, N.Y.
MODEL F25
DRAWN BY AM
DATE 9-7-39
CHECKED D.P.B.
APPROVED F.H.F.


FADA RADIO & ELECTRIC CO.
LONG ISLAND CITY, N.Y.
MODEL 53
DRAWN BY MY
DATE 8-17-39
CHECKED
APPROVED RHF
50L6GT
12Q7GT
12K7GT
12A8GT
35Z5GT
105.134
30.122
110Ω
500M
10.39
.02
.005
10.45
250M
30.114
15 MEG
.005
10.45
1/4 MEG
50.51
.00025
151
35.126
35.125
35.3
30.2
10 M
.01
10.10
.0002 5 MF
15.1
IN.
A
1 MEG
30.22
.01
10.10
.01
10.10
50M
30.3
153Ω
.0001
50M
OSC.
35.114
IF=456 KC VARIABLE CONDENSER 25301
NOTE:
⏚ = CHASSIS
M = THOUSAND OHMS
CONNECTED WIRES
FIELD 450Ω
16MFD
20.104
32 MFD
20.105
.05
10.7
120.17
IRON CORE CHOKE
35.185
SW. ON VOL. CONT.
115V. AC-DC
120Ω 7W
240Ω 6W
500Ω 6W
1KΩ 7W
35Z5GT
35.114
OSC COIL
B-C PRI. 4.75Ω
A-D SEC 6.1Ω
353
ANT COIL
A-C PRI - 2.3Ω
B-D SEC - 4.7Ω


TRANSFER SWITCH
REAR SEC.
FRONT SEC.
PM SPEAKER 105.142
1G5GT
1H5GT
1N5GT
1A7GT
70A7-GT
.005 uf 10.45
.1 uf 10.46
.01 uf 10.10
.0002 uf 15.79
.02 uf 10.5
.05 uf 10.5
.0001 uf 15.3
.002 uf 10.13
.0025 uf 15.6
2 MEG 30.28
25 MFD 20.89
30.42
500 w
1 MEG
2 MEG 30.28
VOL. CONT. 50.60
70 M 30.21
250 M 30.20
2 MEG 30.28
35.174
35.177
35.175
35.150
25.109
OSC. COIL 35.176
VAR. COND. 25.325A
TRANSFER SW. 45.104
.5 MFD 20.89
CHOKE-4078 200 w
500 M - 30.23
.25 MFD 20.89
32 MFD 20.92
.03 uf 10.38
300 w 115.73
FILAMENT 70A7GT
750 w 30.44
DIAL LIGHT 120.17
250 w 30.45
D.P.S.T. SW. ON VOL. CONT.
BATTERY CABLE 90.368A
GREEN A+
BLACK A-
RED B+
YELLOW B-
1½ V. A BATTERY
45 V. B BATTERY
45 V. B BATTERY
115 V. AC-DC
OSC. COIL 35.176
1-2 = PRI.
3-4 = SEC.
NOTE
M = THOUSAND OHMS
⏚ = CHASSIS
I.F. PEAK - 456 KC
TRANSFER SW. SHOWN IN "BATTERY" POSITION
ANT
YELLOW
GND
BLACK
GREEN
BLUE
RED
FADA RADIO & ELECTRIC CO.
LONG ISLAND CITY, N.Y.
MODELS P58 & PL58



FADA RADIO & ELECTRIC CO.	
LONG ISLAND CITY, N.Y.	
MODEL L96	
DRAWN BY MM	DATE 3-28-39
CHECKED L.J.G	APPROVED

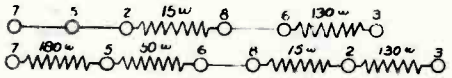


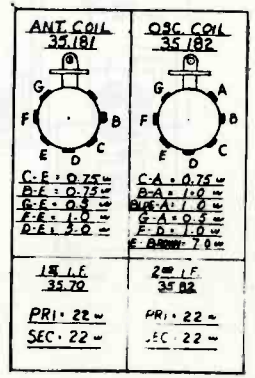
COVERAGE

3 - B.C. BAND - 535 - 1680 Kc
2 - POLICE BAND - 2.2 - 7.0 Mc
1 - S.W. BAND - 7.5 - 24.0 Mc

NOTE:
VOLTAGES MEASURED TO CHASSIS WITH 1000 OHMS PER VOLT VOLTMETER
SHORTING SECTION OF SWITCH NOT SHOWN

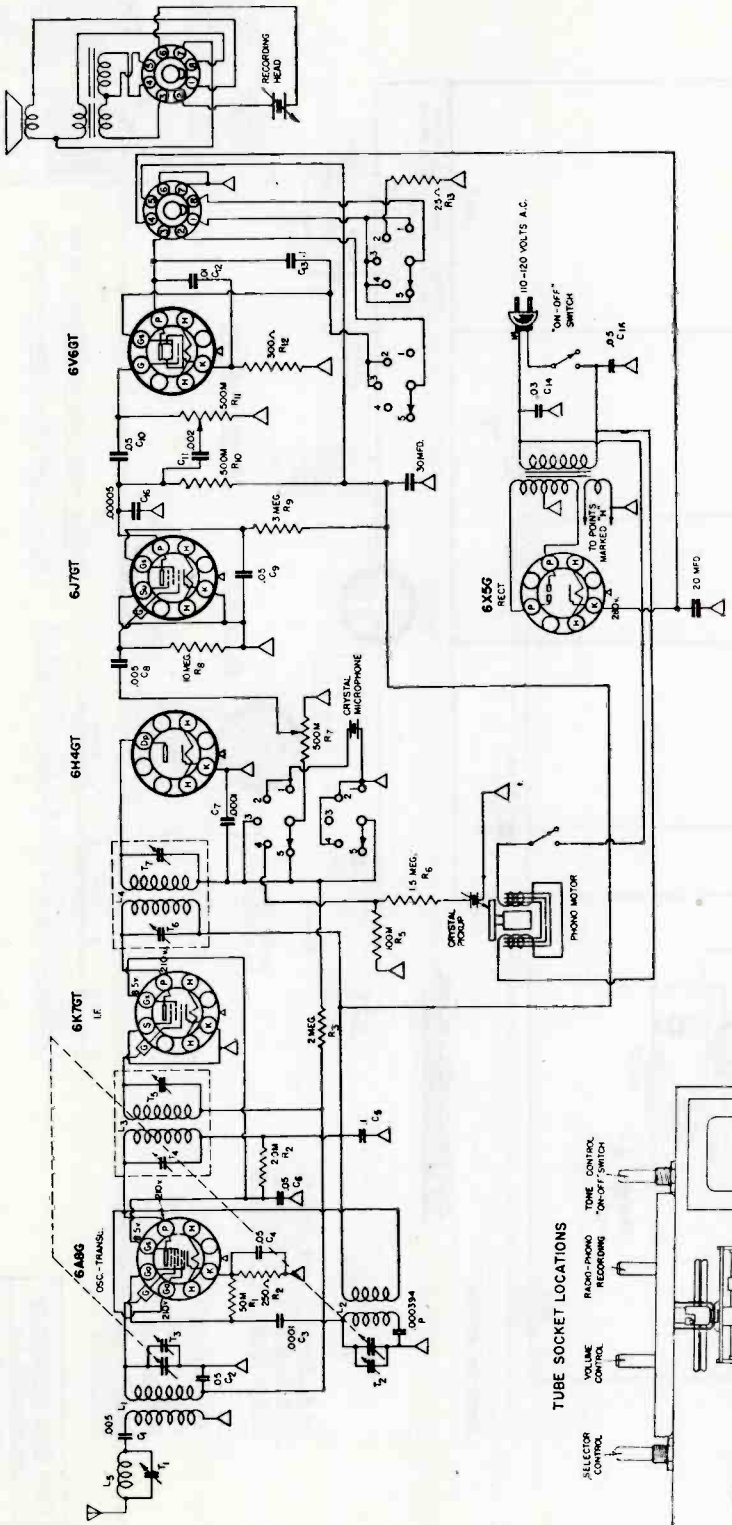
FADA RADIO & ELECTRIC CO. LONG ISLAND CITY N.Y.	
MODEL 63	
DRAWN BY CG	DATE 10-14-39
CHECKED	APPROVED RHE.

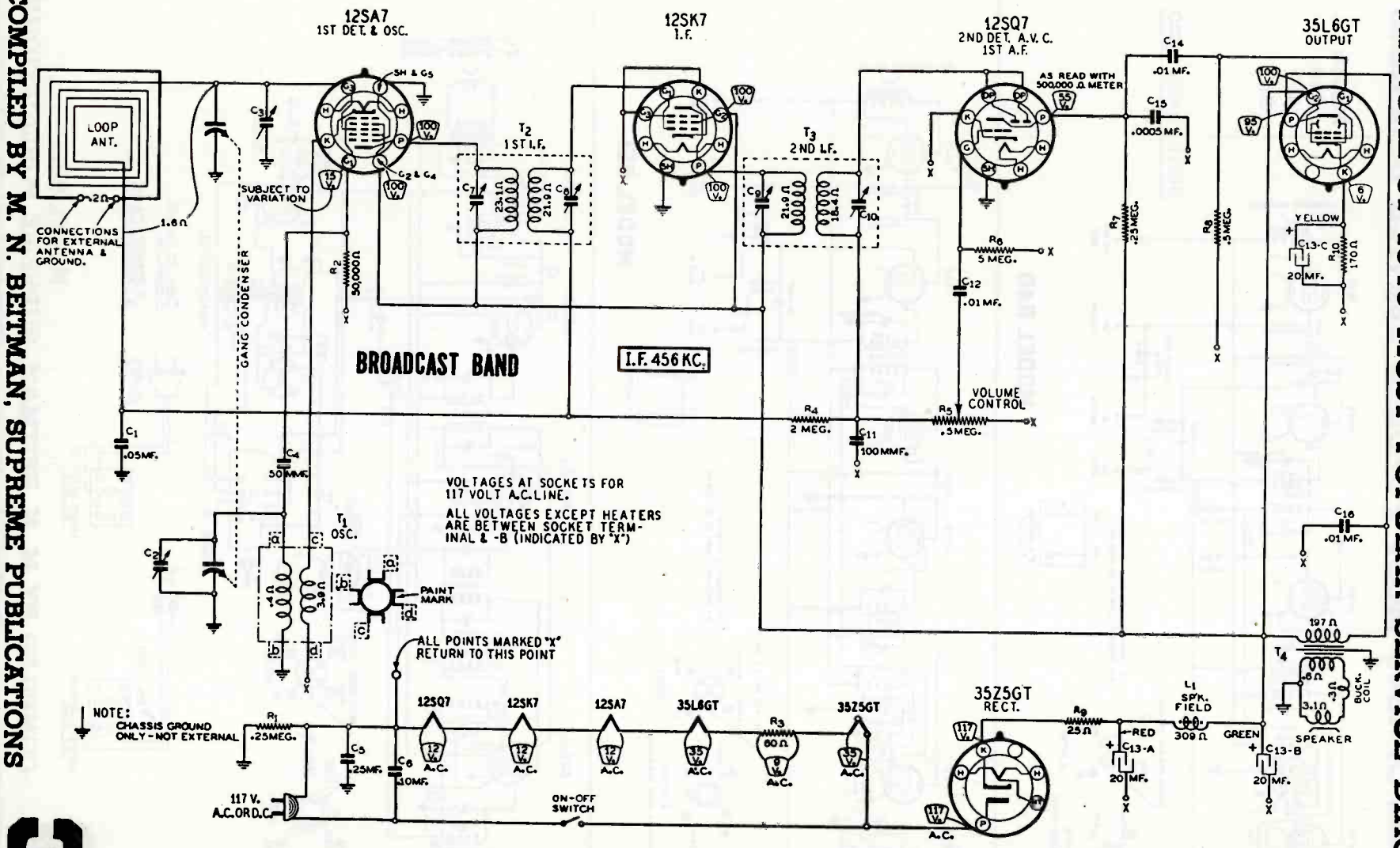




FEDERAL RECORDER CO., Inc.

Model 101—Radio, Phonograph and Recorder Combination





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35

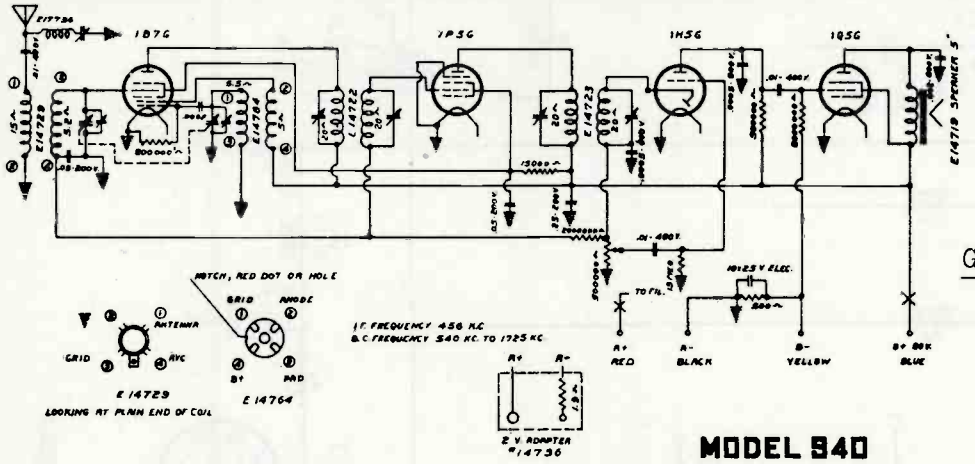
Series 5D2

Gamble-Skogmo

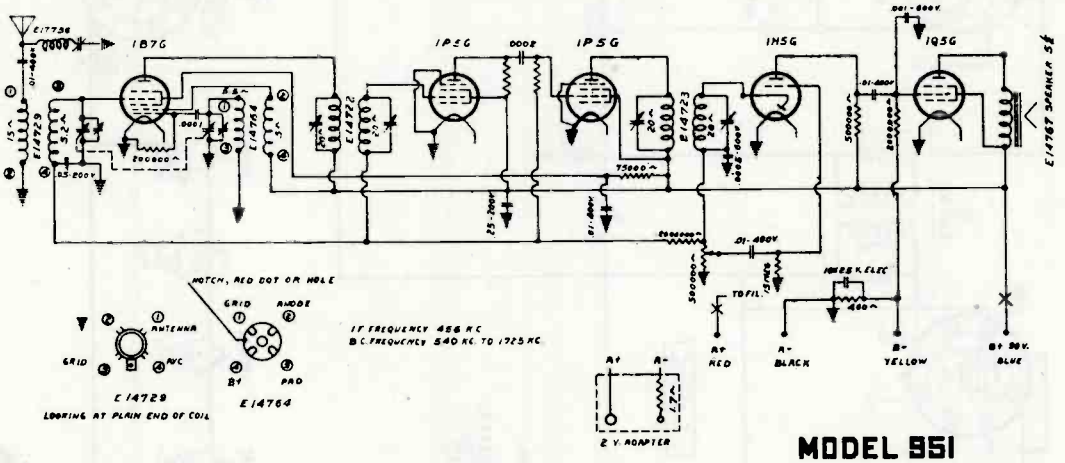
MANUAL OF 1940 MOST POPULAR SERVICE DIAGRAMS

Models
940
951
961

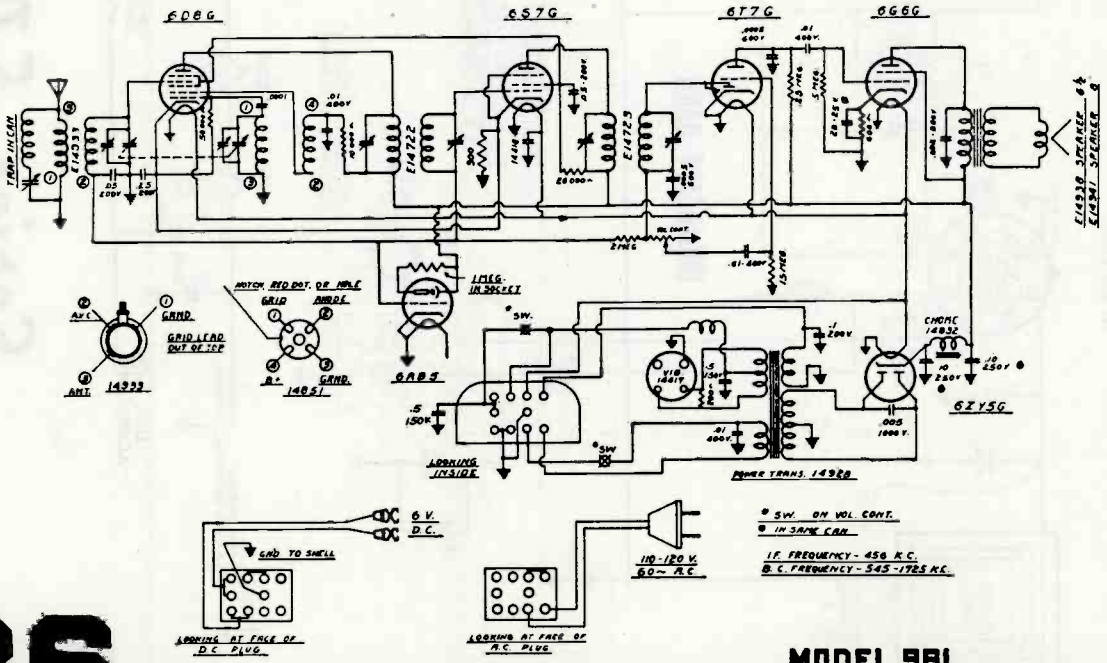
Gamble-Skogmo



MODEL 940



MODEL 951



MODEL 961

COMPILED BY M. N. BEITMAN, SUPREME PUBLICATIONS

MANUAL OF 1940 MOST POPULAR SERVICE DIAGRAMS

GENERAL ELECTRIC

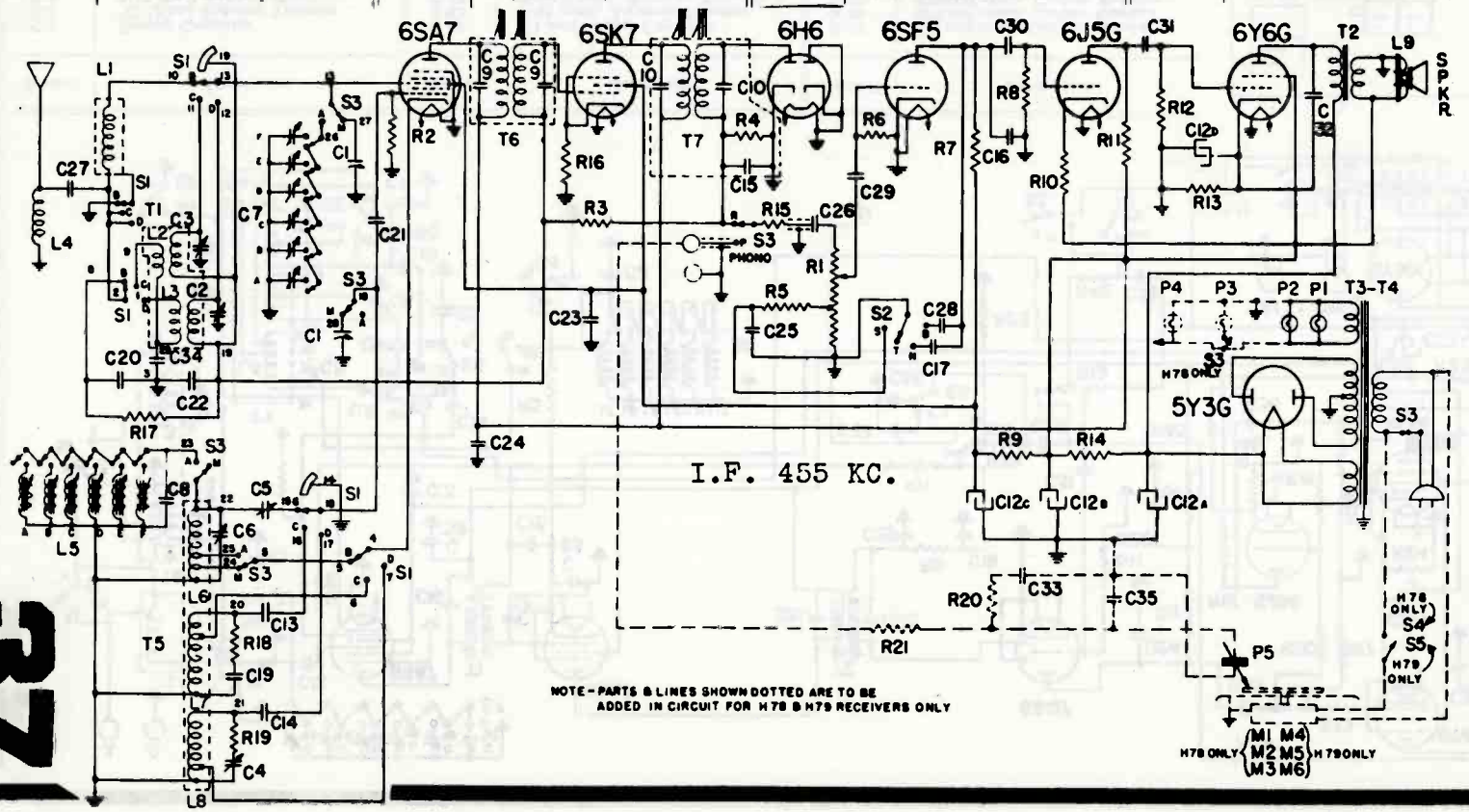
MODELS H-73, H-77, H-78 AND H-79

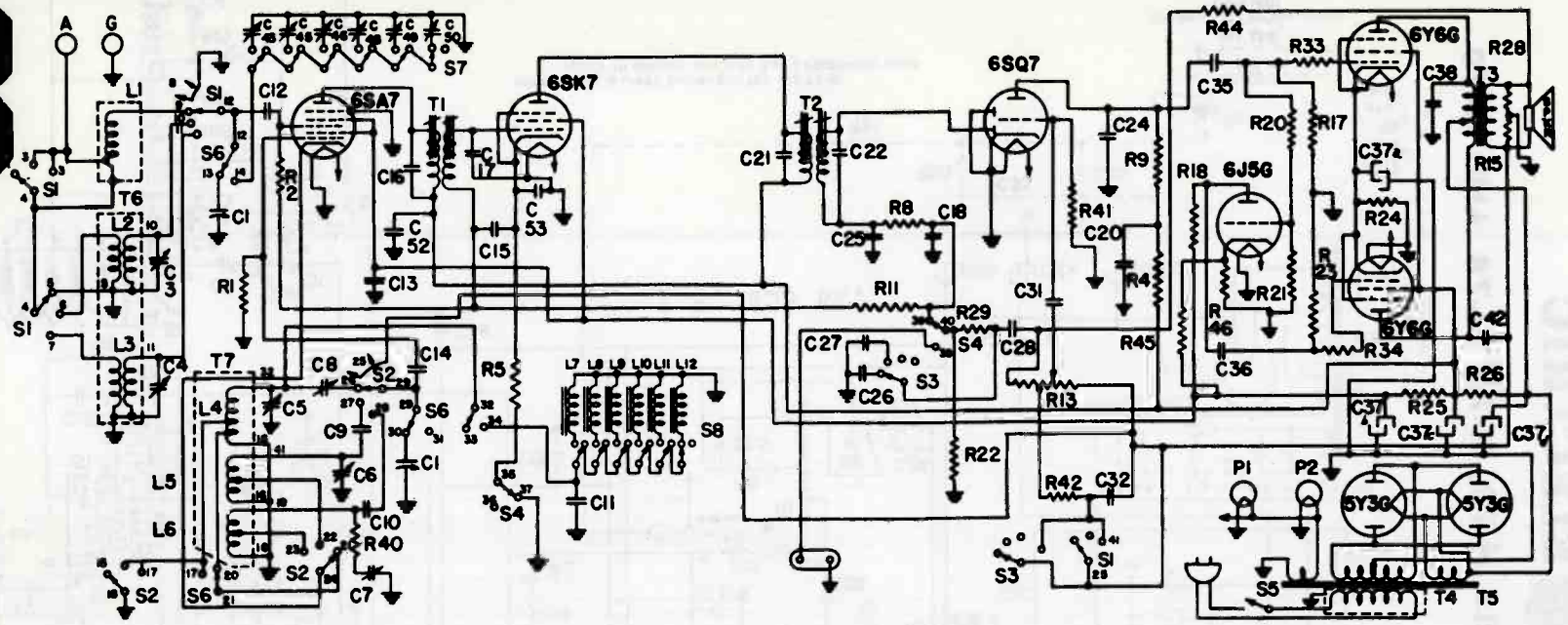
SYMBOL	DESCRIPTION
C-1	Tuning condenser
C-2	"D" band antenna trimmer
C-3	"C" band antenna trimmer
C-4	"D" band oscillator trimmer
C-5	"B" band oscillator padder
C-6	"B" band oscillator trimmer
C-7A	100–490 mmf. trimmer
C-7B	100–490 mmf. trimmer
C-7C	100–490 mmf. trimmer
C-7D	20–180 mmf. trimmer
C-7E	20–180 mmf. trimmer
C-7F	7–65 mmf. trimmer
C-8	750 mmf. silvered mica capacitor
C-9	Adjusted silvered mica capacitors
C-10	Adjusted silvered mica capacitors
C-12a	40 mfd. dry electrolytic
C-12b	20 mfd. dry electrolytic
C-12c	20 mfd. dry electrolytic
C-12d	20 mfd. dry electrolytic
C-13	2000 mmf. mica capacitor
C-14	5600 mmf. mica capacitor
C-15	100 mmf. mica capacitor
C-16	100 mmf. mica capacitor
C-17	680 mmf. mica capacitor
C-19	22 mmf. mica capacitor
C-20	4700 mmf. mica capacitor

SYMBOL	DESCRIPTION
C-21	50 mmf. mica capacitor
C-22	.05 mfd. paper capacitor
C-23	.05 mfd. paper capacitor
C-24	.05 mfd. paper capacitor
C-25	.0072 mfd. paper capacitor
C-26	.005 mfd. paper capacitor
C-27	0.1 mfd. paper capacitor
C-28	.002 mfd. paper capacitor
C-29	.01 mfd. paper capacitor
C-30	.005 mfd. paper capacitor
C-31	.02 mfd. paper capacitor
C-32	.01 mfd. paper capacitor
C-33	.01 mfd. paper capacitor
C-34	.05 mfd. paper capacitor
C-35	.001 mfd. paper capacitor
L-1	Beam-a-Scope
L-4	Antenna choke
L-5A	Touch Tuning trimmer coil (Code—Blue)
L-5B	Touch Tuning trimmer coil (Code—Blue)
L-5C	Touch Tuning trimmer coil (Code—Blue)
L-5D	Touch Tuning trimmer coil (Code—Red)

SYMBOL	DESCRIPTION
L-5E	Touch Tuning trimmer coil (Code—Red)
L-5F	Touch Tuning trimmer coil (Code—None)
M-1	Phono motor, 60 cycles
M-2	Phono motor, 50 cycles
M-3	Phono motor, 25 cycles
M-4	Phono motor, 60 cycles
M-5	Phono motor, 50 cycles
M-6	Phono motor, 25 cycles
P-1	Pilot lamp, MAZDA No. 44
P-2	Pilot lamp, MAZDA No. 44
P-3	Pilot lamp, MAZDA No. 44
P-4	Pilot lamp, MAZDA No. 44
P-5	Crystal Pick-up
R-1	Volume Control
R-2	22,000 ohms carbon
R-3	2.2 megohms carbon
R-4	470,000 ohms carbon
R-5	56,000 ohms carbon
R-6	15 megohms carbon
R-7	220,000 ohms carbon
R-8	1.0 megohms carbon
R-9	3,900 ohms carbon
R-10	3,300 ohms carbon
R-11	100,000 ohms carbon

SYMBOL	DESCRIPTION
R-12	330,000 ohms carbon
R-13	220 ohms 2 W. carbon
R-14	3,300 ohms 2 W. carbon
R-15	47,000 ohms carbon
R-16	470 ohms carbon
R-17	47,000 ohms carbon
R-18	150 ohms carbon
R-19	68 ohms carbon
R-20	100,000 ohms carbon
R-21	1.0 megohm carbon resistor
S-1	Band switch
S-2	Tone switch
S-3a	Power switch
S-3b	Manual switch
S-3c	Station selector switch
S-3d	Phonograph switch
T-1	"C" and "D" band antenna transformer
T-2	Output transformer
T-3	Power transformer, 60 cycles
T-4	Power transformer, 25 cycles
T-5	Oscillator transformer for all bands
T-6	1st I.F. transformer
T-7	2nd I.F. transformer

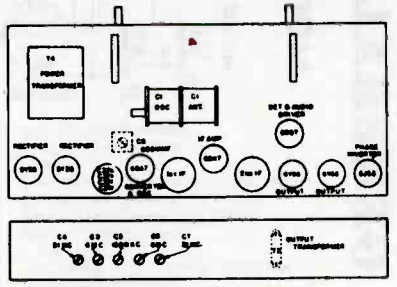




Symbol	Description
C-1	Tuning Capacitor
C-3	"C" Band Antenna Trimmer
C-4	"D" Band Antenna Trimmer
C-5	"B" Band Oscillator Trimmer
C-6	"C" Band Oscillator Trimmer
C-7	"D" Band Oscillator Trimmer
C-8	"B" Band Padder
C-9	1600 mmf., Mica Capacitor ±5%
C-10	4300 mmf., Mica Capacitor ±5%
C-11	750 mmf., Silvered Mica Capacitor ±5%
C-12	150 mmf., Mica Capacitor
C-13	0.1 mfd., Paper Capacitor
C-14	47 mmf., Mica Capacitor
C-15	0.1 mfd., Paper Capacitor
C-18	47 mmf., Mica Capacitor
C-20	.25 mfd., Paper Capacitor
C-24	100 mmf., Mica Capacitor
C-25	47 mmf., Mica Capacitor
C-26	.0015 mfd., Paper Capacitor
C-27	470 mmf., Mica Capacitor
C-28	.01 mfd., Paper Capacitor
C-31	.01 mfd., Paper Capacitor
C-32	.003 mfd., Paper Capacitor
C-35	.05 mfd., Paper Capacitor
C-36	.05 mfd., Paper Capacitor
C-37a	20 mfd., 25 V. Dry Electrolytic
C-37b	20 mfd., 250 V. Dry Electrolytic
C-37c	20 mfd., 250 V. Dry Electrolytic
C-37d	40 mfd., 250 V. Dry Electrolytic
C-38	.02 mfd., Paper Capacitor

Symbol	Description
C-42	.01 mfd., Paper Capacitor
C-43	7–65 mmf., Antenna Trimmer
C-45	20–180 mmf., Antenna Trimmer
C-46	20–180 mmf., Antenna Trimmer
C-48	100–490 mmf., Antenna Trimmer
C-49	100–490 mmf., Antenna Trimmer
C-50	100–490 mmf., Antenna Trimmer
C-52	.25 mfd., Paper Capacitor
C-53	.08 mfd., Paper Capacitor
L-1	Beam-a-Scope
L-2	"C" Band Antenna Coil
L-3	"D" Band Antenna Coil
L-4	"B" Band Oscillator Coil
L-5	"C" Band Oscillator Coil
L-6	"D" Band Oscillator Coil
L-7	Tuning Coil (Code—None)
L-8, 9	Tuning Coil (Code—Red)
L-10, 11, 12	Tuning Coil (Code—Blue)
R-1	22,000 ohms, Carbon Resistor
R-2	1.0 megohm, Carbon Resistor
R-4	47,000 ohms, Carbon Resistor
R-5	330 ohms, Carbon Resistor
R-8	47,000 ohms, Carbon Resistor
R-9	220,00 ohms, Carbon Resistor
R-11	2.2 megohms, Carbon Resistor
R-13	2 megohms, Volume Control
R-15	15 ohms, Carbon Resistor
R-17	330,000 ohms, Carbon Resistor
R-18	68,000 ohms, Carbon Resistor

Symbol	Description
R-20	3.3 megohms, Carbon Resistor
R-21	270,000 ohms, Carbon Resistor
R-22	220,000 ohms, Carbon Resistor
R-23	150,000 ohms, Carbon Resistor
R-24	100 ohms, 3.4-W. Wire Wound
R-25	2400 ohms, 2-W. Carbon Resistor
R-26	2200 ohms, 2.6-W Wire Wound
R-28	68 ohms, Carbon Resistor
R-29	47,000 ohms, Carbon Resistor
R-33	1000 ohms, Carbon Resistor
R-34	1000 ohms, Carbon Resistor
R-40	33 ohms, Carbon Resistor
R-41	4.7 megohms, Carbon Resistor
R-42	100,000 ohms, Carbon Resistor
R-44	4.7 megohms, Carbon Resistor
R-45	15,000 ohms, 1-W. Carbon Resistor
R-46	270 ohms, Carbon Resistor
P-1	Pilot Light, MAZDA No. 44
P-2	Pilot Light, MAZDA No. 44
S-1	Antenna Band Switch
S-2	Oscillator Band Switch
S-3	Tone Switch
S-4	Phono. Switch
S-5	Power Switch
S-6	Manual Switch
S-7	Antenna Section, Touch Tuning Switch
S-8	Oscillator Section, Touch Tuning Switch



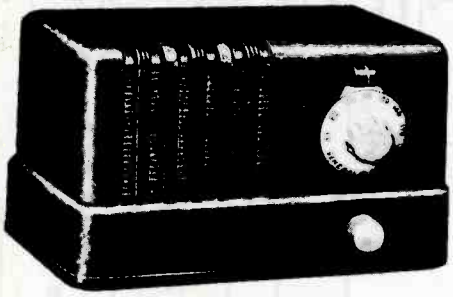
Trimmer Location

General Electric

I.F. 455 KC.

MODEL H-87

General Electric MODEL H-400



GENERAL INFORMATION

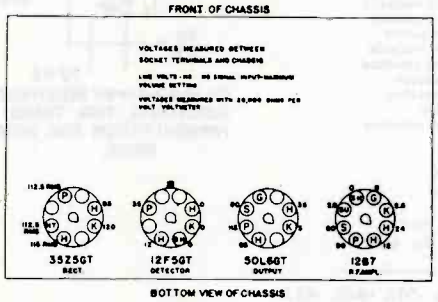
Model H-400 is a compact four-tube AC-DC tuned radio-frequency receiver that tunes the standard broadcast band of frequencies and one police band. One side of the power line is connected directly to the chassis ground; therefore, caution should be exercised in servicing.

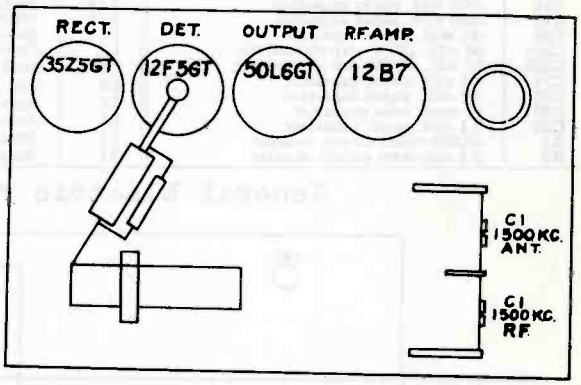
When operating from a DC source of power it is necessary to insert the power plug with the proper polarity. If the receiver fails to function with the power plug inserted one way, reverse the plug. If any hum is noticed when the receiver is used on A-C, reverse the power plug as above.

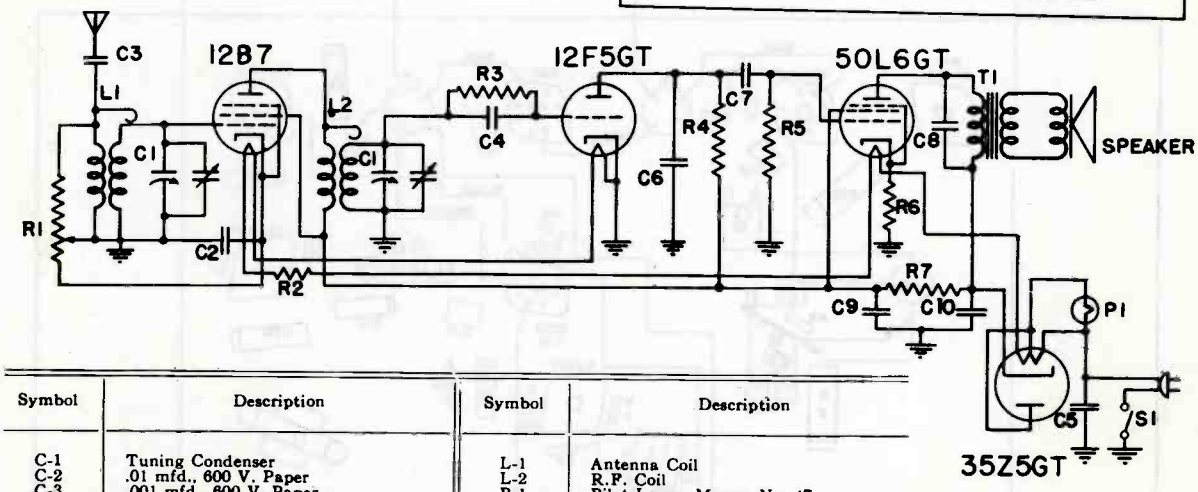
ALIGNMENT

Connect the high side of the signal generator through a 100-mmf condenser to the terminal to which the antenna hank is soldered. The low side of the signal generator output should be connected to the receiver chassis through a .05 mfd. condenser. Connect a suitable output meter across the voice coil leads; then proceed as follows:

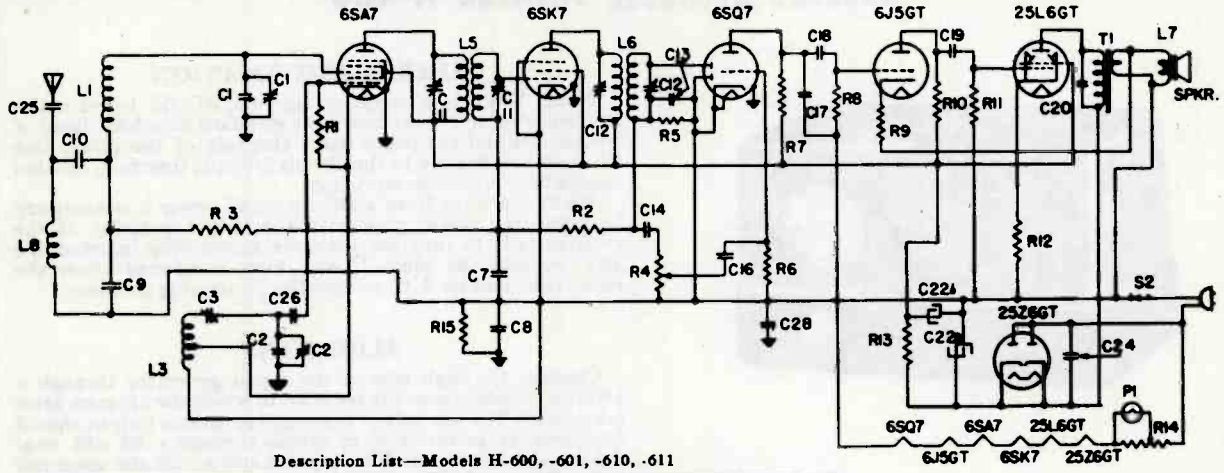
1. With gang condenser plates completely closed, the tuning index should be over the last calibration mark on the dial.
2. Set volume control to about ¾ of maximum.
3. Rotate gang to minimum capacity and tune trimmers on the gang condenser to 1750 KC signal. Re-tune gang to 1500 KC signal and peak trimmers by alternate adjustment.





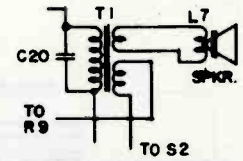


Symbol	Description	Symbol	Description
C-1	Tuning Condenser	L-1	Antenna Coil
C-2	.01 mfd., 600 V. Paper	L-2	R.F. Coil
C-3	.001 mfd., 600 V. Paper	P-1	Pilot Lamp, MAZDA No. 47
C-4	.005 mfd., 600 V. Paper	R-1	30,000 ohm, Volume Control (300 ohm stop)
C-5	.01 mfd., 600 V. Paper	R-2	75 ohm, 2-W. Carbon
C-6	330 mmf., Mica	R-3	4.7 megohm, ½-W. Carbon
C-7	.01 mfd., 600 V. Paper	R-4	1.0 megohm, ½-W. Carbon
C-8	.02 mfd., 600 V. Paper	R-5	1.0 megohm, ½-W. Carbon
C-9	20 mfd., 150 V. Dry Electrolytic	R-6	150 ohm, ½-W. Carbon ± 5%
C-10	40 mfd., 150 V. Dry Electrolytic	R-7	4700 ohm, ½-W. Carbon



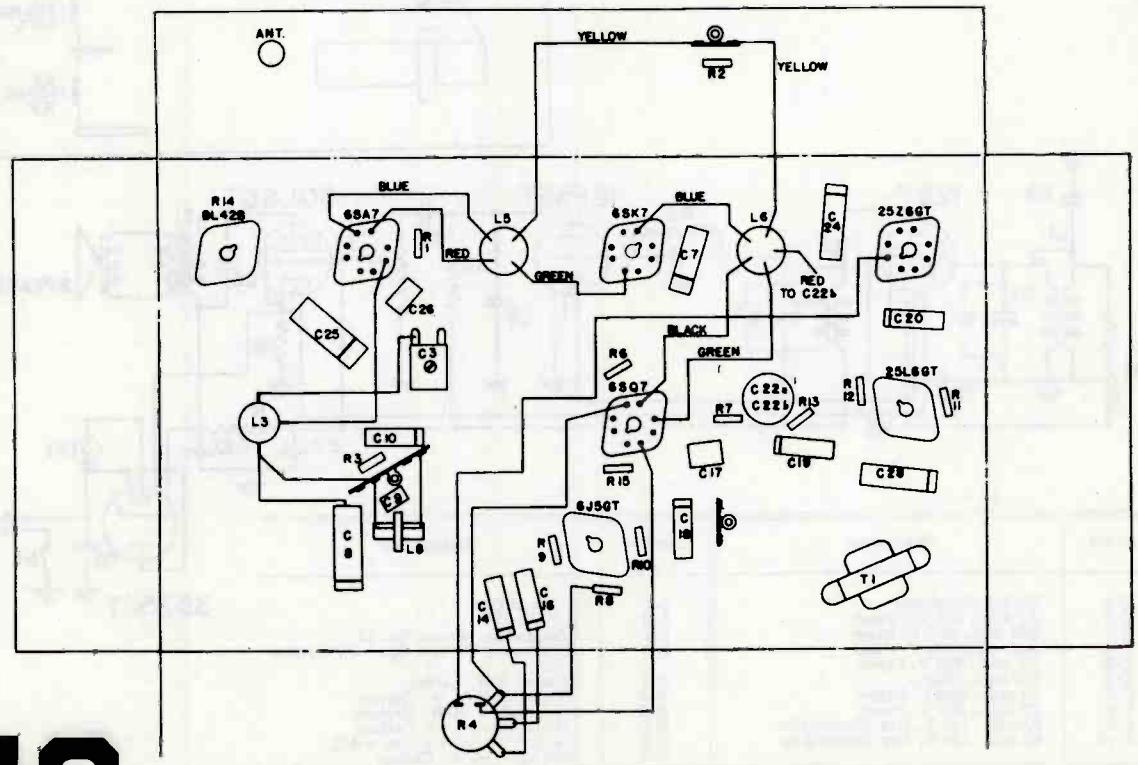
Description List—Models H-600, -601, -610, -611

Symbol	Description	Symbol	Description
C1	Antenna section of tuning condenser	R3	470,000 ohms carbon resistor
C2	Oscillator section of tuning condenser	R4	2 megohms volume control
C3	"B" band padder	R5	470,000 ohms carbon resistor
C7	.05 mfd. paper capacitor	R6	15 megohms carbon resistor
C8	0.1 mfd. paper capacitor	R7	470,000 ohms carbon resistor
C9	3900 mmf. ±5% mica capacitor	R8	1.0 megohm carbon resistor
C10	.01 mfd. paper capacitor	R9	3300 ohms carbon resistor
C13	470 mmf. mica capacitor	R10	39,000 ohms carbon resistor
C14	.002 mfd. paper capacitor	R11	470,000 ohms carbon resistor
C16	.02 mfd. paper capacitor	R12	150 ohms carbon resistor
C17	470 mmf. mica capacitor	R13	1000 ohms carbon resistor
C18	.005 mfd. paper capacitor	R14	BL42B ballast resistor
C19	.005 mfd. paper capacitor	R15	470,000 ohms carbon resistor
C20	.01 mfd. paper capacitor	L1	Beam-a-Scope
C22a	50 mfd. 150 V. dry electrolytic	L3	Oscillator coil
C22b	30 mfd. 150 V. dry electrolytic	L5	1st I.F. transformer
C24	.05 mfd. paper capacitor	L6	2nd I.F. transformer
C25	.01 mfd. paper capacitor	L7	Speaker voice coil
C26	47 mmf. mica capacitor	L8	Antenna choke, 1½ MH
C28	0.1 mfd. paper capacitor	P1	Pilot lamp, MAZDA No. 44
R1	33,000 ohms carbon resistor	T1	Output transformer
R2	2.2 megohms carbon resistor		



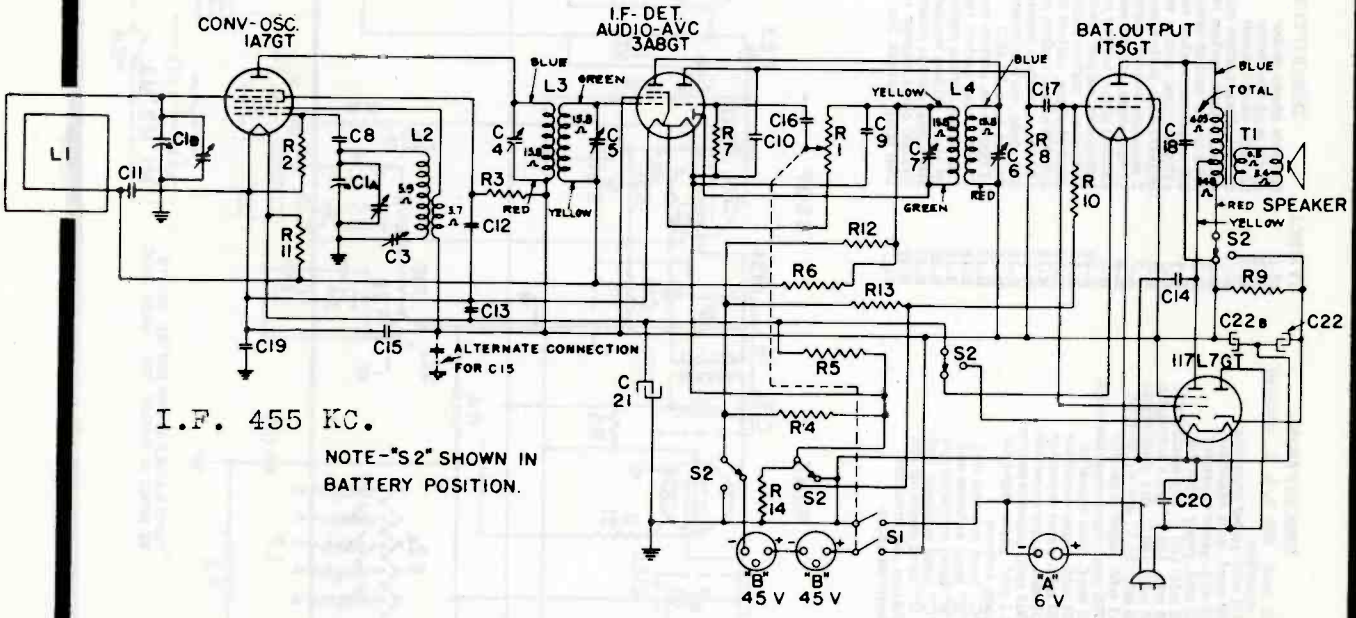
ON H-601 & H-611 RECEIVERS SUBSTITUTE THIS TRANSFORMER (T-1) FOR ONE SHOWN ABOVE.

General Electric *Models H-600, -601, -610, -611*



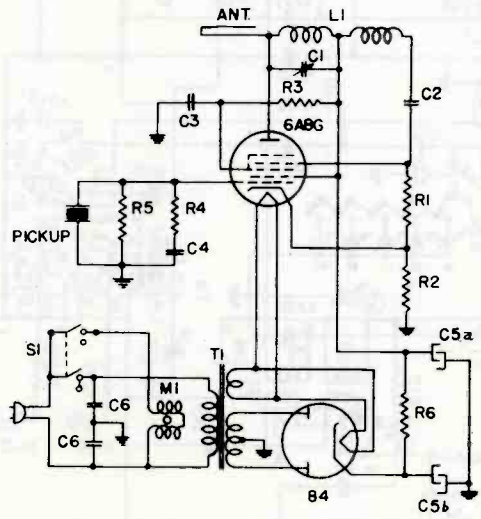
General Electric Model HB-412

Symbol	Description	Symbol	Description	Symbol	Description
C-1A	Oscillator section tuning condenser	C-19	0.2 mfd. paper capacitor	R-6	2.2 megohms carbon resistor
C-1B	Antenna section tuning condenser	C-20	.01 mfd. line capacitor	R-7	15 megohms carbon resistor
C-3	Oscillator padding capacitor	C-21	100 mfd. 5 V. dry electrolytic	R-8	1.0 megohm carbon resistor
C-8	47 mmf. mica capacitor	C-22A	40 mfd. 150 V. dry electrolytic	R-9	1800 ohms carbon resistor
C-9	220 mmf. mica capacitor	C-22B	20 mfd. 150 V. dry electrolytic	R-10	470,000 ohms carbon resistor
C-10	220 mmf. mica capacitor	L-1	Beam-a-Scope	R-11	3.9 megohms carbon resistor
C-11	.05 mfd. paper capacitor	L-2	Oscillator coil	R-12	680,000 ohms carbon resistor
C-12	0.1 mfd. paper capacitor	L-3	1st I.F. transformer	R-13	1.5 megohms carbon resistor
C-13	0.1 mfd. paper capacitor	L-4	2nd I.F. transformer	R-14	27 ohms carbon resistor
C-14	220 mmf. mica capacitor	R-1	1.0 megohm volume control	S-1	Power switch (on volume control)
C-15	0.1 mfd. paper capacitor	R-2	220,000 ohms carbon resistor	S-2	AC-DC or Battery switch
C-16	.002 mfd. paper capacitor	R-3	47,000 ohms carbon resistor	T-1	Output transformer
C-17	.01 mfd. paper capacitor	R-4	150 ohms carbon resistor		
C-18	.004 mfd. paper capacitor	R-5	560 ohms carbon resistor		



I.F. 455 KC.

NOTE-"S 2" SHOWN IN BATTERY POSITION.



General Electric *Model HM-21*

Symbol	Description
C-1	300–850 mmf. tuning trimmer
C-2	100 mmf. mica capacitor
C-3	0.1 mfd. paper capacitor
C-4	.005 mfd. paper capacitor
C-5a	10 mfd. dry electrolytic
C-5b	10 mfd. dry electrolytic
C-6	.01-.01 mfd. line capacitor
L-1	Oscillator coil
M-1	Motor
R-1	120,000 ohms carbon resistor
R-2	1,200 ohms carbon resistor
R-3	47,000 ohms carbon resistor
R-4	47,000 ohms carbon resistor
R-5	1.0 megohms carbon resistor
R-6	6,800 ohms carbon resistor
S-1	Power switch
T-1	Power transformer

MANUAL OF 1940 MOST POPULAR SERVICE DIAGRAMS

General Electric

Models H-634, H-638, and H-640

Tuning Frequency Range

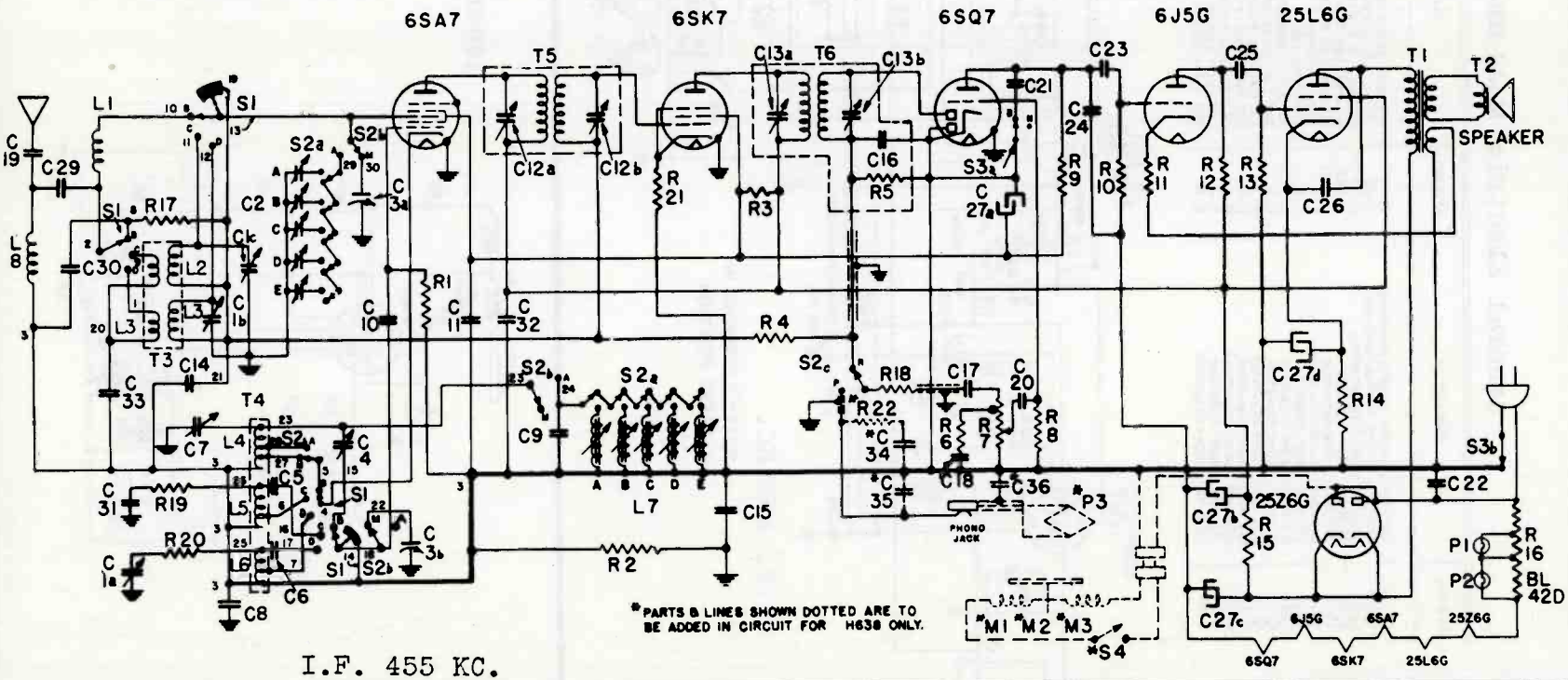
Band "B" . . . . . 550–1600 K.C.
Band "C" . . . . . 2200–6500 K.C.
Band "D" . . . . . 6500–22000 K.C.

Intermediate Frequency . . . . 455 K.C.

SYMBOL	DESCRIPTION
C-1a	"D" band oscillator trimmer
C-1b	"D" band antenna trimmer
C-1c	"C" band antenna trimmer
C-2a	7–65 mmf. station trimmer
C-2b	20–180 mmf. station trimmer
C-2c	20–180 mmf. station trimmer
C-2d	100–490 mmf. station trimmer
C-2e	100–490 mmf. station trimmer
C-3	Tuning condenser
C-4	"B" band oscillator padder
C-5	2000 mmf. mica capacitor ±5%
C-6	5600 mmf. mica capacitor ±5%
C-7	"B" band oscillator trimmer
C-8	0.1 mfd. paper capacitor
C-9	750 mmf. silvered mica capacitor ±5%
C-10	47 mmf. mica capacitor
C-11	.05 mfd. paper capacitor
C-14	.05 mfd. paper capacitor
C-15	0.1 mfd. paper capacitor
C-16	100 mmf. mica capacitor
C-17	.005 mfd. paper capacitor
C-18	.0072 mfd. paper capacitor
C-19	.005 mfd. paper capacitor
C-20	.01 mfd. paper capacitor
C-21	.0015 mfd. paper capacitor

SYMBOL	DESCRIPTION
C-22	.05 mfd. 250 V. A. C. moulded capacitor
C-23	.005 mfd. paper capacitor
C-24	100 mmf. mica capacitor
C-25	.02 mfd. paper capacitor
C-26	.01 mfd. paper capacitor
C-27a	50 mfd. 150 V. dry electrolytic
C-27b	50 mfd. 150 V. dry electrolytic
C-27c	50 mfd. 150 V. dry electrolytic
C-27d	20 mfd. 25 V. dry electrolytic
C-29	0.1 mfd. paper capacitor
C-30	4700 mmf. mica capacitor ±5%
C-31	22 mmf. mica capacitor
C-32	.05 mfd. paper capacitor
C-33	.05 mfd. paper capacitor
C-34	.01 mfd. paper capacitor
C-35	.002 mfd. paper capacitor
C-36	0.1 mfd. paper capacitor
L-1	Loop antenna
L-2	"C" band antenna coil
L-3	"D" band antenna coil
L-4	"B" band oscillator coil
L-5	"C" band oscillator coil
L-6	"D" band oscillator coil
L-7	Station coil trimmers
L-8	Antenna choke

SYMBOL	DESCRIPTION
M-1	60 cycle phono motor
M-2	50 cycle phono motor
M-3	25 cycle phono motor
R-1	22,000 ohms, carbon resistor
R-2	470,000 ohms, carbon resistor
R-3	2200 ohms, carbon resistor
R-4	2.2 megohms, carbon resistor
R-5	470,000 ohms, carbon resistor
R-6	56,000 ohms, carbon resistor
R-7	2 megohm volume control
R-8	15 megohms, carbon resistor
R-9	220,000 ohms, carbon resistor
R-10	1 megohm, carbon resistor
R-11	3300 ohms, carbon resistor
R-12	220,000 ohms, carbon resistor
R-13	470,000 ohms, carbon resistor
R-14	150 ohms, carbon resistor
R-15	560 ohms, carbon resistor
R-16	Ballast tube BL42D
R-17	47,000 ohms, carbon resistor
R-18	47,000 ohms, carbon resistor
R-19	150 ohms, carbon resistor
R-20	68 ohms, carbon resistor
R-21	390 ohms, carbon resistor
R-22	100,000 ohms, carbon resistor
P-1, 2	Dial lamp, Mazda No. 44.



General Electric *Model HJ-612*

I.F. Alignment

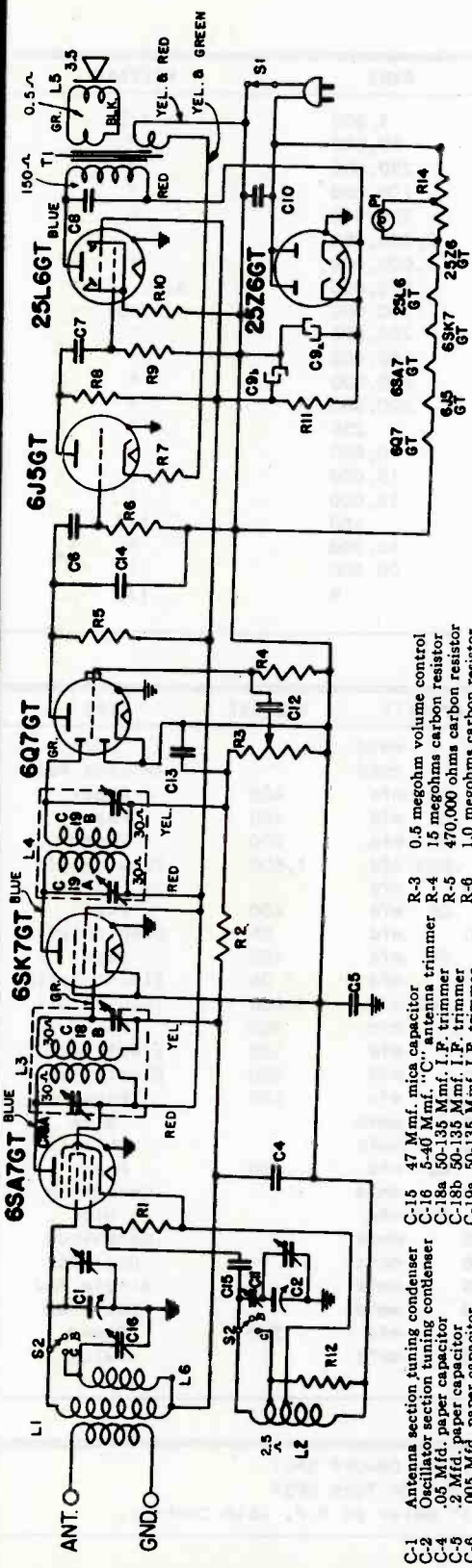
Connect an output meter across the voice coil. Rotate the volume control to maximum. Completely close the gang condenser plates and set the dial pointer to the first dial mark at the low end of the scale. Throw the band switch to "BC" (up).

Set test oscillator to 455 KC and apply signal to the control grid of the 6SA7 tube through a .05 mfd. capacitor. Do not remove the 6SA7 grid lead. Keep the test oscillator output as low as a readable meter reading will permit. Adjust all I.F. trimmers for maximum meter reading.

R.F. Alignment

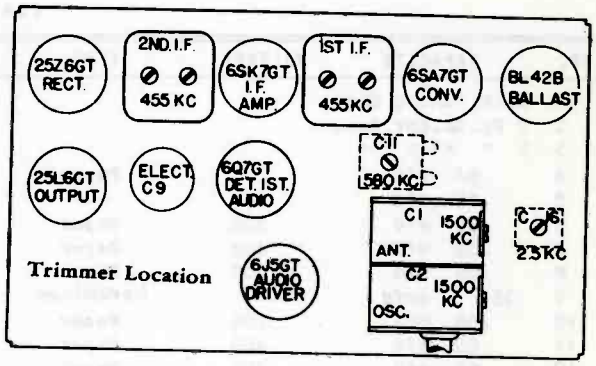
Apply a 1500 KC signal either through a standard I.R.E. dummy to the antenna terminal or through an additional loop connected to the signal generator output which can be magnetically coupled to the receiver Beam-a-Scope. When using an I.R.E. dummy antenna for R.F. alignment do not connect a ground lead between the signal generator and the receiver. Align (C-2) at 1500 KC and peak (C-1) for maximum output. Change signal to 580 KC and tune receiver to signal. Peak (C-11) on the 580 KC signal by rocking the gang condenser. Retrim at 1500 KC.

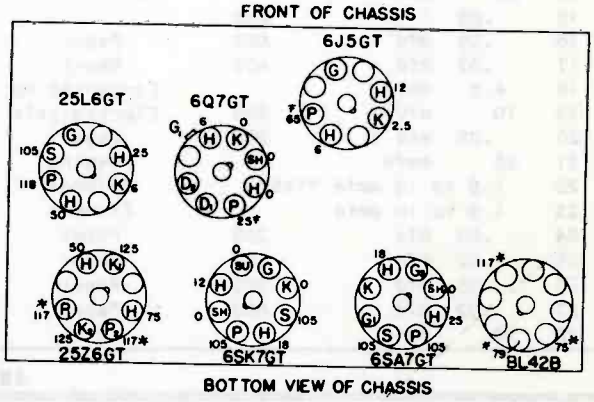
Throw the band switch to "SW" band. Peak (C-16) on 2500 KC.



C-1	Antenna section tuning condenser	C-15	47 Mmf. mica capacitor
C-2	Oscillator section tuning condenser	C-16	5-40 Mmf. "C" antenna trimmer
C-4	.05 Mfd. paper capacitor	C-18a	50-135 Mmf. I.F. trimmer
C-5	.2 Mfd. paper capacitor	C-18b	50-135 Mmf. I.F. trimmer
C-6	.005 Mfd. paper capacitor	C-19a	50-135 Mmf. I.F. trimmer
C-7	.005 Mfd. paper capacitor	C-19b	50-135 Mmf. I.F. trimmer
C-8	.01 Mfd. paper capacitor	L-1	Beam-a-Scope
C-9a	50 Mfd., 150 V. dry electrolytic	L-2	Oscillator coil
C-9b	30 Mfd., 150 V. dry electrolytic	L-3	1st I.F. transformer
C-10	.05 Mfd. paper capacitor	L-4	2nd I.F. transformer
C-11	300-675 Mmf. padder	L-6	"C" band antenna coil
C-12	.03 Mfd. paper capacitor	P-1	Dial lamp, MAZDA No. 44
C-13	470 Mmf. mica capacitor	R-1	33,000 ohms carbon resistor
C-14	220 Mmf. mica capacitor	R-2	2.2 megohms carbon resistor

R-3	0.5 megohm volume control
R-4	15 megohms carbon resistor
R-5	470,000 ohms carbon resistor
R-6	1.0 megohms carbon resistor
R-7	3300 ohms carbon resistor
R-8	39,000 ohms carbon resistor
R-9	470,000 ohms carbon resistor
R-10	150 ohms carbon resistor
R-11	1000 ohms, 1 W. carbon resistor
R-12	4700 ohms carbon resistor
R-14	Ballast resistor BL-42-B
T-1	Output transformer





VOLTAGES MEASURED BETWEEN SOCKET TERMINALS AND MINUS B
* MEASURED ON 250 VOLT SCALE OF 1000 OHMS PER VOLT METER.
* VOLTS AC.
LINE VOLTS—117 A.C. GANG CLOSED MAX. VOLUME

SUPER DEFIANT MODEL SX25

RESISTORS

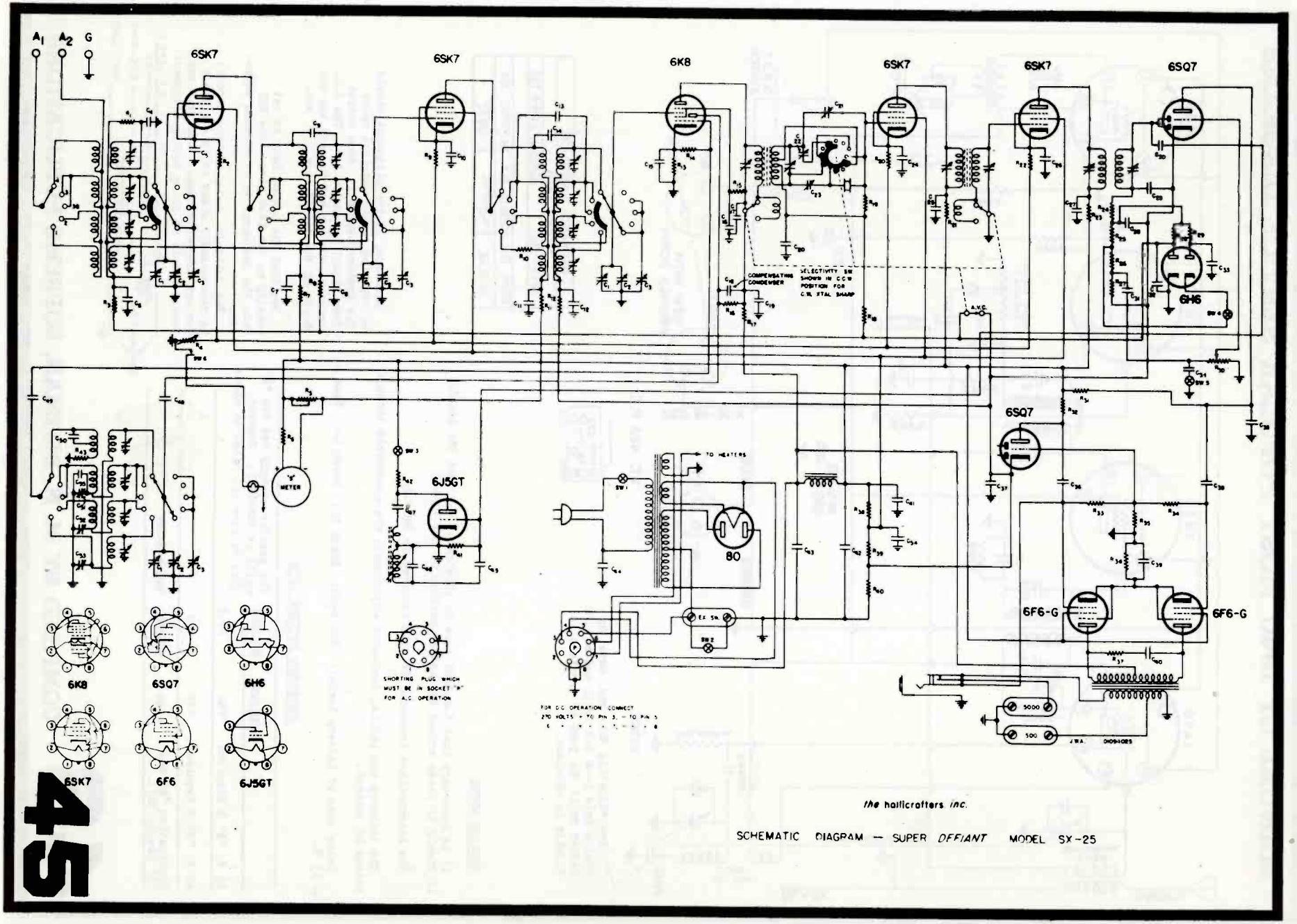
NO.	OHMS	WATTAGE	NO.	OHMS	WATTAGE
R1	100,000	1/3	23	3,000	1/3
2	400	"	24	50,000	"
3	100,000	"	25	250,000	"
4	10,000	R. F. Gain	26	100,000	"
5	500	S Meter	27	250,000	"
6	100	1/3	28	2,000,000	"
7	3,000	"	29	1,000,000	"
8	100,000	"	30	500,000	A.F. Gain
9	400	"	31	250,000	1/3
10	500	"	32	250,000	"
11	3,000	"	33	250,000	"
12	100,000	"	34	250,000	"
13	400	"	35	200,000	"
14	50,000	"	36	250	1
15	30,000	1	37	20,000	1
16	15,000	1	38	15,000	1
17	4,000	1	39	15,000	1
18	100,000	1/3	40	150	1/3
19	500,000	"	41	50,000	"
20	800	"	42	20,000	1
21	3,000	"	43	8	1/3
22	1,000	"			

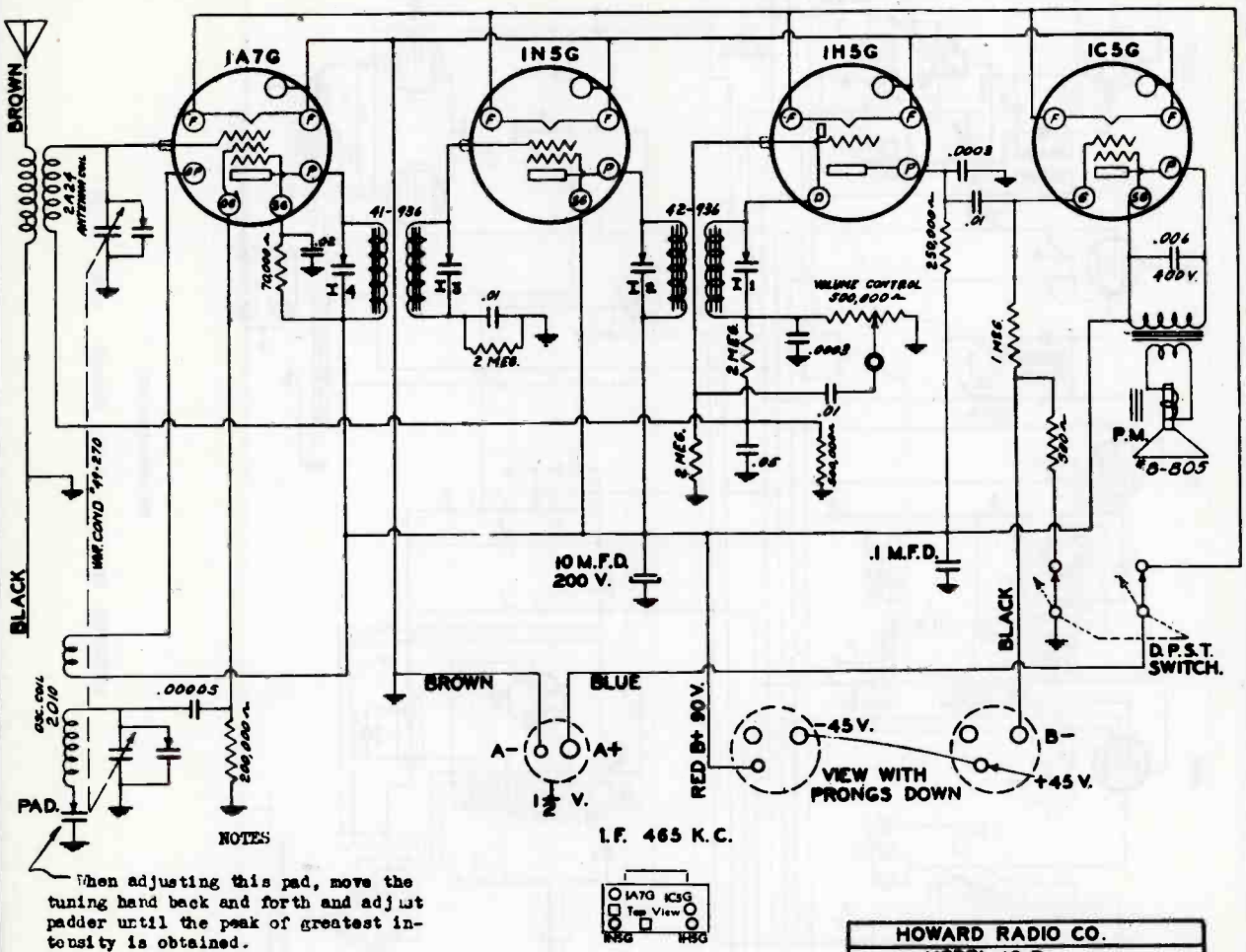
CONDENSERS

NO.	CAPACITY	VOLTAGE	TYPE	NO.	CAPACITY	VOLTAGE	TYPE
C1	Main Tuning Gang			29	100 mmfd		Mica
2	2 PL.Bd.Spr.Sec.			30	3 mmfd		Twisted Pair
3	5 " " " "			31	.02 mfd	400	Paper
4	.01 mfd	200	Paper	32	.02 mfd	400	Paper
5	.05 mfd	200		33	.05 mfd	200	Paper
6	.05 mfd	200	Paper	34	.002 mfd	1,600	Tubular Oil
7	.02 mfd	400	Paper	35	250 mfd		Mica
8	.05 mfd	200	Paper	36	.05 mfd	400	Paper
9	35 mmfd		Ceramicon	37	10 mfd	25	Electrolytic
10	.05 mfd	200	Paper	38	.05 mfd	400	Paper
11	.02 mfd	400	Paper	39	10 mfd	25	Electrolytic
12	.05 mfd	200	Paper	40	.002 mfd	1,600	Tubular Oil
13	5 mmfd		Ceramicon	41	.1 mfd	400	Paper
14	35 mmfd		Ceramicon	42	10 mfd	350	Electrolytic
15	.05	200		43	30 mfd	350	Electrolytic
16	.05 mfd	400	Paper	44	.01 mfd	600	Paper
17	.02 mfd	400	Paper	45	100 mmfd		Mica
18	4.5 mmfd		Compensating	46	500 mmfd		Mica
19	10 mfd	350	Electrolytic	47	.02 mfd	400	Paper
20	.05 mfd	200	Paper	48	105 mmfd		Ceramicon
21	25 mmfd		Phasing	49	.002 mfd		Mica
22	1.5 to 18 mmfd "TXS"		Trimmer	50	105 mmfd		Ceramicon
23	1.5 to 18 mmfd		Trimmer	51	2300 mmfd		Dual Pad
24	.05 mfd	200	Paper	52	1400 mmfd		Single Pad
25	.02 mfd	400	Paper	53	450 mmfd		Dual Pad
26	.05 mfd	200	Paper	54	.1 mfd	200	Paper
27	.02 mfd	400	Paper	55	700 mmfd		Mica
28	50 mmfd		Mica				

SWITCHES

SW1 - AC ON-OFF on A.F. Gain Control
SW2 - Stand-by SPST
SW3 - B.F.O. ON-OFF SPST
SW4 - A.N.L. ON-OFF SPST
SW5 - High-Low Tone SPST
SW6 - "S" Meter on R.F. Gain Control.


A1
A2
G
6SK7
6SK7
6K8
6SK7
6SK7
6SQ7
6H6
6SQ7
6J5GT
80
6F6-G
6F6-G
"S" METER
TO HEATERS
SHORTING PLUG WHICH MUST BE IN SOCKET "P" FOR A.C. OPERATION
6K8
6SQ7
6H6
6SK7
6F6
6J5GT
the hallicrafters inc.
SCHEMATIC DIAGRAM — SUPER DEFIANT MODEL SX-25
45



NOTES

When adjusting this pad, move the tuning hand back and forth and adjust padder until the peak of greatest intensity is obtained.

HOWARD RADIO CO.		
MODEL 12-B		
10-27-39.	DWG. NO. D64-715	
DWN. BY.	CHKD. BY.	APPVD. BY.
R.B.M.		

SERVICE NOTES

It is necessary that the IN5G tube be shielded. See that the shield is firmly in place around the bottom portion of the tube.

The intermediate frequency of this receiver is 465 K.C.

The trimmers and padding condenser adjustments are accessible through bottom of cabinet.

Color code of battery leads:- Red B+90; Black B-; Brown A-; Blue A + 1½ V.

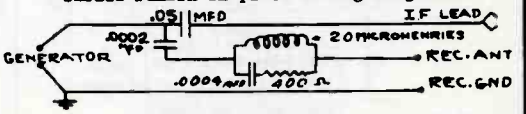
RECOMMEND BATTERY KITS

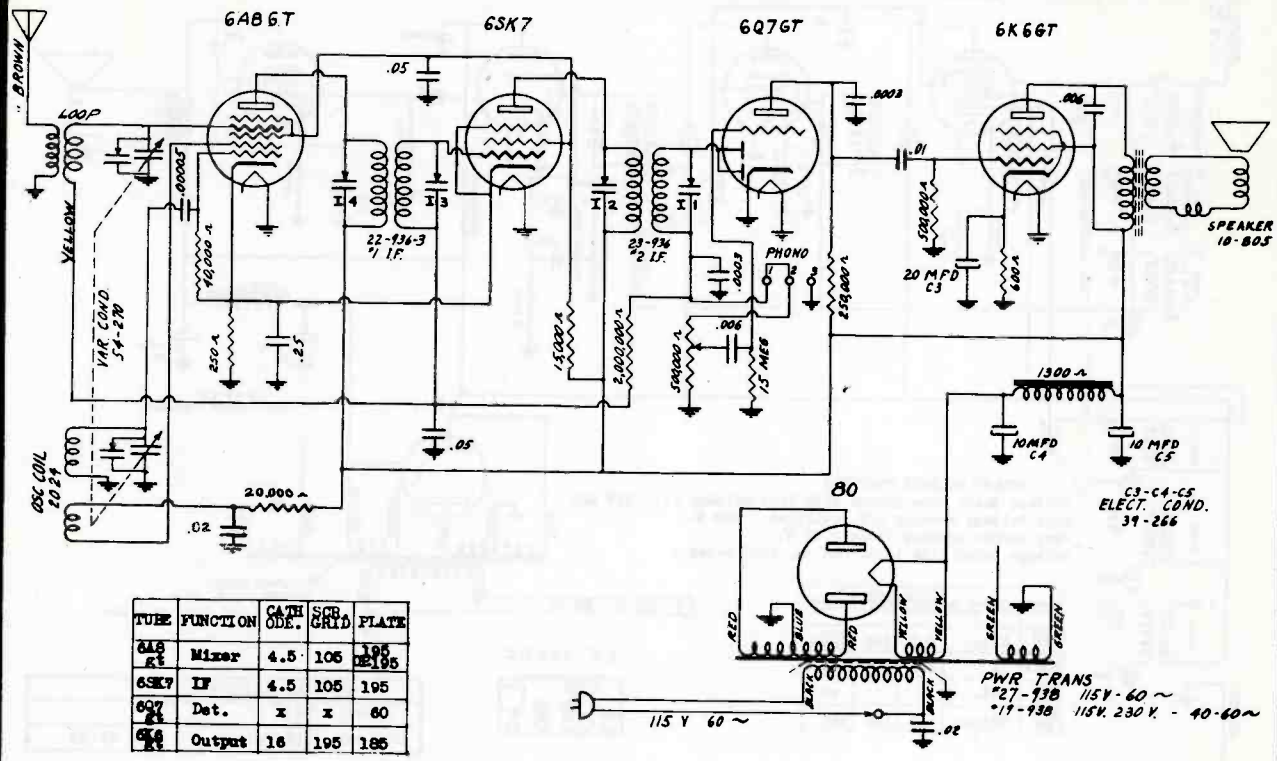
	EVEREADY	BURGESS	
1½ V. "A" 1 Required	740	20-F	For greater economy use two "A" cells in PARALLEL. Connect plus to plus and minus to minus.
45 V. "B" 2 Required	749	D60	
Combination "A" and "B" Single Unit.	746	17GD60	Use Adapter

Each step of the alignment should be repeated in the original order for greater accuracy. Keep output from Signal Generator low. The I.F. trimmers are reached through the two holes on the top of each I.F. can.

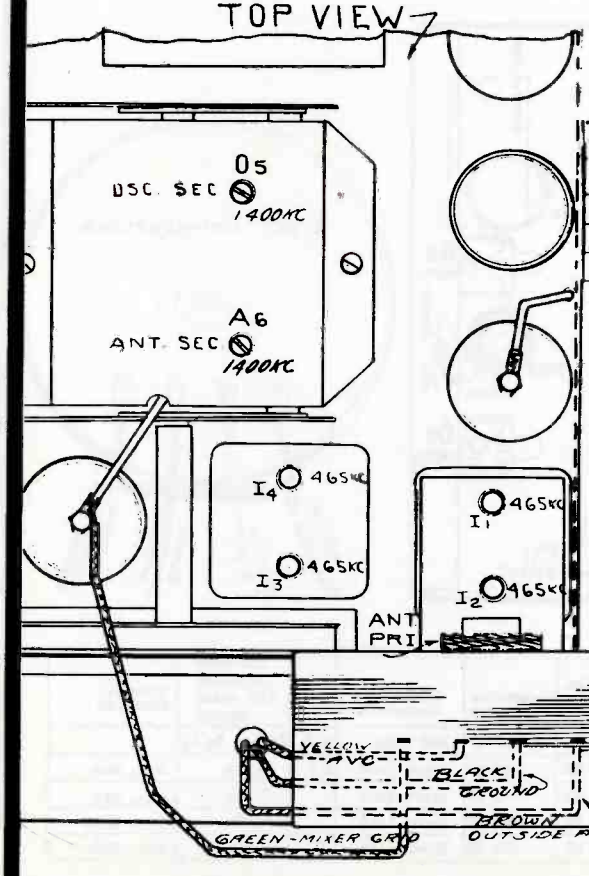
See that the tuning hand is set exactly on the last line above 540 when the condenser is at maximum capacity.

The following dummy antenna circuit is recommended, since it is adaptable for any frequency range. The grid cap should remain in place during alignment.





TUBE	FUNCTION	CATHODE.	SCR. GRID	PLATE
6A8 G.T.	Mixer	4.5	105	195 to 195
6SK7	IF	4.5	105	195
6Q7 G.T.	Det.	x	x	60
6K6 G.T.	Output	16	195	185



Howard Radio Model 300

ALIGNMENT PROCEDURE

Wave-Band Switch Position	Position of Dial Pointer	Generator Frequency	Generator Connection	See Note	Trimmers Adjusted (In order shown)	Trimmer Function
x	Min. Cap.	465 KC	6A8 Grid	A,E	I_1 I_2 I_3 I_4	IF
x	1400 KC	1400 KC	Brown lead	D	O_5 A_6	Osc. & Ant.
x	600 KC	600 KC	Brown lead		OUT PLATE	OSC. SECTION

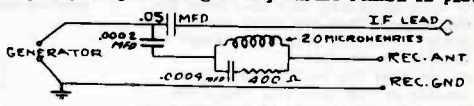
A- Each step of the alignment should be repeated in the original order for greater accuracy. Keep output from Signal Generator low. The I.F. trimmers are reached through the two holes on the top of each I.F. can.

B- When aligning the short wave bands, do not adjust to the IMAGE frequency. For example, if the adjustment is correctly made at 21 MC, then a weaker image will be heard at 21,000 KC less 930 KC, or about 20,070 KC on the dial.

C- When adjusting this pad, move the tuning hand back and forth and adjust padder until the peak of greatest intensity is obtained.

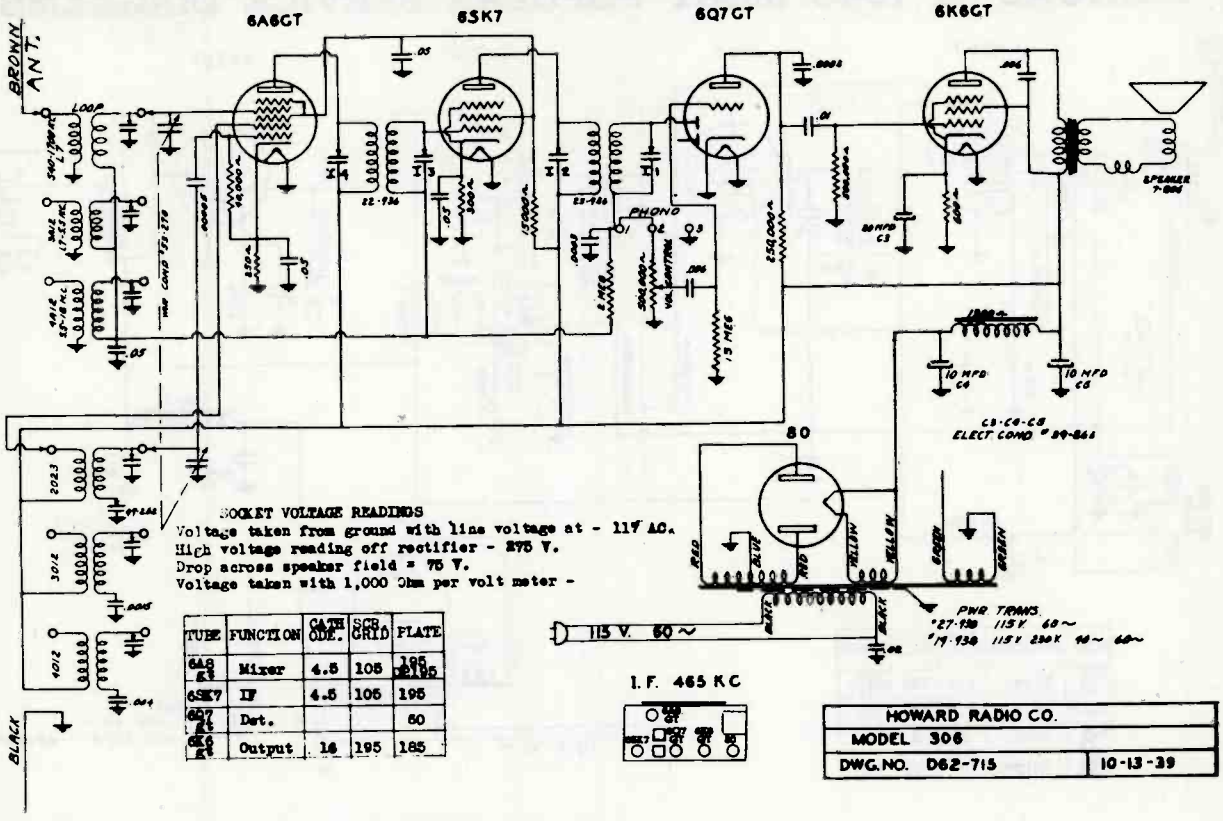
D- See that the tuning hand is set exactly on the last line above 540 when the condenser is at maximum capacity.

E- The following dummy antenna circuit is recommended, since it is adaptable for any frequency range. The grid cap should remain in place during alignment.



SOCKET VOLTAGE READINGS

Voltage taken from ground with line voltage at - 117 AC.
High voltage reading off rectifier = 275 V.
Drop across speaker field = 75 V.
Voltage taken with 1,000 Ohm per volt meter -

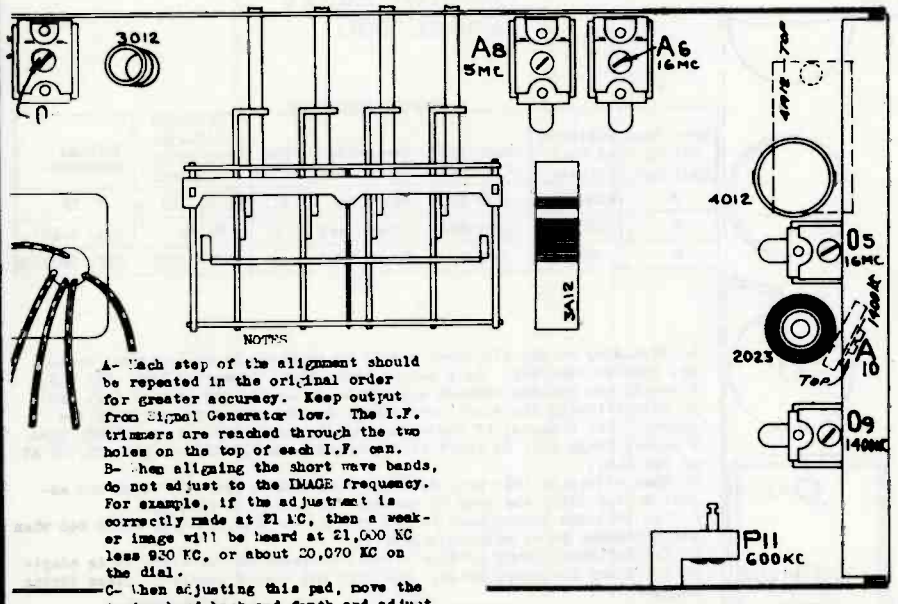


SOCKET VOLTAGE READINGS
Voltage taken from ground with line voltage at - 117 AC.
High voltage reading off rectifier - 275 V.
Drop across speaker field = 75 V.
Voltage taken with 1,000 Ohm per volt meter -

TUBE	FUNCTION	CATH ODE.	SCR GRID	PLATE
6A8 G	Mixer	4.5	105	195
6SK7	IF	4.5	105	195
6Q7 G	Det.			60
6K6 G	Output	16	195	185

I.F. 465 KC

HOWARD RADIO CO.	
MODEL 306	
DWG. NO. D62-715	10-13-39



A- Each step of the alignment should be repeated in the original order for greater accuracy. Keep output from Signal Generator low. The I.F. trimmers are reached through the two holes on the top of each I.F. can.
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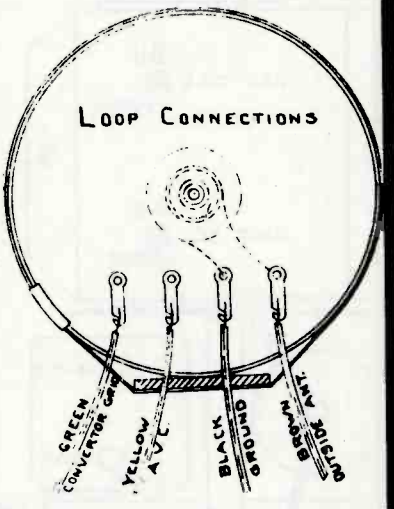
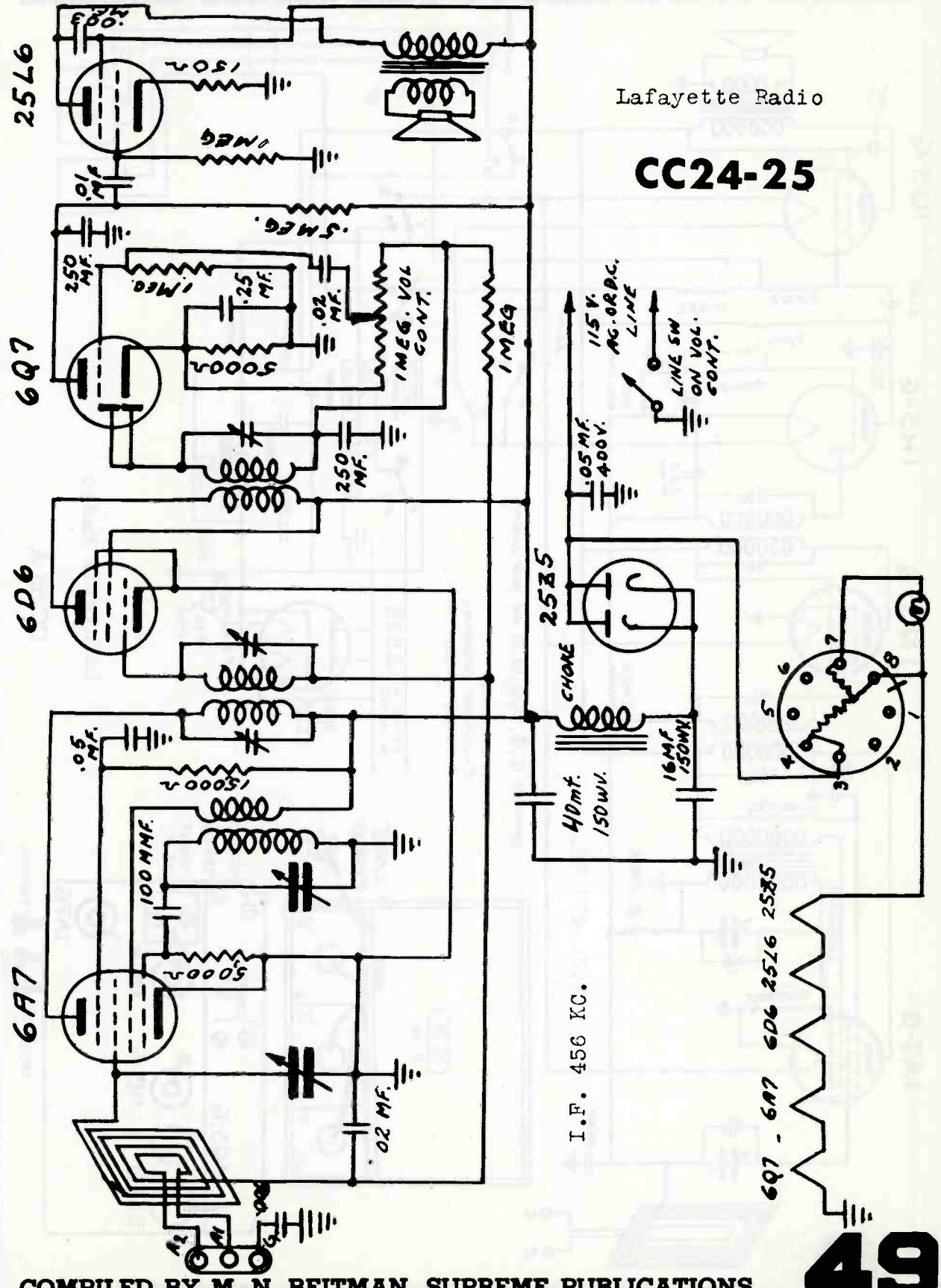


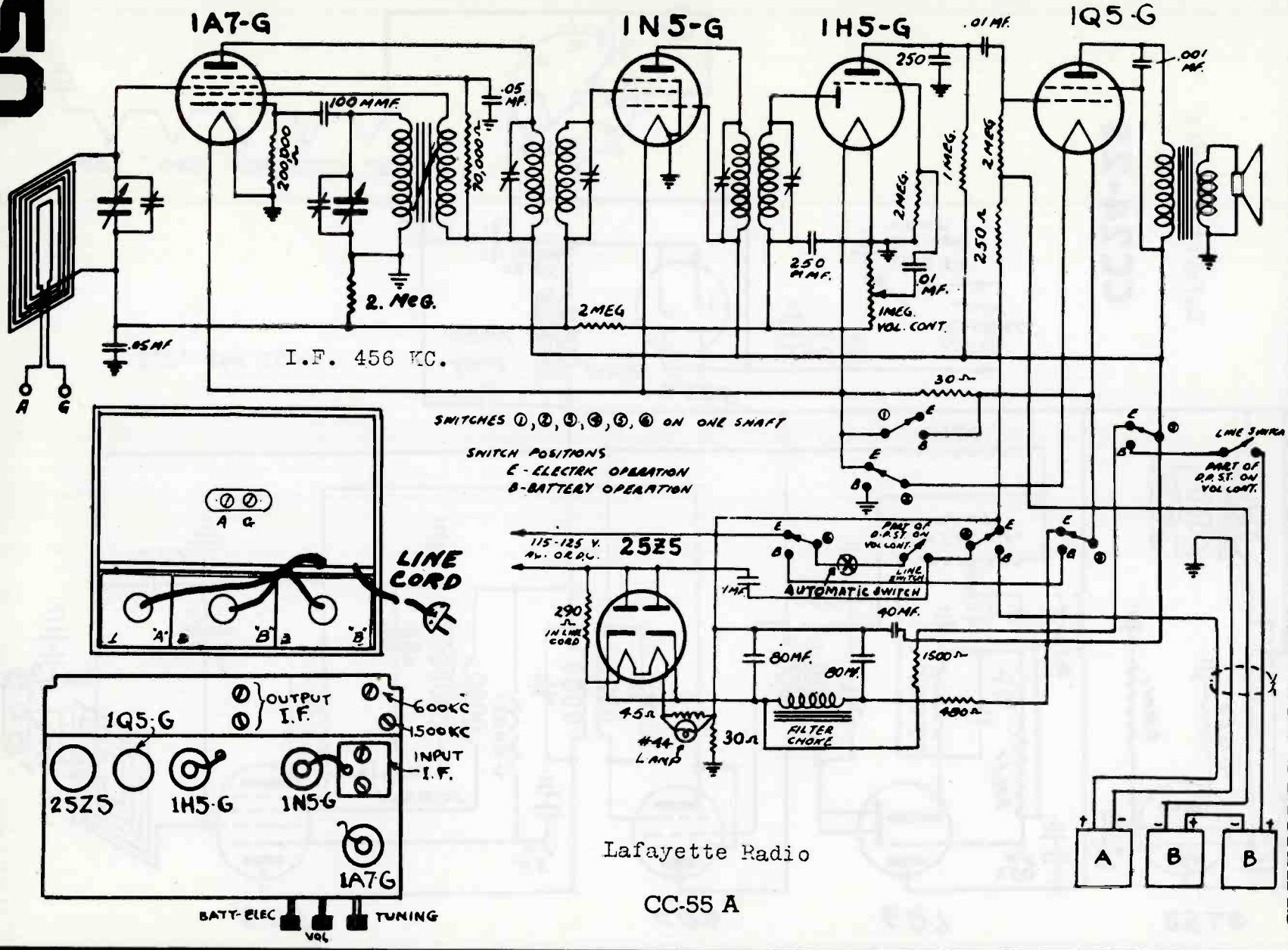
ALIGNMENT PROCEDURE

Wave-Band Switch Position	Position of Dial Pointer	Generator Frequency	Generator Connection	See Note	Trimmers Adjusted (In order shown)	Trimmer Function
BC	Min. Cap.	465 KC	6A8 Grid	A,E	I_1 I_2 I_3 I_4	IF
SW	16 MC	16 MC	Brown lead	B,D	O_5 A_8	Osc. Ant.
PB	5 MC	5 MC	Brown lead		O_7 A_8	Osc. Ant.
BC	1400 KC	1400 KC	Brown lead		O_9 A_{10}	Osc. Ant.
BC	600 KC	600 KC	Brown lead	C	P_{11}	Osc. Pad.

Lafayette Radio

CC24-25



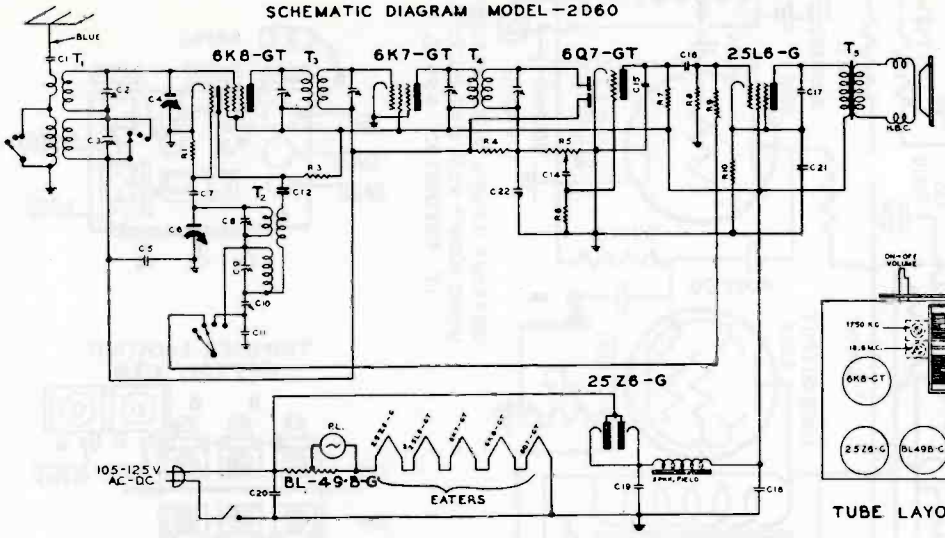


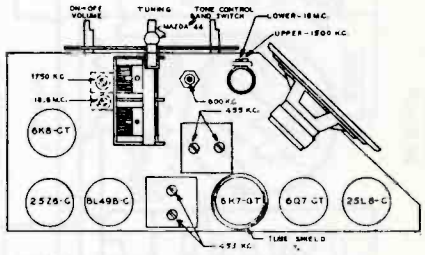
Lafayette Radio

CC-55 A

SCHEMATIC DIAGRAM MODEL-2D60

Majestic Radio





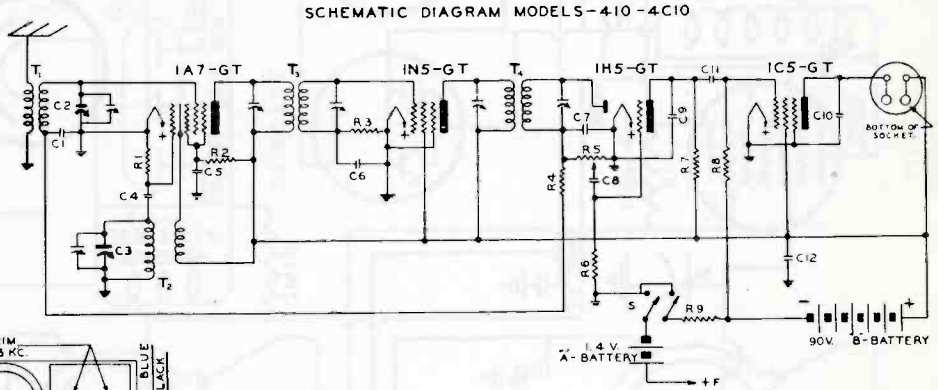
TUBE LAYOUT MODEL-2D60

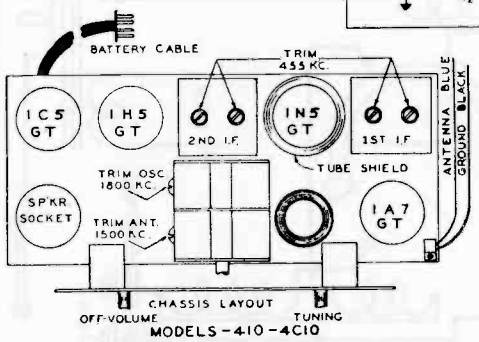
Schematic Location	Part No.	Description
C1,C12,C16, C17	C-15754	Tubular cond. .01 mfd. 400V
C4,C6	Y-CV-16A	Variable Condenser
C5	C-15752	Tubular cond. .05 mfd. 200V
C7	CM-31	Mica cond. 100 mmfd. 30%
C10	Y-CP-8	Padder Condenser
C11	CM-2	Mica cond. 4330 mmfd. 5%
C14	C-31	Tubular cond. .004 mfd. 400V
C15,C22	CM-30	Mica cond. 250 mmfd. 30%
C18,C19,C21	CE-46	Electrolytic Condenser
C20	C-15756	Tubular cond. .05 mfd. 400V
P.L.	LB-44	Mazda Bulb #44

Schematic Location	Part No.	Description
T1	Y-ANA-10	Antenna Assembly
T2	Y-OSA-10	Oscillator Assembly
T3	Y-IFA-10	1st I. F. Transformer
T4	Y-IFA-11	2nd I. F. Transformer
R1	R-15511	Carbon res. 50K ohm ½W 20%
R3	R-15531	Carbon res. 10K ohm ½W 20%
R4	R-15500	Carbon resistor 2meg ½W 20%
R5	Y-VC-21	Volume Control and Switch
R6,R8	R-50	Carbon resistor 5meg ½W 20%
R7	R-15504	Carbon res. 150K ohm ½W 20%
R9	R-15500	Carbon res. 20K ohm ½W 20%
R10	R-80	Carbon res. 110 ohm ½W 20%

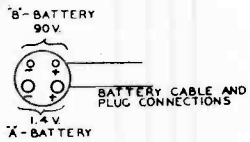
SCHEMATIC DIAGRAM MODELS-410-4C10

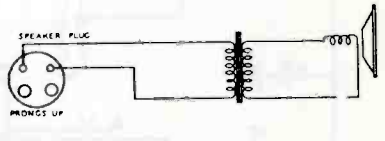
Majestic Radio





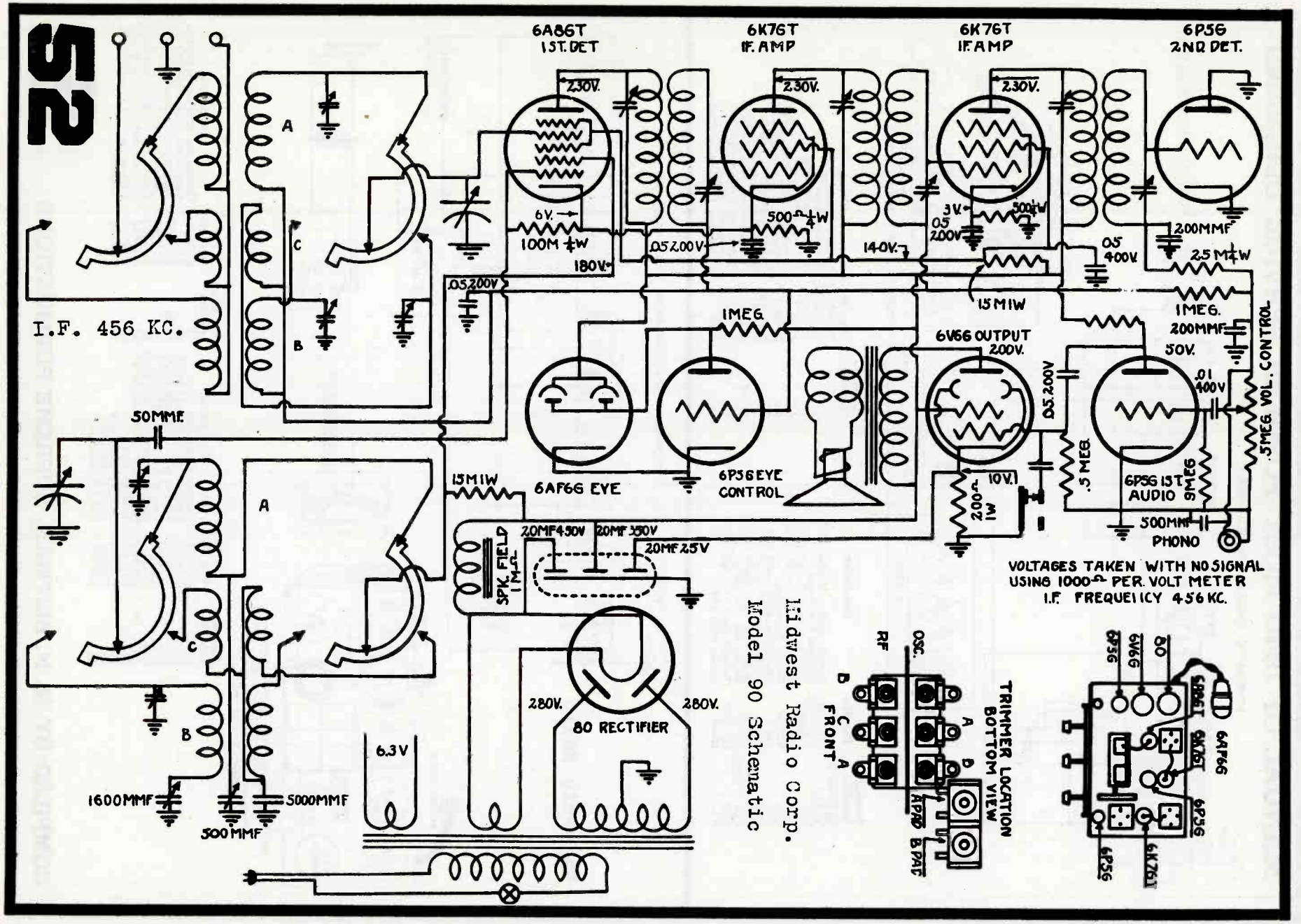
MODELS-410-4C10





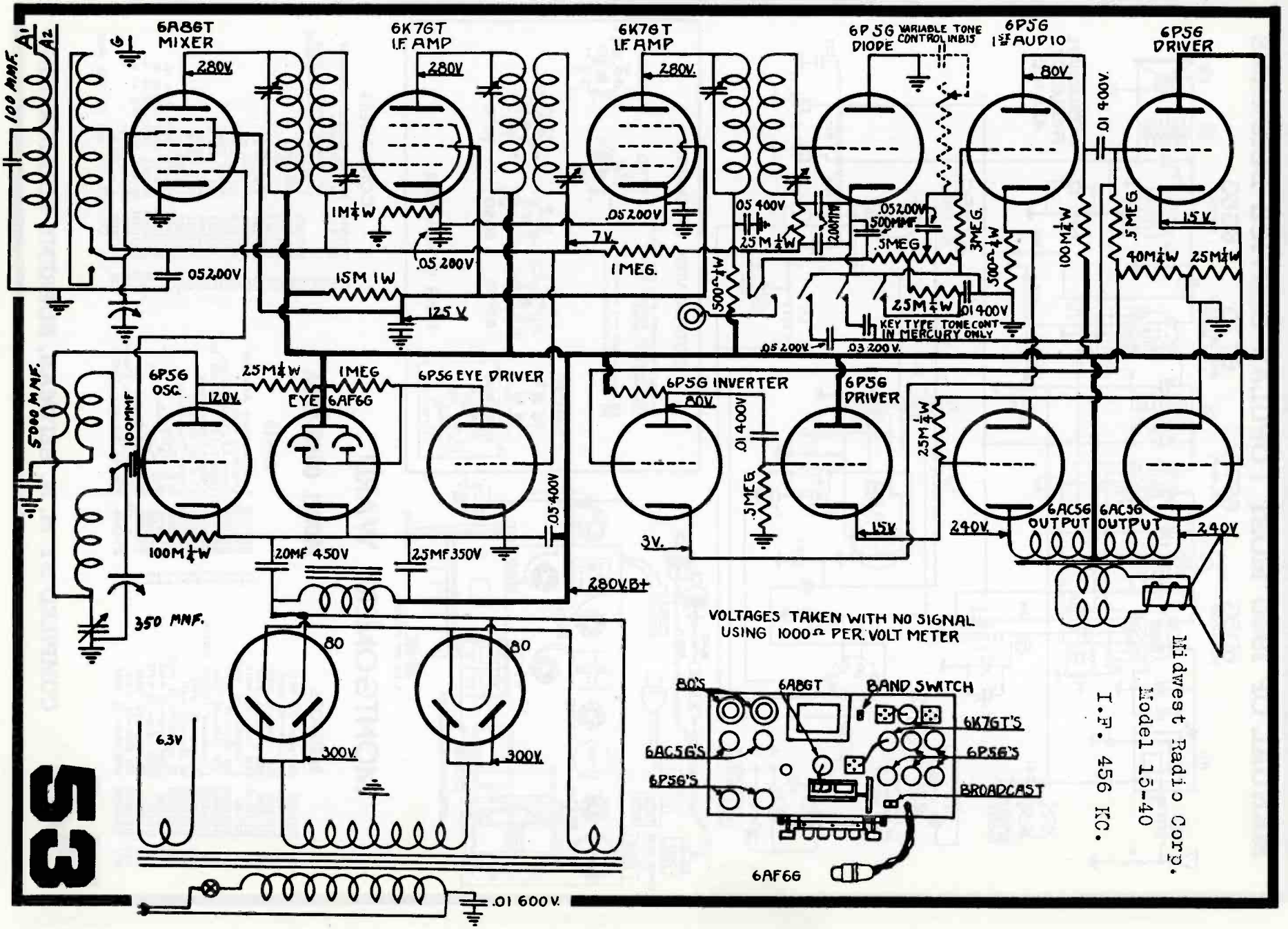
Schematic Location	Part No.	Description
C2,C3	Y-CV-26	Variable Condenser
C1,C5	C-15752	Tubular cond. .05 mfd. 200V
C6,C8,C11	C-15763	Tubular cond. .01 mfd. 200V
C10	C-15774	Tubular cond. .002 mfd. 400V
C12	CE-35	8 mfd. 150V Electrolytic cond.
C4,C7,C9	CM-31	Mica cond. 100 mmfd. 30%
T1	Y-CS 62	Antenna Coil
T2	Y-OSA-11	Oscillator Assembly
T3	Y-CI-29	1st I. F. Assembly
T4	Y-CI-30	2nd I. F. Assembly

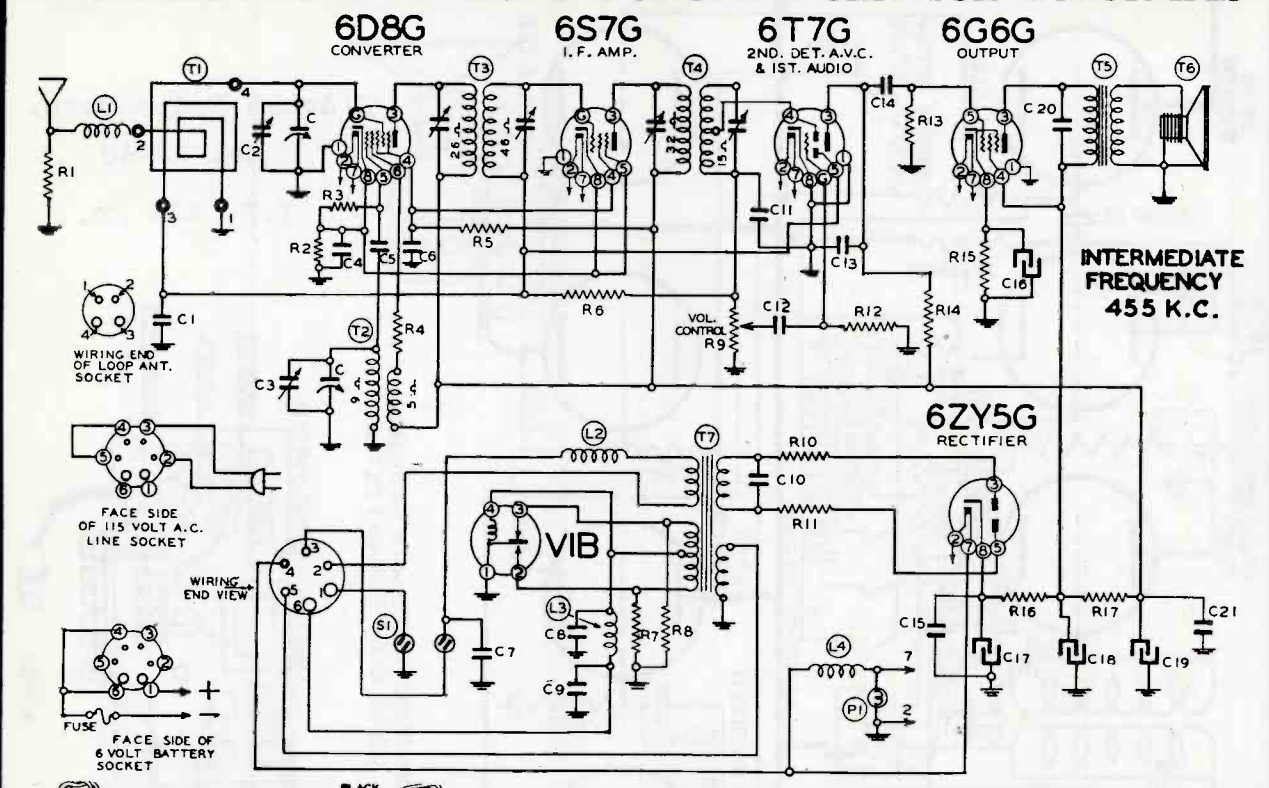
Schematic Location	Part No.	Description
R1	R-15523	Carbon res. 200K ohm ¼W 20%
R2	R-44	Carbon res. 70K ohm ¼W 10%
R3,R4	R-15500	Carbon resistor 2meg ¼W 20%
R6	R-15559	Carbon resistor 3meg ¼W 20%
R7	R-15520	Carbon res. 500K ohm ¼W 20%
R8	R-15517	Carbon resistor 1meg ¼W 20%
R9	R-72	Carbon res. 600 ohm ¼W 20%
R5	Y-VC-43	Volume Control

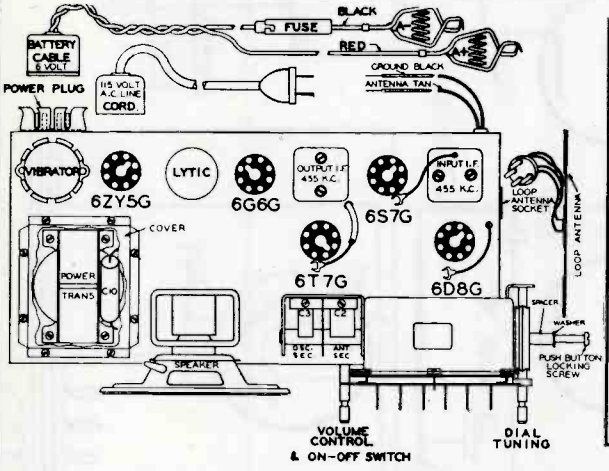


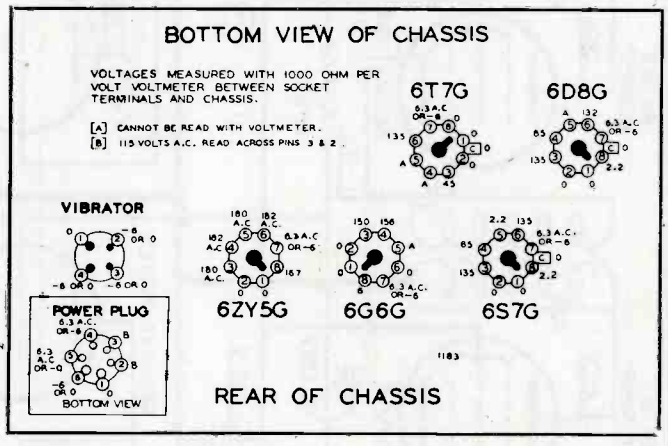
VOLTAGES TAKEN WITH NO SIGNAL
USING 1000Ω PER VOLT METER
I.F. FREQUENCY 456 KC.

Midwest Radio Corp.
Model 90 Schematic


6A8GT MIXER
6K7GT I.F. AMP
6K7GT I.F. AMP
6P5G DIODE
6P5G VARIABLE TONE CONTROL IN B15
6P5G 1ST AUDIO
6P5G DRIVER
6P5G OSC.
6P5G EYE DRIVER
6AF6G EYE
6P5G INVERTER
6P5G DRIVER
6AC5G OUTPUT
6AC5G OUTPUT
KEY TYPE TONE CONT IN MERCURY ONLY
350 MNF.
280V B+
VOLTAGES TAKEN WITH NO SIGNAL
USING 1000Ω PER VOLT METER
80'S
6A8GT
BAND SWITCH
6K7GT'S
6P5G'S
BROADCAST
6AC5G'S
6P5G'S
6AF6G
6.3V
300V.
300V.
Midwest Radio Corp.
Model 15-40
I.F. 456 KC.







MONTGOMERY WARD

MODEL 04BR-570A

RESISTORS

R1	BE13022	5M ohm—⅓ watt
R2	BE130166	150 ohm—⅓ watt
R3	BE13012	50M ohm—⅓ watt
R4	BE13026	1000 ohm—⅓ watt
R5	BE130157	12M ohm—⅓ watt
R6	BE1304	3 megohm—⅓ watt
R7	BE130168	100 ohm—⅓ watt
R8	BE130168	100 ohm—⅓ watt
R9	BE101225	1 megohm volume control
R10	BE130233	60 ohm—⅓ watt
R11	BE130233	60 ohm—⅓ watt
R12	BE130223	10 megohm—⅓ watt
R13	BE13037	750M ohm—⅓ watt
R14	BE13011	250M ohm—⅓ watt
R15	BE13079	400 ohm—⅓ watt
R16	BE130222	350 ohm—⅓ watt
R17	BE130235	1500 ohm—⅓ watt

PARTS

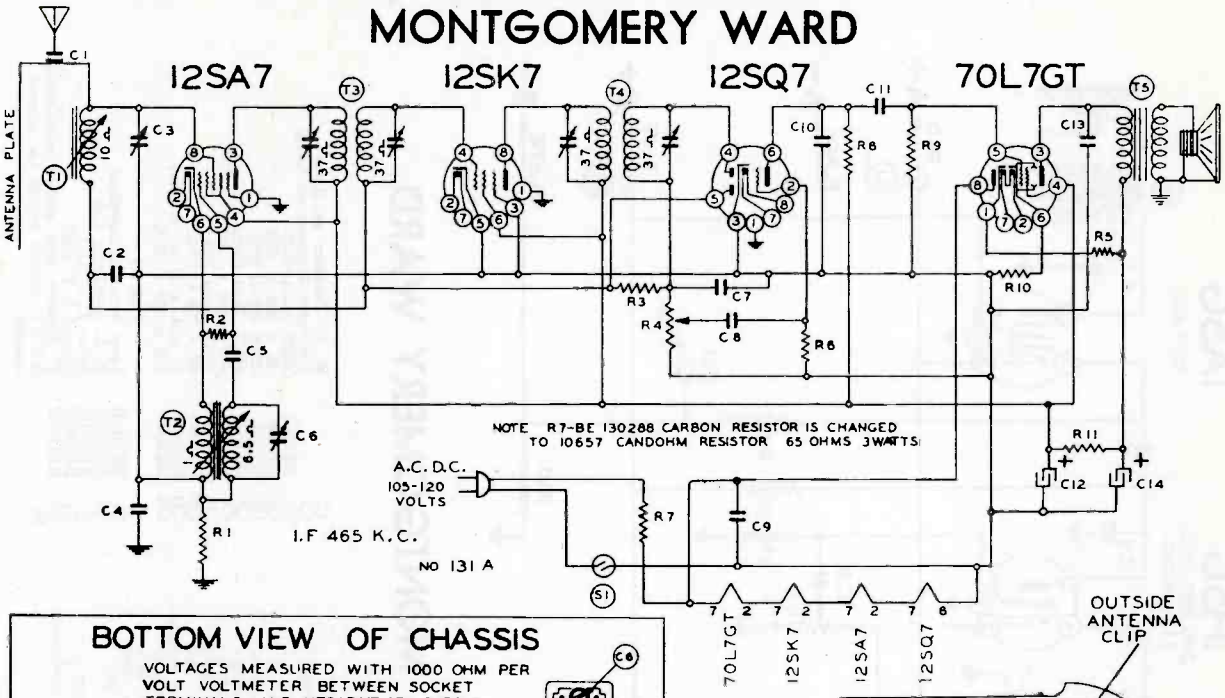
T1	BE111187	Loop Antenna Assembly
T2	BE110155	Oscillator Coil
T3	BE108129C	Input I.F. Coil—455 kc.
T4	BE108130D	Output I.F. Coil—455 kc.
T5	BE105113	Output Transformer
T6	BE114205	5" P.M. Speaker
T7	BE104216	Power Transformer
L1	BE12312	R.F. Choke
L2	BE10566	R.F. "A" Choke
L3	BE10568	R.F. Choke
L4	BE10566	R.F. "A" Choke
		On-Off Switch on Volume Control
P1	BE12626	Plug-in Vibrator Unit

CONDENSERS

C	BE102134	2 gang variable condenser
C1	BE1009	.05 x 200 volts
C2		Antenna trimmer on gang
C3		Oscillator trimmer on gang
C4	BE10020	.1 x 200 v.
C5	BE1295	.0001 mica
C6	BE10020	.1 x 200 v.
C7	BE10013	.05 x 400 v.
C8	BE10031	.5 x 120 v.
C9	BE10031	.5 x 120 v.
C10	BE10073	.008 x 1200 v.
C11	BE12951	.000125 mica
C12	BE10012	.003 x 600 v.
C13	BE12960	.00015 mica
C14	BE10011	.01 x 400 v.
C15	BE10020	.1 x 200 v.
C16	BE119111	20 mfd. lytic—25 w. v.
C17	BE119111	40 mfd. lytic—200 w. v.
C18	BE119111	20 mfd. lytic—200 w. v.
C19	BE119111	20 mfd. lytic—200 w. v.
C20	BE10019	.006 x 600 v.
C21	BE10020	.1 x 200 v.

C16, C17, C18, C19 are in same unit

MONTGOMERY WARD

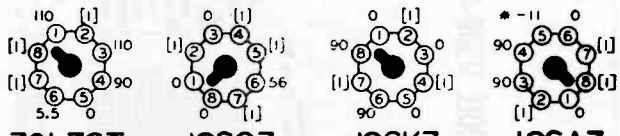


BOTTOM VIEW OF CHASSIS

VOLTAGES MEASURED WITH 1000 OHM PER VOLT VOLTMETER BETWEEN SOCKET TERMINALS AND NEGATIVE "B" SUPPLY.

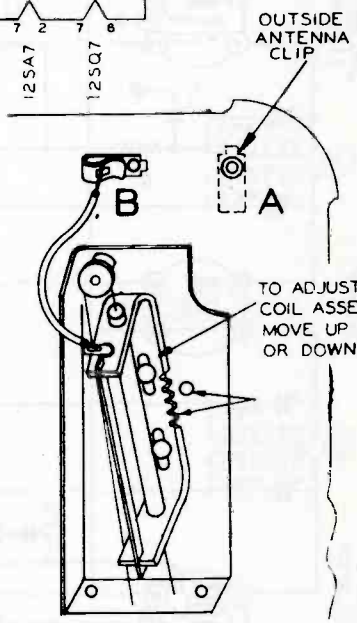
[1] CANNOT BE MEASURED WITH VOLTMETER.

* OSCILLATOR VOLTAGE MEASURED WITH R.F CHOKE IN SERIES WITH LEAD.



REAR OF CHASSIS

962



BOTTOM VIEW

RESISTORS

R1	BE130100	150M ohm—⅓ w.
R2	BE130176	20M ohm—⅓ w.
R3	BE1304	3 megohm—⅓ w.
R4	BE101188	Volume control (500M ohm)
R5	BE130293	30 ohm—1 watt
R6	BE130257	5 megohm—⅓ w.
R7	BE10657	65 ohm—3 watt
R8	BE13011	250M ohm—⅓ w.
R9	BE13011	250M ohm—⅓ w.
R10	BE130166	150 ohm—⅓ w.
R11	BE130279	1M ohm—1 watt

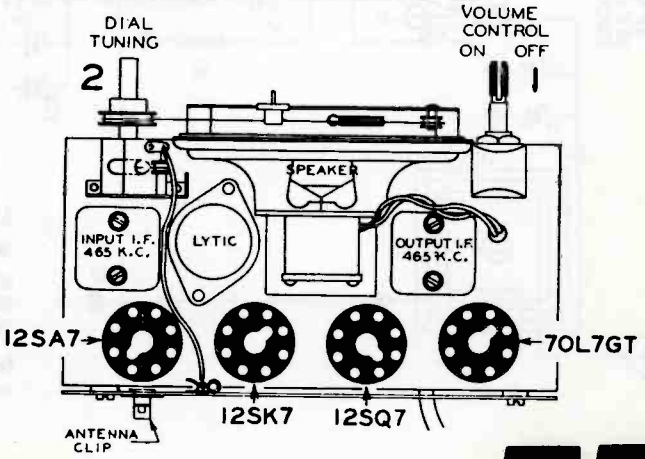
CONDENSERS

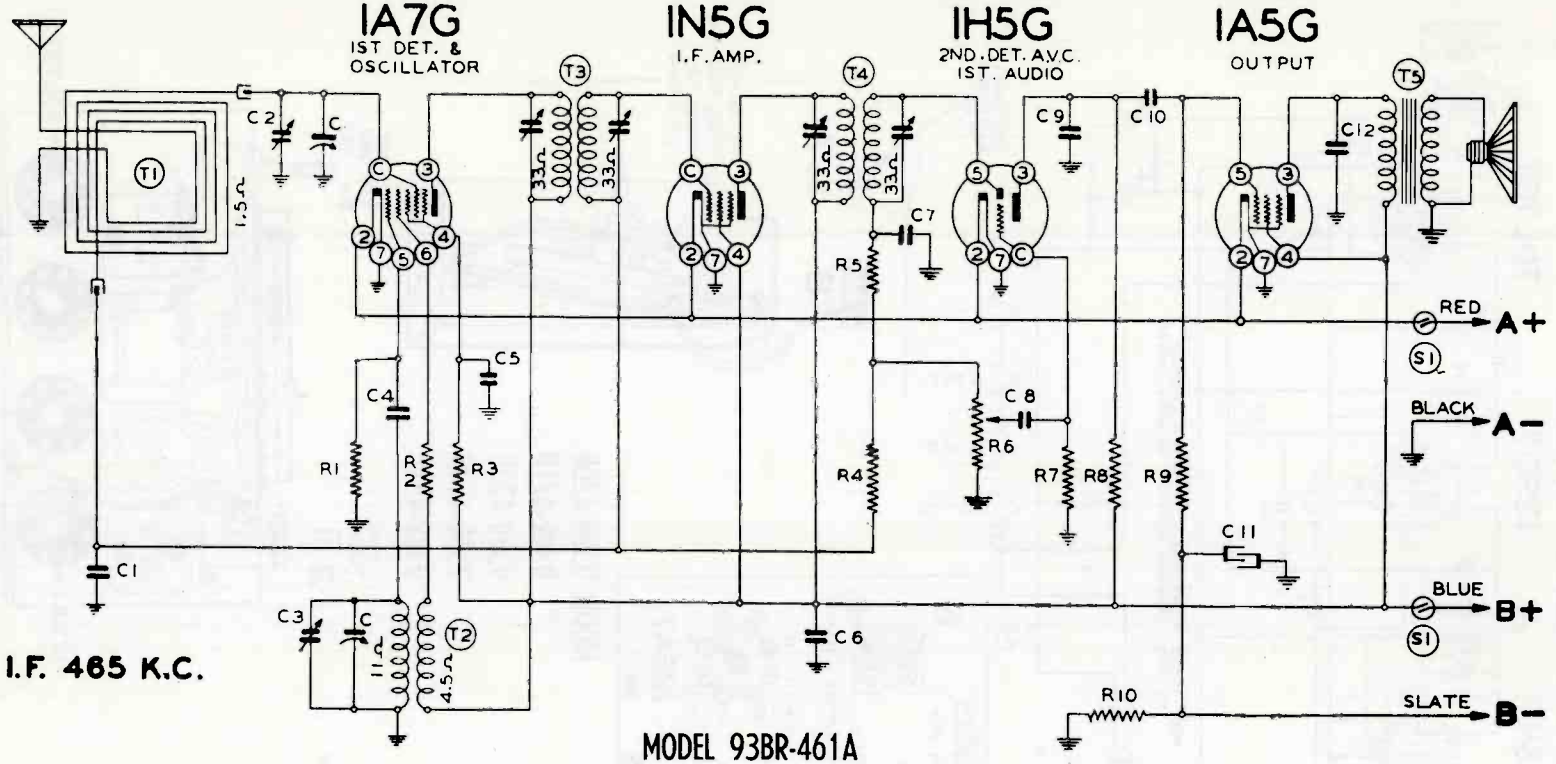
C1	BE131262	.00001 washer condenser (Ant. Clip on Back Plate)
C2	BE1009	.05 x 200 v.
C3	BE124100	Antenna Trimmer
C4	BE10091	.15 x 400 v.
C5	BE12939	.00005 mica
C6	BE124100	Osc. Trimmer
C7	BE12912	.00025 mica
C8	BE10025	.002 x 600 v.
C9	BE10013	.05 x 400 v.
C10	BE1292	.0005 mica
C11	BE10011	.01 x 400 v.
C12	BE11992	20 ufd. x 150 w. v. lytic
C13	BE10011	.01 x 400 v.
C14	BE11992	40 ufd. x 150 w. v. lytic C3 and C6 in one unit C12 and C14 in one unit

PARTS

T1	BE111136	Antenna Coil Complete
T2	BE110126	Oscillator Coil
T3	BE108157	Input I. F. Coil—465 kc.
T4	BE108157B	Output I. F. Coil—465 kc.
T5	BE114170	4 in. P. M. Speaker and Output transformer
S1		Off-on switch on volume control

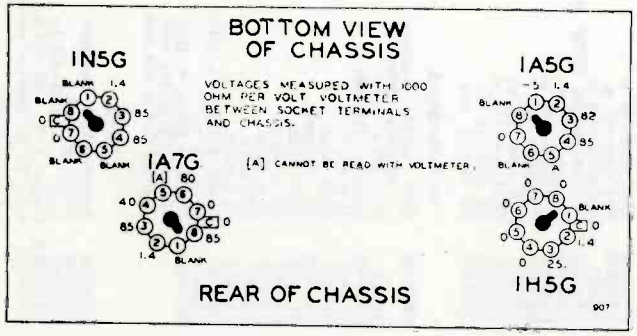
MODEL 93BR-420B
" 93BR-421B
" 93BR-423B
" 93BR-424B
" 93BR-431B



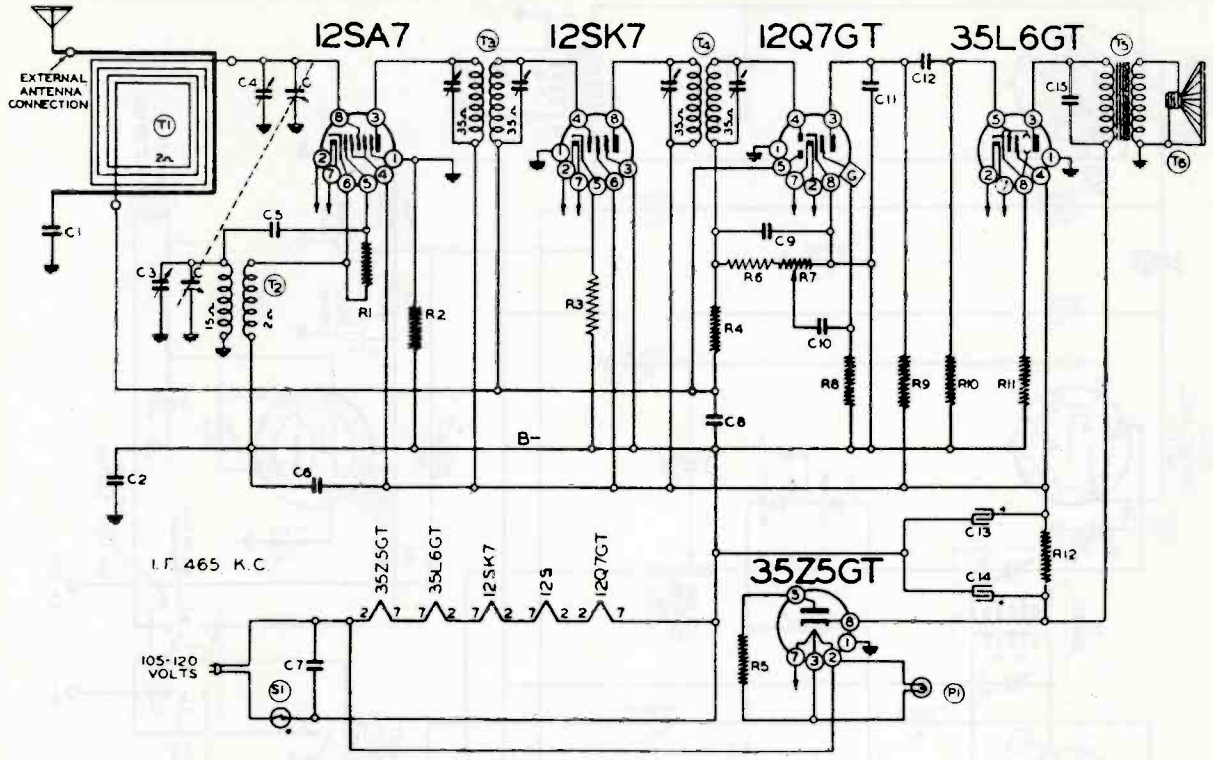


MODEL 93BR-461A

MONTGOMERY WARD



Schematic Ref. No.	Part No.	Description
		RESISTORS
R1	BE1309	200M ohm—½ w. 20%
R2	BE13018	4M ohm—½ w. 20%
R3	BE130208	40M ohm—½ w. 20%
R4	BE13038	2 megohm—½ w. 20%
R5	BE13020	100M ohm—½ w. 20%
R6	BE101173	1 megohm volume control
R7	BE130257	5 megohm—½ w. 25%
R8	BE13037	750M ohm—½ w. 20%
R9	BE13038	2 megohm—½ w. 20%
R10	BE13070	500 ohm—½ w. 10%
		CONDENSERS
C	BE102108	2 gang variable condenser
C1	BE10022	.05 x 200 v. 25%
C2		R. F. Trimmer on Gang
C3		Oscillator Trimmer on Gang
C4	BE12912	.00025 mica—20%
C5	BE1009	.05 x 200 v. 25%
C6	BE1006	.25 x 200 v. 20%
C7	BE12912	.00025 Mica 20%
C8	BE10025	.002 x 600 v. 25%
C9	BE12912	.00025 Mica 20%
C10	BE10078	.01 x 200 v. 25%
C11	BE11975	10 mfd. x 25 w. v. lytic
C12	BE10025	.002 x 600 v. 25%
		PARTS
T1	BE111131	Loop Antenna Complete
T2	BE110121	B. C. Oscillator Coil
T3	BE108151	Input I. F. Coil
T4	BE108152	Output I. F. Coil
T5	BE114165	5" Speaker with output transformer
S1		D.P.S.T. On-off switch on volume control



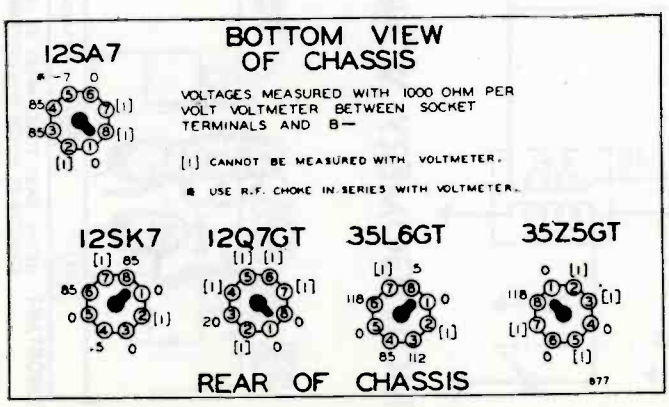
Schematic Ref. No.	Part No.	Description
		RESISTORS
R1	BE130176	20M ohm—½ w.—10%
R2	BE1309	200M ohm—½ w.
R3	BE130203	40 ohm—½ w.—10%
R4	BE1304	3 megohm—½ w.
R5	BE130215	25 ohm—½ w.
R6	BE1301	25M ohm—½ w.
R7	BE101170	1 megohm—volume control
R8	BE130257	5 megohm—½ w.
R9	BE1303	500M ohm—½ w.
R10	BE1303	500M ohm—½ w.
R11	BE130166	150 ohm—½ w.
R12	BE130199	1500 ohm—1 watt
		CONDENSERS
C	BE102107	2 gang variable condenser
C1	BE10011	.01 x 400 v.
C2	BE10091	.15 x 400 v.
C3		Osc. Trimmer on Gang
C4		Antenna Trimmer on Gang
C5	BE12921	.0002 mica

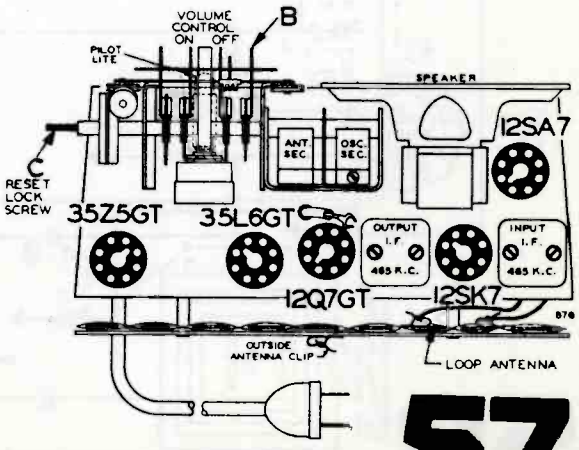
Schematic Ref. No.	Part No.	Description
C6	BE1009	.05 x 200 v.
C7	BE1001	.1 x 400 v.
C8	BE1009	.05 x 200 v.
C9	BE1295	.0001 mica
C10	BE10025	.002 x 600 v.
C11	BE12912	.00025 mica
C12	BE100106	.004 x 600 v.
C13	BE11987	30 mfd. lytic
C14	BE11987	30 mfd. lytic
C15	BE10026	.02 x 400 v. C13 and C14 in same unit
		PARTS
T1	BE111128	Loop Antenna
T2	BE110116	Oscillator Coil
T3	BE108140E	Input I. F.
T4	BE108141B	Output I. F.
T5	BE10589	Output Transformer
T6	BE114160	5" P. M. Speaker
S1		Off-on switch on vol. control
P1	BE107249	6-8 v. pilot light T-47

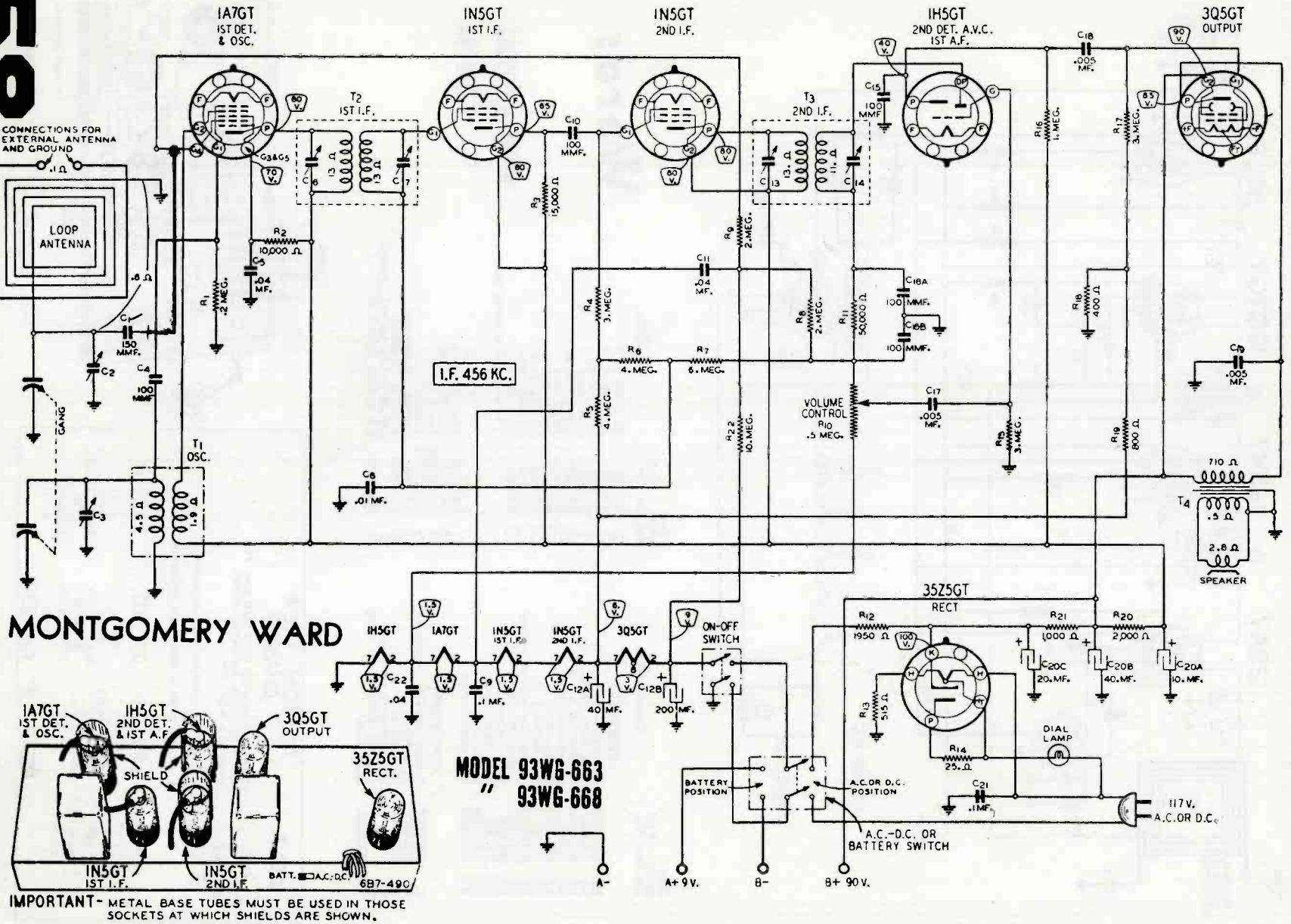
Wards

MODEL 93BR508A

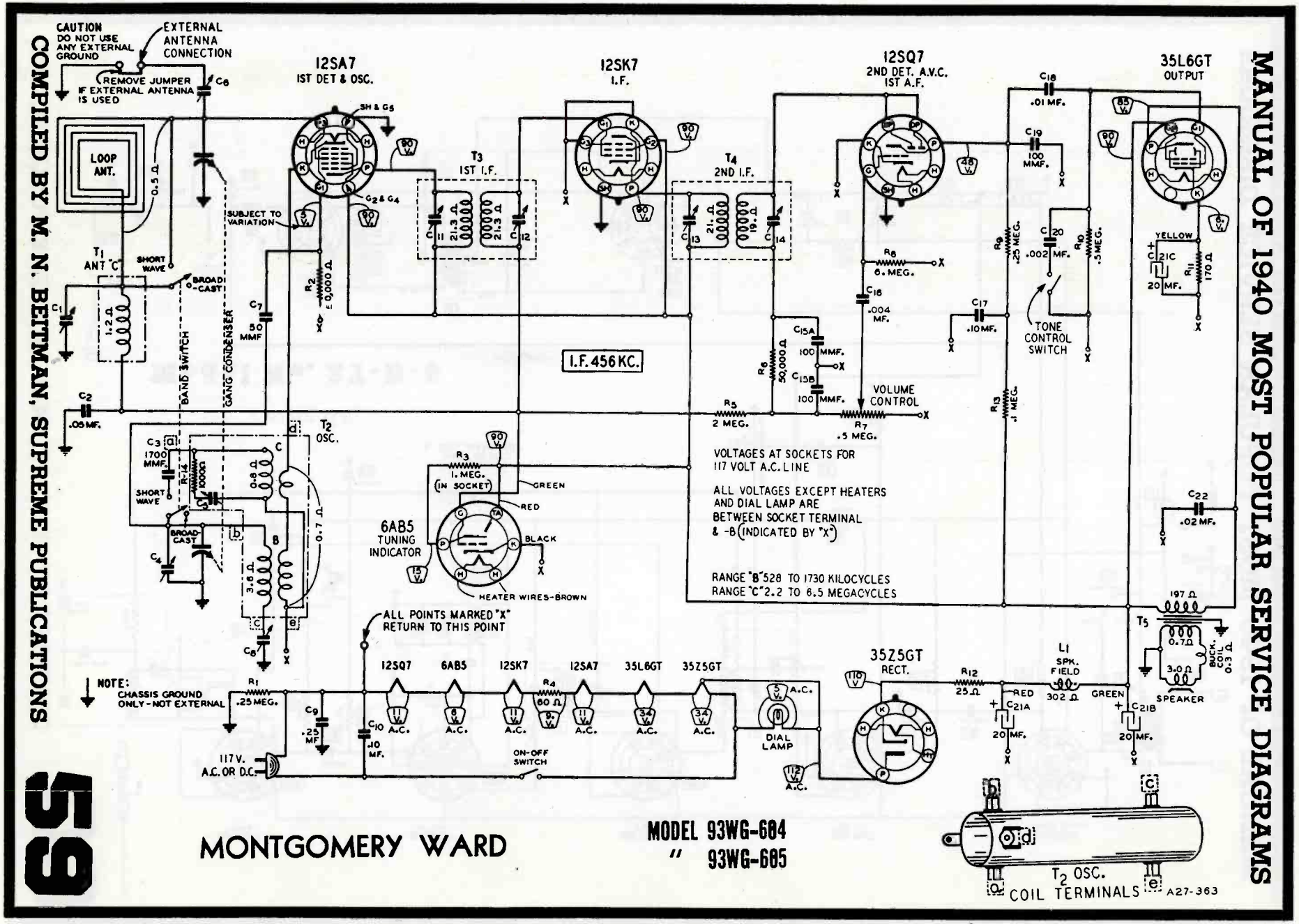
" 93BR509A





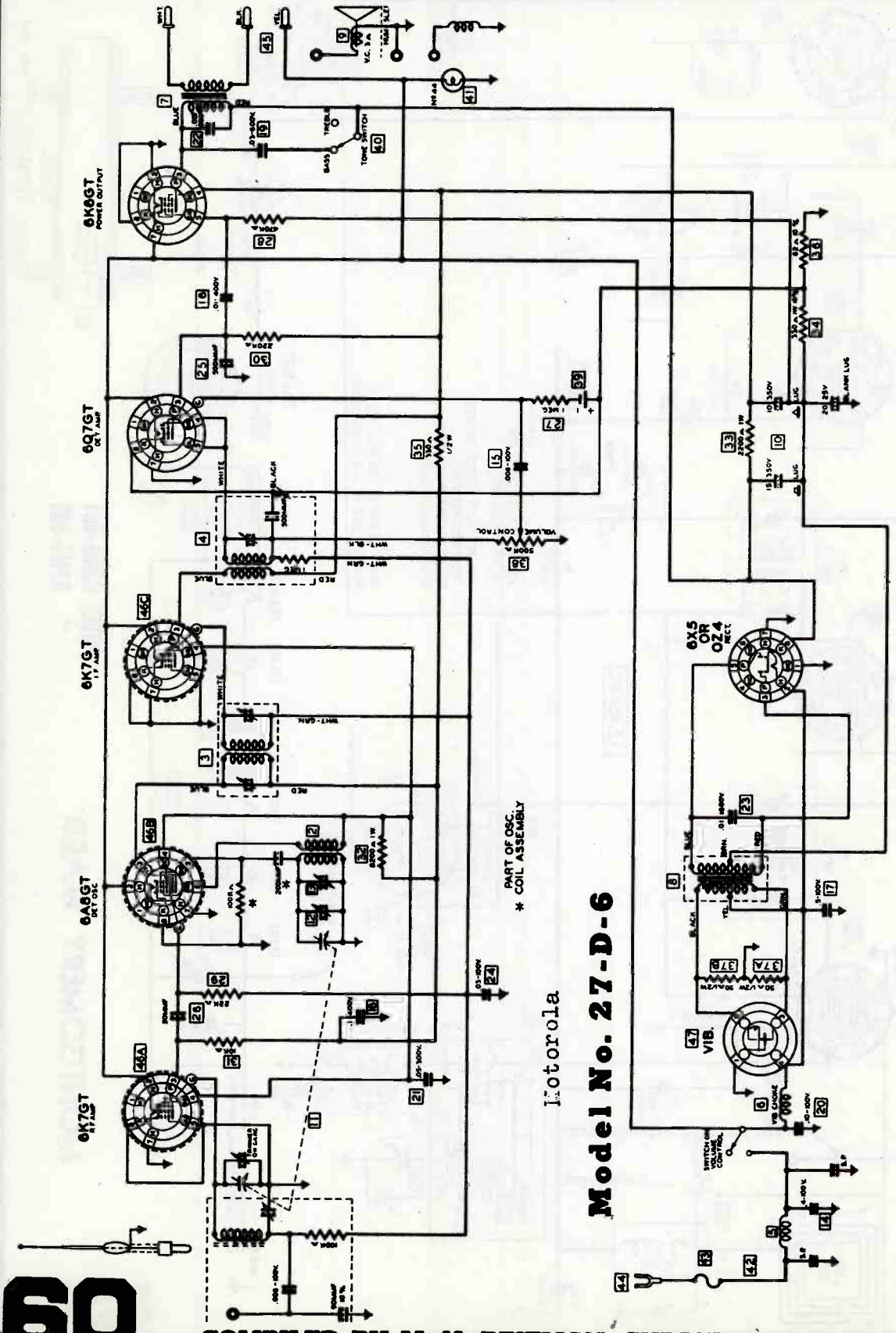


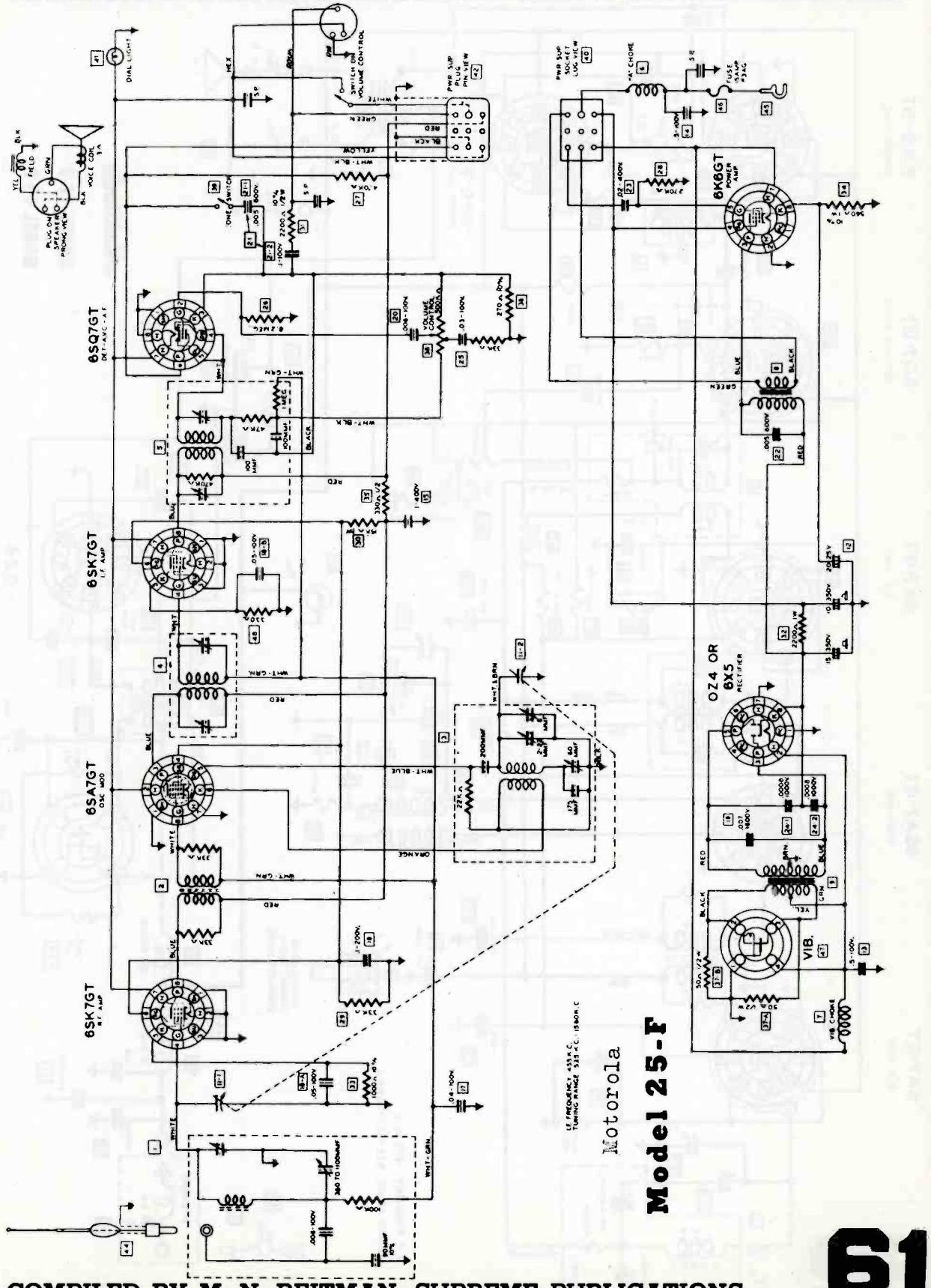
IMPORTANT- METAL BASE TUBES MUST BE USED IN THOSE SOCKETS AT WHICH SHIELDS ARE SHOWN.

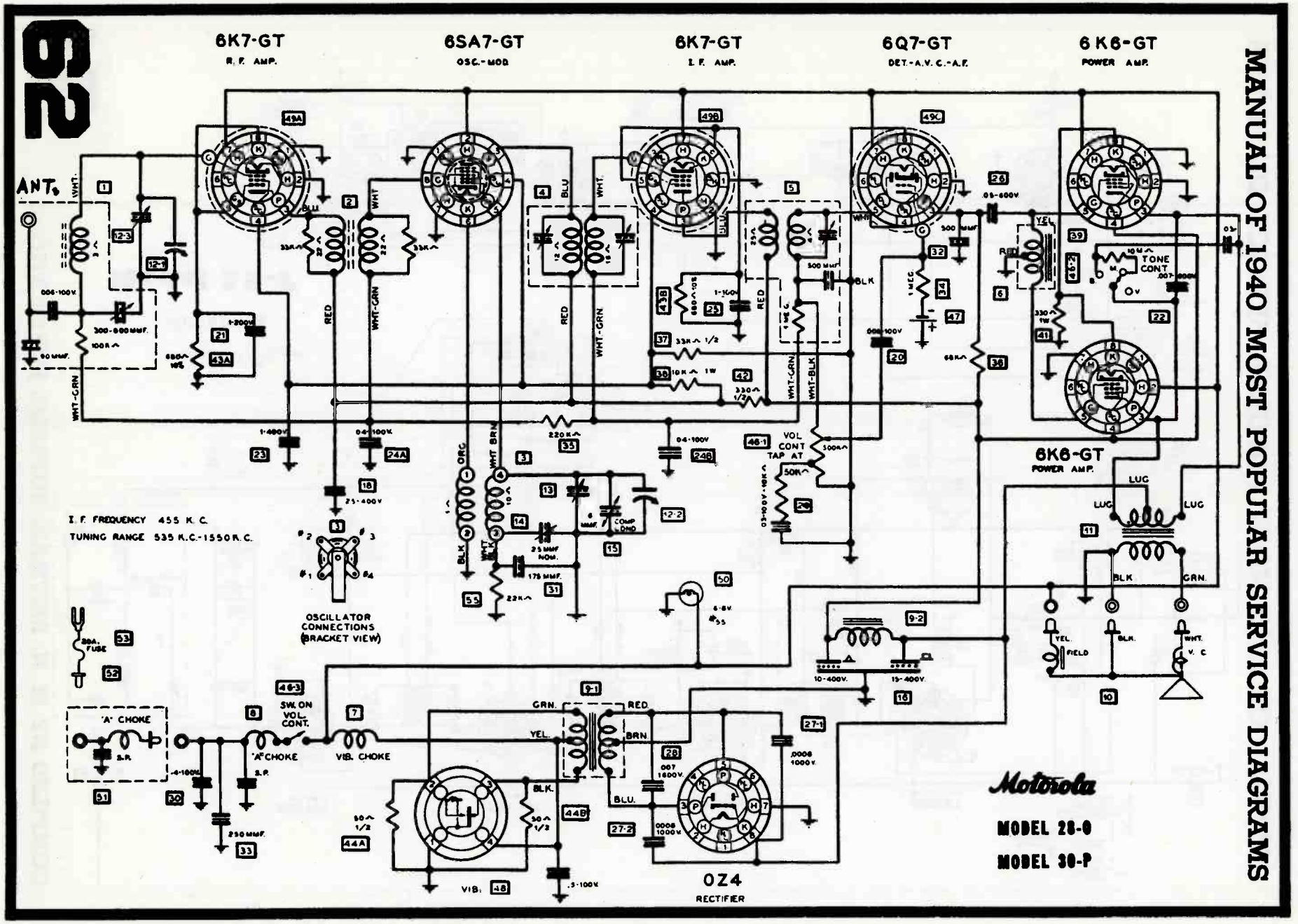


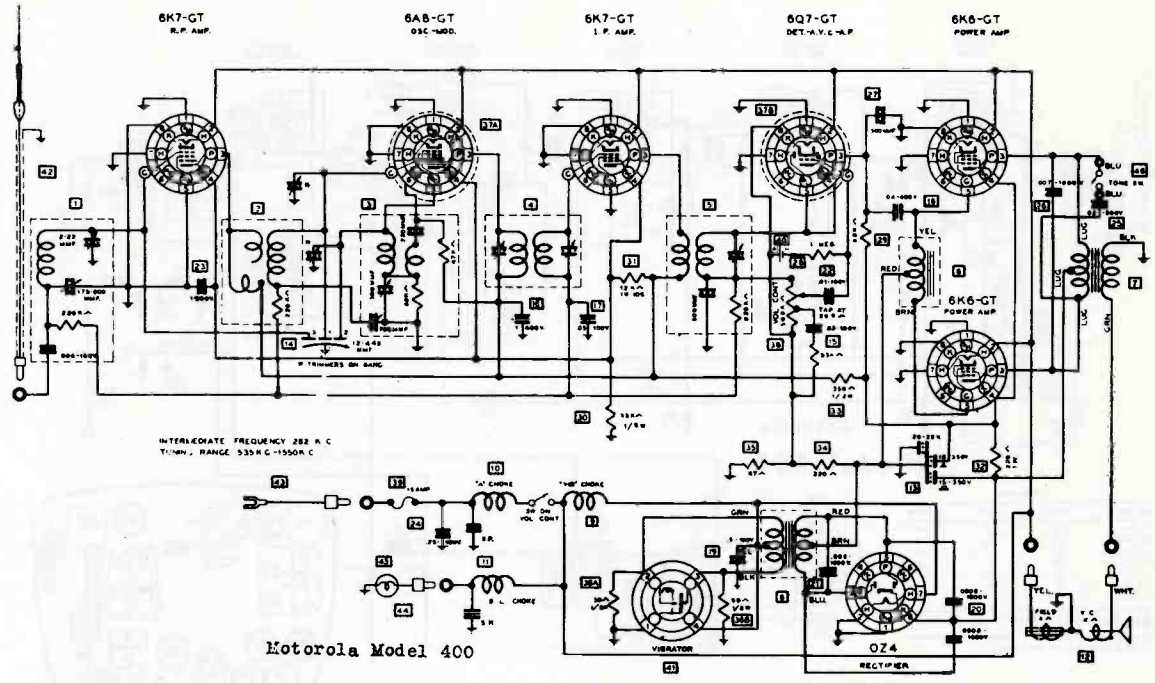
MONTGOMERY WARD

MODEL 93WG-604
" 93WG-605

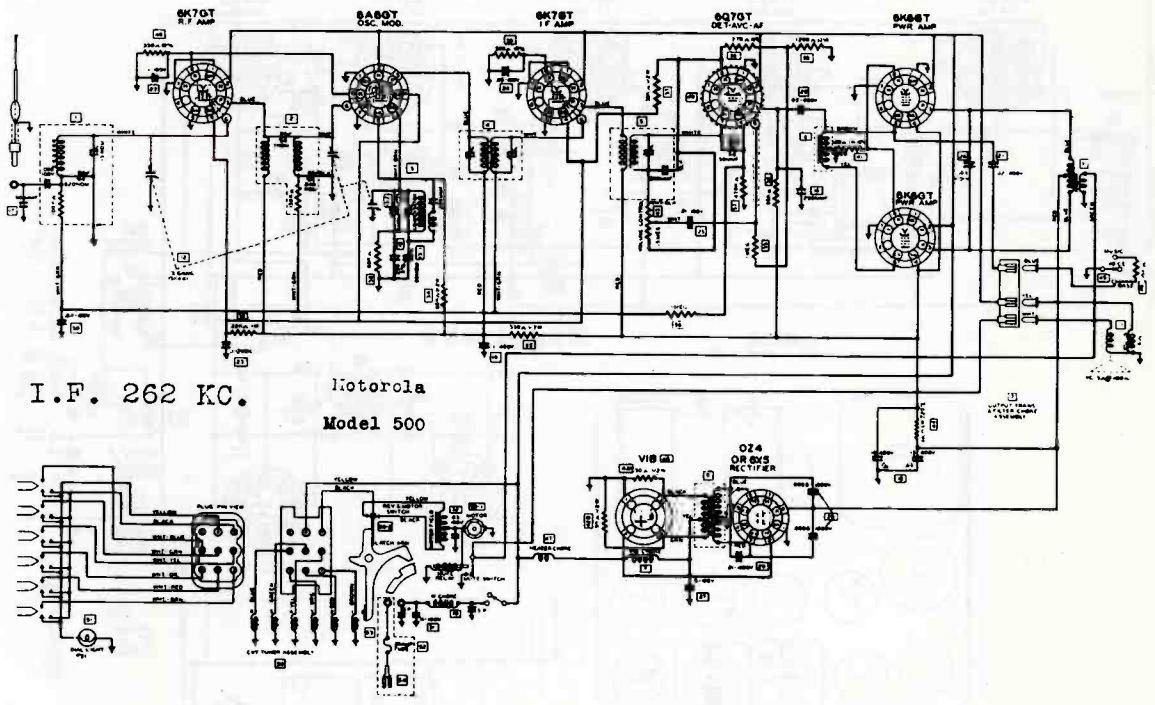

6K8GT
POWER OUTPUT
6Q7GT
DET. AMP.
6K7GT
I.F. AMP.
6A8GT
DET. OSC.
6K7GT
I.F. AMP.
6X5
OR
OZ4
RECT.
VIB.
PART OF OSC.
* COIL ASSEMBLY
Motorola
Model No. 27-D-6


6SQ7GT
DET-AVC-AF
6SK7GT
I.F. AMP
6SA7GT
OSC-MOD
6SK7GT
R.F. AMP
6K6GT
POWER AMP
OZ4 OR
6X5
RECTIFIER
VIB.
DIAL LIGHT
VOLUME CONTROL
SWITCH ON
PWR SUP
PLUG VIEW
PWR SUP
SOCKET
LOG VIEW
PLUG ON
SPEAKER
PRONG VIEW
VOICE COIL
FIELD
VIB CHOKE
Motorola
Model 25-F


92
6K7-GT
R. F. AMP.
6SA7-GT
OSC.-MOD.
6K7-GT
I. F. AMP.
6Q7-GT
DET.-A.V.C.-A.F.
6 K6-GT
POWER AMP.
MANUAL OF 1940 MOST POPULAR SERVICE DIAGRAMS
ANT.
I. F. FREQUENCY 455 K. C.
TUNING RANGE 535 K.C.-1550 K.C.
OSCILLATOR CONNECTIONS (BRACKET VIEW)
6K6-GT
POWER AMP.
TONE CONT.
VOL. CONT. TAP AT
SW. ON VOL. CONT.
"A" CHOKE
"A" CHOKE
VIB. CHOKE
VIB.
0Z4
RECTIFIER
Motorola
MODEL 28-0
MODEL 30-P

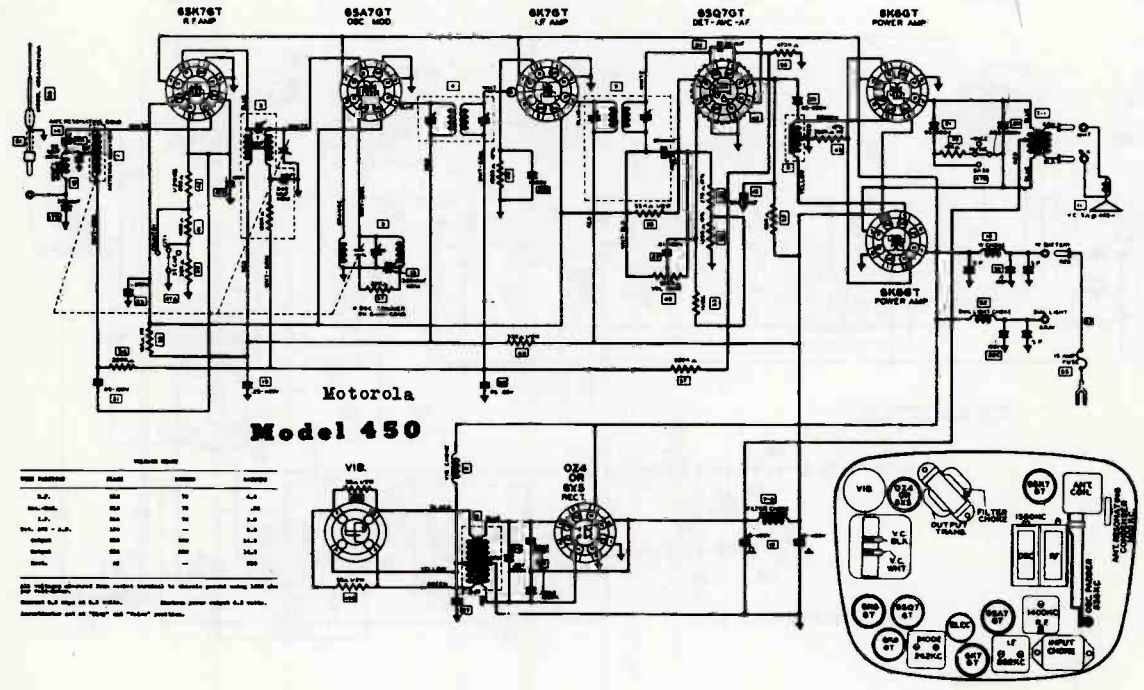


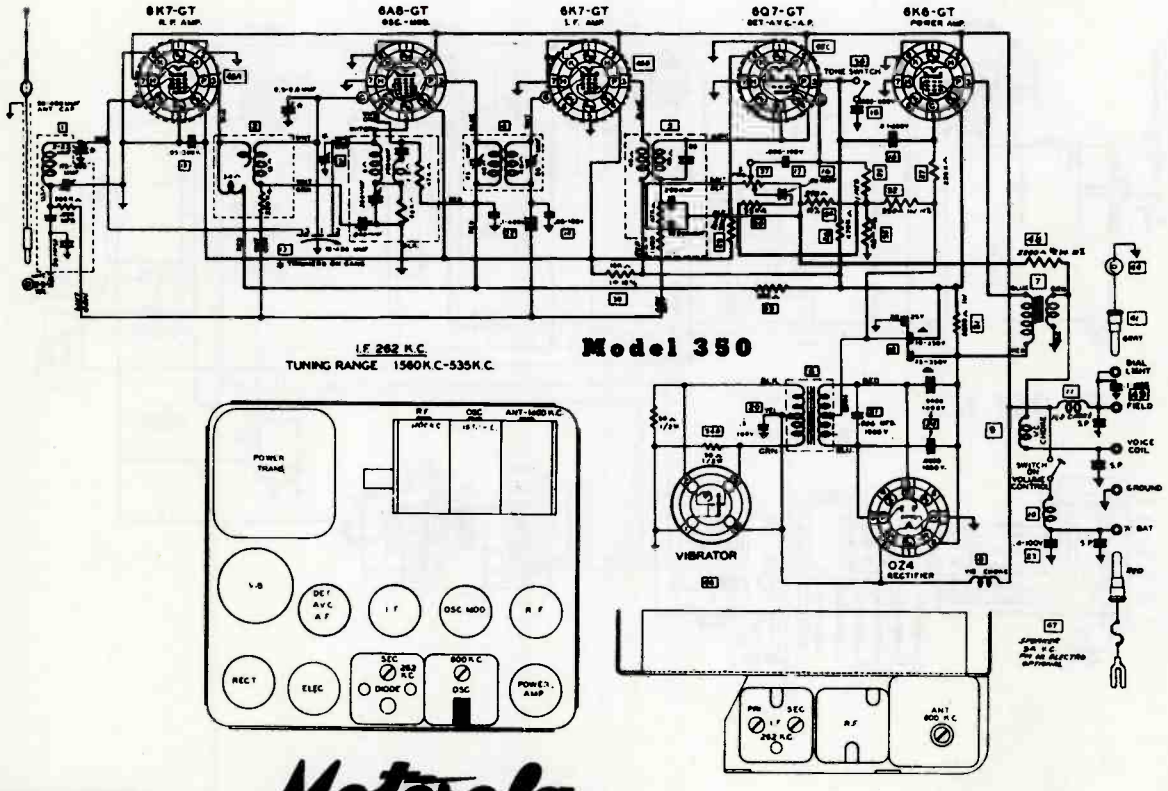
Motorola Model 400



I.F. 262 KC. Motorola

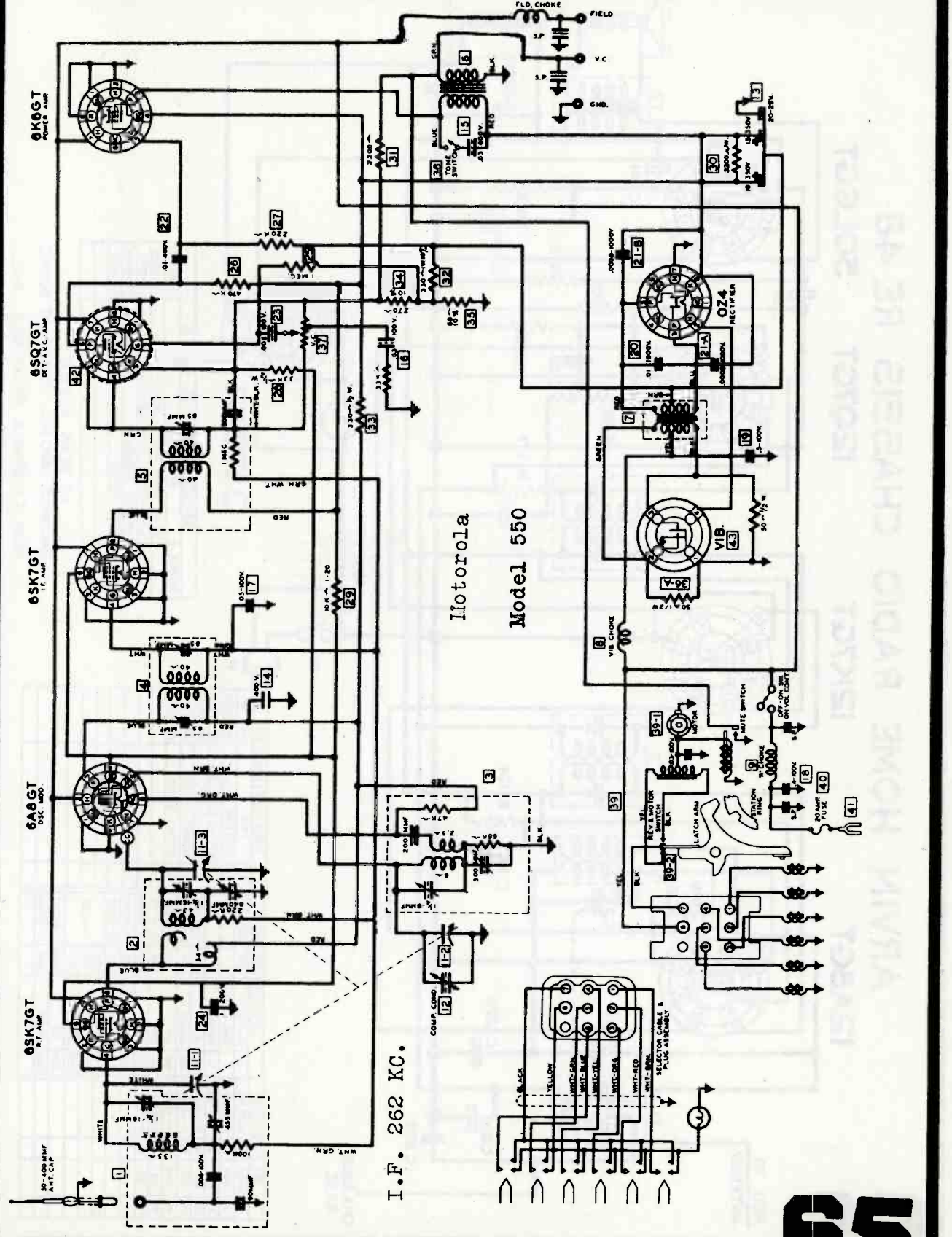
Model 500



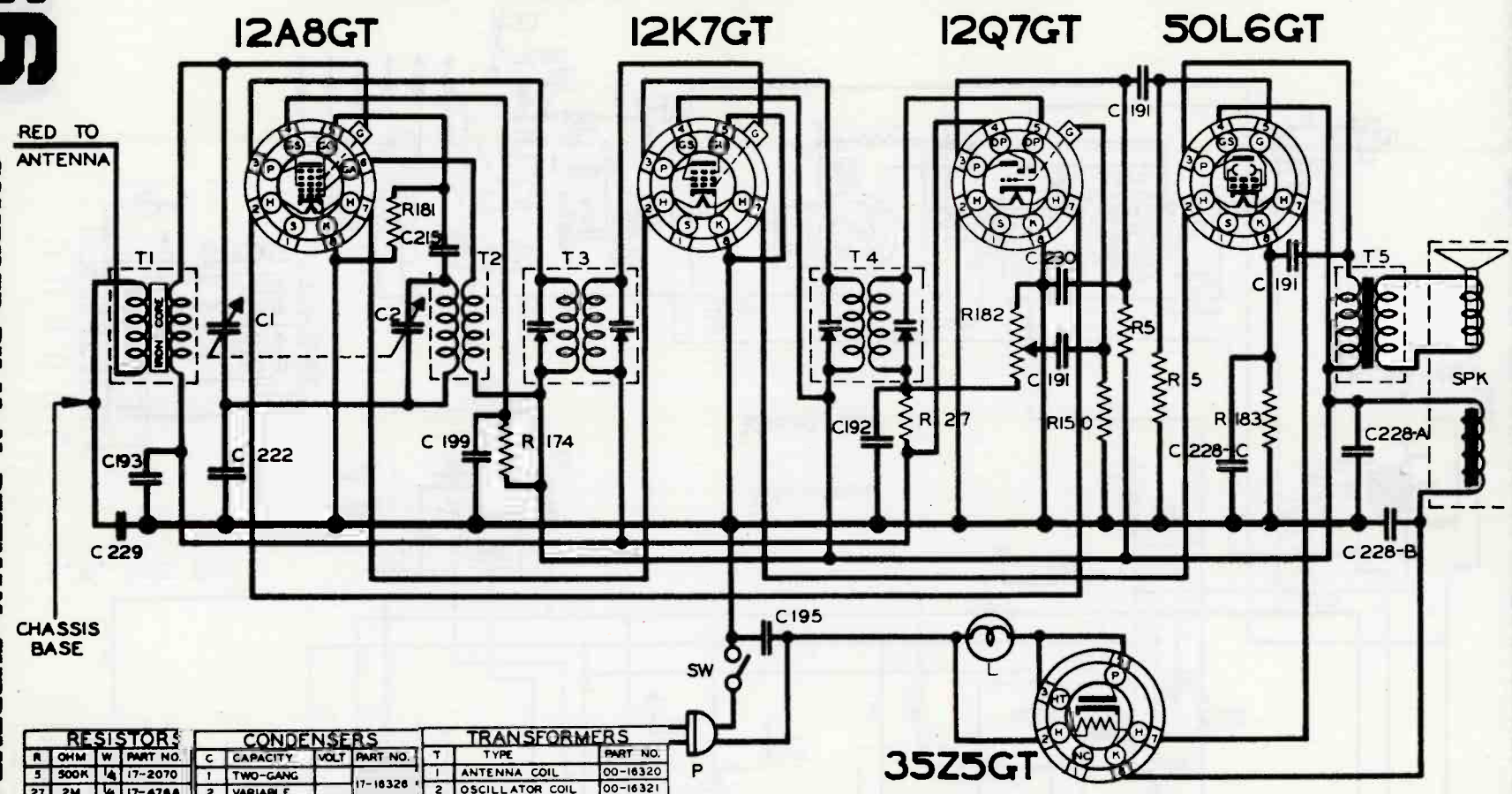


Motorola

COMPILED BY M. N. BEITMAN, SUPREME PUBLICATIONS


Motorola
Model 550
I.F. 262 KC.
6K6GT
6SQ7GT
6SK7GT
6A8GT
6SK7GT
OZ4
VIB.
FLD. CHOKE
FIELD
GND.
VIB. CHOKE
MUTE SWITCH
REV. MOTOR
LATCH ARM
STATION RING
20 AMP FUSE
BLACK
YELLOW
WHT-GRN
WHT-BLUE
WHT-YEL
WHT-ORG
WHT-RED
WHT-BRN
SELECTOR CABLE & PLUG ASSEMBLY

ARVIN HOME RADIO CHASSIS RE 48



RESISTORS			
R	OHM	W	PART NO.
5	500K	1/4	17-2070
27	2M	1/4	17-4788
150	5M	1/4	17-14242
174	20K	1/4	17-14291
181	100K	1/4	17-14303
182	1M	V.C.	17-14315
183	150	1/4	17-14316

CONDENSERS			
C	CAPACITY	VOLT	PART NO.
1	TWO-GANG		17-16326
2	VARIABLE		
191	.01	400	17-14272
192	.00025	600	17-14273
193	.05	200	17-14274
195	.05	400	17-14276
199	.02	200	17-14283
215	.0001	600	17-14310
222	.2	400	17-14317
228A	10 MFD.	150	
228B	20 MFD.	150	17-14326
228C	20 MFD.	25	
229	.02	400	17-14327
230	.0005	400	17-14328

TRANSFORMERS		
T	TYPE	PART NO.
1	ANTENNA COIL	00-16320
2	OSCILLATOR COIL	00-16321
3	FIRST I.F. COIL	00-16322
4	SECOND I.F. COIL	00-16323
5	OUTPUT TRANS.	00-16324

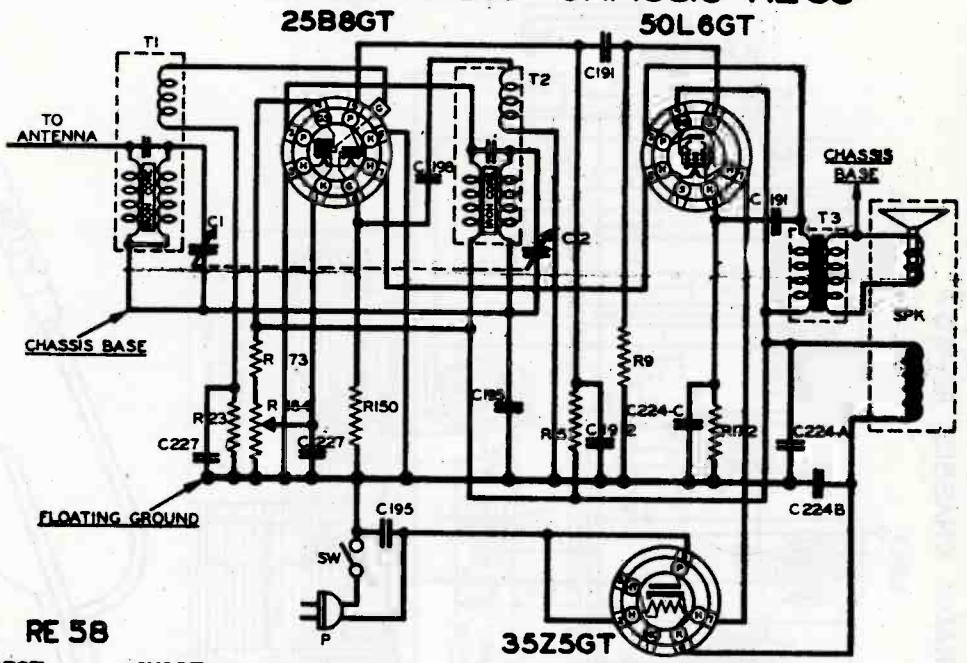
MISCELLANEOUS UNITS		
SYMBOL	DESCRIPTION	PART NO.
L	DIAL LIGHT BULB - MAZDA NO. 51	17-13904
P	LINE CORD & PLUG ASSEMBLY	17-16371
SPK	SPEAKER ASSEMBLY	17-16314-A
SW	LINE SWITCH	17-14315

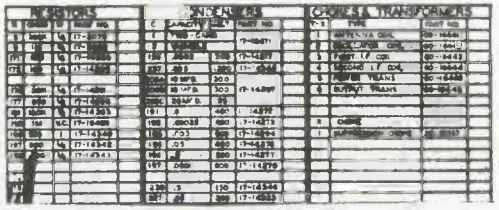
I.F. PEAK 455 K.C.

BALANCE 1400 K.C. - CHECK AT 600 K.C.

NOBLITT-SPARKS INDUSTRIES, INC.,

HOME RADIO CHASSIS RE-55



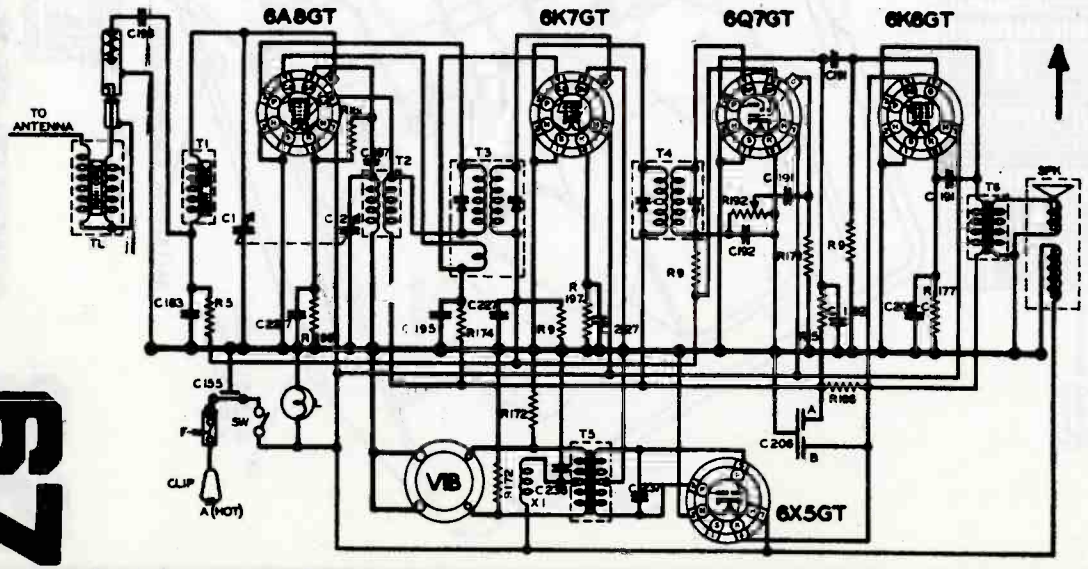


MISCELLANEOUS UNITS

SYMBOL	DESCRIPTION	PART NO.
P	CORD - 30 AMP	
SW	LINE SWITCH	
SPK	SPEAKER ASSEMBLY	
T1	ANTENNA COIL	
T2	R.F. COIL	
T3	OUTPUT TRANSFORMER	

I.F. PEAK 456 K.C.
FREQUENCY RANGE 1575 TO 540 K.C.
NOBLITT-SPARKS INDUSTRIES, INC.

ARVIN CAR RADIO CHASSIS RE 58



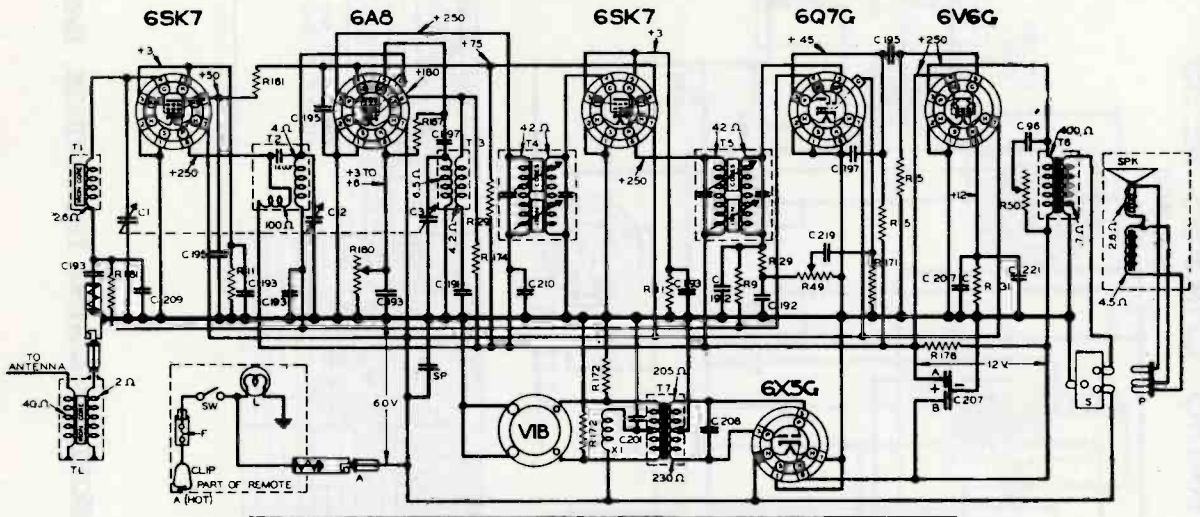
RESISTORS				CONDENSERS				MISCELLANEOUS UNITS	
R	OHM	W	PART NO.	C	CAPACITY	VOLT	PART NO.	SYMBOL	DESCRIPTION
5	500K	½	17-2070	1	TWO-GANG		17-16369	P	LINE CORD & PLUG ASSEMBLY
9	1M	½	17-2080	2	VARIABLE			SPK	SPEAKER ASSEMBLY
23	250K	½	17-3011	191	.01	400	17-14278	SW	LINE SWITCH
73	30K	½	17-4278	192	.00025	600	17-14273	T1	ANTENNA COIL
150	5M	½	17-14243	193	.05	400	17-14276	T2	R.F. COIL
178	100	½	17-14289	195	.005	400	17-14279	T3	OUTPUT TRANSFORMER
184	10K	W.C.	17-14320	206A	10 MFD.	150			
				206B	20 MFD.	150	17-14389		
				206C	20 MFD.	25			
				227	.05	200	17-14323		

FREQUENCY RANGE
1700 K.C. TO 540 K.C.

NOBLITT-SPARKS INDUSTRIES, INC.

MANUAL OF 1940 MOST POPULAR SERVICE DIAGRAMS

ARVIN CAR RADIO CHASSIS RE-60



NOTE - ALL VOLTAGES GIVEN FOR "A" INPUT OF 6 VOLTS. ALLOW ± 10% ON ALL VOLTAGES & RESISTANCES OF WINDING

RESISTORS

#	OHMS	W	PART NO
3	500M	½	17-2070
9	1M	½	17-2080
11	5M	½	17-4802
29	150M	½	17-2087
31	25Ω	½	17-2086
49	200M	VC	17-14336
50	400M	VC	17-14369
167	60M	½	17-14284
171	15M	½	17-15296
174	30M	½	17-14289
178	200	1	17-14298
179	100	½	17-14283
180	2000	MW	17-14367
181	100M	½	17-14363

CONDENSERS

#	CAPACITY	VOL. V	PART NO
1	THREE -		17-9786
2	GANG		
3	VARIABLE		
96	.03	600	17-14121
104	.01	200	17-4206
191	.01	400	17-14272
192	.00025	600	17-14273
193	.03	200	17-14274
197	.05	400	17-14275
198	.0001	600	17-14276
200	.5	.50	17-14283
201&20	20 MFD.	600	
207&9	DUMP &	450	17-14369
208	DUMP	25	
209	.001	400	17-14300
210	.00721	600	17-14303
215	/	400	17-14304
216	.0025	500	17-14305
217	.001	500	17-14312

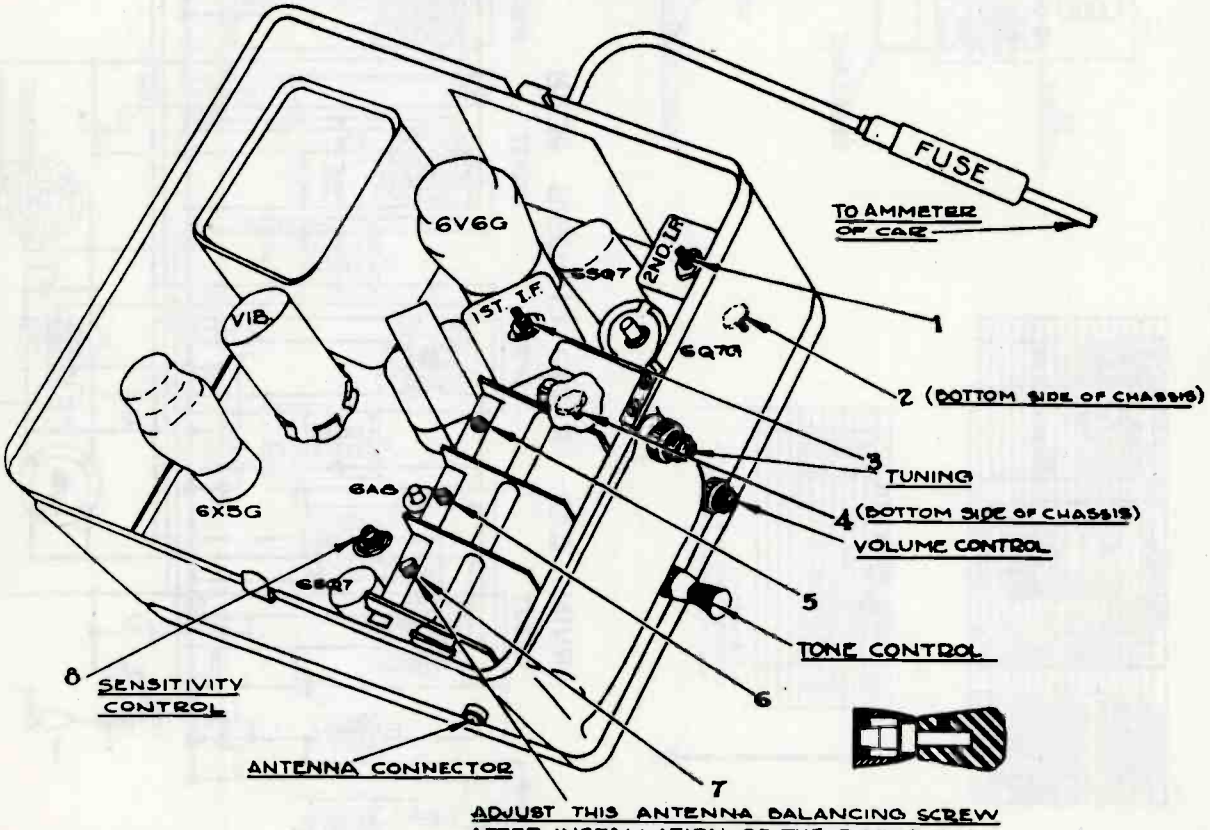
CHOKES & TRANSFORMERS

T-R #	TYPE	PART NO.
T	TRANSFORMERS	
1	ANTENNA COIL	00-16300
2	R.F. COIL	00-16301
3	OSCILLATOR COIL	00-16302
4	FIRST I.F. COIL	00-16303
5	SECOND I.F. COIL	00-16304
6	OUTPUT TRANS.	00-16305
7	POWER TRANS.	00-16308
R	CHOKES	
1	SUPPRESSION CHOKE	29-16308

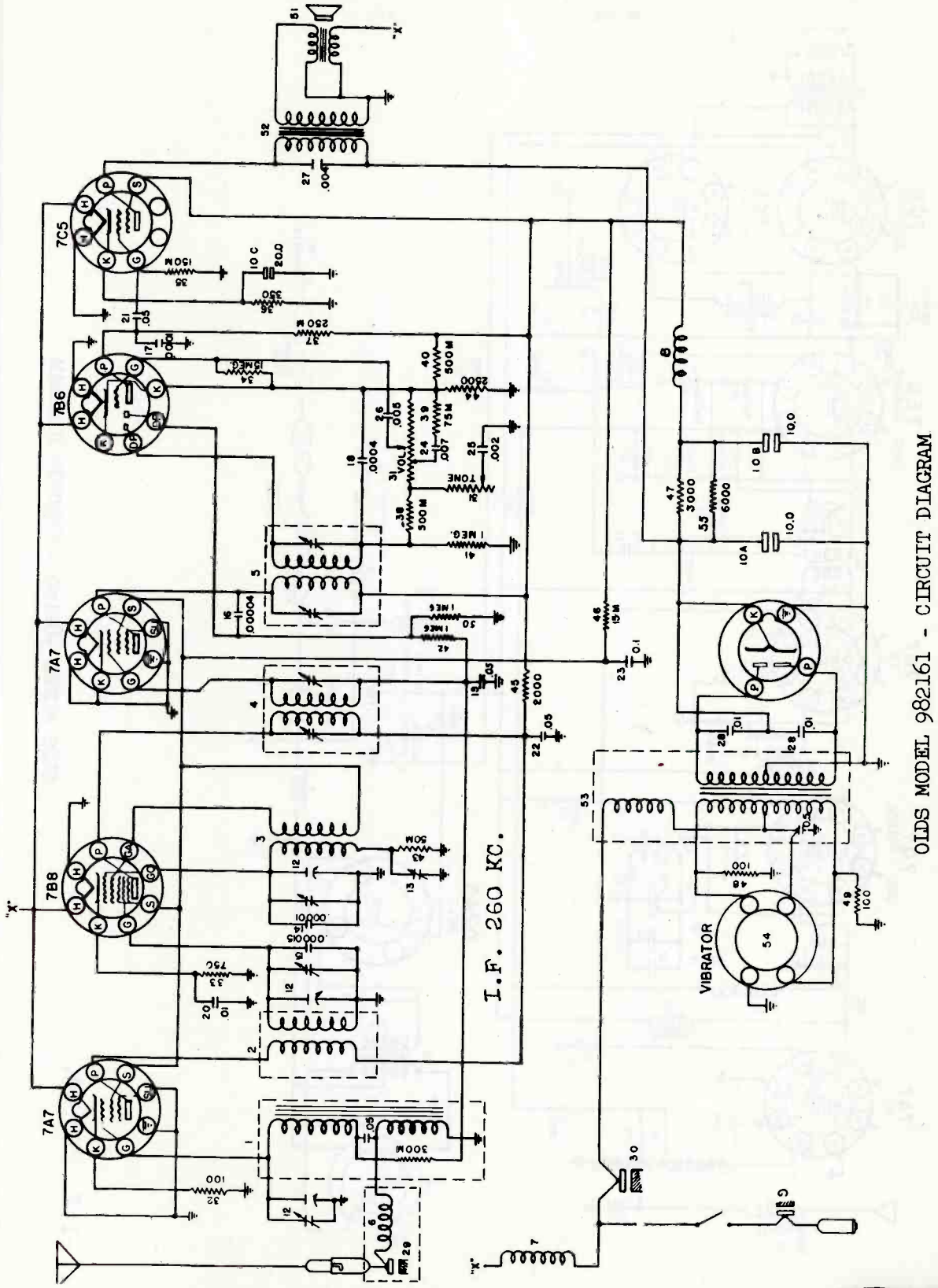
MISCELLANEOUS UNITS

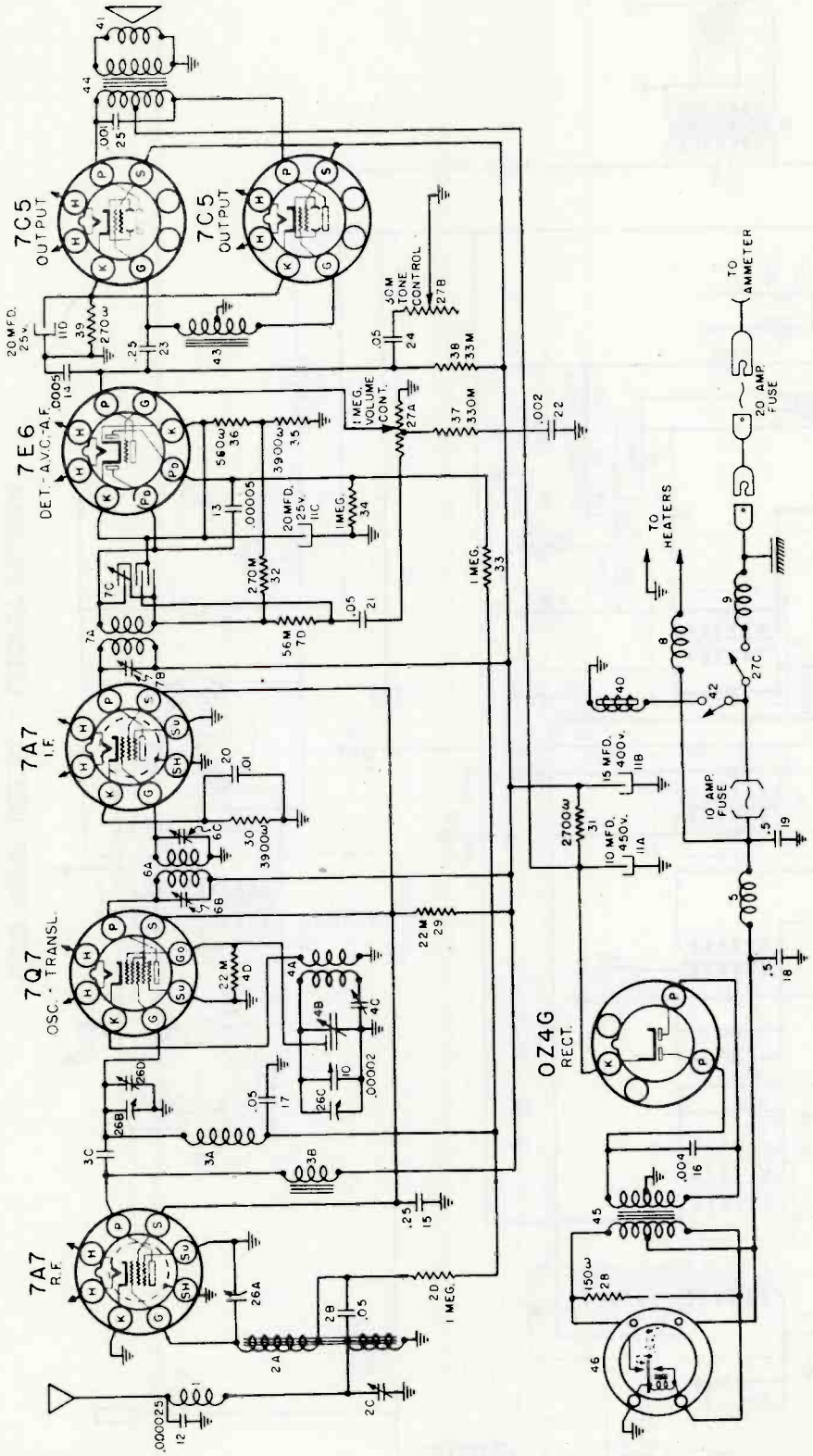
SYMBOL	DESCRIPTION	PART NO.
F	FUSE - 30 AMP.	17-2288
L	DIAL LIGHT BULB - MAZDA NO. 51	17-2006-4
P	SPEAKER PLUG	17-4790
S	SPEAKER SOCKET	17-12619
SPR	SPEAKER ASSEMBLY	17-16348
SW	POWER SWITCH	
SP	SPARK PLATE	
TL	TRANSMISSION LINE	00-16307
VIB	VIBRATOR	17-16747

INTERMEDIATE FREQUENCY 170 K.C.
FREQUENCY RANGE 1570 TO 540 K.C.
NOBLITT-SPARKS INDUSTRIES, INC.
COLUMBUS, INDIANA



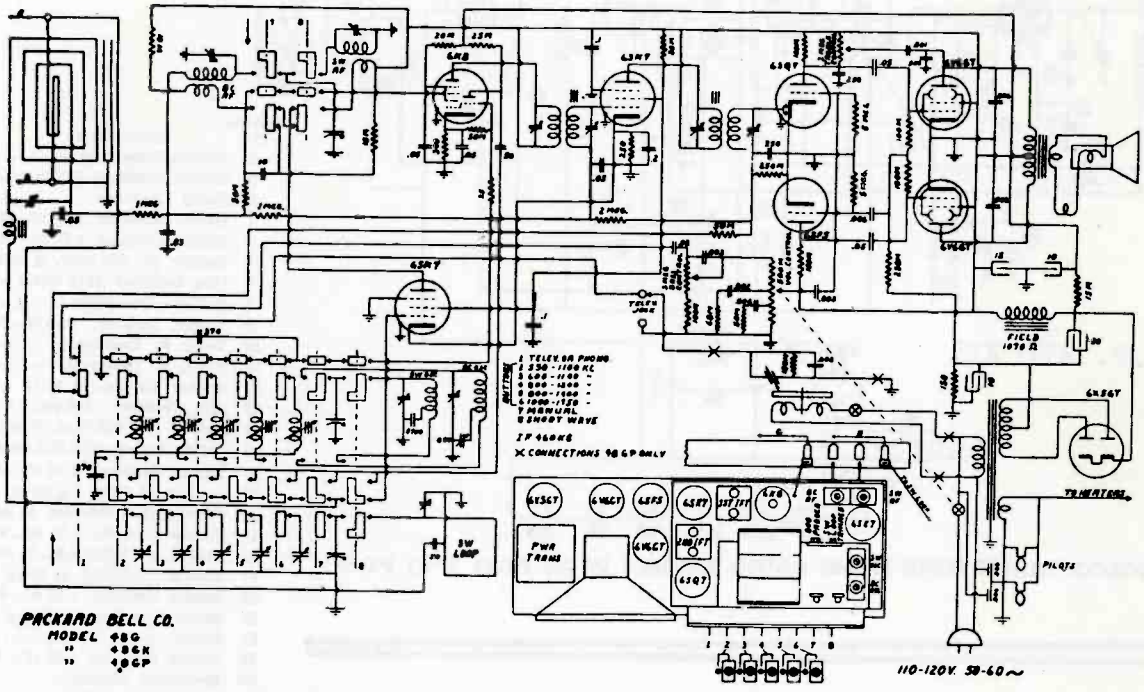
COMPILED BY M. N. BEITMAN, SUPREME PUBLICATIONS

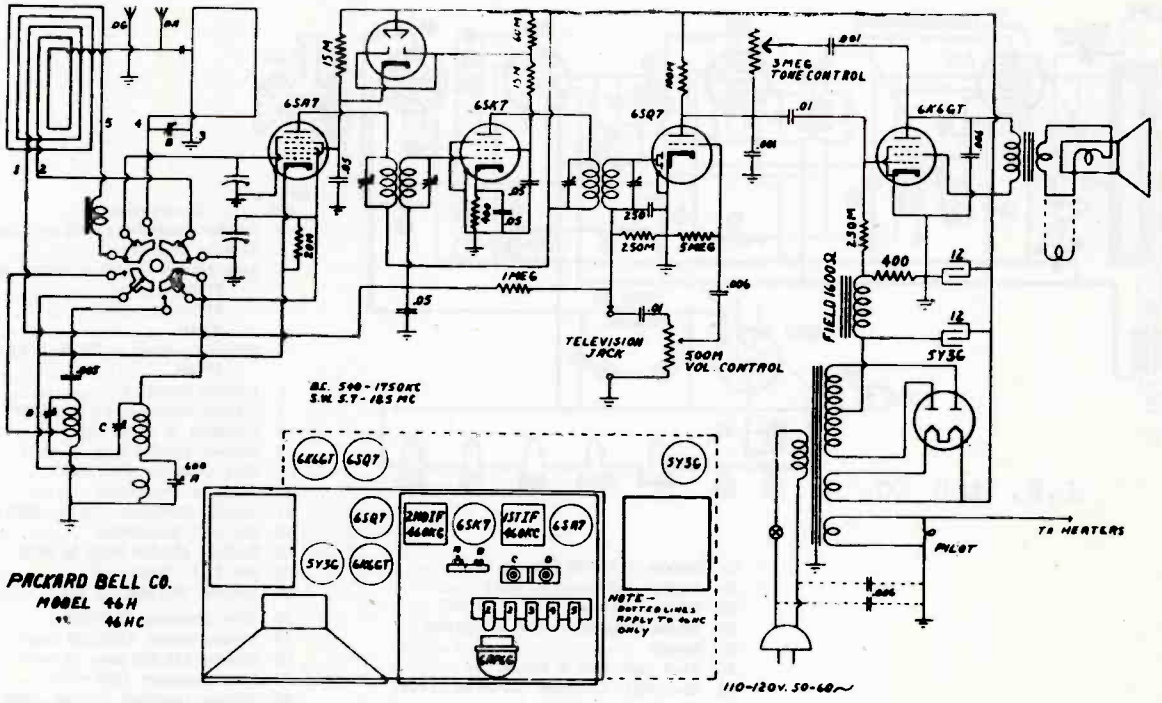

OLDS MODEL 982161 - CIRCUIT DIAGRAM
I.F. 260 KC.
VIBRATOR
7C5
7B6
7A7
7B8
7A7

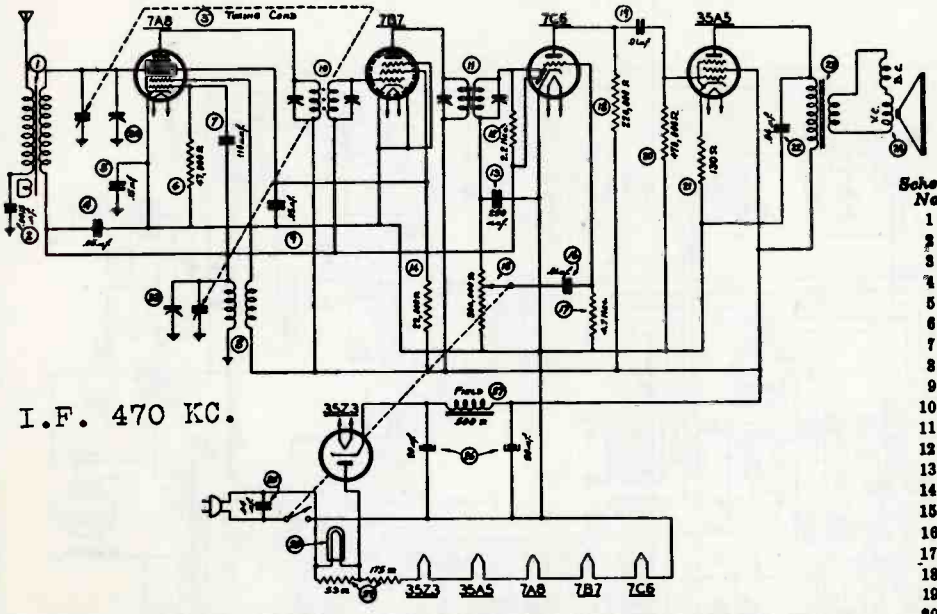


OLDS MODEL 982160 - CIRCUIT DIAGRAM

I.F. 260 KC.


PACKARD BELL CO.
MODEL 48G
" 48GK
" 48GP
110-120V. 50-60~

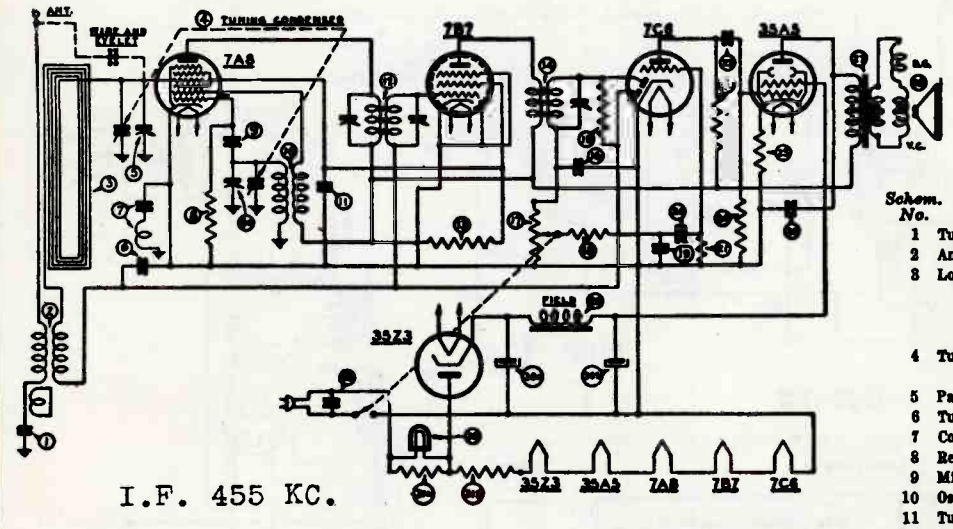

PACKARD BELL CO.
MODEL 46H
" 46HC
3MEG TONE CONTROL
TELEVISION JACK
500M VOL. CONTROL
FIELD 1600Ω
110-120V. 50-60~



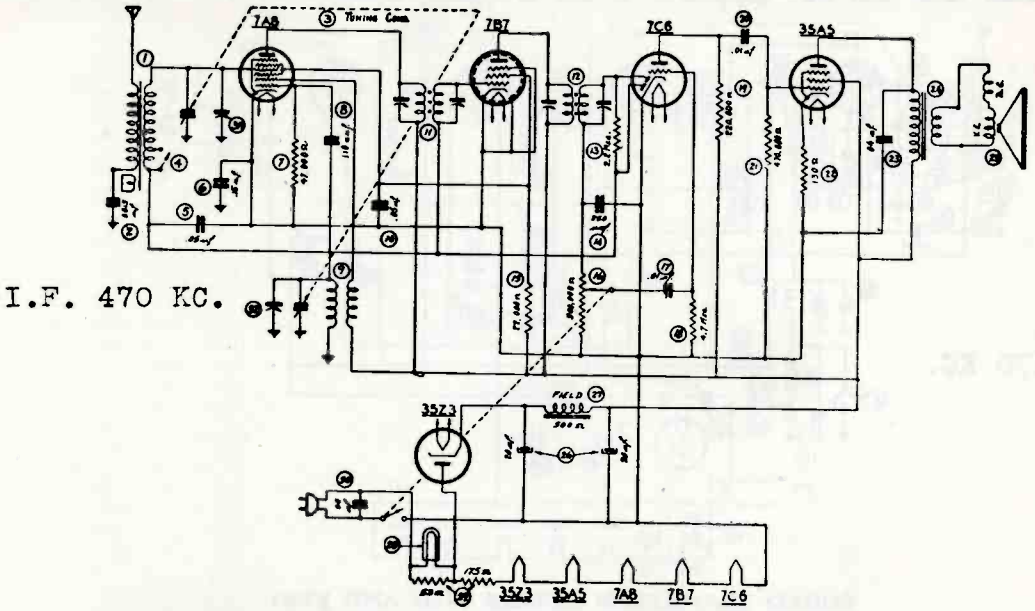
PHILCO TRANSITONE HOME RADIO MODELS PT-25, PT-27 AND PT-39

Schem. No.	Description
1	Antenna Transformer
2	Tubular Condenser (.0015 mf., 200 V.)
3	Tuning Condenser
4	Tubular Condenser (.05 mf., 200 V.)
5	Tubular Condenser (.15 mf., 400 V.)
6	Resistor (47,000 ohms, ½ watt)
7	Mica Condenser (110 mmf.)
8	Oscillator Transformer
9	Tubular Condenser (.05 mf., 200 V.)
10	1st I. F. Transformer
11	2nd I. F. Transformer
12	Resistor 2.2 meg., ½ watt)
13	Mica Condenser (250 mmf.)
14	Resistor (22,000 ohms, ½ watt)
15	Volume Control (500,000 ohms)
16	Tubular Condenser (.01 mf., 200 V.)
17	Resistor (4.7 meg., ½ watt)
18	Resistor (220,000 ohms, ½ watt)
19	Tubular Condenser (.01 mf., 400 V.)
20	Resistor (470,000 ohms, ½ watt)
21	Resistor (130 ohms, ½ watt)
22	Tubular Condenser (.04 mf., 400 V.)
23	Output Transformer ..Part of Speaker
24	Speaker
25	Tubular Condenser (.04 mf., 400 V.)
26	Electrolytic Condenser (20-20 mf., 150 V.)
27	Field Coil .....Part of Speaker
28	Pilot Lamp
29	Line Resistor

PHILCO TRANSITONE HOME RADIOS — MODELS PT-26, PT-28 AND PT-36



Schem. No.	Description
1	Tubular Condenser (.0015 mf., 200V)
2	Antenna Transformer
3	Loop Antenna — Part of cabinet and loop
	PT-26
	PT-28
	PT-36
4	Tuning Condenser — PT-26 & PT-28
	PT-36
5	Padding Condenser
6	Tubular Condenser (.1 mf., 200V)
7	Condenser & Choke Assy.
8	Resistor (22,000 ohms, ½ watt)
9	Mica Condenser (110 mmf.)
10	Oscillator Transformer
11	Tubular Condenser (.05 mf., 200V)
12	1st I. F. Transformer
13	Resistor (22,000 ohms, ½ watt)
14	2nd I. F. Transformer
15	Resistor (2.2 meg., ½ watt)
16	Mica Condenser (250 mmf.)
17	Volume Control (500,000 ohms)
18	Resistor (47,000 ohms, ½ watt)
19	Mica Condenser (250 mmf.)
20	Tubular Condenser (.01 mf., 200V)
21	Resistor (4.7 meg., ½ watt)
22	Resistor (220,000 ohms, ½ watt)
23	Tubular Condenser (.01 mf., 400V)
24	Resistor (470,000 ohms, ½ watt)
25	Resistor (130 ohms, ½ watt)
26	Tubular Condenser (.04 mf., 400V)
27	Output Transformer—Part of Speaker
28	Speaker
29	Field Coil—Part of Speaker No.
30	Electrolytic Condenser (20-20 mf., 150V)
31	Line Resistor
32	Pilot Lamp
33	Tubular Condenser (.04 mf., 400V)

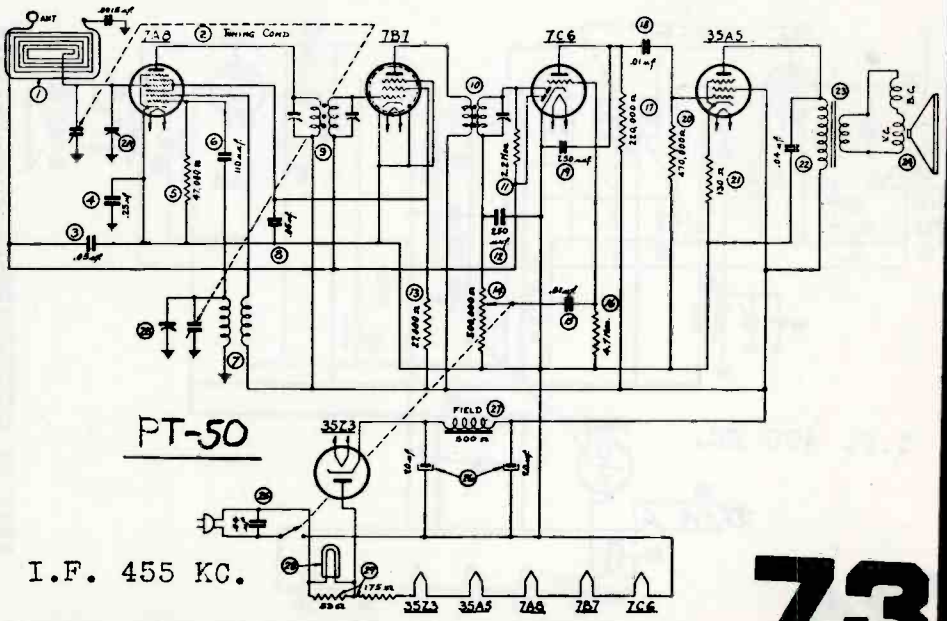


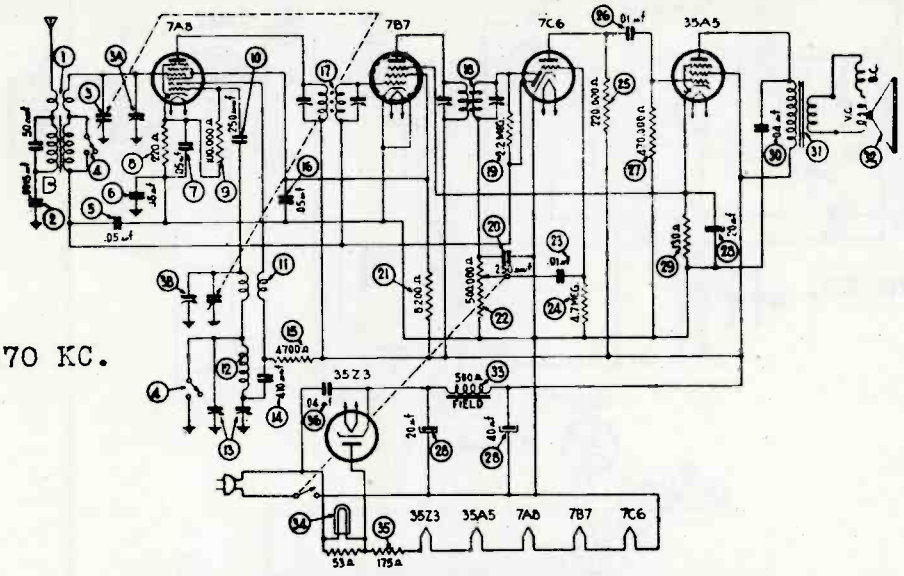
PHILCO TRANSITONE HOME RADIO MODELS PT-29 AND PT-31

Schem. No.	Description	Philco Part No.
1	Antenna Transformer	32-3164
2	Tubular Condenser (.0015 mf., 200 v.)	30-4555S
3	Tuning Condenser	31-2427
4	Switch	42-1406
5	Tubular Condenser (.05 mf., 200 v.)	30-4519S
6	Tubular Condenser (.15 mf., 400 v.)	30-4505S
7	Resistor (47,000 ohms, ¼ watt)	33-347154
8	Mica Condenser (110 mmf.)	30-1130
9	Oscillator Transformer	32-3152
10	Tubular Condenser (.05 mf., 200 v.)	30-4519S
11	1st I. F. Transformer	32-3149
12	2nd I. F. Transformer	32-3150
13	Resistor (2.2 meg., ¼ watt)	33-522154
14	Mica Condenser (250 mmf.)	61-0033
15	Resistor (22,000 ohms, ½ watt)	33-322334
16	Volume Control (500,000 ohms)	33-5306
17	Tubular Condenser (.01 mf., 200 v.)	30-4479S
18	Resistor (4.7 meg., ¼ watt)	33-547154
19	Resistor (220,000 ohms, ¼ watt)	33-422154
20	Tubular Condenser (.01 mf., 400 v.)	30-4572S
21	Resistor (47,000 ohms, ¼ watt)	33-447154
22	Resistor (130 ohms, ½ watt)	33-113336
23	Tubular Condenser (.04 mf., 400 v.)	30-4119S
24	Output Transformer Part of Speaker No.	36-1469
25	Speaker	36-1469
26	Electrolytic Condenser (20-20 mf., 150 v.)	30-2382
27	Field Coil Part of Speaker, Part Number	36-1469
28	Pilot Lamp	34-2068
29	Line Resistor	33-3367
30	Tubular Condenser (.04 mf., 400 v.)	30-4119S

PHILCO TRANSITONE HOME RADIOS — MODELS PT-33, PT-41 AND PT-61

1 Loop Antenna Assembly .....
2 Tuning Condenser .....
3 Tubular Condenser (.05 mf., 200 V.)
4 Tubular Condenser (.25 mf., 400 V.)
5 Resistor (47,000 ohms, ¼ watt) ..
6 Mica Condenser (110 mmf.) .....
7 Oscillator Transformer .....
8 Tubular Condenser (.05 mf., 200 V.)
9 1st I. F. Transformer .....
10 2nd I. F. Transformer .....
11 Resistor (2.2 megs., ¼ watt) .....
12 Mica Condenser (250 mmf.) .....
13 Resistor (27,000 ohms, ½ watt) ..
14 Volume Control (500,000 ohms) ..
15 Tubular Condenser (.01 mf., 200 V.)
16 Resistor (4.7 megs., ¼ watt) ....
17 Resistor (220,000 ohms, ¼ watt) ..
18 Tubular Condenser (.01 mf., 400 V.)
19 Mica Condenser (250 mmf.) .....
20 Resistor (470,000 ohms, ¼ watt) .
21 Resistor (130 ohms, ½ watt) .....
22 Tubular Condenser (.04 mf., 400 V.)
23 Output Transformer..Part of Speaker
24 Speaker .....
25 Tubular Condenser (.04 mf., 400 V.)
26 Electrolytic Condenser (20-20 mf., 150 V.) .....
27 Field Coil .....Part of Speaker
28 Pilot Lamp .....
29 Line Resistor .....



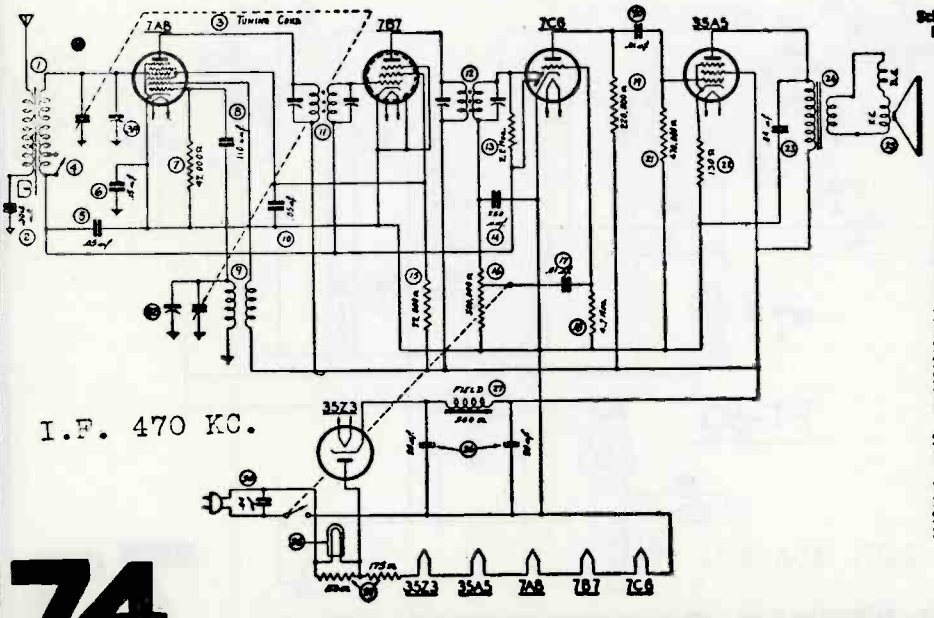


I.F. 470 KC.

PHILCO TRANSITONE MODELS PT-37 AND PT-53

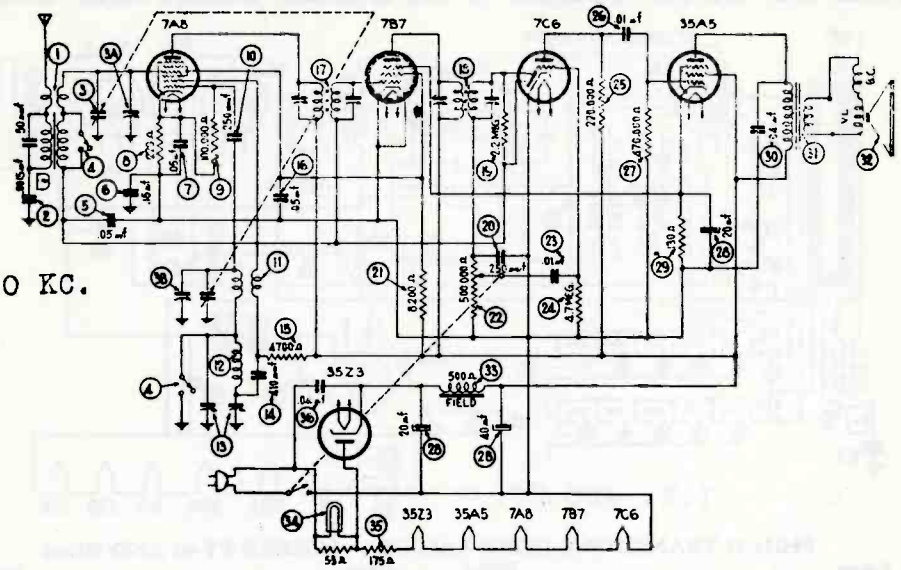
Schem. No.	Description	Philco Part No.
1	Antenna Transformer	32-3233
2	Tubular Condenser (.0015 mf., 200 v.)	30-4555S
3	Tuning Condenser	31-2431
4	Wave Switch	42-1497
5	Tubular Condenser (.05 mf., 200 v.)	30-45198
6	Tubular Condenser (.15 mf., 400 v.)	30-46008
7	Tubular Condenser (.05 mf., 200 v.)	30-45198
8	Resistor (220 ohms, ½ watt)	33-122336
9	Resistor (100,000 ohms, ¼ watt)	33-410154
10	Mica Condenser (250 mmf.)	61-0033
11	Short Wave Oscillator Trans.	32-3234
12	BC Oscillator Transformer	32-3217
13	Dual Padding Condenser	31-6331
14	Mica Condenser (410 mmf.)	30-1089
15	Resistor (4700 ohms, ¼ watt)	33-247134
16	Tubular Condenser (.05 mf., 200 v.)	30-45198
17	1st I. F. Transformer	32-3327
18	2nd I. F. Transformer	32-3150
19	Resistor (2.2 megohms, ¼ watt)	33-522154
20	Mica Condenser (250 mmf.)	61-0033
21	Resistor (8,200 ohms, ¼ watt)	33-282334
22	Volume Control	33-5306
23	Tubular Condenser (.01 mf., 400 v.)	30-45728
24	Resistor (4.7 megohm, ¼ watt)	33-547154
25	Resistor (220,000 ohms, ¼ watt)	33-522154
26	Tubular Condenser (.01 mf., 200 v.)	30-45818
27	Resistor (470,000 ohms, ¼ watt)	33-447154
28	Electrolytic Condenser	30-2402
29	Resistor (130 ohms, ½ watt)	33-113336
30	Tubular Condenser (.04 mf., 400 v.)	30-41198
31	Output Trans.—Part of Speaker No.	36-1469
32	Speaker	36-1469
33	Field Coil—Part of Speaker No.	36-1469
34	Pilot Lamp	34-2068
35	Line Resistor	33-3367
36	Tubular Condenser (.04 mf., 400 v.)	30-41198

PHILCO TRANSITONE HOME RADIO MODEL PT-35



I.F. 470 KC.

Schem. No.	Description
1	Antenna Transformer
2	Tubular Condenser (.0015 mf., 200 v.
3	Tuning Condenser
4	Switch
5	Tubular Condenser (.05 mf., 200 v.)
6	Tubular Condenser (.15 mf., 400 v.)
7	Resistor (47,000 ohms, ¼ watt)
8	Mica Condenser (110 mmf.)
9	Oscillator Transformer
10	Tubular Condenser (.05 mf., 200 v.)
11	1st I. F. Transformer
12	2nd I. F. Transformer
13	Resistor (2.2 meg., ¼ watt)
14	Mica Condenser (250 mmf.)
15	Resistor (22,000 ohms, ½ watt)
16	Volume Control (500,000 ohms)
17	Tubular Condenser (.01 mf., 200 v.)
18	Resistor (4.7 meg., ¼ watt)
19	Resistor (220,000 ohms, ¼ watt)
20	Tubular Condenser (.01 mf., 400 v.)
21	Resistor (470,000 ohms, ¼ watt)
22	Resistor (130 ohms, ½ watt)
23	Tubular Condenser (.04 mf., 400 v.)
24	Output Transformer Part of Speaker No.
25	Speaker
26	Electrolytic Condenser (20-20 mf., 150 v.)
27	Field Coil—Part of Speaker No.
28	Pilot Lamp
29	Line Resistor
30	Tubular Condenser (.04 mf., 400 v.)



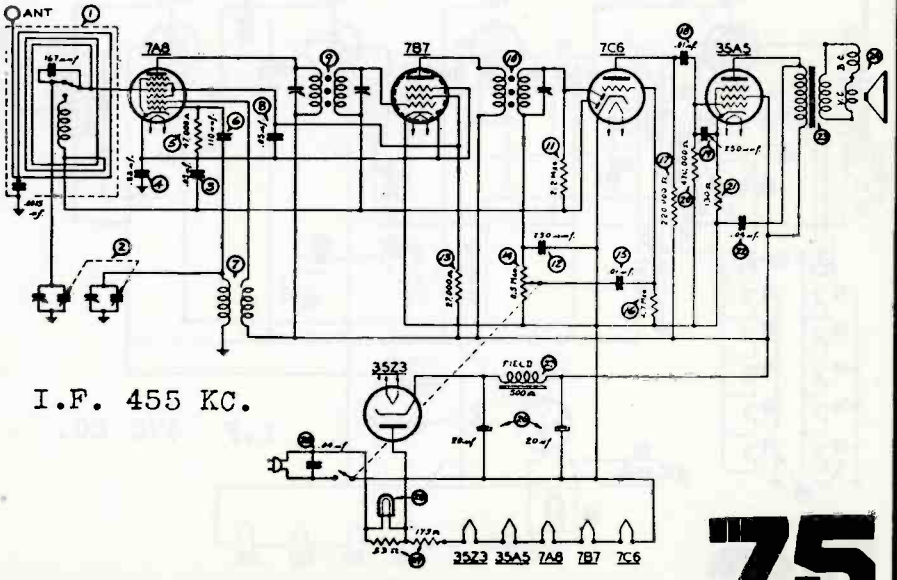
I.F. 470 KC.

PHILCO TRANSITONE MODEL PT-38

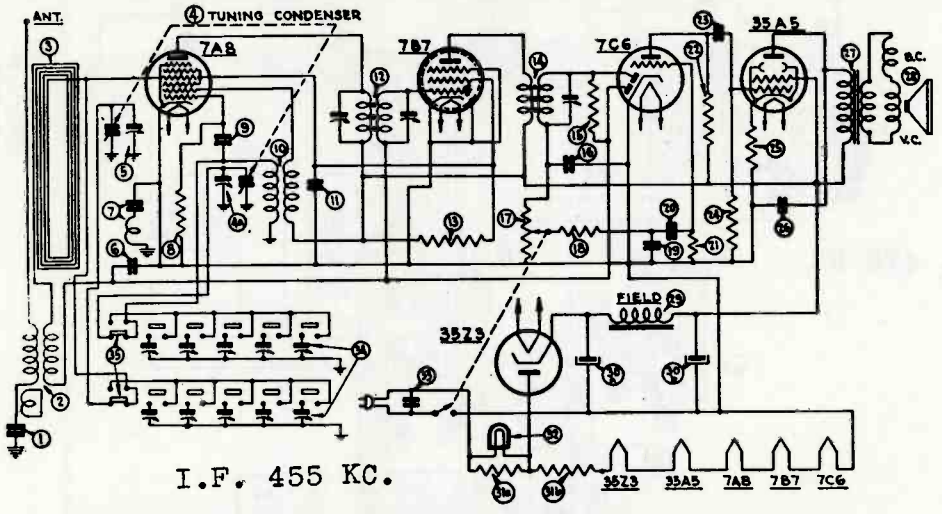
Schem. No.	Description	Philco Part No.
1	Antenna Transformer	32-3233
2	Tubular Condenser (.0015 mf., 200 v.)	30-4555
3	Tuning Condenser	31-2431
4	Wave Switch	42-1497
5	Tubular Condenser (.04 mf., 200 v.)	30-4519
6	Tubular Condenser (.15 mf., 400 v.)	30-4600
7	Tubular Condenser (.05 mf., 200 v.)	30-4519
8	Resistor (220 ohms, ½ watt)	33-122336
9	Resistor (100,000 ohms, ¼ watt)	33-410154
10	Mica Condenser (250 mmf.)	61-0033
11	Short Wave Oscillator Trans.	32-3234
12	BC Oscillator Transformer	32-3217
13	Dual Padding Condenser	31-6331
14	Mica Condenser (410 mmf.)	30-1089
15	Resistor (4700 ohms, ¼ watt)	33-247134
16.	Tubular Condenser (.05 mf., 200 v.)	30-4519
17	1st I. F. Transformer	32-3327
18	2nd I. F. Transformer	32-3150
19	Resistor (2.2 megohms, ¼ watt)	33-522154
20	Mica Condenser (250 mmf.)	61-0033
21	Resistor (8,200 ohms, ¼ watt	33-282334
22	Volume Control	33-5306
23	Tubular Condenser (.01 mf., 400 v.)	30-4572
24	Resistor (4.7 megohms, ¼ watt)	33-547154
25	Resistor (220,000 ohms, ¼ watt)	33-522154
26	Tubular Condenser (.01 mf., 400 v.)	30-4572
27	Resistor (470,000 ohms, ¼ watt)	33-447154
28	Electrolytic Condenser	30-2402
29	Resistor (130 ohms, ½ watt)	33-113336
30	Tubular Condenser (.04 mf., 400 v.)	30-4119
31	Output Trans.—Part of Speaker No.	36-1469
32	Speaker	36-1469
33	Field Coil—Part of Speaker No.	36-1469
34	Pilot Lamp	34-2068
35	Line Resistor	33-3367
36	Tubular Condenser (.04 mf., 400 v.)	30-4119

PHILCO TRANSITONE HOME RADIO MODELS PT-43 AND PT-55

Schem. No.	Description
1	Loop Antenna Assembly
2	Tuning Condenser
3	Tubular Condenser (.05 mf., 200 v.)
4	Tubular Condenser (.25 mf., 400 v.)
5	Resistor (47,000 ohms, ¼ watt)
6	Mica Condenser (110 mmf.)
7	Oscillator Transformer
8	Tubular Condenser (.05 mf., 200 v.)
9	1st I. F. Transformer
10	2nd I. F. Transformer
11	Resistor (2.2 megs., ¼ watt)
12	Mica Condenser (250 mmf.)
13	Resistor (27,000 ohms, ½ watt)
14	Volume Control (500,000 ohms)
15	Tubular Condenser (.01 mf., 200 v.)
16	Resistor (4.7 megs., ¼ watt)
17	Resistor (220,000 ohms, ¼ watt)
18	Tubular Condenser (.01 mf., 400 v.)
19	Mica Condenser (250 mmf.)
20	Resistor (470,000 ohms, ¼ watt)
21	Resistor (130 ohms, ½ watt)
22	Tubular Condenser (.04 mf., 400 v.)
23	Output Transformer, Part of Speaker
24	Speaker
25	Tubular Condenser (.04 mf., 400 v.)
26	Electrolytic Condenser (20-20 mf., 150 v.)
27	Field Coil, Part of Speaker
28	Pilot Lamp
29	Line Resistor



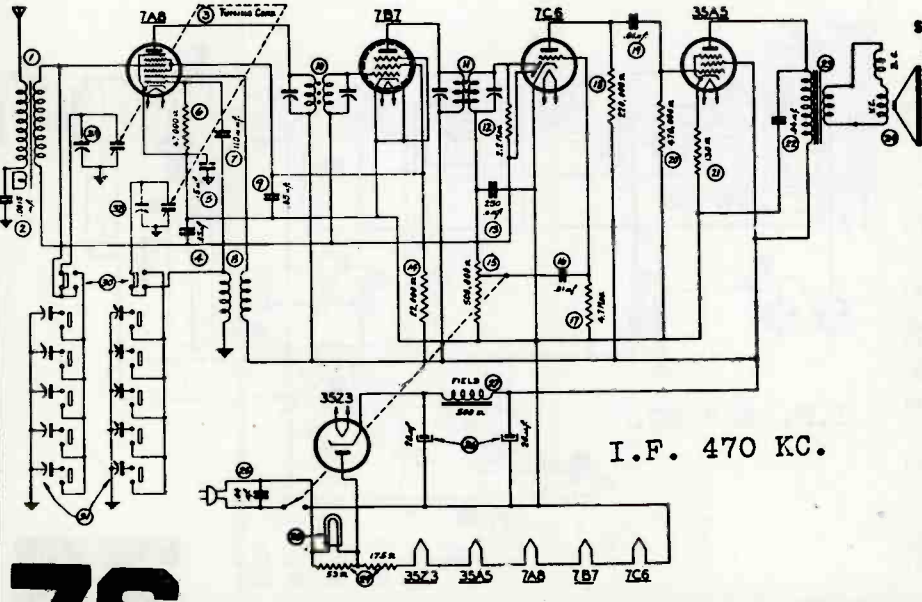
I.F. 455 KC.



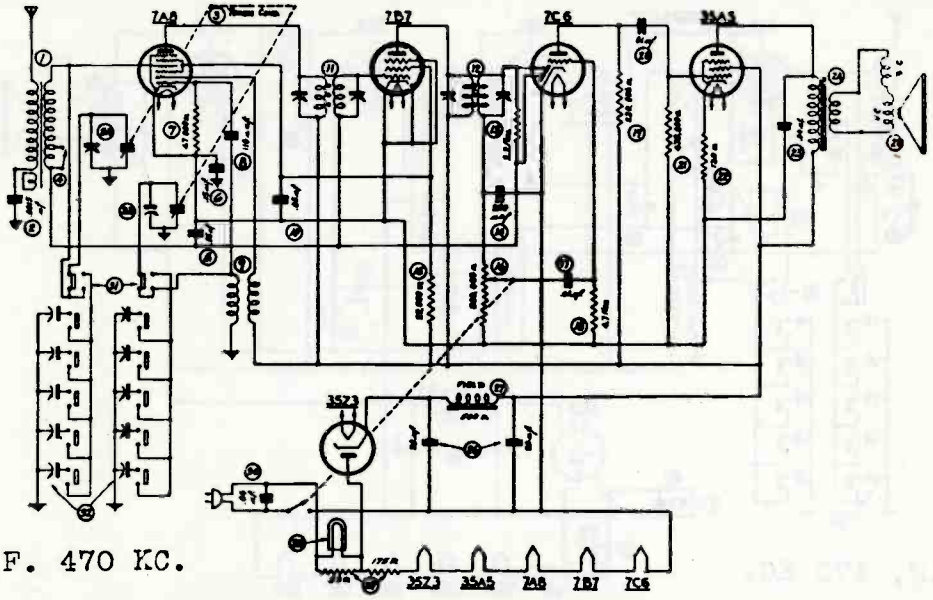
PHILCO TRANSITONE HOME RADIOS — MODELS PT-46 AND PT-48

Schem. No.	Description	Philco Part No.
1	Tubular Condenser (.0015 mf., 200 v.)	30-4555
2	Antenna Transformer	32-3394
3	Loop Antenna — Part of Cabinet and Loop Assy.	
	PT-46	76-1015
	PT-48	76-1016
4	Tuning Condenser (PT-46 and PT-48)	31-2445
5	Padding Condenser	31-6344
6	Tubular Condenser (.1 mf., 200 v.)	30-4499
7	Condenser & Choke Assy.	76-1019
8	Resistor (22,000 ohms, ¼ watt)	33-322154
9	Mica Condenser (110 mmf.)	30-1130
10	Oscillator Transformer	32-3152
11	Tubular Condenser (.05 mf., 200 v.)	30-4519
12	1st I. F. Transformer	32-3390
13	Resistor (22,000 ohms, ½ watt)	33-322334
14	2nd I. F. Transformer	32-3391
15	Resistor (2.2 meg., ¼ watt)	33-522154
16	Mica Condenser (250 mmf.)	61-0033
17	Volume Control (500,000 ohms)	33-5306
18	Resistor (47,000 ohms, ¼ watt)	33-347154
19	Mica Condenser (250 mmf.)	61-0033
20	Tubular Condenser (.01 mf., 200 v.)	30-4479
21	Resistor (4.7 meg., ¼ watt)	33-547154
22	Resistor (220,000 ohms, ¼ watt)	33-422154
23	Tubular Condenser (.01 mf., 400 v.)	30-4572
24	Resistor (470,000 ohms, ¼ watt)	33-447154
25	Resistor (130 ohms, ½ watt)	33-113336
26	Tubular Condenser (.04 mf., 400 v.)	30-4119
27	Output Transformer Part of Speaker No.	36-1469
28	Speaker	36-1469
29	Field Coil Part of Speaker No.	36-1469
30	Electrolytic Condenser (20-20 mf., 150 v.)	30-2382
31	Line Resistor	33-3367
32	Pilot Lamp	34-2068
33	Tubular Condenser (.04 mf., 400 v.)	30-4119
34	Padding Condenser Strip	31-6324
35	Push Button Switch	42-1485

PHILCO TRANSITONE HOME RADIO MODELS PT-45 AND PT-47



Schem. No.	Description
1	Antenna Transformer
2	Tubular Condenser (.0015 mf., 200 v.
3	Tuning Condenser
4	Tubular Condenser (.05 mf., 200 v.)
5	Tubular Condenser (.15 mf., 400 v.)
6	Resistor (47,000 ohms, ¼ watt)
7	Mica Condenser (110 mf.)
8	Oscillator Transformer
9	Tubular Condenser (.05 mf., 200 v.)
10	1st I. F. Transformer
11	2nd I. F. Transformer
12	Resistor (2.2 meg., ¼ watt)
13	Mica Condenser (250 mmf.)
14	Resistor (22,000 ohms, ½ watt)
15	Volume Control (500,000 ohms)
16	Tubular Condenser (.01 mf., 200 v.)
17	Resistor (4.7 meg., ¼ watt)
18	Resistor (220,000 ohms, ¼ watt)
19	Tubular Condenser (.01 mf., 400 v.)
20	Resistor (470,000 ohms, ¼ watt)
21	Resistor (130 ohms, ½ watt)
22	Tubular Condenser (.04 mf., 400 v.)
23	Output Transformer Part of Speaker No.
24	Speaker
25	Tubular Condenser (.04 mf., 400 v.)
26	Electrolytic Condenser (20-20 mf., 150 v.)
27	Field Coil Part of Speaker No.
28	Pilot Lamp
29	Line Resistor
30	Push Button Switch
31	Padding Condenser Strip

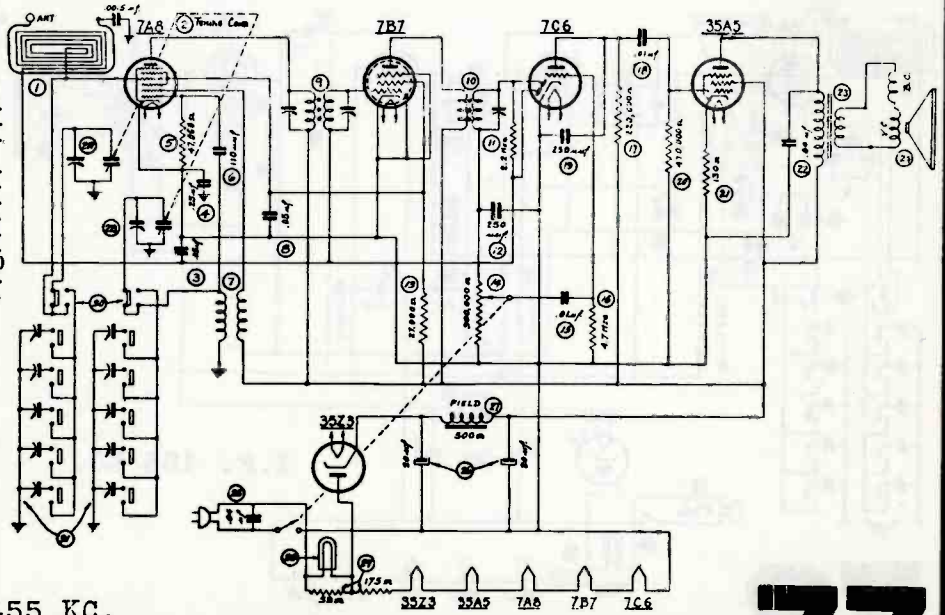


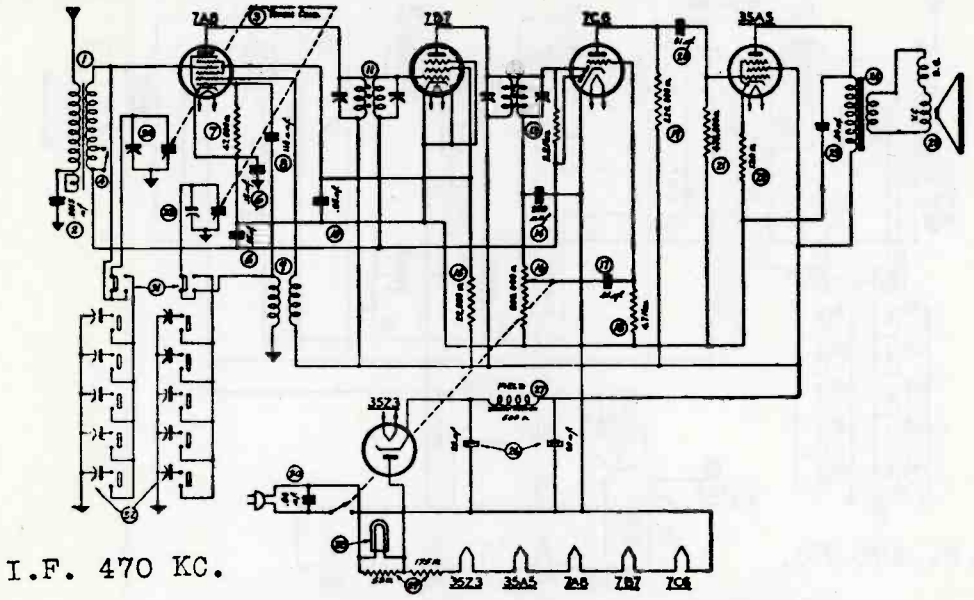
TRANSITONE HOME RADIO MODELS PT-49 AND PT-51

Schem. No.	Description	Philco Part No.
1	Antenna Transformer	32-3168
2	Tubular Condenser (.0015 mf., 200 v.)	30-45558
3	Tuning Condenser	31-2428
4	Switch	42-1406
5	Tubular Condenser (.05 mf., 200 v.)	30-45198
6	Tubular Condenser (.15 mf., 400 v.)	30-45058
7	Resistor (47,000 ohms, ¼ watt)	33-347154
8	Mica Condenser (110 mmf.)	30-1130
9	Oscillator Transformer	32-3167
10	Tubular Condenser (.05 mf., 200 v.)	30-45198
11	1st I. F. Transformer	32-3149
12	2nd I. F. Transformer	32-3150
13	Resistor (2.2 meg., ¼ watt)	33-522154
14	Mica Condenser (250 mmf.)	61-0033
15	Resistor (22,000 ohms, ½ watt)	33-322334
16	Volume Control (500,000 ohms)	33-5306
17	Tubular Condenser (.01 mf., 200 v.)	30-44798
18	Resistor (4.7 meg., ¼ watt)	33-547154
19	Resistor (220,000 ohms, ¼ watt)	33-422154
20	Tubular Condenser (.01 mf., 400 v.)	30-45728
21	Resistor (470,000 ohms, ¼ watt)	33-447154
22	Resistor (130 ohms, ½ watt)	33-113336
23	Tubular Condenser (.04 mf., 400 v.)	30-41198
24	Output Transformer Part of Speaker No.	36-1469
25	Speaker	36-1469
26	Electrolytic Condenser (20-20 mf., 150 v.)	30-2382
27	Field Coil Part of Speaker No.	36-1469
28	Pilot Lamp	34-2068
29	Line Resistor	33-3367
30	Tubular Condenser (.04 mf., 400 v.)	30-41198
31	Push Button Switch	42-1485
32	Padding Condenser Strip	31-6293

PHILCO TRANSITONE HOME RADIOS — MODELS PT-57 AND PT-65

Schem. No.	Description
1	Loop Antenna Assembly
2	Tuning Condenser
3	Tubular Condenser (.05 mf., 200 v.)
4	Tubular Condenser (.25 mf., 400 v.)
5	Resistor (47,000 ohms, ¼ watt)
6	Mica Condenser (110 mmf.)
7	Oscillator Transformer
8	Tubular Condenser (.05 mf., 200 v.)
9	1st I. F. Transformer
10	2nd I. F. Transformer
11	Resistor (2.2 megs., ¼ watt)
12	Mica Condenser (250 mmf.)
13	Resistor (27,000 ohms, ½ watt)
14	Volume Control (500,000 ohms)
15	Tubular Condenser (.01 mf., 200 v.)
16	Resistor (4.7 megs., ¼ watt)
17	Resistor (220,000 ohms, ¼ watt)
18	Tubular Condenser (.01 mf., 400 v.)
19	Mica Condenser (250 mmf.)
20	Resistor (470,000 ohms, ¼ watt)
21	Resistor (130 ohms, ½ watt)
22	Tubular Condenser (.04 mf., 400 v.)
23	Output Transformer Part of Speaker No.
24	Speaker
25	Tubular Condenser (.04 mf., 400 v.)
26	Electrolytic Condenser (20-20 mf., 150 v.)
27	Field Coil—Part of Speaker No.
28	Pilot Lamp
29	Line Resistor
30	Push Button Switch
31	Padding Condenser Strip

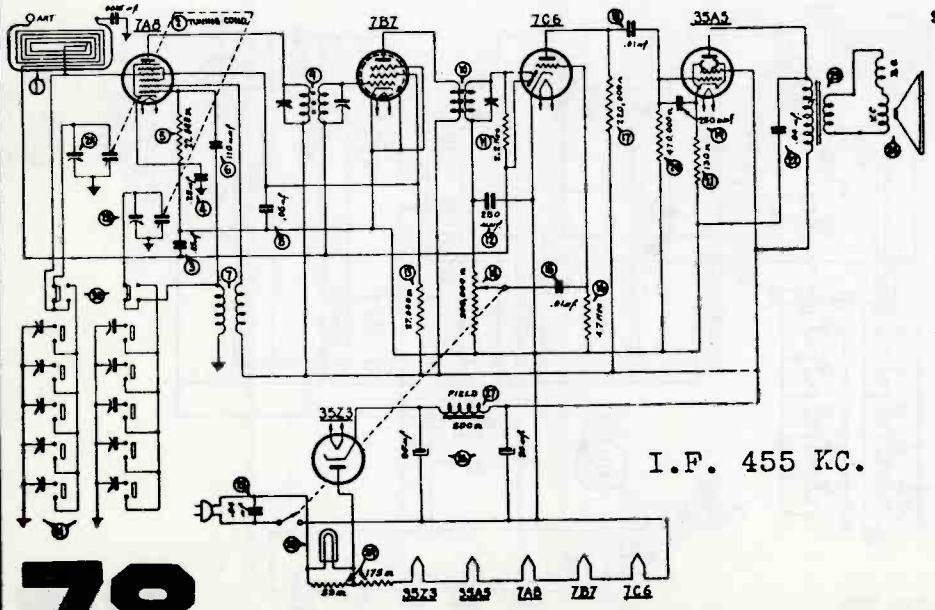




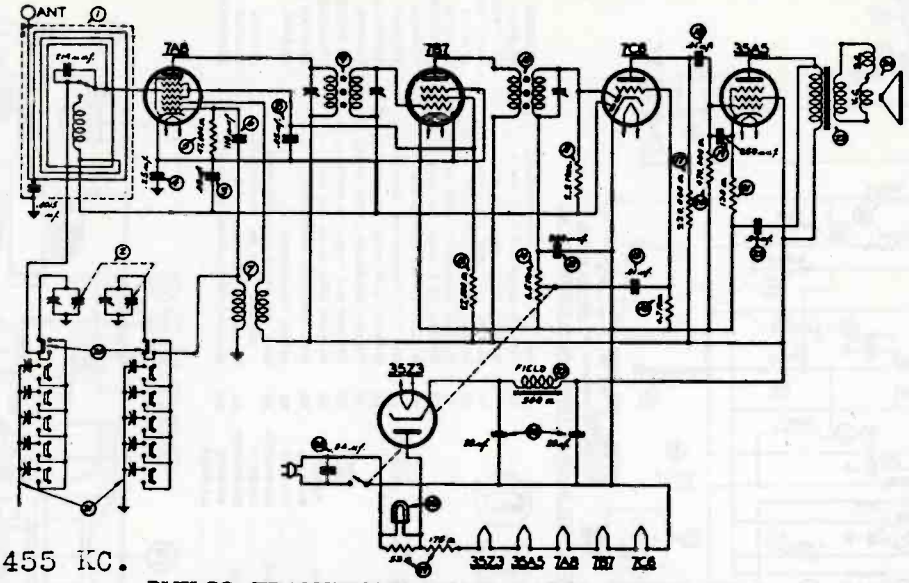
PHILCO TRANSITONE HOME RADIO MODEL PT-59

Schem. No.	Description	Philco Part No.
1	Antenna Transformer	32-3164
2	Tubular Condenser (.0015 mf., 200 v.)	30-4555S
3	Tuning Condenser	31-2435
4	Switch	42-1406
5	Tubular Condenser (.05 mf., 200 v.)	30-4519S
6	Tubular Condenser (.15 mf., 400 v.)	30-4505S
7	Resistor (47,000 ohms, ¼ watt)	33-347154
8	Mica Condenser (110 mmf.)	30-1130
9	Oscillator Transformer	32-3152
10	Tubular Condenser (.05 mf., 200 v.)	30-4519S
11	1st I. F. Transformer	32-3149
12	2nd I. F. Transformer	32-3150
13	Resistor (2.2 meg., ¼ watt)	33-522154
14	Mica Condenser (250 mmf.)	61-0033
15	Resistor (22,000 ohms, ½ watt)	33-322334
16	Volume Control (500,000 ohms)	33-5306
17	Tubular Condenser (.01 mf., 200 v.)	30-4479S
18	Resistor (4.7 meg., ¼ watt)	33-547154
19	Resistor (220,000 ohms, ¼ watt)	33-422154
20	Tubular Condenser (.01 mf., 400 v.)	30-4572S
21	Resistor (470,000 ohms, ¼ watt)	33-447154
22	Resistor (130 ohms, ½ watt)	33-113336
23	Tubular Condenser (.4 mf., 400 v.)	30-4119S
24	Output Transformer Part of Speaker No.	36-1469
25	Speaker	36-1469
26	Electroyltic Condenser (20-20 mf., 150 v.)	30-2382
27	Field Coil Part of Speaker, Part No.	36-1469
28	Pilot Lamp	34-2068
29	Line Resistor	33-3367
30	Tubular Condenser (.04 mf., 400 v.)	30-4119S

PHILCO TRANSITONE HOME RADIOS — MODEL PT-66



Schem. No.	Description
1	Loop Antenna Assembly
2	Tuning Condenser
3	Tubular Condenser (.05 mf., 200 v.)
4	Tubular Condenser (.25 mf., 400 v.)
5	Resistor (22,000 ohms, ¼ watt)
6	Mica Condenser (110 mmf.)
7	Oscillator Transformer
8	Tubular Condenser (.05 mf., 200 v.)
9	1st I. F. Transformer
10	2nd I. F. Transformer
11	Resistor (2.2 megs., ¼ watt)
12	Mica Condenser (250 mmf.)
13	Resistor (27,000 ohms, ½ watt)
14	Volume Control (500,000 ohms)
15	Tubular Condenser (.01 mf., 200 v.)
16	Resistor (4.7 megs., ¼ watt)
17	Resistor (220,000 ohms, ¼ watt)
18	Tubular Condenser (.01 mf., 400 v.)
19	Mica Condenser (250 mmf.)
20	Resistor (470,000 ohms, ¼ watt)
21	Resistor (130 ohms, ½ watt)
22	Tubular Condenser (.04 mf., 400 v.)
23	Output Transformer Part of Speaker No.
24	Speaker
25	Tubular Condenser (.04 mf., 400 v.)
26	Electrolytic Condenser (20-20 mf., 150 v.)
27	Field Coil—Part of Speaker No.
28	Pilot Lamp
29	Line Resistor
30	Push Button Switch
31	Padding Condenser Strip



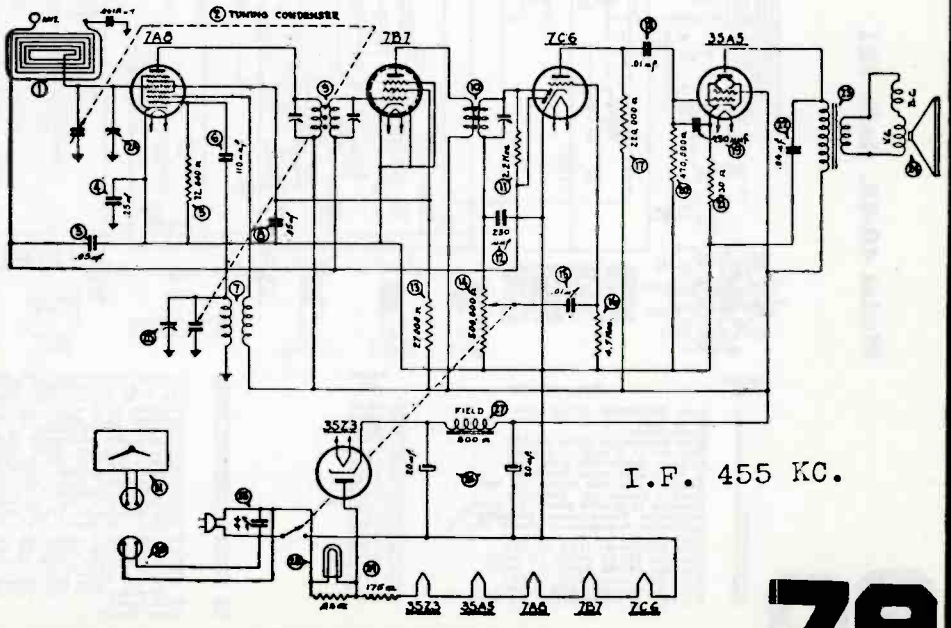
I.F. 455 KC.

PHILCO TRANSITONE HOME RADIO MODEL PT-67

Schem. No.	Description	Philco Part No.
1	Loop Antenna Assembly	38-9937
2	Tuning Condenser	31-2437
3	Tubular Condenser (.05 mf., 200 v.)	30-45198
4	Tubular Condenser (.25 mf., 400 v.)	30-46048
5	Resistor (47,000 ohms, ¼ watt)	33-347154
6	Mica Condenser (110 mmf.)	30-1130
7	Oscillator Transformer	32-3152
8	Tubular Condenser (.05 mf., 200 v.)	30-45198
9	1st I. F. Transformer	32-3177
10	2nd I. F. Transformer	32-3178
11	Resistor (2.2 megs., ¼ watt)	33-522154
12	Mica Condenser (250 mmf.)	61-0033
13	Resistor (27,000 ohms, ⅛ watt)	33-327334
14	Volume Control (500,000 ohms)	33-5306
15	Tubular Condenser (.01 mf., 200 v.)	30-44798
16	Resistor (4.7 megs., ¼ watt)	33-547154
17	Resistor (220,000 ohms, ¼ watt)	33-422154
18	Tubular Condenser (.01 mf., 400 v.)	30-45728
19	Mica Condenser (250 mmf.)	61-0033
20	Resistor (470,000 ohms, ¼ watt)	33-447154
21	Resistor (130 ohms, ½ watt)	33-113336
22	Tubular Condenser (.04 mf., 400 v.)	30-41198
23	Output Transformer	Part of Speaker No. 36-1469
24	Speaker	36-1469
25	Tubular Condenser (.04 mf., 400 v.)	30-41198
26	Electrolytic Condenser (20-20 mf., 150 v.)	30-2382
27	Field Coil	Part of Speaker No. 36-1469
28	Pilot Lamp	34-2068
29	Line Resistor	33-3367
30	Push Button Switch	42-1485
31	Padding Condenser Strip	31-6324

PHILCO TRANSITONE HOME RADIO — MODEL PT-69

Schem. No.	Description
1	Loop Antenna Assembly
2	Tuning Condenser
3	Tubular Condenser (.05 mf., 200 v.)
4	Tubular Condenser (.25 mf., 400 v.)
5	Resistor (22,000 ohms, ¼ watt)
6	Mica Condenser (110 mmf.)
7	Oscillator Transformer
8	Tubular Condenser (.05 mf., 200 v.)
9	1st I. F. Transformer
10	2nd I. F. Transformer
11	Resistor (2.2 megs., ¼ watt)
12	Mica Condenser (250 mmf.)
13	Resistor (27,000 ohms, ⅛ watt)
14	Volume Control (500,000 ohms)
15	Tubular Condenser (.01 mf., 200 v.)
16	Resistor (4.7 megs., ¼ watt)
17	Resistor (220,000 ohms, ¼ watt)
18	Tubular Condenser (.01 mf., 400 v.)
19	Mica Condenser (250 mmf.)
20	Resistor (470,000 ohms, ¼ watt)
21	Resistor (130 ohms, ½ watt)
22	Tubular Condenser (.04 mf., 400 v.)
23	Output Transformer Part of Speaker No.
24	Speaker
25	Tubular Condenser (.04 mf., 400 v.)
26	Electrolytic Condenser (20-20 mf., 150 v.)
27	Field Coil Part of Speaker No.
28	Pilot Lamp
29	Line Resistor
30	Connector Cable
31	Complete Clock (For 50 Cycle operation) (For 60 Cycle operation)



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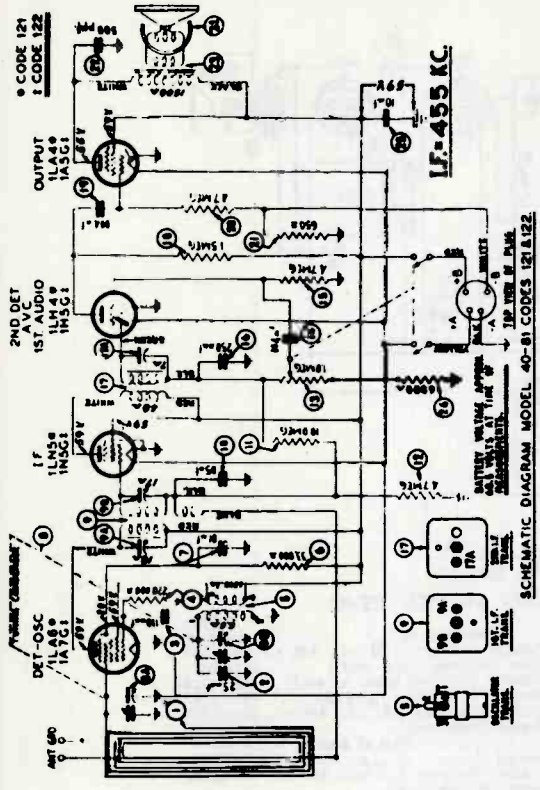
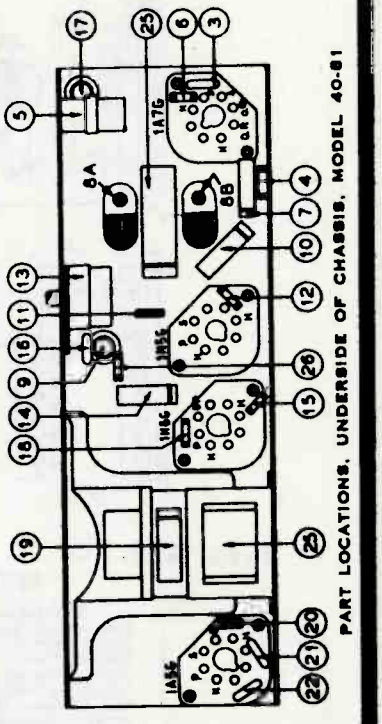


PHILCO

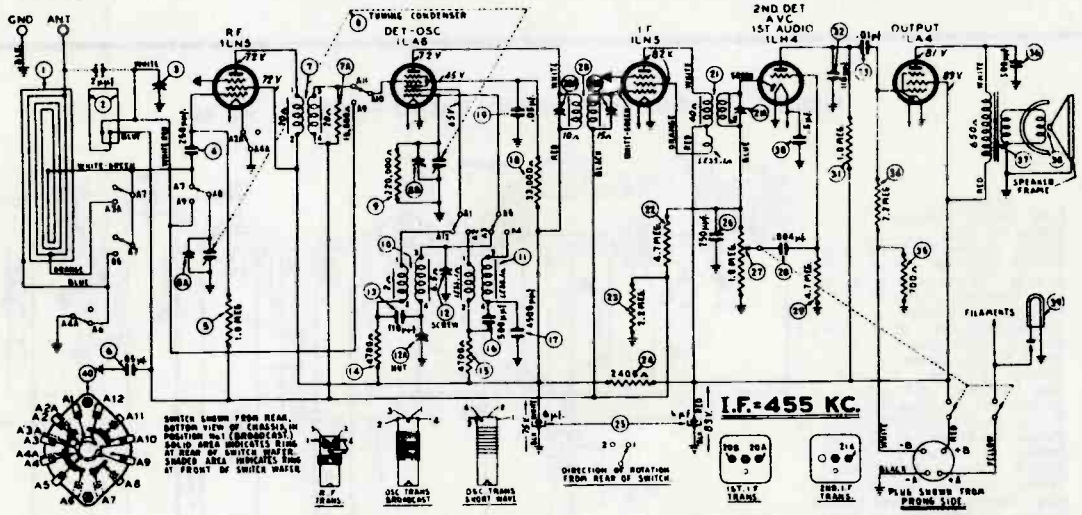
Models 40-81, Codes 121, 122

SCHE. No.	DESCRIPTION	PART No.
1	Loop Assembly (Part of Cabinet)	10413A
2	Mica Condenser (15 mmfd.)	61-0028
3	Mica Condenser (110 mmfd.)	30-1031
4	Resistor (250,000 ohms, ½ watt)	33-425239
5	Oscillator Transformer	32-3277
6	Resistor (33,000 ohms, ½ watt)	33-333339
7	Tubular Condenser (.01 mfd.)	30-4872
8	Tuning Condenser Assembly	31-2432
9	1st I. F. Transformer Assembly	32-3285
10	Tubular Condenser (.05 mfd.)	30-4819
11	Resistor (10.0 meg., ½ watt)	33-610339
12	Resistor (4.7 meg., ½ watt)	33-547339
13	Volume Control and On-Off Switch	33-2321
14	Tubular Condenser (.004 mfd.)	30-4878
15	Resistor (4.7 meg., ½ watt)	33-547339
16	Mica Condenser (250 mmfd.)	61-0033
17	2nd I. F. Transformer Assembly	32-3286
18	Resistor (1.0 meg., ½ watt)	33-510339
19	Tubular Condenser (.004 mfd.)	30-4878
20	Resistor (4.7 meg., ½ watt)	33-547339
21	Resistor (850 ohms, ½ watt)	33-185339
22	Mica Condenser (800 mmfd.)	30-1114
23	Output Transformer	32-8062
24	Cone and Voice Coil Assembly (Speaker Part No. 36-1482-3)	36-4121
25	Electrolytic Condenser (10 mfd., 150 v.)	30-2366
26	Resistor (6800 ohms, ½ watt)	33-268339

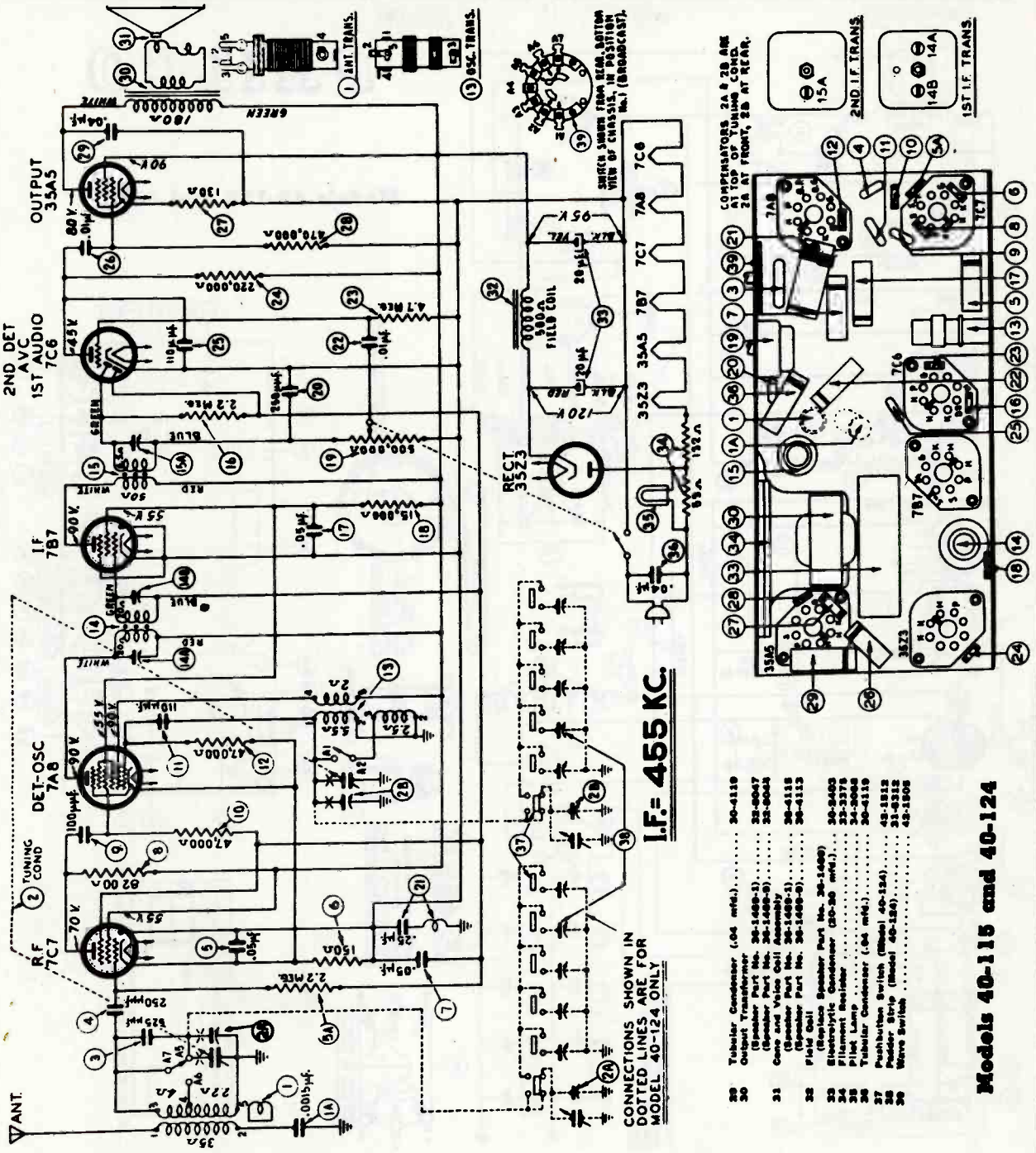


PART LOCATIONS, UNDERSIDE OF CHASSIS, MODEL 40-81

Model 40-88, Code 121



SCHE. No.	DESCRIPTION	PART No.
1	Loop Assembly (Broadcast)	38-8917
2	Loop Assembly (Short Wave)	38-8865
3	Compensator	31-6288
4	Mica Condenser (250 mmfd.)	61-0033
5	Resistor (1.0 meg., ½ watt)	33-510339
6	Tubular Condenser (.05 mfd.)	30-4819
7	R. F. Transformer Assembly	32-3215
7A	Resistor (10,000 ohms, ½ watt)	33-310339
8	Tuning Condenser Assembly	31-2378
9	Resistor (220,000 ohms, ½ watt)	33-422339
10	Oscillator Transformer (Broadcast)	32-3249
11	Oscillator Transformer (Short Wave)	32-3220
12	Compensator	31-6100
13	Mica Condenser (110 mmfd.)	30-1130
14	Resistor (4700 ohms, ½ watt)	33-247339
15	Resistor (4700 ohms, ½ watt)	33-247339
16	Mica Condenser (500 mmfd.)	30-1114
17	Mica Condenser (4500 mmfd.)	30-1109
18	Resistor (33,000 ohms, ½ watt)	33-333339
19	Tubular Condenser (.05 mfd.)	30-4819
20	1st I. F. Transformer Assembly	32-3222
21	2nd I. F. Transformer Assembly	32-3223
22	Resistor (4.7 meg., ½ watt)	33-547339
23	Resistor (2.2 meg., ½ watt)	33-522339
24	Resistor (2400 ohms, ½ watt)	33-224339
25	Electrolytic Condenser (8-8 mf., 150 V.)	30-2388
26	Mica Condenser (250 mmfd.)	61-0033
27	Volume Control and On-Off Switch	33-2310
28	Tubular Condenser (.004 mfd.)	30-4878
29	Resistor (4.7 meg., ½ watt)	33-547339
30	Tubular Condenser (.1 mfd.)	30-4881
31	Resistor (1.0 meg., ½ watt)	33-510339
32	Mica Condenser (110 mmfd.)	30-1130
33	Tubular Condenser (.01 mfd.)	30-4872
34	Resistor (2.2 meg., ½ watt)	33-522339
35	Resistor (700 ohms, ½ watt)	33-170339
36	Mica Condenser (500 mmfd.)	30-1114
37	Output Transformer	32-8066
38	Cone and Voice Coil Assembly (Speaker Part No. 36-1482-3)	36-4121
39	Pilot Lamp	34-8246
40	Wave Switch	42-1409



SCHE. No.	DESCRIPTION	PART No.
1	Antenna Transformer (Model 40-115)	32-3303
	Antenna Transformer (Model 40-124)	32-3321
1A	Tubular Condenser (.0015 mfd.)	30-4885
2	Tuning Condenser (Model 40-115)	31-2425
	Tuning Condenser (Model 40-124)	31-2426
3	Mica Condenser (525 mmfd.)	30-1142
4	Mica Condenser (250 mmfd.)	61-0033
5	Tubular Condenser (.05 mfd.)	30-4819
5A	Resistor (2.2 meg., ½ watt)	33-522339
6	Resistor (150 ohms, ½ watt)	33-115336
7	Tubular Condenser (.05 mfd.)	30-4819
8	Resistor (8200 ohms, ½ watt)	33-282339
9	Mica Condenser (100 mmfd.)	30-1138
10	Resistor (47,000 ohms, ½ watt)	33-347339
11	Mica Condenser (110 mmfd.)	30-1130
12	Resistor (47,000 ohms, ½ watt)	33-347339
13	Oscillator Trans. (Model 40-115)	32-3285

SCHE. No.	DESCRIPTION	PART No.
14	1st I. F. Transformer Assembly	32-3237
15	2nd I. F. Transformer Assembly	32-3238
16	Resistor (2.2 meg., ½ watt)	33-522339
17	Tubular Condenser (.05 mfd.)	30-4819
18	Resistor (15,000 ohms, ½ watt)	33-215339
19	Volume Control and On-Off Switch	33-3306
20	Mica Condenser (250 mmfd.)	30-1074
21	Choke and Condenser Assembly (.25 mfd.)	32-2986
22	Tubular Condenser (.01 mfd.)	30-4479
23	Resistor (4.7 meg., ½ watt)	33-547339
24	Resistor (220,000 ohms, ½ watt)	33-422339
25	Mica Condenser (110 mmfd.)	30-1130
26	Tubular Condenser (.01 mfd.)	30-4872
27	Resistor (130 ohms, ½ watt)	33-113336
28	Resistor (470,000 ohms, ½ watt)	33-447339

29	Tubular Condenser (.04 mfd.)	30-4119
30	Output Transformer	
	(Speaker Part No. 36-1468-1)	32-3047
	(Speaker Part No. 36-1468-2)	32-3046
31	Cone and Voice Coil Assembly	
	(Speaker Part No. 36-1468-1)	36-4115
	(Speaker Part No. 36-1468-2)	36-4115
32	Field Coil	
	(Replace Speaker Part No. 36-1468)	30-2402
33	Electrolytic Condenser (20-30 mfd.)	32-3378
34	Filament Resistor	34-2048
35	Pilot Lamp	34-2046
36	Tubular Condenser (.04 mfd.)	30-4118
37	Pushbutton Switch (Model 40-124)	43-1512
38	Padder Strip (Model 40-124)	31-4312
39	Wave Switch	43-1506

Models 40-115 and 40-124

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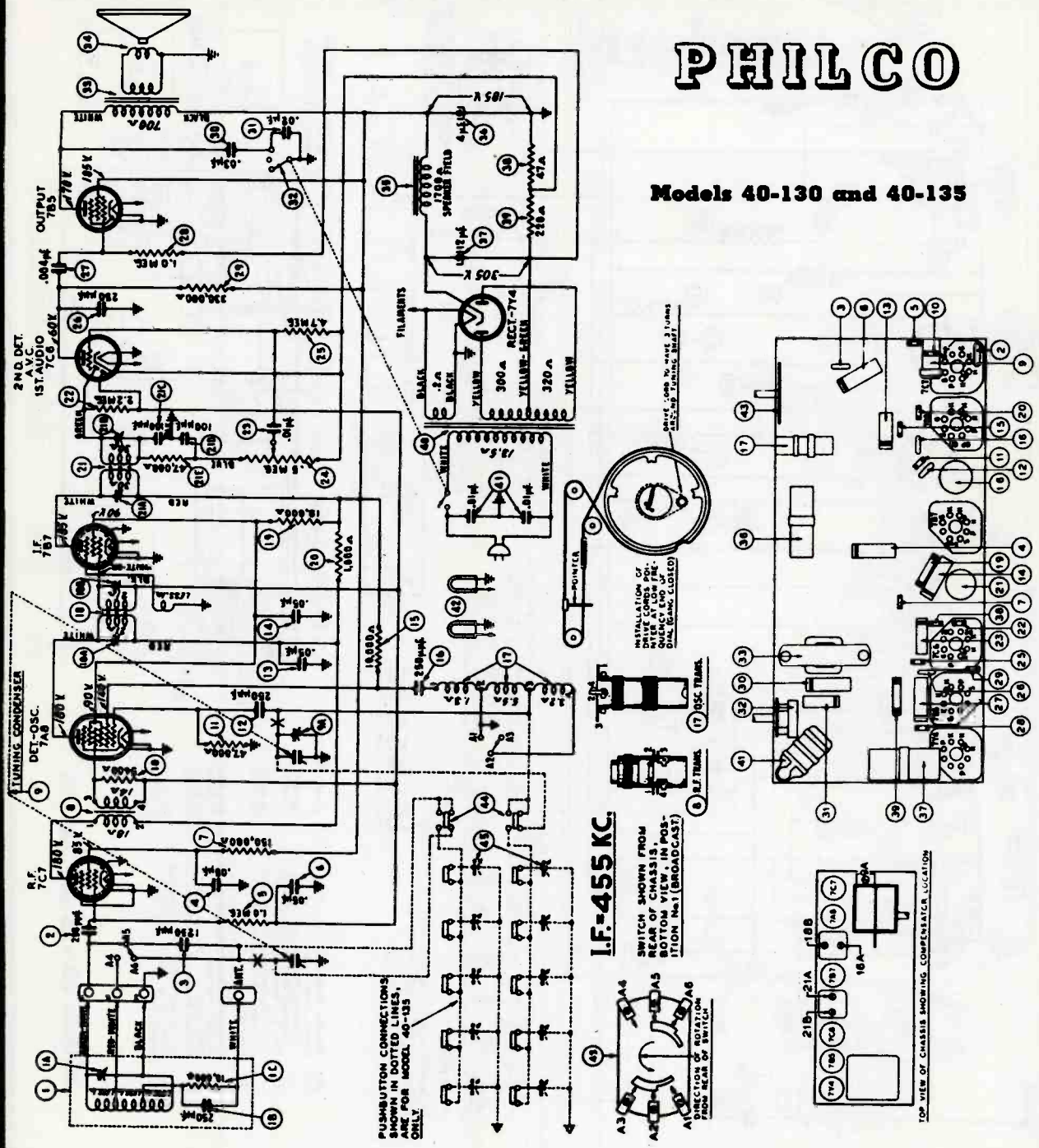
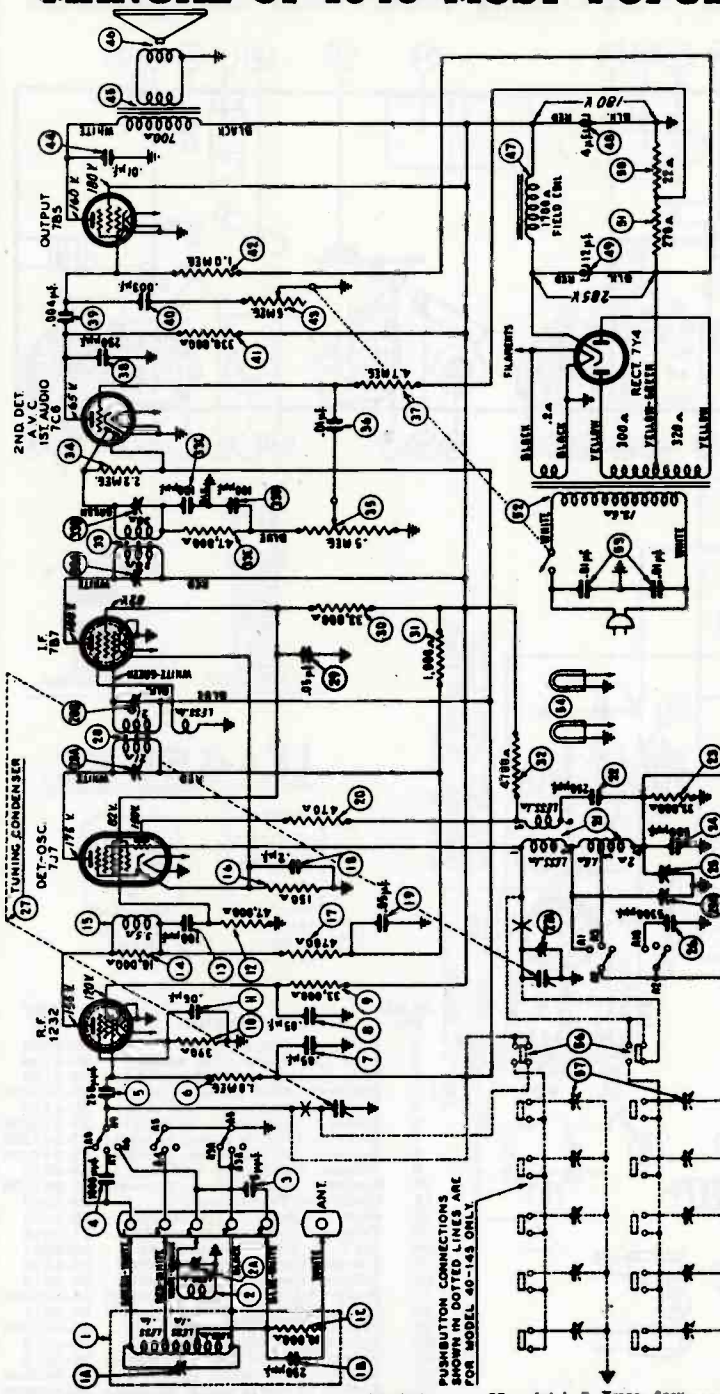
Models 40-130 and 40-135

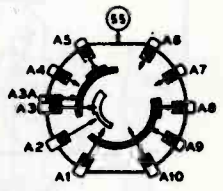


SCHE. No.	DESCRIPTION	PART No.
1	Loop Assembly	38-8881
1A	Compensator	31-6318
1B	Mica Cond. (250 mmfd.)	61-0033
1C	Resistor (10,000 ohms, ½ watt)	33-3103239
2	Mica Cond. (250 mmfd.)	61-0033
3	Mica Cond. (1250 mmfd.)	5886
4	Tubular Cond. (.05 mfd.)	30-4516
5	Resistor (1.0 meg., ½ watt)	33-5103239
6	Tubular Cond. (.05 mfd.)	30-4516
7	Resistor (150,000 ohms, ½ watt)	33-4153239
8	R. F. Transformer	32-3283
9	Tuning Condenser	31-2274
10	Resistor (5600 ohms, ½ watt)	33-2563239
11	Resistor (47,000 ohms, ½ watt)	33-3473239
12	Mica Cond. (250 mmfd.)	61-0033
13	Tubular Cond. (.05 mfd.)	30-4516
14	Tubular Cond. (.05 mfd.)	30-4516
15	Resistor (10,000 ohms, ½ watt)	33-3103239
16	Mica Cond. (250 mmfd.)	61-0033
17	Oscillator Transformer	32-3212
18	1st I. F. Trans. Assy.	32-3210
19	Resistor (18,000 ohms, 1 watt)	33-3184239
20	Resistor (1,000 ohms, ½ watt)	33-2103239
21	2nd I. F. Trans. Assy.	32-3281
22	Resistor (2.2 meg., ½ watt)	33-5223239
23	Tubular Cond. (.01 mfd.)	30-4572
24	Volume Control (.5 meg.)	33-5332
25	Resistor (4.7 meg., ½ watt)	33-5473239
26	Mica Cond. (250 mmfd.)	61-0033
27	Tubular Cond. (.004 mfd.)	30-4578
28	Resistor (1.0 meg., ½ watt)	33-5103239
29	Resistor (330,000 ohms, ½ watt)	33-4333239
30	Tubular Cond. (.03 mfd.)	30-4449
31	Tubular Cond. (.02 mfd.)	30-4481
32	Tone Control and On-Off Switch	42-1620
33	Output Transformer	32-3063
34	Cone and Voice Coil Assy. (Spkr. Part No. 36-1478-3)	36-4065
35	Field Coil (Replace Spkr. Part No. 36-1478)	
36	Electrolytic Cond. (4 mfd., 400 V.)	30-2401
37	Electrolytic Cond. (12 mfd., 400 V.)	30-2409
38	Resistor (47 ohms, ½ watt)	33-0473231
39	Resistor (220 ohms, 1 watt)	33-1223231
40	Power Trans. (115 V., 50-60 cycles)	32-3064
41	Bakelite Cond. (.03-.01 mfd.)	3903-DB
42	Pilot Lamps	34-2064
43	Wave Switch	42-1494
44	Pushbutton Switch (Model 40-135 only)	42-1528
45	Padder Strip (Model 40-135 only)	31-6315

PHILCO

Models 40-140 and 40-145



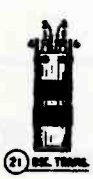


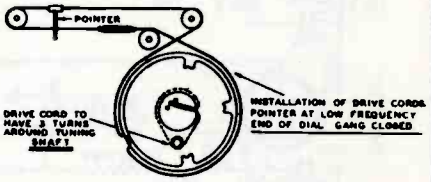
SWITCH SHOWN FROM REAR OF CHASSIS, BOTTOM VIEW, IN POSITION No.1 BROADCAST.

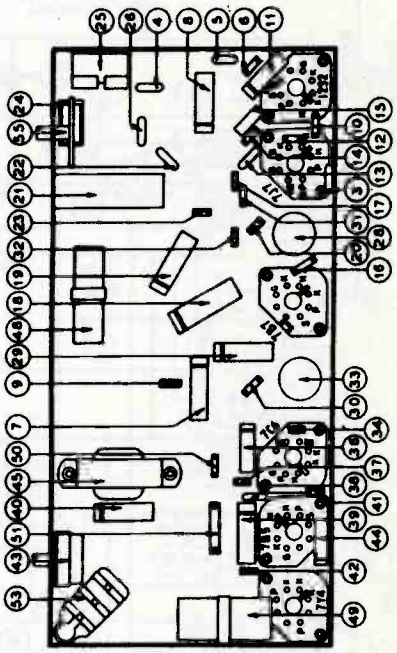
SHADED AREA INDICATES RING AT FRONT OF SWITCH WAFER.

UNSHADED AREA INDICATES RING AT REAR OF SWITCH WAFER.

DIRECTION OF ROTATION FROM REAR OF SWITCH.

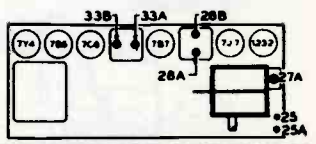






1	Loop Assembly (Broadcast)	30-8892
1A	Compensator	31-6318
2	Mica Cond. (250 mmfd.)	61-0033
3	Resistor (10,000 ohms, ½ watt)	33-310339
3A	Loop Assembly (Short Wave)	30-8893
4	Compensator	31-6320
5	Mica Cond. (5 mmfd.)	30-1087
6	Mica Cond. (1000 mmfd.)	30-1083
7	Mica Cond. (250 mmfd.)	61-0033
8	Resistor (1.0 meg., ½ watt)	33-310539
9	Tubular Cond. (.05 mfd.)	30-4818
10	Tubular Cond. (.05 mfd.)	30-4818
11	Resistor (33,000 ohms, ½ watt)	33-333339
12	Resistor (390 ohms, ½ watt)	33-139331
13	Tubular Cond. (.05 mfd.)	30-4818
14	Resistor (47,000 ohms, ½ watt)	33-347339
15	Mica Cond. (100 mmfd.)	30-1128
16	Resistor (10,000 ohms, ½ watt)	33-310339
17	R. F. Transformer	32-3184
18	Resistor (150 ohms, ½ watt)	33-115331
19	Resistor (4700 ohms, ½ watt)	33-247339
20	Tubular Cond. (.2 mfd.)	30-4834
21	Tubular Cond. (.05 mfd.)	30-4818
22	Resistor (470 ohms, ½ watt)	33-147339
23	Oscillator Transformer	32-3188
24	Mica Cond. (250 mmfd.)	61-0033
25	Resistor (33,000 ohms, ½ watt)	33-333339
26	Silver Mica Cond. (500 mmfd.)	30-1138
27	Compensator (2 section)	31-6317
28	Mica Cond. (5300 mmfd.)	30-1134
28	1st I. F. Trans. Assy.	32-3210
29	Tubular Cond. (.05 mfd.)	30-4818
30	Resistor (33,000 ohms, ½ watt)	33-333339
31	Resistor (1,000 ohms, ½ watt)	33-110339
32	Resistor (4700 ohms, ½ watt)	33-247339
33	2nd I. F. Trans. Assy.	32-3281
34	Resistor (2.2 meg., ½ watt)	33-322339
35	Volume Control (.5 meg.)	31-6323
36	Tubular Cond. (.01 mfd.)	30-4872
37	Resistor (4.7 meg., ½ watt)	33-347339
38	Mica Cond. (250 mmfd.)	61-0033
39	Tubular Cond. (.004 mfd.)	30-4878
40	Tubular Cond. (.003 mfd.)	30-4880
41	Resistor (330,000 ohms, ½ watt)	33-433339
42	Resistor (1.0 meg., ½ watt)	33-410339
43	Tone Control (.5 meg.) & On-Off Switch	31-6323
44	Tubular Cond. (.01 mfd.)	30-4872
45	Field Coil (Replace Spkr. Part No. 36-1478)	
46	Electrolytic Cond. (4 mfd., 400 V.)	30-2401
46	Electrolytic Cond. (12 mfd., 400 V.)	30-2408
47	Resistor (23 ohms, ½ watt)	33-023331
48	Resistor (270 ohms, 1 watt)	33-127431
49	Power Trans. (115 V., 50-60 cycles)	32-8064
52	Line Condenser (.01-.01 mfd.)	3903-ODG
54	Pilot Lamps	34-2064
55	Wave Switch	42-1495
56	Push Button Switch (Model 40-145 only)	42-1528
57	Padder Strip (Model 40-145 only)	31-6316

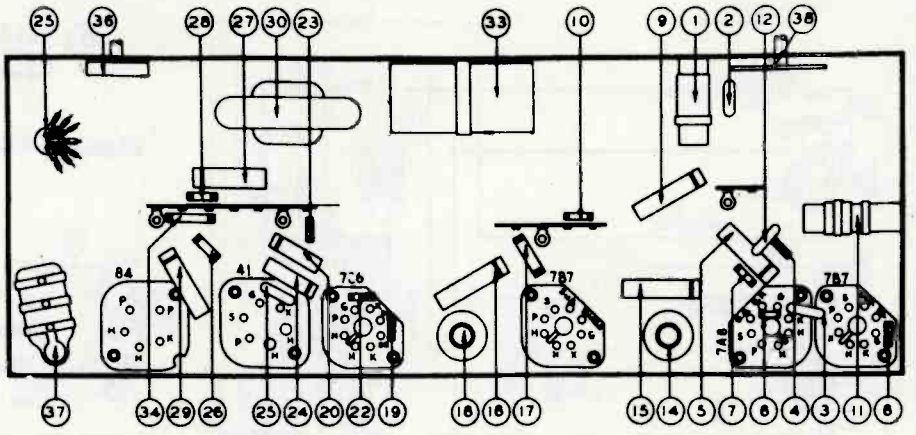
I.F.=455 KC.

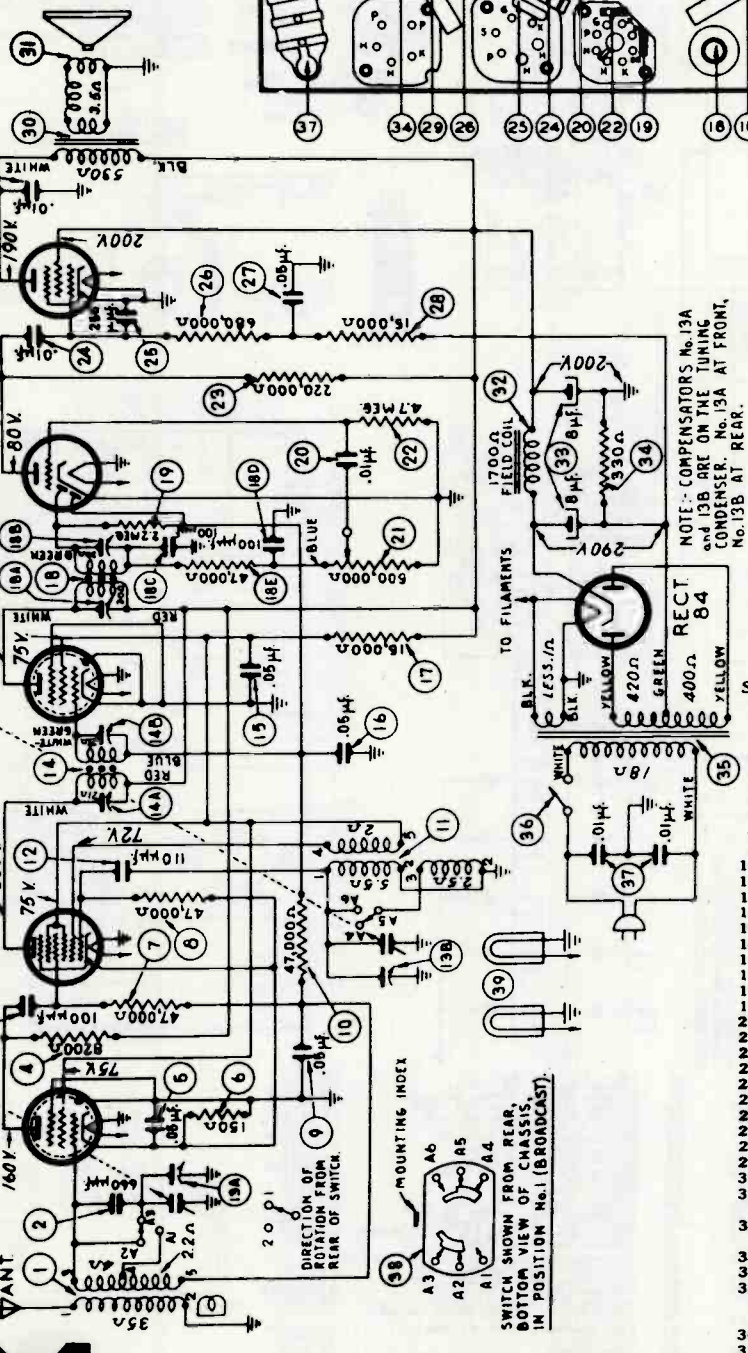


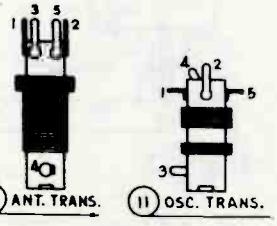
TOP VIEW OF CHASSIS SHOWING COMPENSATOR LOCATION

PHILCO

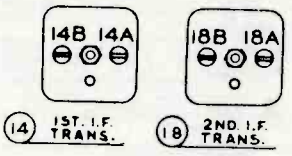
Model 40-158







I.F. = 455 KC.



SCHE. No.	DESCRIPTION	PART No.
1	Antenna Transformer	32-3303
2	Mica Condenser (660 mmfd.)	30-1136
3	Mica Condenser (100 mmfd.)	30-1128
4	Resistor (8200 ohms, ½ watt)	33-282339
5	Tubular Condenser (.05 mfd.)	30-4519
6	Resistor (150 ohms, ½ watt)	33-115339
7	Resistor (47,000 ohms, ½ watt)	33-347339
8	Resistor (47,000 ohms, ½ watt)	33-347339
9	Tubular Condenser (.05 mfd.)	30-4519
10	Resistor (47,000 ohms, ½ watt)	33-347339
11	Oscillator Transformer	32-3255
12	Mica Condenser (110 mmfd.)	30-1130
13	Tuning Condenser Assembly	31-2418
14	1st I. F. Transformer Assy.	32-3361
15	Tubular Condenser (.05 mfd.)	30-4519
16	Tubular Condenser (.05 mfd.)	30-4519
17	Resistor (15,000 ohms, 1 watt)	33-315439
18	2nd I. F. Transformer Assembly	32-3211
19	Resistor (2.2 meg., ½ watt)	33-522339
20	Tubular Condenser (.01 mfd.)	30-4572
21	Volume Control (500,000 ohms)	33-5319
22	Resistor (4.7 meg., ½ watt)	33-547339
23	Resist. (220,000 ohms, ½ watt)	33-422339
24	Tubular Condenser (.01 mfd.)	30-4572
25	Mica Condenser (250 mmfd.)	61-0033
26	Resist. (680,000 ohms, ½ watt)	33-468339
27	Tubular Condenser (.05 mfd.)	30-4519
28	Resist. (15,000 ohms, ½ watt)	33-315339
29	Tubular Condenser (.01 mfd.)	30-4501
30	Output Transformer	32-8056
31	Cone and Voice Coil Assembly (Speaker Part No. 36-1480-3)	36-4086
32	Field Coil (Replace Speaker Part No. 36-1480)	
33	Elec. Cond. (8-8 mfd., 450 V.)	30-2447
34	Resistor (330 ohms, 1 watt)	33-133439
35	Power Transformer (115-130 V., 50-60 cycles)	32-8055
	(115-130 V., 25 cycle)	32-8076
36	A. C. Switch	42-1545
37	Bakelite Cond. (.01-.01 mfd.)	3903-DG
38	Wave Switch	42-1494
39	Pilot Lamps	34-2064

I.F.=455 KC.
Philco Radio
Models 40-150
40-155

MOST POPULAR SERVICE DIAGRAMS

PHILCO Models 40-180, 40-185, 40-190

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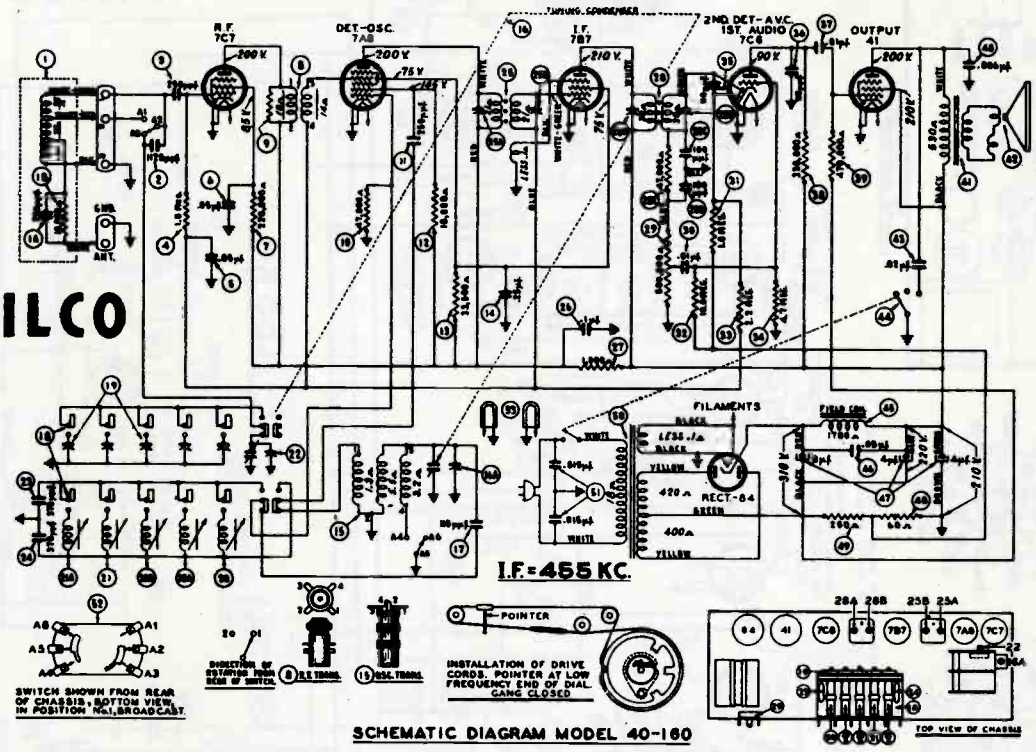
MANUAL OF 1940 MOST POPULAR SERVICE DIAGRAMS

Model 40-160

PHILCO

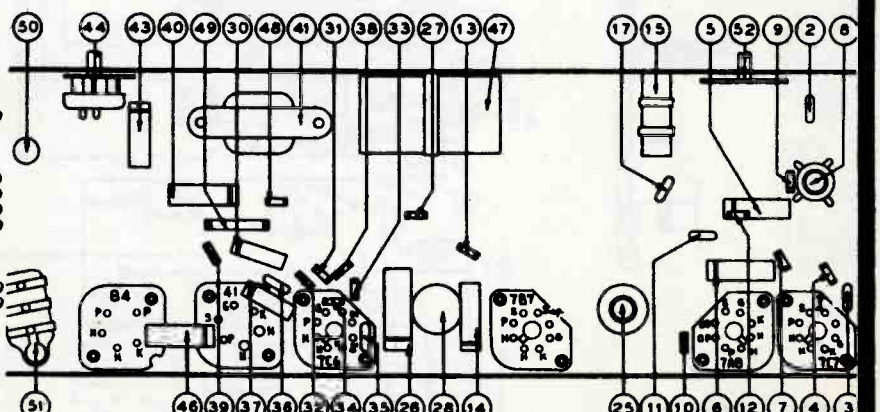


SCHEMATIC DIAGRAM MODEL 40-160

Sch. No.	Description	Part No.
1	Loop Ass'y	38-9897
1A	Mica Cond. (250 mmfd.)	61-0033
1B	Resistor (10,000 ohms, ½ watt)	33-310339
2	Mica Cond. (1120 mmfd.)	30-1140
3	Mica Cond. (250 mmfd.)	61-0033
4	Resistor (1.0 meg., ½ watt)	33-510339
5	Tubular Cond. (.05 mfd.)	30-4519
6	Tubular Cond. (.05 mfd.)	30-4123
7	Resistor (220,000 ohms, ½ watt)	33-422339
8	R. F. Trans.	32-3283
9	Resistor (6800 ohms, ½ watt)	33-268339
10	Resistor (470,000 ohms, ½ watt)	33-447339
11	Mica Cond. (250 mmfd.)	61-0033
12	Resistor (10,000 ohms, ½ watt)	33-310339
13	Resistor (33,000 ohms, ½ watt)	33-333339
14	Tubular Cond. (.25 mfd.)	30-4448
15	Oscillator Trans.	32-3212
16	Tuning Cond.	31 2374
17	Mica Cond. (110 mmfd.)	30-1130
18	Push Button Switch	42-1493
19	Padder Strip and Bracket Assy.	31-6325
20	Coil No. 1—540-1000 K.C.	
20A	Coil No. 2 650-1100 K.C.	32-3042
20B	Coil No. 3 740-1300 K.C.	
21	Coil No. 4—900-1500 K.C.	
21A	Coil No. 5—1100-1600 K.C.	32-3041
22	Compensator	31-6308
23	Silver Mica Cond. (370 mmfd.)	30-1110
24	Silver Mica Cond. (370 mmfd.)	30-1110
25	1st I.F. Trans.	32-3210
26	Tubular Cond. (.1 mfd.)	30-4455
27	Resistor (1000 ohms, ½ watt)	33-210339
28	2nd I.F. Trans. Assy.	32-3211
29	Volume Control	33-5319
30	Tubular Cond. (.01 mfd.)	30-4572
31	Resistor (1.0 meg., ½ wattt)	33-510339
32	Resistor (10.0 meg., ½ watt)	33-610339
33	Resistor (2.2 meg., ½ watt)	33-522339
34	Resistor (4.7 meg., ½ watt)	33-547339
35	Mica Cond. (110 mmfd.)	30-1130
36	Mica Cond. (110 mmfd.)	30-1130
37	Tubular Cond. (.01 mfd.)	30-4572
38	Resistor (330,000 ohms, ½ watt)	33-433339
39	Resistor (470,000 ohms, ½ watt)	33-447339
40	Tubular Cond. (.006 mfd.)	30-4504
41	Output Trans.	32-8056
42	Cone and Voice Coil Assy. (Spkr. Part No. 36-1480-3)	36-4086
43	Tubular Cond. (.02 mfd.)	30-4599
44	Tone Control and On-Off Switch	42-1520
45	Field Coil (Replace Spkr. Part No. 36-1480)	
46	Tubular Cond. (.05 mfd.)	30-4123
47	Electrolytic Cond. (8-4-4 mfd.)	30-2400
48	Resistor (60 ohms, ½ watt)	33-060339
49	Resistor (250 ohms, ½ watt)	33-125339
50	Power Trans.	32-8055
51	Line Cond. (.015-.015 mfd.)	3903-DG
52	Wave Switch	42-1494
53	Pilot Lamps	34-2064

MISCELLANEOUS PARTS

Description	Part No.
Bezel	27-4842
Cabinet	10398A
Cable and Plug (Power Supply)	L-3199
Clip (Coil Mtg.)	28-5002
Dial	27-5506
Drive Cord Assy. (Pointer)	31-2382
Drive Cord Assy. (Tuning Cond.)	31-2400
Escutcheon (Push Button)	27-4843
Insulating Bushing (Insulate Drive Shaft)	27-9437
Knobs (Tuning, Tone, Volume, Wave Switch)	27-4332
Knobs (Push Buttons)	27-4824
Pilot Lamp Socket Assy.	38-9908
Pointer	56-1479
Reflector (Pilot Lamp)	27-9455
Rubber Hose (Tuning Cond. Drive)	27-9432
Spring (Tuning, Drive Cord)	28-8751
Spring (Pointer, Drive Cord)	28-8953
Spring (Drive Shaft, Grounding)	28-8955
Screw (Bezel Mtg.)	W-1834
Speaker	36-1480
Socket (Type 84 Tube)	27-6035
Socket (Type 41 Tube)	27-6036
Socket (Loktal, Type 7A8 Tube)	27-6129
Socket (Loktal, Type 7C7, 7B7, 7C6 Tubes)	27-6131
Tab (Dial)	27-5528
Tab (Television)	27-9451
Tab Kit	40-6474
Tuning Shaft	56-6052
Tuning Drive Drum Assy.	38-9883
Washer ("C" Type, Tuning Shaft)	28-2043



Part Locations, Underside of Chassis

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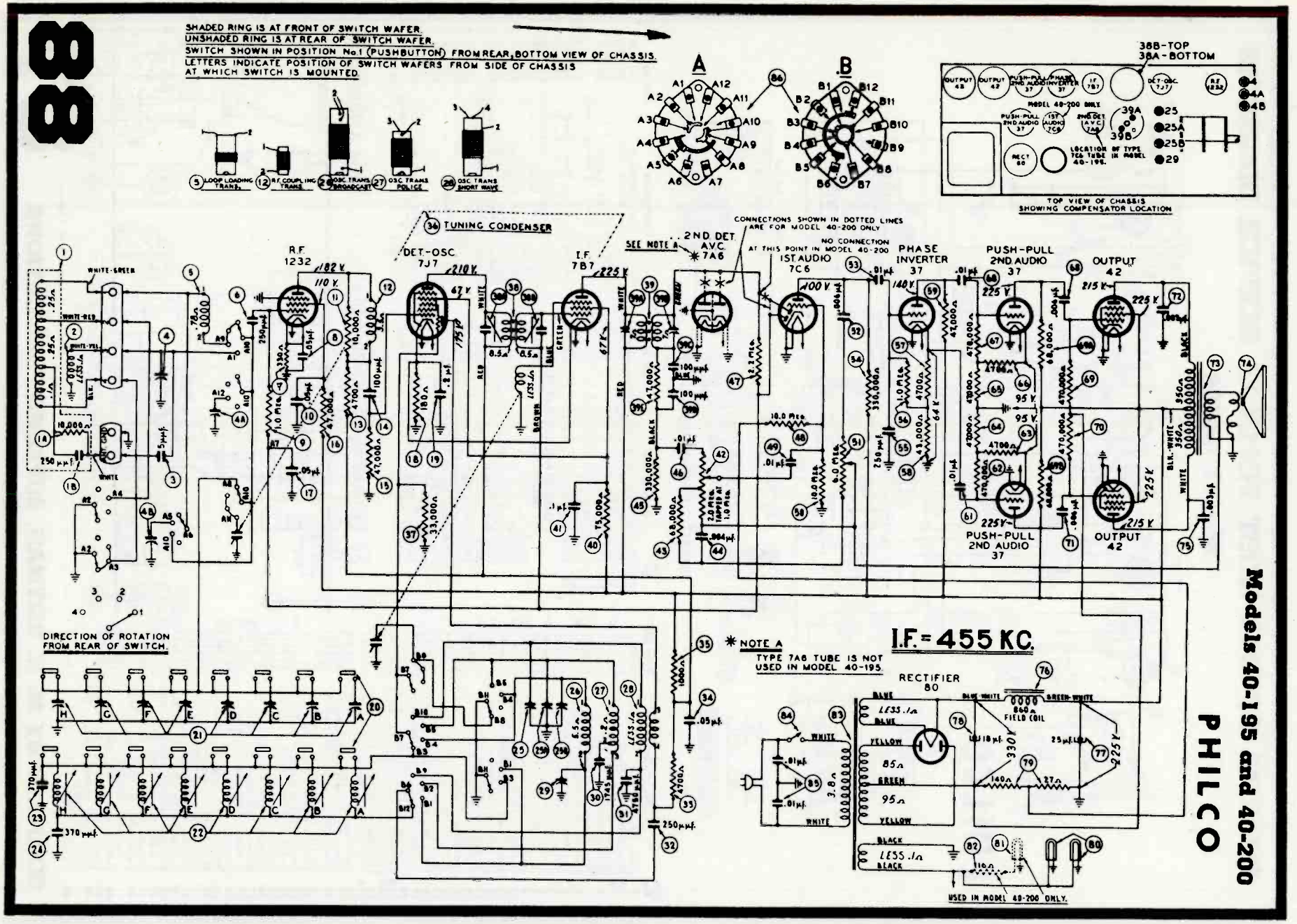
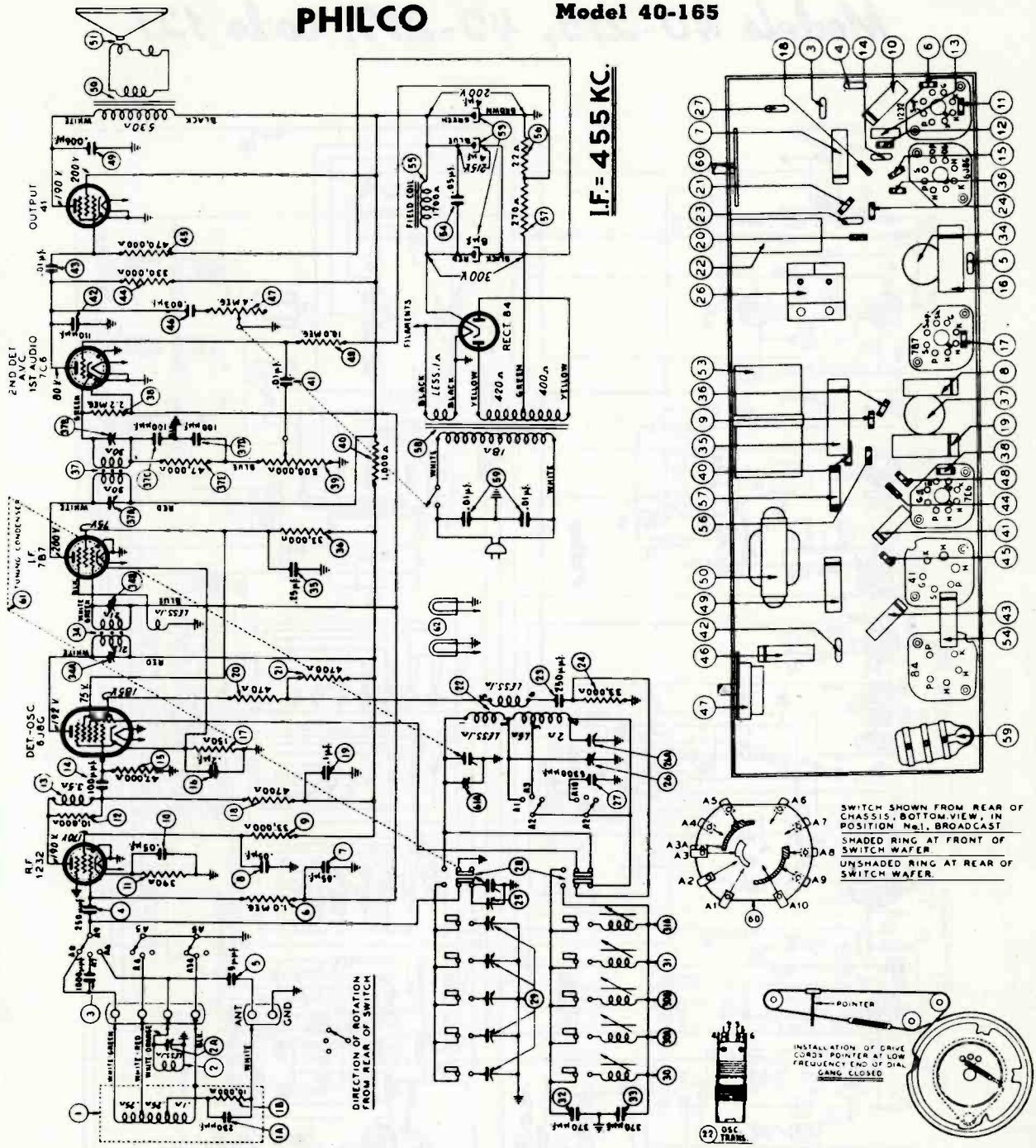

88
SHADED RING IS AT FRONT OF SWITCH WAFER.
UNSHADED RING IS AT REAR OF SWITCH WAFER.
SWITCH SHOWN IN POSITION No.1 (PUSHBUTTON) FROM REAR, BOTTOM VIEW OF CHASSIS.
LETTERS INDICATE POSITION OF SWITCH WAFERS FROM SIDE OF CHASSIS AT WHICH SWITCH IS MOUNTED
A
B
38B-TOP
38A-BOTTOM
TOP VIEW OF CHASSIS SHOWING COMPENSATOR LOCATION
34 TUNING CONDENSER
R.F. 1232
DET-OSC 7J7
I.F. 7B7
2ND DET. AVC 7A6
1ST AUDIO 7C6
PHASE INVERTER 37
PUSH-PULL 2ND AUDIO 37
OUTPUT 42
CONNECTIONS SHOWN IN DOTTED LINES ARE FOR MODEL 40-200 ONLY
NO CONNECTION AT THIS POINT IN MODEL 40-200
SEE NOTE A
DIRECTION OF ROTATION FROM REAR OF SWITCH.
I.F. = 455 KC.
* NOTE A
TYPE 7A6 TUBE IS NOT USED IN MODEL 40-195.
RECTIFIER 80
USED IN MODEL 40-200 ONLY.
Models 40-195 and 40-200
PHILCO

PHILCO

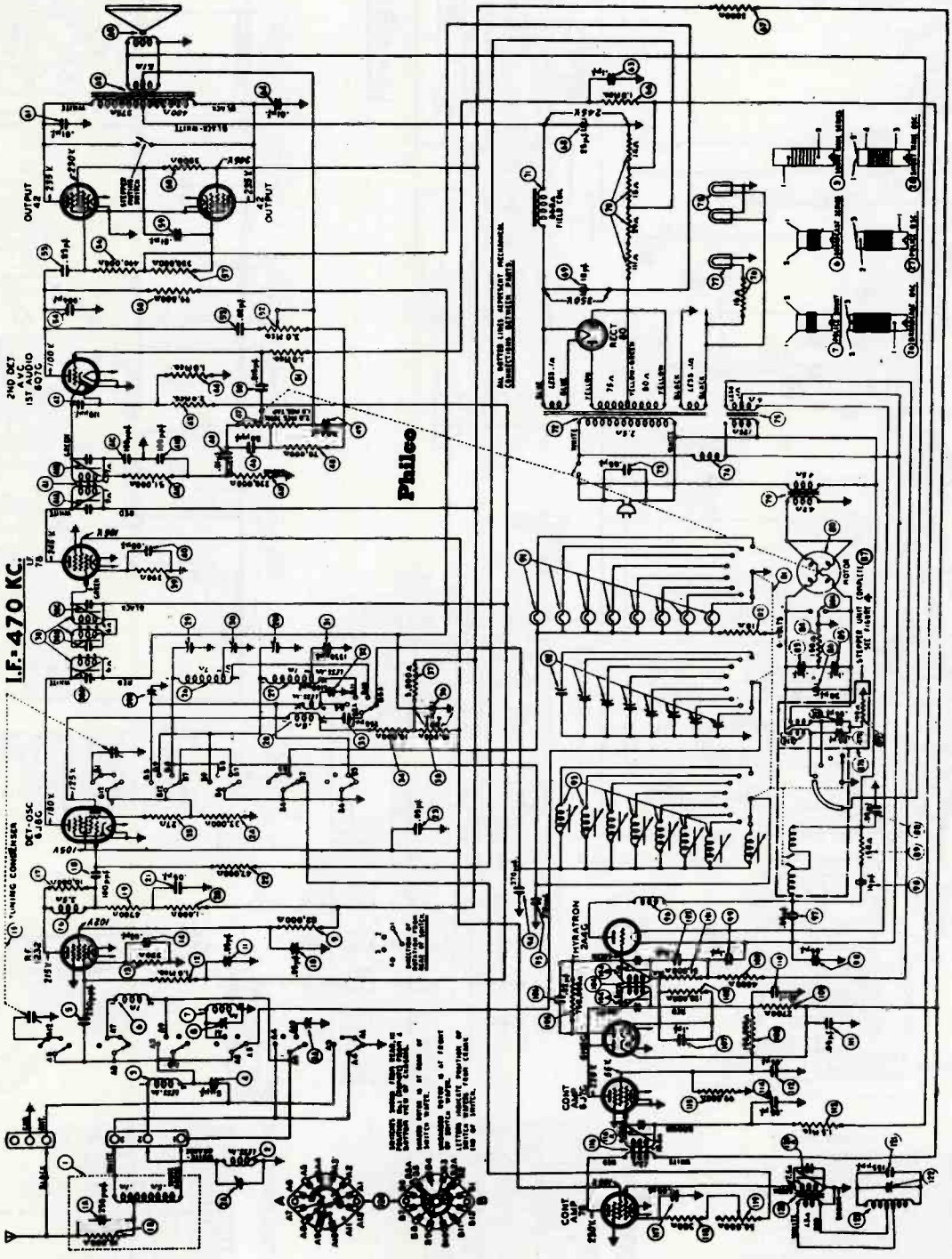
Model 40-165



SCHE. No.	DESCRIPTION
1	Loop Assy. (Broadcast)
1A	Mica Cond. (250 mmfd.)
1B	Resistor (10,000 ohms, ½ watt)
2	Loop Assy. (Short Wave)
2A	Compensator (Part of S. W. Loop)
3	Mica Cond. (1000 mmfd.)
4	Mica Cond. (250 mmfd.)
5	Mica Cond. (5 mmfd.)
6	Resistor (1.0 meg., ½ watt)
7	Tubular Cond. (.05 mfd.)
8	Tubular Cond. (.05 mfd.)
9	Resistor (33,000 ohms, ½ watt)
10	Tubular Cond. (.05 mfd.)
11	Resistor (390 ohms, ½ watt)
12	Resistor (10,000 ohms, ½ watt)
13	R. F. Coupling Trans.
14	Mica Cond. (100 mmfd.)
15	Resistor (47,000 ohms, ½ watt)
16	Tubular Cond. (.2 mfd.)
17	Resistor (150 ohms, ½ watt)
18	Resistor (4700 ohms, ½ watt)
19	Tubular Cond. (.1 mfd.)
20	Resistor (470 ohms, ½ watt)
21	Resistor (4700 ohms, ½ watt)
22	Osc. Trans.
23	Mica Cond. (250 mmfd.)
24	Resistor (33,000 ohms, ½ watt)
25	Compensator (Single)
26	Compensator (2 section)
27	Mica Cond. (5300 mmfd.)
28	Push Button Switch
29	Padder Strip and Bracket Assy.
30	Coil No. 1 (540-1000 K.C.)
30A	Coil No. 2 (830-1100 K.C.)
30B	Coil No. 3 (740-1300 K.C.)
31	Coil No. 4 (900-1500 K.C.)
31A	Coil No. 5 (1100-1600 K.C.)
32	Silver Mica Cond. (370 mmfd.)
33	Silver Mica Cond. (370 mmfd.)
34	1st I. F. Trans.
35	Tubular Cond. (.25 mfd.)
36	Resistor (33,000 ohms, ½ watt)
38	Resistor (2.2 meg., ½ watt)
39	Volume Control (500,000 ohms)
40	Resistor (1000 ohms, ½ watt)
41	Tubular Cond. (.01 mfd.)
42	Mica Cond. (110 mmfd.)
43	Tubular Cond. (.01 mfd.)
44	Resistor (330,000 ohms, ½ watt)
45	Resistor (470,000 ohms, ½ watt)
46	Tubular Cond. (.003 mfd.)
47	Tone Control and On-Off Switch (.4 meg.)
48	Resistor (10.0 meg., ½ watt)
49	Tubular Cond. (.006 mfd.)
50	Output Trans.
51	Cone and Voice Coil Assy. (Spkr. Part No. 38-1480-3)
53	Electrolytic Cond. (4-4-8 mfd.)
54	Tubular Cond. (.05 mfd.)
55	Field Coil (Replace Spkr. Part
56	Resistor (22 ohms, ½ watt)
57	Resistor (270 ohms, ½ watt)
58	Power Trans. (110 volt, 60
59	Line Cond. (.01-.01 mfd.)

MANUAL OF 1940 MOST POPULAR SERVICE DIAGRAMS

Models 40-215, 40-217, code 121



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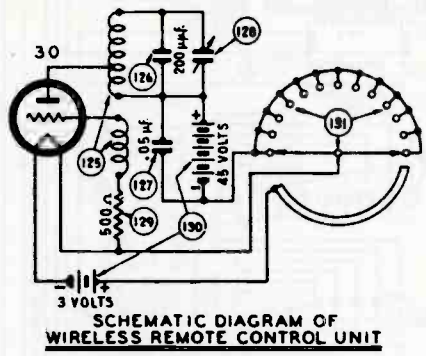
RECEIVER CIRCUIT ADJUSTMENTS — Models 40-215, 40-217

Operation	SIGNAL GENERATOR		RECEIVER			SPECIAL INSTRUCTIONS
	Output Connections to Receiver	Dial Setting	Dial Setting	Control Setting	Adjust Compensators	
1	78 I. F. Grid	470 K. C.	580 K. C.	Vol. Max. Range Switch "Brdcst"	41A, 41B	Turn Out 38B Ful
2	6J8G Det. Osc. Grid	470 K. C.	580 K. C.	Vol. Max. Range Switch "Brdcst"	38A, 38C, 38B	Note A
3	Use Loop on Generator	18.0 M. C.	18.0 M. C.	Vol. Max. Range Switch "Short Wave"	29B, 2A	Note C, Note D 2A on SW Loop
4	Use Loop on Generator	1500 K. C.	1500 K. C.	Vol. Max. Range Switch "Brdcst"	29, 8A	Note A
5	Use Loop on Generator	580 K. C.	580 K. C.	Vol. Max. Range Switch "Brdcst"	30	Rollgang
6	Use Loop on Generator	1500 K. C.	1500 K. C.	Vol. Max. Range Switch "Brdcst"	29	
7	Use Loop on Generator	3.5 M. C.	3.5 M. C.	Vol. Max. Range Switch "Police"	29A, 8	Note B



SCHEMATIC DIAGRAM OF WIRELESS REMOTE CONTROL UNIT

FIG. 3. SCHEMATIC DIAGRAM, WIRELESS REMOTE CONTROL.

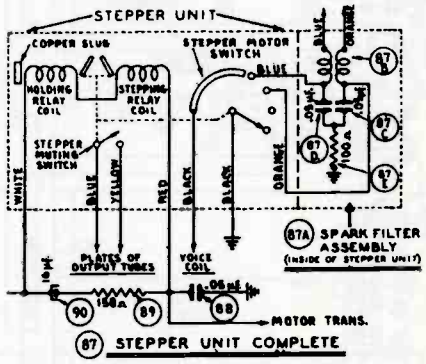
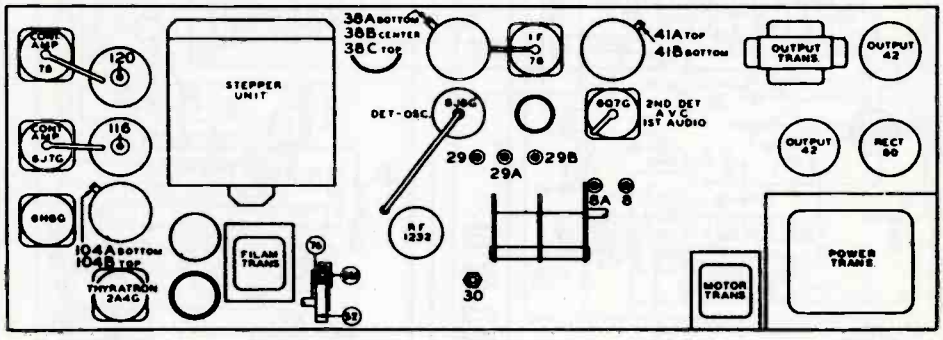
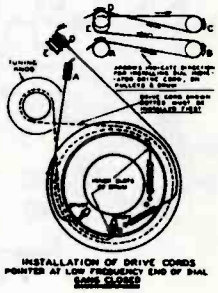


FIG. 4. WIRING OF STEPPER UNIT, WIRELESS REMOTE CONTROL.

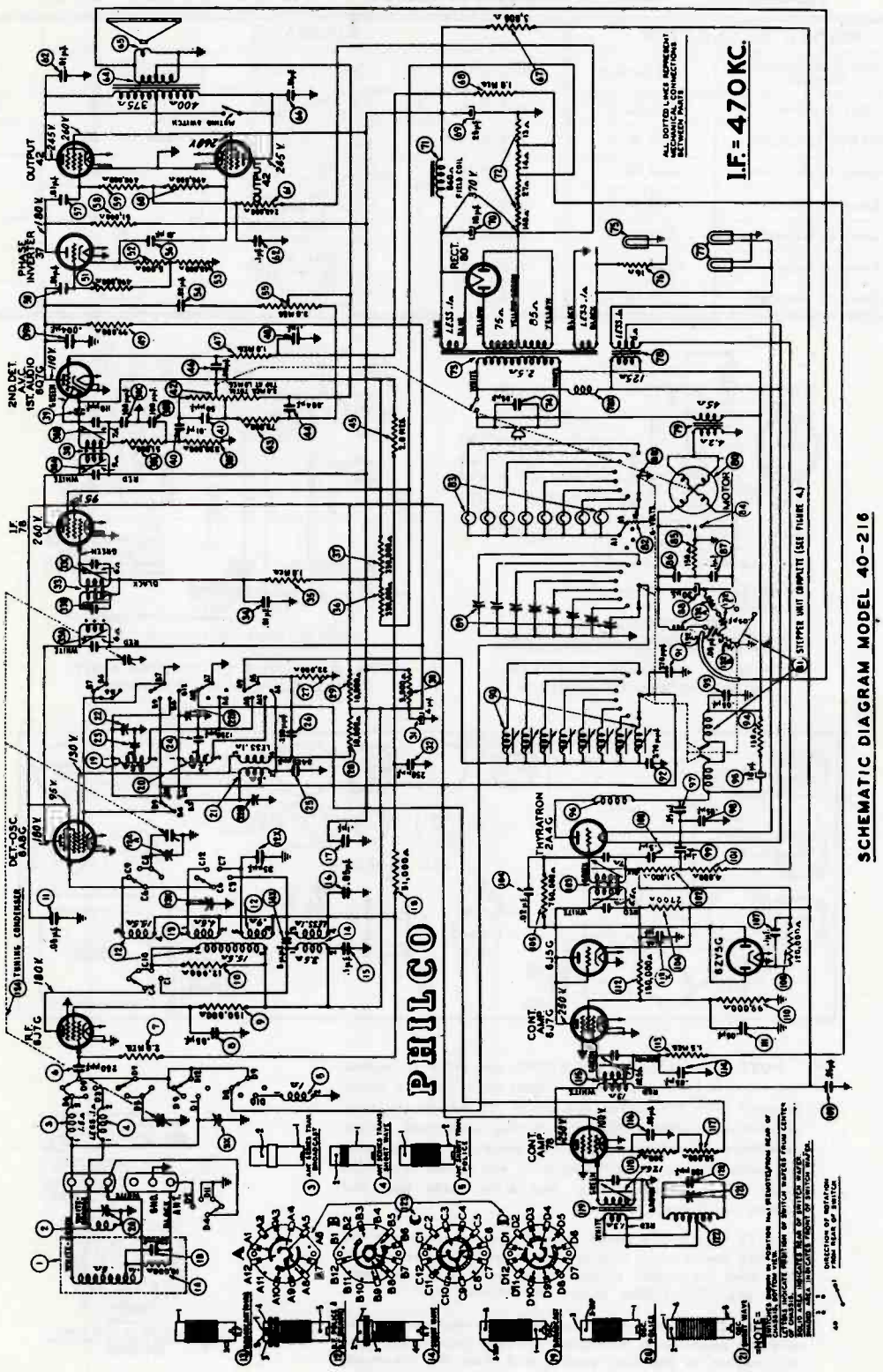


NOTE A — DIAL CALIBRATION: In order to adjust the receiver correctly the dial must be aligned to track properly with the tuning condenser. To adjust the dial, proceed as follows: With the tuning condenser closed (maximum capacity), set the dial pointer on the extreme left index line at the low frequency end of the broadcast scale. The arrangement of the drive cable and dial pointer is shown

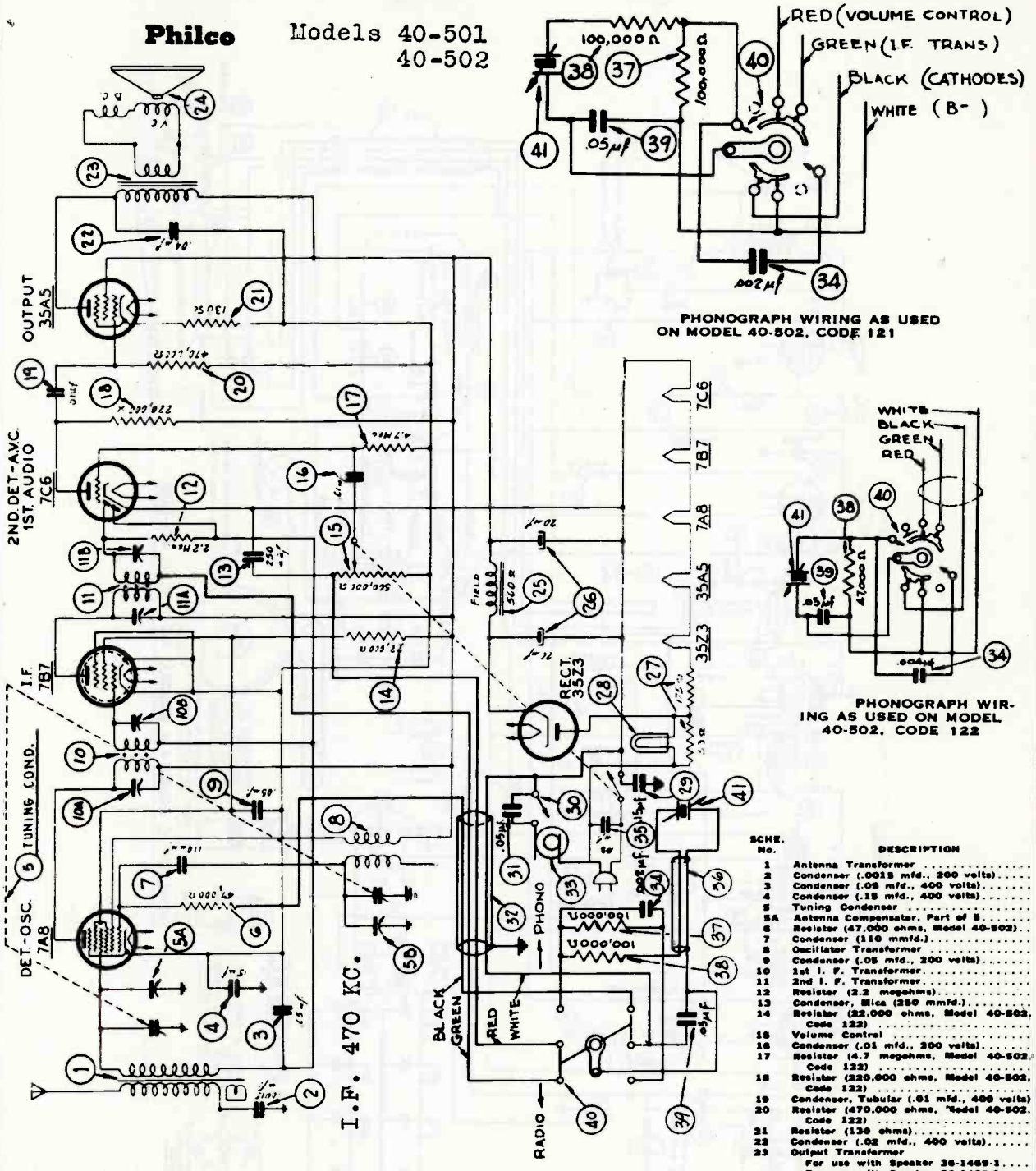


NOTE C — If two peaks (signals) are observed on the aligning meter when adjusting the oscillator padder No. 29B, tune the padder to the second peak from the maximum capacity position (screw all the way in).

NOTE D — If two peaks (signals) are observed on the aligning meter when adjusting the loop padder 2A, tune the padder to the first peak signal from the maximum capacity position (screw all the way in). When adjusting the padders to this first peak roll the tuning condenser (rock) slightly back and forth to obtain the maximum readings on the aligning meter.


I.F. = 470 KC.
PHILCO
SCHEMATIC DIAGRAM MODEL 40-216

Philco Models 40-501 40-502



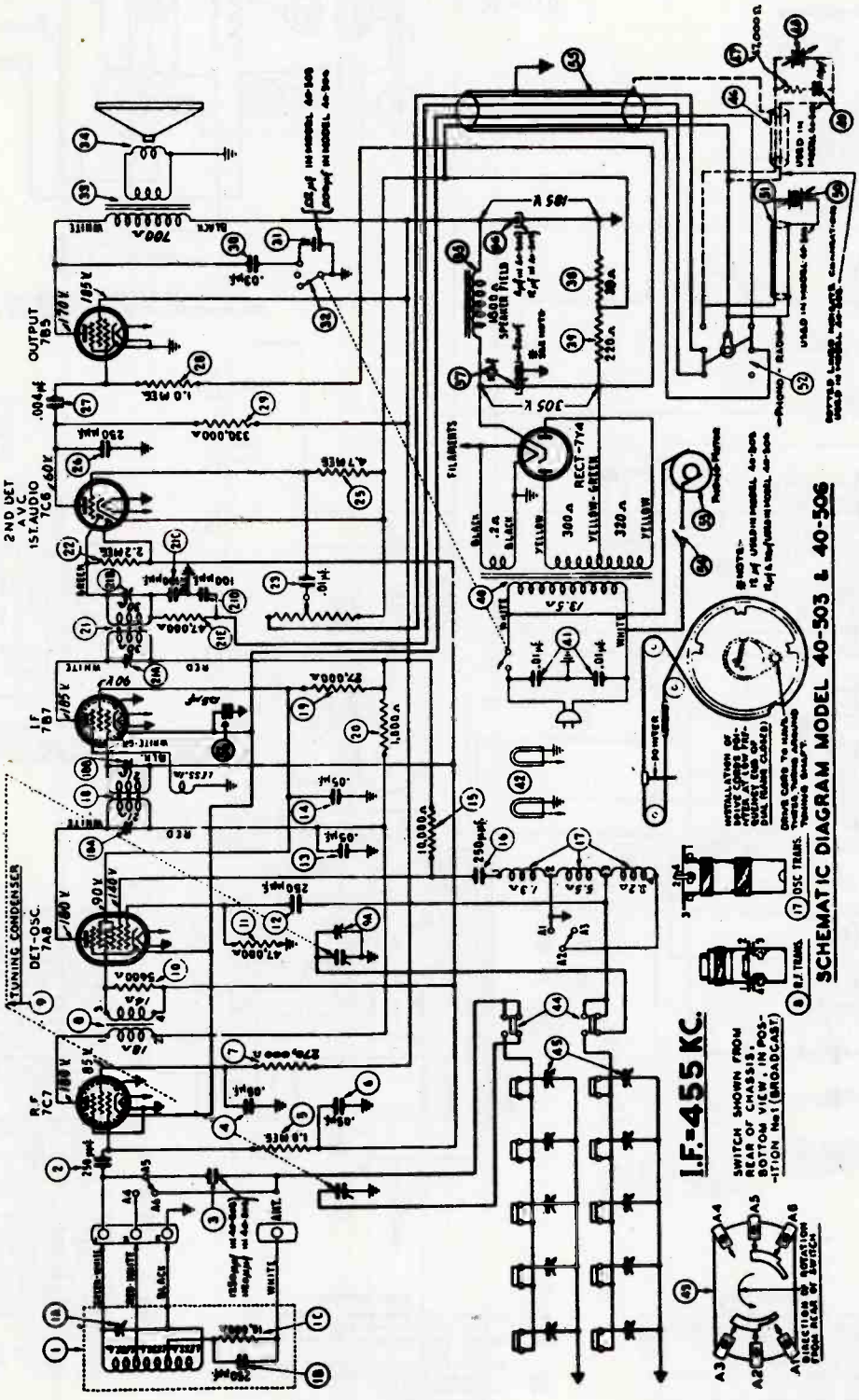
PHONOGRAPH WIRING AS USED ON MODEL 40-502, CODE 121

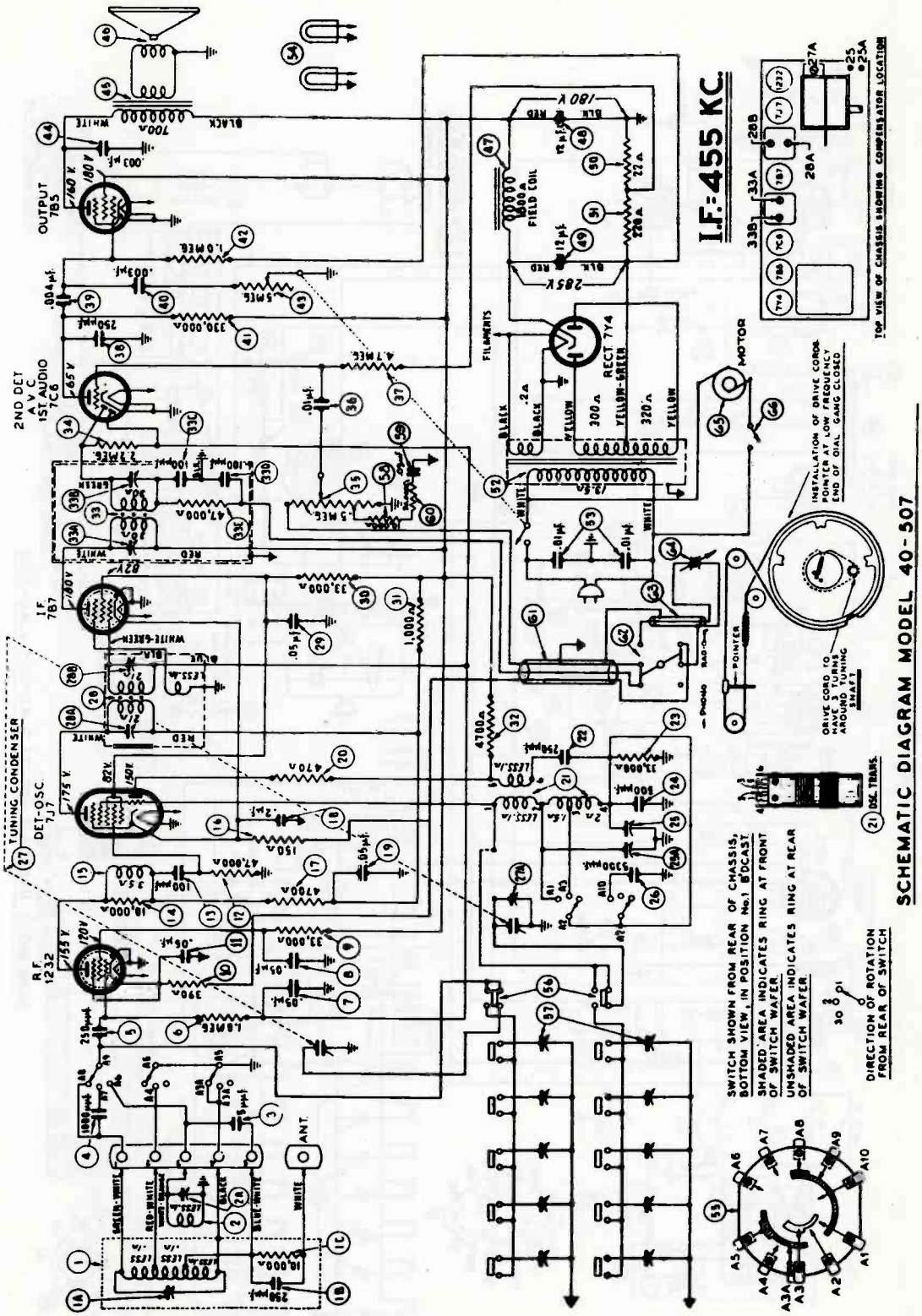
PHONOGRAPH WIRING AS USED ON MODEL 40-502, CODE 122

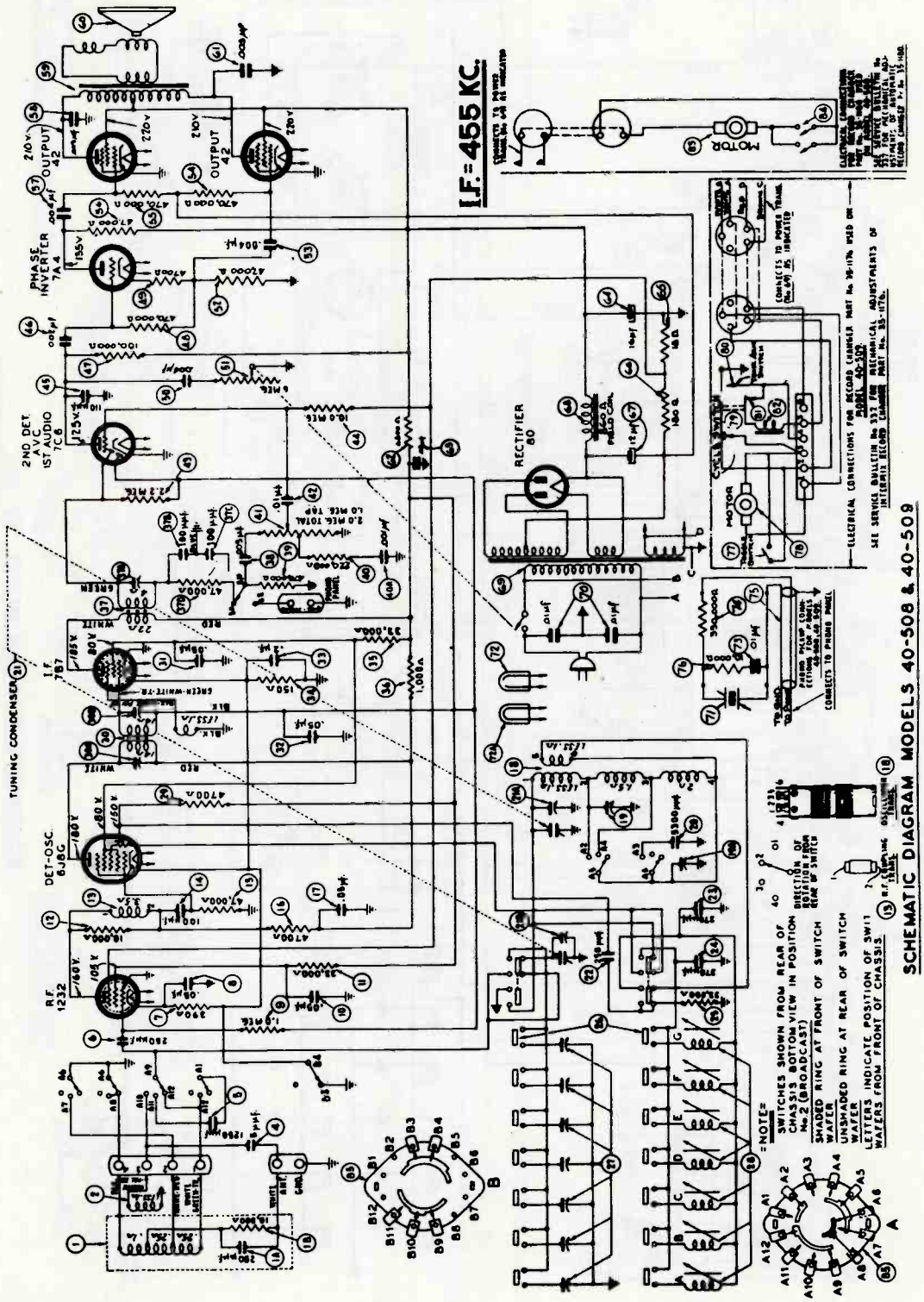
SCHE. No.	DESCRIPTION
1	Antenna Transformer
2	Condenser (.0015 mfd., 200 volts)
3	Condenser (.05 mfd., 400 volts)
4	Condenser (.15 mfd., 400 volts)
5	Tuning Condenser
5A	Antenna Compensator, Part of 5
6	Resistor (47,000 ohms, Model 40-502)
7	Condenser (110 mmfd.)
8	Oscillator Transformer
9	Condenser (.05 mfd., 200 volts)
10	1st I. F. Transformer
11	2nd I. F. Transformer
12	Resistor (2.2 megohms)
13	Condenser, Mica (250 mmfd.)
14	Resistor (22,000 ohms, Model 40-502, Code 122)
15	Volume Control
16	Condenser (.01 mfd., 200 volts)
17	Resistor (4.7 megohms, Model 40-502, Code 122)
18	Resistor (220,000 ohms, Model 40-502, Code 122)
19	Condenser, Tubular (.01 mfd., 400 volts)
20	Resistor (470,000 ohms, Model 40-502, Code 122)
21	Resistor (130 ohms)
22	Condenser (.02 mfd., 400 volts)
23	Output Transformer For use with Speaker 36-1469-1 For use with Speaker 36-1469-9
24	Cone Assembly for Speaker 36-1469-1 Cone Assembly for Speaker 36-1469-9
25	Field Coil—Replace Speaker 36-1469
26	Electrolytic Condenser (20-20 mfd.)
27	Resistor
28	Pilot Lamp
29	Condenser (.15 mfd.)
30	Motor Switch (40-501, 121, 40-502, 121-122)

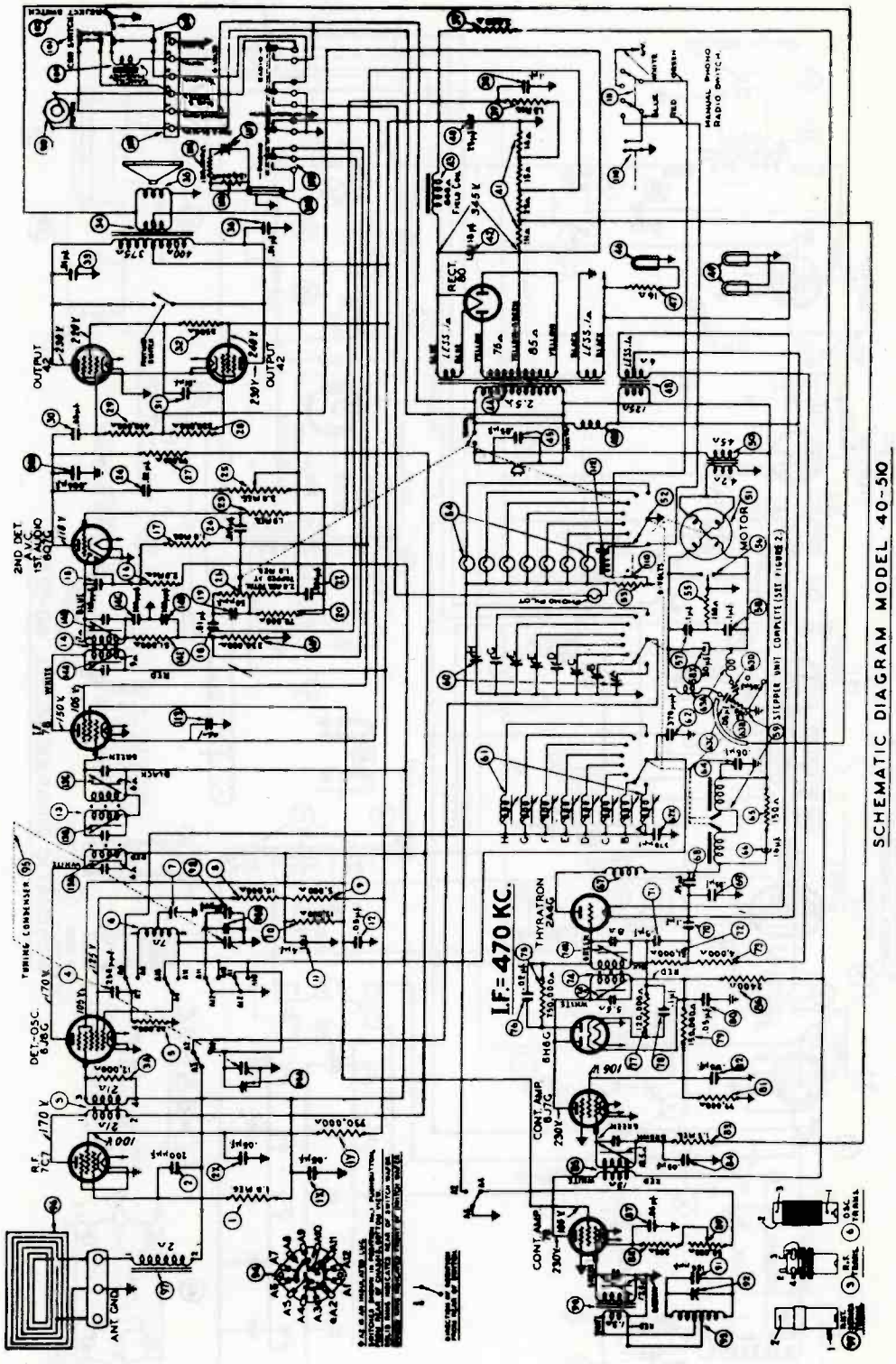
SCHE. No.	DESCRIPTION
31	Condenser, Tubular (.05 mfd.)
32	Radio-Phone Cable, Model 40-501 Radio-Phone Cable, Model 40-502, Code 121-122
33	Motor (115 volts, 60 cycle) 40-501, Code 121, 40-502, Code 121. 40-502, Code 122
34	Condenser (.002 mfd., 40-501, 40-502, Code 121) Condenser (.004 mfd., 40-502, Code 122)
35	Condenser (.03 mfd., 400 volts)
36	Pickup Cable

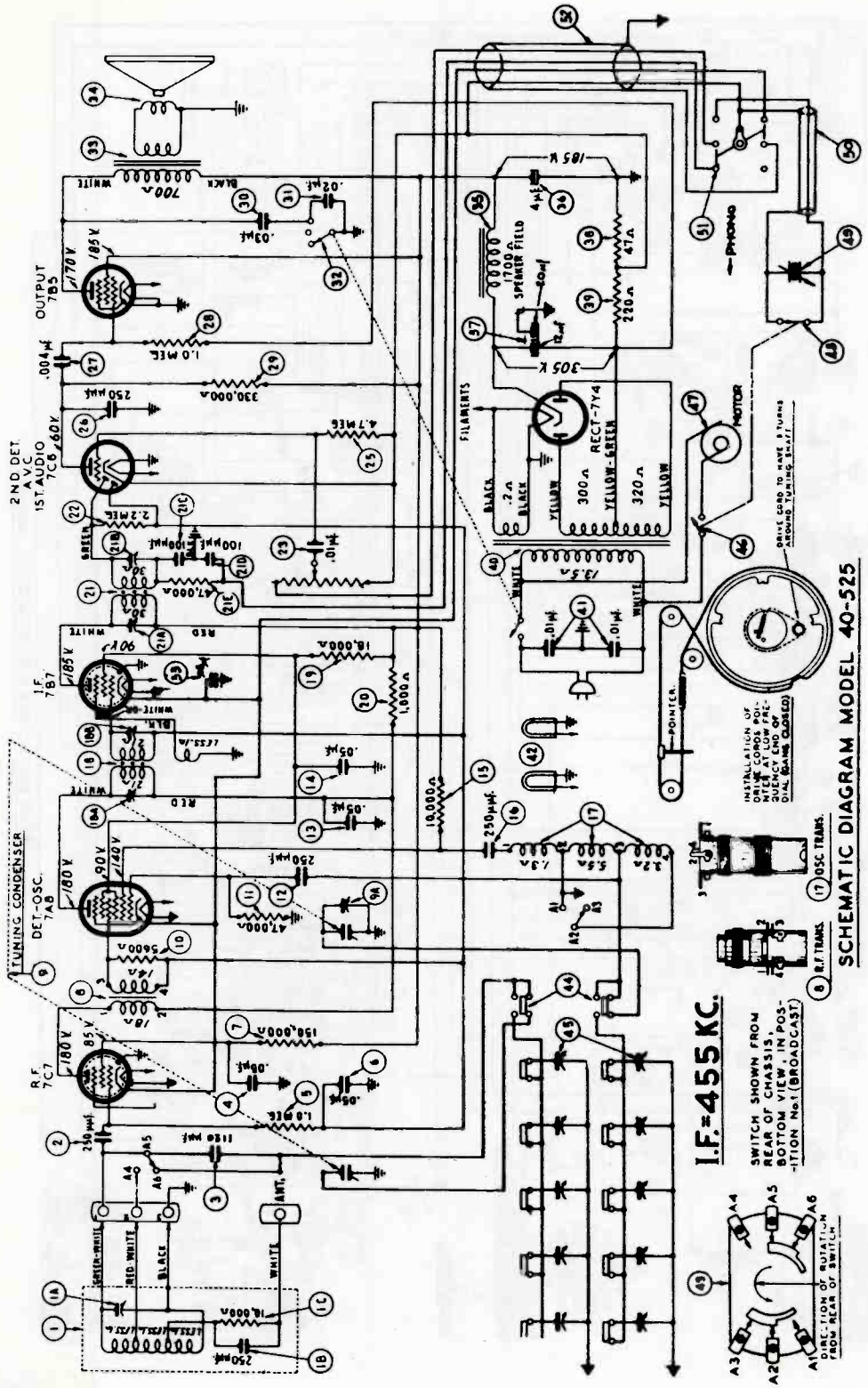
SCHE. No.	DESCRIPTION
37	Resistor (100,000 ohms, 40-501, Code 121, 40-502, Code 121) Resistor (47,000 ohms, 40-502, Code 122)
38	Resistor (100,000 ohms, 40-501, 40-502, Code 121)
39	Condenser, Tubular (.05 mfd., 400 volts)
40	Radio-Phono Switch (Model 40-501) (Model 40-502, Code 121-122)
41	Pickup Crystal Cartridge 40-501, 40-502, Code 121 40-502, Code 122

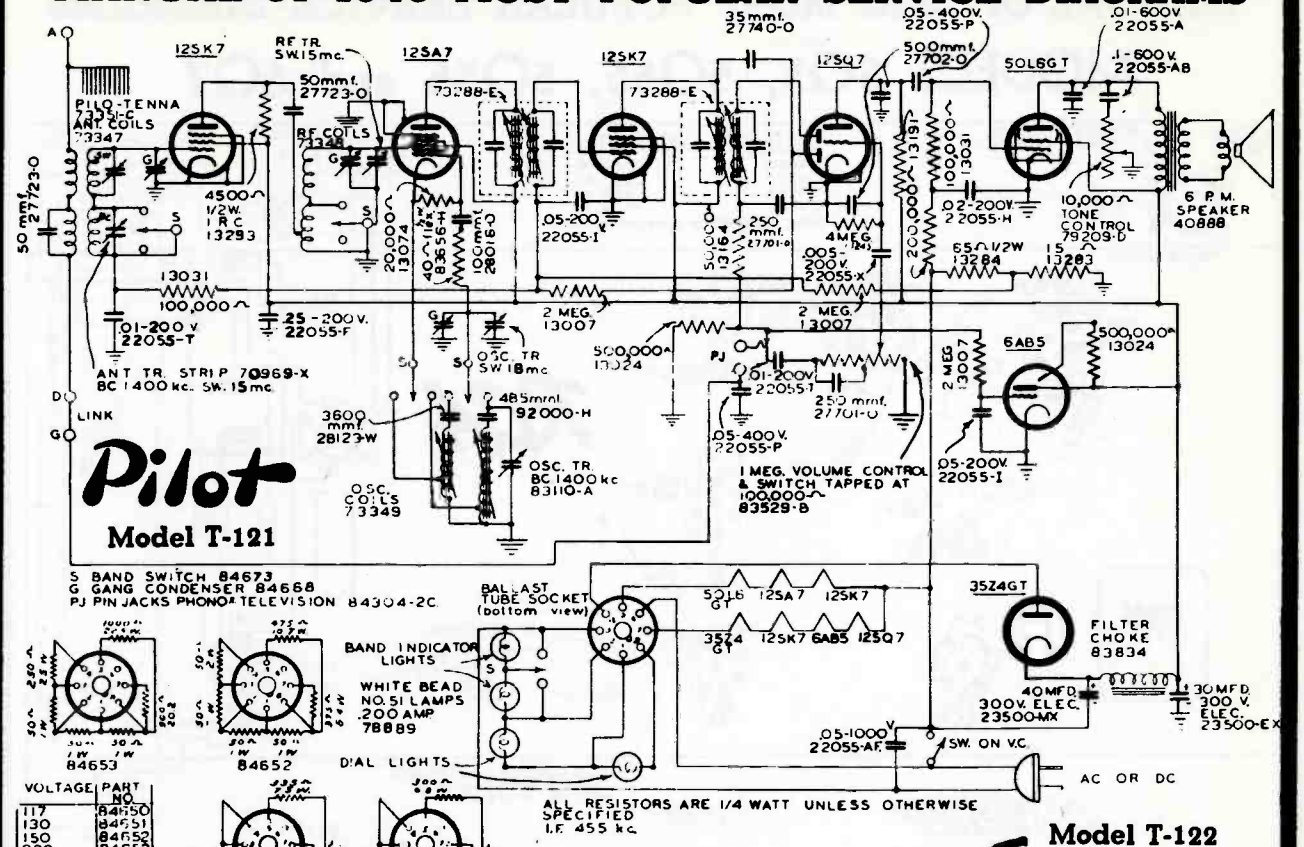

SCHEMATIC DIAGRAM MODEL 40-503 & 40-506
I.F.=455 KC.
SWITCH SHOWN FROM REAR OF CHASSIS IN BOTTOM VIEW IN POSITION No.1 (BROADCAST)
TUNING CONDENSER
OUTPUT 7B5
2ND DET AVC 1ST AUDIO 7C6
IF 7B7
DET-OSC. 7A8
RF 7C7
FILAMENTS
RECT-7Y4
OSC TRANS.
R.F. TRANS.


I.F.=455 KC.
SCHEMATIC DIAGRAM MODEL 40-307
OUTPUT 7B5
2ND DET A V C 1ST AUDIO 7C6
I.F. 7B7
DET-OSC. 7J7
R.F. 12J2
RECT 7Y4
FIELD COIL
MOTOR
TUNING CONDENSER
ANT.
SWITCH SHOWN FROM REAR OF CHASSIS, BOTTOM VIEW, IN POSITION No.1 B'CAST
SHADED AREA INDICATES RING AT FRONT OF SWITCH WAFER.
UNSHADED AREA INDICATES RING AT REAR OF SWITCH WAFER.
DIRECTION OF ROTATION FROM REAR OF SWITCH
INSTALLATION OF DRIVE CORD. POINTER AT LOW FREQUENCY END OF DIAL GANG CLOSED
DRIVE CORD TO MAKE 3 TURNS AROUND TUNING SHAFT
POINTER
OSC. TRANS.
Top view of chassis showing compensator location

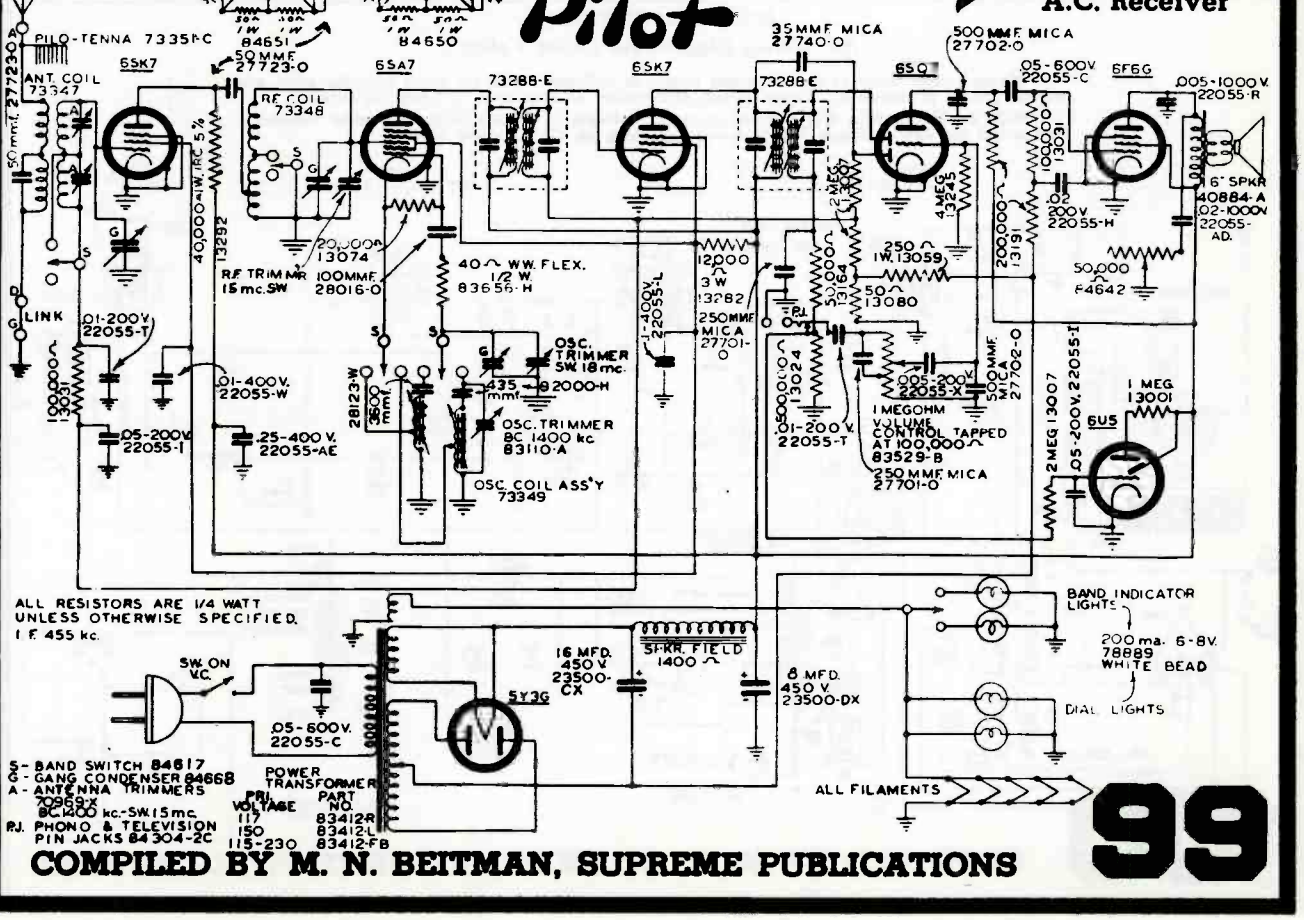

I.F.=455 KC.
SCHEMATIC DIAGRAM MODELS 40-508 & 40-509
TUNING CONDENSER
DET-OSC. 6J8G
R.F. 1232
I.F. 7B7
2ND DET. & AUDIO 1ST AUDIO 7C6
PHASE INVERTER 7A4
OUTPUT 42
OUTPUT 42
RECTIFIER 80
MOTOR
NOTE= SWITCHES SHOWN FROM REAR OF CHASSIS BOTTOM VIEW IN POSITION No. 2 (BROADCAST)
SHADED RING AT FRONT OF SWITCH WAFER
UNSHADED RING AT REAR OF SWITCH WAFER
LETTERS INDICATE POSITION OF SWITCH WAFERS FROM FRONT OF CHASSIS


I.F. = 470 KC.
SCHEMATIC DIAGRAM MODEL 40-510


SCHEMATIC DIAGRAM MODEL 40-525
I.F.=455 KC.
SWITCH SHOWN FROM REAR OF CHASSIS, BOTTOM VIEW, IN POSITION No.1 (BROADCAST)
DIRECTION OF ROTATION FROM REAR OF SWITCH
INSTALLATION OF DRIVE CORDS POINTER AT LOW FREQUENCY END OF DIAL (GANG CLOSED)
DRIVE CORD TO MAKE 3 TURNS AROUND TUNING SHAFT
TUNING CONDENSER
DET-OSC. 7A8
I.F. 7B7
2ND DET. AVC 1ST AUDIO 7C6
OUTPUT 7B5
R.F. 7C7
RECT-7Y4
FILAMENTS
SPEAKER FIELD
MOTOR
POINTER
PHONO
OSC. TRANS.
R.F. TRANS.
ANT.
GND.

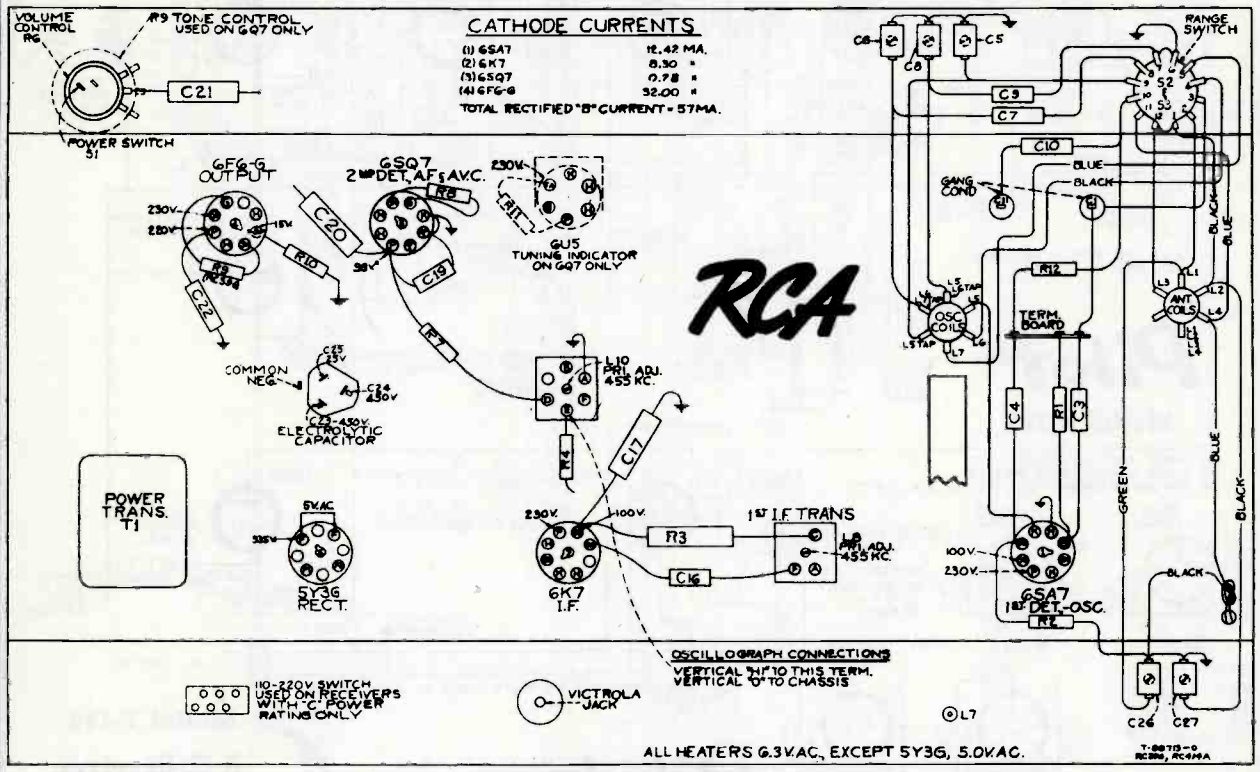


Model T-122
A.C. Receiver



MANUAL OF 1940 MOST POPULAR SERVICE DIAGRAMS

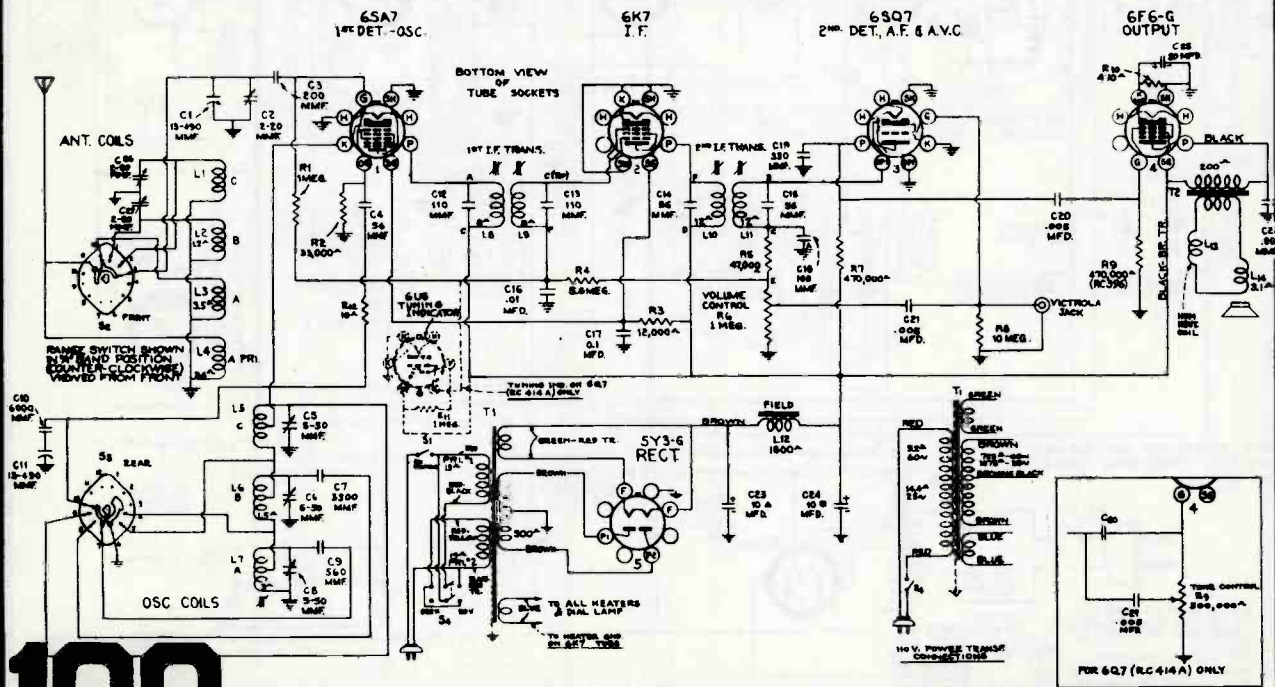
MODELS 5Q5, 5Q55, 5Q56 and 6Q7



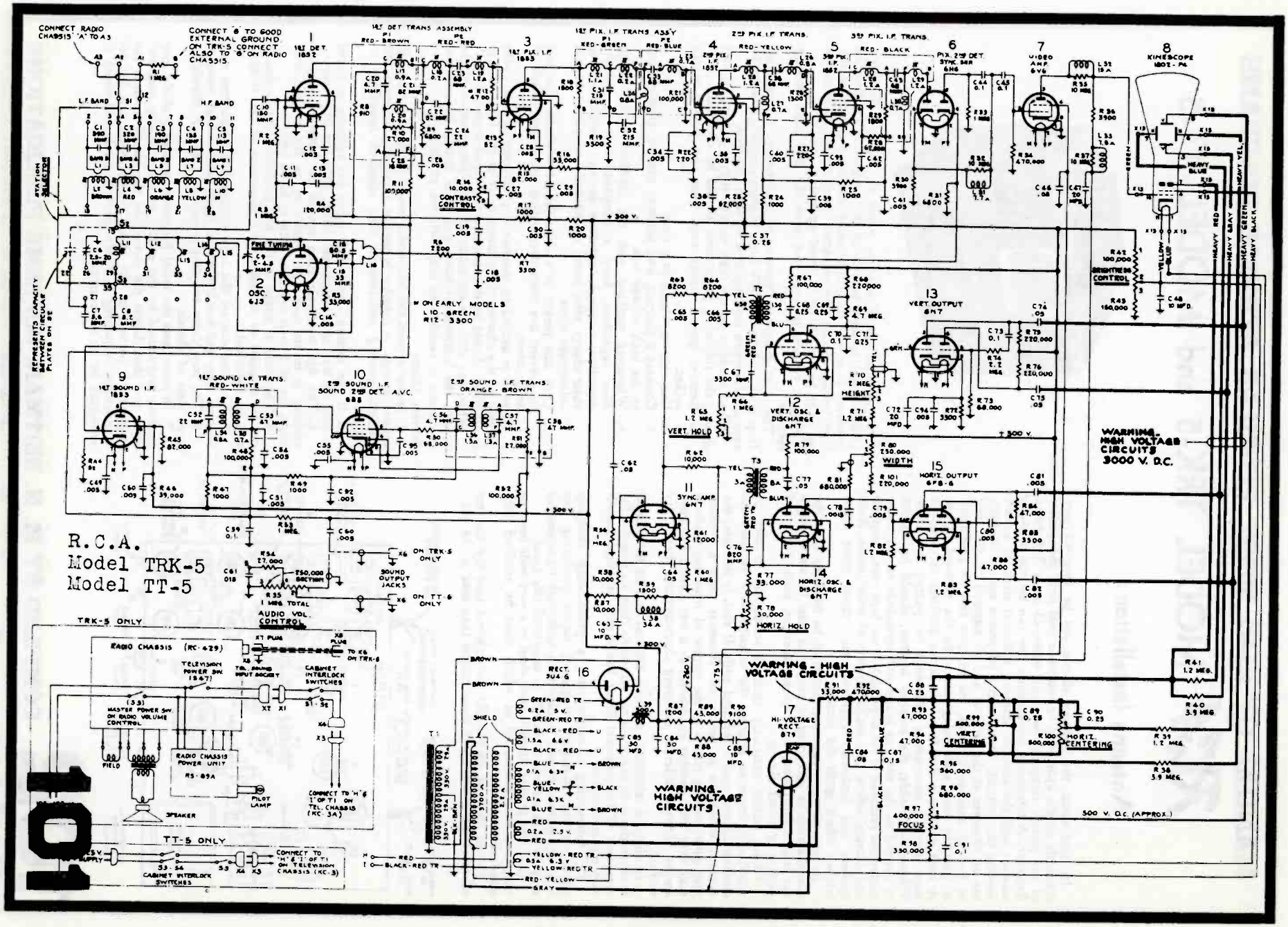
R-F Wiring Diagram and Socket Voltages

Measurements made to chassis unless otherwise indicated, with set tuned to quiet point and volume control at minimum. Values should hold within ± 20% with 117-volt a-c supply.

***NOTE:** Values with star (*) are operating voltages in circuits with high series resistance. The actual measured voltages will be lower, depending on the voltmeter loading.



COMPILED BY M. N. BEITMAN, SUPREME PUBLICATIONS


R.C.A.
Model TRK-5
Model TT-5
WARNING - HIGH VOLTAGE CIRCUITS 9000 V. D.C.
WARNING - HIGH VOLTAGE CIRCUITS
WARNING - HIGH VOLTAGE CIRCUITS
TRK-5 ONLY
TT-5 ONLY
RADIO CHASSIS (RC-429)
RADIO CHASSIS POWER UNIT RS-89A
SPEAKER
PILOT LAMP
CONTRAST CONTROL
BRIGHTNESS CONTROL
VERT. HOLD
VERT. HEIGHT
WIDTH
HORIZ. HOLD
VERT. CENTERING
HORIZ. CENTERING
FOCUS
AUDIO VOL. CONTROL
SOUND OUTPUT JACKS
CONNECT RADIO CHASSIS 'A' TO A3
CONNECT 'B' TO GOOD EXTERNAL GROUND ON TRK-5 CONNECT ALSO TO 'B' ON RADIO CHASSIS
+300 V.
+260 V.
+475 V.
500 V. D.C. (APPROX.)

RCA MODEL TRK-5 and MODEL TT-5

Antenna Installation:

In most cases, the antenna should not be installed permanently on the apartment or residence roof until the quality of the picture reception has been observed on a Television Receiver. A temporary transmission line can be run between receiver and the antenna allowing sufficient slack to permit moving the antenna. Then, with a telephone system connecting an observer at the receiver and an assistant on the roof to find an antenna location, the antenna can be positioned to give the most satisfactory results on the received signal. A shift of only a few feet in antenna position or direction may effect a tremendous difference in picture reception. Whenever possible, the antenna location should be chosen or erected so the antenna is not only broadside to the transmitter but removed as far as possible from highways, hospitals and doctors' offices, and similar sources of interference. Auto ignition and diathermy apparatus may cause noise interference which spoils the picture.

In mounting any antenna, care must be taken to keep the antenna rods or pickup wires proper at least ¼ wave length (at least 6 feet) away from other antennas, metal roofs and gutters or metal objects.

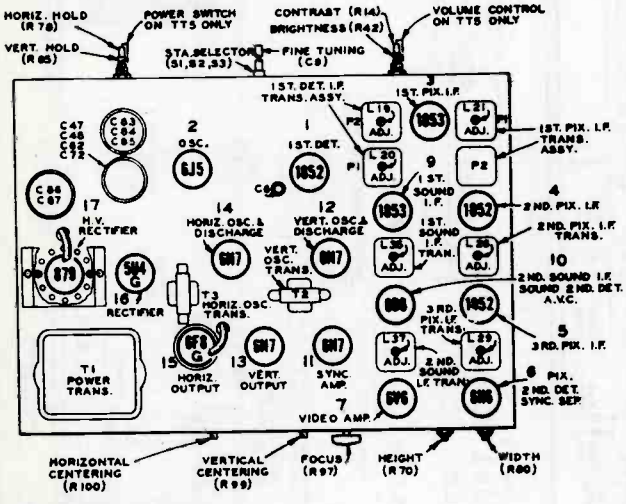
Under certain extremely unusual conditions, it may be possible to rotate or position the antenna so it receives the cleanest picture over a reflected path. If such is the case, the antenna should be so positioned. However, such a position may give variable results as the nature of reflecting surfaces may vary with weather conditions, as a wet surface has been known to have different reflecting characteristics than a dry surface.

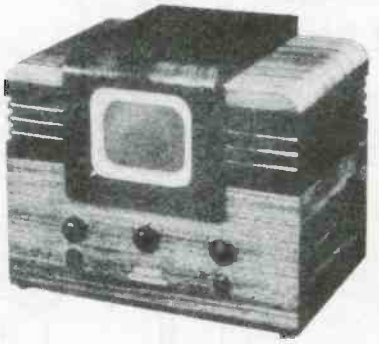
In short, a television receiving antenna and its installation must conform to much higher standards than an antenna for reception of International Short Wave and Standard Broadcast signals because:

(1) Intervening obstacles have a pronounced shielding effect on the ultra-high frequency waves producing low intensity signals. Severe trouble with multi-path transmissions may be experienced, especially in congested city areas.

(2) The picture signal is comprised of a very wide band or range of frequencies, all of which must be received with good efficiency.

(3) It must be continually remembered that the discernment of the eye is much more critical than that of the ear.





No attempt should ever be made to measure the high (2,000 volts) voltage, because of the dangers and difficulties involved. If at any time it becomes necessary to service the high voltage circuit, the suspected parts should be replaced by parts known to be in good operating condition.

Always replace the red can over the 879 high voltage rectifier.

The most dangerous portion of the receiver is the plate (top cap) lead for the 879 high voltage rectifier. Always be very careful when working near or with this lead.

When working on the high voltage supply portion of this chassis, the following precautions should be observed:

1. Remove power supply cord from the power supply socket.
2. Use only one hand at a time.
3. Connect a shorting lead between ground (firstly) and to the high voltage side.
4. Whenever working with the oil-filled high voltage filter capacitors, keep a constant short across the capacitor, as these capacitors do not completely lose their charge after being discharged a single or several subsequent times.
5. Only one person at a time should work on the unit to prevent any misunderstanding which may result in an accident.

When it is desired to measure any voltages on the Video portion of the chassis, the primary leads of the high voltage transformer should be disconnected and taped together.

When any changes are made on the Video portion of the chassis, the locations of leads and parts should be returned as closely as possible to their original positions.

Service Hints:

1. In some cases the horizontal sweep oscillator circuit will radiate energy to nearby broadcast receiving antennas and lead-ins, causing interference with standard broadcast receivers.

2. If the picture "tears out" when the receiver is jarred it may be due to microphonic 1852, 1853, or 6J5 tubes.

3. The 6J5 oscillator tube should be removed without rocking it in its socket to loosen it, as the motion may cause the 80.5 mmf capacitor C16 to break off.

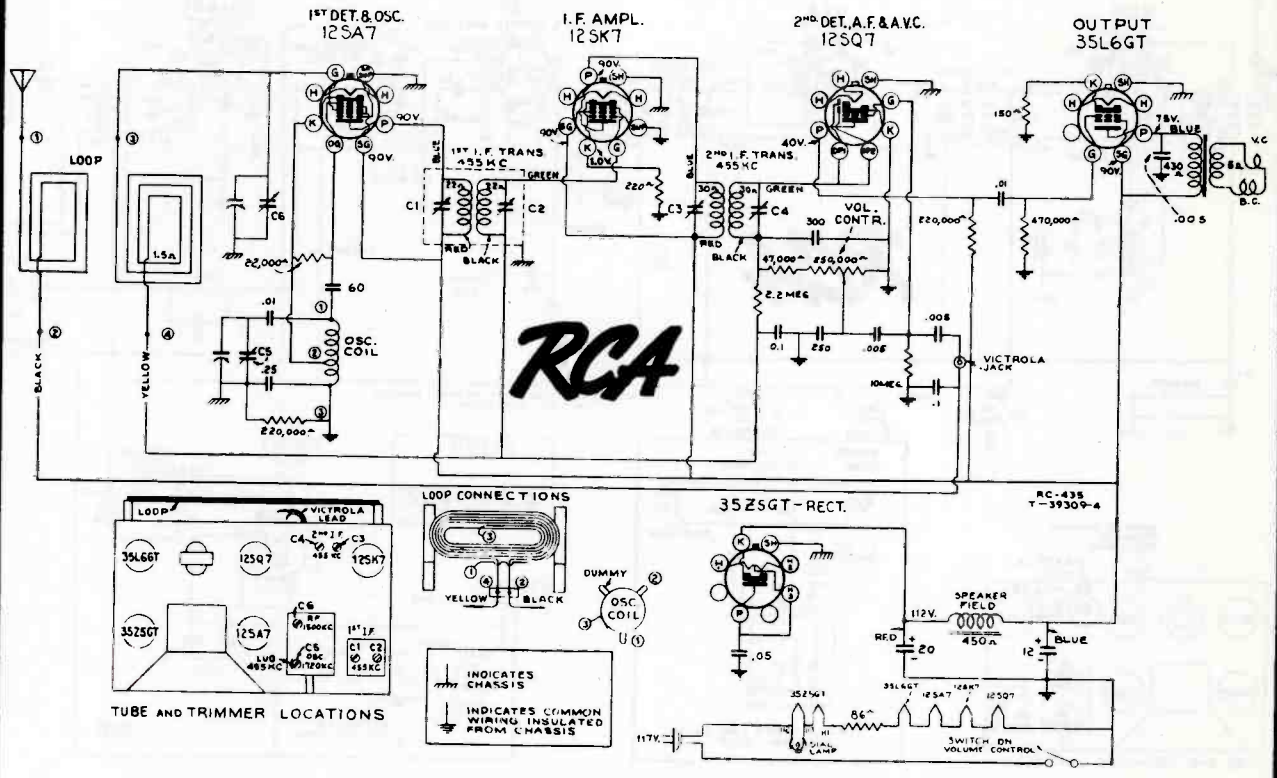
4. The coils or straps in the h.f. oscillator circuits **should not be touched or moved** or the alignment of the receiver will be disturbed.

5. The insulator on the high voltage filter capacitors may become dirty and break down to short out the high voltage.

6. The two Video coupling capacitors C44, 45, should be kept clear of chassis.

7. In some cases the metal Kinescope mounting shield may become magnetized by the earth's or some nearby magnetic field, and thus distort the picture on the screen towards the magnetized portion of the shield. The shield can be demagnetized by passing it slowly through a solenoid which is energized by an a-c current.

Model 9TX-50 Series (Chassis No. RC-435)



Alignment Procedure

Output Meter Alignment.—Connect the meter across the voice coil, and turn the receiver volume control to maximum.

Test-Oscillator.—Connect the low side of the test-oscillator to the receiver chassis, through a .01 mfd. capacitor, and keep the output as low as possible.

Pre-Setting Dial.—With gang condenser in full mesh, the pointer should be adjusted so that top edge of pointer just touches rivet in dial plate.

Antenna.—The set is equipped with a built-in loop antenna. If an outdoor antenna is used, it may be connected to the "ANT" terminal on rear of cabinet. It should not be longer than 100 feet, including lead-in. If it is longer, connect a 100 to 200 mmf. capacitor in series with the lead-in.

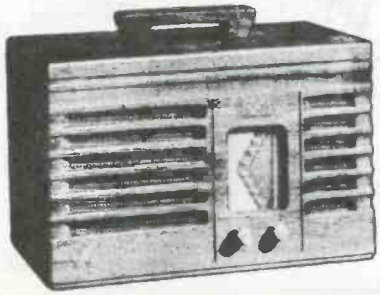
Power-Supply Polarity.—For operation on d-c, the power plug must be inserted in the outlet for correct polarity. If the set does not function, reverse the plug. On a-c, reversal of the plug may reduce hum.

Victrola Attachment.—A jack is provided on the rear of cabinet for connecting a Victrola Attachment into the audio-amplifying circuit. The cable from the Victrola Attachment should be terminated in a Stock No. 31048 plug to fit the jack.

Steps	Connect the high side of test-oscillator to—	Tune test-osc. to—	Turn radio dial to—	Adjust the following for max. peak output—
1	Tuning condenser stator (osc.) in series with .01 mfd.	455 kc	Quiet point at 1,600 kc end of dial	C1, C2, C3, C4 (1st and 2nd I-F transformers)
2	Antenna term. of ant. loop in series with 100 mmfd.	1,720 kc	Full clockwise (out of mesh)	C5 (oscillator)
3		1,500 kc	Resonance on 1,500 kc signal	C6 (antenna)

Precautionary Lead Dress

1. Dress 2nd I-F green lead close to chassis and under other parts.
2. Dress lead from gang condenser to grid of 12SA7 close to chassis and away from 12SQ7 socket.
3. Dress blue 1st I-F lead under volume control close to chassis.
4. Dress blue 2nd I-F lead close to chassis and behind 12SK7 socket.



Power Supply Ratings

A-C Rating ..... 105-125 volts, 50-60 cycles, 30 watts
D-C Rating ..... 105-125 volts, direct current, 30 watts

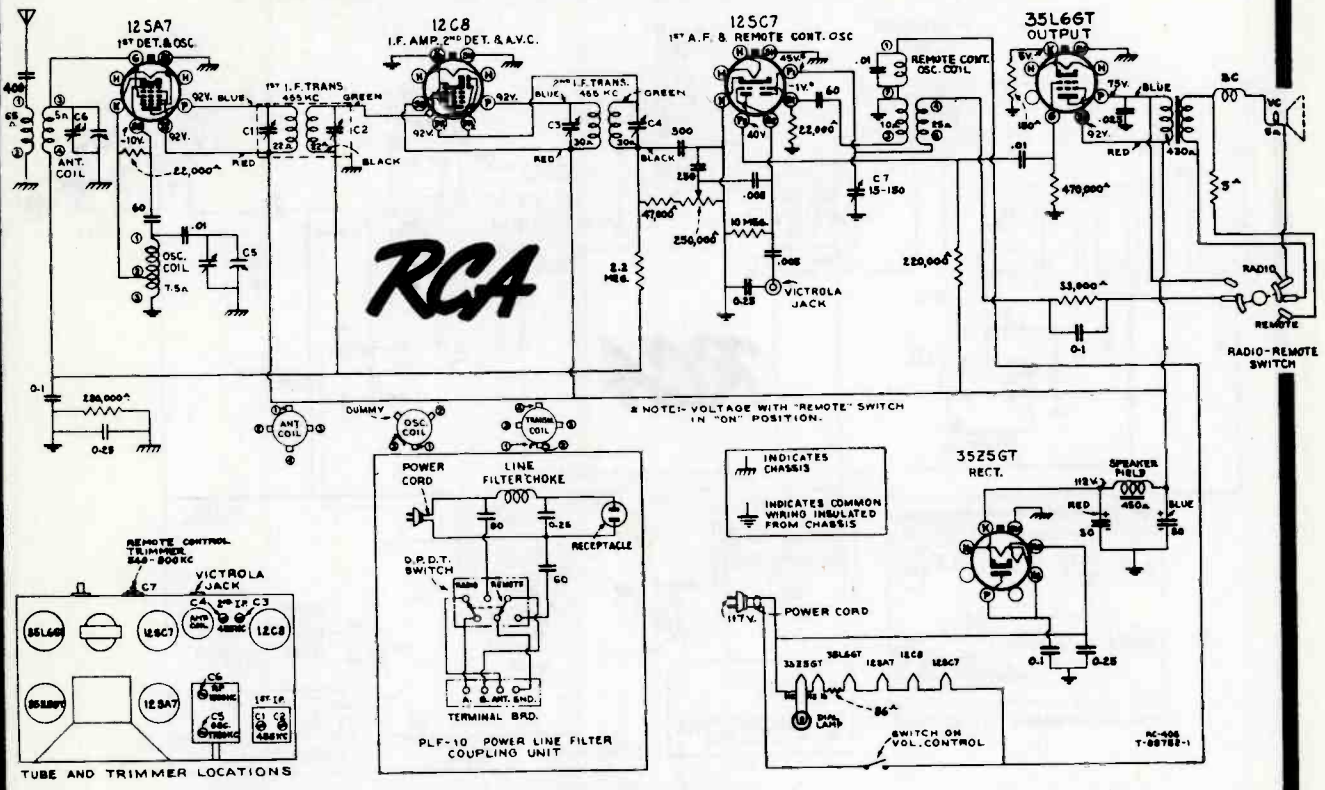
Power Output (125 volt, 60 cycle supply)

Undistorted ..... 1.5 watts
Maximum ..... 2.0 watts

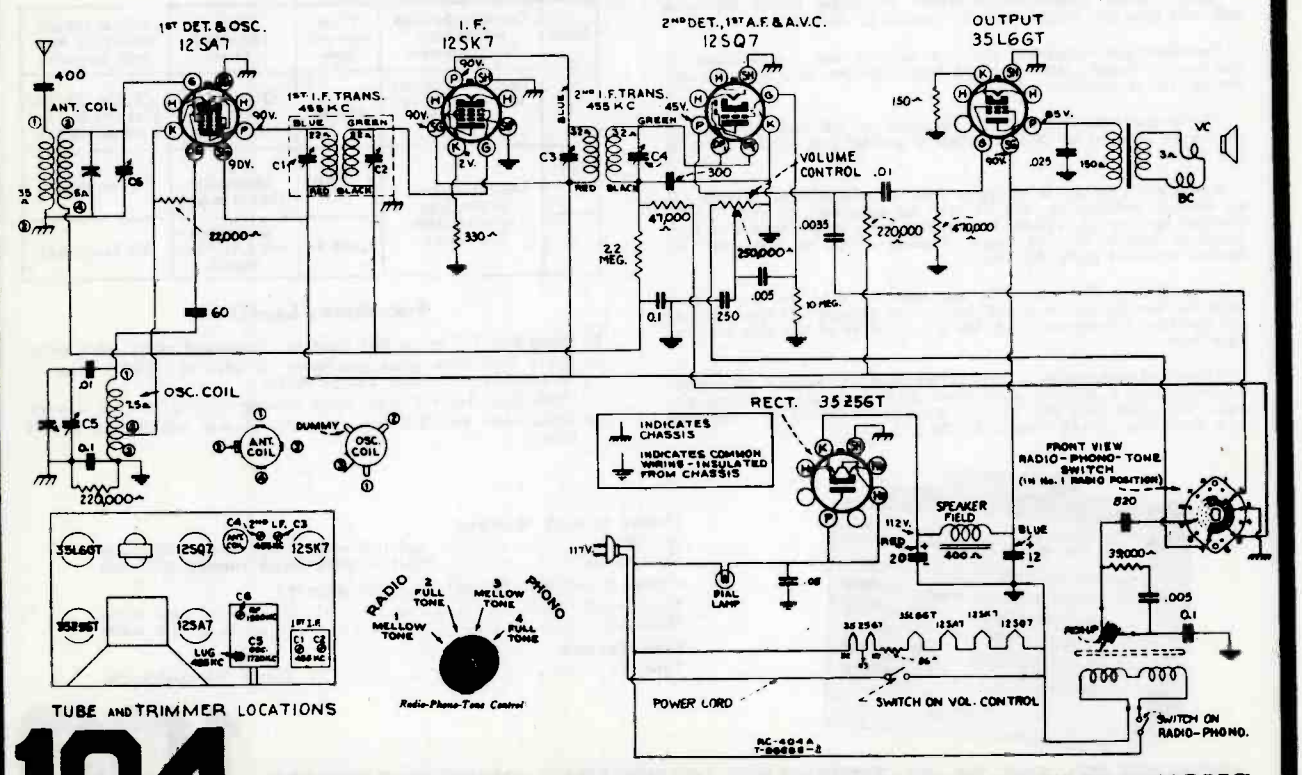
Loudspeaker

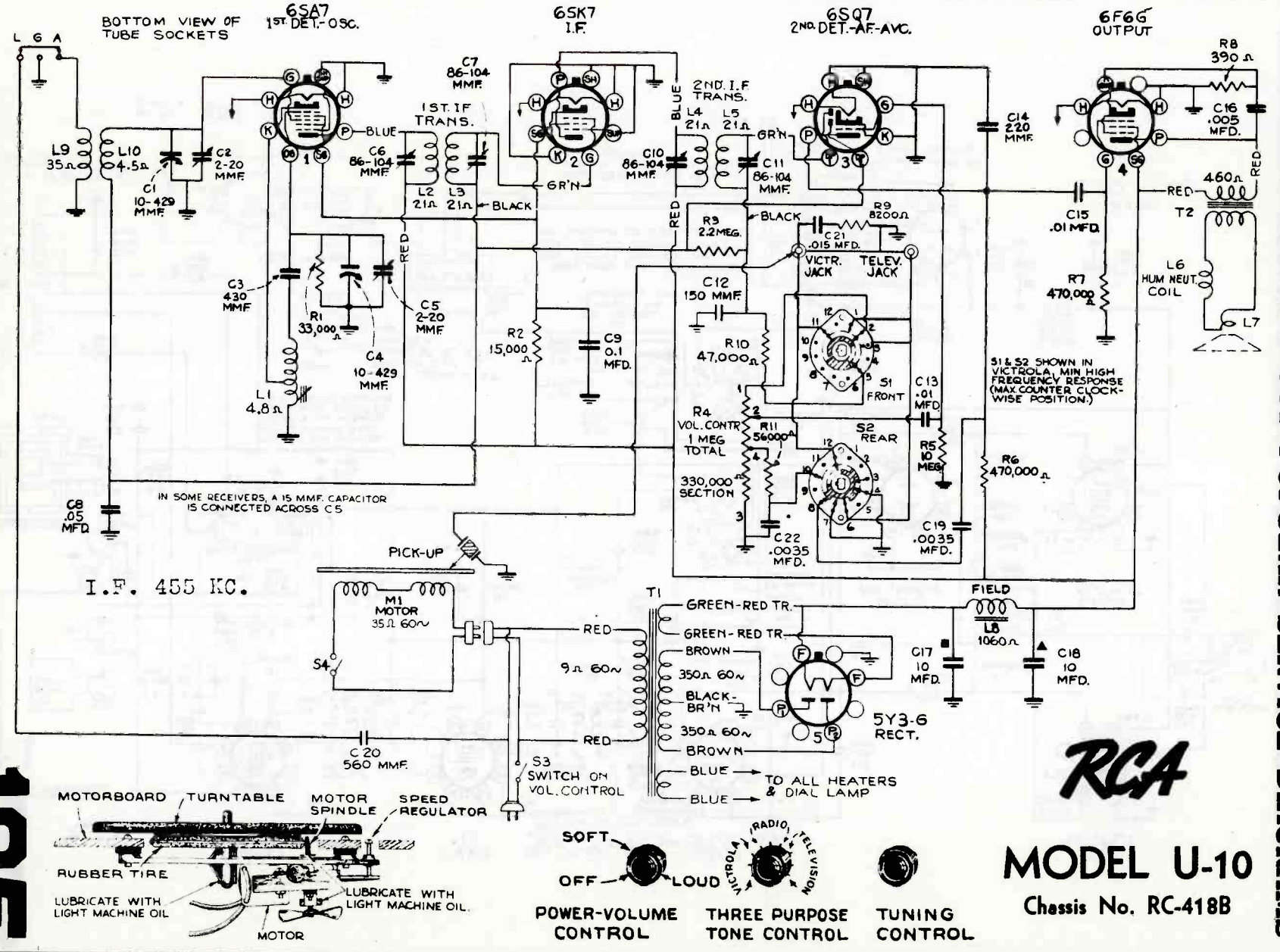
Type ..... 4-inch Electrodynamic

Model 5X5 Series (Chassis No. RC-406)



RCA Victor MODEL U-8 (Chassis No. RC-404A)

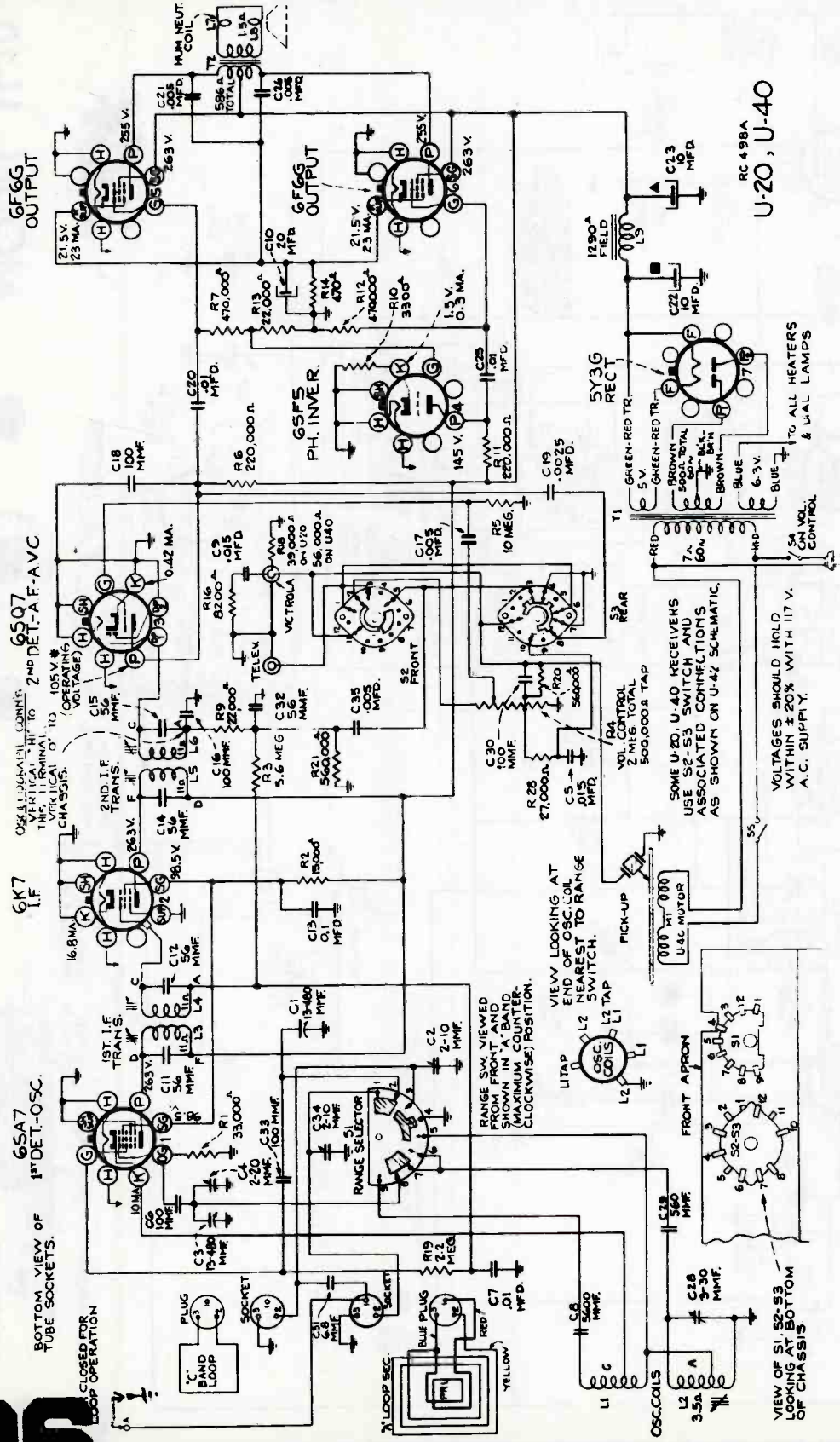




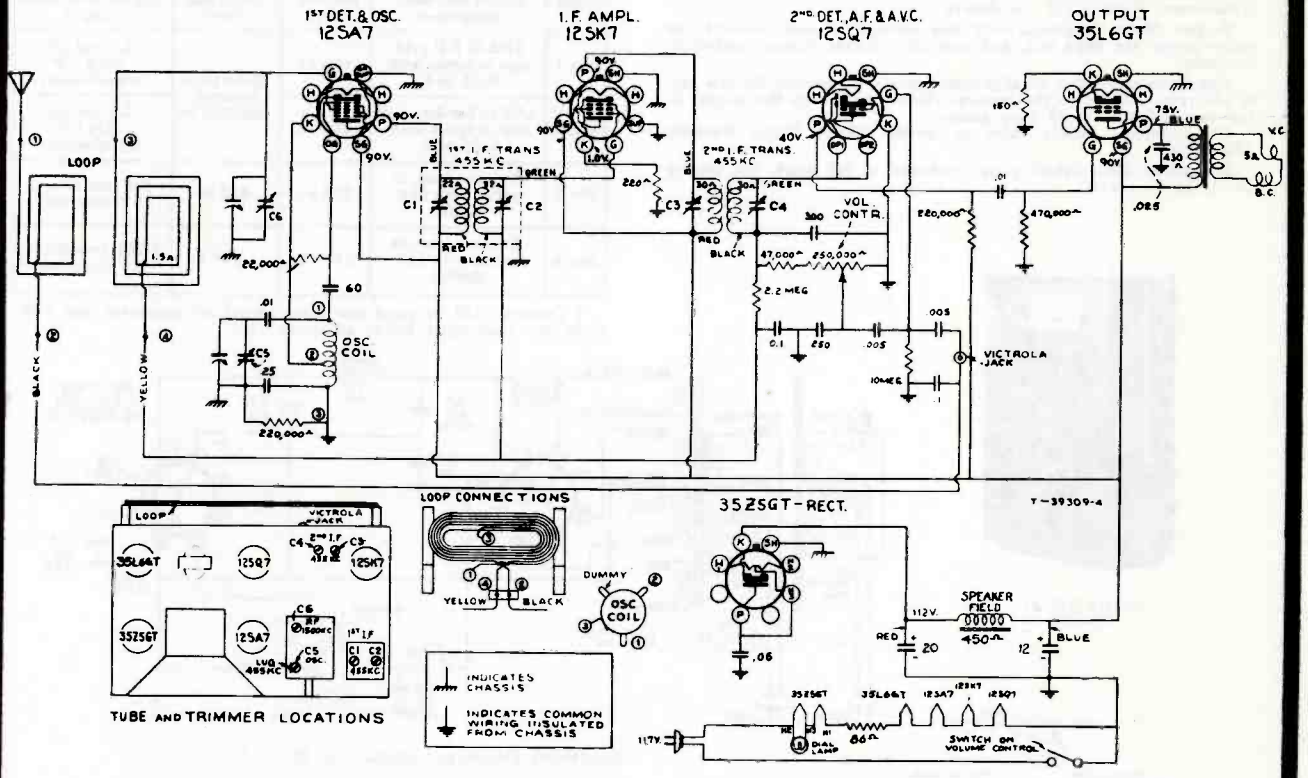
RCA

MODEL U-10

Chassis No. RC-418B


U-20, U-40
RC 498A
6F6G OUTPUT
6F6G OUTPUT
6SQ7 2ND DET-A-F-AVC
6K7 I.F.
6SA7 1ST DET-OSC.
6SF5 PH. INVER.
5Y3G RECT.
TO ALL HEATERS & DIAL LAMPS
VOLTAGES SHOULD HOLD WITHIN ± 20% WITH 117 V. A.C. SUPPLY.
SOME U-20, U-40 RECEIVERS USE S2-S3 SWITCH AND ASSOCIATED CONNECTIONS AS SHOWN ON U-42 SCHEMATIC.
VIEW LOOKING AT END OF OSC. COIL NEAREST TO RANGE SWITCH.
RANGE SW. VIEWED FROM FRONT AND SHOWN IN A.B.C. POSITION (MAXIMUM COUNTER-CLOCKWISE) POSITION.
BOTTOM VIEW OF TUBE SOCKETS.
CLOSED FOR LOOP OPERATION
VIEW OF S1, S2-S3 LOOKING AT BOTTOM OF CHASSIS
I.F. 455 KC.

Models 40X-30 and 40X-31 (Chassis No. RC405C & D)



Output Meter Alignment.—Connect the meter across the voice coil, and turn the receiver volume control to maximum.

Test-Oscillator.—Connect the low side of the test-oscillator to the receiver chassis, through a .01 mfd. capacitor, and keep the output as low as possible.

Pre-setting Dial.—With gang condenser in full mesh, the pointer should be horizontal.

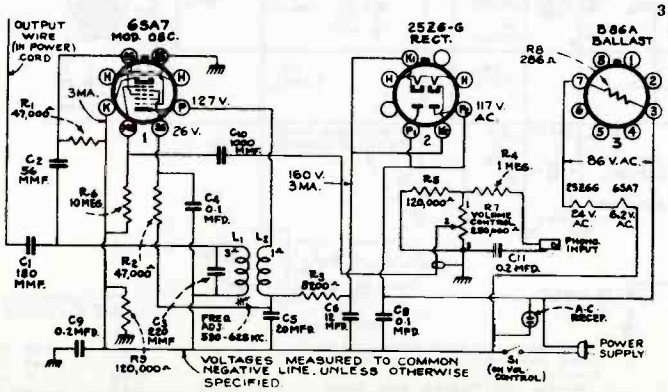
Antenna.—The set is equipped with a built-in loop antenna. If an outdoor antenna is used, it may be connected to the "ANT." terminal on rear of cabinet. It should not be longer than 100 feet, including lead-in. If it is longer, connect a 100 to 200 mmf. capacitor in series with the lead-in.

Power-Supply Polarity.—For operation on d-c, the power plug must he inserted in the outlet for correct polarity. If the set does not function, reverse the plug. On a-c, reversal of the plug may reduce hum.

Steps	Connect the high side of test-oscillator to—	Tune test-osc. to—	Turn radio dial to—	Adjust the following for max. peak output—
1	Tuning condenser stator (osc.) in series with .01 mfd.	455 kc	Quiet point at 1,600 kc end of dial	C1, C2, C3, C4 (1st and 2nd I-F transformers)
2	Antenna term. of ant. loop in series with 100 mmfd.	1,680 kc	Full clockwise (out of mesh)	C5 (oscillator)
3		1,500 kc	Resonance on 1,500 kc signal	C6 (antenna)

Precautionary Lead Dress

1. Dress 2nd I-F green lead close to chassis and under other parts.
2. Dress lead from gang condenser to grid of 12SA7 close to chassis and away from 12SQ7 socket.
3. Dress blue 1st I-F lead under volume control close to chassis.



RCA

← OSC-22

Wireless Oscillator

RCA Victor MODELS BK-41 and BT-41

Cathode-ray Alignment is the preferable method. Connections for the oscillograph are as follows: Vertical "Hi" to E on the 2nd I-F transformer, Vertical "O" to chassis.

Output Meter Alignment.—If this method is used, connect the meter across the voice coil, and turn the receiver volume control to maximum.

Test-Oscillator.—For all alignment operations, connect the low side of the test-oscillator to the receiver chassis, and keep the output as low as possible to avoid a-v-c action.

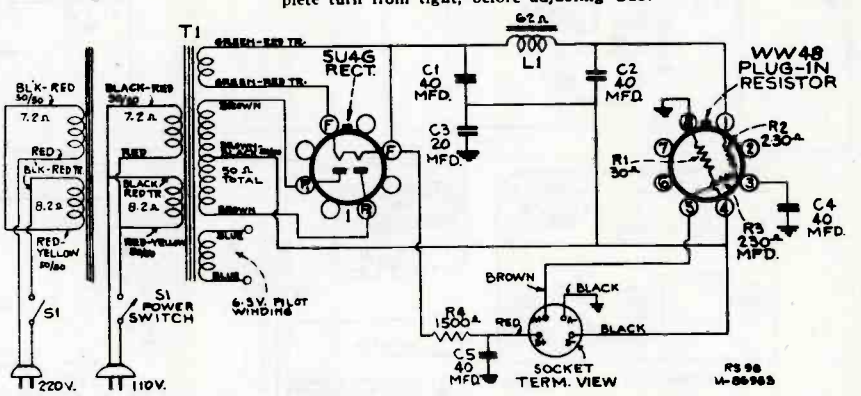
For additional details, refer to booklet "RCA Victor Receiver Alignment."

Pre-setting Dial.—With gang condenser in full mesh, the pointer should be horizontal.

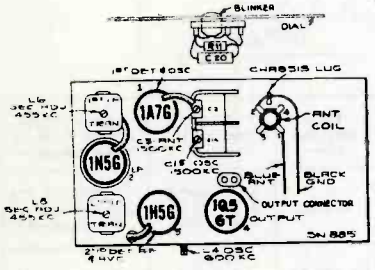
Steps	Connect the high side of test-oscillator to—	Tune test-osc. to—	Turn radio dial to—	Adjust the following for max. peak output
No. 1	1N5-G I-F grid cap, in series with 0.01 mfd.	455 kc	Quiet point between 550-750 kc	L7 and L8 (2nd I-F transformer)
No. 2	1A7-G 1st-det. grid cap in series with 0.01 mfd.	455 kc		L5 and L6 (1st I-F transformer)
No. 3	Antenna lead, in series with 200 mmfd.	600 kc	600 kc	L4 (oscillator) L2 (antenna)
No. 4	Antenna lead, in series with 200 mmfd.	1,500 kc	1,500 kc	C15† (oscillator) C3 (antenna)

† Trimmer C16 on gang condenser should be unscrewed one complete turn from tight, before adjusting C15.

Model BK-41

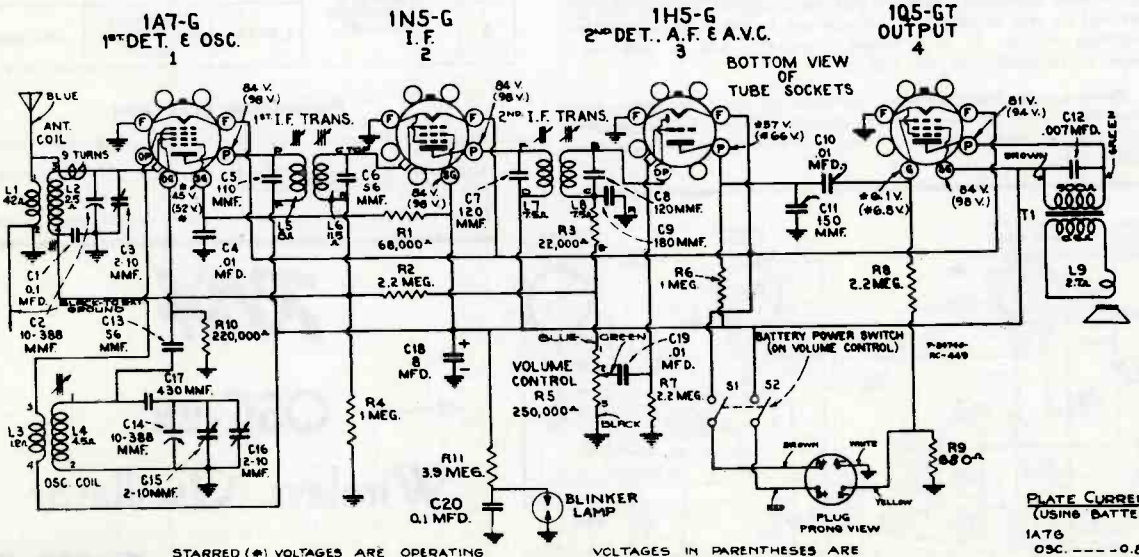


Schematic Diagram—Model CV-40



Precautionary Lead Dress

1. Red lead from second i-f transformer to screen terminal of 1N5-G must be dressed close to and along edge of chassis.
2. Twisted green wire from antenna coil to gang must be 9 turns and kept clear of rotor.
3. Blue and green leads to volume control must be dressed close to chassis and between gang and front apron.
4. The opening in the shield of the 1N5-G should be turned away from the chassis and the i-f transformers.
5. Antenna and ground wires shoud be twisted together.



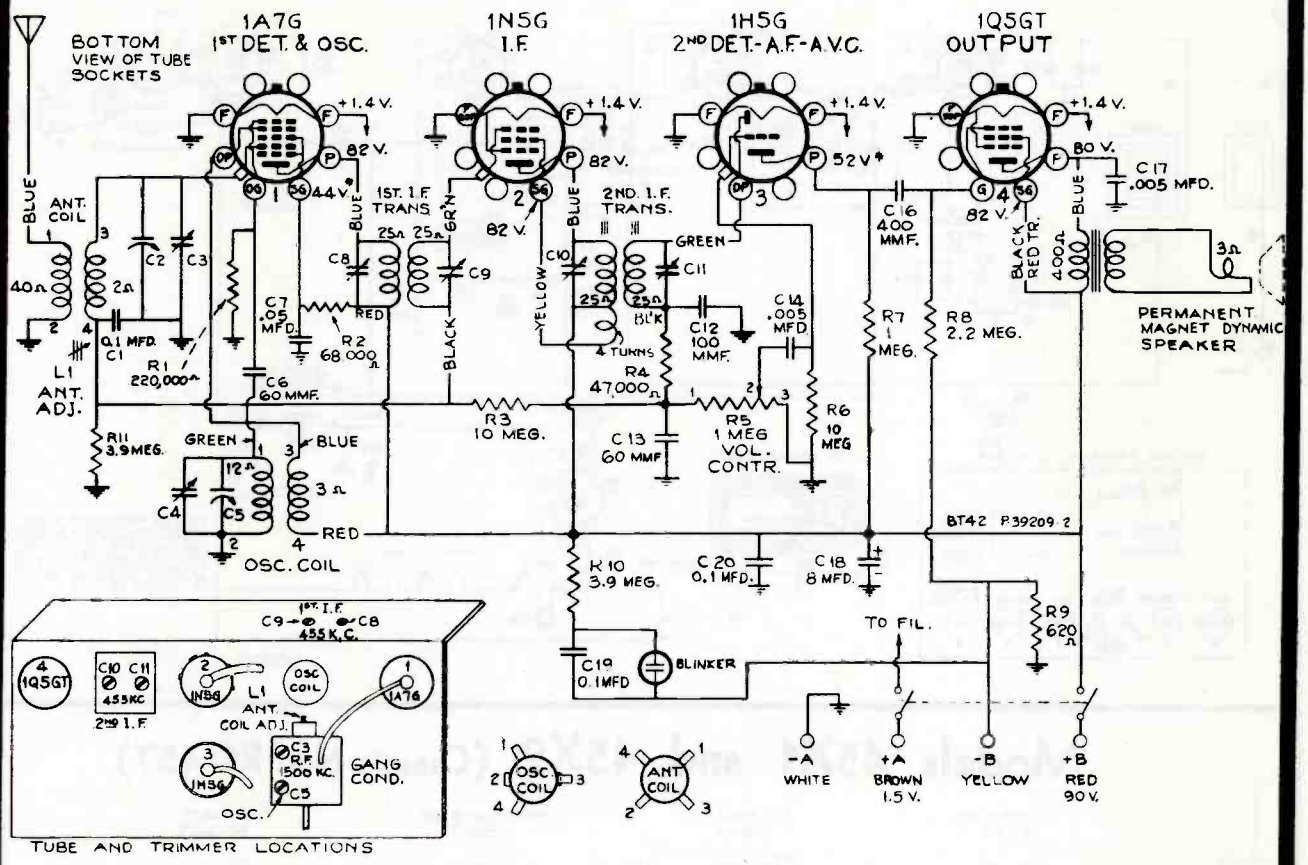
STARRED (*) VOLTAGES ARE OPERATING VOLTAGES IN CIRCUITS WITH HIGH SERIES RESISTANCE; THE ACTUAL MEASURED VOLTAGES WILL BE LOWER, DEPENDING ON THE VOLTMETER LOADING.

VOLTAGES IN PARENTHESES ARE THOSE OBTAINED BY USING POWER SUPPLY CV-40. WHEN BATTERIES ARE USED VOLTAGES NOT IN PARENTHESES APPLY.

PLATE CURRENTS (USING BATTERIES)

1A7G OSC.	0.85 MA.
1A7G DET.	0.49 MA.
1N5G	1.2 MA.
1H5G	.026 MA.
1B5GT	6.0 MA.

MODEL BT-42



Alignment Procedure

Output Meter Alignment.—If this method is used, connect the meter across the voice coil, and turn the receiver volume control to maximum.

Test-oscillator.—For all alignment operations, keep the output as low as possible to avoid a-v-c action.

Pre-setting Dial.—With the gang condenser fully out of mesh, the indicator should point to the extreme right (high frequency) mark on the dial scale.

CAUTION.—When ready to install or replace batteries or tubes or to make any repairs or changes, be sure to turn off power switch.

Steps	Connect the high side of test-oscillator to—	Tune test-osc. to—	Turn Radio Dial to—	Adjust the following for max. peak output—
1	1A7G 1st-Det. grid cap, in series with .01 mfd.	455 kc	Quiet point at 550 kc End of Dial	C8, C9, C10, C11 (1st and 2nd I-F transformers)
2	Antenna lead (blue) in series with 100 mmfd.	1,500 kc	1,500 kc	C5 (oscillator)
3		600 kc	600 kc	L1 (antenna)*
4		1,500 kc	1,500 kc	C3 (antenna)

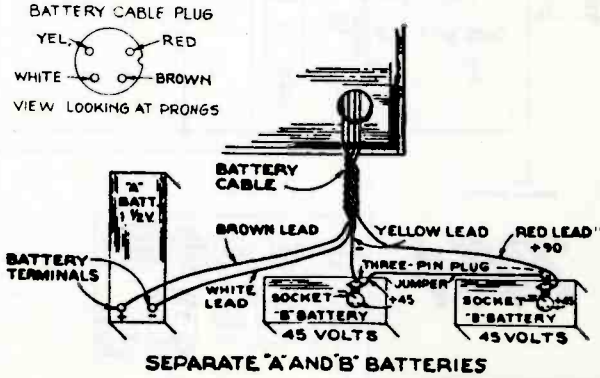
* When adjusting L1 (antenna), trimmer C3 should be in a minimum capacity position (unscrewed).

Precautionary Lead Dress.—

1. All filament (brown) and B+ (red) leads must be dressed away from unshielded I.F. coil.

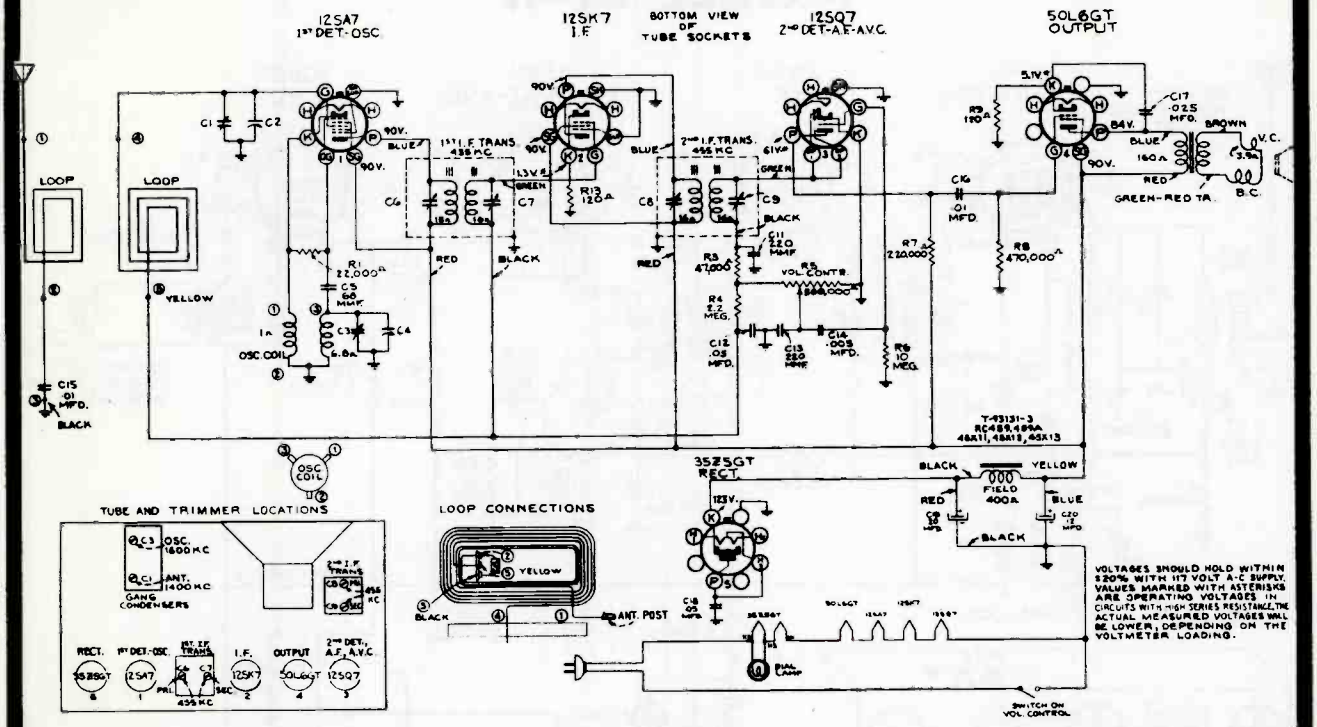
2. Green grid lead of 1A7G tube to be twisted around antenna (blue) lead for capacity coupling.

3. Red and brown battery cable leads to be dressed and held against front apron with tape.

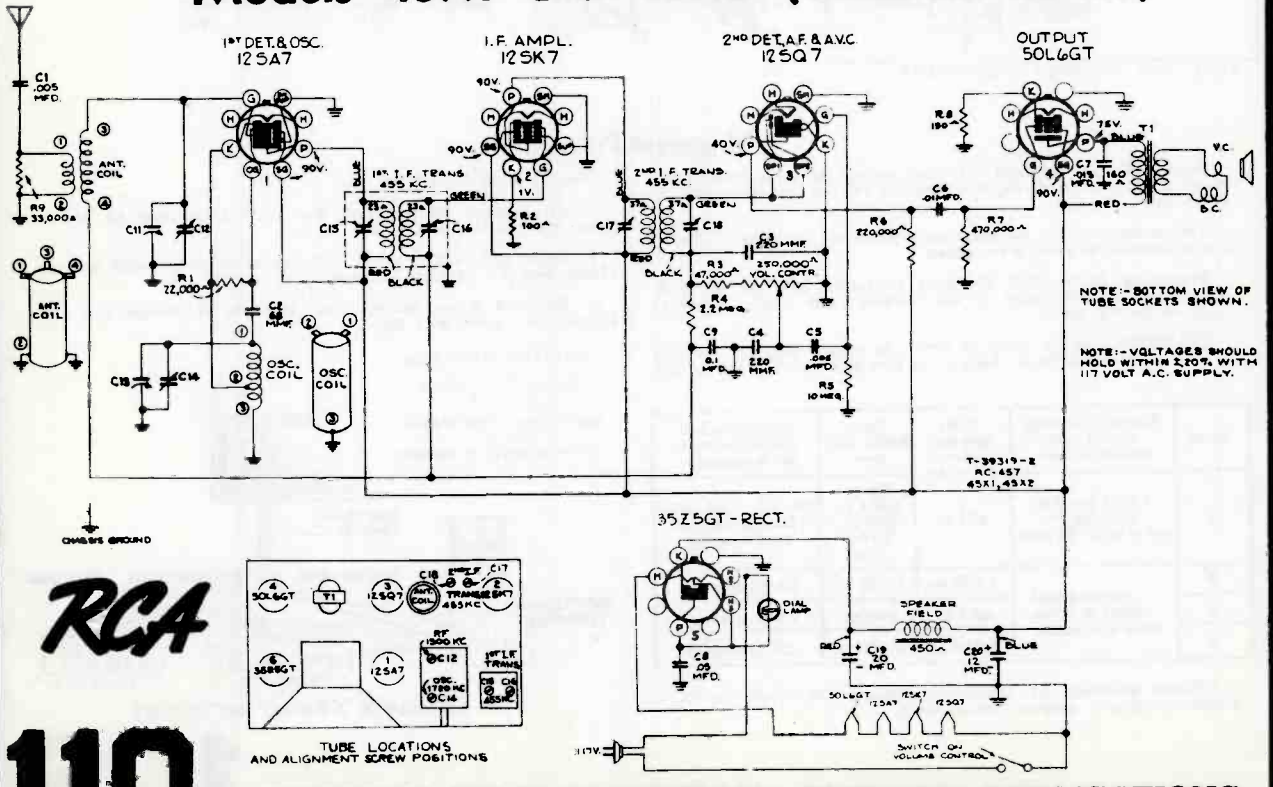


MANUAL OF 1940 MOST POPULAR SERVICE DIAGRAMS

Models 45X11, 45X12 — Model 45X13



Models 45X1 and 45X2 (Chassis No. RC-457)



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MODEL O-50 PORTABLE VICTROLA

(phonograph only)

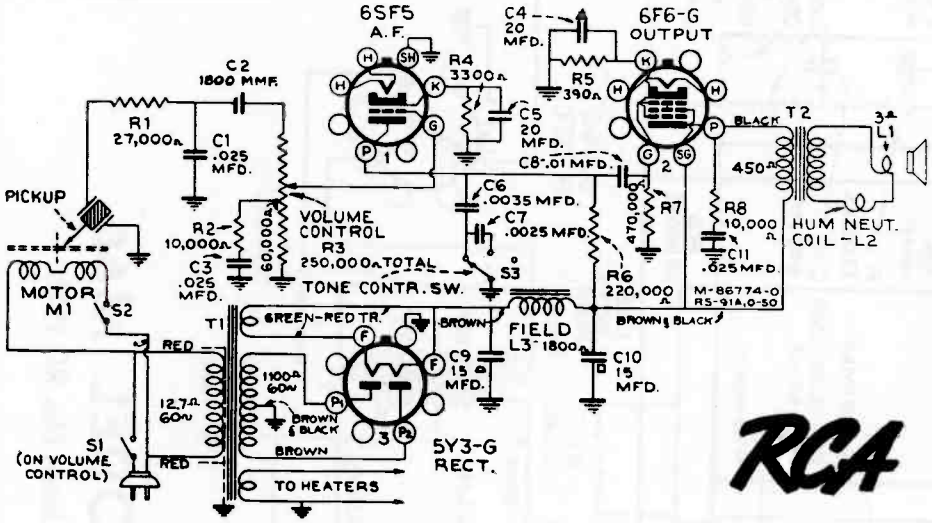
The Model O-50 Portable Electric Victrola consists of a crystal pickup, a two-stage audio amplifier, and eight-inch electrodynamic speaker, and a motor turntable mechanism with automatic mercury switch for starting and stopping—all housed in a portable carrying case of modern design and appearance.

The phonograph motor is a self-starting, constant-speed induction type. It should be lubricated every six months by applying a few drops of light machine oil to the spindle bearing and oil hole.

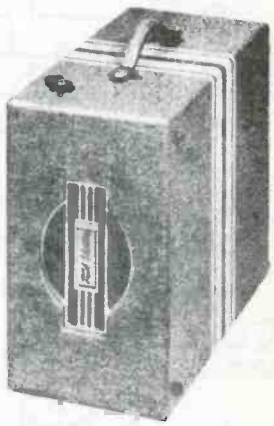
The motor spindle is tapered, and a conical rubber piece fits snugly on the spindle. The hole in the turntable bushing is tapered to fit the rubber. This provides an excellent self-centering floating mounting.

A metal washer is placed on the spindle under the rubber piece. The washer has ears on the under side which fit over a pin that projects through the spindle.

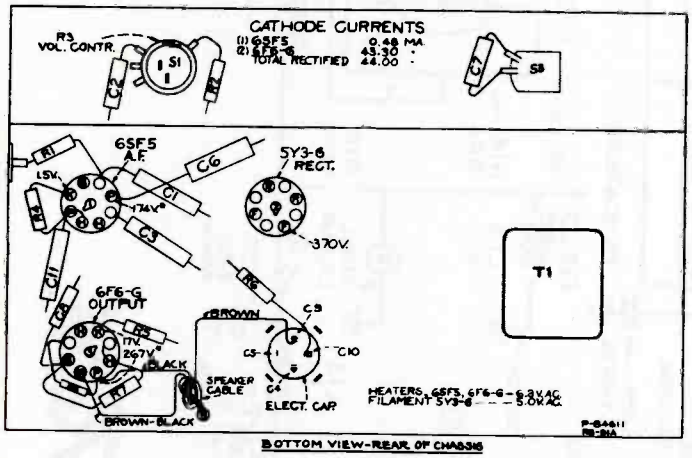
The motor switch is automatic for both starting and stopping, and when properly adjusted, will turn the motor on as the pickup is moved from the pickup rest toward the turntable. The switch should be adjusted so that it will snap into the "off" position when the pickup needle is 1¾ inches from the center line of the spindle. The motor may be shut off at any time by placing the pickup on the pickup rest.



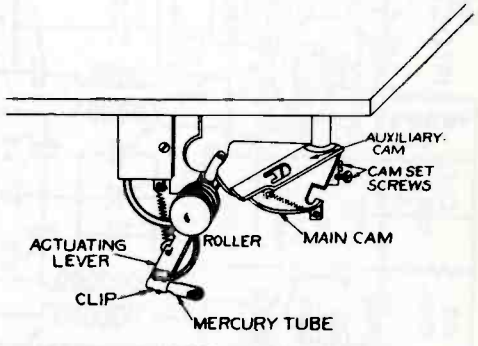
Schematic Circuit Diagram



Model O-50



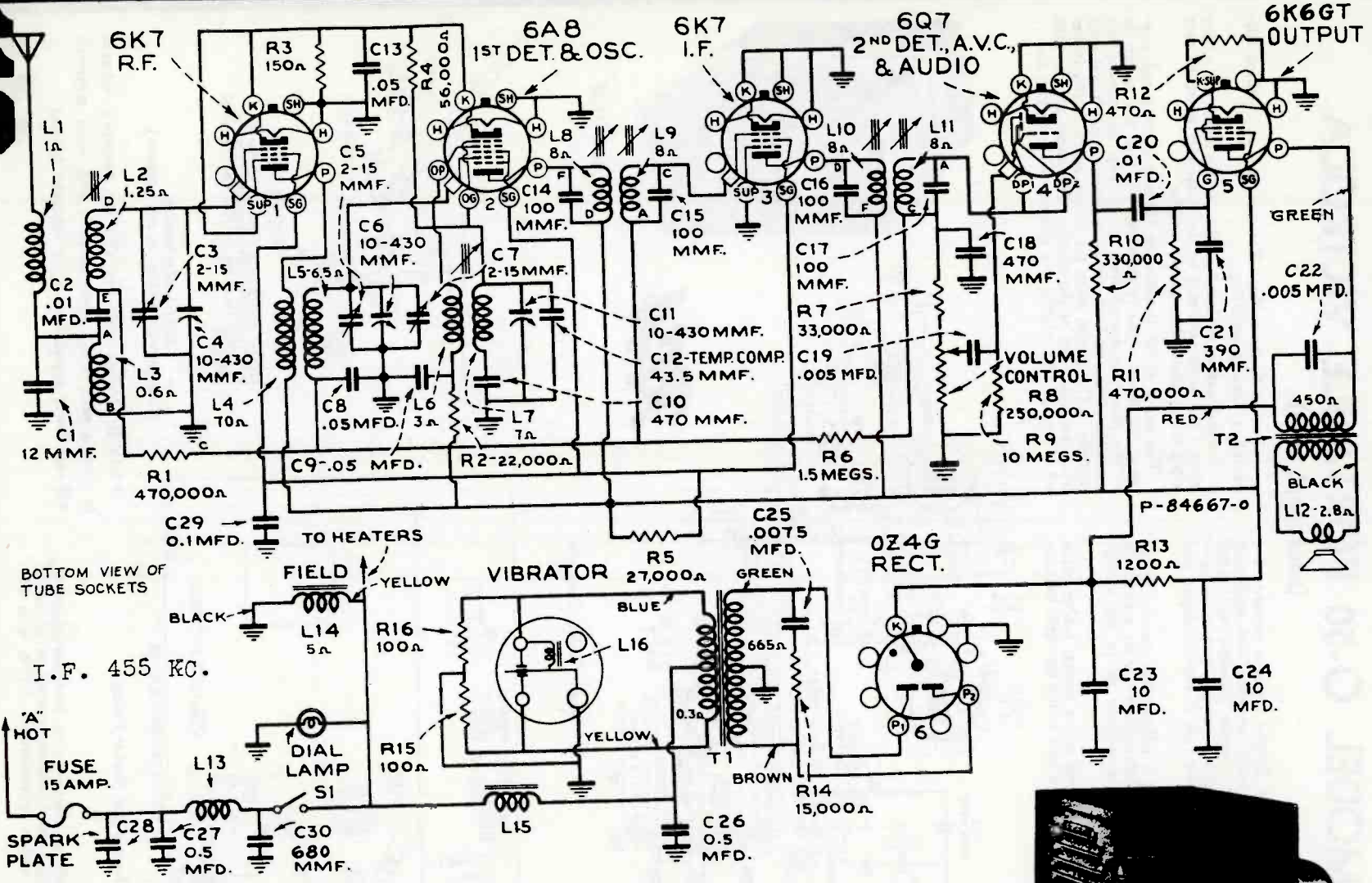
Parts Layout and Socket Voltages



Switch Mechanism
(Shown with pickup in rest position)

Measurements made to chassis unless otherwise indicated, with set tuned to quiet point, volume control at minimum. Values should hold within approximately ±20% with 117-volt a-c supply.

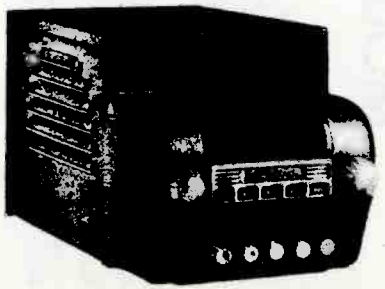
***NOTE:** Values with star (*) are operating voltages in circuits with high series-resistance, and when measured will read lower depending on the voltmeter loading.

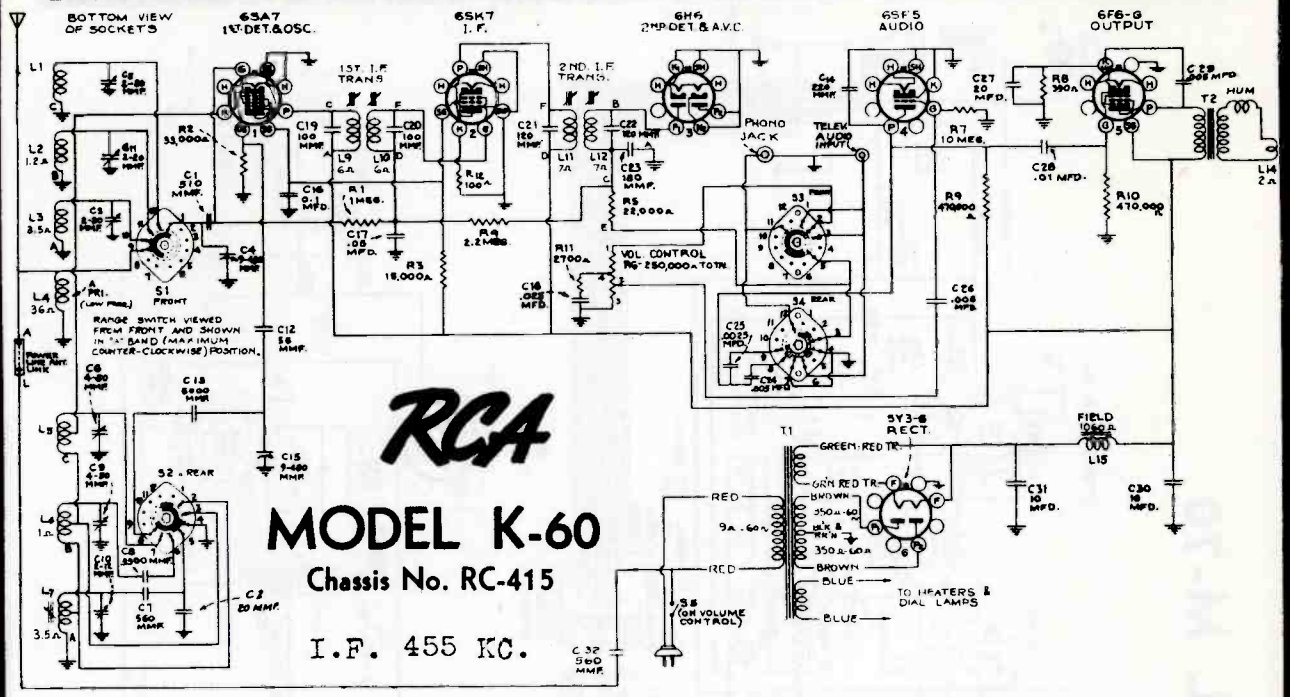


RCA

MODEL M60

Chassis No. RC 357K





RCA

MODEL K-60

Chassis No. RC-415

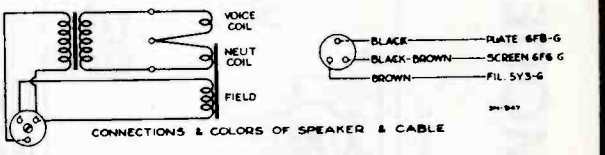
Note: On some receivers the following circuit modifications are in effect:

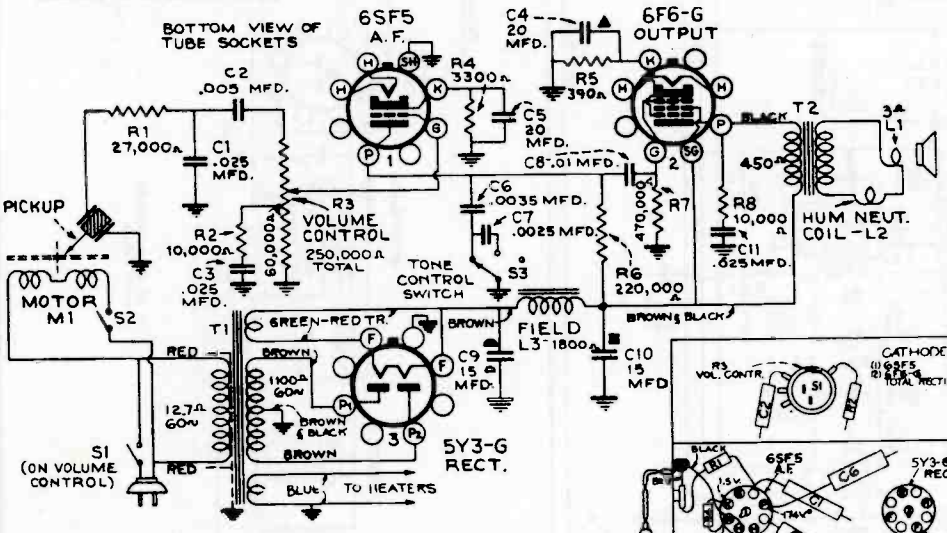
1. R11 is 4,700 ohms, and C18 is .05 mfd.
2. C1 is 470 mmfd.
3. There are three types of 2nd I-F transformers in use.

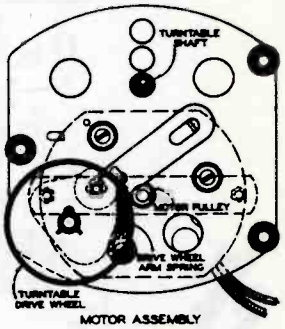
a. The first type (Stock No. 14308) has C23 and R5 mounted inside the case, and is connected exactly as shown above.

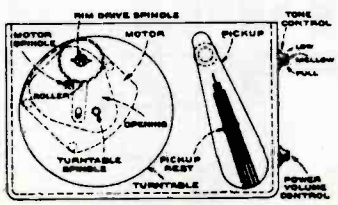
b. In the second type R5 is omitted and the lead from S4 connects to C instead of E. E is not used.

c. In the third type R5 is omitted and C23 is connected externally from C to ground. E is not used. The lead from the diode plate connects to A instead of B.

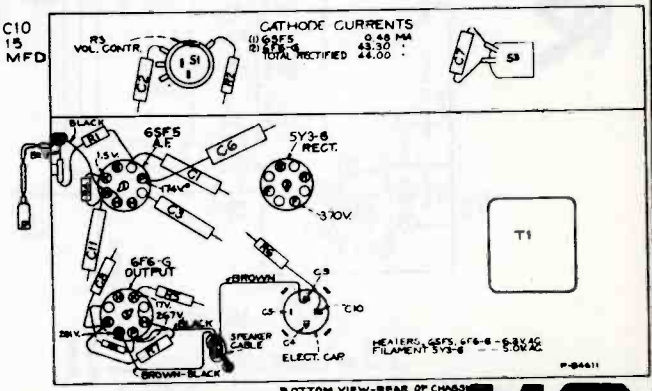




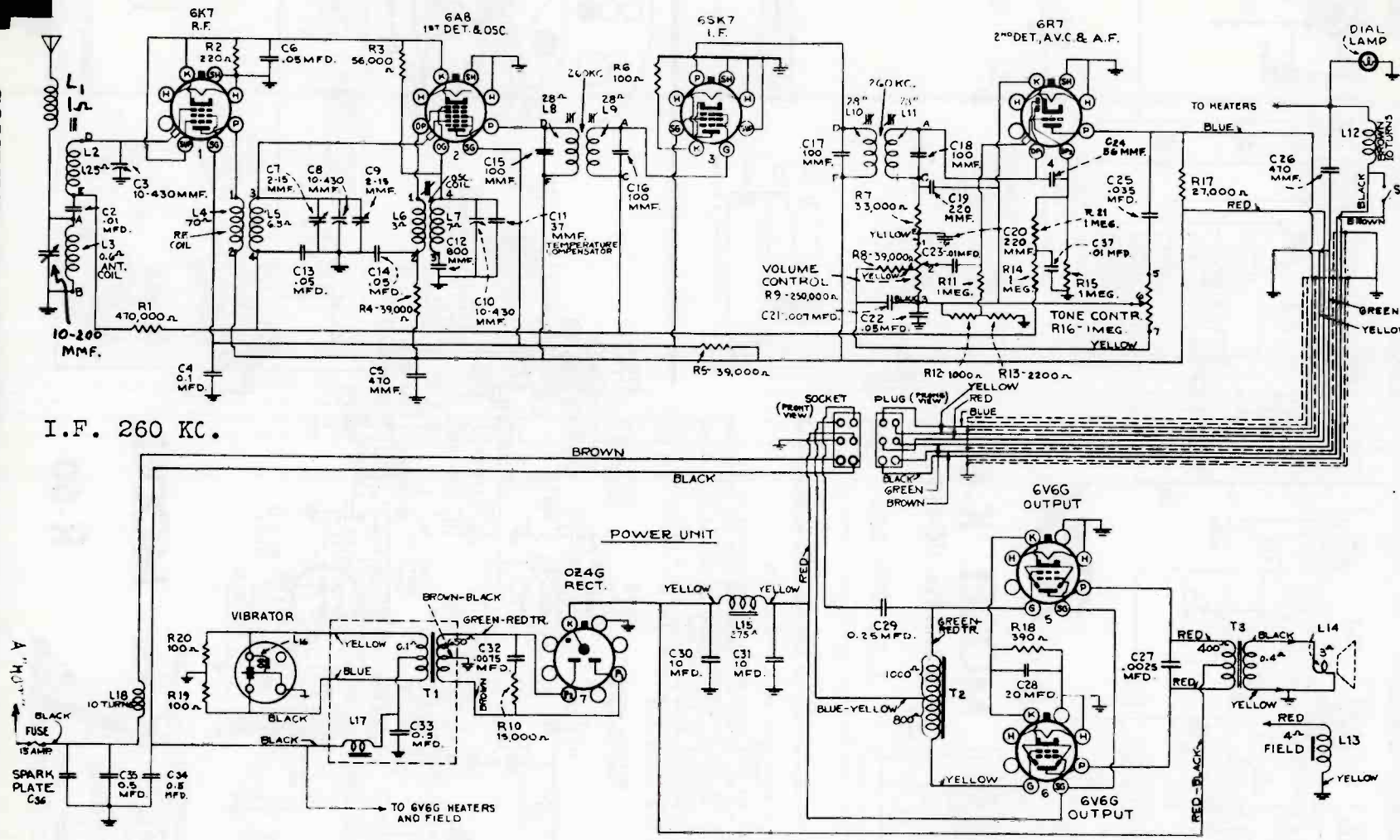


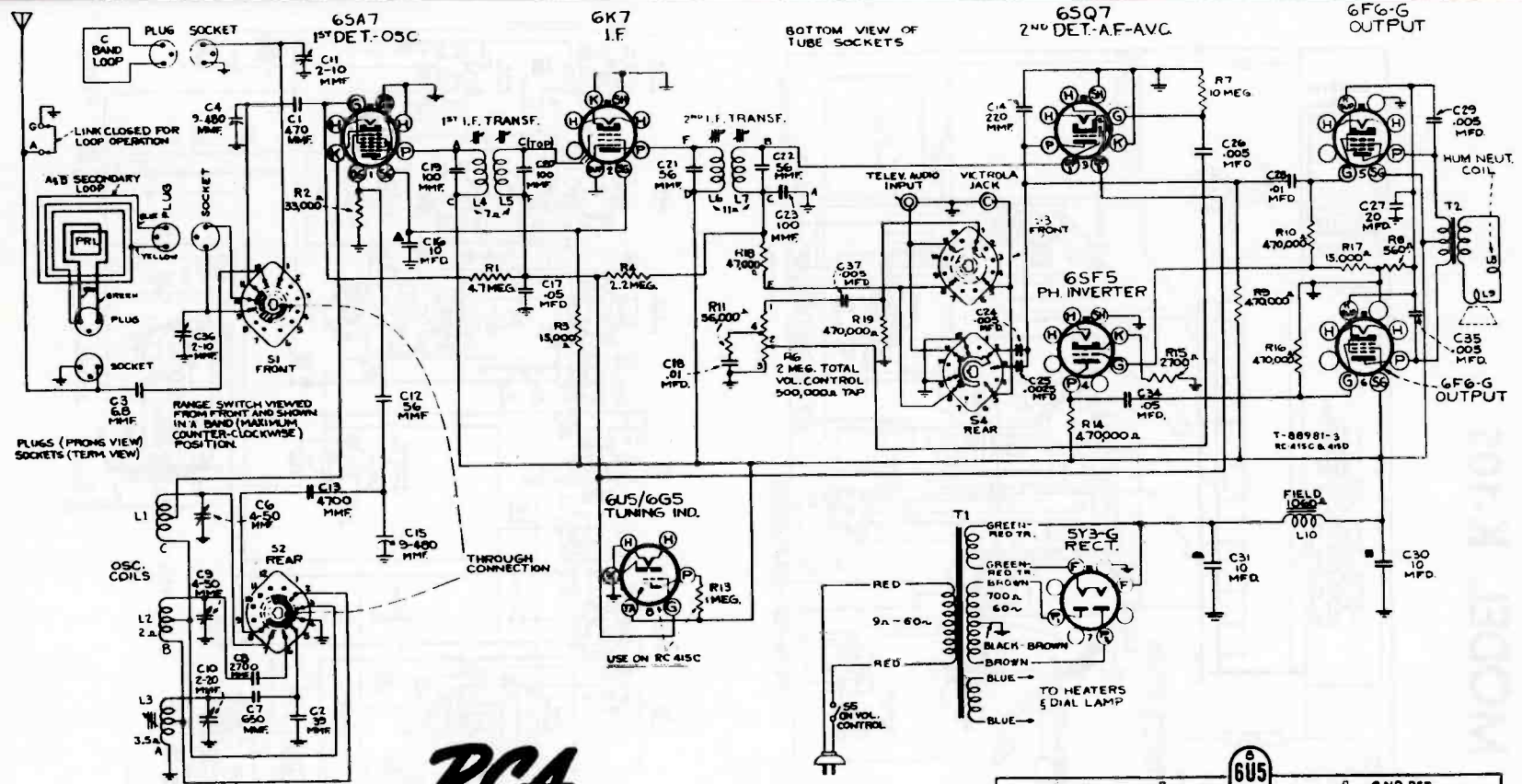


MODEL R-60



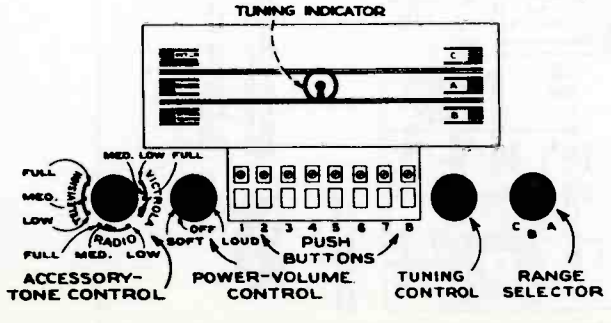
RCA MODEL M-70

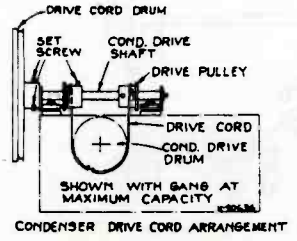




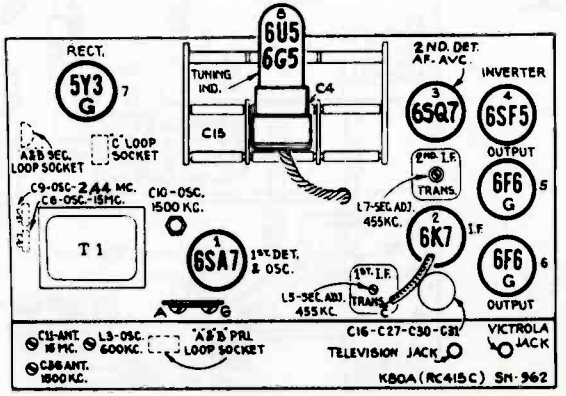
RCA

Models K-80 and K-81





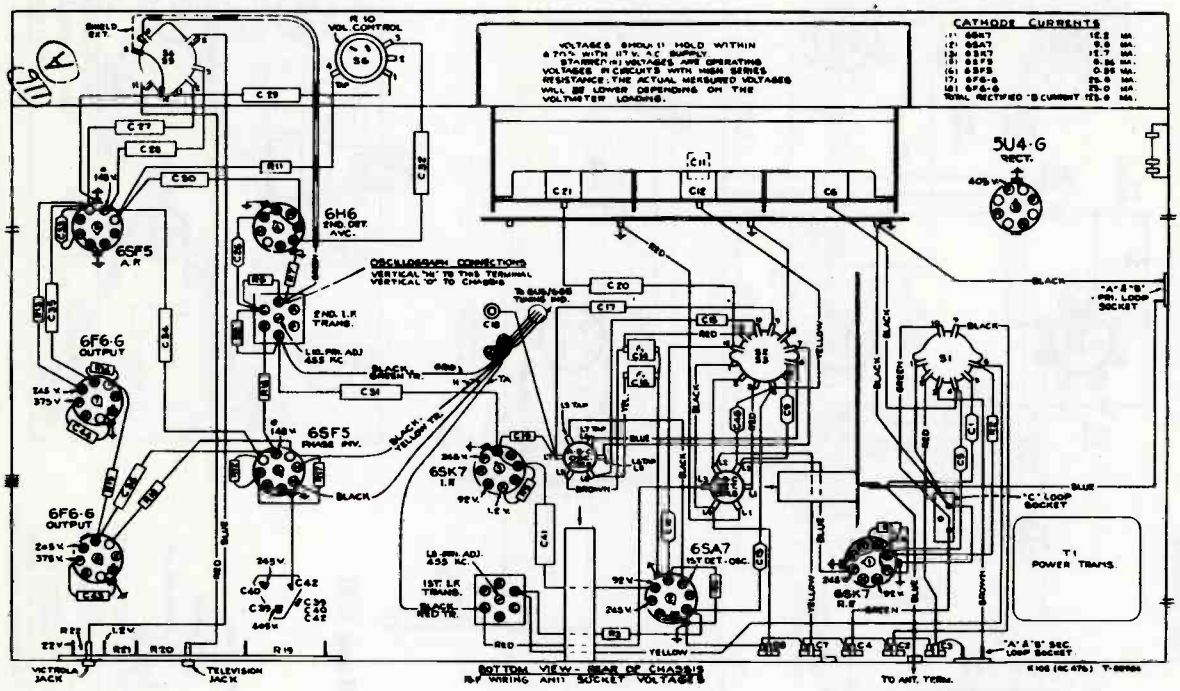
CONDENSER DRIVE CORD ARRANGEMENT

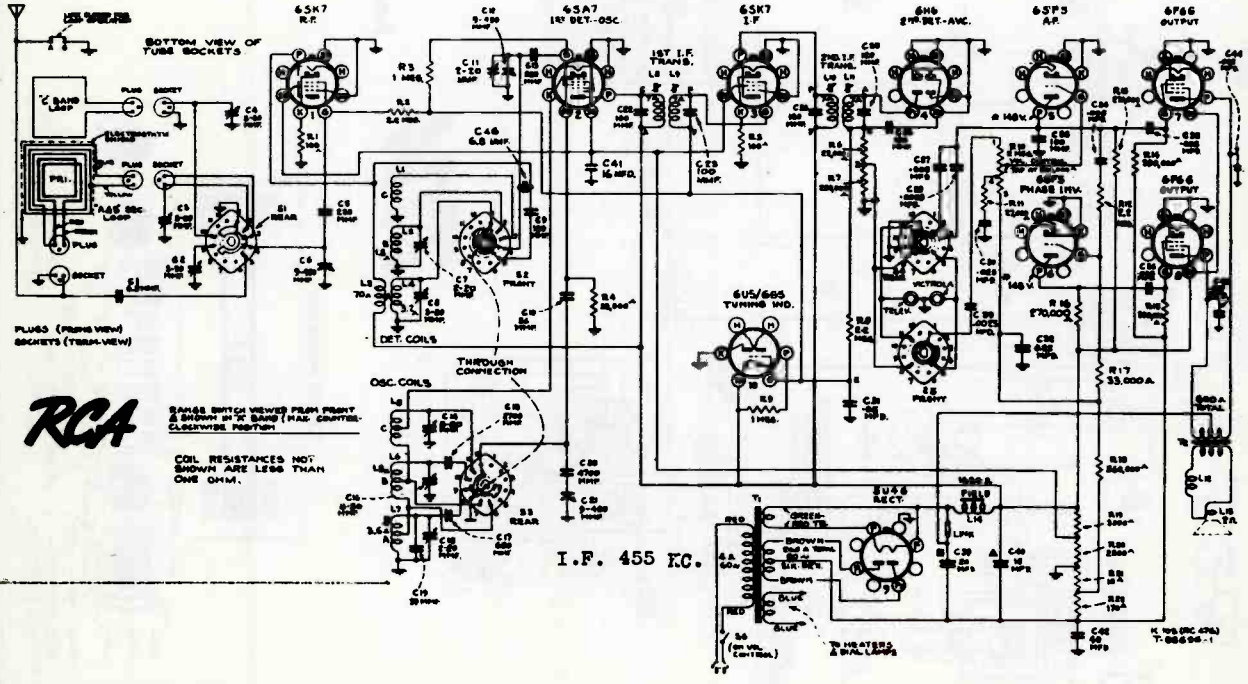


Models K-80, K-81

MANUAL OF 1940 MOST POPULAR SERVICE DIAGRAMS

MODEL K-105





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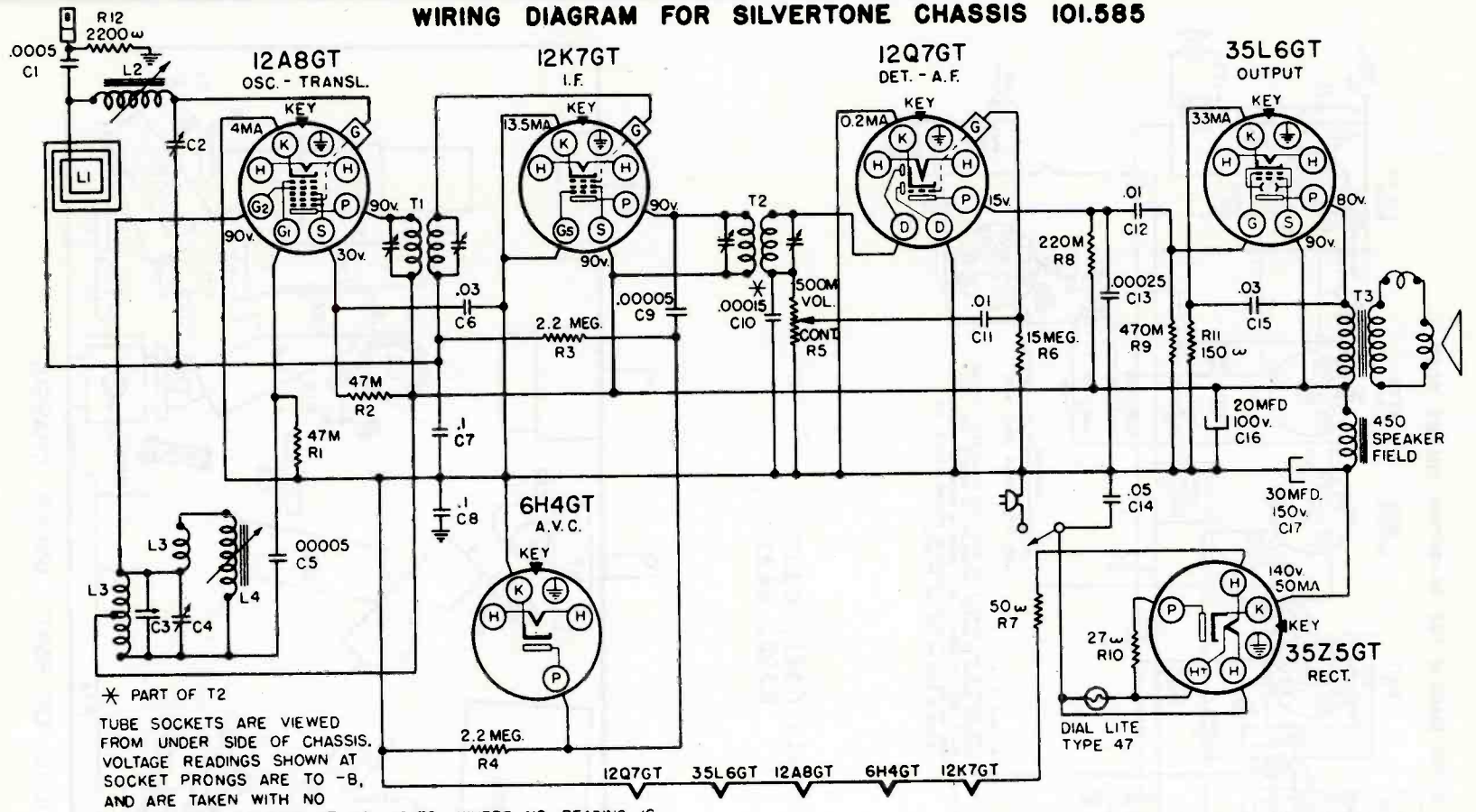
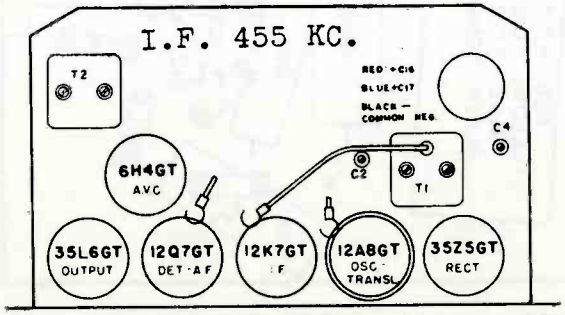
WIRING DIAGRAM FOR SILVERTONE CHASSIS 101.585

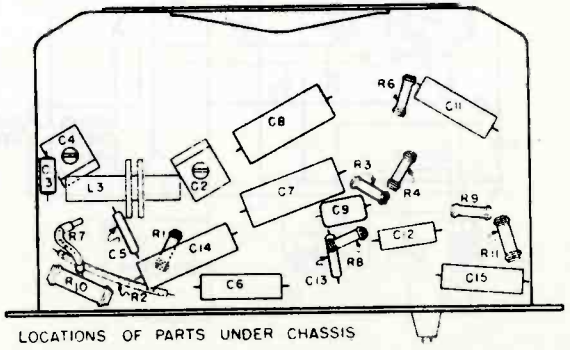


✳ PART OF T2

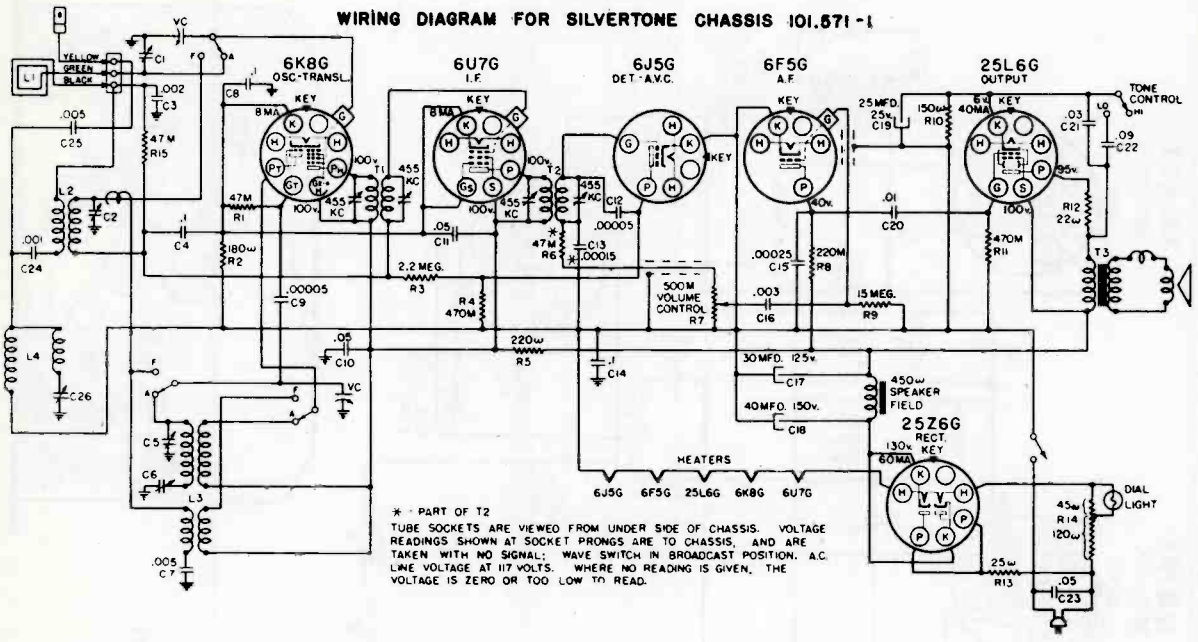
TUBE SOCKETS ARE VIEWED FROM UNDER SIDE OF CHASSIS. VOLTAGE READINGS SHOWN AT SOCKET PRONGS ARE TO -B, AND ARE TAKEN WITH NO SIGNAL. LINE VOLTAGE AT 117 VOLTS. WHERE NO READING IS GIVEN, THE VOLTAGE IS ZERO OR TOO LOW TO READ.



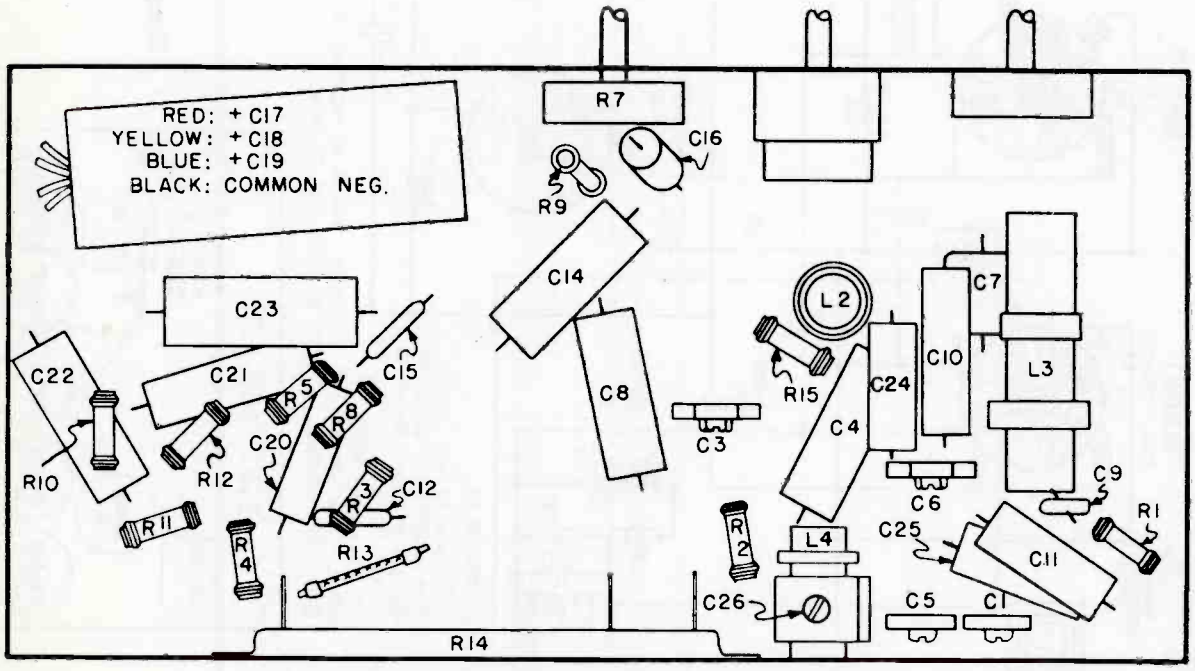
Sears Model 6320



LOCATIONS OF PARTS UNDER CHASSIS

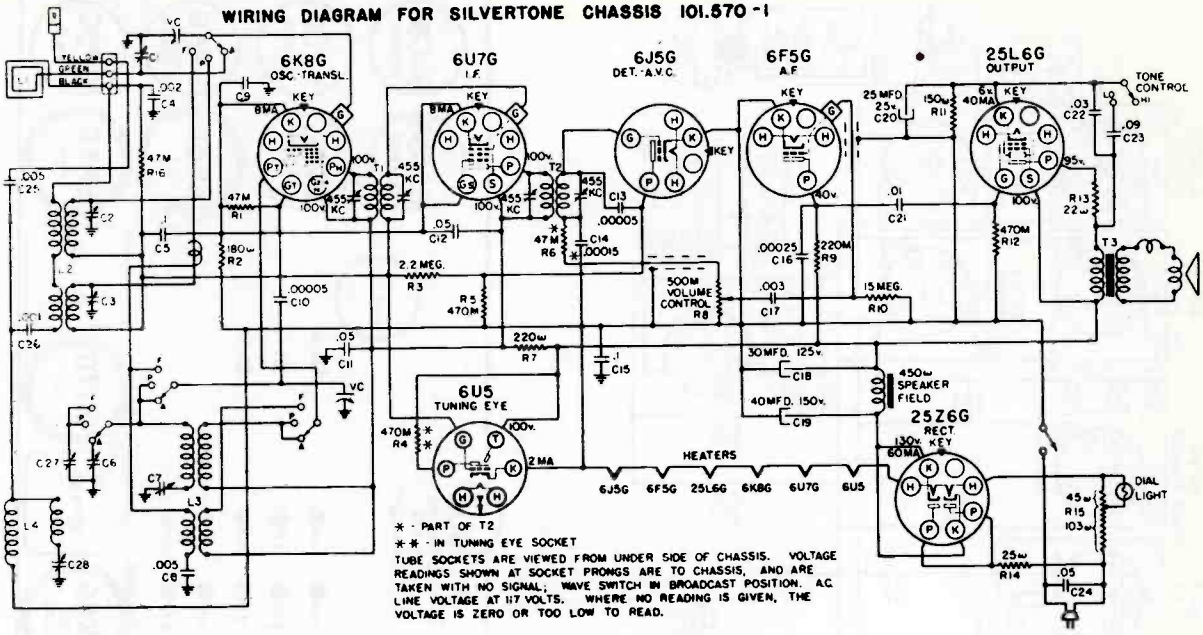


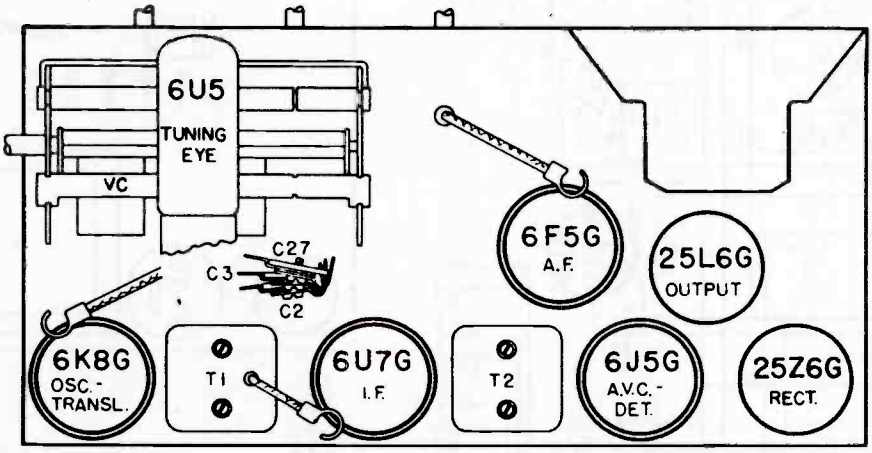
Sears Models 6321, 6322
6323, 6421



LOCATIONS OF PARTS UNDER CHASSIS.

WIRING DIAGRAM FOR SILVERTONE CHASSIS 101.570-1

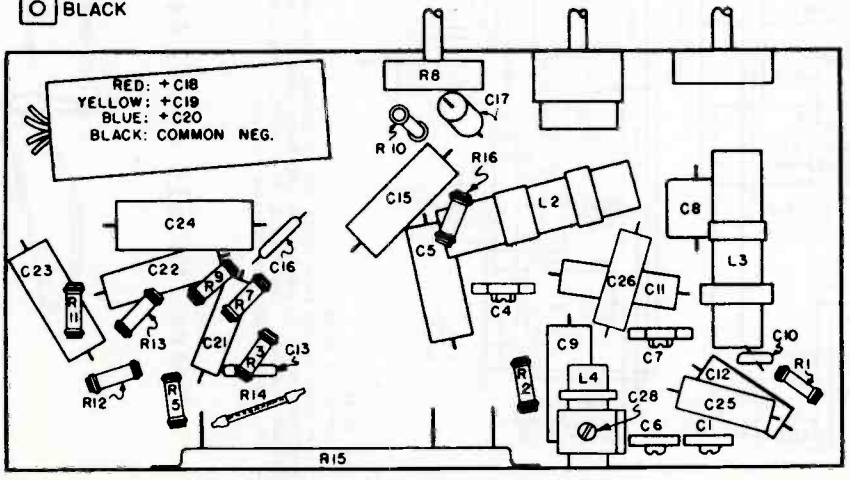




YELLOW
GREEN
BLACK

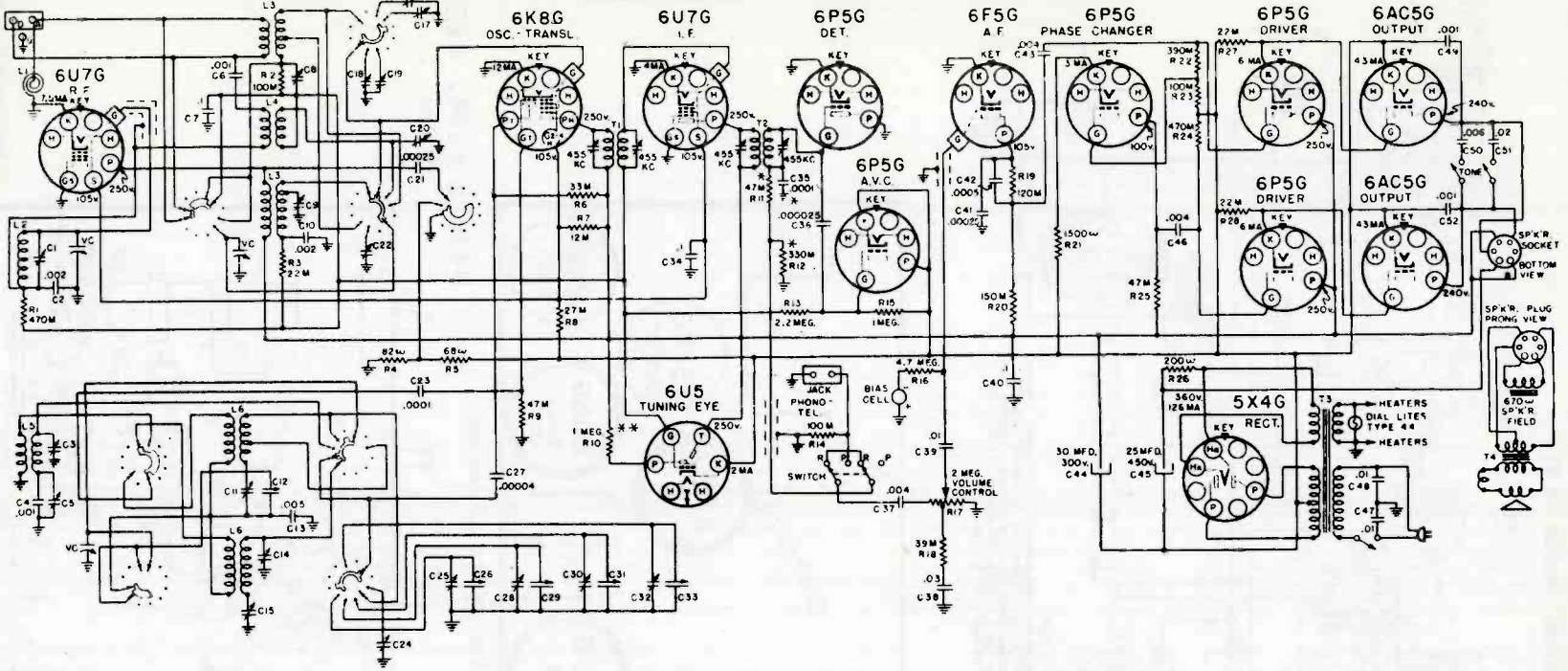
LOCATIONS OF PARTS ON TOP OF CHASSIS

Sears Models 6324, 6424 6493



LOCATIONS OF PARTS UNDER CHASSIS.

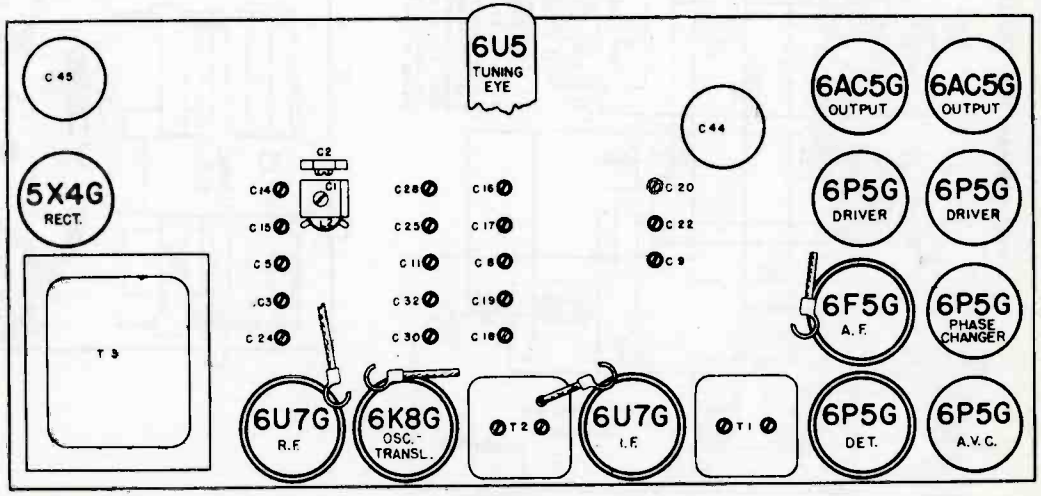
WIRING DIAGRAM FOR SILVERTONE CHASSIS 101.576



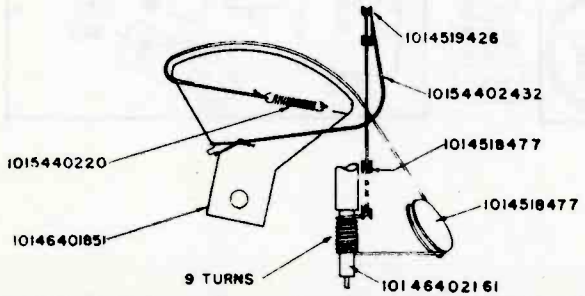
* - PART OF T2

** - IN TUNING EYE SOCKET

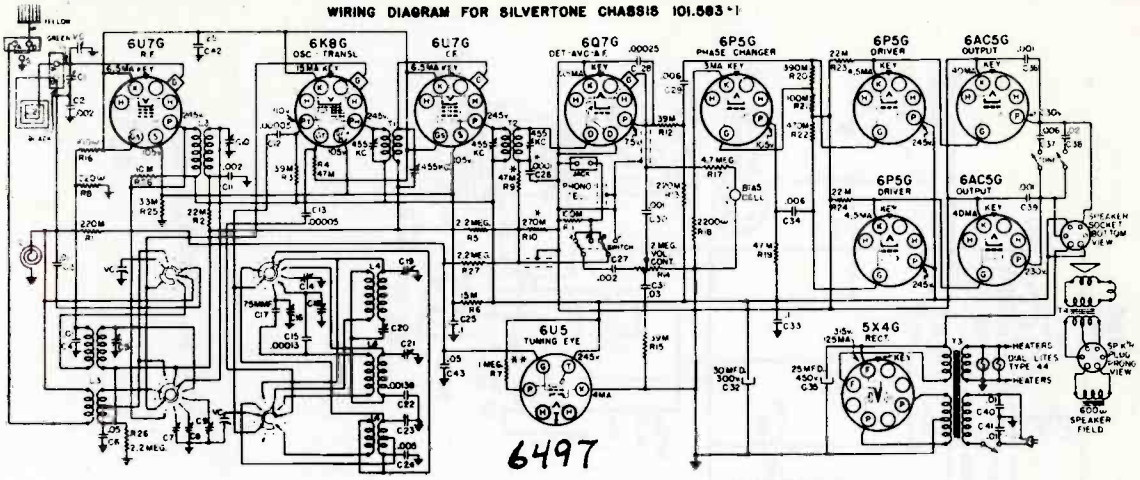
TUBE SOCKETS ARE VIEWED FROM UNDER SIDE OF CHASSIS. VOLTAGE READINGS SHOWN AT SOCKET PRONGS ARE TO CHASSIS, AND ARE TAKEN WITH NO SIGNAL; WAVE SWITCH IN BROADCAST POSITION. LINE VOLTAGE AT 117 VOLTS. WHERE NO READING IS GIVEN, THE VOLTAGE IS ZERO OR TOO LOW TO READ.



Sears, Models 6337, 6437



WIRING DIAGRAM FOR SILVERTONE CHASSIS 101.583-1



Sears Models 6438B, 6439A, 6440

* - PART OF T2
** IN TUNING EYE SOCKET
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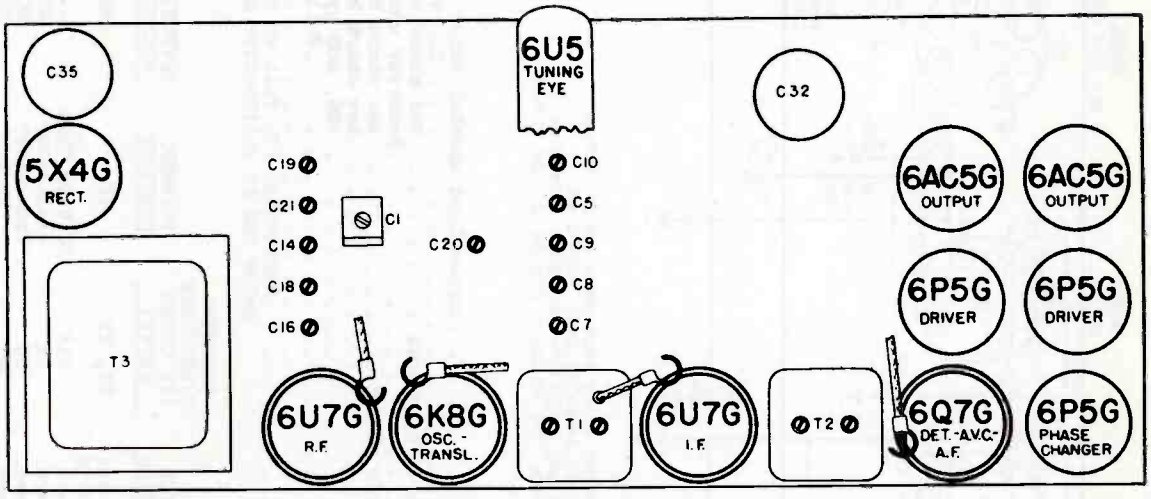
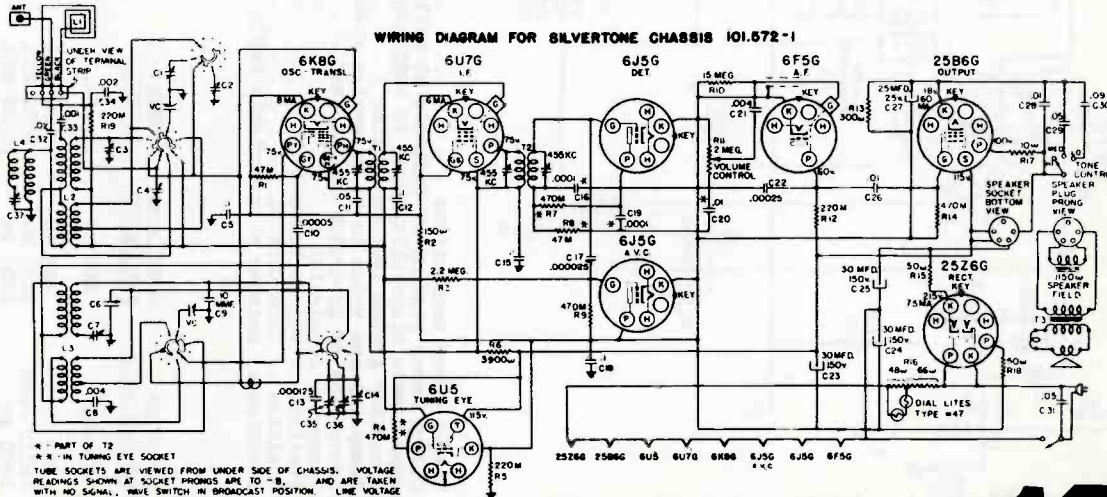


LOCATIONS OF PARTS ON TOP OF CHASSIS - 101.583-1

WIRING DIAGRAM FOR SILVERTONE CHASSIS 101.572-1



* - PART OF T2
** - IN TUNING EYE SOCKET
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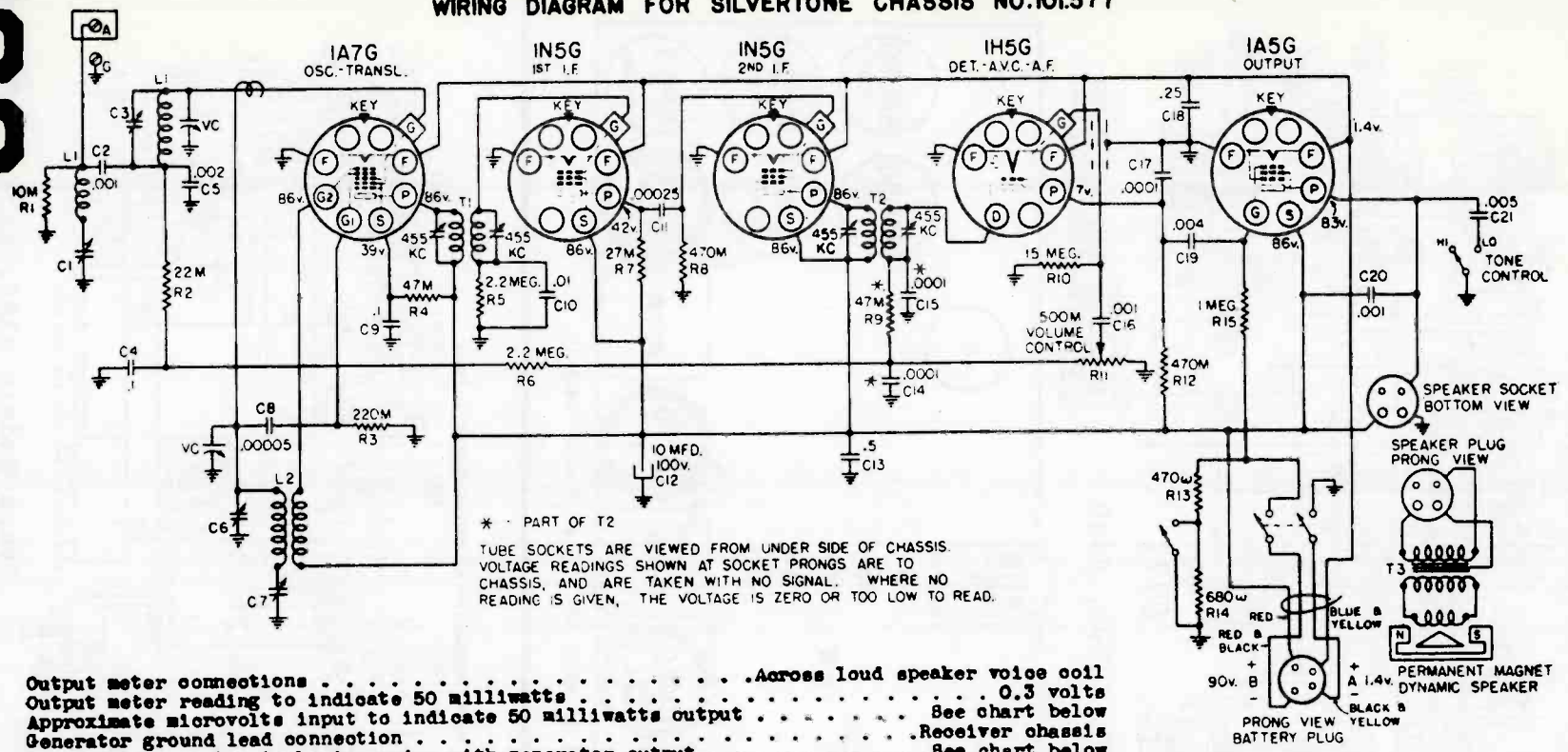
Sears Models 6325, 6425

WIRING DIAGRAM FOR SILVERTONE CHASSIS NO. 101.577



* - PART OF T2

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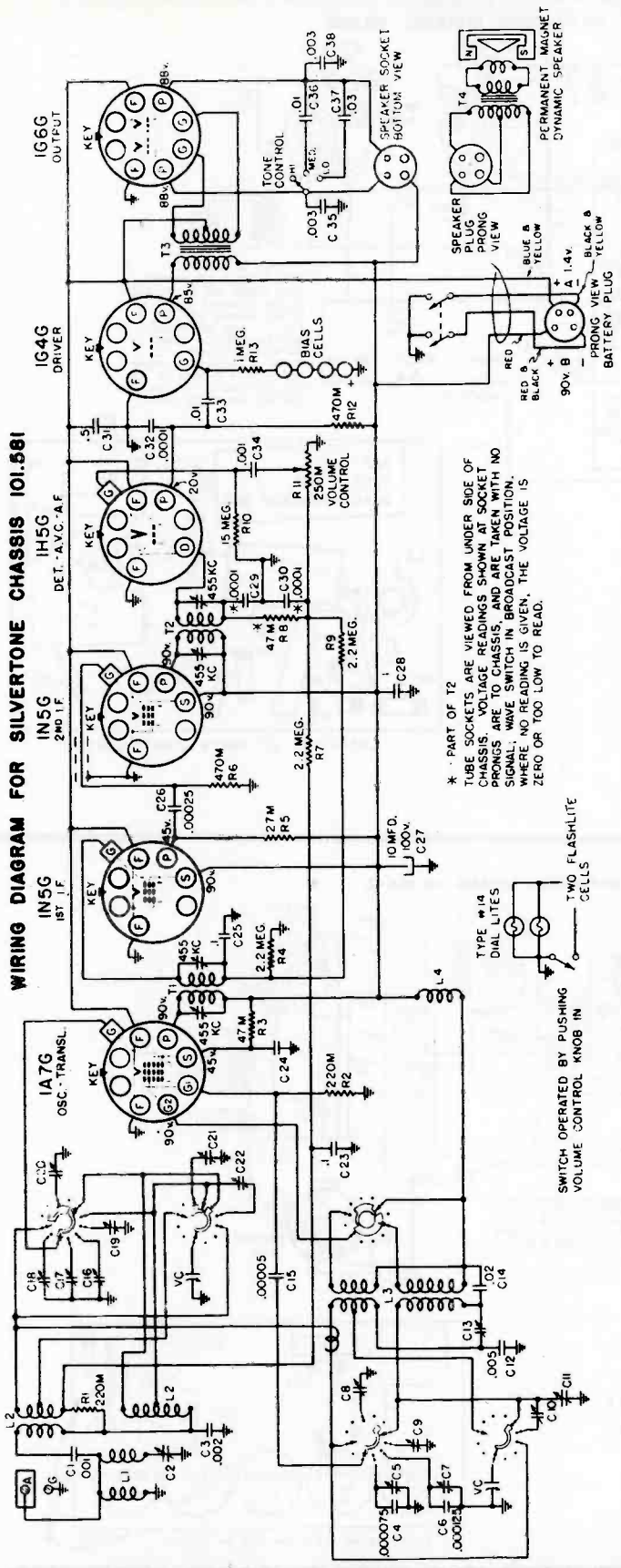
Output meter connections	Across loud speaker voice coil
Output meter reading to indicate 50 milliwatts	0.3 volts
Approximate microvolts input to indicate 50 milliwatts output	See chart below
Generator ground lead connection	Receiver chassis
Dummy antenna value to be in series with generator output	See chart below
Connection of generator output lead	See chart below
Generator modulation	30%, 400 cycles
Position of Volume Control	Fully on
Position of Tone Control	HI
Position of pointer with variable fully closed	Horizontal (To fall on block below 550 kc calibration mark.)

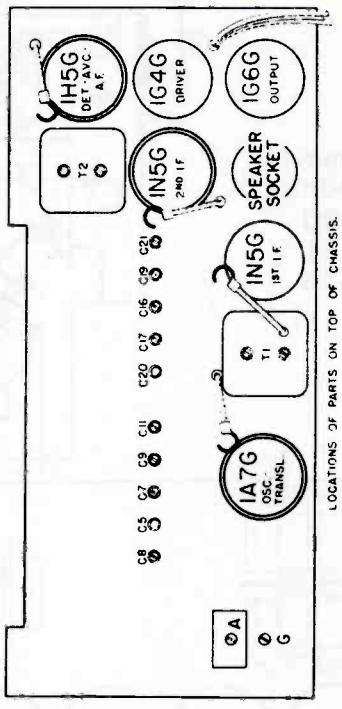
POSITION OF VARIABLE	GENERATOR FREQUENCY	DUMMY ANTENNA	GENERATOR CONNECTION	TRIMMER ADJUSTMENTS (IN ORDER SHOWN)	TRIMMER FUNCTION	APPROXIMATE MICROVOLTS
Closed	455 kc	.1 mfd.	1A7G Translator Grid	T2, T1	IF	65
600 kc	455 kc	.0002 mfd.	Ant. Term.	C1*	IF Wave Trap	--
Fully open	1750 kc	.0002 mfd.	Ant. Term.	C6	Oscillator	45
1400 kc	1400 kc	.0002 mfd.	Ant. Term.	C3	Translator	30
600 kc(rock)	600 kc	.0002 mfd.	Ant. Term.	C7	Padder	25

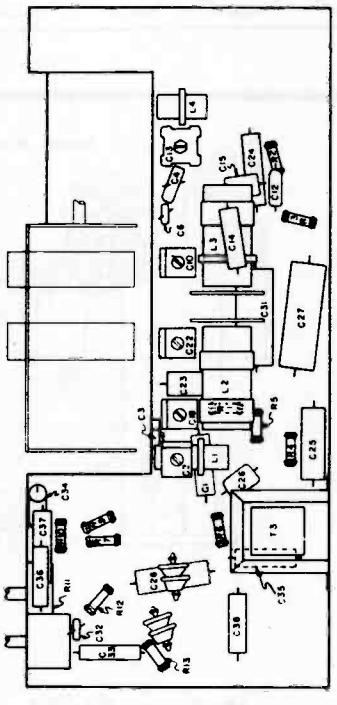
Sears, Models 6353
6354
6355

WIRING DIAGRAM FOR SILVERTONE CHASSIS 101.581



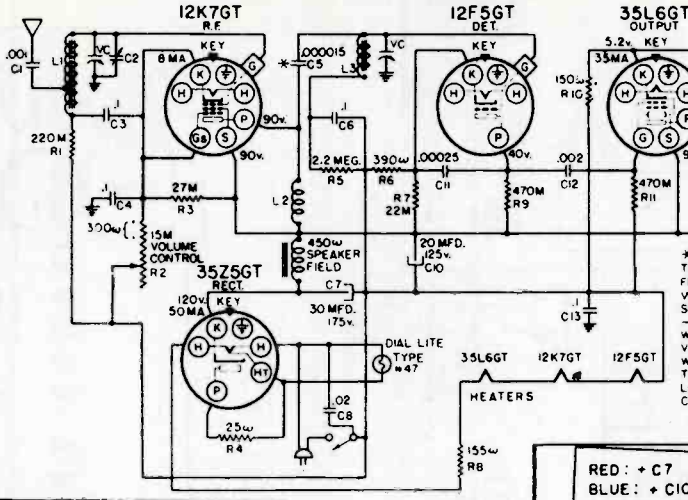
Sears, Model 6362, 6363, 6364

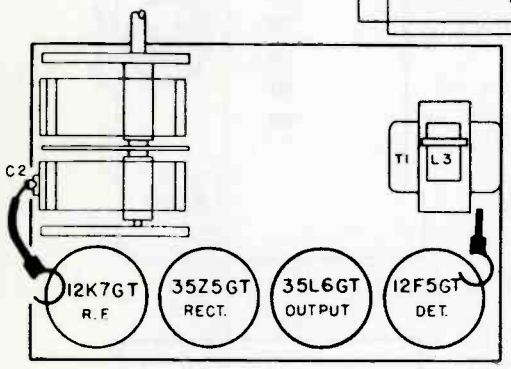


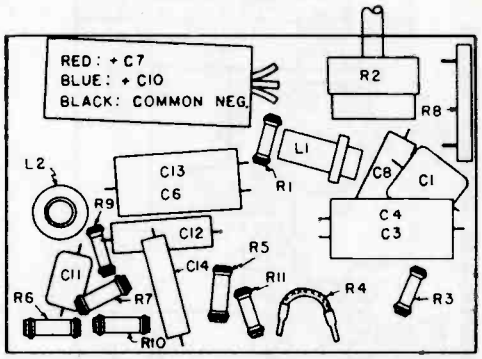


WIRING DIAGRAM FOR SILVERTONE CHASSIS 101.565

Sears,
Models
6400
6401
6402

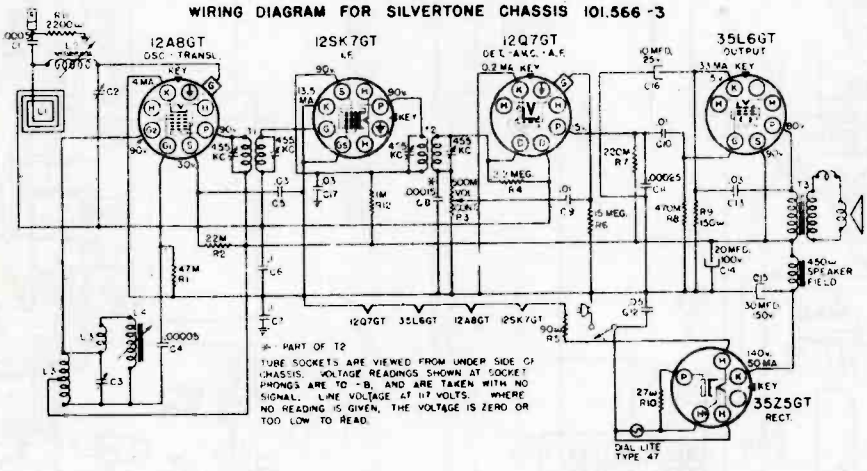




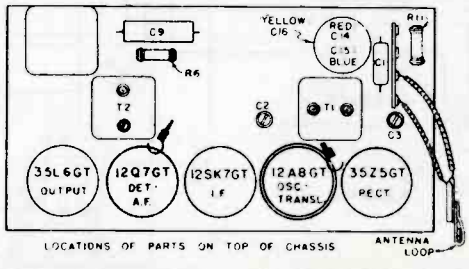


LOCATIONS OF PARTS UNDER CHASSIS

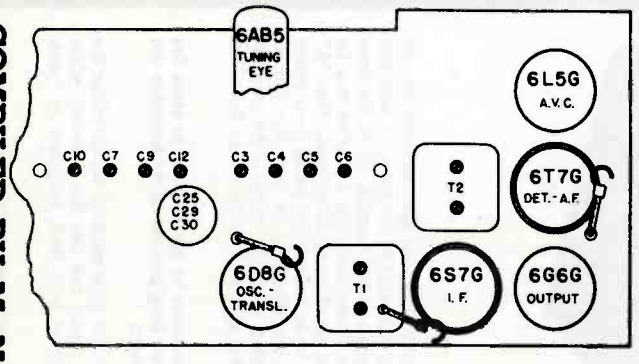
WIRING DIAGRAM FOR SILVERTONE CHASSIS 101.566-3

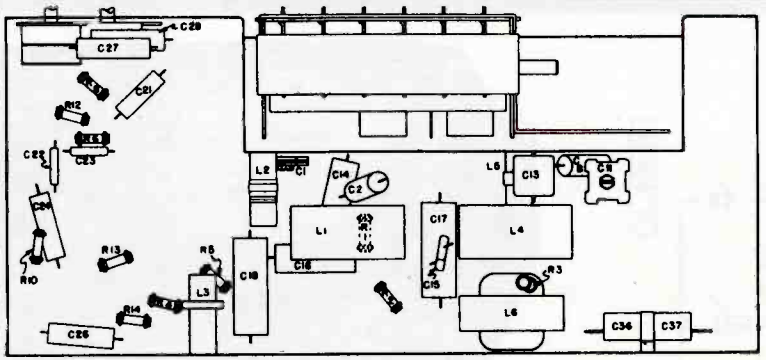


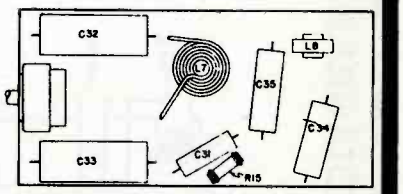
Sears Models 6403A, 6404A,
6405A, 6406A.



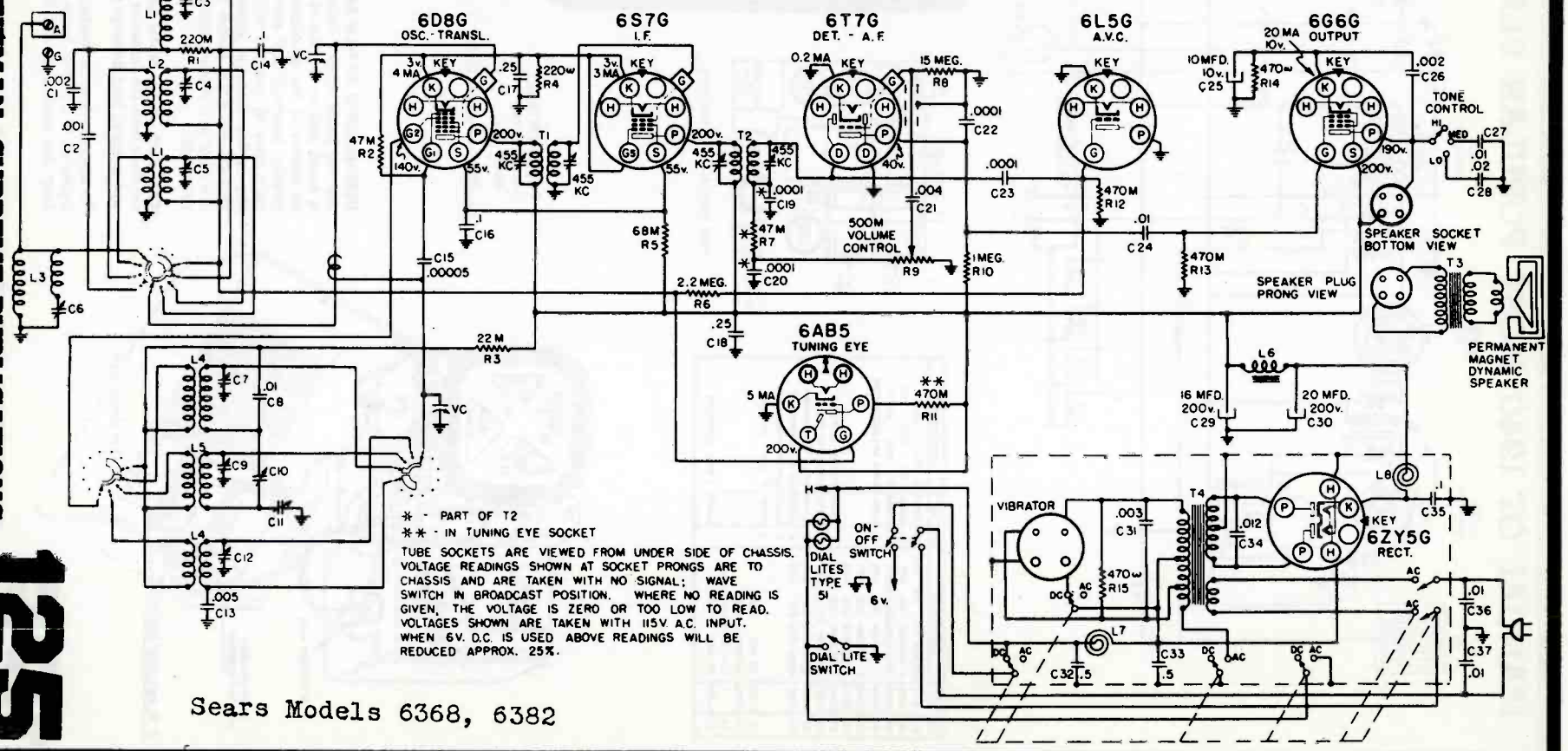
LOCATIONS OF PARTS ON TOP OF CHASSIS







WIRING DIAGRAM FOR SILVERTONE CHASSIS 101.582 & 101.594

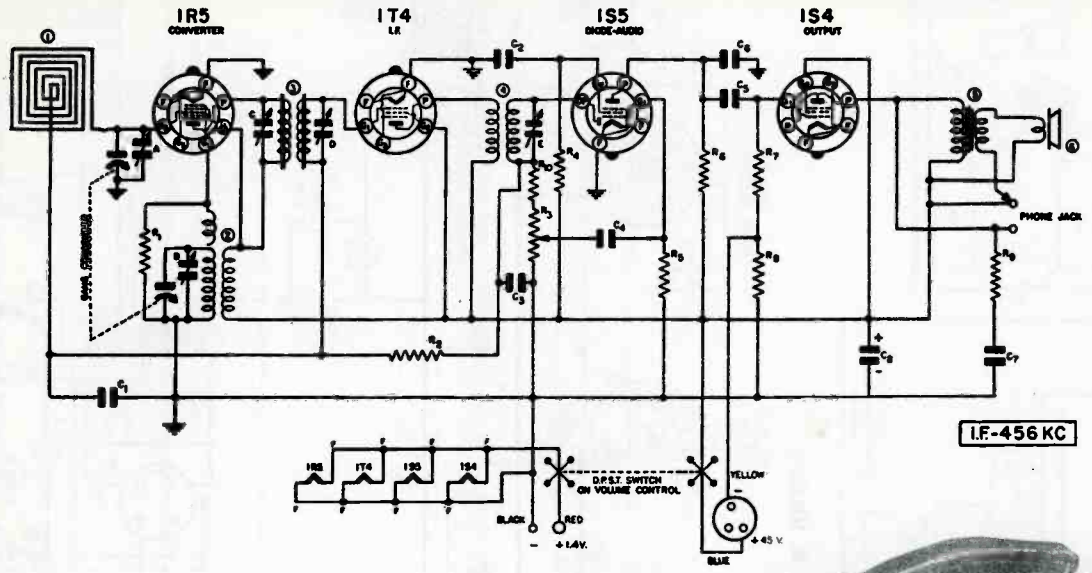


* - PART OF T2

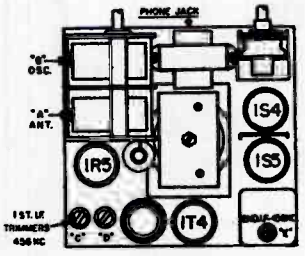
** - IN TUNING EYE SOCKET

TUBE SOCKETS ARE VIEWED FROM UNDER SIDE OF CHASSIS. VOLTAGE READINGS SHOWN AT SOCKET PRONGS ARE TO CHASSIS AND ARE TAKEN WITH NO SIGNAL; WAVE SWITCH IN BROADCAST POSITION. WHERE NO READING IS GIVEN, THE VOLTAGE IS ZERO OR TOO LOW TO READ. VOLTAGES SHOWN ARE TAKEN WITH 115V. A.C. INPUT. WHEN 6V. D.C. IS USED ABOVE READINGS WILL BE REDUCED APPROX. 25%.

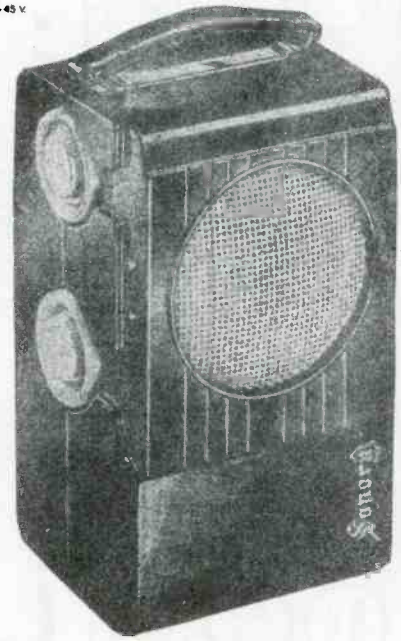
Sears Models 6368, 6382

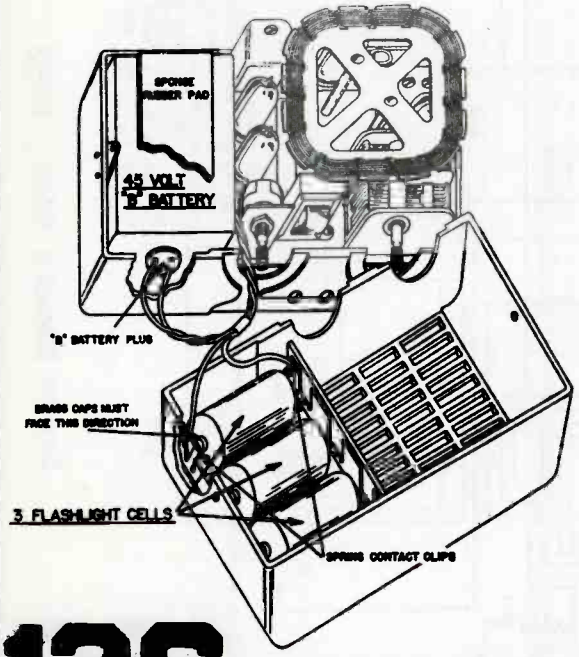


SYMBOL	PART NO.	DESCRIPTION
R1	9-3172	100,000 OHM .5W. 20%
R2	9-3173	2 MEGOHM .5W. 20%
R3	9-3066	1 MEGOHM VOLUME CONTROL
R4	9-3174	3 MEGOHM .5W. 20%
R5	9-3065	6 MEGOHM .5W. 20%
R6	9-3172	1 MEGOHM .5W. 20%
R7	9-3173	2 MEGOHM .5W. 20%
R8	9-3170	500 OHM .5W. 5%
R9	9-3177	15,000 OHM .5W. 20%
R10	9-3164	50,000 OHM .5W. 20%
C1	9-1248	.00 MFD. 200 V.
C2	9-2284	.01 MFD. 400 V.
C3		.0001 MFD.
C4	9-2284	.01 MFD. 400 V.
C5	9-2284	.01 MFD. 400 V.
C6	9-2284	.01 MFD. 400 V.
C7	9-3064	.01 MFD. 400 V.
C8	9-3181	6 MFD. 50 V. ELECTROLYTIC
1	9-3200	ANTENNA LOOP COIL
2	9-3097	OSCILLATOR COIL
3	9-3098	1ST. I.F. TRANSFORMER
4	9-3099	2ND. I.F. TRANSFORMER
5	9-3100	OUTPUT TRANSFORMER
6	9-3101	4" P.M. SPEAKER
	9-3102	2 GANG CONDENSER



TUBE AND TRIMMER LOCATIONS





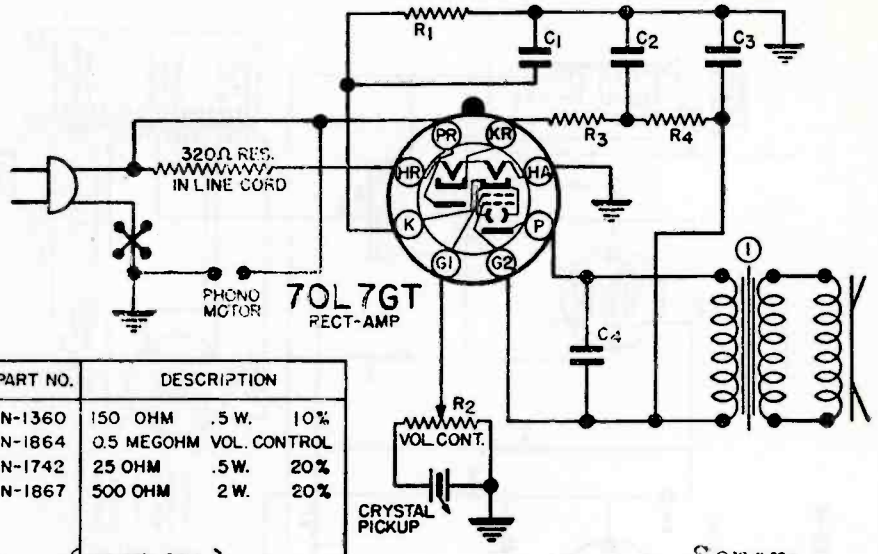
4 TUBE PORTABLE
SUPERHETERODYNE
SINGLE BAND

DRAWN R.S.C. APPROVED M. N. Beitman

INSTALLATION OF NEW BATTERIES. To install new batteries remove the two large screws located on the ends of the case by inserting a small coin in the slot of the screws and turning. Open the case as shown in the accompanying illustration. The batteries can be readily removed and new ones used to replace them. The "A" cells must be inserted with the ends having the brass caps pointing in the direction shown in the diagram. Be sure the contact springs are clean before installing new "A" cells. If the contacts are dirty or corroded, scrape them off with a knife before installing new cells.

CAUTION. Never leave dead batteries in the receiver or store the receiver with the batteries in it for long periods as the batteries are apt to swell and damage the radio.

To insure maximum battery life from your receiver do not allow the batteries to become heated or damp and use the batteries while they are new. Batteries deteriorate with heat, moisture and age.

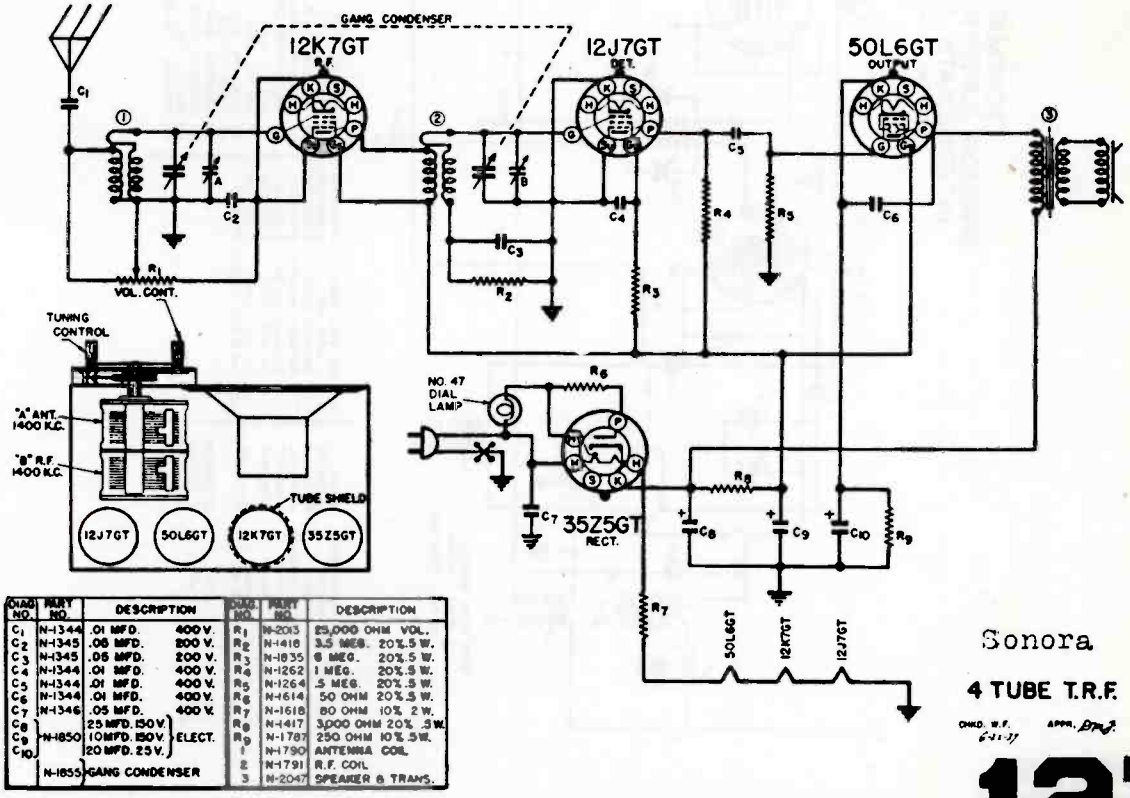


DIAG. NO	PART NO.	DESCRIPTION
R 1	N-1360	150 OHM .5 W. 10%
R 2	N-1864	0.5 MEGOHM VOL. CONTROL
R 3	N-1742	25 OHM .5W. 20%
R 4	N-1867	500 OHM 2 W. 20%
C 1	N-1866	20 MFD. 25V.
C 2		30 MFD. 150V. ELECTRO.
C 3		30 MFD. 150V.
C 4	N-1344	.01 MFD. 400V.
1	N-1863	5 1/2" P.M. SPEAKER(TE-38)
	N-1865	LINE RES. CORD
1	N-1910	5 1/2" P.M. SPKR(TE-40&41)

Sonora

ELECTRIC PHONOGRAPH

DRN. J.B. APP. 5-9-39



DIAG NO	PART NO	DESCRIPTION	DIAG NO	PART NO	DESCRIPTION
C1	N-1344	.01 MFD. 400 V.	R1	N-2013	25,000 OHM VOL.
C2	N-1345	.05 MFD. 200 V.	R2	N-1416	3.5 MEG. 20% .5 W.
C3	N-1345	.05 MFD. 200 V.	R3	N-1835	6 MEG. 20% .5 W.
C4	N-1344	.01 MFD. 400 V.	R4	N-1262	1 MEG. 20% .5 W.
C5	N-1344	.01 MFD. 400 V.	R5	N-1264	.5 MEG. 20% .5 W.
C6	N-1344	.01 MFD. 400 V.	R6	N-1614	50 OHM 20% .5 W.
C7	N-1346	.05 MFD. 400 V.	R7	N-1618	80 OHM 10% 2 W.
C8	N-1850	25 MFD. 150 V. ELECT.	R8	N-1417	3,000 OHM 20% .5W.
C9		10 MFD. 150 V.	R9	N-1787	250 OHM 10% .5W.
C10		20 MFD. 25 V.	1	N-1790	ANTENNA COIL
	N-1855	GANG CONDENSER	2	N-1791	R.F. COIL
			3	N-2047	SPEAKER & TRANS.

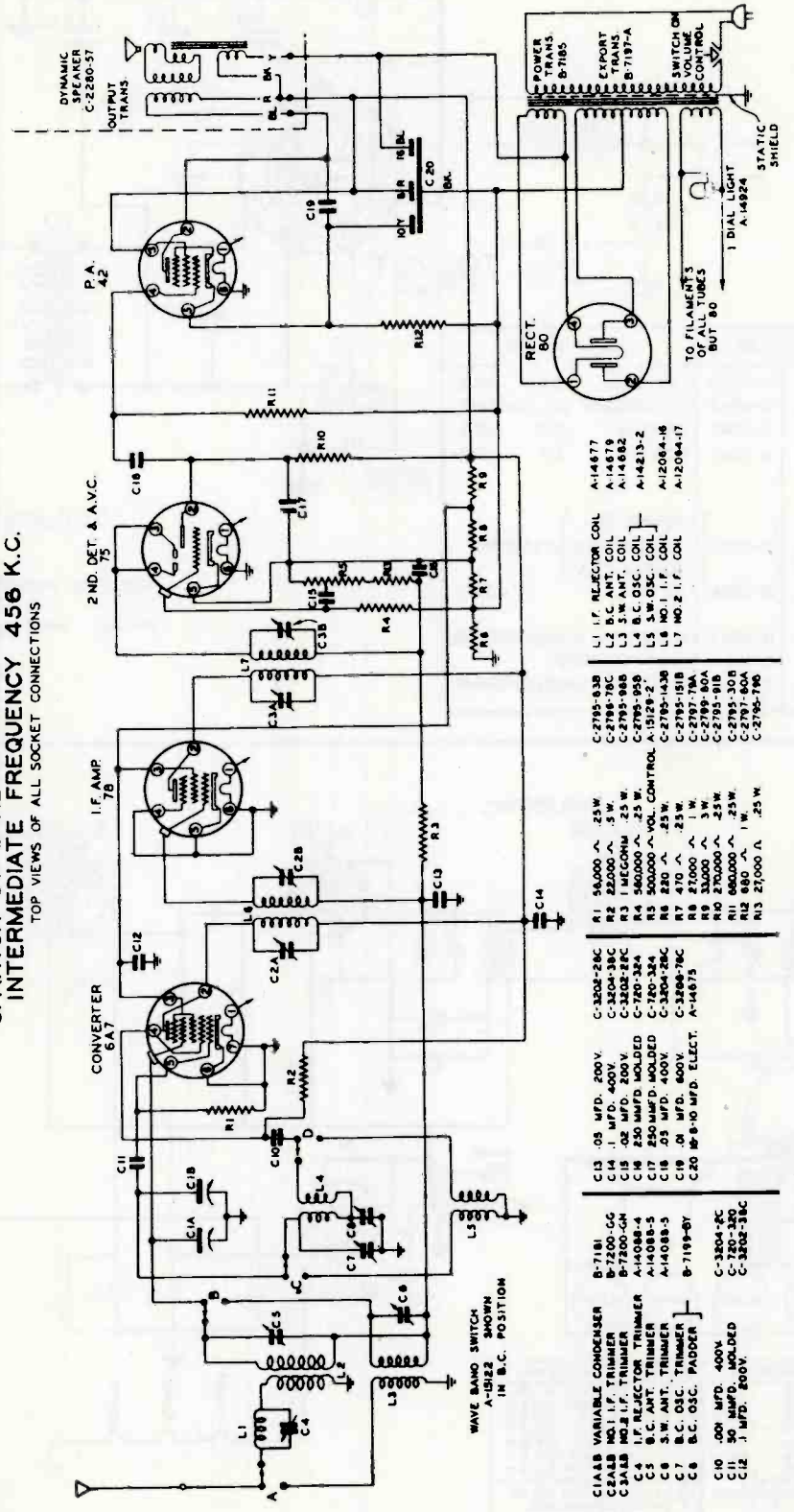
Sonora

4 TUBE T.R.F.

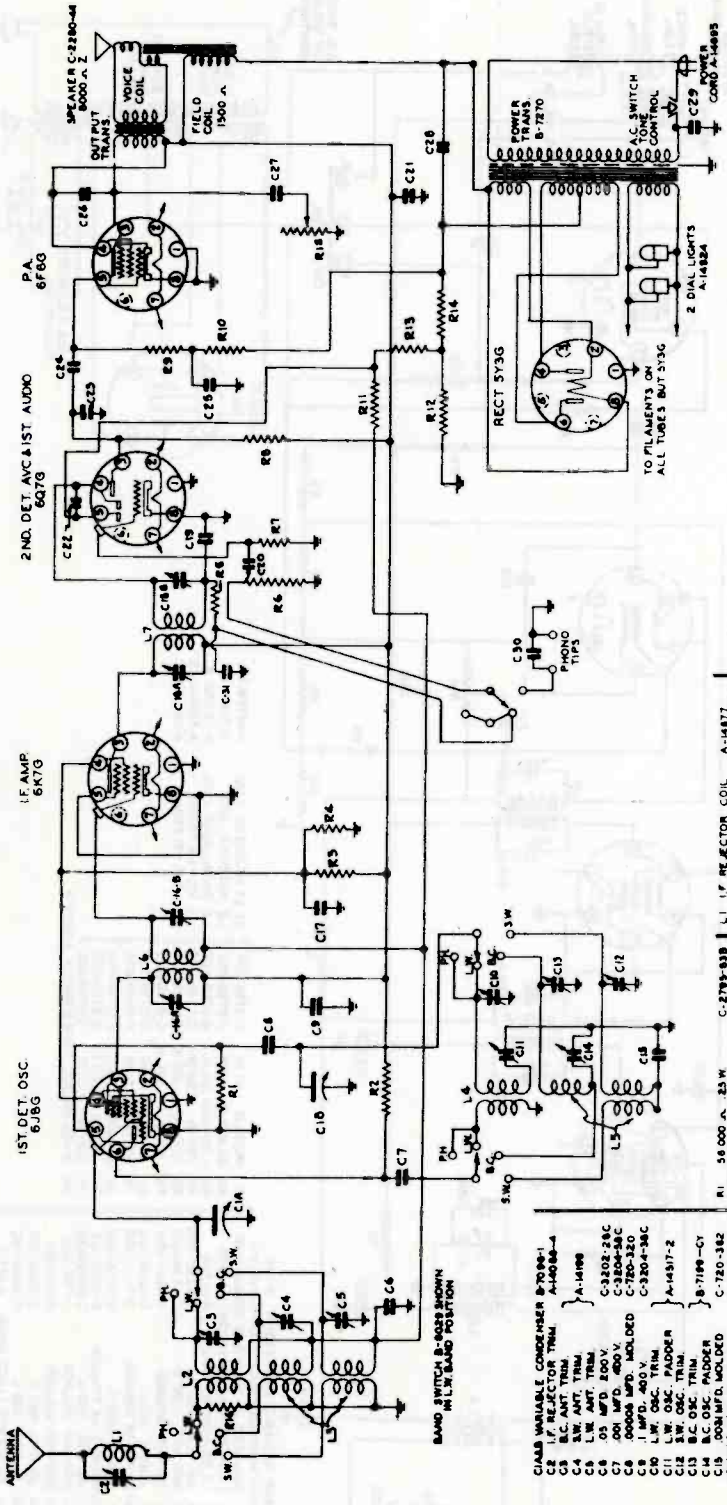
CHKD. W.F. APPR. B.N.S.

SCHEMATIC DIAGRAM
SPARTON SUPERHETERODYNE MODEL 530-X
INTERMEDIATE FREQUENCY 456 K.C.

TOP VIEWS OF ALL SOCKET CONNECTIONS



SCHEMATIC DIAGRAM
SPARTON SUPERHETERODYNE MODEL 540LX
INTERMEDIATE FREQUENCY 456 K.C.
TOP VIEWS OF ALL SOCKET CONNECTIONS



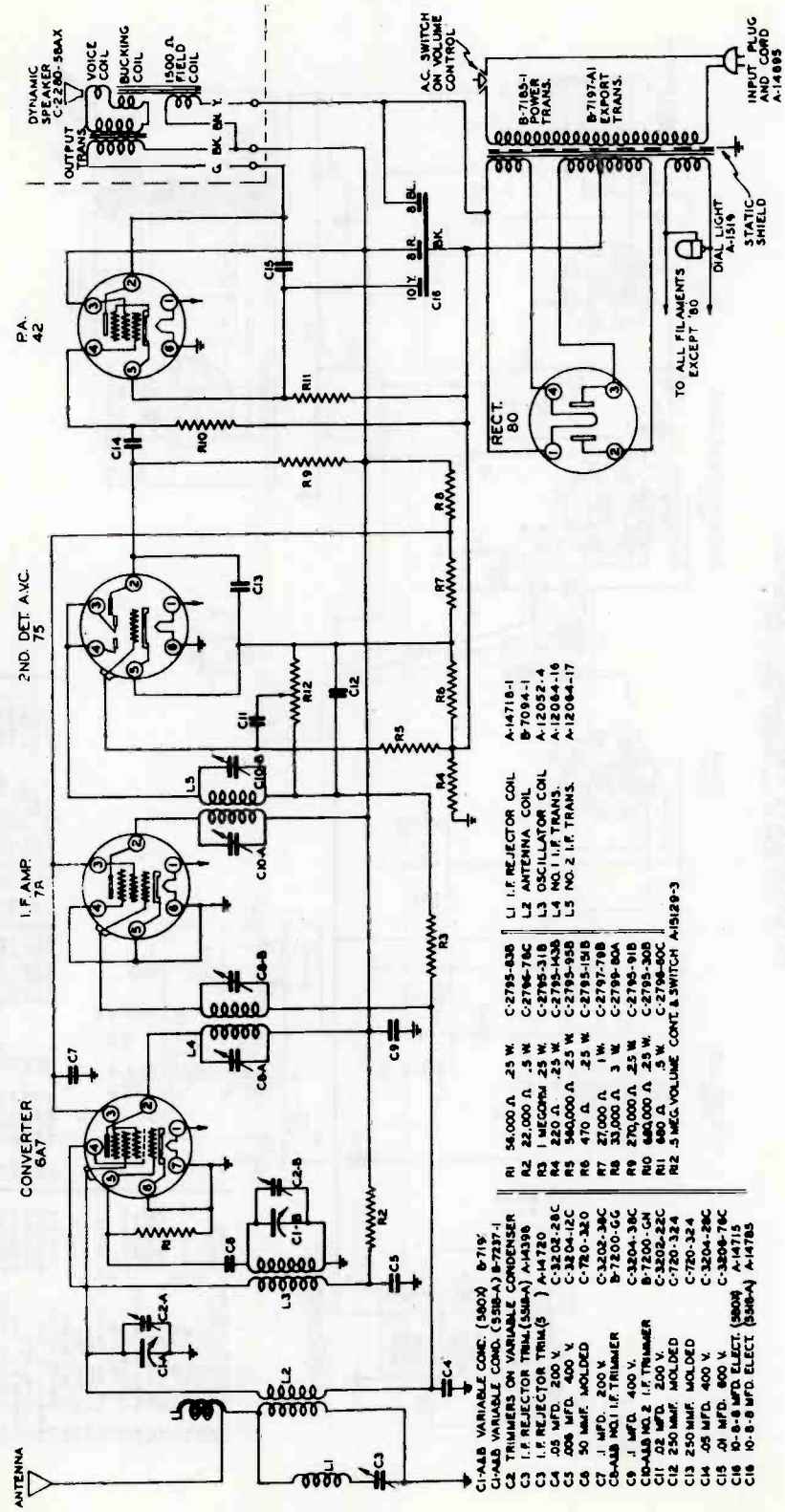
C1AB VARIABLE CONDENSER B-7099-1		
C2 I.F. REJECTOR TRIM	A-14088-4	
C3 B.C. ANT. TRIM.	A-14199	
C4 S.W. ANT. TRIM.		
C5 L.W. ANT. TRIM.		
C6 .05 MFD. 200 V.	C-3202-28C	
C7 .0005 MFD. 600 V.	C-3204-38C	
C8 .0001 MFD. MOLDED	C-720-320	
C9 .1 MFD. 400 V.	C-3204-38C	
C10 L.W. OSC. TRIM.		
C11 L.W. OSC. PADDER	A-14317-2	
C12 S.W. OSC. TRIM.		
C13 B.C. OSC. TRIM.	B-7199-CY	
C14 B.C. OSC. PADDER		
C15 .006 MFD. MOLDED	C-720-382	
C16AB .002 I.F. TRIM	B-7200-CG	
C17 .1 MFD. 400 V.	C-3204-38C	
C18AB .002 I.F. TRIM	B-7200-CH	
C19 .0001 MFD. MOLDED	C-720-319	
C20 .05 MFD. 200 V.	C-3202-28C	
C21 .30 MFD. 300 V. ELECT.	A-14073-A	
C22 .0001 MFD. MOLDED	C-720-318	
C23 .00025 MFD. MOLDED	C-720-318	
C24 .05 MFD. 400 V.	C-3204-44C	
C25 .1 MFD. 200 V.	C-3202-38C	
C26 .008 MFD. 600 V.	C-3208-68C	
C27 .03 MFD. 600 V.	C-3208-90C	
C28 .10 MFD. 450 V. ELECT.	A-14073-A	
C29 .006 MFD. 600 V.	C-3208-12C	
C30 .006 MFD. 600 V.	C-3208-12C	
C31 .0005 MFD. MICA	C-720-320	

L1 I.F. REJECTOR COIL	A-14877	
L2 L.W. ANT. COIL	A-14883-1	
L3 B.C. & S.W. ANT. COIL	A-14209-5	
L4 L.W. OSC. COIL	A-14888-1	
L5 B.C. & S.W. OSC. COIL	A-14213-5	
L6 NO.1 I.F. COIL	A-12064-29	
L7 NO.2 I.F. COIL	A-12064-30	

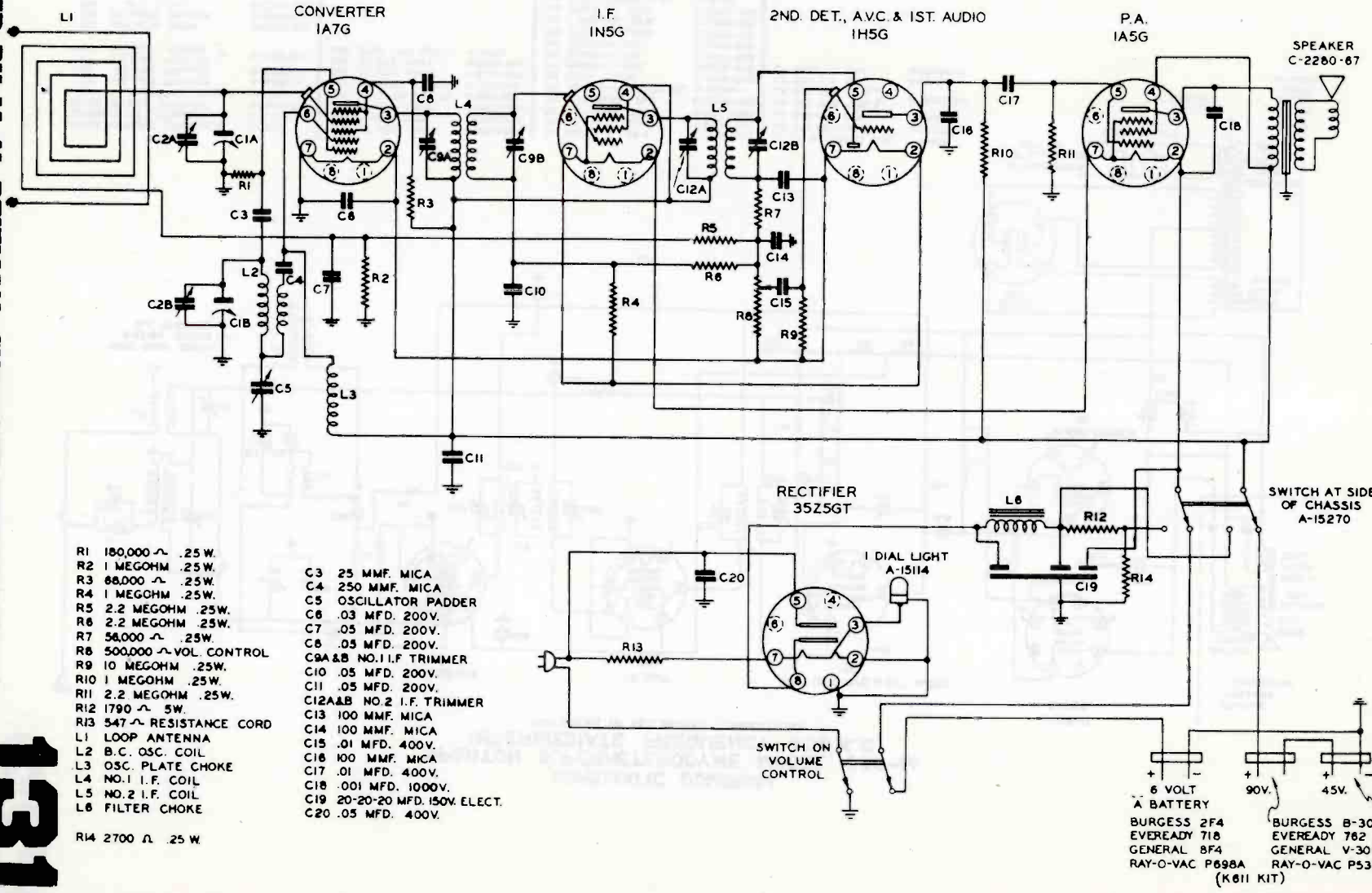
R1	56 000 Δ	.25 W.	C-2795-838
R2	22 000 Δ	.5 W.	C-2794-76C
R3	24 000 Δ	2 W.	C-2796-182A
R4	27 000 Δ	1 W.	C-2797-79B
R5	27 000 Δ	.25 W.	C-2795-79B
R6	.5 MEG.	VOLUME CONT.	A-14930
R7	.5 MEG.	.25 W.	C-2795-1078
R8	270 000 Δ	.25 W.	C-2795-918
R9	270 000 Δ	.25 W.	C-2795-918
R10	270 000 Δ	.25 W.	C-2795-918
R11	1 MEGOHM	.25 W.	C-2795-968
R12	82 Δ	.25 W.	C-2793-1338
R13	1 MEGOHM	.25 W.	C-2795-968
R14	220 Δ	1 W.	C-2797-1438
R15	1 MEG.	TONE CONTROL	A-15131
R16	15 000 Δ	.25 W.	C-2795-768

SCHEMATIC DIAGRAM
SPARTON SUPERHETERODYNE MODEL 580-X
INTERMEDIATE FREQUENCY 456 K.C.

TOP VIEW OF ALL SOCKET CONNECTIONS



SCHEMATIC DIAGRAM
SPARTON SUPERHETERODYNE MODEL 590-1
INTERMEDIATE FREQUENCY 456 K.C.
TOP VIEWS OF ALL SOCKET CONNECTIONS

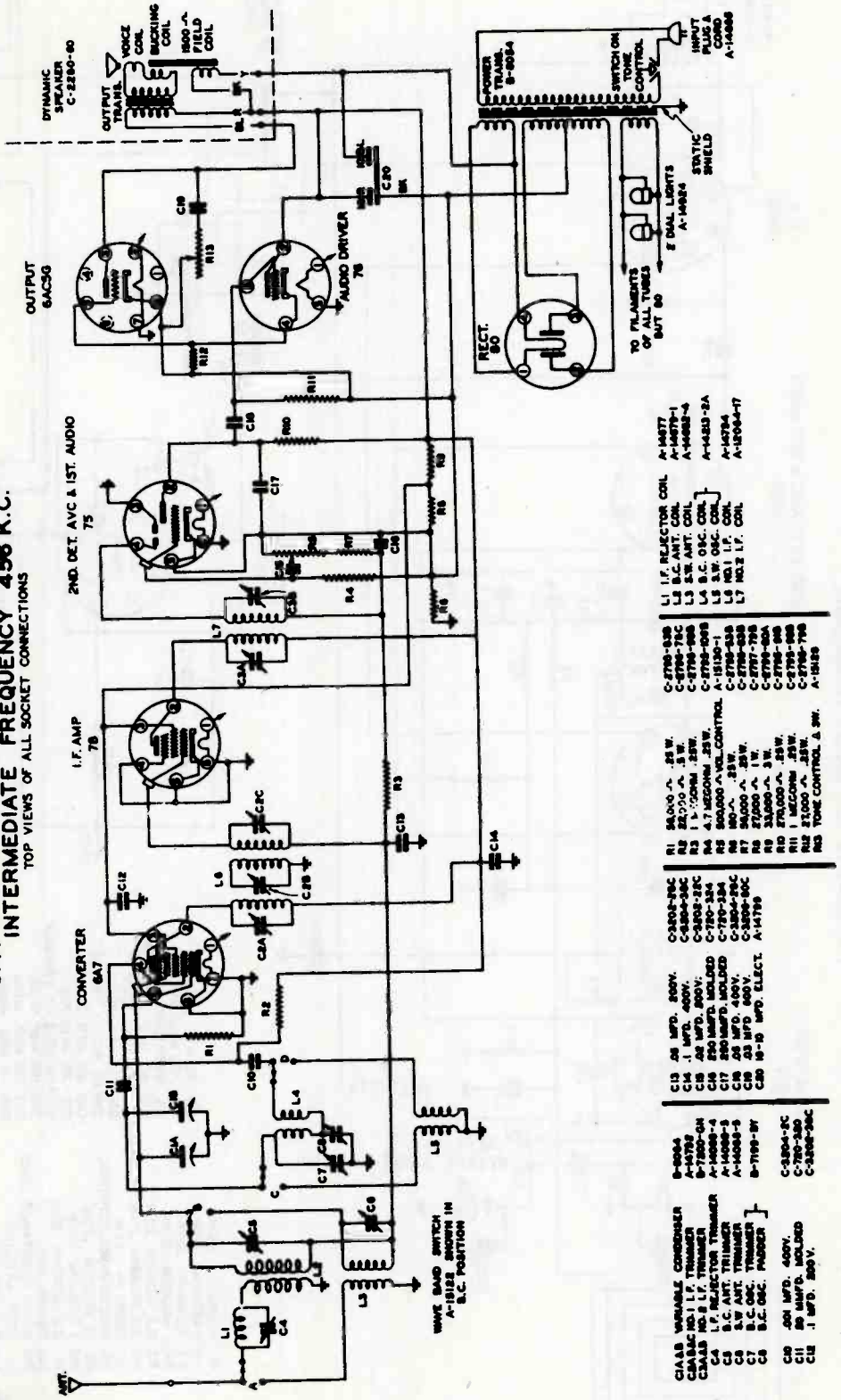


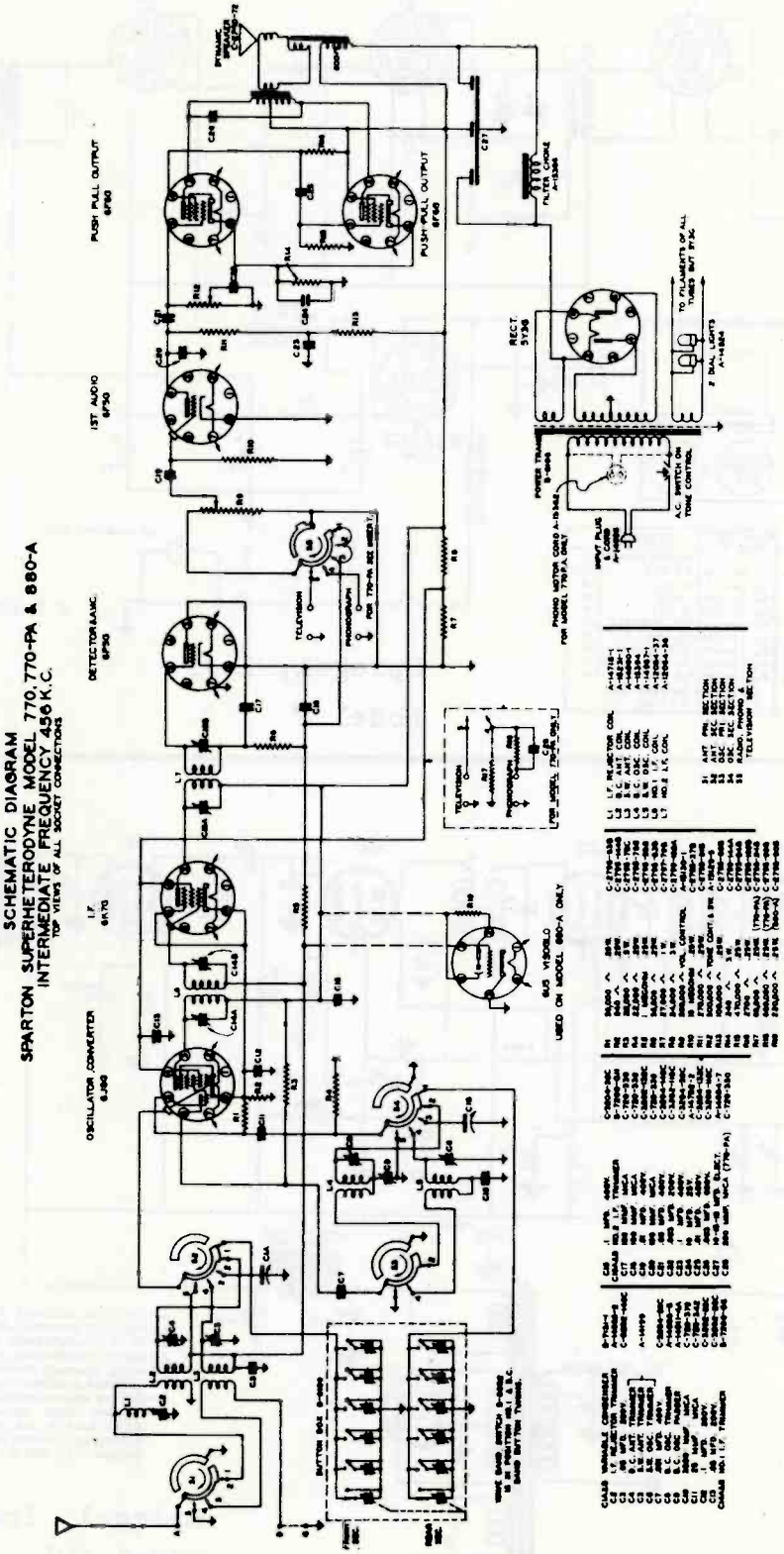
R1 180,000 Ω .25 W.
R2 1 MEGOHM .25 W.
R3 68,000 Ω .25 W.
R4 1 MEGOHM .25 W.
R5 2.2 MEGOHM .25 W.
R6 2.2 MEGOHM .25 W.
R7 56,000 Ω .25 W.
R8 500,000 Ω VOL. CONTROL
R9 10 MEGOHM .25 W.
R10 1 MEGOHM .25 W.
R11 2.2 MEGOHM .25 W.
R12 1790 Ω 5 W.
R13 547 Ω RESISTANCE CORD
L1 LOOP ANTENNA
L2 B.C. OSC. COIL
L3 OSC. PLATE CHOKE
L4 NO.1 I.F. COIL
L5 NO.2 I.F. COIL
L6 FILTER CHOKE

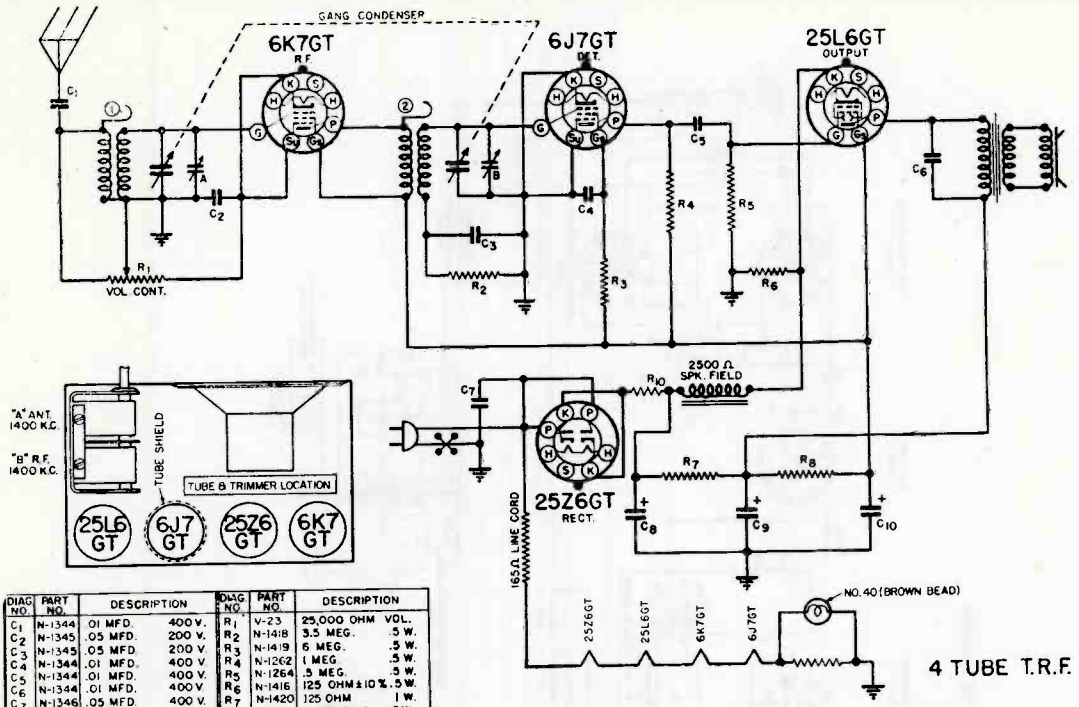
R14 2700 Ω .25 W.

C3 25 MMF. MICA
C4 250 MMF. MICA
C5 OSCILLATOR PADDER
C6 .03 MFD. 200V.
C7 .05 MFD. 200V.
C8 .05 MFD. 200V.
C9A&B NO.1 I.F TRIMMER
C10 .05 MFD. 200V.
C11 .05 MFD. 200V.
C12A&B NO.2 I.F. TRIMMER
C13 100 MMF. MICA
C14 100 MMF. MICA
C15 .01 MFD. 400V.
C16 100 MMF. MICA
C17 .01 MFD. 400V.
C18 .001 MFD. 1000V.
C19 20-20-20 MFD. 150V. ELECT.
C20 .05 MFD. 400V.

SCHEMATIC DIAGRAM
SPARTON SUPERHETERODYNE MODEL 660-M
INTERMEDIATE FREQUENCY 456 K.C.
TOP VIEWS OF ALL SOCKET CONNECTIONS




SCHEMATIC DIAGRAM
SPARTON SUPERHETERODYNE MODEL 770, 770-PA & 880-A
INTERMEDIATE FREQUENCY 456 K.C.
TOP VIEWS OF ALL SOCKET CONNECTIONS
PUSH PULL OUTPUT 6F50
PUSH PULL OUTPUT 6F50
1ST AUDIO 6F50
DETECTOR A.V.C. 6F50
I.F. 6K7G
OSCILLATOR CONVERTER 6J8G
RECT 5Y3G
TELEVISION
PHONOGRAPH
FOR 770-PA SEE SHEET 2
FOR MODEL 770-PA ONLY
FOR MODEL 770-PA ONLY
880 VISUALO
USED ON MODEL 880-A ONLY
A.C. SWITCH ON TONE CONTROL
POWER TRANS.
INPUT PLUG
TO FILAMENTS OF ALL TUBES BUT 5Y3G
PILOT LIGHTS
BUTTON BAR SWITCH
TONE BAND SWITCH

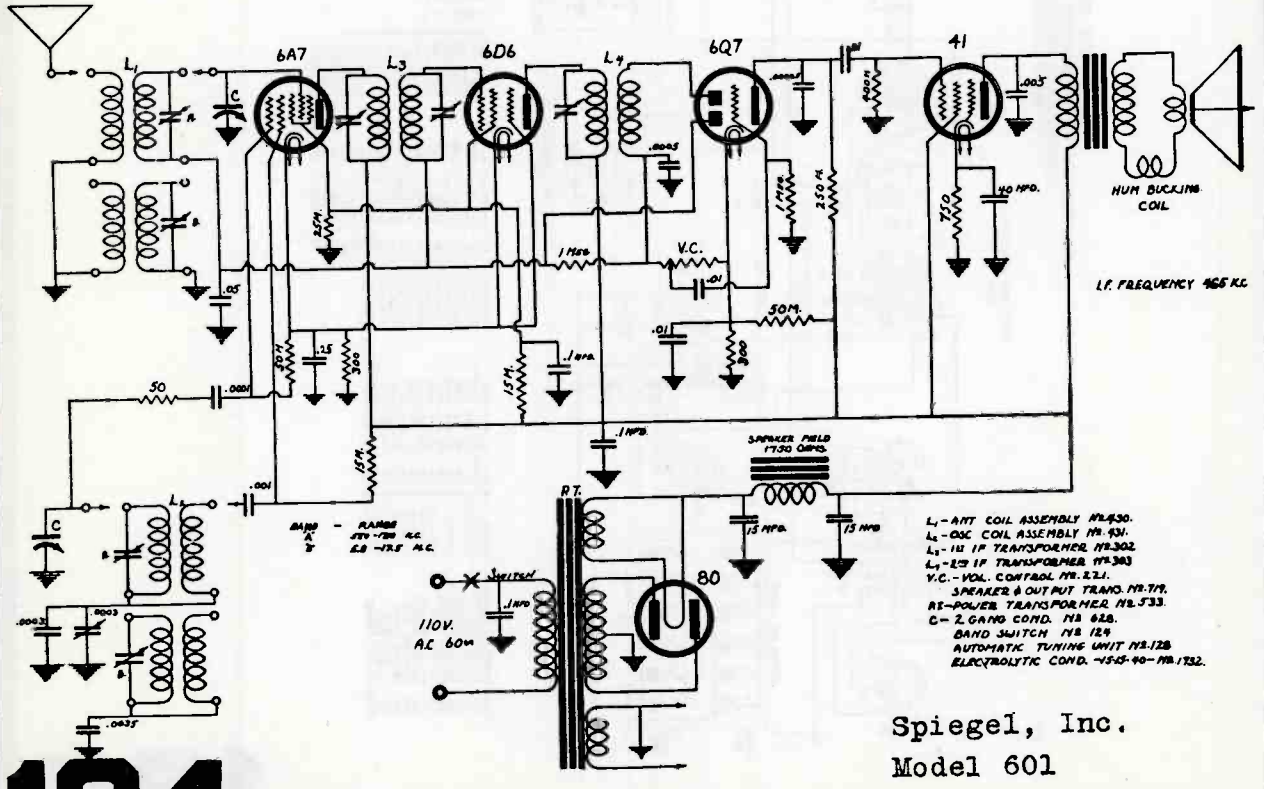


DIAG NO	PART NO	DESCRIPTION		DIAG NO	PART NO	DESCRIPTION	
C_1	N-1344	.01 MFD.	400 V.	R_1	V-23	25,000 OHM	VOL.
C_2	N-1345	.05 MFD.	200 V.	R_2	N-1418	3.5 MEG.	.5 W.
C_3	N-1345	.05 MFD.	200 V.	R_3	N-1419	6 MEG.	.5 W.
C_4	N-1344	.01 MFD.	400 V.	R_4	N-1262	1 MEG.	.5 W.
C_5	N-1344	.01 MFD.	400 V.	R_5	N-1264	.5 MEG.	.5 W.
C_6	N-1344	.01 MFD.	400 V.	R_6	N-1416	125 OHM ±10%	.5 W.
C_7	N-1344	.01 MFD.	400 V.	R_7	N-1420	125 OHM	1 W.
C_8	C-233	16 MFD.	150 W.V.	R_8	N-1417	3,000 OHM	.5 W.
C_9		8 MFD.	150 W.V.	R_9	N-1415	30 OHM	1.0 W.
C_{10}		6 MFD.	150 W.V.	R_{10}	N-1251	25 OHM	1 W.
	S-300	SPEAKER		1	L-110	ANTENNA COIL	
	G-25	GANG CONDENSER		2	L-111	R.F. COIL	

4 TUBE T.R.F.

Spiegel, Inc.

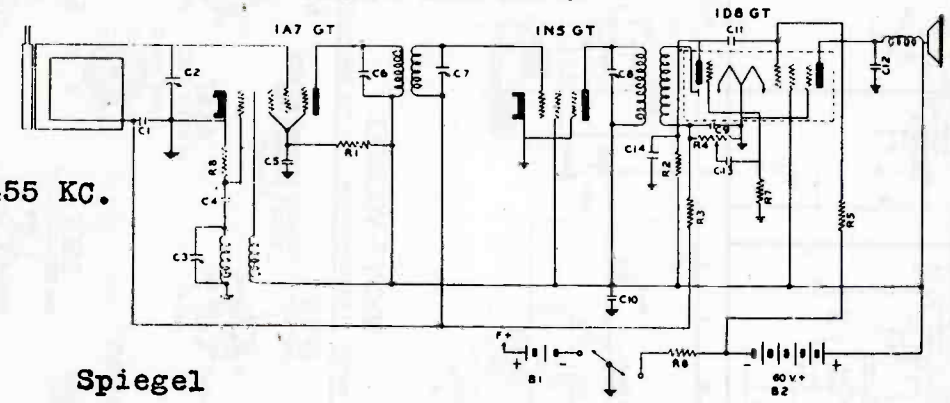
Model P



Spiegel, Inc.

Model 601

SCHEMATIC DIAGRAM MODEL-130



I.F. 455 KC.

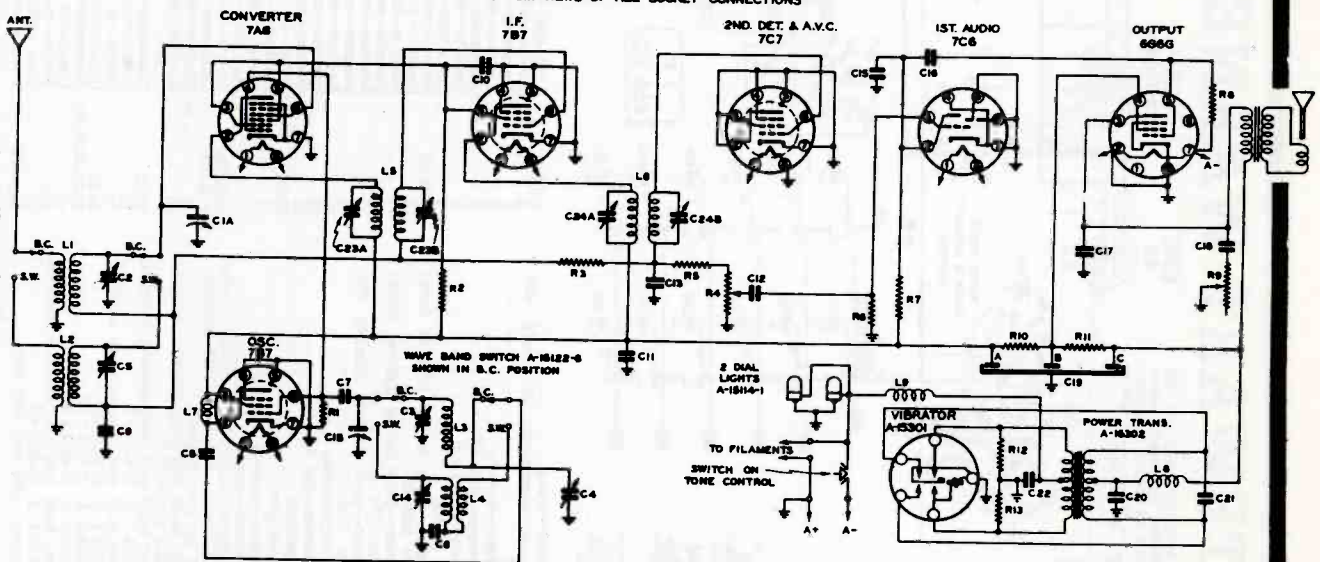
Spiegel

REPLACEMENT PARTS LIST

Schematic Location	Part No.	Description	Schematic Location	Part No.	Description
C1	C-45	Tubular cond. .05 mfd. 200V	R1	R-105	Carbon res. 5K ohm
C2, C3	Y-CV-46	Variable Condenser	R2, R7	R-102	Carbon res. 1 meg.
C4	CM-31	Mica cond. 100 mmfd.	R3 R5	R-101	Carbon res. 2 meg.
C5, C11	C-48	Tubular cond. .01 mfd. 400V	R8	R-113	Carbon res. 100K ohm
C6, C7	CT-1	Trimmer condenser	R6	R-103	Carbon res. 60 ohm
C8	CT-32	Trimmer condenser			
C9, C14	CM-30	Mica cond. 250 mmfd.	B1		
C10	CE-58	4 mfd. 100V Electrolytic	B2		
C12, C13	C-47	Tubular cond. .004 mfd. 400V			

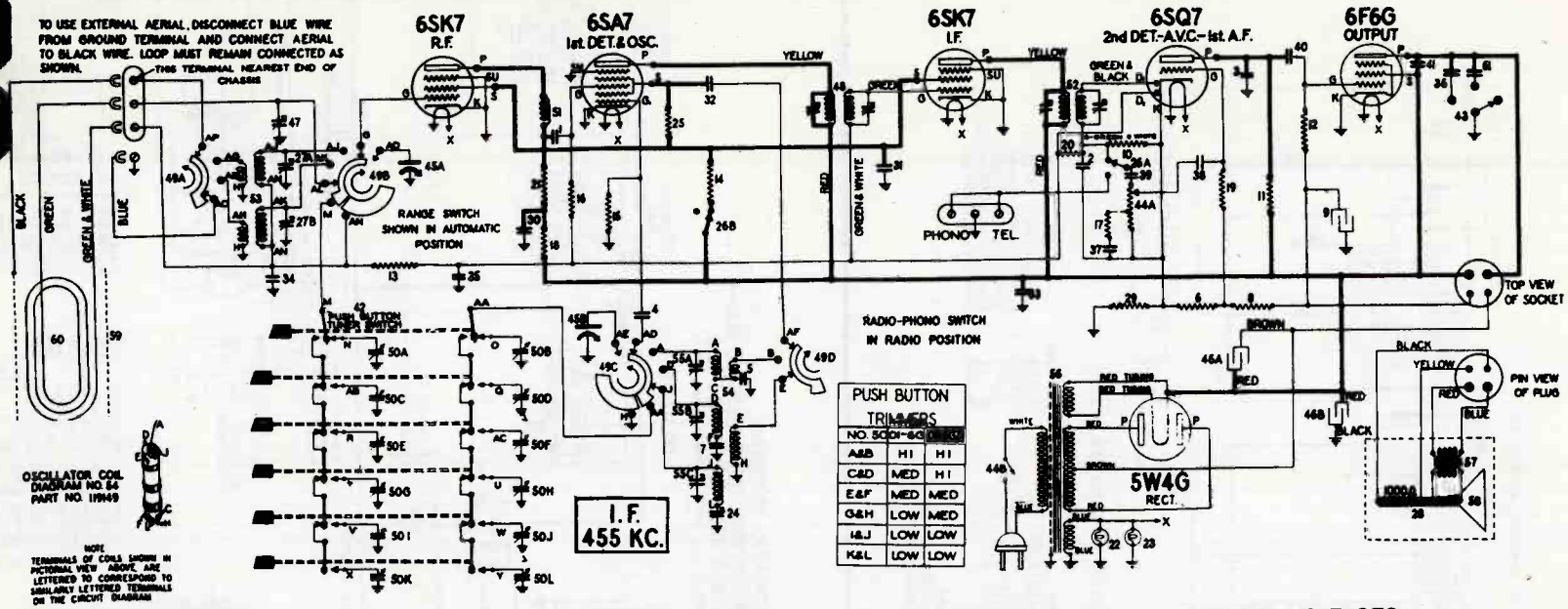
Spiegel

SCHEMATIC DIAGRAM
AIR CASTLE SUPERHETERODYNE MODEL 631-6
INTERMEDIATE FREQUENCY 456 K.C.
BOTTOM VIEWS OF ALL SOCKET CONNECTIONS



C1A,B	VARIABLE CONDENSER	B-7229	C13	250 MMF. MICA	C-720-324	R1	56,000 Ω	.25W.	C-2795-536	L1	B. C. ANT. COIL A-15348-1
C2	B.C. ANT. TRIMMER	A-14088-6	C14	S.W. OSC. TRIMMER	A-14088-6	R2	15,000 Ω	.5 W.	C-2796-77C	L2	S.W. ANT. COIL A-14682-3
C3	B.C. OSC. TRIMMER	B-7188-EY	C15	250 MMF. MICA	C-720-324	R3	1 MEGOHM	.25W.	C-2795-958	L3	B.C. OSC. COIL A-15352-1
C4	B.C. OSC. PADDER		C16	.05 MFD. 200V.	C-3202-52C	R4	500,000 Ω VOLUME CONT.		A-15130-3	L4	S.W. OSC. COIL A-15233-5
C5	S.W. ANT. TRIMMER	A-14088-5	C17	.001 MFD. 400V.	C-3204-58C	R5	47,000 Ω	.25W.	C-2795-238	L5	NO.1 I.F. COIL A-12064-39
C6	2700 MMF. MICA	A-15481	C18	.02 MFD. 400V.	C-3204-78C	R6	4.7 MEGOHM	.25W.	C-2795-358	L6	NO.2 I.F. COIL A-12064-17
C7	50 MMF. MICA	C-720-318	C19,20	30-20-20 MFD. 150V. ELECT.	A-14864-6	R7	220,000 Ω	.25W.	C-2795-278	L7	B+ PLATE CHOKE A-14681-1
C8	250 MMF. MICA	C-720-324	C20	1000 MMF. MICA	C-720-297	R8	1 MEGOHM	.25W.	C-2795-998	L8	B+ HASH CHOKE A-14718-2
C9	.05 MFD. 200V.	C-3202-54C	C21	.01 MFD. 600V.	C-3206-132C	R9	TONE CONTROL & SWITCH		A-15128-2	L9	A LEAD HASH CHOKE A-14944
C10	.1 MFD. 200V.	C-3202-36C	C22	.5 MFD. 120V.	C-3203-46B	R10	330 Ω	.5 W.	C-2796-10C		
C11	.1 MFD. 200V.	C-3202-36C	C23	NO.1 I.F. TRIMMER	B-7200-GN	R11	68 Ω	.5 W.	C-2796-46C		
C12	.02 MFD. 200V.	C-3202-52C	C24	NO.2 I.F. TRIMMER	B-7200-GN	R12	68 Ω	.5 W.	C-2796-9C		
						R13	68 Ω	.5 W.	C-2796-6C		

STEWART-WARNER 01-6G and 01-6G-Z

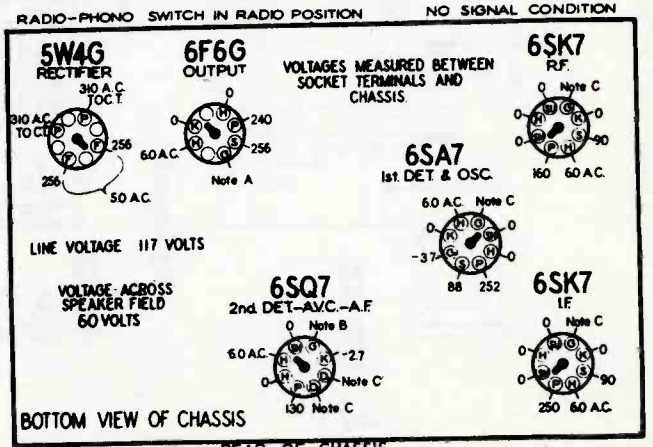


45A-45B	....	Condenser—gang
46A-46B	....	Condenser—electrolytic 10-15 mfd. 450 volts
47	.....	Condenser—trimmer
		Transformer—2nd I.F.
48	.....	Transformer—1st I.F.
49A to 49C	..	Range switch
50A to 50L		Condenser—push button trimmer (Low) 540 to 1000 KC.
		Condenser—push button trimmer (Med.) 750 to 1375 KC.
		Condenser—push button trimmer (Hi) 980 to 1550 KC.
51	.....	Coil—compensating
52	.....	Transformer—2nd I.F.
53	.....	Coil—antenna
54	.....	Coil—oscillator
55A-55B-55C	.	Condenser—trimmer 3 section
56	.....	Transformer—power
57	.....	U. Transformer—output for U-115086 speaker
58	.....	U. Cone & Voice coil for U-115086 speaker
59	.....	Shield for loop antenna
60	.....	Cabinet back and loop antenna complete 01-6G1 & 01-6G1-Z
		Cabinet back and loop antenna complete 01-6G4-1 & 01-6G4-1-Z
		Cabinet back and loop antenna complete 01-6G4-2 & 01-6G4-2-Z; 01-6G4-3 & 01-6G4-3-Z; 01-6G4-5 & 01-6G4-5-Z
		Cabinet back and loop antenna complete 01-6G4-4 & 01-6G4-4-Z
61	.....	Condenser—.006 mfd. 600 volt

1-2-3	.....	Condenser—mica 260 mmfd.
4	.....	Condenser—mica 51 mmfd.
5	.....	Condenser—mica .00351 mfd. 3%
6	.....	Resistor—wire wound 25 ohms ½ watt
7	.....	Condenser—mica .002 mfd.
8	.....	Resistor—wire wound 220 ohms 1 watt
9	.....	Condenser—electrolytic 10 mfd.—35 volts
10-11-12	....	Resistor—carbon 220,000 ohms ¼ watt
13	.....	Resistor—carbon 470,000 ohms ¼ watt
14	.....	Resistor—carbon 15,000 ohms 2 watts
15-16	.....	Resistor—carbon 100,000 ohms ¼ watt
17	.....	Resistor—carbon 22,000 ohms ¼ watt
18	.....	Resistor—carbon 10,000 ohms 1 watt
19	.....	Resistor—carbon 2.2 meg. ¼ watt
20	.....	Resistor—carbon 3.3 meg. ¼ watt
21	.....	Resistor—carbon 2,200 ohms ¼ watt
22-23	.....	Lamp—6.3 volt .25 amps
24	.....	Condenser—padder (530 to 630 mmfd.)
25	.....	Resistor—insulated, 470 ohms ¼ watt
		Condenser—.006 mfd. 600 volt
26A-26B	....	Switch—D.P.D.T. (Radio-Phono)
27A-27B	....	Condenser—2 section trimmer
28	.....	U. Speaker—dynamic 6 in.
29	.....	Resistor—wire wound 50 ohms ½ watt (10%)
30-31	.....	Condenser—.1 mfd. 600 volt
32	.....	Condenser—.01 mfd. 600 volt
33	.....	Condenser—.2 mfd. 600 volt
34-35	.....	Condenser—.05 mfd. 600 volt
36-37-38-39-40		Condenser—.02 mfd. 600 volt
41	.....	Condenser—.002 mfd. 600 volt
42	.....	Switch—push button
43	.....	Tone control switch
44A-44B	....	Volume control with switch—1 meg.

SOCKET VOLTAGES

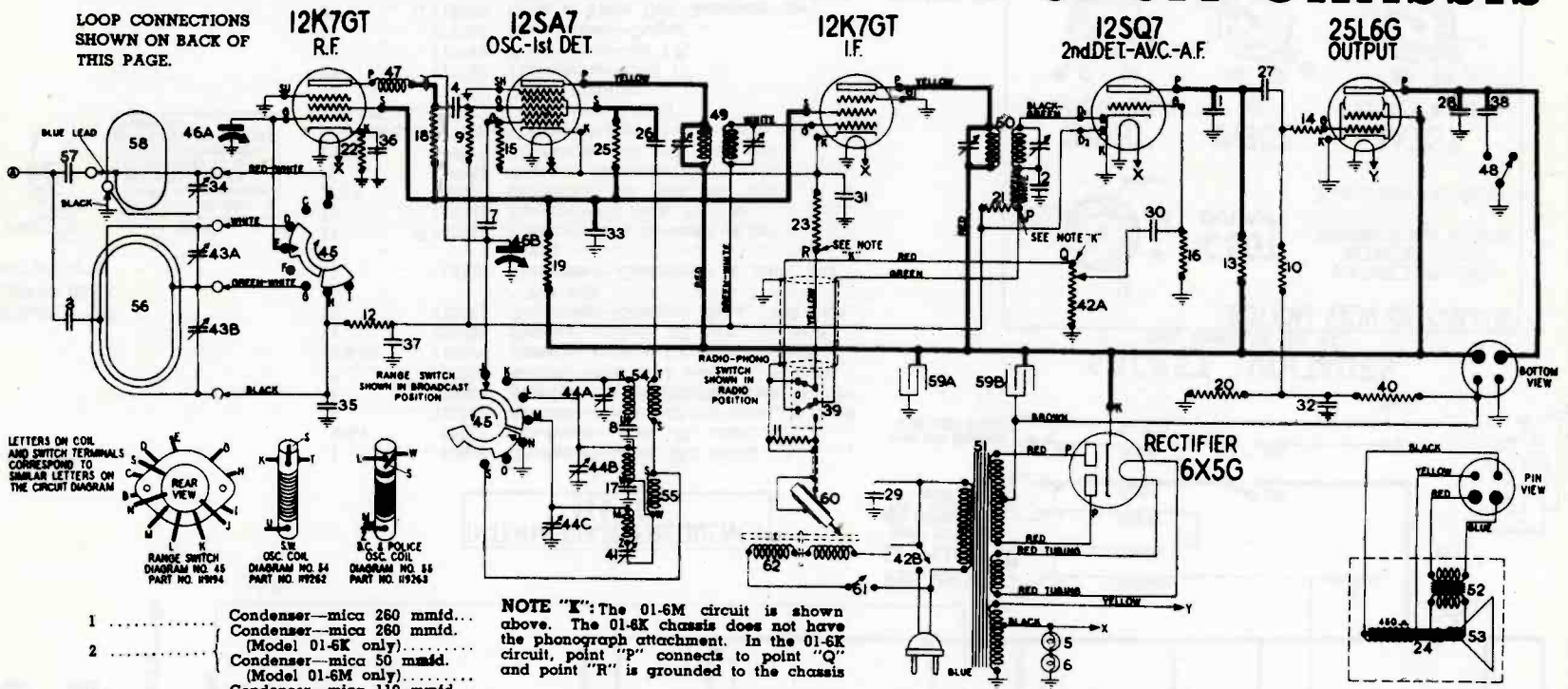
RADIO-PHONO SWITCH IN RADIO POSITION — NO SIGNAL CONDITION



NOTE A: Bias on 6F6G output tube is —18 volts measured across resistors 29, 6 and 8.

NOTE B: Bias on 6SQ7 grid is —1.5 volts measured across resistor 6.

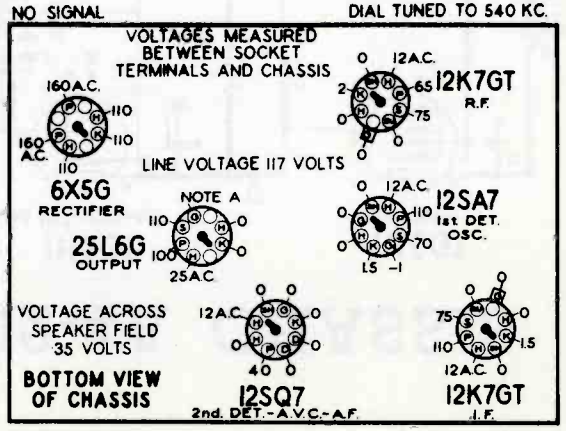
STEWART-WARNER 01-6K and 01-6M CHASSIS



1	Condenser—mica 260 mmfd.
2	Condenser—mica 260 mmfd. (Model 01-6K only) Condenser—mica 50 mmfd. (Model 01-6M only)
3-4	Condenser—mica 110 mmfd.
5-6	Lamp—6-8 volt Mazda No. 51.
7	Condenser—mica 50 mmfd.
8	Condenser—mica .0042 mfd.
9	Resistor—carbon 47,000 ohms ¼ watt.
10	Resistor—carbon 220,000 ohms ¼ watt.
11	Resistor—carbon 220,000 ohms ¼ watt (Model 01-6M only).
12-13	Resistor—carbon 470,000 ohms ¼ watt.
14	Resistor—carbon 100 ohms ¼ watt.
15	Resistor—carbon 100,000 ohms ¼ watt.
16	Resistor—carbon 3.3 meg. ¼ watt.
17	Condenser—mica 1650 mmfd. (3%).
18-19	Resistor—carbon 3,300 ohms ¼ watt.
20	Resistor—carbon 220,000 ohms ¼ watt.
21	Resistor—carbon 1.5 meg. ¼ watt.
22	Resistor—insulated 470 ohms ¼ watt.
23	Resistor—150 ohms ¼ watt.
24	Speaker—dynamic 6"
25	Resistor—680 ohms ¼ watt.
26-27-28	Condenser—.01 mfd. 600 volt.
29	Condenser—.01 mfd. 600 volt (shielded).
30	Condenser—.004 mfd. 600 volt.
31-32-33	Condenser—.2 mfd. 600 volt.
34	Condenser—trimmer
35-36-37	Condenser—.05 mfd. 600 volt.
38	Condenser—.04 mfd. 600 volt.
39	Switch—"Radio-Phono" with escutcheon (Model 01-6M only)

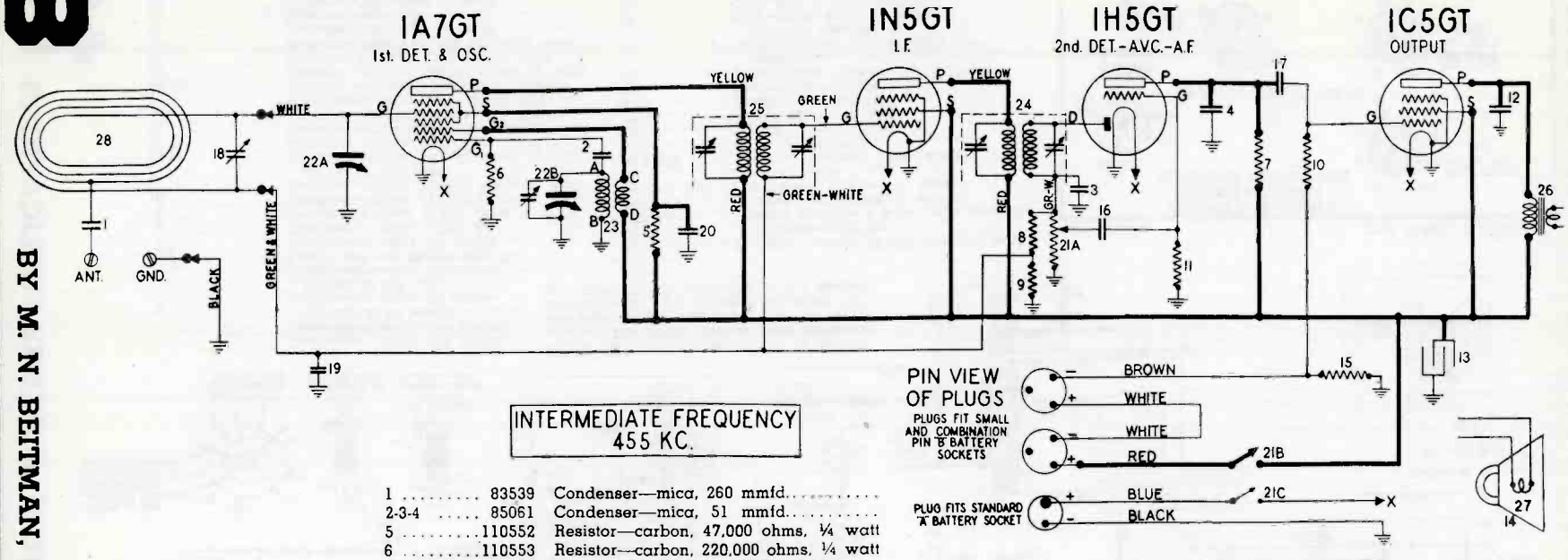
NOTE "K": The 01-6M circuit is shown above. The 01-6K chassis does not have the phonograph attachment. In the 01-6K circuit, point "P" connects to point "Q" and point "R" is grounded to the chassis

40	Resistor—carbon 680,000 ohms ¼ watt.
41	Condenser—padding
42A-42B	Volume control—1 meg. (with switch).
43A-43B	Trimmer condenser—2 section
44A to 44C	Condenser—trimmer 3 section
45	Switch—range
46A-46B	Condenser—gang (with drum)
47	Coil—compensating
48	Switch—tone control
49	Transformer—1st I.F.
50	Transformer—2nd I.F.
51	Transformer—power
52	Transformer—output—for U-115088 speaker
53	Cone & Voice coil assembly for U-115088 speaker
54	Coil—short wave oscillator
55	Coil—B.C. & Pol. Oscillator
56	Loop antenna (BC & POL) with cabinet back (01-6K only) Loop antenna (BC & POL) with cabinet back (01-6M only)
57	Condenser—mica 5 mmfd.
58	Short wave loop antenna assembly complete (01-6K only) Short wave loop antenna assembly complete (01-6M only)
59A-59B	Condenser—electrolytic 20-40 mfd. 200



STEWART-WARNER MODEL 02-4A CHASSIS

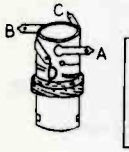
BY M. N. BEITMAN, SUPREME PUBLICATIONS



INTERMEDIATE FREQUENCY
455 KC.

1	83539	Condenser—mica, 260 mmfd.
2-3-4	85061	Condenser—mica, 51 mmfd.
5	110552	Resistor—carbon, 47,000 ohms, ¼ watt
6	110553	Resistor—carbon, 220,000 ohms, ¼ watt
7	110554	Resistor—carbon, 1 megohm, ¼ watt
8-9-10	110570	Resistor—carbon, 2.2 meg., ¼ watt
11	110580	Resistor—carbon, 3.3 meg., ¼ watt
12	113035	Condenser—Ceramic Tube, .006 mfd., 600 volt
13	113118	Condenser—Electrolytic—8 mfd., 150 volt
14	U-115068	Speaker—P.M. Dynamic (4 in.)
15	116061	Resistor—800 ohm, ¼ watt
16-17	116640	Condenser—.01 mfd., 600 volt
18	116781	Trimmer Condenser
19-20	116819	Condenser—.05 mfd., 600 volt
21A-21B-21C	117706	Volume Control—1 meg., with switch
22A-22B	117707	Condenser—Tuning
23	117741	Coil—Oscillator
24	117742	Transformer—2nd I.F.
25	117743	Transformer—1st I.F.
26	117782	Transformer—Output
27	U-118280	Cone & Voice Coil Assembly for U-115068 Speaker
28	117914	Loop Antenna

OSCILLATOR COIL
DIAGRAM NO. 23
PART NO. 117741

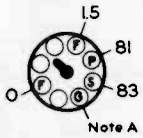


NOTE
TERMINALS OF COIL SHOWN IN ILLUSTRATION ARE LETTERED TO CORRESPOND TO SIMILARLY LETTERED TERMINALS ON THE CIRCUIT DIAGRAM.

SOCKET VOLTAGES

DIAL TUNED TO 540 KC.

BOTTOM VIEW OF CHASSIS

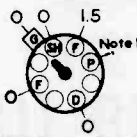


1C5GT
OUTPUT

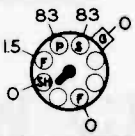
VOLTAGES MEASURED BETWEEN SOCKET TERMINALS AND CHASSIS

'B'-BATTERY = 90 VOLTS

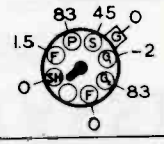
1H5GT
2nd. DET.-AVC-AF



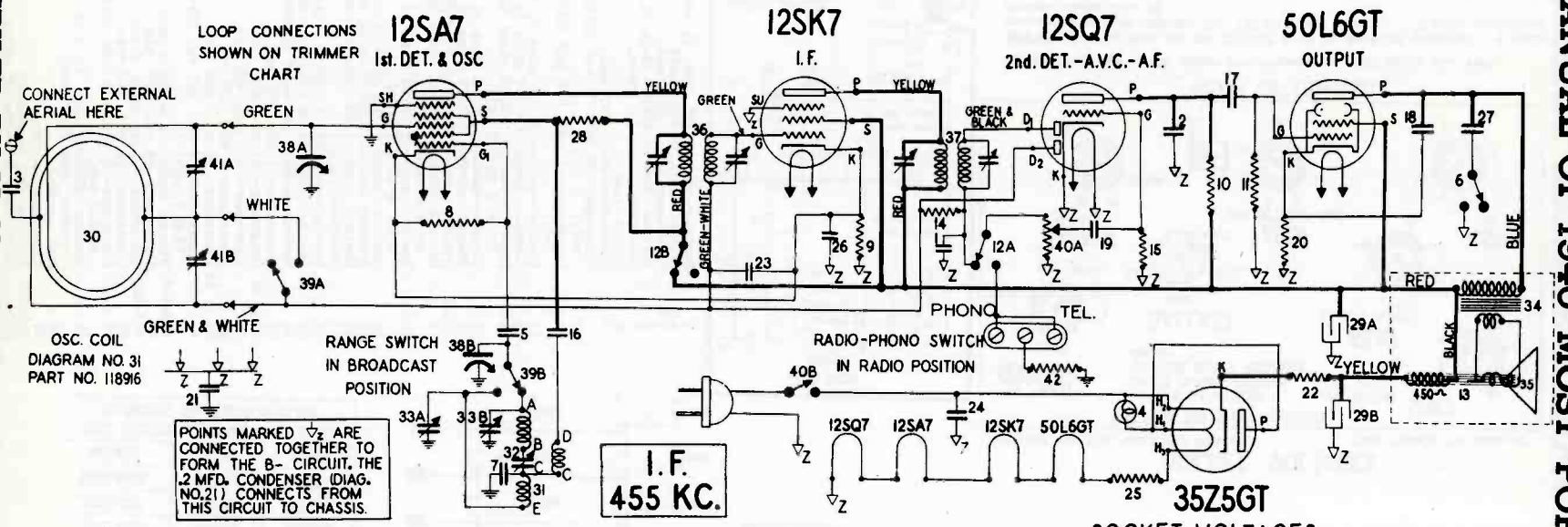
1N5GT
I.F.



1A7GT
1st. DET. & OSC.



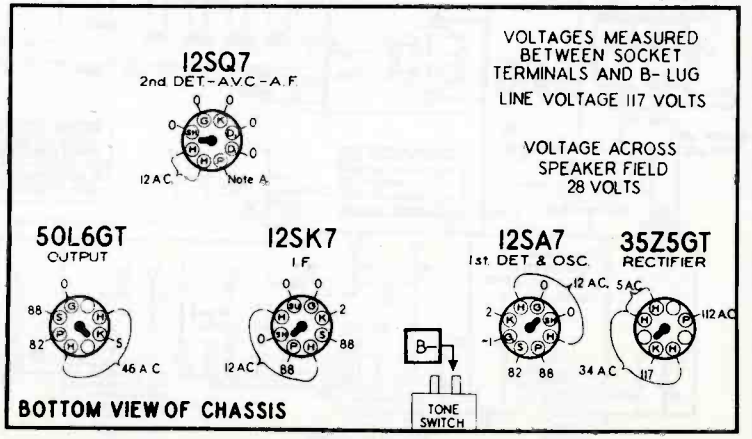
STEWART-WARNER 03-5S CHASSIS



1-2 ... Condenser—mica 260 mmfd.....
3 .... Condenser—mica 110 mmfd.....
4 .... Lamp—dial 6 to 8 volt (Mazda 51)..
5 .... Condenser—mica 26 mmfd.....
6 .... Switch—tone control.....
7 .... Condenser—mica .002 mfd.....
8 .... Resistor—carbon 47,000 ohms ¼ watt
9 .... Resistor—carbon 100 ohms ¼ watt.
10 .... Resistor—carbon 680,000 ohms ¼ watt.....
11 .... Resistor—carbon 470,000 ohms 1/10 watt.....
12A-12B Switch—D.P.D.T. (Radio-Phono).....
13 .... Speaker—dynamic (5").....
14-15 .. Resistor—insulated 3.3 megohms ¼ watt.....
16-17-18 Condenser—.01 mfd. 600 volt.....
19 .... Condenser—.004 mfd. 600 volt.....
20 .... Resistor—140 ohms ½ watt wire wound .....
21 .... Condenser—.2 mfd. 600 volt.....
22 .... Resistor—33 ohms 1 watt wire wound .....
23-24 .. Condenser—.05 mfd. 600 volt.....
25 .... Resistor—20 ohms 1 watt.....
26 .... Condenser—.25 mfd. 600 volts.....
27 .... Condenser—.07 mfd. 600 volts.....
28 .... Resistor—insulated 680 ohms ¼ watt
29A-29B Condenser—electrolytic—20-20 mfd. 150 volt.....
30 .... Cabinet back and loop antenna complete (03-5S1) .....
Cabinet back and loop antenna complete (03-5S2) .....
31 .... Coil—oscillator .....
32 .... Condenser—padding .....
33A-33B Trimmer strip (2 sect.).....
34 .... Transformer—output for R-115085 speaker .....
35 .... Cone & Voice coil for R-115085 speaker .....
36 .... Transformer—1st I.F.....
37 .... Transformer—2nd I.F.....
38A-38B Gang condenser & push button unit
39A-39B Range switch.....
40A-40B Volume control—1 meg. (with switch) .....
41A-41B Condenser—trimmer for loop antenna .....
42 .... Resistor—220,000 ohms ¼ watt (on underwriters' approved sets only).

SOCKET VOLTAGES

VOLUME ON FULL WITH NO SIGNAL — DIAL TUNED TO 540 KC



Use a High Resistance Voltmeter of at Least 1000 Ohms per Volt.

NOTE A: The reading on this plate will be small because of the high resistance of resistor No. 10.

STEWART-WARNER 03-6J, 03-6J-Z, 03-6L, and 03-6L-Z

PUSH BUTTON TRIMMER RANGES		
DIAGRAM NO.	03-6J & 03-6L	03-6J-Z & 03-6L-Z
60A-60B	HIGH	HIGH
60C-60D	MED.	HIGH
60E-60F	LOW	MED.
60G-60H	LOW	MED.
60I-60J	LOW	LOW

SEE PARTS LIST BELOW FOR RANGES IN KILOCYCLES

SOCKET VOLTAGES

VOLUME ON FULL WITH NO SIGNAL — DIAL TUNED TO 540 KC.

BOTTOM VIEW OF CHASSIS

MEASURE ALL VOLTAGES EXCEPT FILAMENT BETWEEN THE TUBE SOCKET TERMINALS AND B-

LINE VOLTAGE 117 VOLTS

These readings taken using a voltmeter of 1000 ohms per volt.

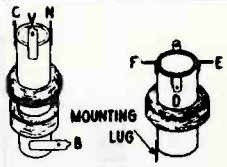
NOTE A: The bias on the 25L6GT grid is: on 03-6J chassis: —4 volts measured across resistor No. 12; on 03-6L chassis: —5 volts measured across choke No. 63.

NOTE B: Due to the high resistance of resistors No. 20, 6, and 13, only a small voltage will be read at the plate of the 6SQ7 when using a voltmeter having a resistance of 1000 ohms per volt.

1	Resistor	carbon 400 ohms ¼ watt
2-3	Condenser	mica 260 mmfd.
4-5	Condenser	mica 110 mmfd.
6	Resistor	carbon 470,000 ohms ¼ watt
7	Condenser	mica 51 mmfd.
8	Switch	tone
9	Condenser	mica .002 mfd.
10	Condenser	10 mfd. 35 volt (03-6L & 03-6L-Z only)
	Condenser	.1 mfd. 600 volt (03-6J & 03-6J-Z only)
11	Resistor	carbon 47,000 ohms ¼ watt
12	Resistor	carbon 220,000 ohms ¼ watt
13-14	Resistor	carbon 220,000 ohms ¼ watt (03-6L & 03-6L-Z only)
15	Resistor	carbon 100,000 ohms ¼ watt
16	Resistor	carbon 470,000 ohms ¼ watt
17-18	Resistor	carbon 3.3 meg. ¼ watt
19	Resistor	carbon 330,000 ohms ¼ watt (03-6J & 03-6J-Z only)
20-21	Resistor	carbon 680,000 ohms ¼ watt (03-6J & 03-6J-Z only)
22	Resistor	carbon 3,300 ohms ¼ watt
23	Resistor	carbon 1,500 ohms ¼ watt
24	Resistor	carbon 220 ohms ¼ watt
25	Switch	D.P.D.T.
26	Speaker	dynamic (5") (03-6J & 03-6J-Z only)
27	Speaker	dynamic (8") (03-6L7 & 03-6L7-Z)
28	Resistor	carbon 680 ohms ¼ watt
29	Condenser	.1 mfd. 600 volt
30-31-32	Condenser	.01 mfd. 600 volt
33	Condenser	.004 mfd. 600 volt
34	Condenser	.2 mfd. 600 volt
35 to 39	Condenser	.05 mfd. 600 volt
40	Condenser	.05 mfd. 600 volt (03-6L & 03-6L-Z only)
41A-41B	Volume control	1 megohm (with switch)
42	Condenser	.04 mfd. 600 volts
43A-43B	Condenser	tuning (with drum)
44	Condenser	.25 mfd. 600 volts
45	Condenser	.5 mfd. 150 volts (03-6L & 03-6L-Z only)
46	Resistor	220,000 ohms ¼ watt (on Underwriters' approved sets)
47	Coil	oscillator
48	Condenser	padding
49A-49B	Trimmer strip	(2 section)
50-51	Lamp	dial 6.3 volts .25 amps.

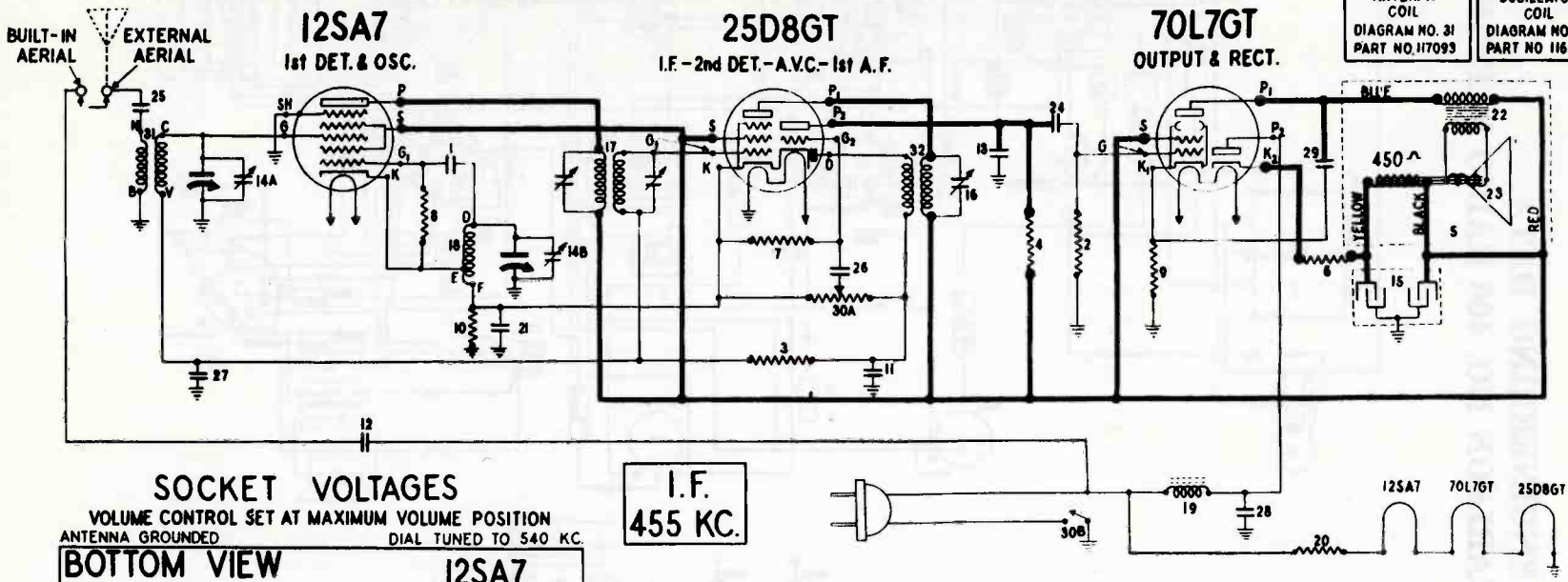
STEWART-WARNER "AIR-PAL" RECEIVER MODEL A-6S (07-32 CHASSIS)

THIS MANUAL APPLIES ONLY TO THE RECEIVER MARKED A-6S.
A SEPARATE MANUAL HAS BEEN ISSUED FOR THE RECEIVER MARKED A-6.



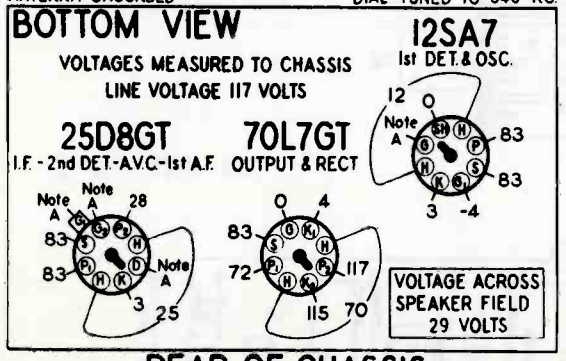
ANTENNA COIL DIAGRAM NO. 31 PART NO. 117093

OSCILLATOR COIL DIAGRAM NO. 18 PART NO 116609



SOCKET VOLTAGES

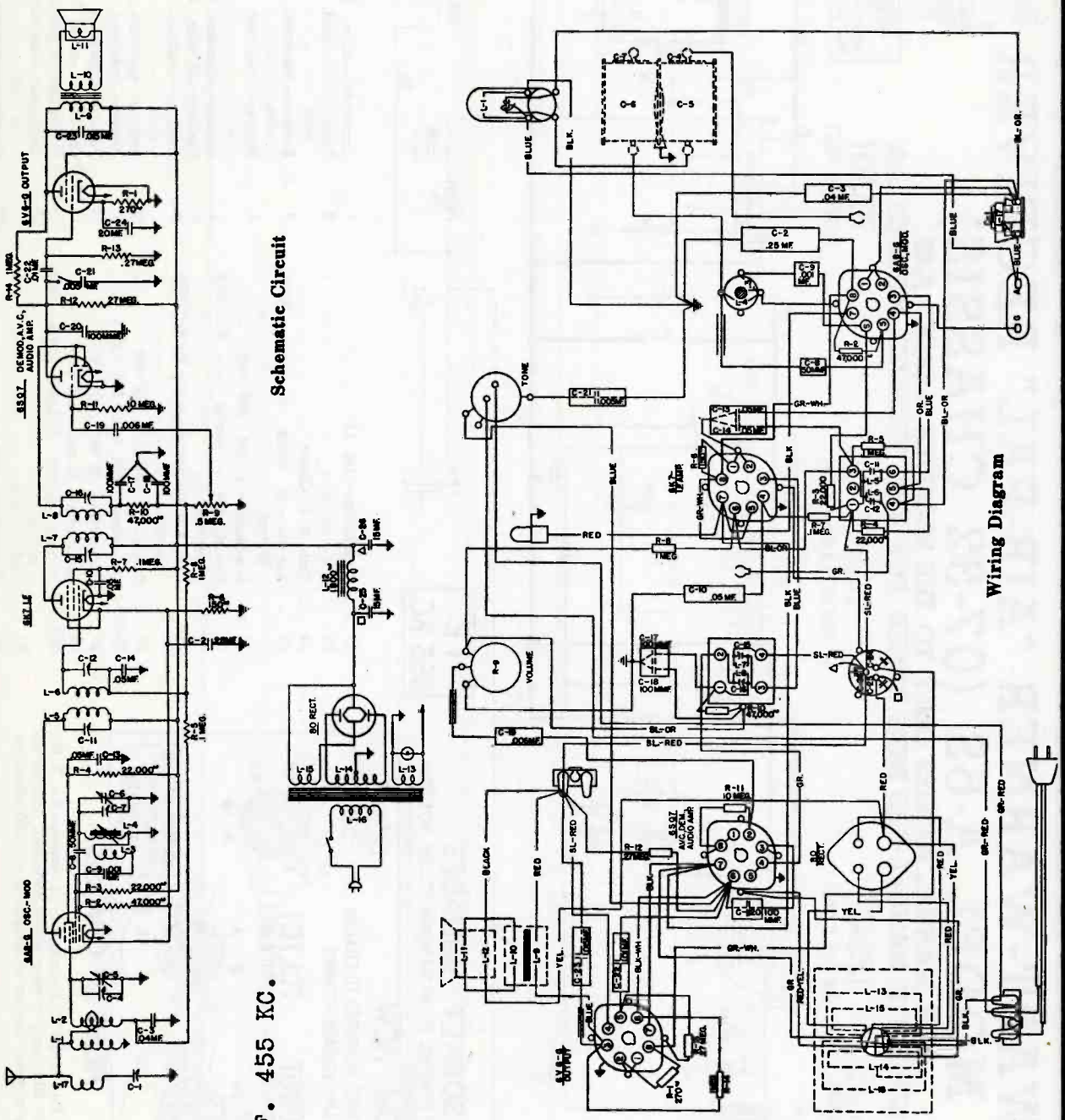
VOLUME CONTROL SET AT MAXIMUM VOLUME POSITION
ANTENNA GROUNDED — DIAL TUNED TO 540 KC.



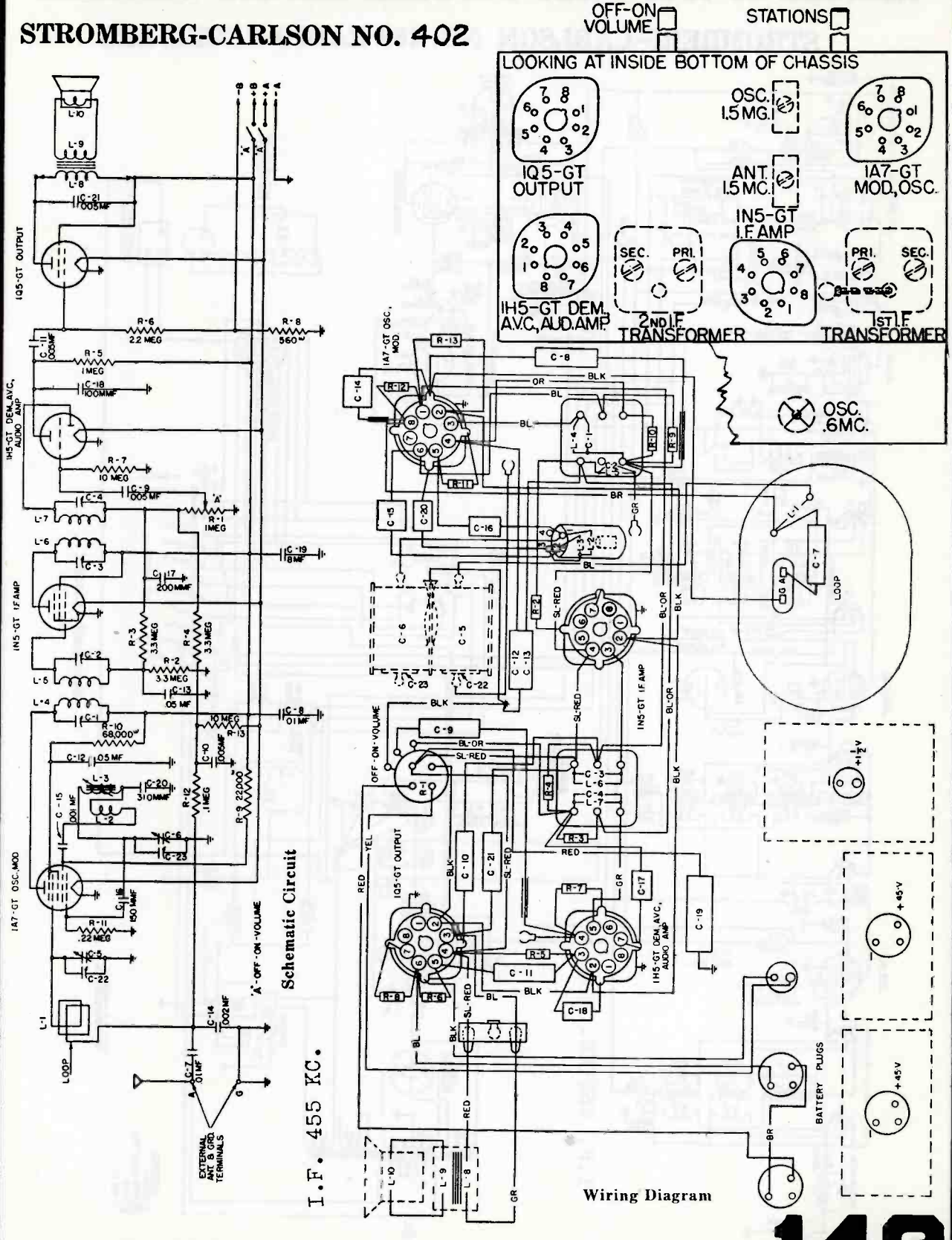
NOTE A: Due to the high resistance of resistors No. 3, No. 7, and No. 30A, only a very slight deflection will be obtained on a meter having a resistance of 1000 ohms per volt.

17	Transformer—1st I.F.	1	Condenser—mica, 110 mmf.
18	Coil—oscillator	2	Resistor—insulated, 470,000 ohms, ¼ watt
19	Coil—R. F. Choke	3	Resistor—insulated, 1 megohm, ¼ watt
20	Resistor—65 ohms, 2 watts, Wire Wound	4	Resistor—insulated, 220,000 ohms, ¼ watt
21	Condenser—.1 mfd., 600 volt	5	Speaker—dynamic 3"
22	Transformer — output for R-115053 speaker	6	Resistor—50 ohm, 1 watt
23	Cone & Voice coil assembly for R-115053 speaker	7	Resistor—insulated, 10 megohm, ¼ watt
24	Condenser—.01 mfd., 600 volt	8	Resistor—insulated. 22,000 ohm, ¼ watt
25-26	Condenser—.004 mfd., 600 volt	9	Resistor—insulated, 100 ohm ½ watt
27	Condenser—.05 mfd., 600 volt	10	Resistor—insulated, 100 ohm, ¼ watt
28-29	Condenser—.02 mfd., 600 volt	11-12-13	Condenser—mica, 260 mmfd.
30A-30B	Volume control (500,000 ohms—with switch)	14A-14B	Condenser—2 gang tuning
31	Coil—antenna	15	Condenser—electrolytic, Dual 20 mfd. 150 volt
32	Transformer—2nd I.F.	16	Condenser—trimmer for 2nd I.F.

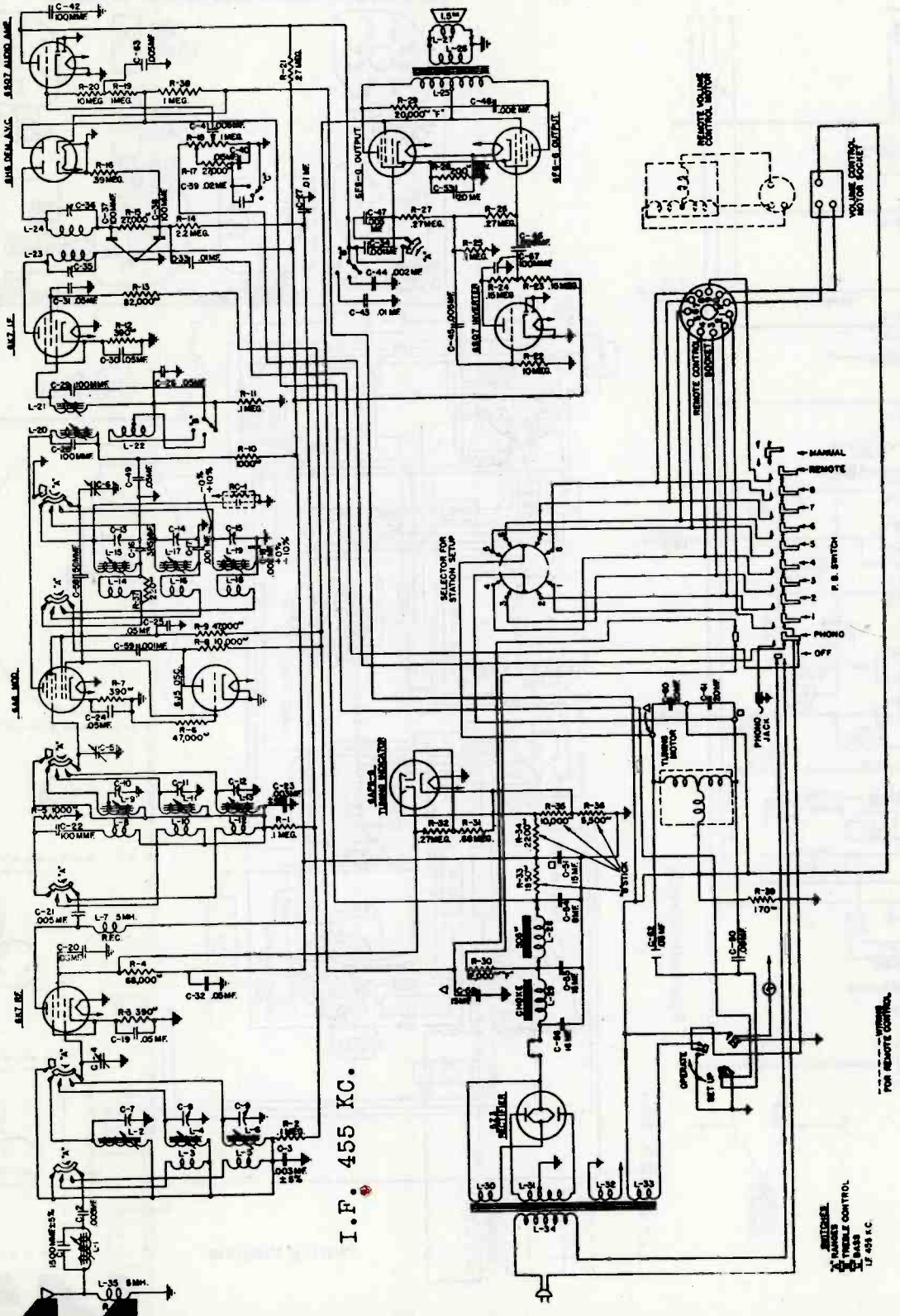
ENGINEERING DATA
STROMBERG-CARLSON NO. 400 RADIO RECEIVERS



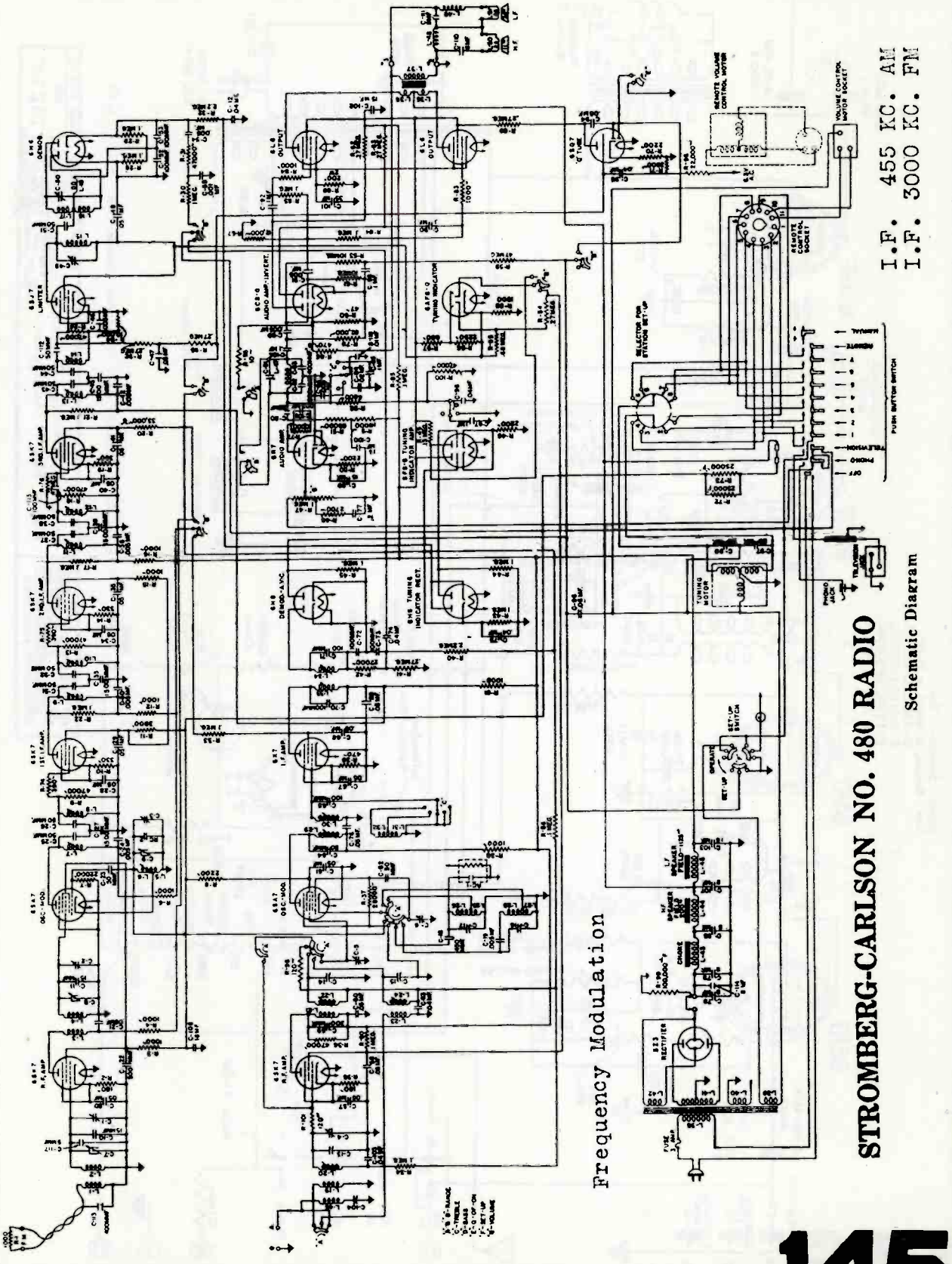
STROMBERG-CARLSON NO. 402



STROMBERG-CARLSON NO. 450 RADIO RECEIVERS



MANUAL OF 1940 MOST POPULAR SERVICE DIAGRAMS

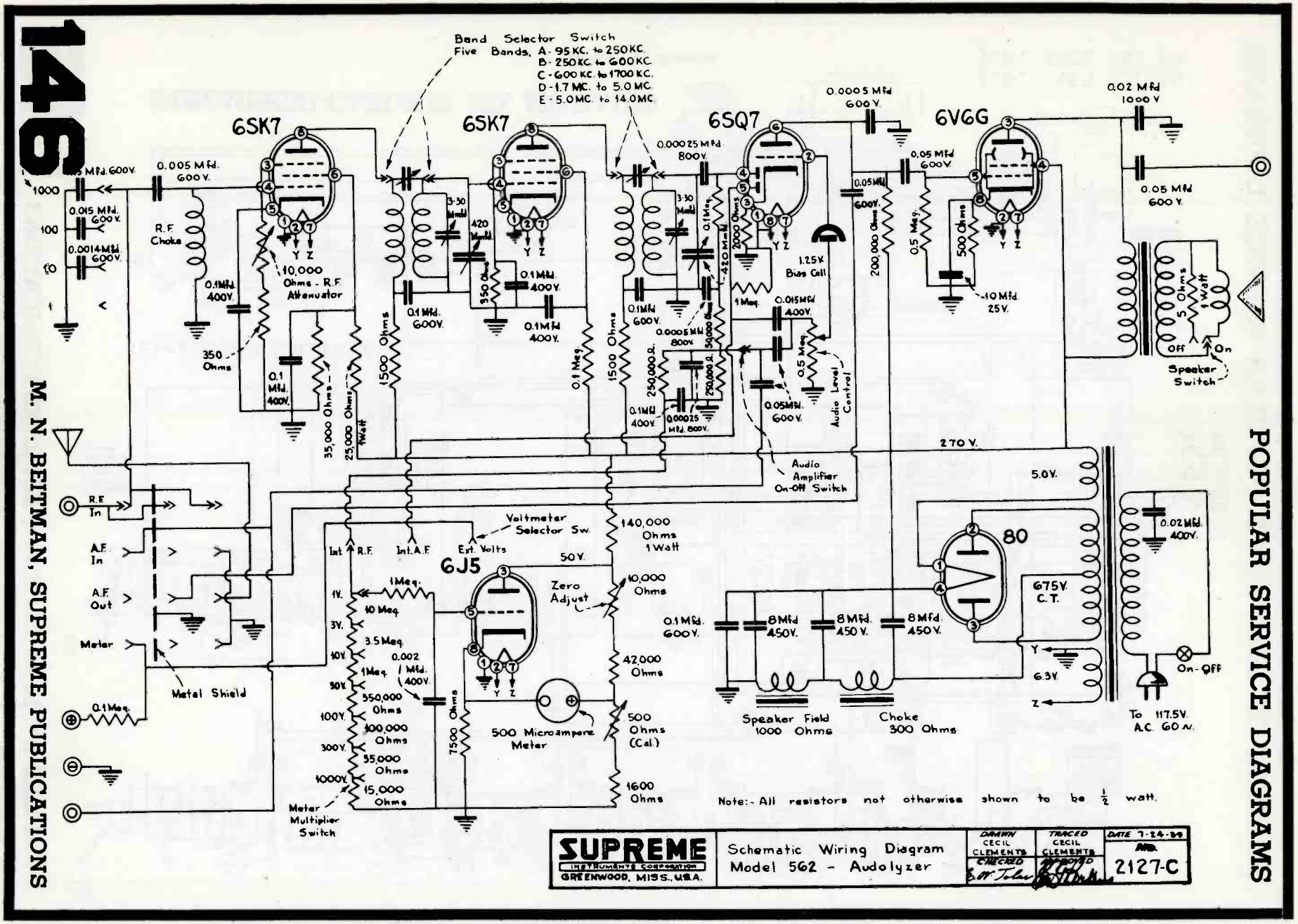


I.F. 455 KC. AM
I.F. 3000 KC. FM

Frequency Modulation

STROMBERG-CARLSON NO. 480 RADIO

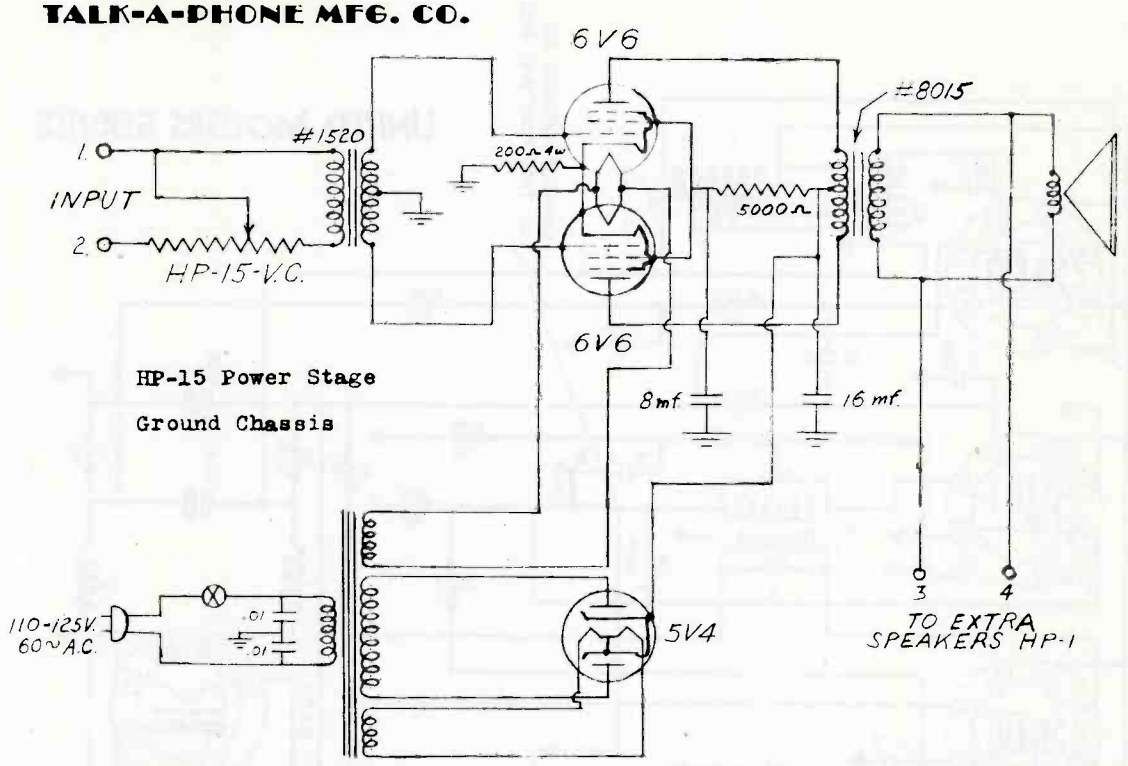
Schematic Diagram



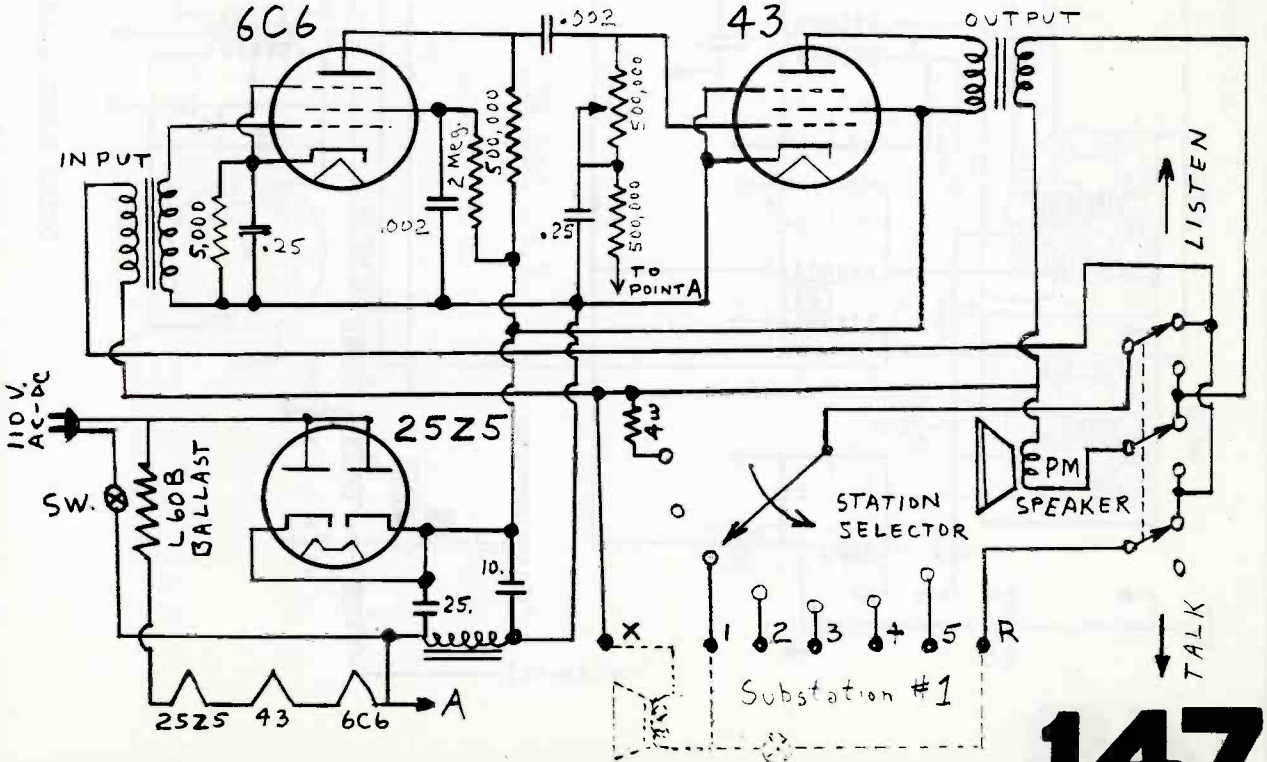
Note:- All resistors not otherwise shown to be ½ watt.

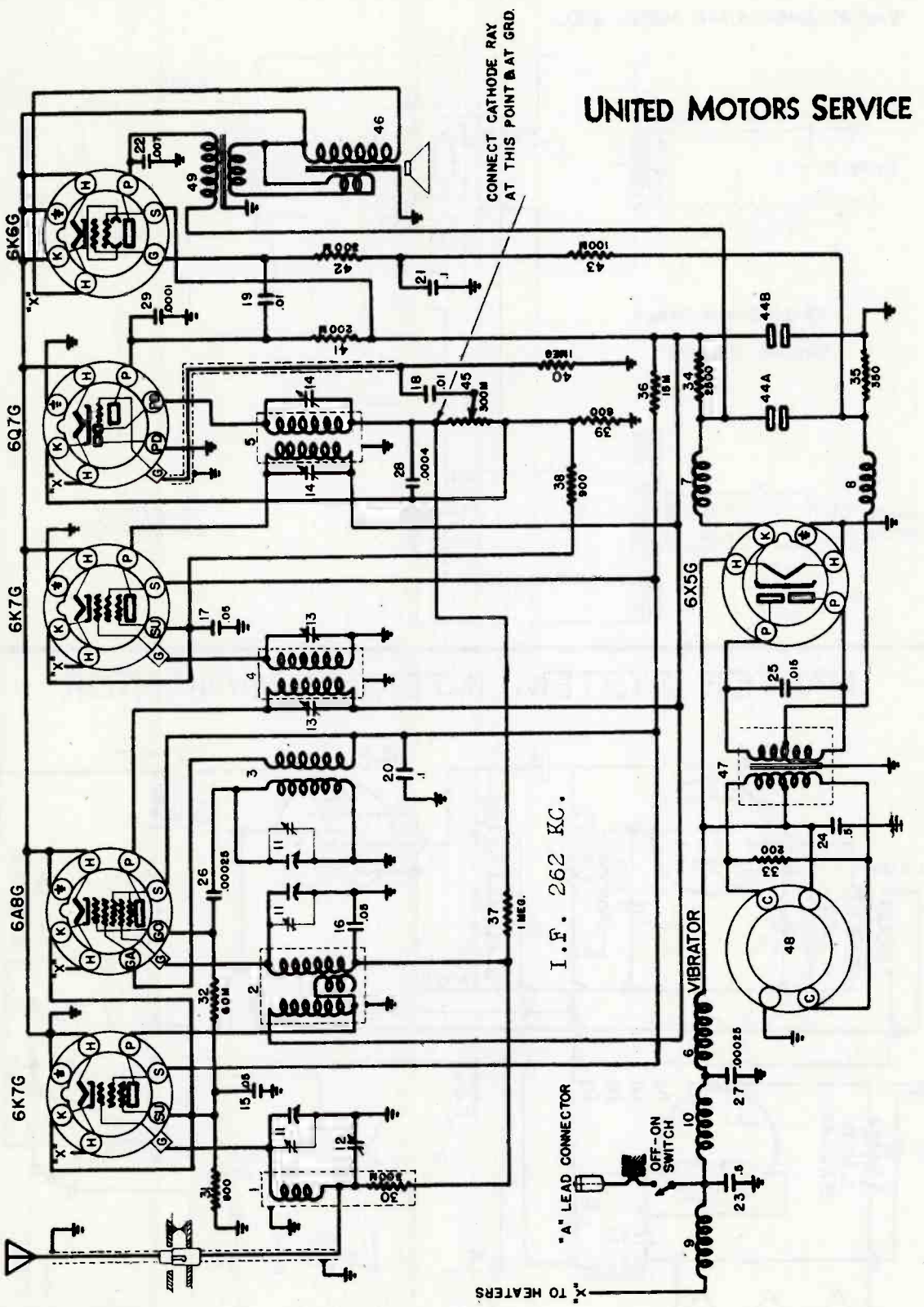
SUPREME INSTRUMENTS CORPORATION GREENWOOD, MISS., U.S.A.	Schematic Wiring Diagram Model 562 - Audolyzer	DRAWN CECIL CLEMENTS CHECKED	TRACED CECIL CLEMENTS APPROVED	DATE 7-24-39 2127-C

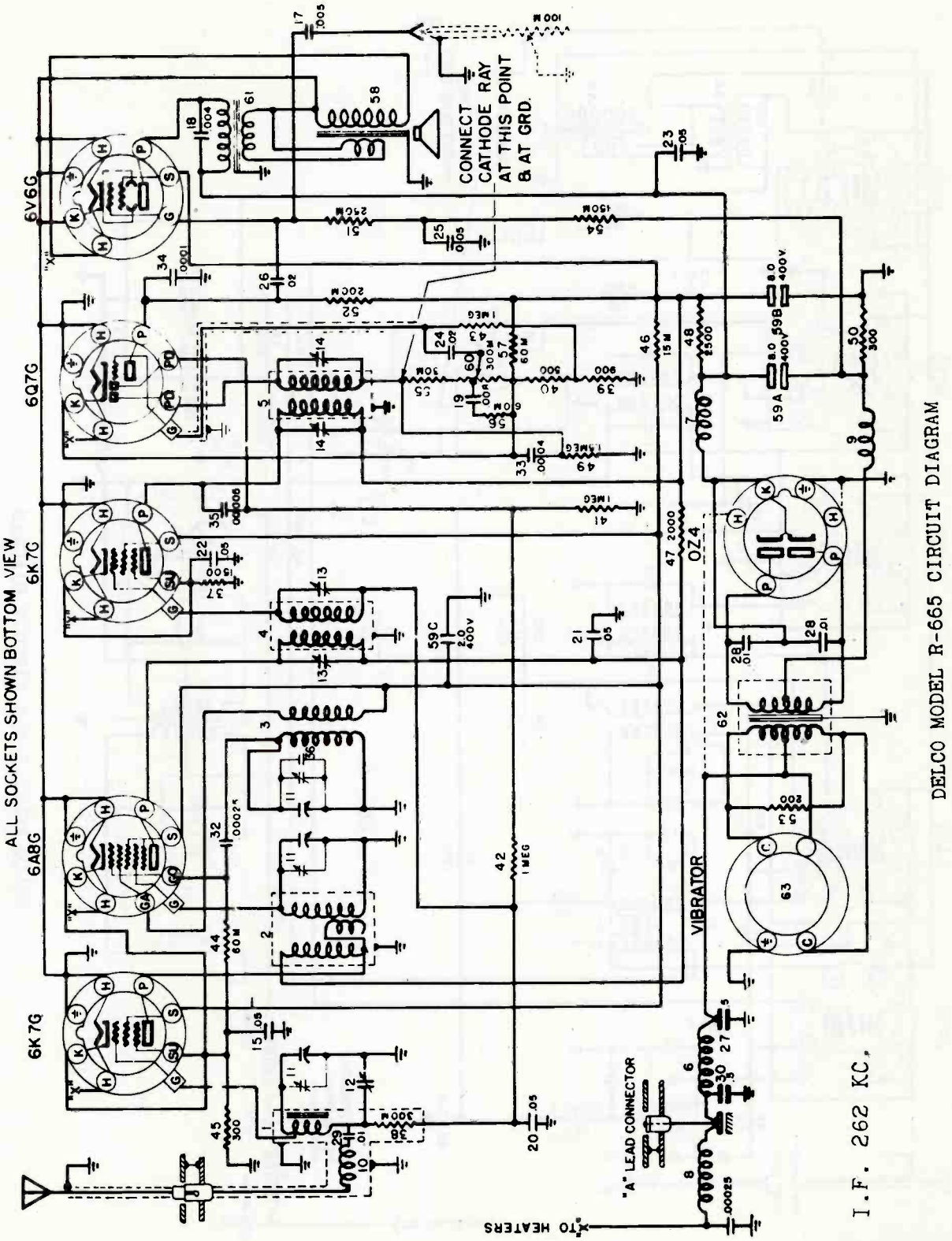
TALK-A-PHONE MFG. CO.

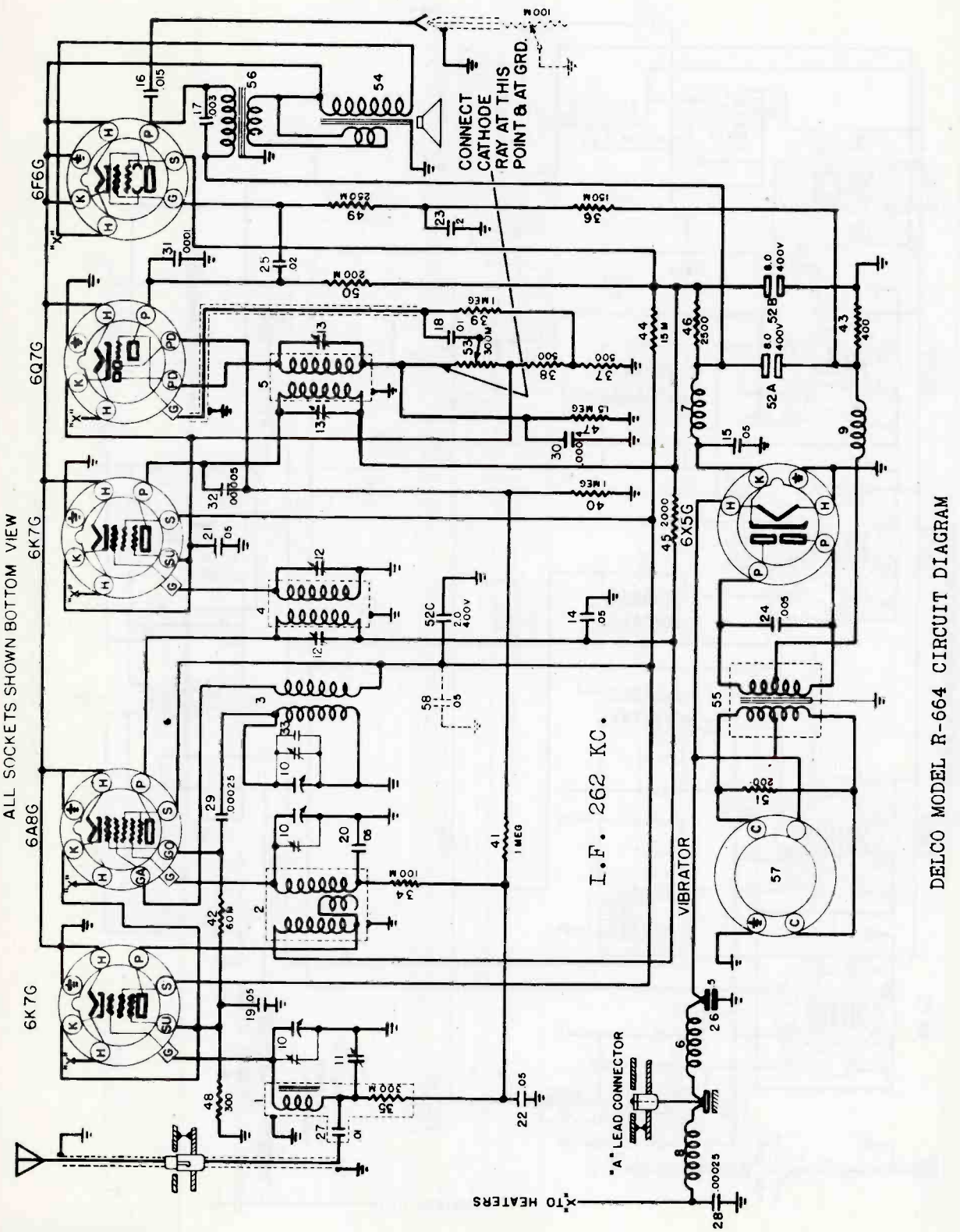


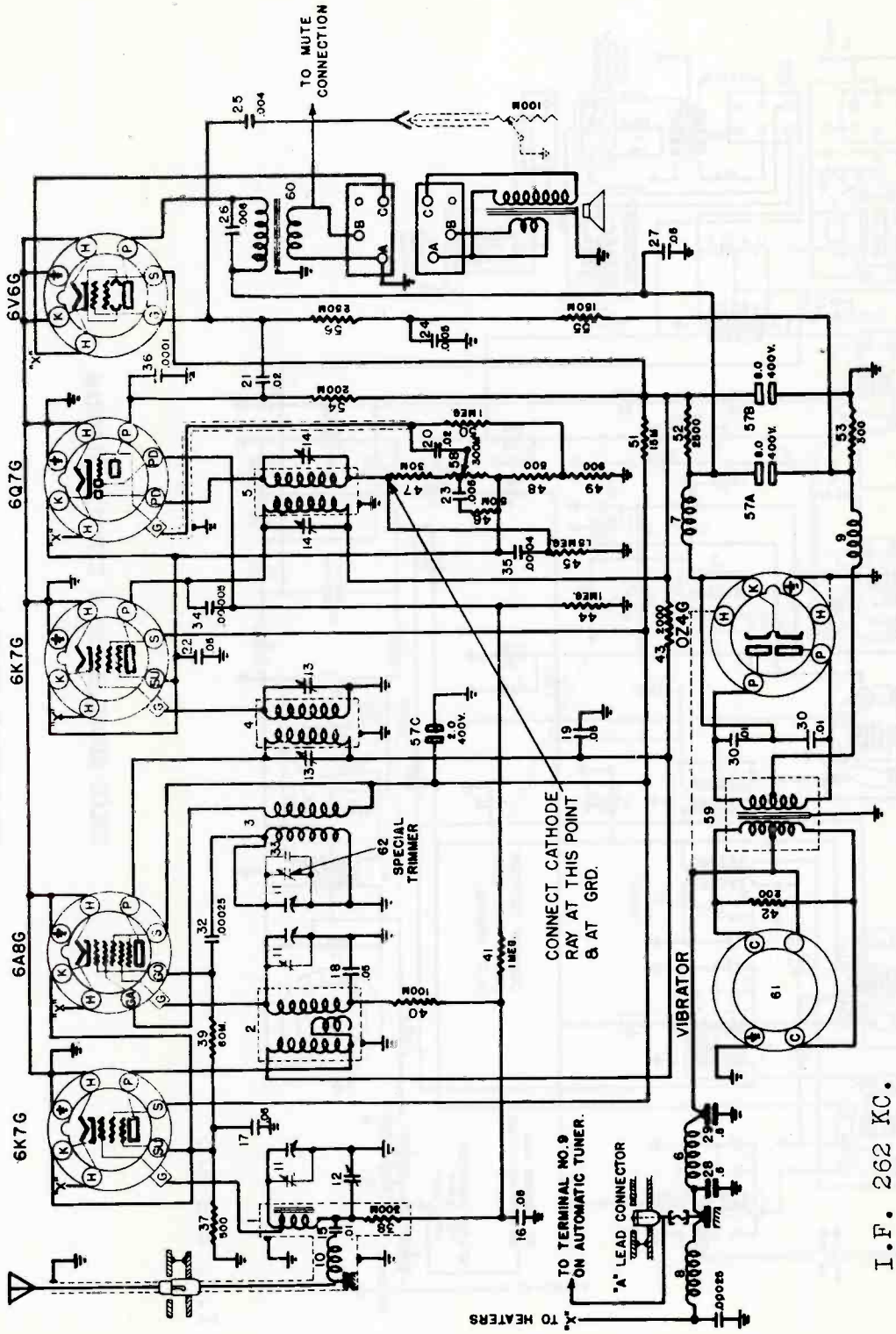
MASTER SYSTEM INTERCOMMUNICATOR

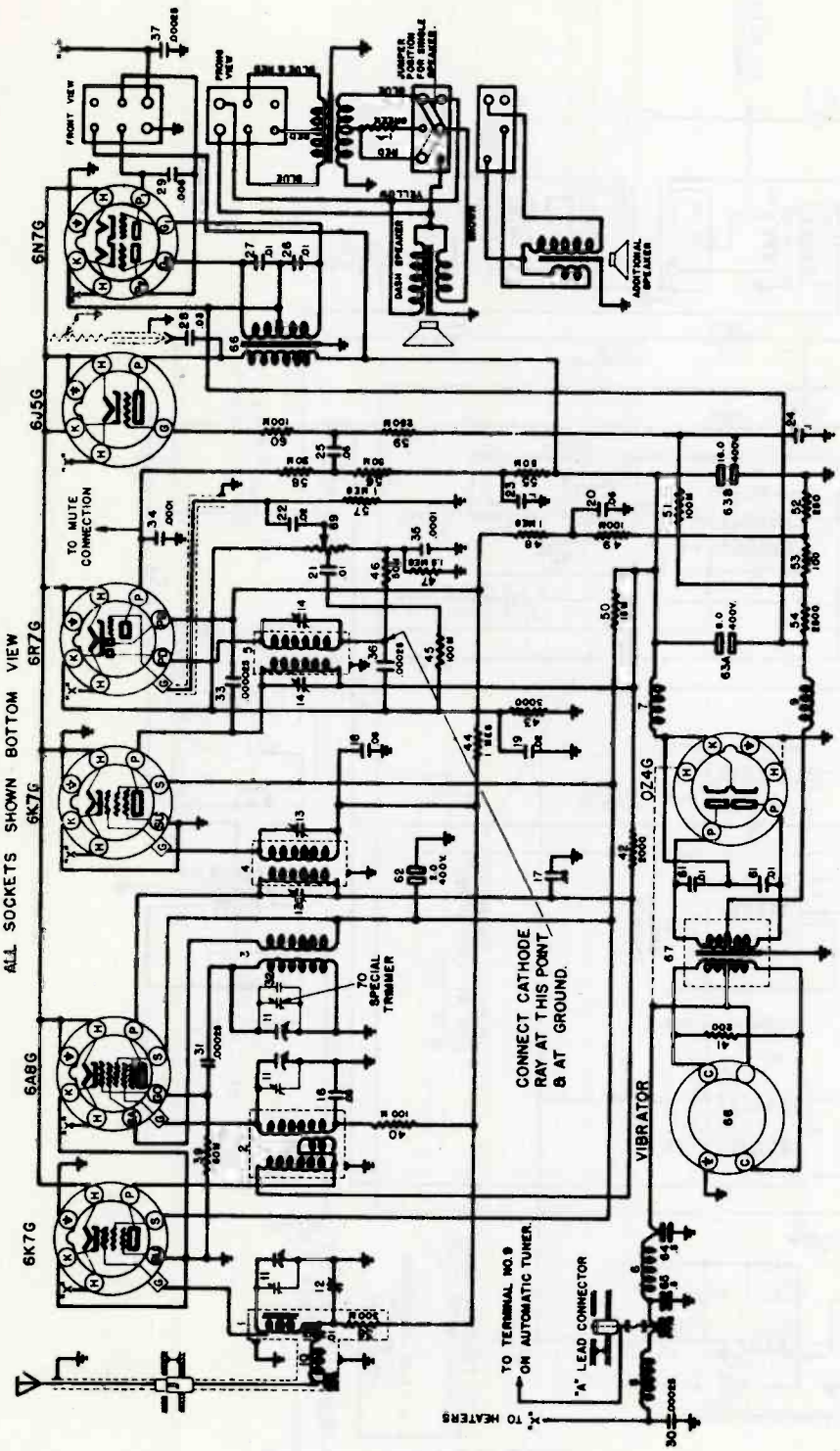



UNITED MOTORS SERVICE
CONNECT CATHODE RAY AT THIS POINT & AT GRD.
ALL SOCKETS SHOWN BOTTOM VIEW
6K6G
6Q7G
6K7G
6A8G
6K7G
6X5G
I.F. 262 KC.
VIBRATOR
"A" LEAD CONNECTOR
OFF-ON SWITCH
TO HEATERS
DELCO MODEL R-663 CIRCUIT DIAGRAM


DELCO MODEL R-665 CIRCUIT DIAGRAM
I.F. 262 KC.
ALL SOCKETS SHOWN BOTTOM VIEW
CONNECT CATHODE RAY AT THIS POINT & AT GRD.
6V6G
6Q7G
6K7G
6A8G
6K7G
6K7G
VIBRATOR
"A" LEAD CONNECTOR
TO HEATERS

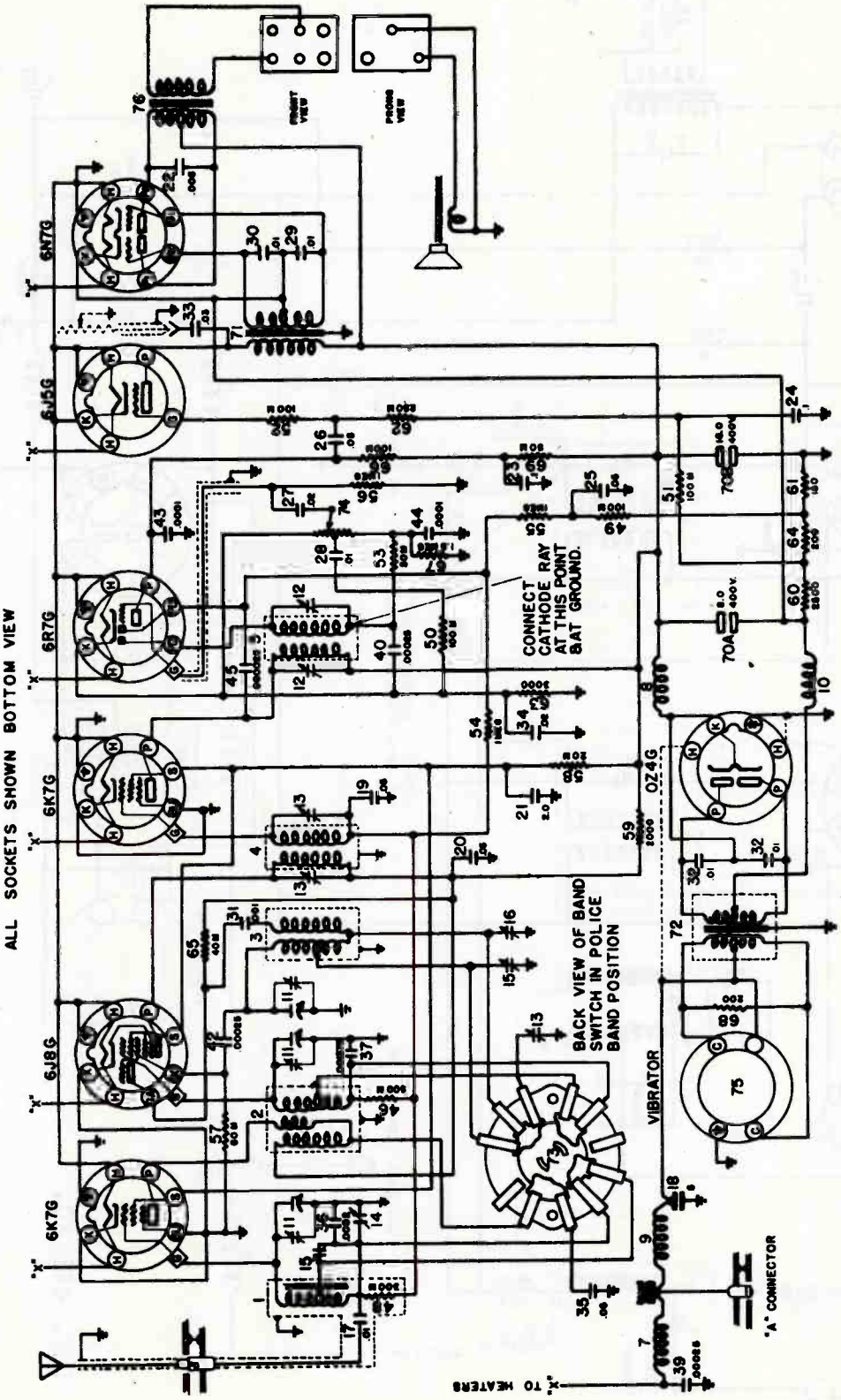

DELCO MODEL R-664 CIRCUIT DIAGRAM
ALL SOCKETS SHOWN BOTTOM VIEW
I.F. 262 KC.
CONNECT CATHODE RAY AT THIS POINT & AT GRD.
VIBRATOR
"A" LEAD CONNECTOR
TO HEATERS
6F6G
6Q7G
6K7G
6A8G
6K7G
6X5G
57


TO MUTE CONNECTION
6V6G
6Q7G
6K7G
6A8G
6K7G
ALL SOCKETS SHOWN BOTTOM VIEW
CONNECT CATHODE RAY AT THIS POINT & AT GRD.
SPECIAL TRIMMER
VIBRATOR
OZ4G
TO TERMINAL NO. 9 ON AUTOMATIC TUNER.
"A" LEAD CONNECTOR
TO HEATERS
I.F. 262 KC.
DELCO MODEL R-666-7 CIRCUIT DIAGRAM



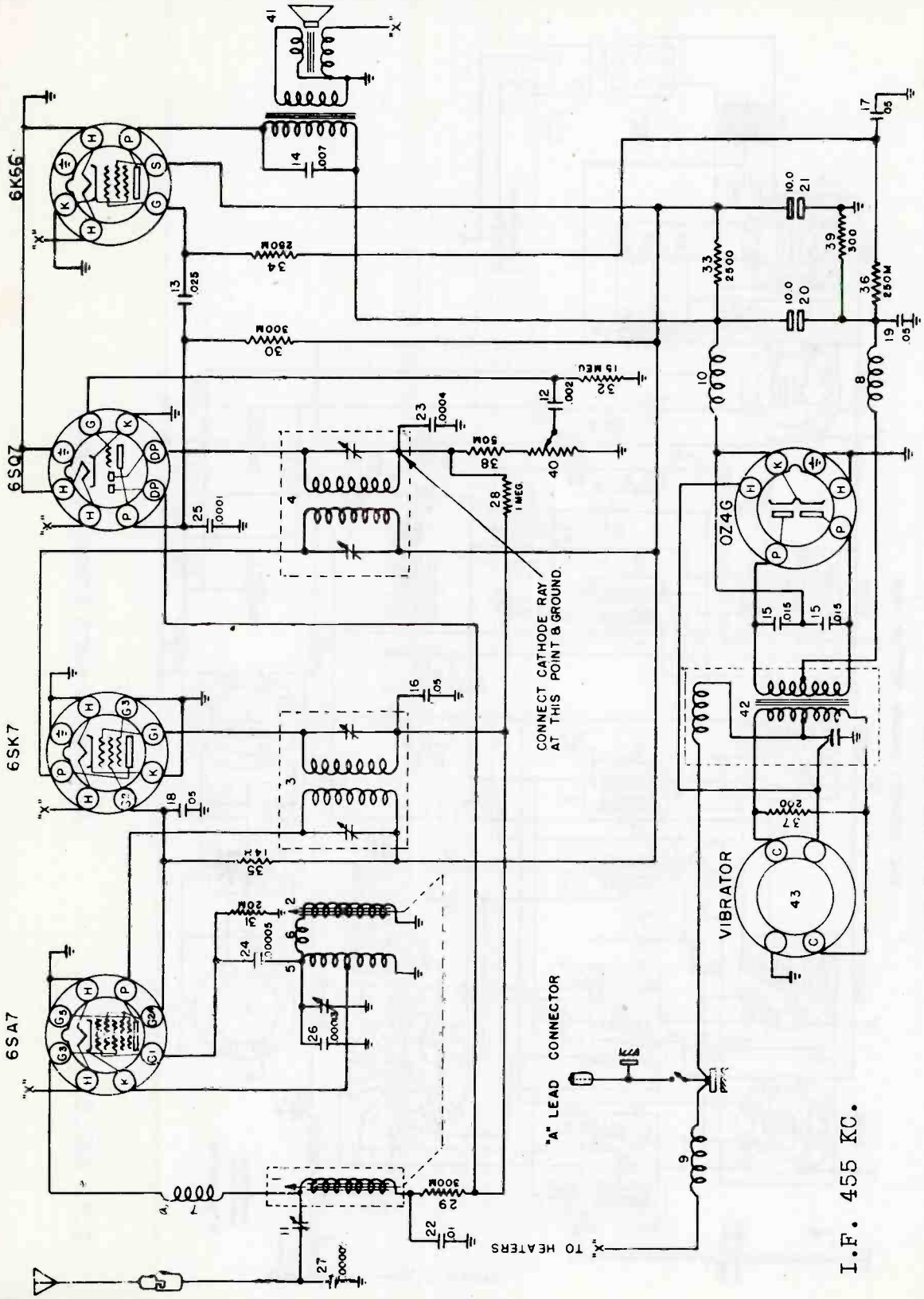
DELCO MODEL R-668-9 CIRCUIT DIAGRAM

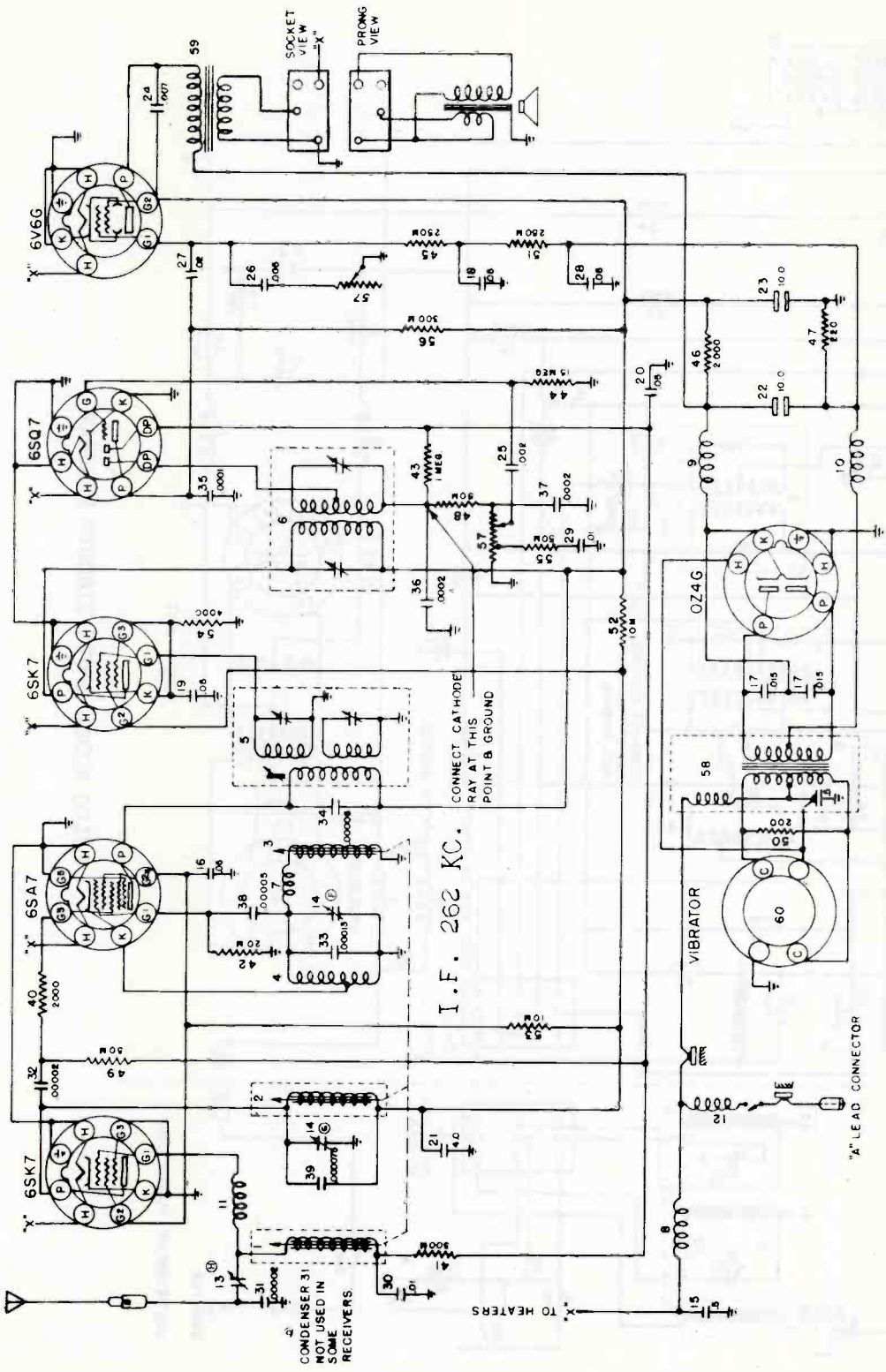
I.F. 262 KC.



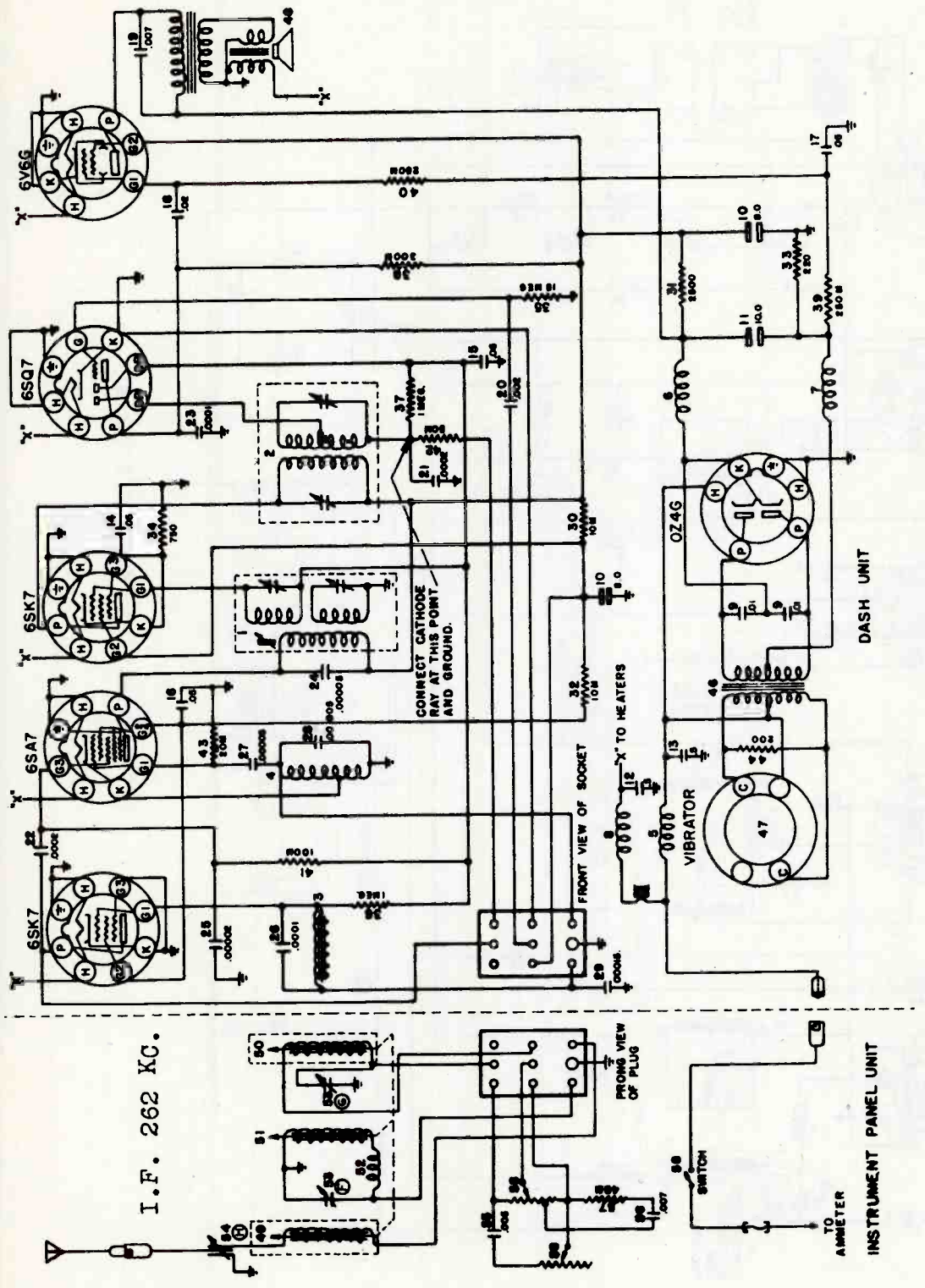
DELCO MODEL R-673 CIRCUIT DIAGRAM

I.F. 262.5

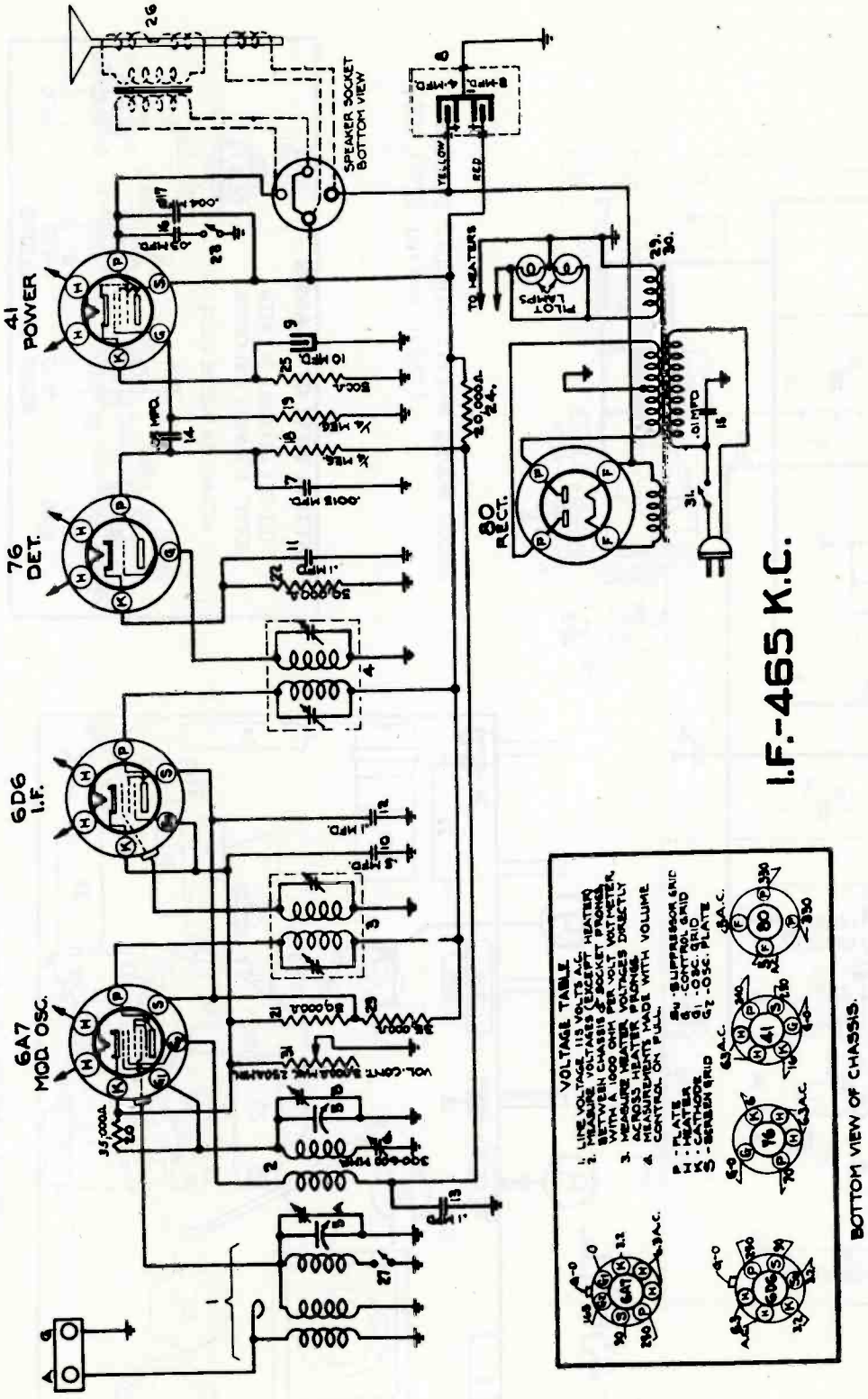

6K5G
6SQ7
6SK7
6SA7
OZ4G
VIBRATOR
CONNECT CATHODE RAY AT THIS POINT & GROUND
"A" LEAD CONNECTOR
TO HEATERS
DELCO MODEL R-675
I.F. 455 KC.



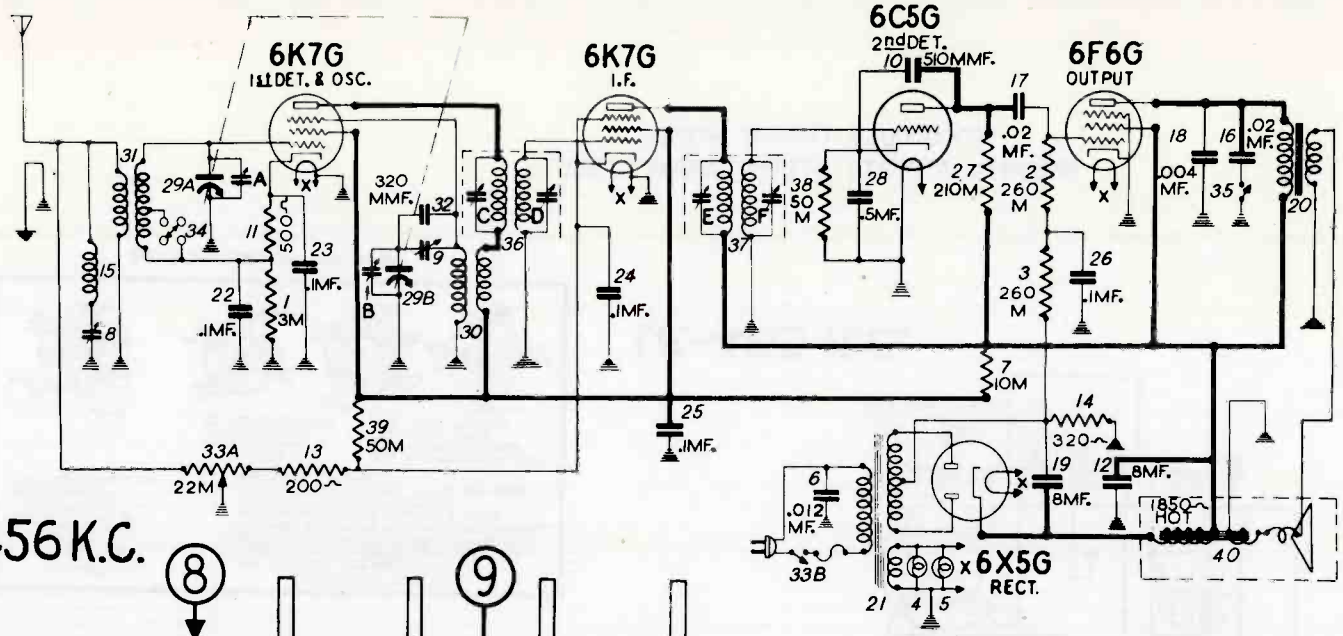
DELCO MODEL R-677 CIRCUIT DIAGRAM



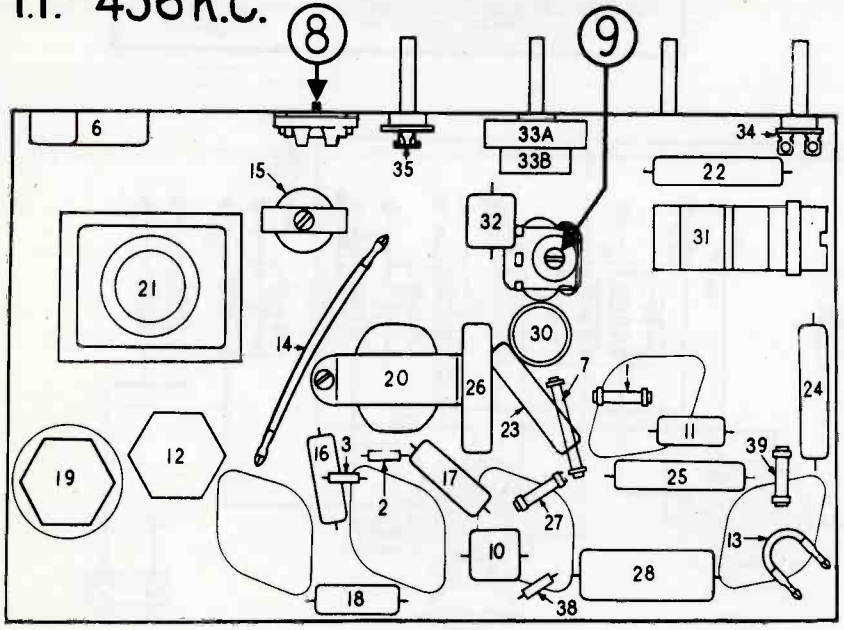
DELCO MODEL R-678 CIRCUIT DIAGRAM



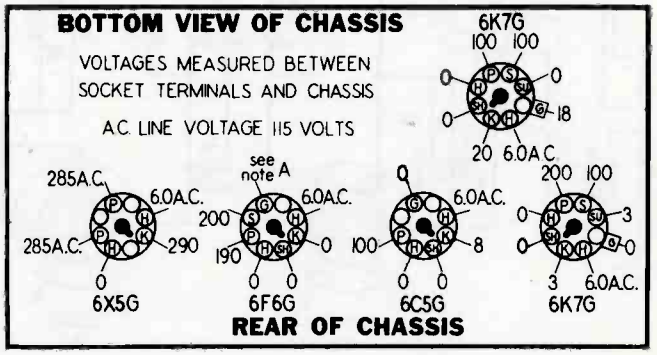
DELCO MODEL R-1115 CIRCUIT DIAGRAM
(Below Serial #100,000)

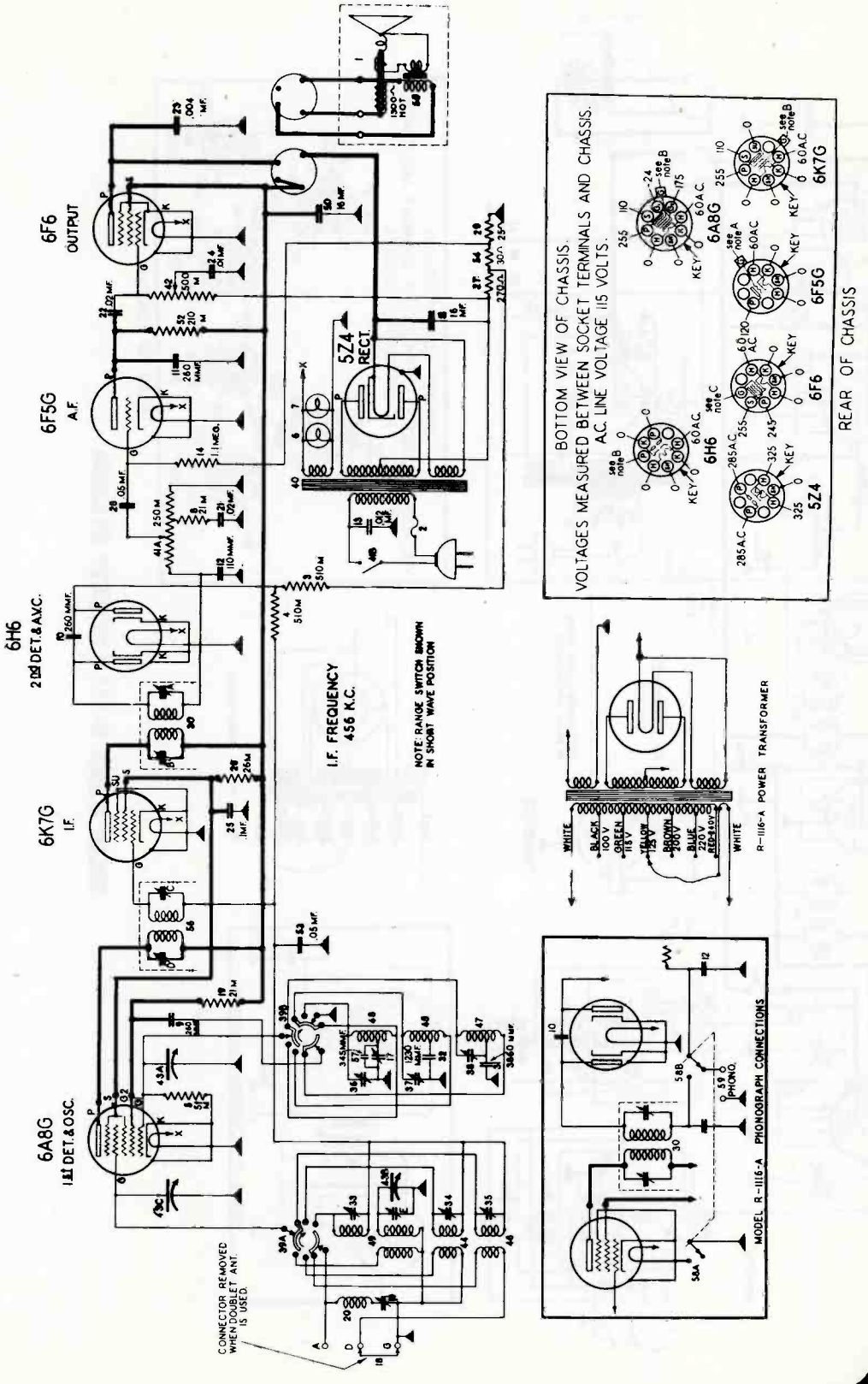


DELCO MODEL R-1115 CIRCUIT DIAGRAM
(Above Serial #100,000)

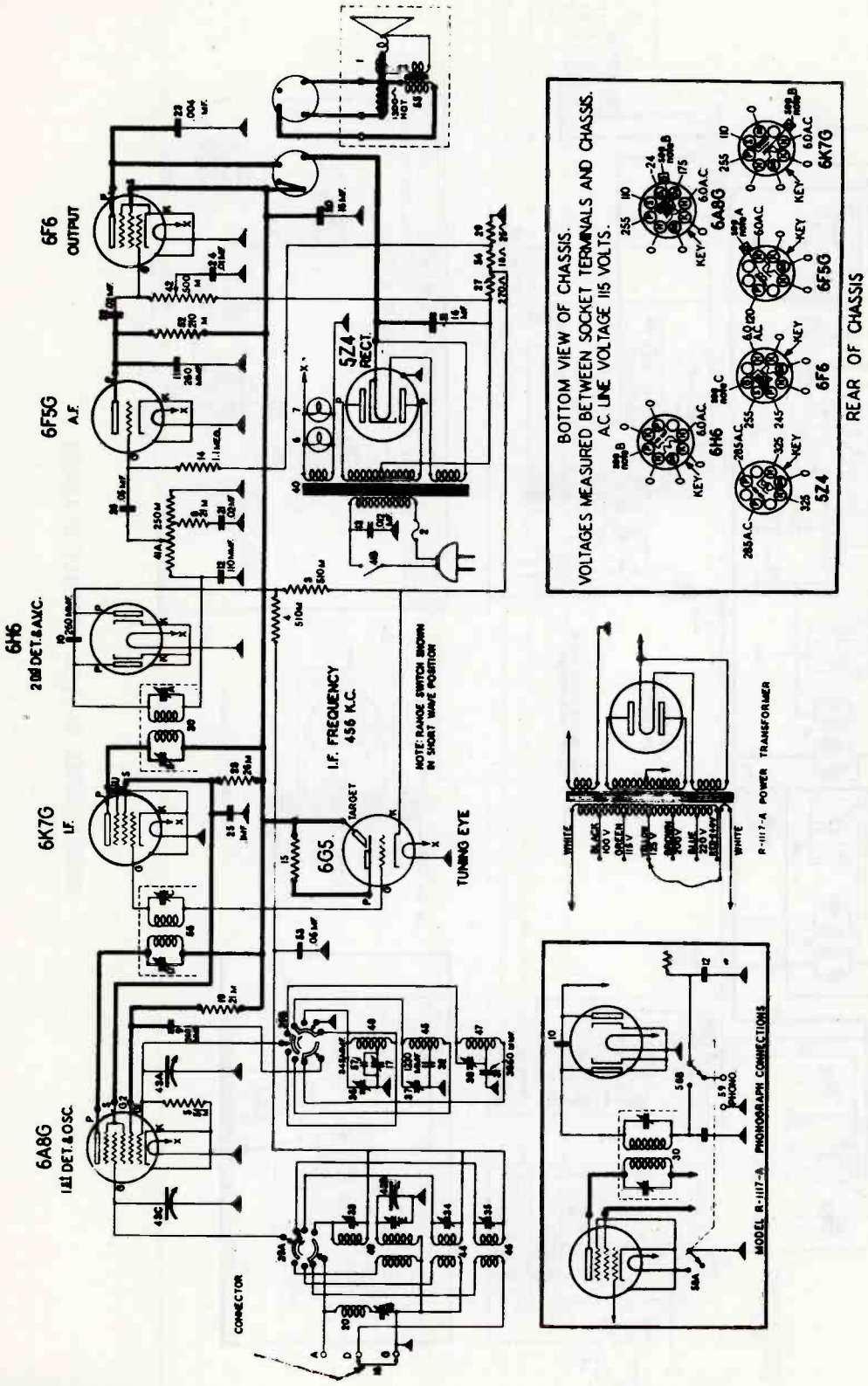


PARTS LAYOUT--Bottom View

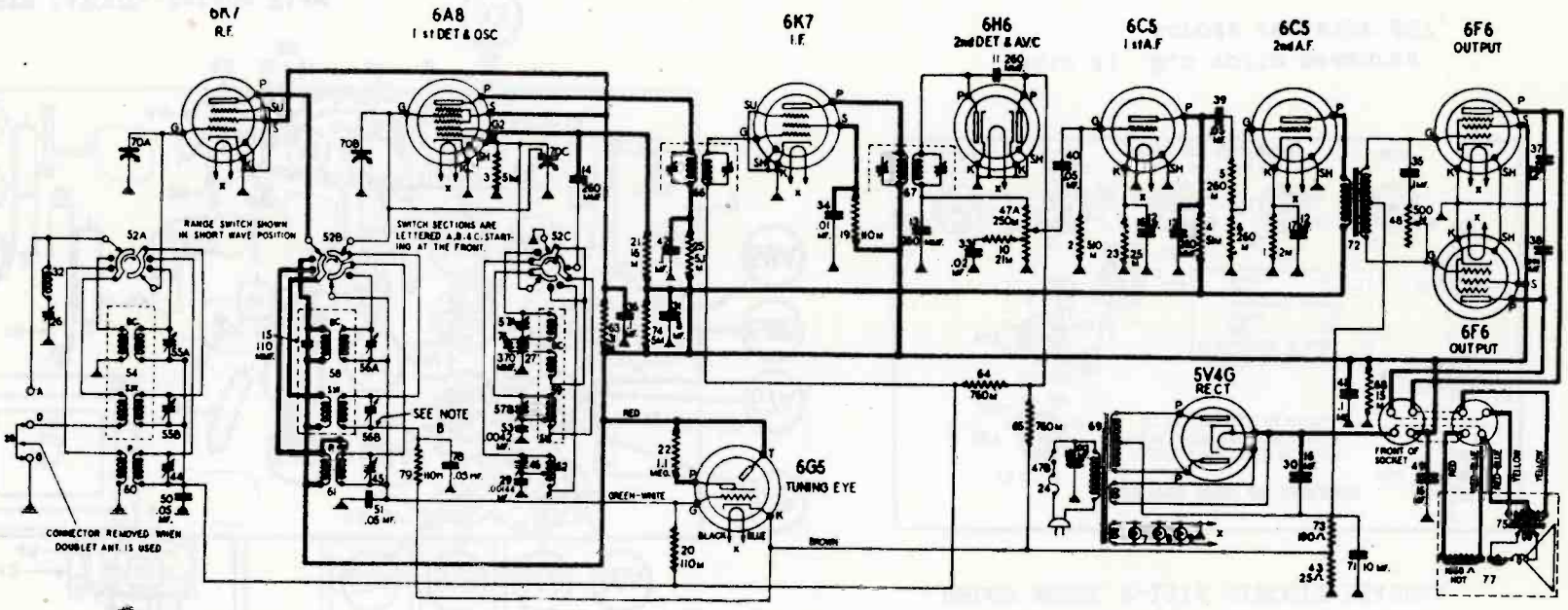




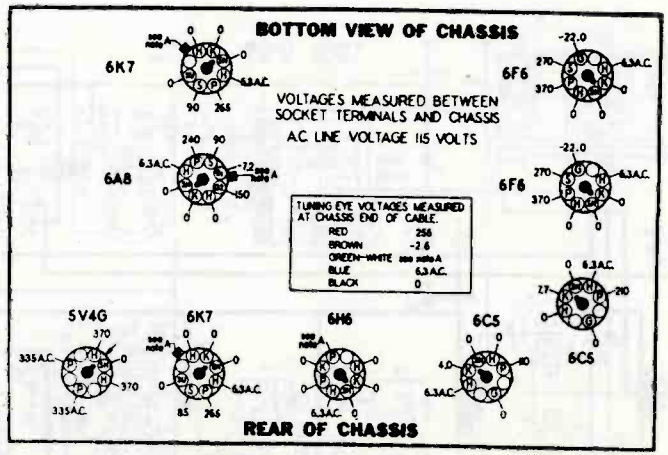
DELCO MODEL R-1116 CIRCUIT DIAGRAM



DELCO MODEL R-1117 CIRCUIT DIAGRAM



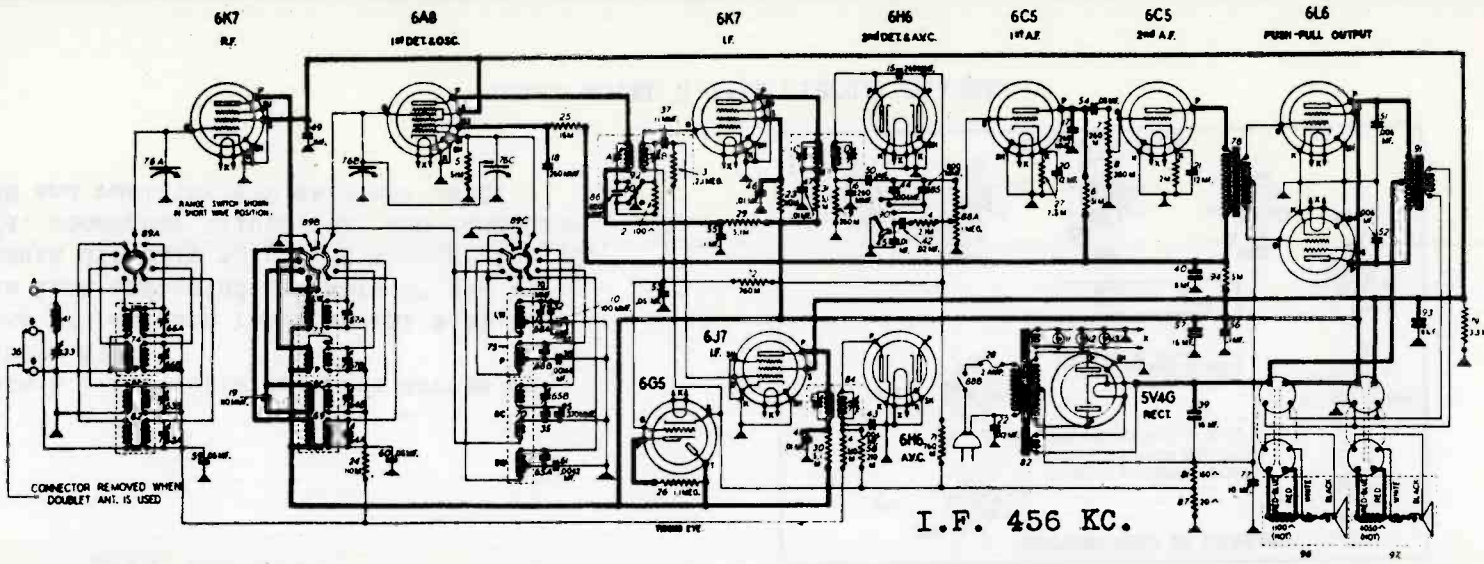
I.F. 456 KC.



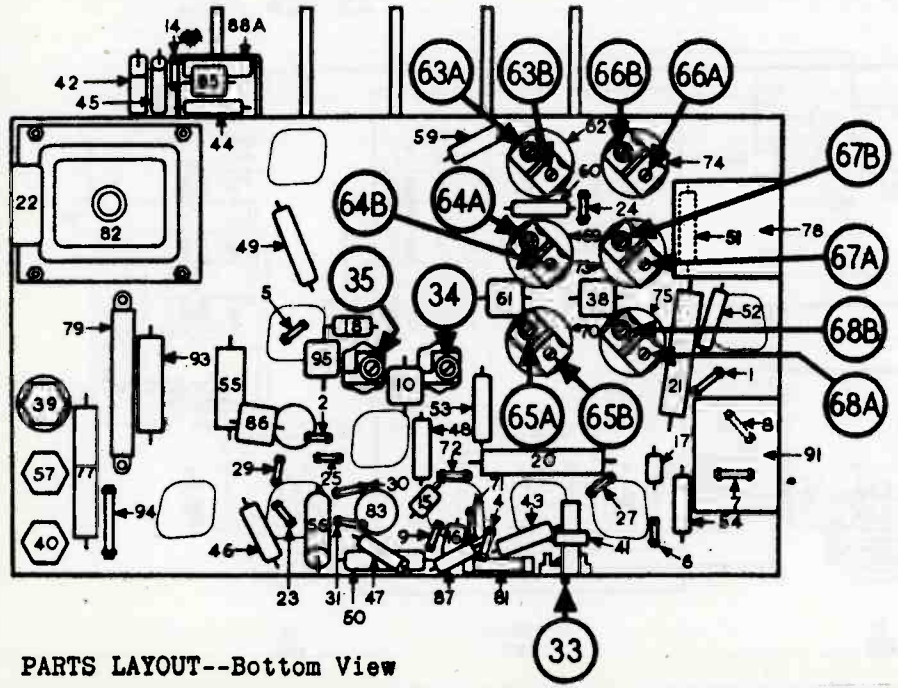
Note A: 2.6 volts measures across resistor #43.

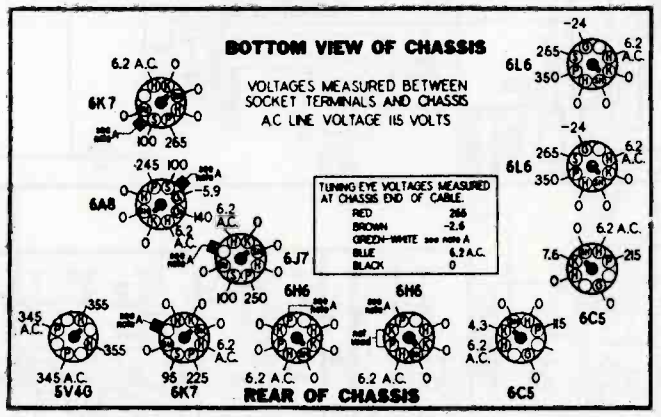
Note B: On sets below serial #415,215, the lead indicated by "Note B" was bypassed directly to ground through the .05 mfd. condenser Illus. #51, and condenser #78 and resistor #79 were not used.

DELCO MODEL R-1118 CIRCUIT DIAGRAM

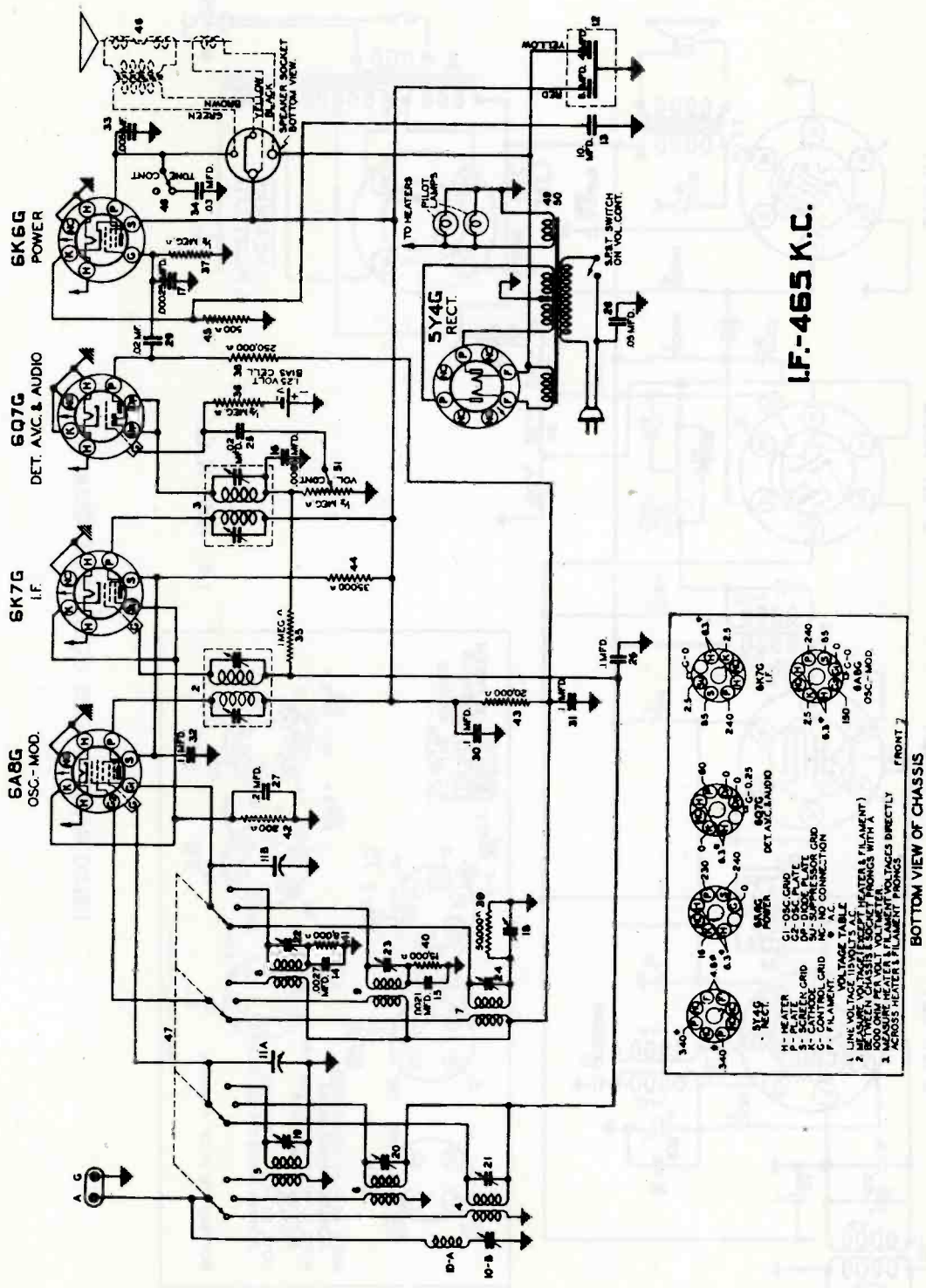


DELCO MODEL R-1119 CIRCUIT DIAGRAM



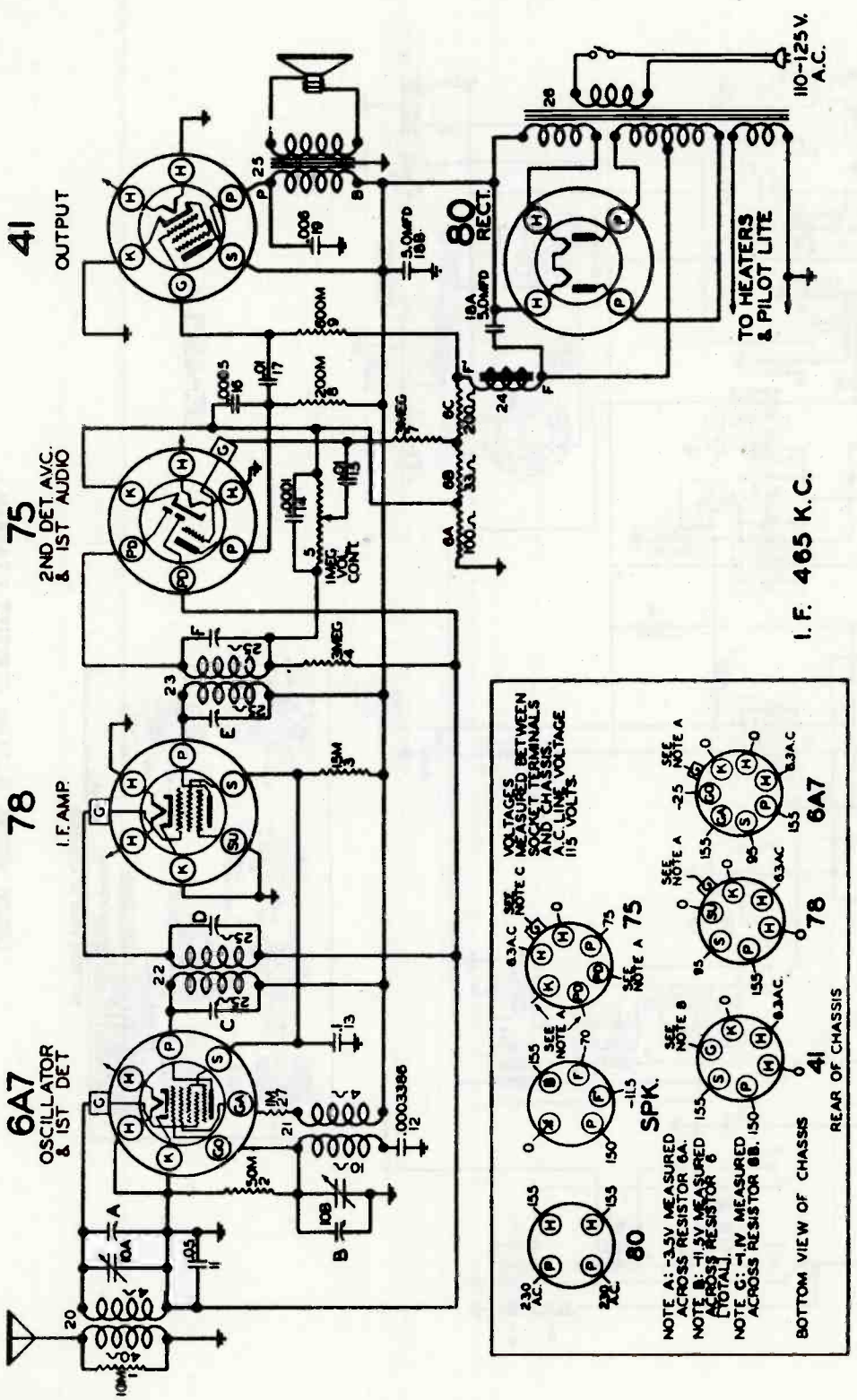


Note A: 2.6 volts measures across resistor #87.

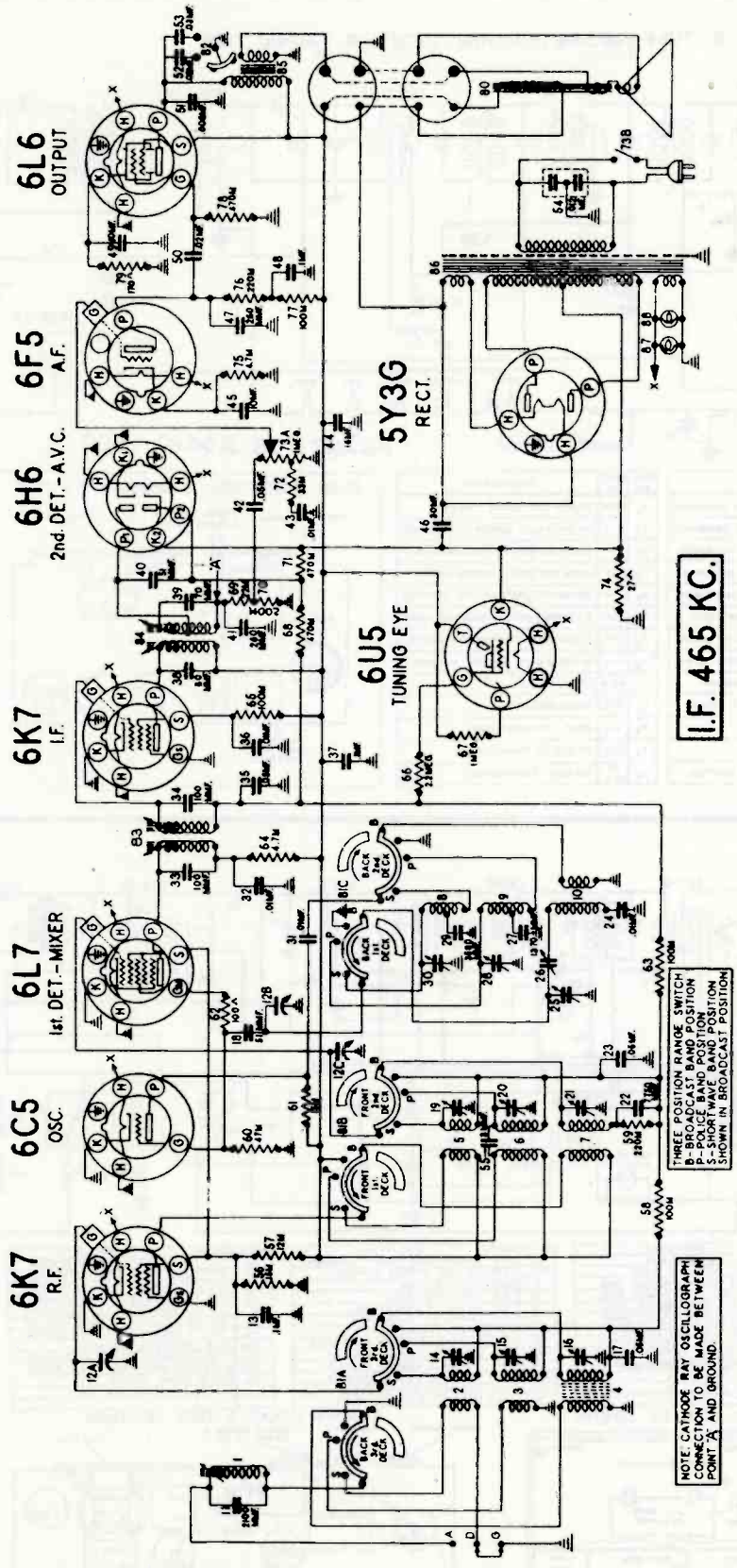


I.F.-465 K.C.

DELCO MODEL R-1120 CIRCUIT DIAGRAM

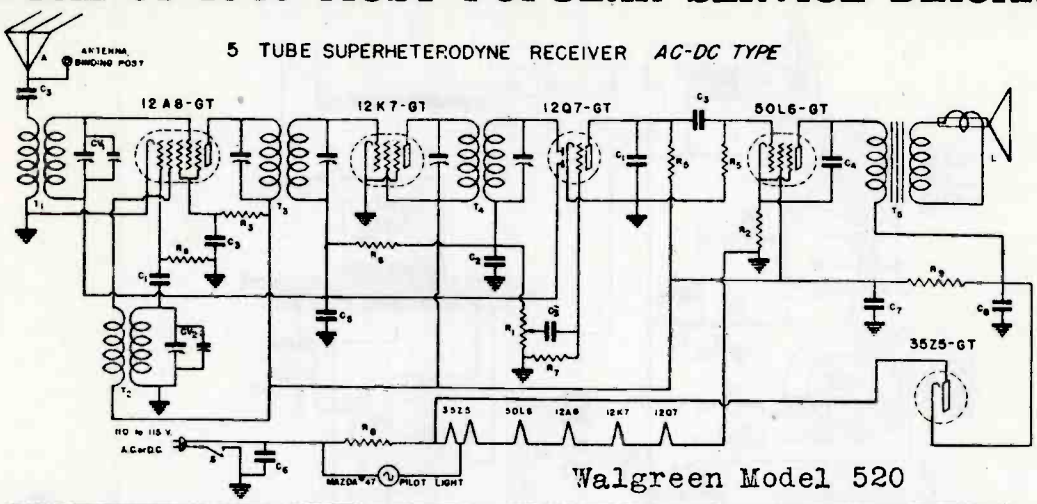


DELCO MODEL R-1125 CIRCUIT DIAGRAM



DELCO MODEL R-1131 CIRCUIT DIAGRAM

5 TUBE SUPERHETERODYNE RECEIVER *AC-DC TYPE*

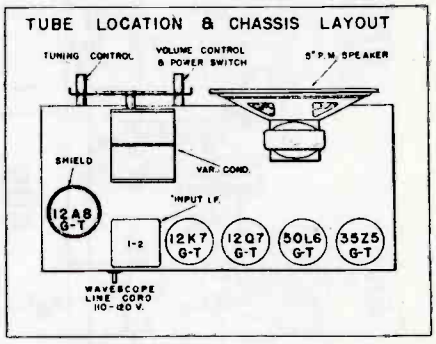


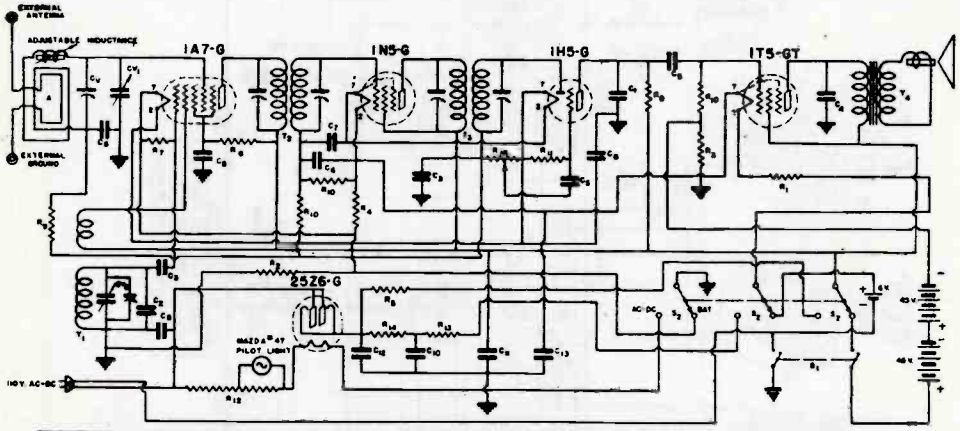
Walgreen Model 520

DIA. NO.	PART NO.	DESCRIPTION
C_1	—	.00025 MFD. 600 V. TUBULAR CONDENSER
C_2	—	.0005 MFD. 200 V. TUBULAR CONDENSER
C_3	—	.01 MFD. 400 V. TUBULAR CONDENSER
C_4	—	.02 MFD. 400 V. TUBULAR CONDENSER
C_5	—	.05 MFD. 200 V. TUBULAR CONDENSER
C_6	—	.1 MFD. 400 V. TUBULAR CONDENSER
C_7	IN 345	20 MFD. 150 W.V. ELECTROLYTIC COND.
C_8	IN 345	40 MFD. 150 W.V. ELECTROLYTIC COND.
CV_{1-2}	648	2 GANG VARIABLE CONDENSER
R_9	—	2500 OHM 1/2 W. CARBON RESISTOR
A	—	WAVESCOPE AERIAL
L	838	P.M. SPEAKER
S	—	LINE SWITCH ON VOLUME CONTROL

DIA. NO.	PART NO.	DESCRIPTION
R_1	200BP	500,000 OHM VOLUME CONTROL
R_2	—	150 OHM 1/2 WATT CARBON RESISTOR
R_3	—	50000 OHM 1/2 WATT CARBON RESISTOR
R_4	—	50000 OHM 1/2 WATT CARBON RESISTOR
R_5	—	500,000 OHM 1/2 WATT CARBON RESISTOR
R_6	—	2 MEGOHM 1/2 WATT CARBON RESISTOR
R_7	—	6 MEGOHM 1/2 WATT CARBON RESISTOR
R_8	—	10 OHM 1/2 WATT CARBON RESISTOR
T_1	A-B-A	ANTENNA COIL
T_2	O-B	OSCILLATOR COIL
T_3	1-2	INPUT I.F. TRANSFORMER
T_4	O-2	OUTPUT I.F. TRANSFORMER
T_5	IN 838	SPEAKER TRANSFORMER

TUBE LOCATION & CHASSIS LAYOUT





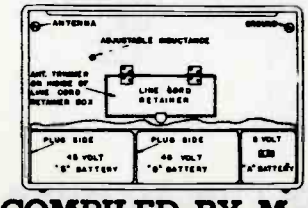
Walgreen Model 530

DIAG. NO.	PART NO.	DESCRIPTION
C_1	—	.0001 MICA CONDENSER
C_2	—	.00002 MICA COND. ± 10%
C_3	—	.0005 MFD. 600 V. TUBULAR COND.
C_4	—	.002 MFD. 600 V. TUBULAR COND.
C_5	—	.01 MFD. 400 V. TUBULAR COND.
C_6	—	.05 MFD. 200 V. TUBULAR COND.
C_7	—	.1 MFD. 200 V. TUBULAR COND.
C_8	—	.1 MFD. 400 V. TUBULAR COND.
C_9	—	25 MFD. 25 V. TUBULAR COND.
C_{10}	345	10 MFD. 25 V. ELECTROLYTIC COND.
C_{11}	345	30 + 60 V. -
C_{12}	345	40 + 60 V. -
C_{13}	345	75 + 6 V. -

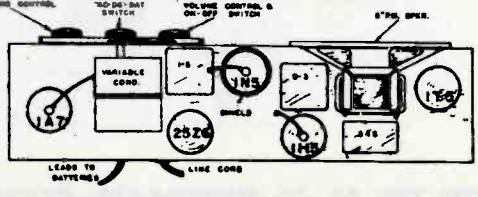
DIAG. NO.	PART NO.	DESCRIPTION
C_V	518	2 TO 40 MMFD. TRIMMER CONDENSER
CV_{1-2}	648-S	2 GANG VARIABLE CONDENSER
A	3830-A	LOOP ANTENNA
T_1	O-S	OSCILLATOR COIL
T_2	1-S	INPUT I.F. TRANSFORMER
T_3	O-3	OUTPUT I.R. TRANSFORMER
T_4	838-S	P.M. SPEAKER
R_1	—	10 OHM 1/2 W. CARBON RESIST. ± 10%
R_2	—	30 OHM 1/2 W. CARBON RESISTOR
R_3	—	100 OHM 1/2 W. CARBON RESISTOR
R_4	—	900 OHM 1/2 W. CARBON RESISTOR
S_1	—	SWITCH ON VOLUME CONTROL
S_2	1005	3 POLE TWO POSITION SWITCH

DIAG NO.	PART NO.	DESCRIPTION
R_A	—	3000 OHM 1/2 W. CARBON RESISTOR
R_B	—	50,000 OHM 1/2 W. CARBON RESISTOR
R_C	—	100,000 OHM 1/2 W. CARBON RESISTOR
R_D	—	1/2 MEGOHM 1/2 W. CARBON RESISTOR
R_E	—	1 MEGOHM 1/2 W. CARBON RESISTOR
R_{10}	—	2 MEGOHM 1/2 W. CARBON RESISTOR
R_{11}	—	3 MEGOHM 1/2 W. CARBON RESISTOR
R_{12}	1018	RESISTANCE LINE CORD
R_{13}	20-155	400 OHM 1 WATT VITRIC WOUND RESIST.
R_{14}	40-155	2200 OHM 1/2 WATT VITRIC WOUND RESIST.
R_{15}	2038-S	VOLUME CONTROL

BACK VIEW OF CABINET

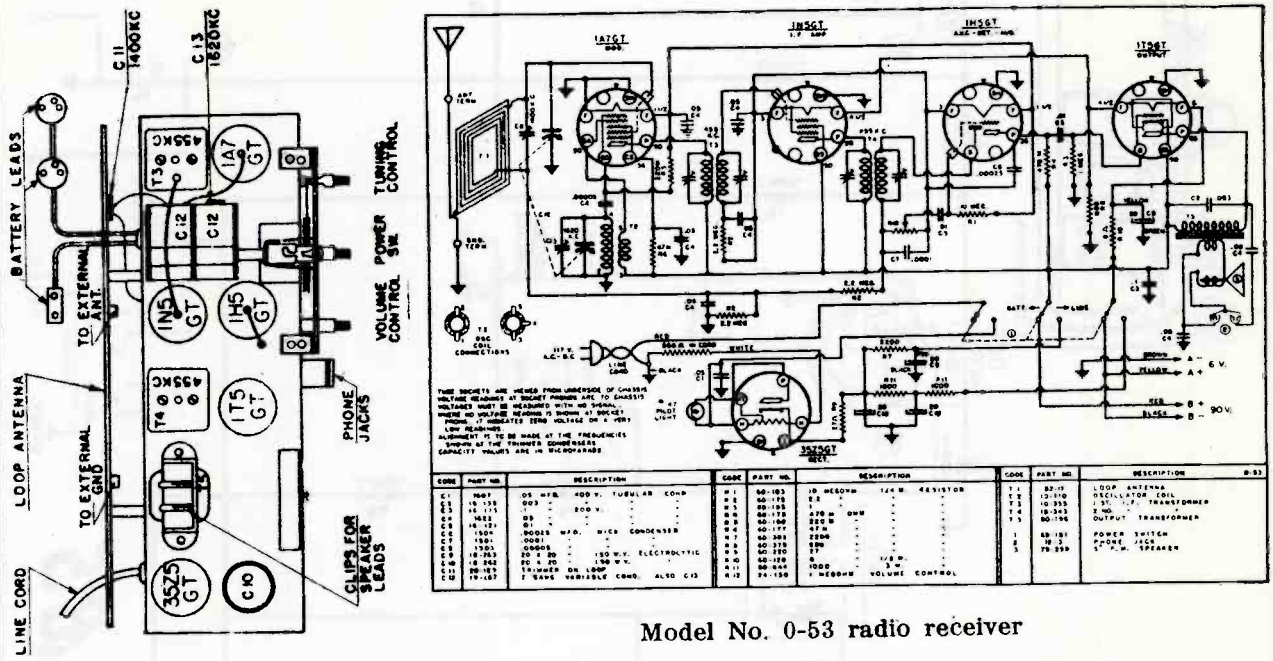


CHASSIS LAYOUT & TUBE LOCATION

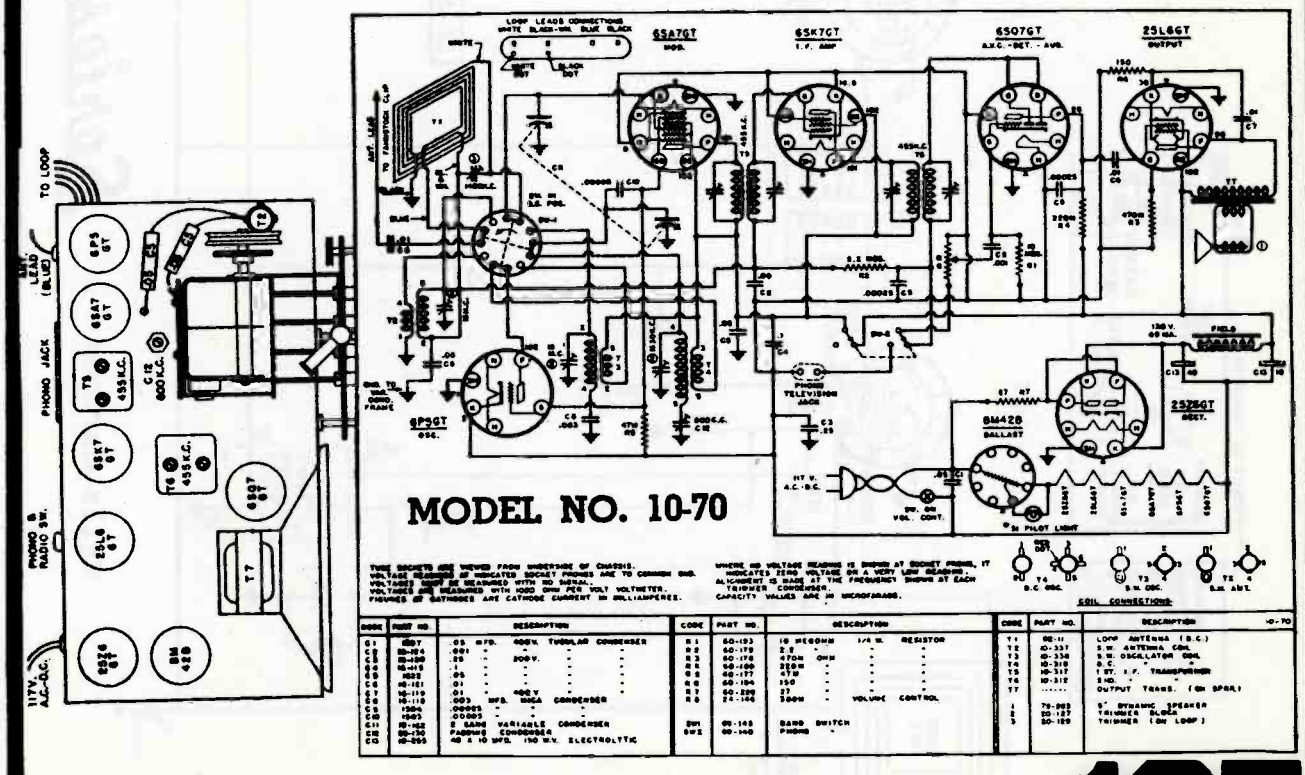


MANUAL OF 1940 MOST POPULAR SERVICE DIAGRAMS

WARWICK MANUFACTURING CORPORATION

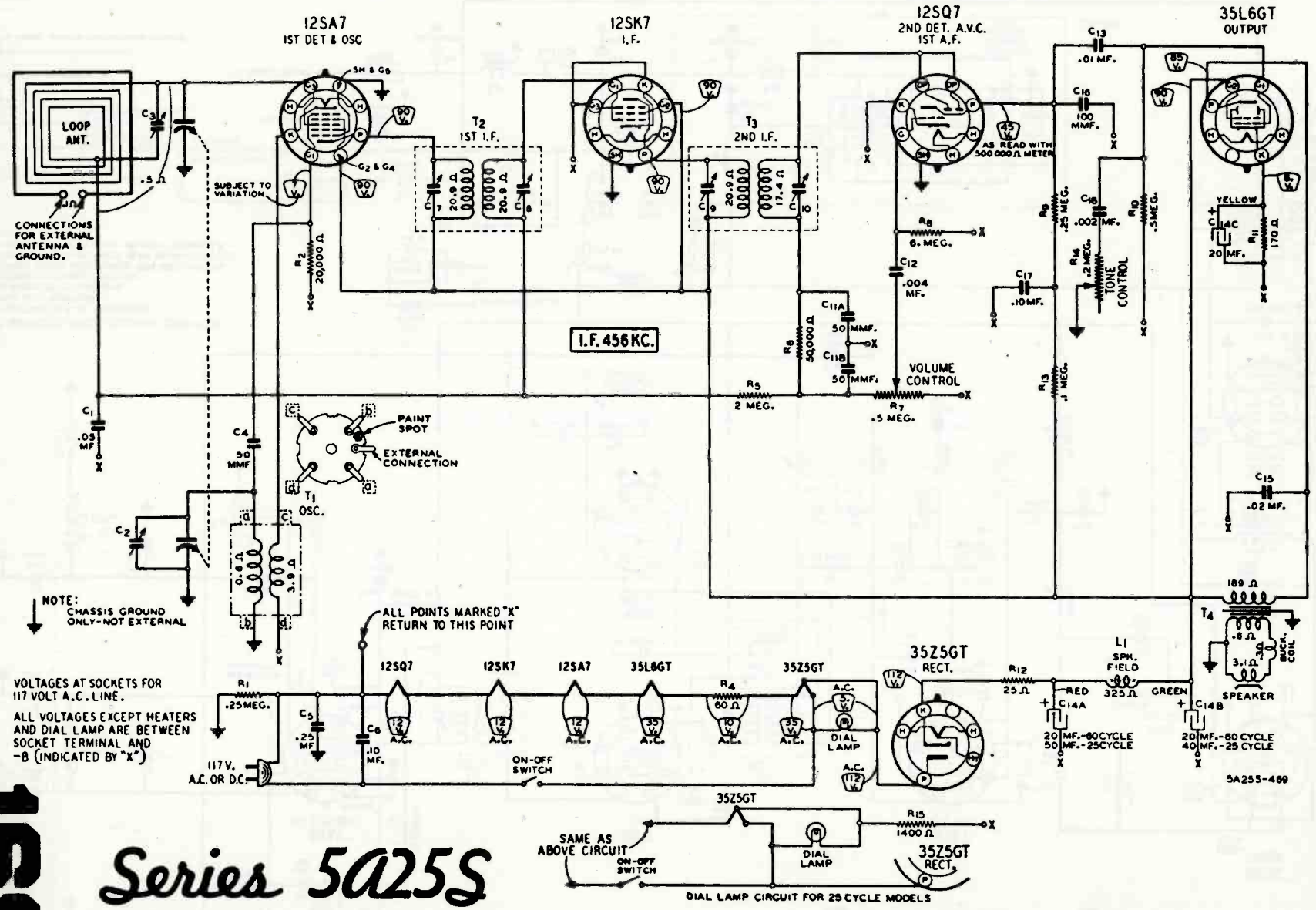


Model No. 0-53 radio receiver



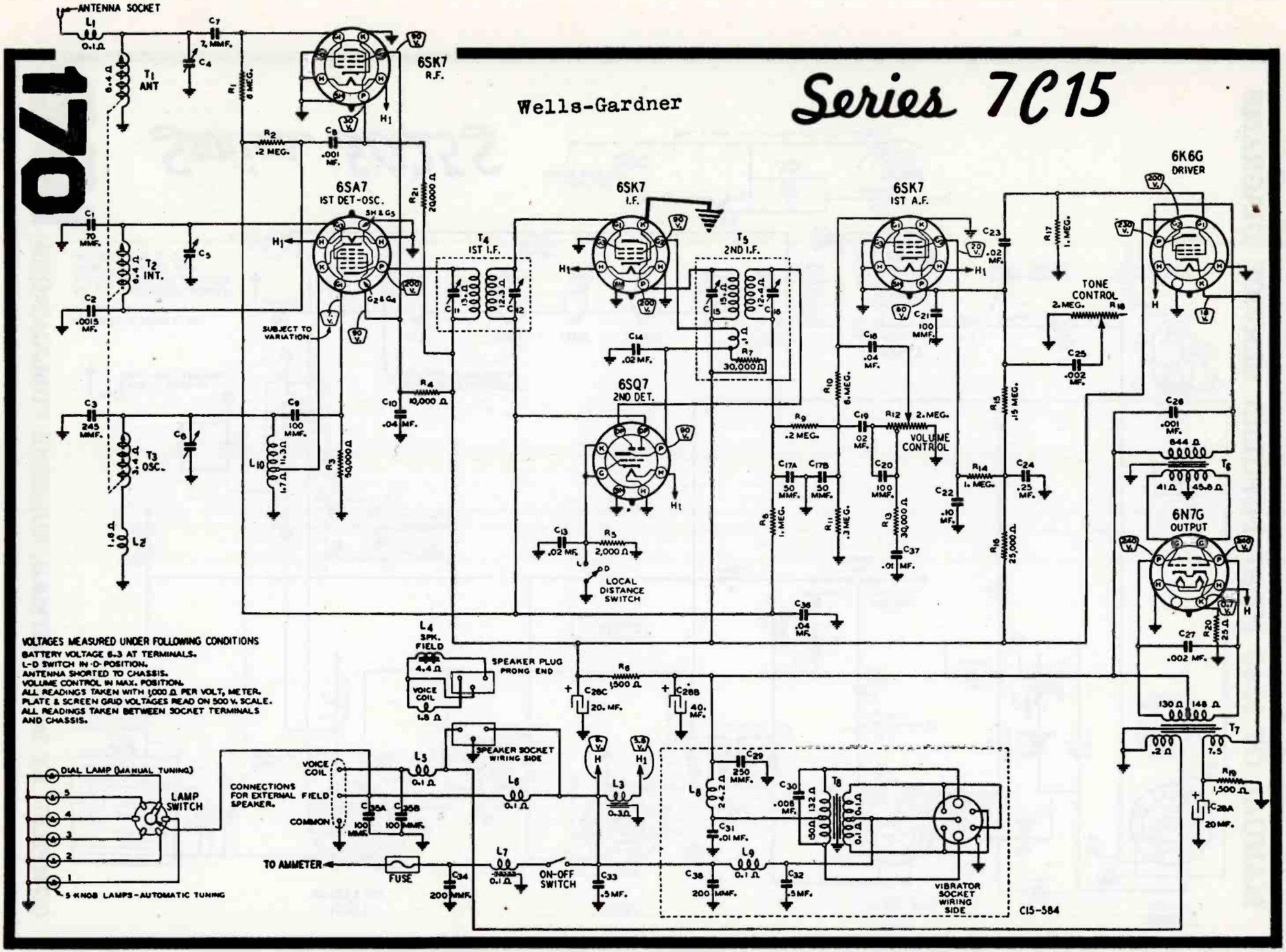
COMPILED BY M. N. BEITMAN, SUPREME PUBLICATIONS

Series 485
Wells-Gardner
I.F. 456 KC
1A5G OUTPUT
1H5G 2ND DET. A.V.C. 1ST A.F.
1P5G 1ST I.F.
1A7G 1ST DET. OSC.
TO LOOP ANTENNA
BLACK
WHITE
B5-313
1A5G OUTPUT
C14 .002 MF.
1018 Ω
0.7 Ω
3.0 Ω
SPEAKER
T4
R8 800 Ω
A-
B-
R6 2 MEG.
C13 .01 MF.
R7 1 MEG.
C15 4 MF.
A+ 1½ V.
B+ 90 V.
SWITCH
1H5G 2ND DET.-A.V.C. 1ST A.F.
C12 .01 MF.
VOLUME CONTROL
R5 .5 MEG.
R6 3 MEG.
C11A 50 MMF.
C11B 50 MMF.
C10 100 MMF.
R3 50,000 Ω
R4 2 MEG.
T3 2ND I.F.
1P5G 1ST I.F.
T2 1ST I.F.
1A7G 1ST DET.
R2 30,000 Ω
C5 .04 MF.
R1 2 MEG.
C4 35 MMF.
T1 OSC.
SUBJECT TO VARIATION
GANG CONDENSER
C3 .05 MF.
0.6 Ω
.1 Ω
LOOP ANT.
CONNECTIONS FOR EXTERNAL ANTENNA & GROUND.
B5-318
TOP VIEW
2ND I.F. TRANS. T3
C8 & C9 2ND I.F.
C6 & C7 1ST I.F.
1ST I.F. TRANS. T2
ANT. SECT.
OSC. SECT.
FRONT OF CHASSIS
C1 ANT. TRIMMER
C2 OSC. TRIMMER
BOTTOM VIEW



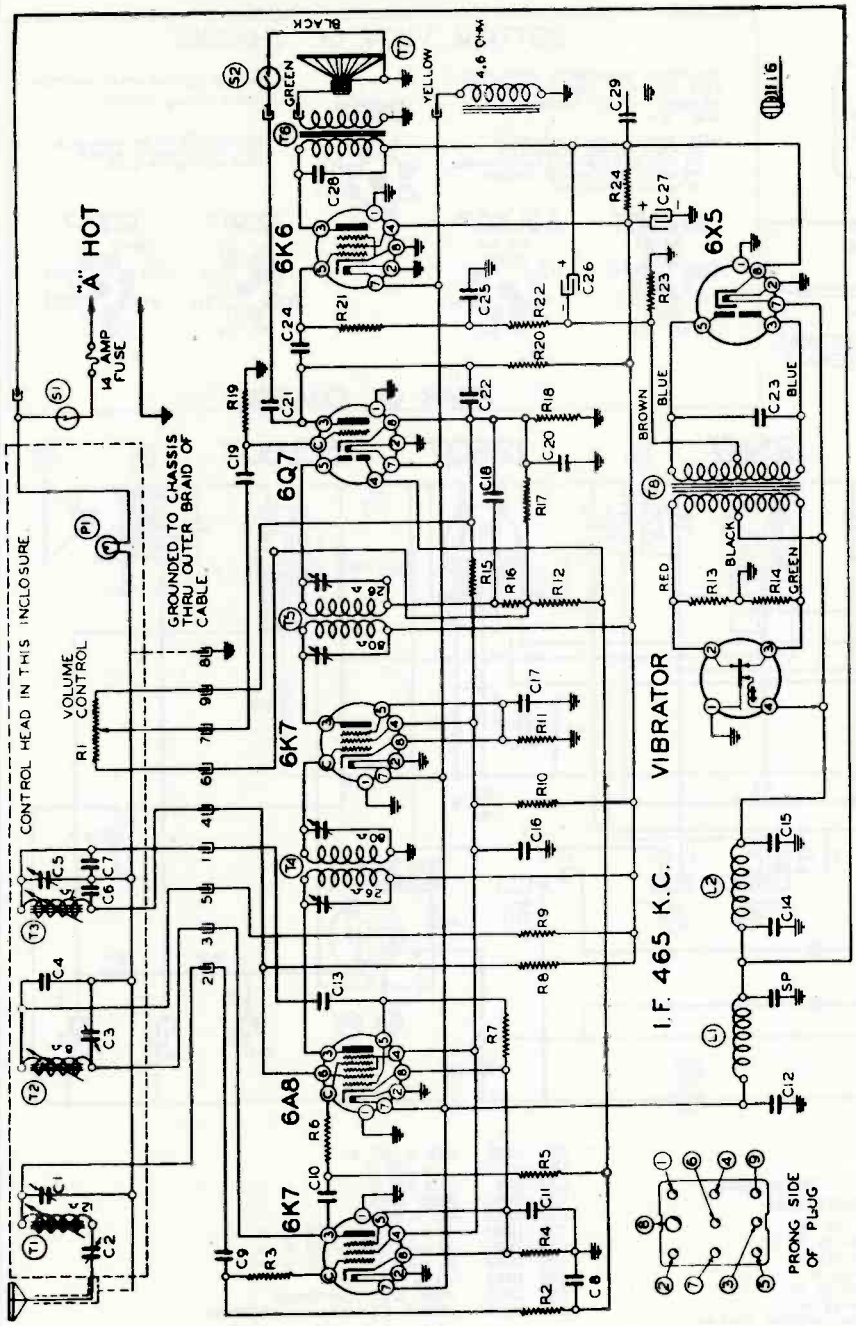
Series 5A25S

Wells-Gardner Series 7C15



VOLTAGES MEASURED UNDER FOLLOWING CONDITIONS
BATTERY VOLTAGE 6.3 AT TERMINALS.
L-D SWITCH IN D POSITION.
ANTENNA SHORTED TO CHASSIS.
VOLUME CONTROL IN MAX. POSITION.
ALL READINGS TAKEN WITH 1,000 Ω PER VOLT, METER.
PLATE & SCREEN GRID VOLTAGES READ ON 500 V. SCALE.
ALL READINGS TAKEN BETWEEN SOCKET TERMINALS AND CHASSIS.

TRUETONE MODEL D976

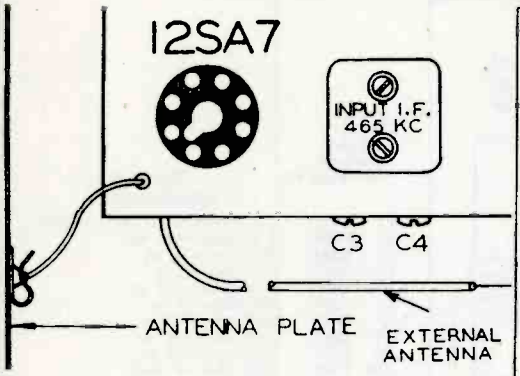


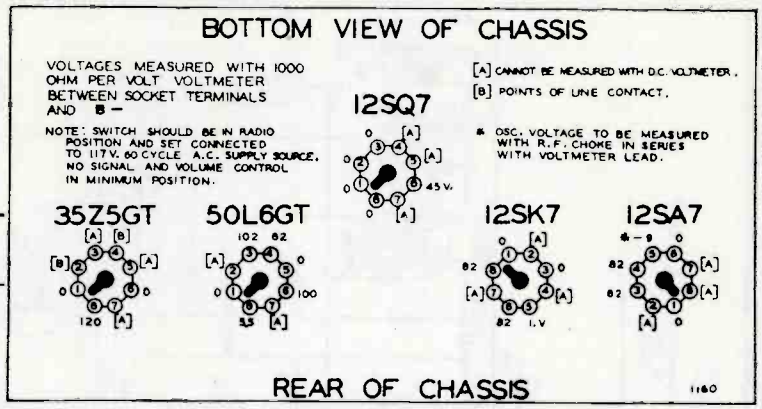
Circuit Diagram Reference No.	Part No.	Description
		RESISTORS
R1	101161	1.2 megohm volume control
R2	13019	1 megohm—½ w.
R3	13054	500 ohm—½ w.
R4	13079	400 ohm—½ w.
R5	13019	1 megohm—½ w.
R6	13054	500 ohm—½ w.
R7	13012	50M ohm—½ w.
R8	13012	50M ohm—½ w.
R9	13021	20M ohm—½ w.
R10	13065	30M ohm—1 watt
R11	130235	1500 ohm—½ w.
R12	13019	1 megohm—½ w.
R13	13056	100 ohm—½ w.
R14	13056	100 ohm—½ w.
R15	130208	40M ohm—½ w.
R16	13020	100M ohm—½ w.
R17	130118	600M ohm—¼ w.
R18	130101	600 ohm—½ w.
R19	13019	1 megohm—½ w.
R20	13011	250M ohm—½ w.
R21	1305	300M ohm—½ w.
R22	13011	250 ohm—½ w.
R23	130274	360 ohm—1 watt
R24	130273	900 ohm—1 watt
		CONDENSERS
C1	12483	Antenna Shunt Trimmer
C2	12481	Antenna Series Trimmer
C3	12480	R. F. Shunt Trimmer
C4	100102	.15 x 400 v.
C5	12480	Oscillator Shunt Trimmer
C6	129137	.0005 Mica
C7	129136	.00017 Mica
C8	10022	.05 x 200 v.
C9	12939	.00005 Mica
C10	1292	.0005 Mica
C11	10022	.05 x 200 v.
C12	1296	.002 Mica
C13	12912	.00025 Mica
C14	10031	.5 x 120 v.
C15	10031	.5 x 120 v.
C16	11626	.25 x 400 v.
C17	1009	.05 x 200 v.
C18	1295	.0001 Mica
C19	10011	.01 x 400 v.
C20	10026	.02 x 400 v.
C21	10037	.003 x 600 v.
C22	1295	.0001 Mica
C23	100100	.008 x 1600 v.
C24	10011	.01 x 400 v.
C25	11626	.25 x 200 v.
C26	11981	16 mfd.
C27	11981B	16 mfd.
C28	10089	.008 x 800 v.
C29	10074	.1 x 400 v.
		PARTS
T1	111118	P. B. Antenna Coil Assembly
T2	10949	P. B. R. F. Coil Assembly
T3	110109	P. B. Oscillator Coil Assembly
T4	108137	Input I. F.—465 kc.
T5	108138	Output I. F.—465 kc.
T6	10586	Output Transformer
T7	114154	6" Dynamic Speaker
T8	104159	Power Transformer
L1	10566	"A" Choke
L2	10519	"A" Choke
S1	101161	Switch on Volume Control
S2	12574	Tone Control Switch
P1	10797	6-8 v. Pilot Lite - T51
	12610	Vibrator

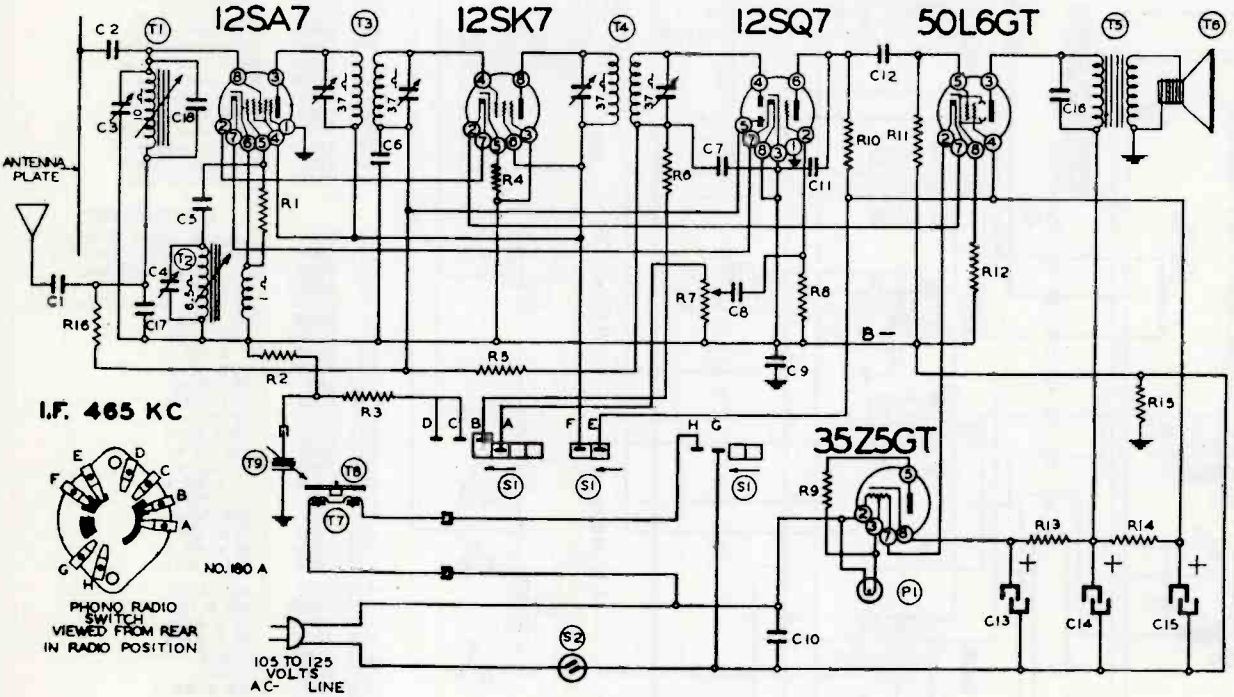
WHEEL STATIC:

Wheel or brake noise is probably the most peculiar type of interference and is due to accumulated static charges. This type of interference is only noticeable while the car is in motion and could very easily be confused with ignition interference. Check for this with car running at a good speed, turn the ignition switch off and the clutch disengaged, apply the brakes. If the noise stops, the source of the static is in the wheels. To overcome the wheel static condition, use graphite grease in the wheel bearings or insert grounding springs in the hub caps. In the case of external brakes, it may be necessary to ground the brake bands to the frame of the car.

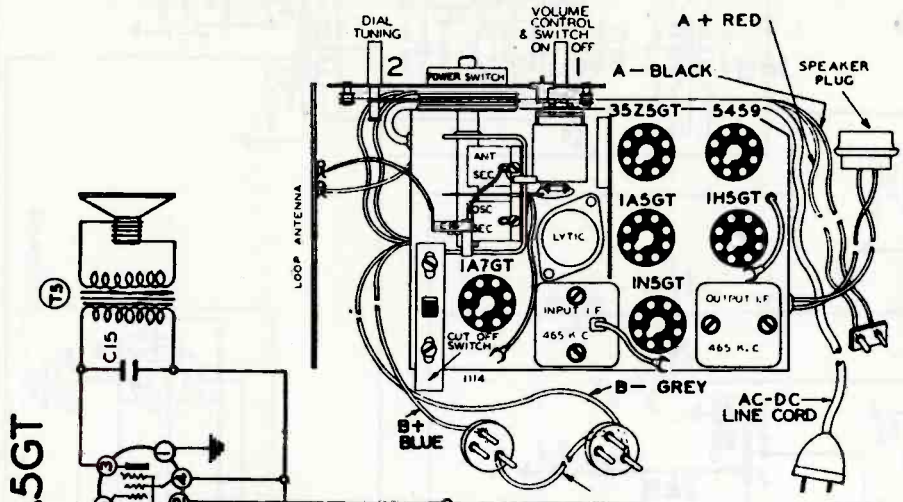
TRUETONE MODEL D1070







Circuit Diagram Ref. No.	Part No.	Description
		RESISTORS
R1	130176	20M ohm—½ w.
R2	130118	600M ohm—½ w.
R3	130118	600M ohm—½ w.
R4	13056	100 ohm—½ w.
R5	130170	3 megohm—½ w.
R6	13012	50M ohm—½ w.
R7	101217	½ megohm—volume control
R8	130257	5 megohm—½ w.
R9	130215	25 ohm—½ w.
R10	1309	200M ohm—½ w.
R11	13037	750M ohm—½ w.
R12	130166	150 ohm—½ w.
R13	13097	200 ohm—½ w.
R14	130287	1200 ohm—1 watt
R15	1309	200M ohm—½ w.
R16	1309	200M—½ w.
		CONDENSERS
C1	1295	.0001 Mica Condenser
C2	129114	.0003 mfd. mica
C3	124136	Antenna Trimmer
C4	124136	Oscillator Trimmer
C5	1295	.0001 mica
C6	1009	.05 x 200 v.
C7	1295	.0001 mica
C8	10025	.002 x 600 v.
C9	100119	.1 x 400 v.
C10	1001	.1 x 400 v.
C11	12912	.00025 mica
C12	10019	.006 x 600 v.
C13	11994	40 mfd. lytic—150 w. v.
C14	11994	20 mfd. lytic—150 w. v.
C15	11994	20 mfd. lytic—150 w. v.
C16	10011	.01 x 400 v.
C17	129162	.0008 Mica Condenser
C18	129163	.000025 Ceramicon Condenser
		C3 and C4 in same unit
		C13, C14 and C15 are in same unit
		PARTS
T1	112767	Antenna Coil—Permeability tuning assembly complete
T2	112767	Oscillator Coil
T3	108140F	Input I. F. Coil—465 kc.
T4	108145D	Output I. F. Coil—465 kc.
T5	105108	Output Transformer
T6	114193	5" P.M. Speaker
T7	104206	Phono Motor
T8	12228	Turntable
T9	114194	Phono pick up arm
S1	125113	Phono Switch
S2		Switch on volume control
P1	107249	Pilot light T47
		T1 and T2 in same unit



Western Auto Truetone Model D-1080

RESISTORS

R1	13038	2 megohm—½ w.
R2	130266	200M ohm—½ w.
R3	13018	4M ohm—½ w.
R4	130208	40M ohm—½ w.
R5	130215	25 ohm—½ w.
R6	130170	3 megohm—½ w.
R7	130129	2500 ohm—½ w.
R8	101210	1 megohm volume control
R9	130257	5 megohm—½ w.
R10	1303	500M ohm—½ w.
R11	13038	2 megohm—½ w.
R12	13092	1M ohm—½ w.
R13	130100	150M Ohm—½ w.

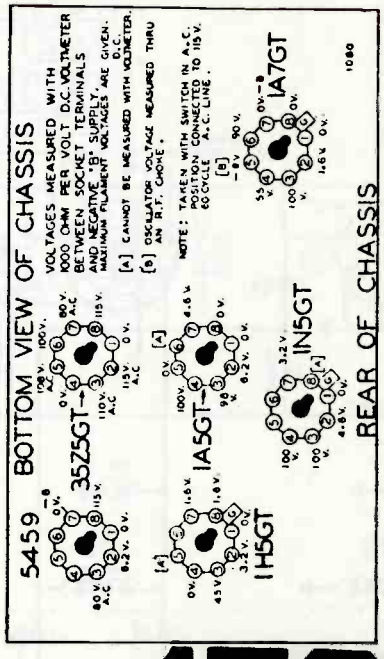
CONDENSERS

C	102125	2 gang variable condenser
C1	12912	.00025
C2	100110	.2 mfd. x 400 v.
C3	1009	.05 x 200 v.
C4	12912	.00025
C5	1009	.05 x 200 v.
C6	10020	.1 x 200 v.
C7	10011	.01 x 400 v.
C8	119104	Lytic 200 mfd. x 6 w. v.
C9	1295	.0001 mfd.
C10	119104	Lytic 40 mfd. x 150 w. v.
C11	10025	.002 x 600 v.
C12	1292	.0005 mfd.
C13	119104	Lytic 20 mfd. x 150 w. v.
C14	10011	.01 x 400 v.
C15	10025	.002 x 600 v.
C16	124116	Adjustable antenna trimmer
C17	10026	.02 x 400 v.

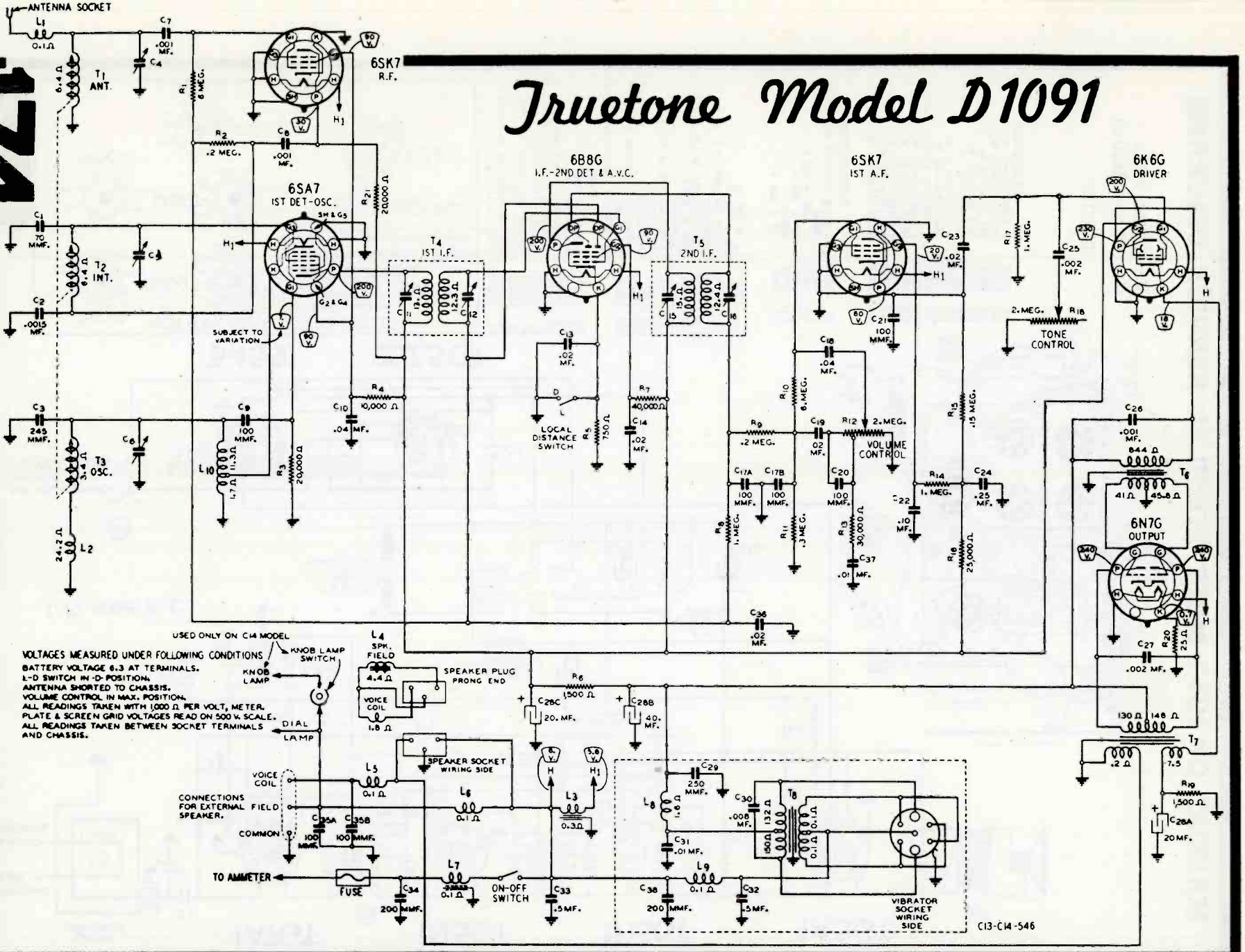
C8, C10 and C13 in same unit

PARTS

T1	111171	Loop Antenna
T2	110144	Oscillator Coil
T3	108171B	Input I. F. Coil—465 kc.
T4	108172	Output I. F. Coil—465 kc.
T5	114189	Speaker with output transfor
S1	101210	Switch on volume control
S2	125106	Power Switch
S3	125107	Cut-off switch in line cord
P1	107249	Pilot light T47



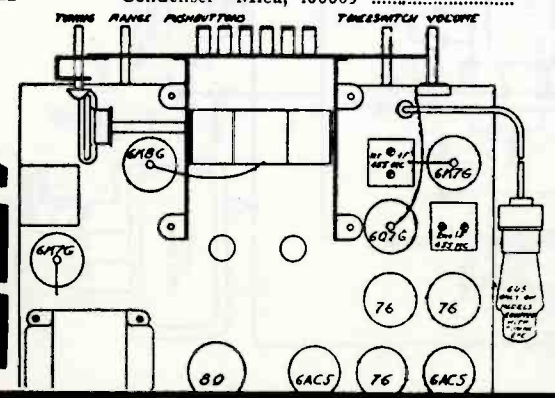
Truetone Model D1091

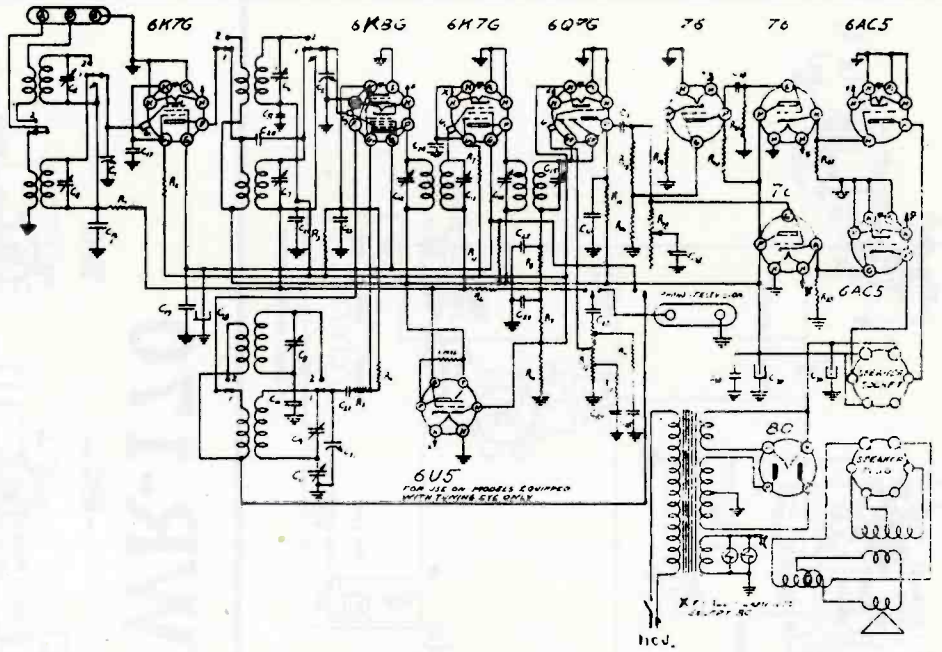


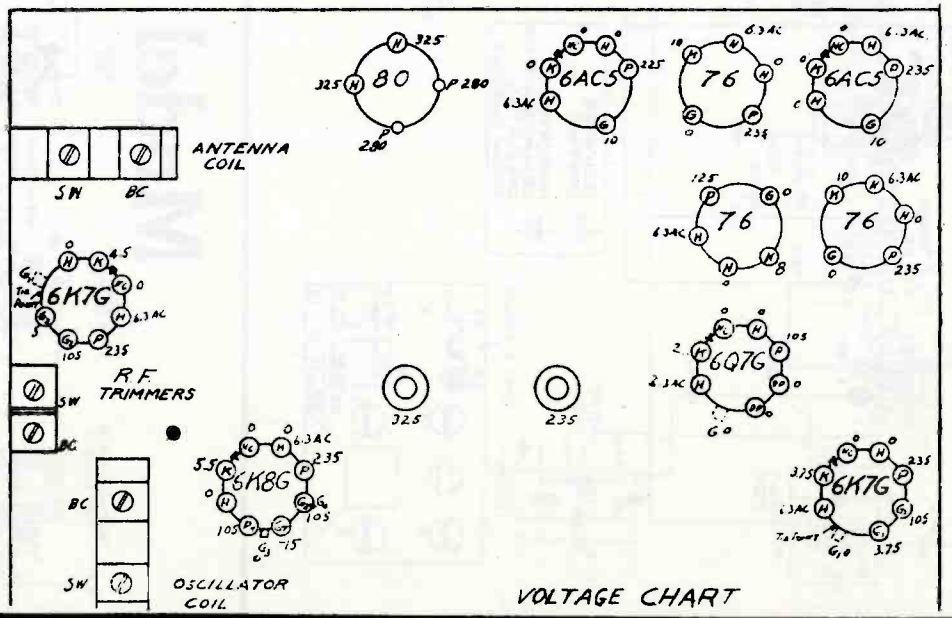
TRUETONE MODEL D924

SERIES A

R4,20	Resistor—1/3 w., 50M + or — 10%	
R2,3	Resistor—1/3 w., 300r + or — 10%	
R19	Resistor—1/3 w., 5M + or — 10%	
R7	Resistor—1/3 w., 400r + or — 10%	
R1	Resistor—1/3 w., 10M + or — 10%	
R17	Resistor—3 w., 10 M + or — 10%	
R16	Resistor—1/3 w., 100M + or — 10%	
R11	Resistor—/3 w., 70r + or — 10%	
R14	Resistor—1/3 w., 200M + or — 20%	
R11	Resistor—1/3 w., 300M + or — 20%	
R15	Resistor—1/3 w., 400M + or — 10%	
R12,22,23	Resistor—1/3 w., 25M + or — 10%	
R6	Resistor—1/3 w., 1 meg. + or — 20%	
R21	Resistor—1/3 w., 500M + or — 10%	
R5	Resistor—1/3 w., 100r + or — 20%	
R18	Control—Tone and Switch	
R13	Control—Volume	
C32	Condenser—Paper, .01-660v	
C1,2,3	Condenser—Var. (Mech. Tuner)	
C23,24	Condenser—Paper, .1-200v	
C30	Condenser—Mica .0001	
C19,34	Condenser—Paper, .1-400 v.	
C16,17,21	Condenser—Paper, .05-200 v	
C4,5,6,7,8,9	Condenser—Trimmer	
C10	Condenser—Padder, 3300 mmf	
C11	Condenser—Padder, 450 mmf., adjustable	
C18	Condenser—Elec., 20 mfd., 150v	
C29	Condenser—Paper, .03-200v	
C27,28	Condenser—Paper, .002-600v	
C36	Condenser—Elec. Wet., 16 mfd	
C35	Condenser—Elec. Wet., regulator	
1	Cord A. C	
C22	Condenser—Mica, .00005	







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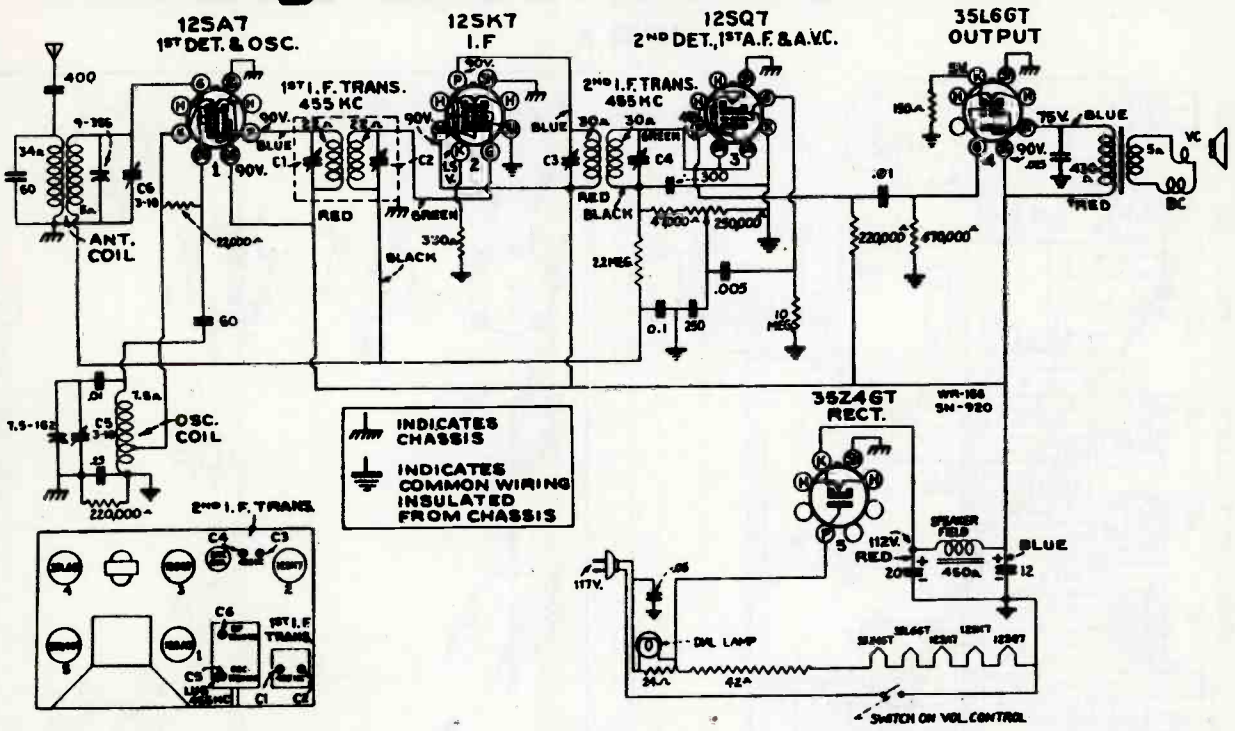
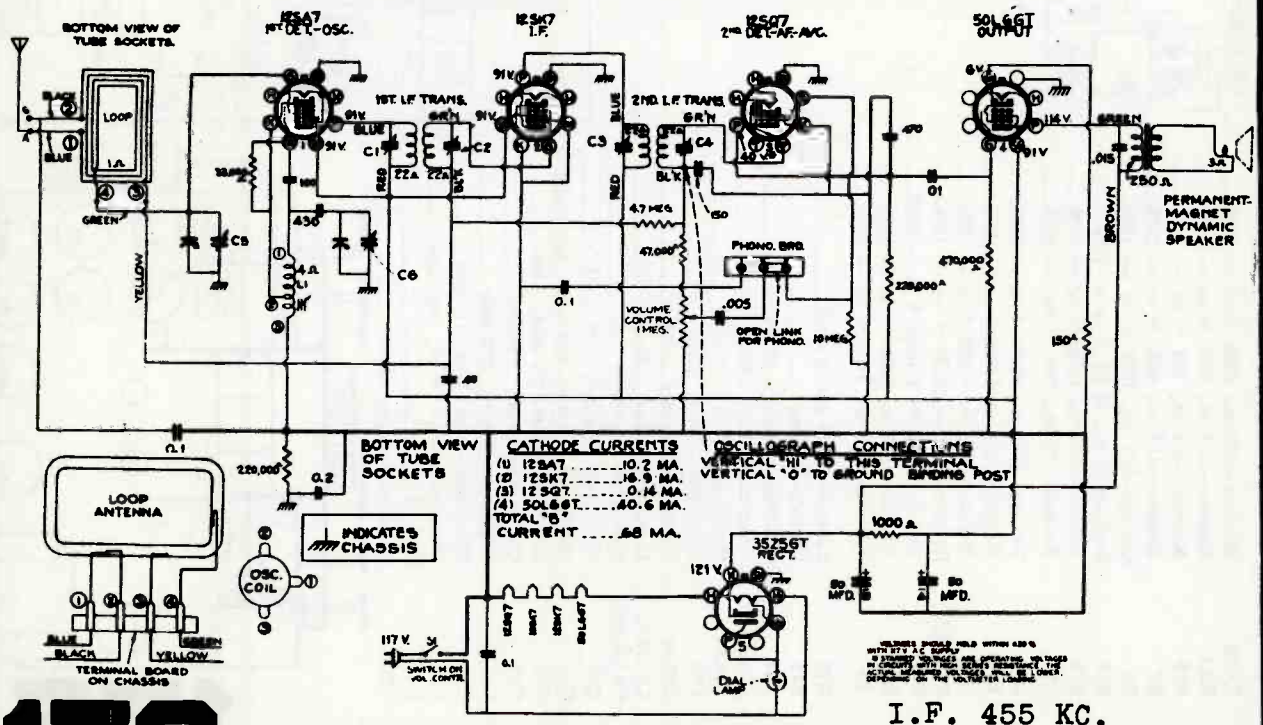
MANUAL OF 1940 MOST POPULAR SERVICE DIAGRAMS

Westinghouse Model WR-166



Model WR-170



I.F. 455 KC.

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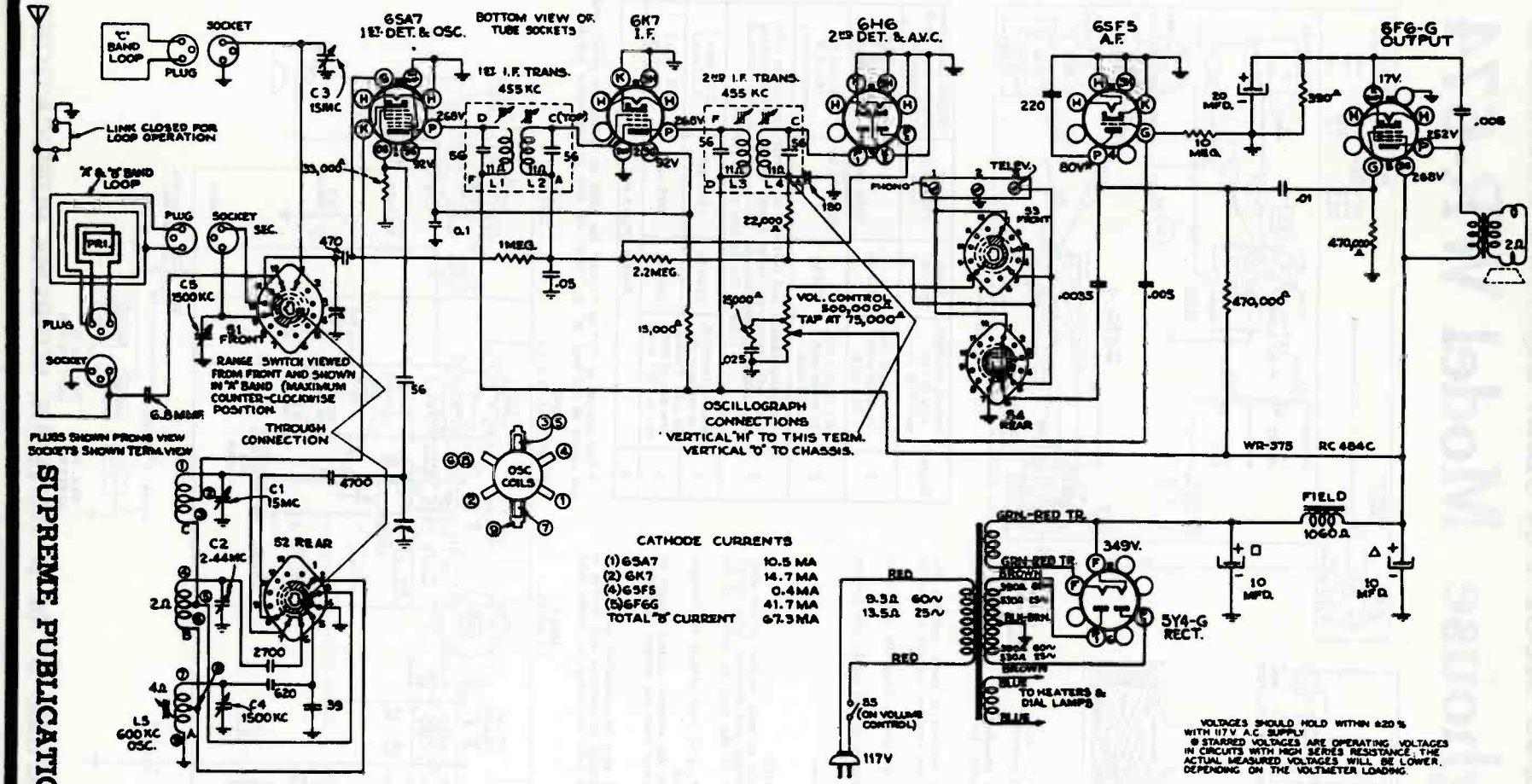
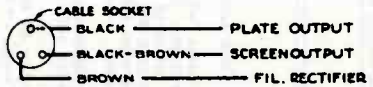
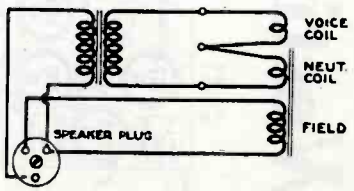
Westinghouse Radio
Model WR-375

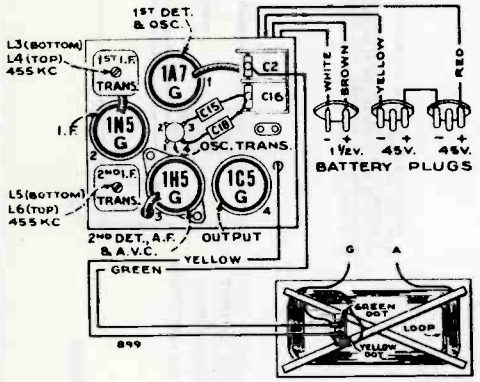




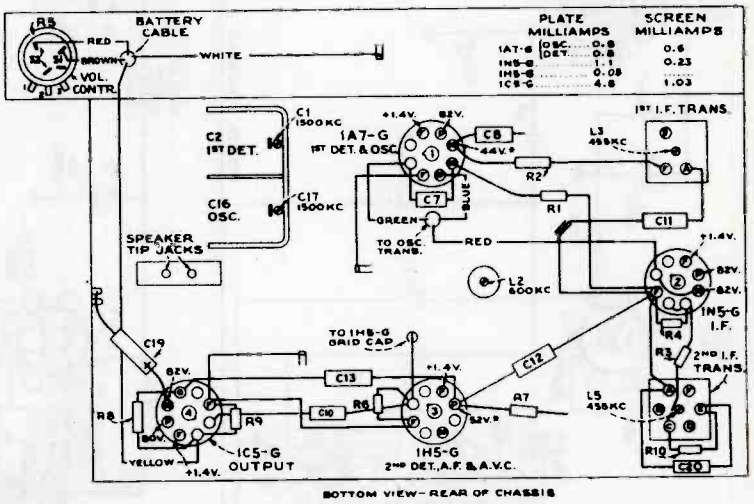
Speaker Connections



Westinghouse Model WR-674



Tube Location



BOTTOM VIEW—REAR OF CHASSIS

Note: Values with star (*) are operating voltages. Values not starred are actual measured voltages.

Measurements are made to chassis unless otherwise indicated, with set tuned to quiet point.

Output Meter Alignment.—If this method is used, connect the meter across the voice coil, and turn the receiver volume control to maximum.

Test-oscillator.—For all alignment operations, keep the output as low as possible to avoid a-v-c action.

Pre-setting Dial.—With gang condenser in full mesh, the pointer should be horizontal.

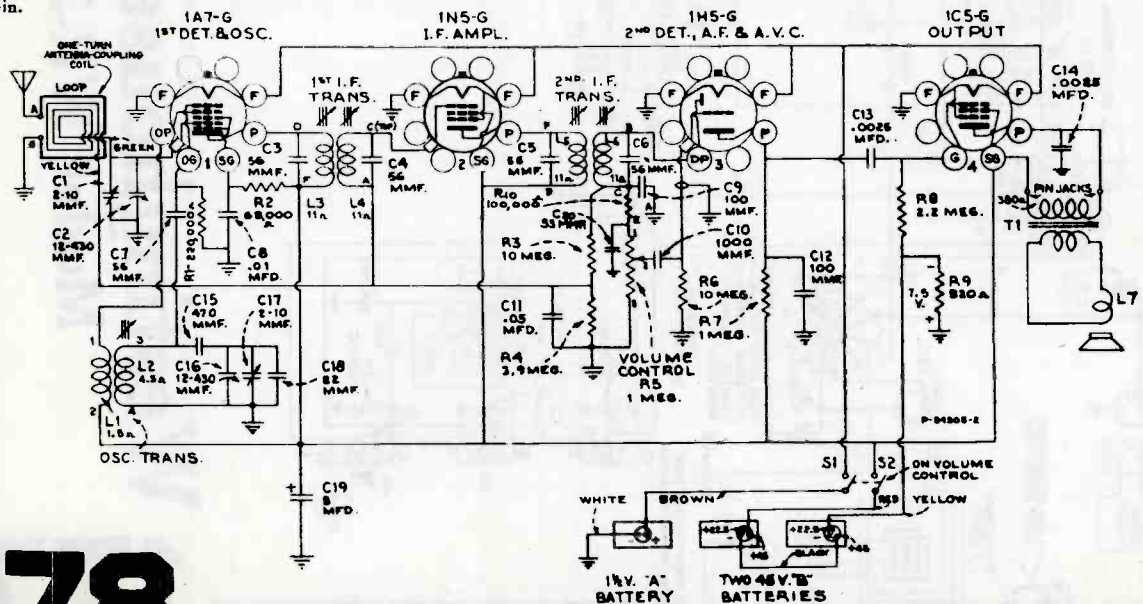
Precautionary Lead Dress.—

1. Dress speaker leads down to chassis.
2. The green lead from the loop to the antenna section of the gang should be dressed between the output and detector tube shields and pulled toward the far corner of the loop by means of the rubber band.
3. The spiral shield on the 1st A.F. grid lead should be brought as close as possible to the grid cap.
4. Leads to the high side and tap of the volume control should be dressed down to the chassis and away from the output tube plate lead.

Antenna.—An antenna and ground may be connected to "A" and "G" at bottom of cabinet. If total length of antenna and lead-in is more than 150 feet, connect a 300 mmf capacitor in series with lead-in.

Steps	Connect the high side of test-oscillator to—	Tune test-osc. to—	Turn radio dial to—	Adjust the follcwing for max. peak output—
1	1N5-G grid cap, in series with .001 mfd.	455 kc	Quiet point between 550-750 kc	L5 and L6 (2nd I-F transformer)
2	1A7-G grid cap, in series with .001 mfd.	455 kc		L3 and L4 (1st I-F transformer)
3	Assemble chassis and batteries in correct position in cabinet, and fasten rear cover (loop) in place while making the following adjustments, which are accessible through holes in the bottom of the cabinet.			
4	Antenna terminal, in series with 200 mfd. Connect low side of test-osc. to "G" term.	1500 kc	1500 kc*	C17 (osc.) C1 (ant.)
5		600 kc	600 kc*	L2 (osc.) Rock in
6	Repeat steps 4 and 5.			

* Use bottom of "1" in "1500" for 1500 kc calibration point, and use center of the last "0" in "600" for 600 kc calibration point.

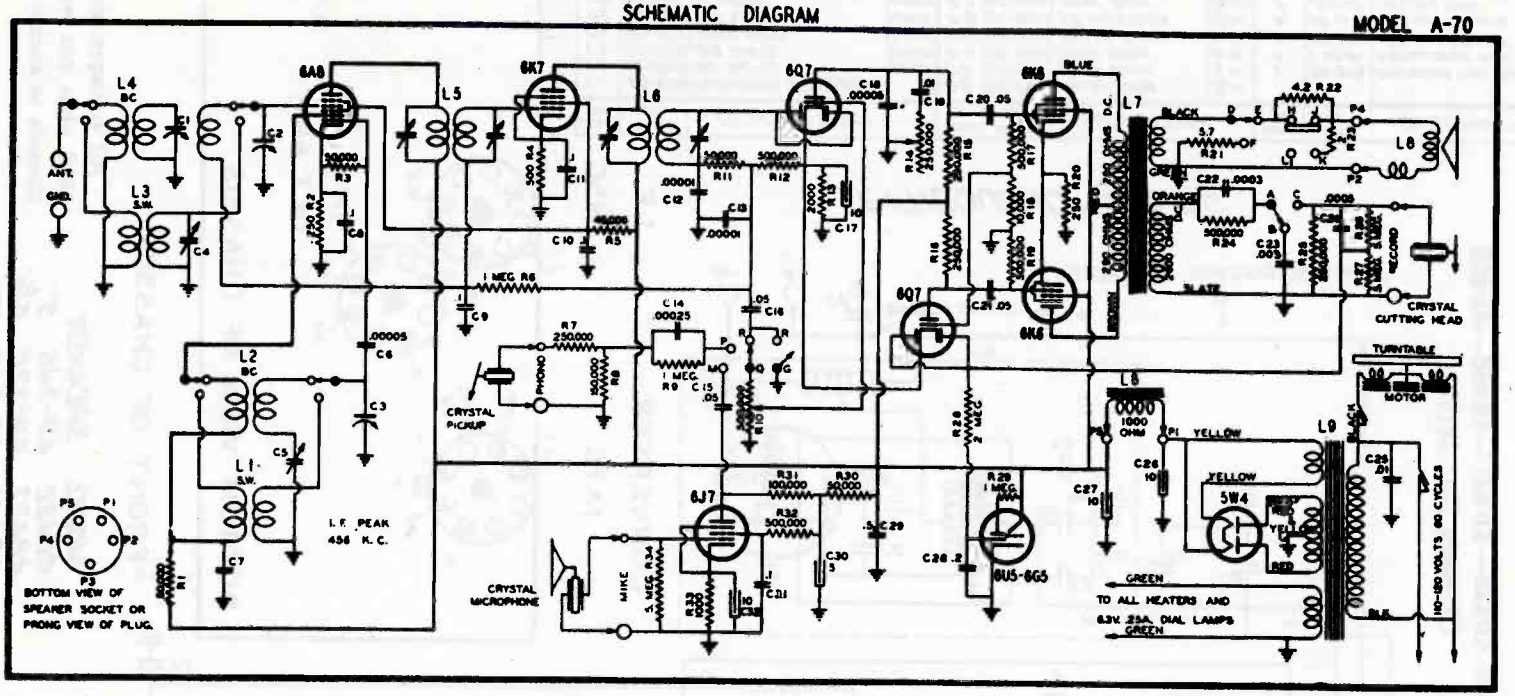


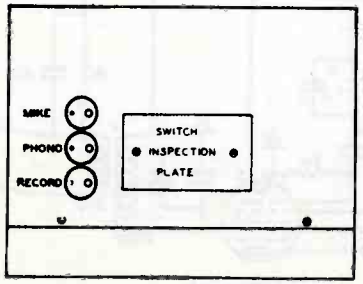
WILCOX-GAY CORPORATION

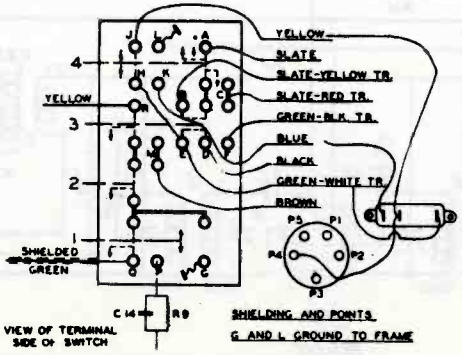
CHASSIS MODEL 9JS

SCHEMATIC DIAGRAM

MODEL A-70

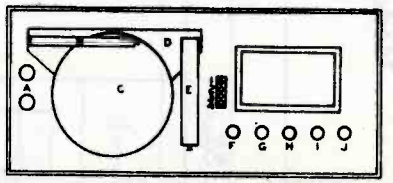






SHIELDING AND POINTS G AND L GROUND TO FRAME

1	OPENS Q-R, CLOSES Q-P, R-G
2	OPENS Q-R, CLOSES Q-M
3	OPENS Q-R, D-E, A-B CLOSES Q-M, D-F, A-C
4 FIRST POS.	OPENS A-B, CLOSES A-C REMAINS CLOSED H-J
4 SECOND POS.	OPENS H-J, CLOSES K-L REMAINS CLOSED A-C
TO USE RADIO ONLY-ALL PLUNGERS UP	
CIRCUITS CLOSED	Q-R, D-E, A-B, H-J
CIRCUITS OPEN	Q-P, D-F, A-C, K-L, Q-M, G-R



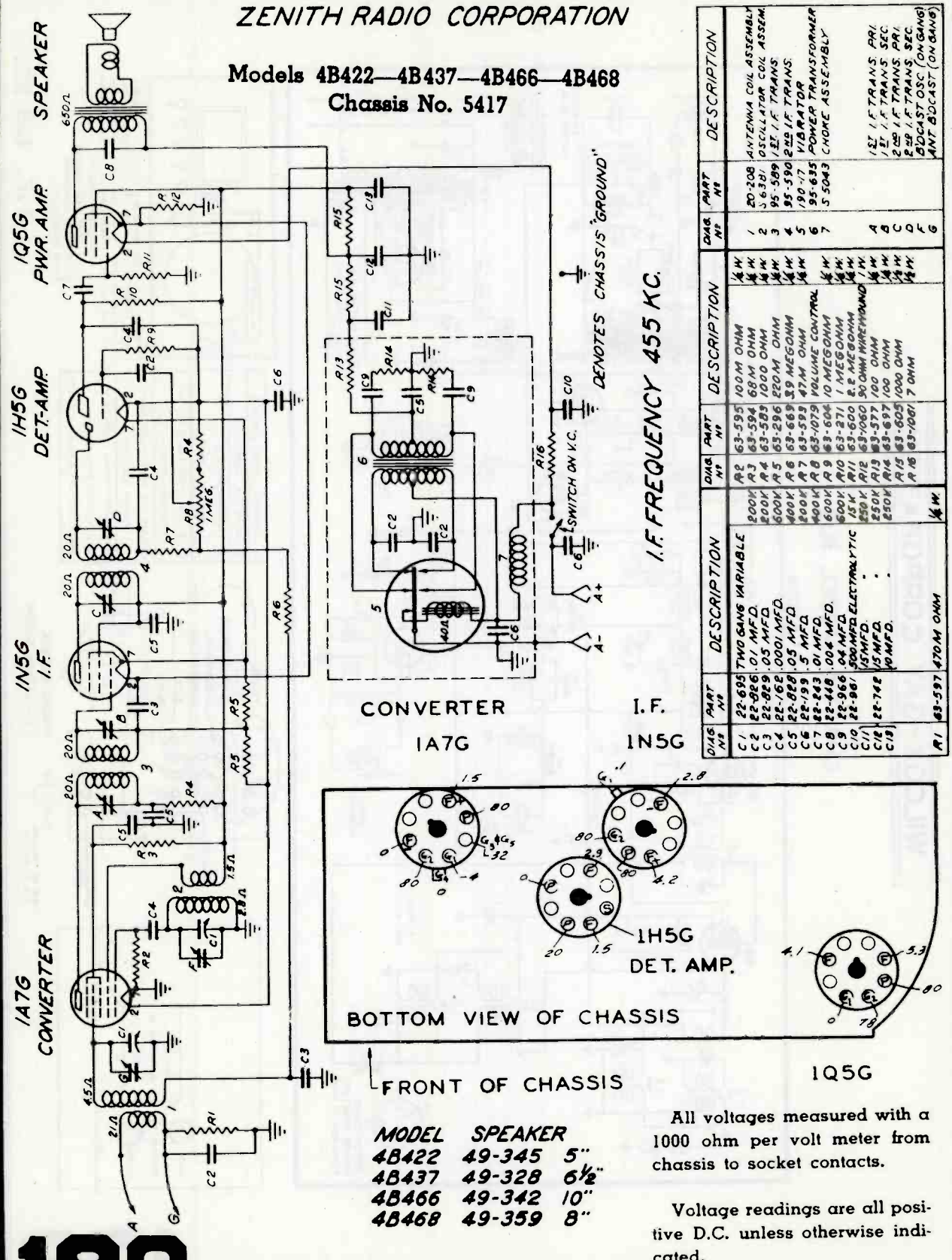
A—NEEDLE CUPS · B—PHONO ARM ASSEMBLY · C—TURNTABLE · D—MOTOR & ARM PLATE · E—CUTTER ARM ASSEMBLY · F—MOTOR CONTROL · G—MASTER SWITCH & VOLUME CONTROL · H—TONE CONTROL · I—BAND SWITCH · J—TUNING CONTROL

1—TO USE AS PHONOGRAPH
2—TO USE AS PUBLIC ADDRESS
3—TO RECORD MICROPHONE
4—TO RECORD RADIO

I.F. 456 KC.

ZENITH RADIO CORPORATION

Models 4B422—4B437—4B466—4B468
Chassis No. 5417



DIAG. NO	PART NO	DESCRIPTION
C1	22-695	TWO GANG VARIABLE
C2	22-826	.01 MFD.
C3	22-829	.05 MFD.
C4	22-162	.0001 MFD.
C5	22-828	.05 MFD.
C6	22-199	.5 MFD.
C7	22-243	.01 MFD.
C8	22-448	.004 MFD.
C9	22-966	.04 MFD.
C10	22-967	500 MFD ELECTROLYTIC
C11		.15 MFD.
C12	22-742	.15 MFD.
C13		.10 MFD.
R1	63-597	470 M OHM
R2	63-595	100 M OHM
R3	63-594	68 M OHM
R4	63-589	1000 OHM
R5	63-296	220 M OHM
R6	63-669	.39 MEGOHM
R7	63-593	47 M OHM
R8	63-1079	VOLUME CONTROL
R9	63-604	.10 MEGOHM
R10	63-271	1 MEGOHM
R11	63-600	2.2 MEGOHM
R12	63-1060	90 OHM WIREWOUND
R13	63-577	100 OHM
R14	63-697	100 OHM
R15	63-605	1000 OHM
R16	63-1061	7 OHM

DIAG. NO	PART NO	DESCRIPTION
1	20-208	ANTENNA COIL ASSEMBLY
2	5638	OSCILLATOR COIL ASSEM.
3	95-589	1ST I.F. TRANS.
4	95-590	2ND I.F. TRANS.
5	190-17	VIBRATOR
6	95-635	POWER TRANSFORMER
7	5043	CHOKE ASSEMBLY
A		1ST I.F. TRANS. PRI.
B		1ST I.F. TRANS. SEC.
C		2ND I.F. TRANS. PRI.
D		2ND I.F. TRANS. SEC.
E		BDCAST OSC. (ON GANG)
F		ANT. BDCAST (ON GANG)

MODEL	SPEAKER	
4B422	49-345	5"
4B437	49-328	6½"
4B466	49-342	10"
4B468	49-359	8"

All voltages measured with a 1000 ohm per volt meter from chassis to socket contacts.

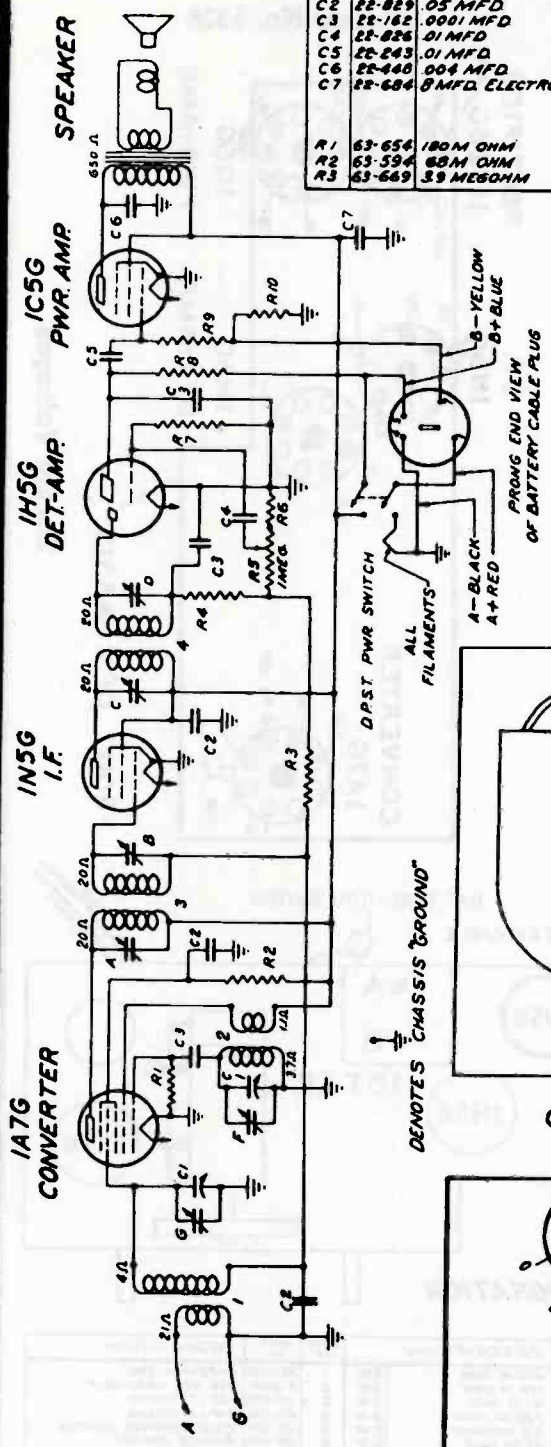
Voltage readings are all positive D.C. unless otherwise indicated.

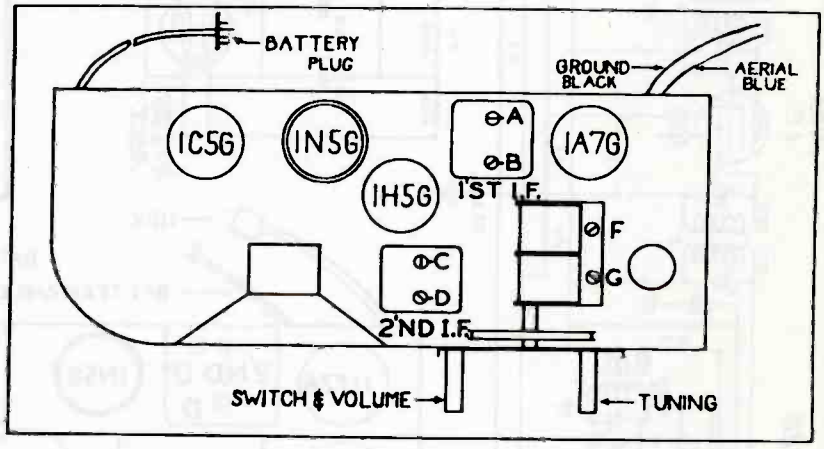
DIAG. Nº	PART Nº	DESCRIPTION	
C1	22-695	TWO GANG VARIABLE	
C2	22-829	.05 MFD.	200V
C3	22-162	.0001 MFD.	600V
C4	22-826	.01 MFD.	200V
C5	22-243	.01 MFD.	400V
C6	22-448	.004 MFD.	600V
C7	22-684	8 MFD. ELECTROLYTIC	150V
R1	63-654	180 M OHM	½ W.
R2	63-594	68 M OHM	½ W.
R3	63-669	.39 MEGOHM	½ W.
R4	63-593	47M OHM	½ W.
R5	63-1072	VOLUME CONTROL	
R6	63-587	4700 OHM	½ W.
R7	63-604	10 MEGOHM	½ W.
R8	63-271	1 MEGOHM	½ W.
R9	63-600	2.2 MEGOHM	½ W.
R10	63-238	1000 OHM	½ W.
1	20-208	ANTENNA COIL	
2	S-7815	OSCILLATOR COIL ASSEM	
3	95-589	1ST I.F. TRANS. ASSEM.	
4	95-590	2ND I.F. TRANS. ASSEM.	
A		1ST I.F. TRANS. PRI.	
B		1ST I.F. TRANS. SEC.	
C		2ND I.F. TRANS. PRI.	
D		2ND I.F. TRANS. SEC.	
F		B'DCAST OSC. (ON GANG)	
G		ANT. B'CAST (ON GANG)	

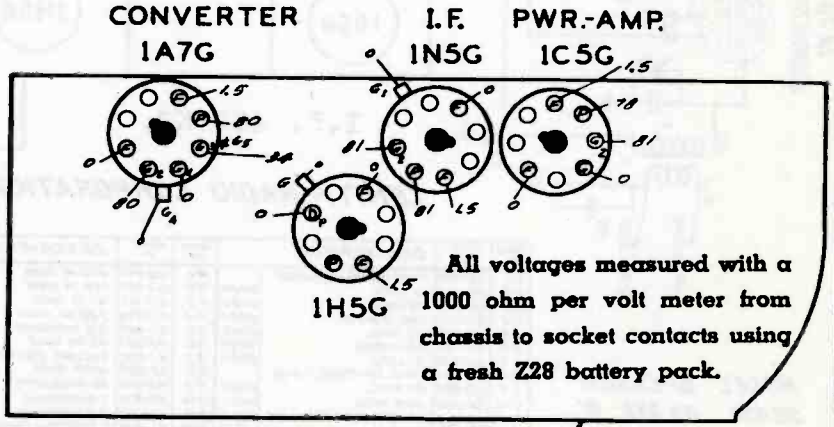
1½V. BATTERY PORTABLE
I.F. FREQUENCY 455 KC.
4 TUBE SUPERHETERODYNE
CHASSIS Nº 5420
ZENITH RADIO CORPORATION

Models 4K422—4K435—4K465—4K466

Chassis No. 5420





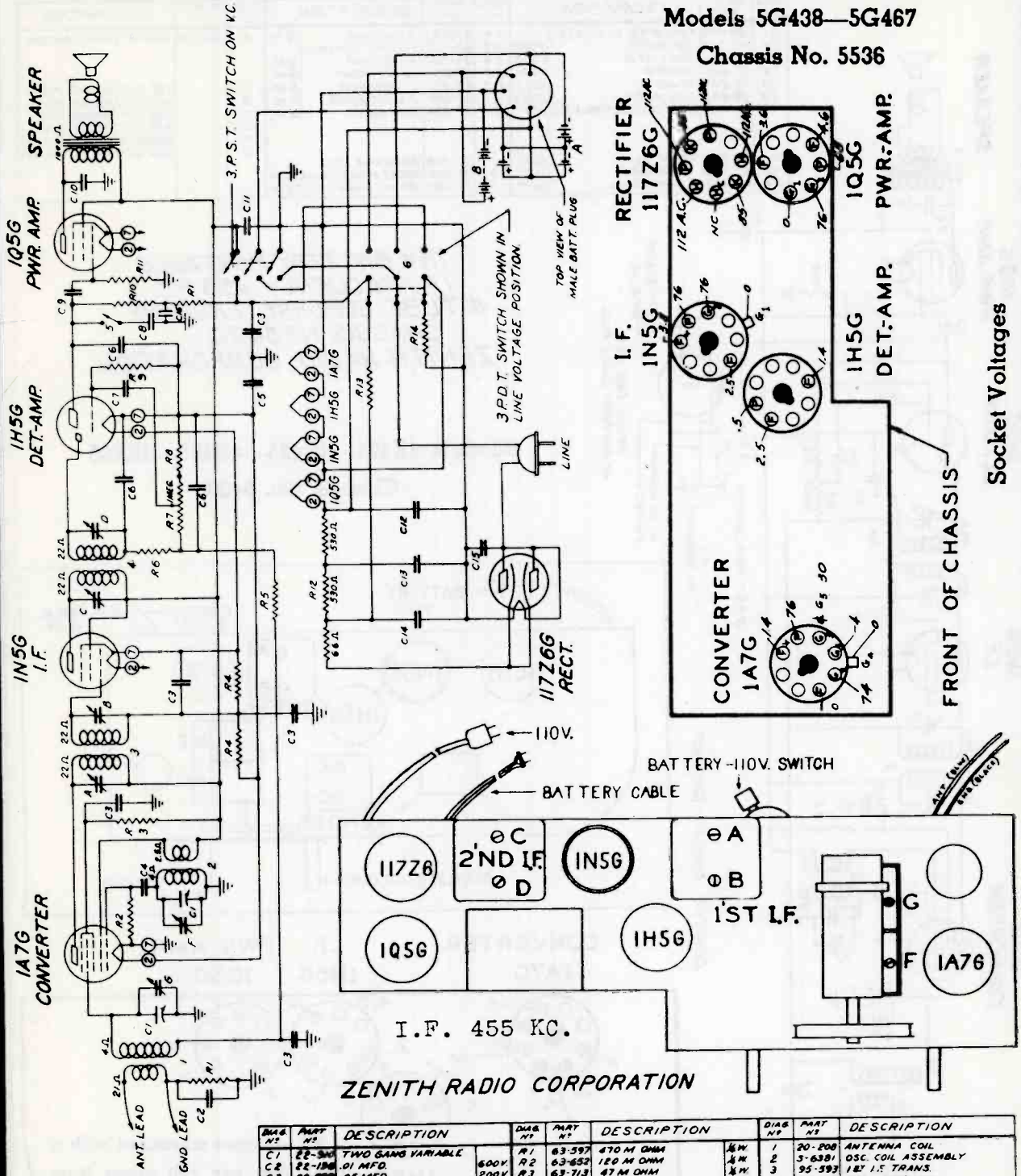


All voltages measured with a 1000 ohm per volt meter from chassis to socket contacts using a fresh Z28 battery pack.

MODEL	SPEAKER	
4K422	49-286	5"
4K435	49-328	6½"
4K465	49-359	8"
4K466	49-342	10"

Models 5G438—5G467

Chassis No. 5536

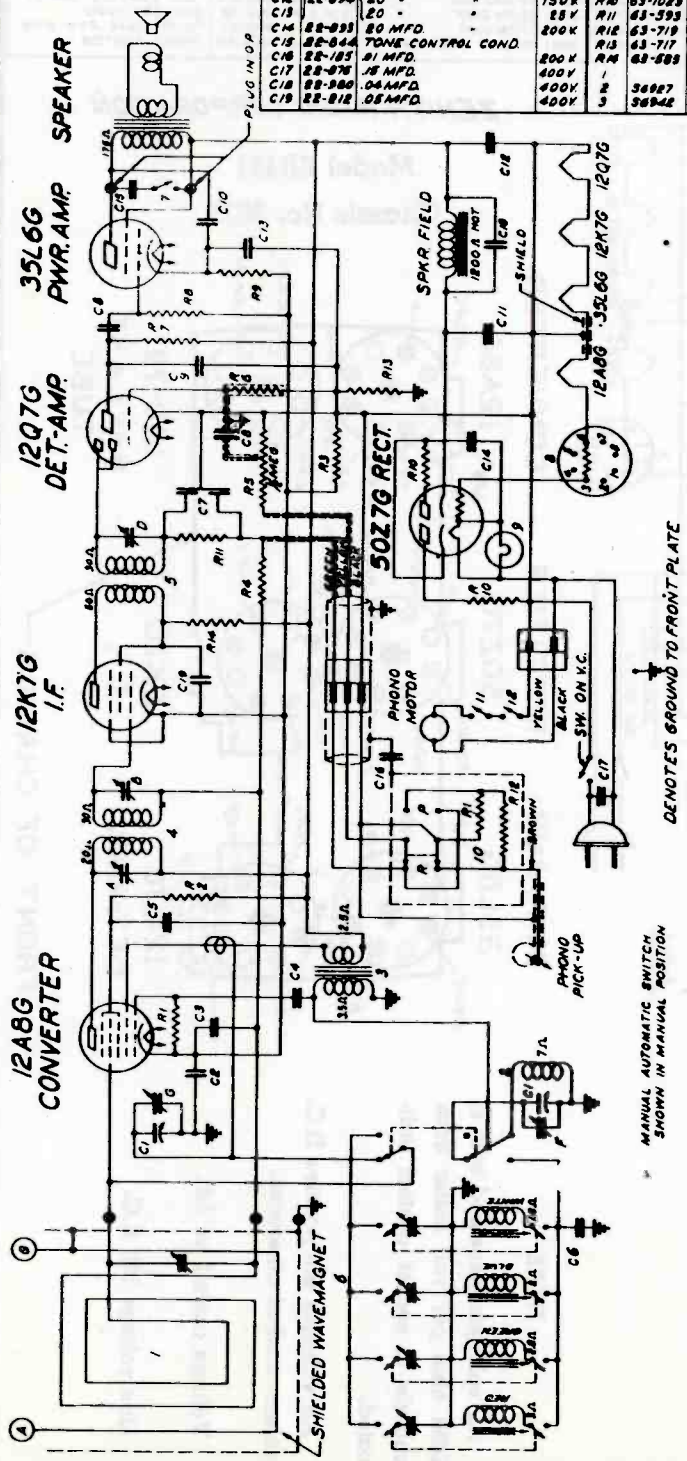


ZENITH RADIO CORPORATION

DIAG. NO.	PART NO.	DESCRIPTION		DIAG. NO.	PART NO.	DESCRIPTION		DIAG. NO.	PART NO.	DESCRIPTION
C1	22-340	TWO GANG VARIABLE		R1	63-597	470 M OHM	½ W	1	20-208	ANTENNA COIL
C2	22-138	.01 MFD.	600V	R2	63-652	120 M OHM	½ W	2	3-6381	OSC. COIL ASSEMBLY
C3	22-889	.05 MFD.	200V	R3	63-713	47 M OHM	½ W	3	95-593	1ST I.F. TRANS.
C4	22-182	.00025 MFD.	600V	R4	63-296	220 M OHM	½ W	4	95-594	2ND I.F. TRANS.
C5	22-350	.25 MFD.	200V	R5	63-669	3.9 MEGOHM	½ W	5	85-187	TONE CONTROL SWITCH
C6	22-186	.0001 MFD.	600V	R6	63-597	47 M OHM	½ W	6	85-198	POWER SWITCH
C7	22-886	.01 MFD.	200V	R7	63-1081	VOLUME CONTROL				
C8	22-887	TONE CONTROL COND.		R8	63-583	1000 OHM	½ W			
C9	22-245	.01 MFD.	400V	R9	63-604	10 MEGOHM	½ W	A		1ST I.F. TRANS. PRI.
C10	22-448	.004 MFD.	600V	R10	63-271	1 MEGOHM	½ W	B		1ST I.F. - SEC
C11	22-988	40 MFD. ELECTROLYTIC	150V	R11	63-600	2.2 MEGOHM	½ W	C		2ND I.F. - PRI.
C12		20 MFD. -	25V	R12	63-1061	3 SECTION CANDOHM		D		2ND I.F. - SEC.
C13	22-879	60 MFD. -	150V	R13	63-605	1000 OHM	½ W	F		BROADCAST OSC. (ON GANG)
C14		60 MFD. -	150V	R14	63-1012	90 OHM WIREWOUND	2 W	G		ANTENNA BDCAST (ON GANG)
C15	22-869	.05 MFD.	400V							
C16	22-138	.2 MFD.	200V							

MODEL	SPEAKER
5G438	49-332 8"
5G467	49-333 10"

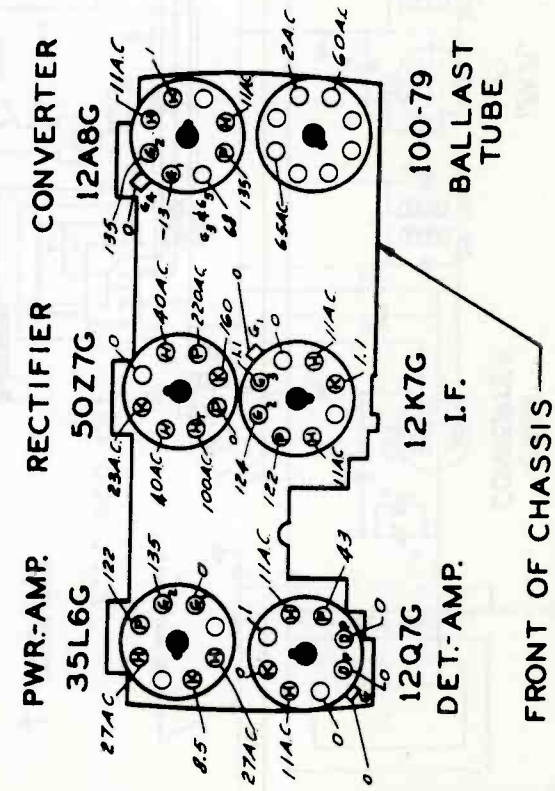
DIAG. NO.	PART NO.	DESCRIPTION		DIAG NO.	PART NO.	DESCRIPTION		DIAG NO.	PART NO.	DESCRIPTION
C1	22-885	TWO-GANG VARIABLE						4	36902	1ST I.F. TRANS. ASSEMBLY
C2	22-936	.2MFD.	200V.					5	36903	2ND I.F. TRANS. "
C3	22-859	.05MFD.	200V.	R1	63-719	47M OHM	½W.	6	36997	AUTOMATIC TUNING UNIT ASSEM
C4		100 MMFD.		R2	63-591	22M OHM	½W.	7	MS517	TONE CONTROL SWITCH
C5	22-841	.02 MFD.	200V.	R3	63-572	15 OHM	½W.	8	100-79	BALLAST TUBE
C6	22-868	COMPENSATING COND.		R4	63-600	2.2 MEGOHM	½W	9	100-39	PILOT LIGHT BULB 2.9V .17A
C7		DUAL 100 MMFD.		R5	63-1088	VOLUME CONTROL		10	85-198	PHONO SWITCH
C8	22-837	.01 MFD.	400V	R6	63-724	4.7 MEGOHM	½W.	11	85-181	AUTOMATIC STOP SWITCH
C9	22-833	.0005 MFD.	600V	R7	63-896	2.2 M OHM	½W.	12	85-191	A.C. SWITCH
C10	22-836	.03 MFD.	400V	R8	63-597	470 M OHM	½W.			
C11		20 MFD. ELECTROLYTIC	350V	R9	63-686	150 OHM WIREWOUND	1W.			
C12	22-894	20 " "	150V	R10	63-1028	2.2 OHM "	½W.			
C13		20 " "	25V	R11	63-593	47 M OHM	½W.	A		1ST I.F. TRANS PRI.
C14	22-893	20 MFD.	200V	R12	63-719	470 M OHM	½W.	B		1ST I.F. " SEC
C15	22-844	TONE CONTROL COND.		R13	63-717	220M OHM	½W.	C		2ND I.F. " SEC.
C16	22-835	.01 MFD.	200V	R14	63-688	1000 OHM	½W.	F		BROADCAST OSC. (ON GANG)
C17	22-876	.15 MFD.	400V	/		WAVEMAGNET ASSEMBLY		G		ANTENNA BROADCAST (ON GANG)
C18	22-960	.04 MFD.	400V	2	36987	OSCILLATOR COIL ASSEM.				
C19	22-812	.05 MFD.	400V	3	36942	OSC. COUPLER COIL ASSEM.				



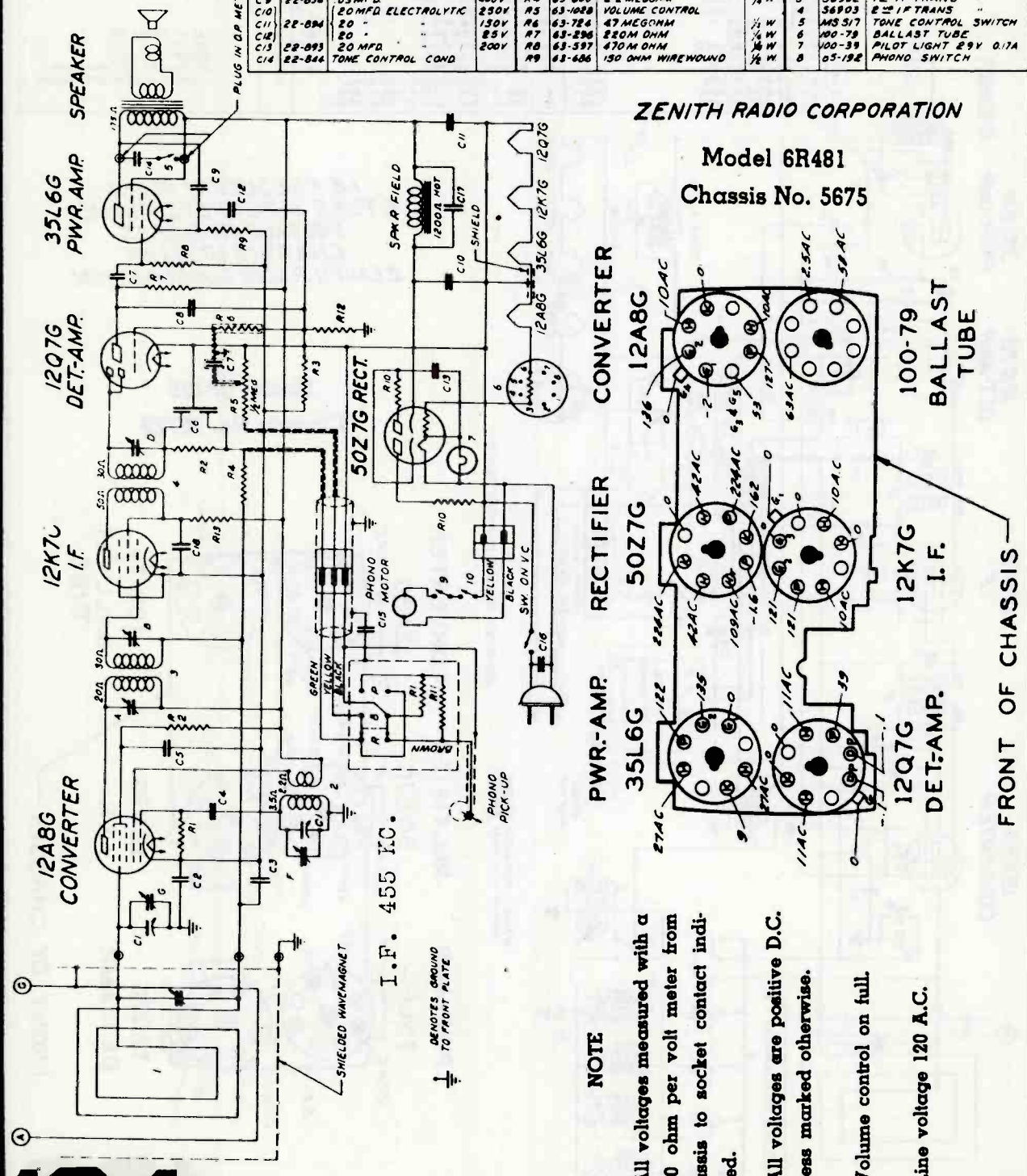
I.F. FREQUENCY 455KC
6 TUBE SUPERHETERODYNE
VOLTAGE DOUBLER A.C.
CHASSIS Nº5672-P
ZENITH RADIO CORPORATION

Model 6R485

Chassis No. 5672P



DIAG Nº	PART Nº	DESCRIPTION		DIAG Nº	PART Nº	DESCRIPTION		DIAG Nº	PART Nº	DESCRIPTION	
C1	22-885	TWO-GANG VARIABLE		C15	22-185	.01 MFD.	200V	R10	63-1023	22 OHM WIREWOUND	½ W
C2	22-938	2MFD.	200V	C16	22-875	.15 MFD.	400V	R11	63-719	470M OHM	½ W
C3	22-850	.05 MFD.	200V	C17	22-980	.04 MFD	400V	R12	63-717	220M OHM	¼ W.
C4		100 MMFD.		C18	22-818	.05 MFD	400V	R13	63-583	1000 OHM	¼ W
C5	22-841	.02 MFD.	200V								
C6		DUAL 100 MMFD		R1	63-713	47 M OHM	½ W				
C7	22-837	.01 MFD	400V	R2	63-593	47 M OHM	⅛ W	1		WAVEMAGNET ASSEMBLY	
C8	22-833	.0005 MFD	600V	R3	63-572	15 OHM	¼ W	2	56901	OSC COIL "	
C9	22-836	.03 MFD.	400V	R4	63-600	2.2 MEGOHM	¼ W	3	56902	1ST I.F TRANS "	
C10		20 MFD. ELECTROLYTIC	250V	R5	63-1028	VOLUME CONTROL		4	56903	2ND I.F TRANS "	
C11	22-894	20 " "	150V	R6	63-724	47 MEGOHM	½ W	5	MS 5/7	TONE CONTROL SWITCH	
C12		20 " "	25V	R7	63-296	220M OHM	¼ W	6	100-79	BALLAST TUBE	
C13	22-893	20 MFD. "	200V	R8	63-597	470M OHM	⅛ W	7	100-39	PILOT LIGHT 29V 0.17A	
C14	22-844	TONE CONTROL COND.		R9	63-686	150 OHM WIREWOUND	½ W.	8	05-192	PHONO SWITCH	



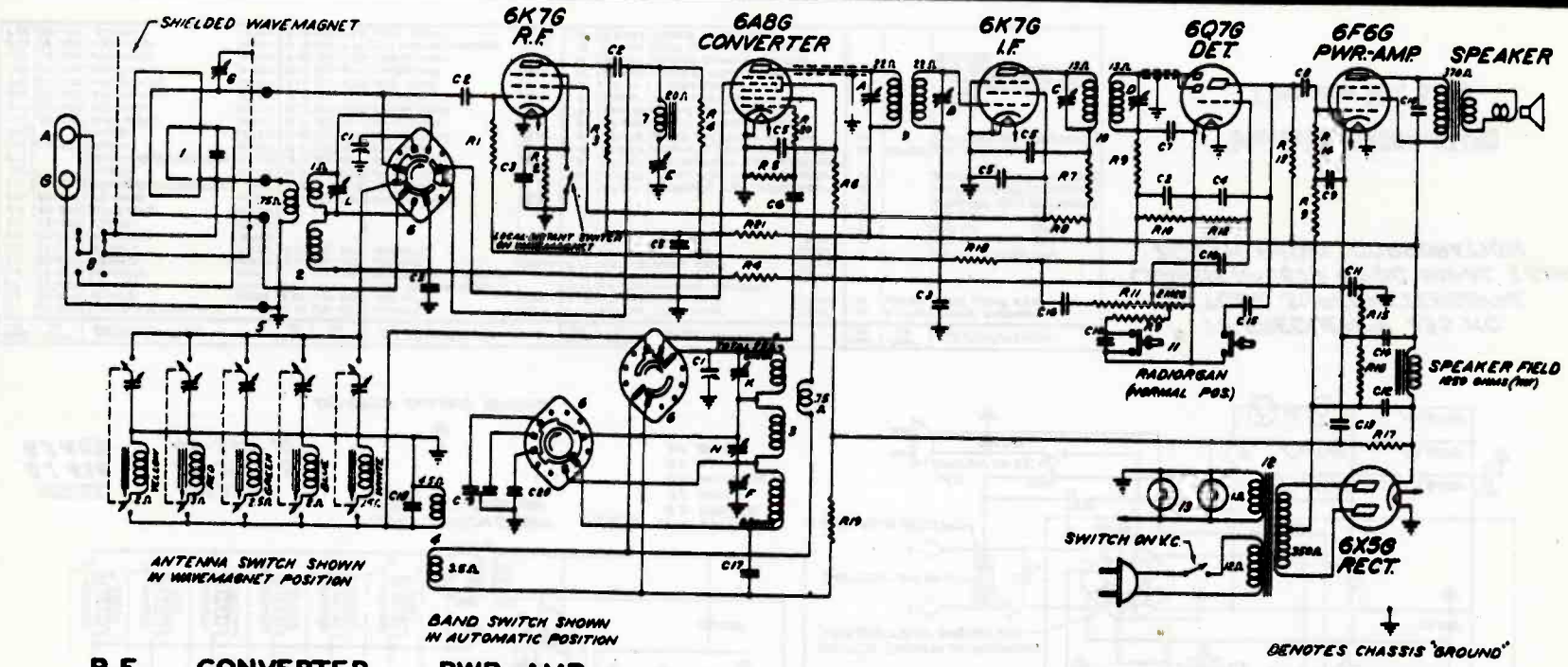
NOTE

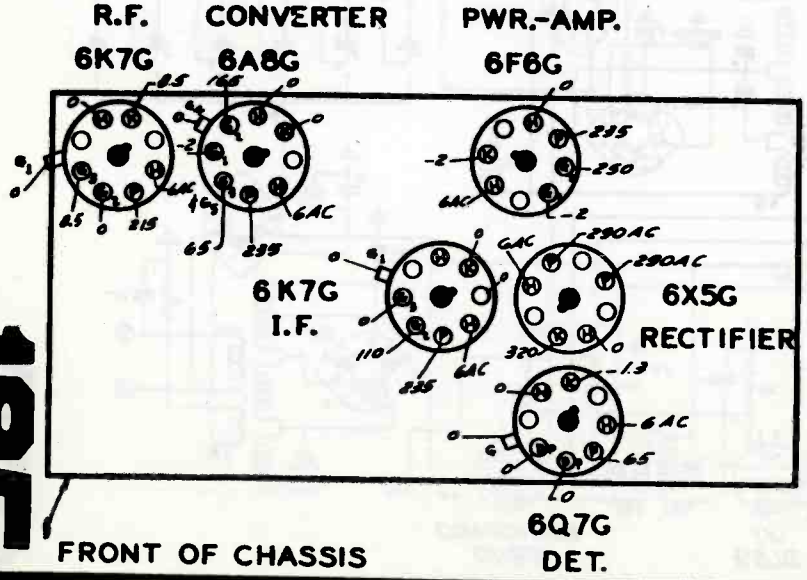
All voltages measured with a 1000 ohm per volt meter from chassis to socket contact indicated.

All voltages are positive D.C. unless marked otherwise.

Volume control on full.

Line voltage 120 A.C.





CHAS. NO.	PART NO.	DESCRIPTION		CHAS. NO.	PART NO.	DESCRIPTION		CHAS. NO.	PART NO.	DESCRIPTION	
C1	22-849	2 GANG VARIABLE		C20	22-866	OSCILLATOR PADDER		R16	63-1056	250 OHM WIREWOUND	10 W
C2	22-762	.0001 MFD.	600V					R17	63-151	15M OHM	1/2 W
C3	22-859	.05 MFD.	200V					R18	63-158	1.5 MEGOHM	1/2 W
C4	22-716	.0005 MFD	600V					R19	63-1078	10M OHM	1/2 W
C5	22-820	.05 MFD.	400V	R1	63-271	1 MEGOHM	1/2 W	R20	63-729	100 OHM	1/2 W
C6	22-781	50 MMFD	600V	R2	63-588	6800 OHM	1/2 W	R21	63-585	2200 OHM	1/2 W
C7	22-782	.00025 MFD	600V	R3	63-607	15M OHM	1/2 W				
C8	22-830	.02 MFD.	600V	R4	63-595	100M OHM	1/2 W	1		WAVEMAGNET ASSEMBLY	
C9	22-819	.03 MFD.	200V	R5	63-598	33M OHM	1/2 W	2	27846	ANTENNA COIL ASSEMBLY	
C10	22-829	.005 MFD	600V	R6	63-581	100M OHM	1/2 W	3	26937	OSCILLATOR COIL ASSEMBLY	
C11	22-867	.1 MFD.	200V	R7	63-583	1000 OHM	1/2 W	4	26932	OSC. COUPLER COIL ASSEM.	
C12	22-973	20 MFD ELECTROLYTIC	450V	R8	63-961	47M OHM	1/2 W	5	27946	AUTOMATIC TUNING ASSEM.	
C13	22-976	10 MFD ELECTROLYTIC	450V	R9	63-593	47M OHM	1/2 W	6	26-205	BAND SELECTOR SWITCH	
C14		25 MFD ELECTROLYTIC	350V	R10	63-669	470M OHM	1/2 W	7	27890	WAVE TRAP COIL ASSEMBLY	
C15	22-668	.004 MFD	600V	R11	63-1030	VOLUME CONTROL	1 W	8	26-171	WAVEMAGNET SWITCH	
C16	22-798	.01 MFD	600V	R12	63-976	1.5 MEGOHM	1/2 W	9	26-696	1ST I.F. TRANS.	
C17	22-358	.008 MFD	600V	R13	63-296	220M OHM	1/2 W	10	26-538	2ND I.F. TRANS.	
C18	22-869	COMPENSATING COND		R14	63-597	470M OHM	1/2 W	11	26994	TONE CONTROL SW ASSEM.	
C19	22-853	DUAL OSC. PADDER		R15	63-1057	47 OHM WIREWOUND	1/2 W	12	25-636	POWER TRANS 60~ 115V.	

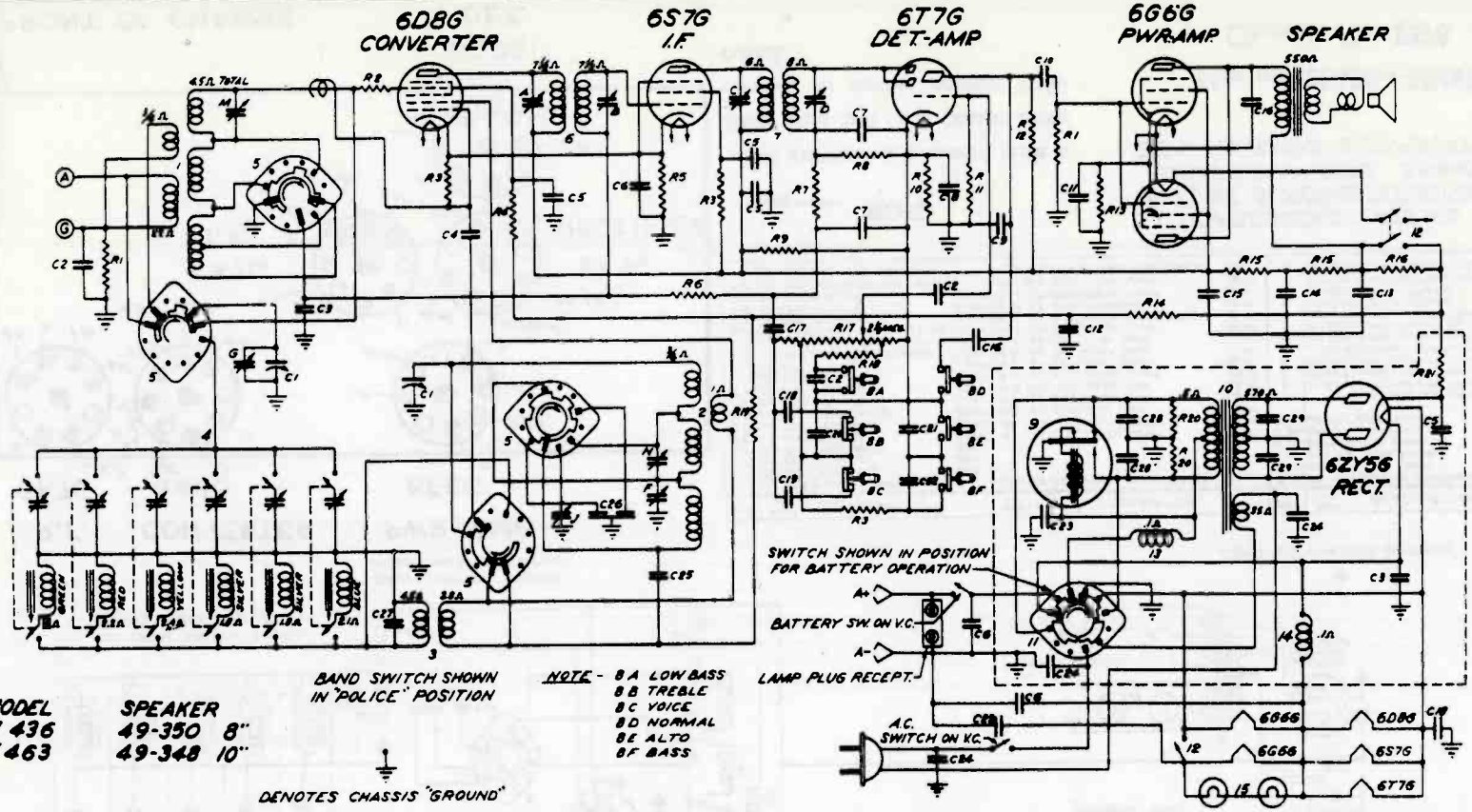
NOTE

All voltages measured with a 1000 ohm per volt meter from chassis to socket contact indicated.

I.F. FREQUENCY 455 KC.
6 TUBE SUPERHETERODYNE
CHASSIS Nº 5678 3BAND
ZENITH RADIO CORPORATION

Models 6S439—6S469

Chassis No. 5678



DIAG NO	PART NO	DESCRIPTION		DIAG NO	PART NO	DESCRIPTION		DIAG NO	PART NO	DESCRIPTION		DIAG NO	PART NO	DESCRIPTION
C1	22-964	TWO GANG VARIABLE		C24	22-830	.02 MFD.	600V	R15	63-605	1000 OHM	½W	14	S2778	CHOKE ASSEMBLY
C2	22-826	.01 MFD.	200V	C25	22-958	.002 MFD.	600V	R16	63-966	4700 OHM	2W	15	100-39	PILOT LIGHT 2.9V .17A
C3	22-829	.05 MFD.	200V	C26	22-973	DUAL OSC. PADDER		R17	63-930	VOLUME CONTROL				
C4	22-289	50 MMFD.	600V	C27	22-868	COMPENSATING COND.		R18	63-591	22M OHM	½W			
C5	22-828	.05 MFD.	400V	C28	22-319	.005 MFD.	500V	R19	63-675	5600 OHM	½W			
C6	22-330	.25 MFD.	200V	C29	22-972	.015 MFD.	600V	R20	63-989	120 OHM	½W	A		1ST I.F. TRANS. PRI.
C7	22-162	.000 1 MFD.	600V					R21	63-577	100 OHM	½W	B		1ST I.F. - SEC.
C8	22-287	.1 MFD.	200V									C		2ND I.F. - PRI.
C9	22-856	.0005 MFD.	600V									D		2ND I.F. - SEC.
C10	22-190	.02 MFD.	400V	R1	63-597	470M OHM	½W					F		B'DCAST. OSC. (SEE NOTE)
C11	22-974	20 MFD. ELECTROLYTIC	25V	R2	63-576	68 OHM	½W	1	S7811	ANTENNA COIL ASSEMBLY		G		ANT. B'DCAST (GN GANG)
C12		20 MFD.	450V	R3	63-595	47M OHM	½W	2	S8007	OSCILLATOR COIL ASSEMBLY		J		B'DCAST PADDER (SEE NOTE)
C13		30 MFD. ELECTROLYTIC	250V	R4	63-649	56M OHM	½W	3	S7507	OSC. COUPLER COIL ASSEMBLY				
C14	22-771	15 MFD.	250V	R5	63-628	270 OHM	½W	4	S7849	AUTOMATIC TUNING UNIT ASSEM.		M	28-788	S.W. ANTENNA
C15		100 MFD.	250V	R6	63-599	1.5 MEGOHM	½W	5	95-810	BAND SELECTOR SWITCH		N		POL. BAND OSC. (SEE NOTE)
C16	22-448	.006 MFD.	600V	R7	63-711	22M OHM	½W	6	95-649	1ST I.F. TRANSFORMER				
C17	22-327	.02 MFD.	200V	R8	63-659	470M OHM	½W	7	95-650	2ND I.F. TRANSFORMER				
C18	22-182	.00025 MFD.	600V	R9	63-760	100M OHM	½W	8	S8013	TONE CONTROL SWITCH				NOTE- TRIMMERS F, J & N ARE MOUNTED ON STRIP SEE-1068
C19	22-470	.0001 5 MFD.	600V	R10	63-634	820 OHM	½W	9	190-11	VIBRATOR				
C20	22-776	.0005 MFD.	600V	R11	63-871	1 MEGOHM	½W	10	95-648	POWER TRANSFORMER				
C21	22-458	.006 MFD.	600V	R12	63-896	220M OHM	½W	11	95-177	POWER SUPPLY SWITCH				
C22	22-326	.003 MFD.	400V	R13	63-977	270 OHM WIREWOUND	1½W	12	95-171	BATT. CONSERVER SWITCH				
C23	22-199	.5 MFD.	200V	R14	63-796	10M OHM	½W	13	S5043	CHOKE ASSEMBLY				

I.F. FREQUENCY 455 KC.
6 TUBE SUPERHETERODYNE
CHASSIS Nº5679 6V-D.C. 110V-A.C. 3 BAND
ZENITH RADIO CORPORATION

Models 6J436—6J463

Chassis No. 5679

ALIGNMENT PROCEDURE

Operation	Connect Test Oscillator to	Dummy Antenna	Input Signal Frequency	Band	Set Dial At	Adjust Trimmers	Purpose
1	6D8 R. F. Grid	0.5 Mfd.	455 Kc.	I. F.	600 Kc.	A, B, C, D	I. F. Alignment
2	Rec. Ant. Post	200 Mfd.	1500 Kc.	Broadcast	1500 Kc.	F	Set Oscillator to Scale
3	Rec. Ant. Post	200 Mfd.	1500 Kc.	Broadcast	1500 Kc.	G	Alignment of Antenna
4	Rec. Ant. Post	200 Mfd.	600 Kc.	Broadcast	600 Kc.	J	Rock Gang and Adjust for Max. Output
5	Rec. Ant. Post	200 Mfd.		Broadcast		F, G	Repeat 2 and 3
6	Rec. Ant. Post	400 Ohms	18000 Kc.	S. W.	18000 Kc.	M	Rock gang & adj. for max. output
7	Rec. Ant. Post	400 Ohms	16000 Kc.	S. W.	16000 Kc.	L	Rock Gang and Adjust for Max. Output
8	Rec. Ant. Post	400 Ohms	6000 Kc.	Police	6000 Kc.	N	Rock Gang and Adjust for Max. Output

Models 6J436—6J463

CHASSIS No. 5679

All voltages measured with a 1000 ohm per volt meter from chassis to socket contact indicated.

All voltages are positive D.C. unless marked otherwise.

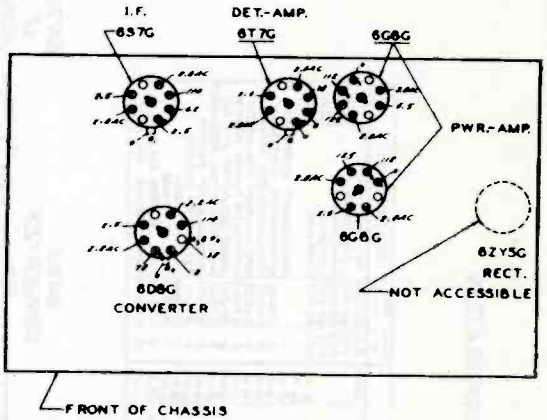
Battery conserver switch in NORMAL position.

Volume control full on.

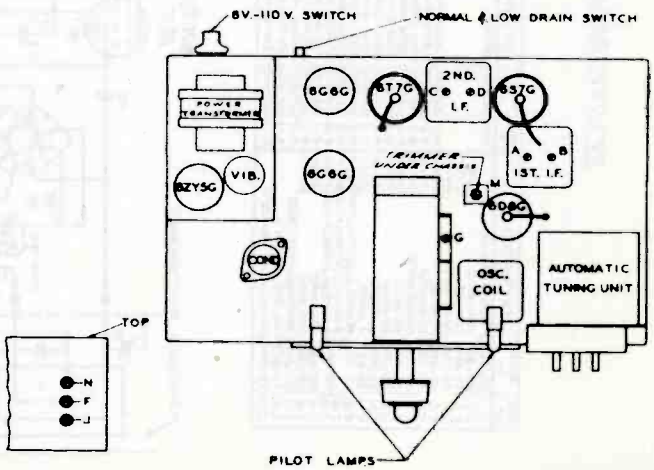
Line voltage 112 v. A.C.

LEGEND

F—Filament
H—Heater
D—Diode
G1—Control Grid
G2—Screen Grid
G3—Suppressor Grid
P—Plate
K—Cathode



Socket Voltages



Location of Tubes and Trimmers

Models 7S432—7S433—7S434—7S449—7S450—7S458—7S459—7S460—7S461—7S462

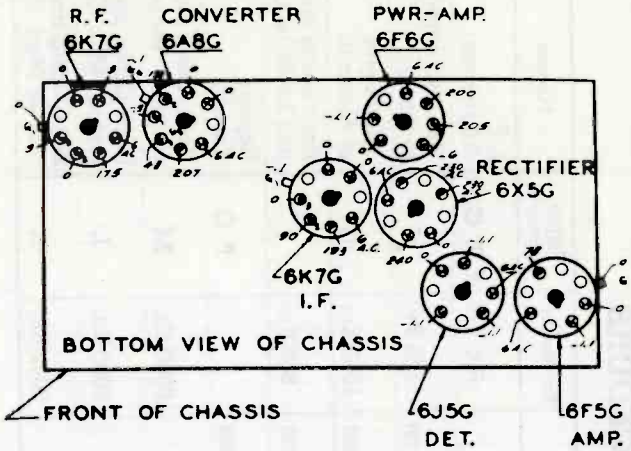
Chassis No. 5724

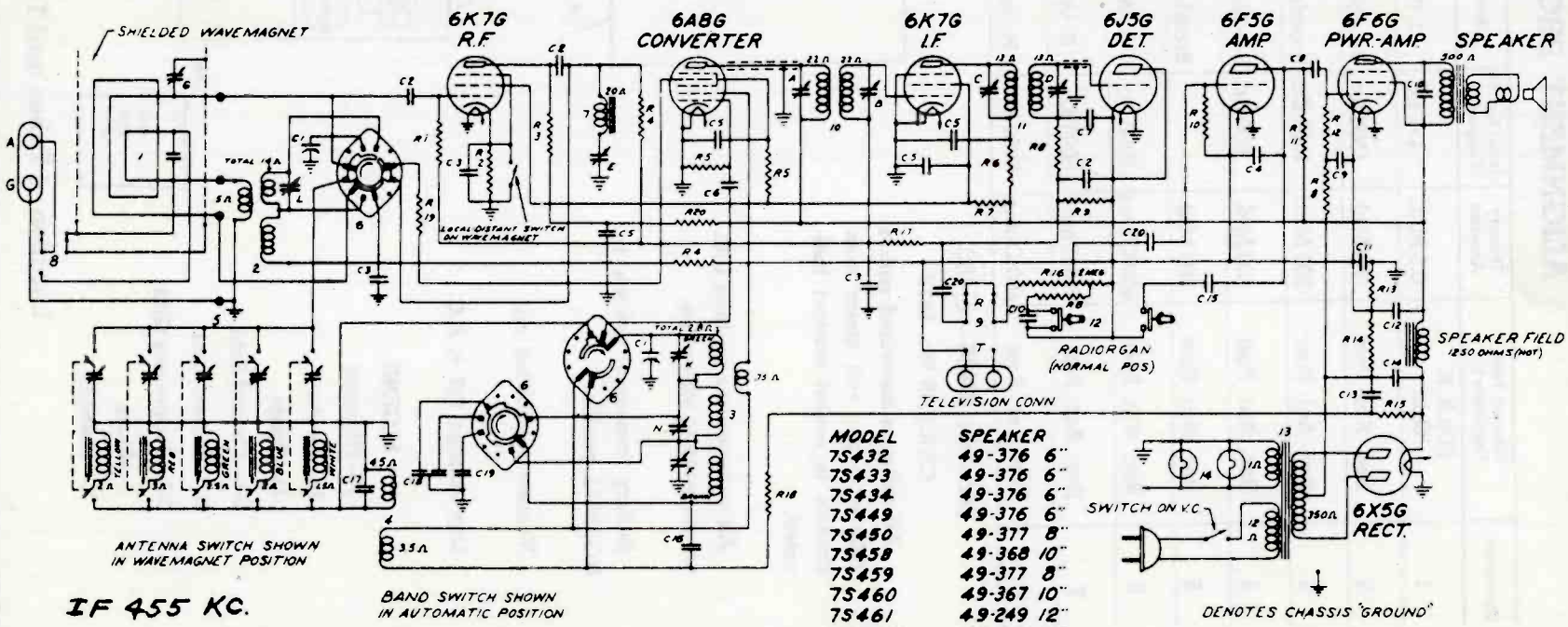
ZENITH RADIO CORPORATION

DIAG NO	PART NO	DESCRIPTION	
C 1	22-848	2 GANG VARIABLE	
C 2	22-188	.0001 MFD.	600 V.
C 3	22-829	.05 MFD.	200 V.
C 4	22-716	.0005 MFD	600 V.
C 5	22-828	.05 MFD.	400 V.
C 6	22-209	50 MMFD	600 V.
C 7	22-182	.00025 MFD.	600 V.
C 8	22-830	.02 MFD.	600 V.
C 9	22-219	.03 MFD.	200 V.
C 10	22-229	.005 MFD.	600 V.
C 11	22-827	.1 MFD.	200 V.
C 12	22-719	16 MFD ELECTROLYTIC	350 V.
C 13		8 MFD ELECTROLYTIC	450 V.
C 14	22-941	8 MFD ELECTROLYTIC	450 V.
C 15	22-448	.006 MFD.	600 V.
C 16	22-258	.002 MFD.	600 V.
C 17	22-866	COMPENSATING COND.	
C 18	38-853	DUAL OSC PADDER	
C 19	22-866	OSCILLATOR PADDER	
C 20	22-196	.01 MFD.	600 V.

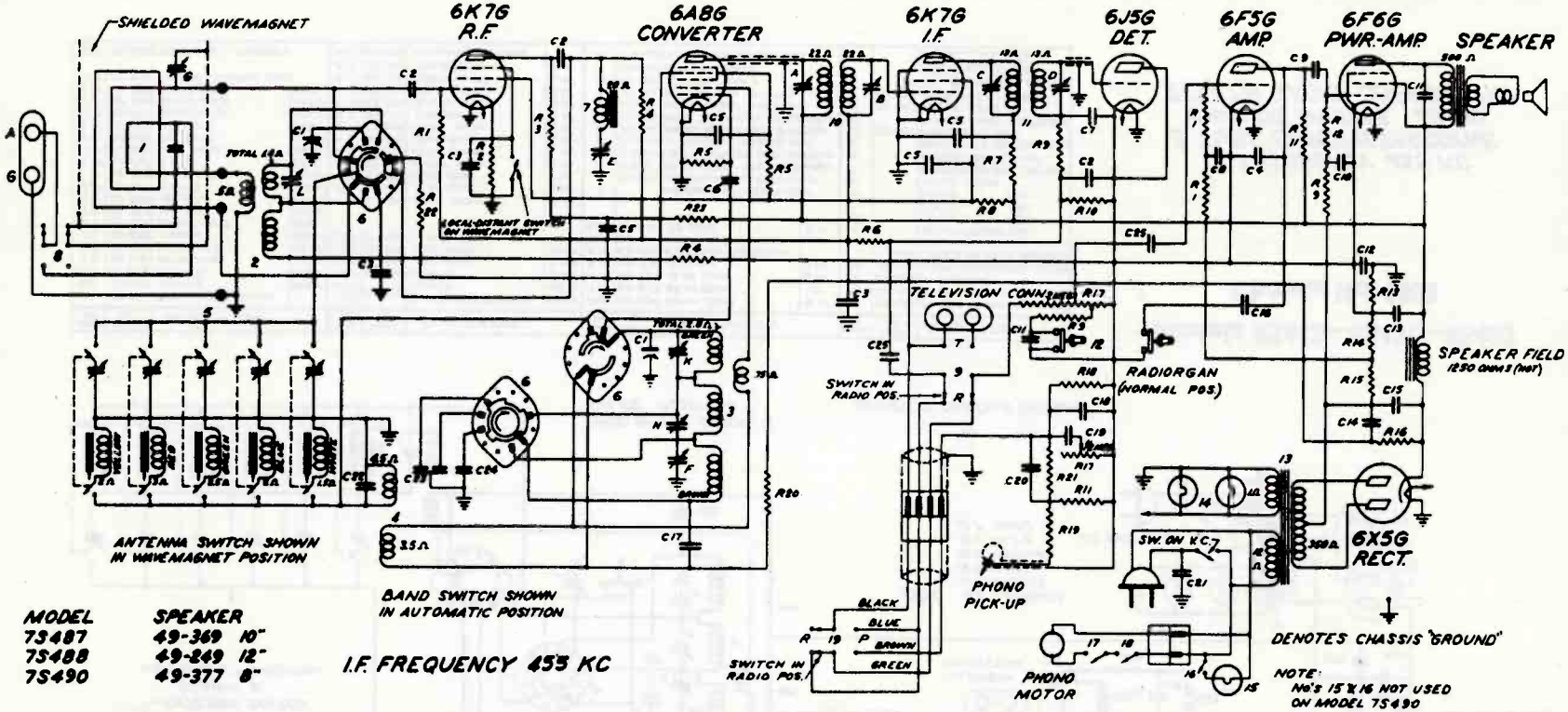
DIAG NO	PART NO	DESCRIPTION	
R 1	63-871	1 MEGOHM	½ W.
R 2	63-588	6800 OHM	½ W.
R 3	63-607	15 M OHM	½ W.
R 4	63-595	100 M OHM	½ W.
R 5	63-592	33 M OHM	½ W.
R 6	63-583	1000 OHM	½ W.
R 7	63-676	27 M OHM	1 W.
R 8	63-593	47 M OHM	½ W.
R 9	63-659	470 M OHM	½ W.
R 10	63-976	15 MEGOHM	½ W.
R 11	63-296	220 M OHM	½ W.
R 12	63-597	470 M OHM	½ W.
R 13	63-1057	47 OHM WIREWOUND	½ W.
R 14	63-1036	280 OHM WIREWOUND	½ W.
R 15	63-1035	22 M OHM	1 W.
R 16	63-1030	VOLUME CONTROL	½ W.
R 17	63-599	1.5 MEGOHM	½ W.
R 18	63-1054	10 M OHM	½ W.
R 19	63-577	100 OHM	½ W.
R 20	63-705	2200 OHM	½ W.

DIAG NO	PART NO	DESCRIPTION
1		WAVEMAGNET ASSEMBLY
2	58936	ANTENNA COIL ASSEMBLY
3	56937	OSCILLATOR COIL ASSEMBLY
4	56992	OSC. COUPLER COIL ASSEM.
5	57044	AUTOMATIC TUNING ASSEM.
6	49-205	BAND SELECTOR SWITCH
7	57500	WAVE TRAP COIL ASSEMBLY
8	85-171	WAVEMAGNET SWITCH
9	85-171	TELEVISION SWITCH
10	95-600	12" I.F. TRANS.
11	95-596	8" I.F. TRANS.
12	56998	TONE CONTROL SW. ASSEM.
13	95-634	POWER TRANS. 60~ 115 V.





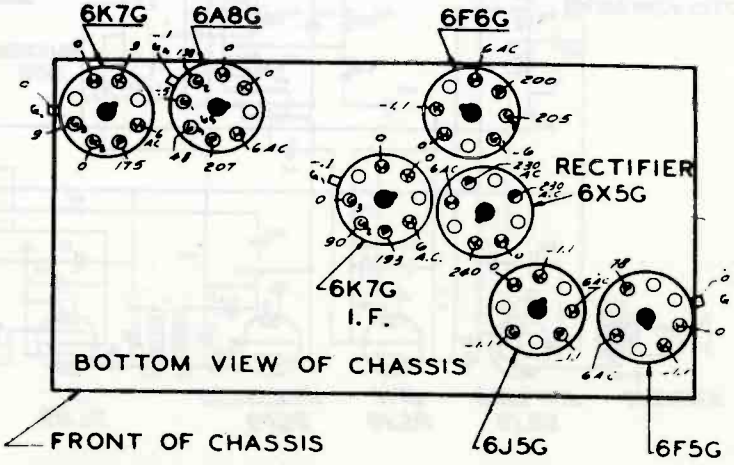
MODEL	SPEAKER
7S432	49-376 6"
7S433	49-376 6"
7S434	49-376 6"
7S449	49-376 6"
7S450	49-377 8"
7S458	49-368 10"
7S459	49-377 8"
7S460	49-367 10"
7S461	49-249 12"
7S462	49-367 10"



MODEL	SPEAKER
7S487	49-369 10"
7S488	49-249 12"
7S490	49-377 8"

I.F. FREQUENCY 455 KC

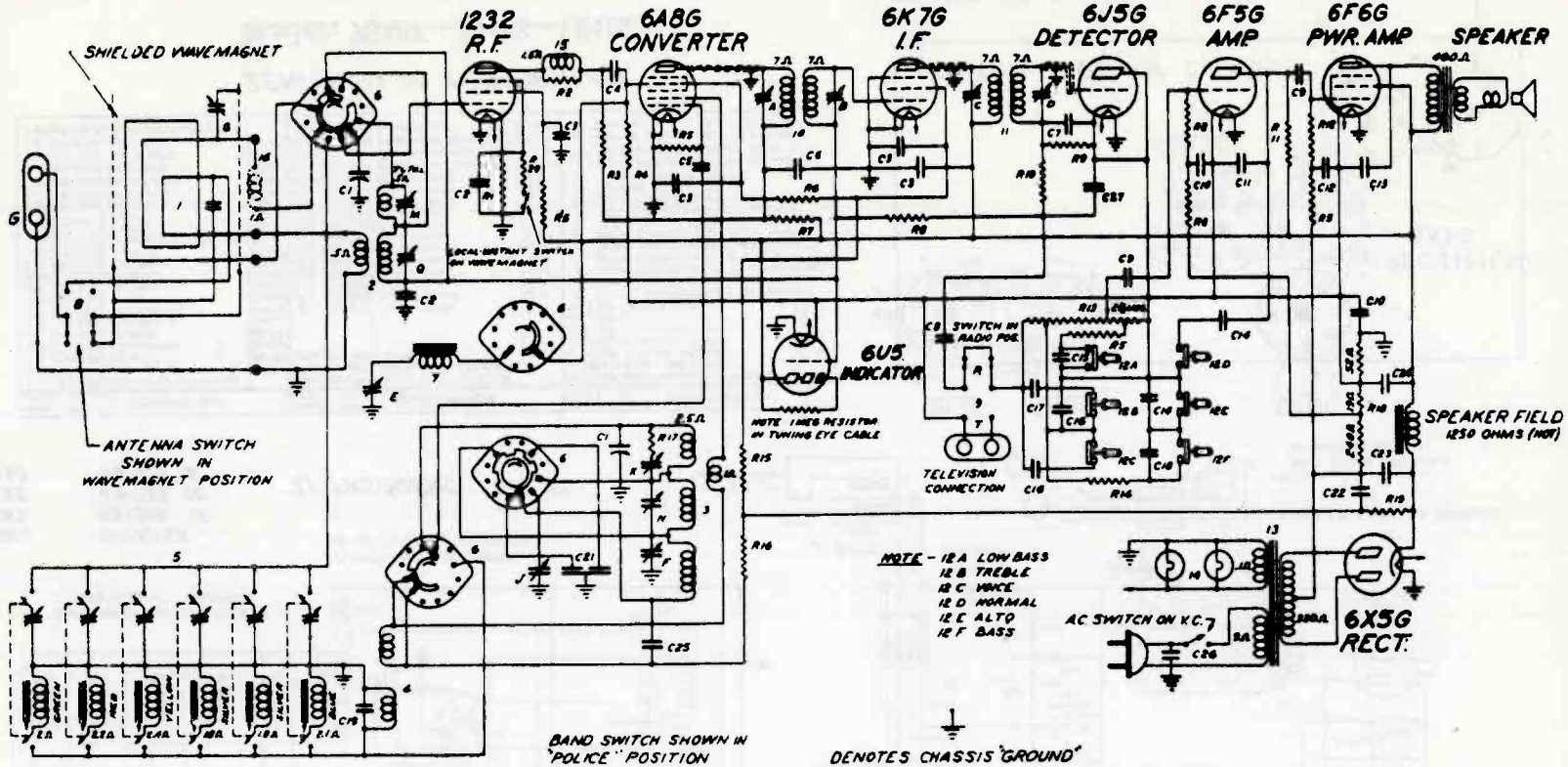
DIAG NO	PART NO	DESCRIPTION		DIAG NO	PART NO	DESCRIPTION		DIAG NO	PART NO	DESCRIPTION	
C1	22-849	TWO GANG VARIABLE		C23	22-853	DUAL OSC. PADDER		R17	63-1035	VOLUME CONTROL	
C2	22-162	.0001 MFD.	600 V	C24	22-846	OSCILLATOR PADDER		R18	63-686	1 MEGOHM	½ W
C3	22-829	.05 MFD.	200 V	C25	22-196	.01 MFD.	600 V	R19	63-717	220 M OHM	½ W
C4	22-716	.0008 MFD.	600 V					R20	63-1056	10 M OHM	½ W
C5	22-828	.05 MFD.	400 V					R21	63-719	470 M OHM	½ W
C6	22-809	.50 MMFD.	600 V					R22	63-577	100 OHM	½ W
C7	22-181	.0005 MFD.	600 V	R1	63-271	1 MEGOHM	½ W	R23	63-705	2200 OHM	½ W
C8	22-196	.1 MFD.	200 V	R2	63-525	6800 OHM	½ W	1		WAVEMAGNET ASSEMBLY	
C9	22-830	.02 MFD.	400 V	R3	63-607	15M OHM	½ W	2	S6936	ANTENNA COIL ASSEMBLY	
C10	22-219	.03 MFD.	200 V	R4	63-595	100M OHM	½ W	3	S6997	OSCILLATOR COIL ASSEMBLY	
C11	22-229	.005 MFD.	600 V	R5	63-592	33 M OHM	½ W	4	S6992	OSC. COUPLER COIL ASSEM.	
C12	22-827	.1 MFD.	200 V	R6	63-599	1.5 MEGOHM	½ W	5	S7064	AUTOMATIC TUNING ASSEM.	
C13	22-719	.45 MFD. ELECTROLYTIC	350 V	R7	63-583	1000 OHMS	½ W	6	85-205	BAND SELECTOR SWITCH	
C14		.5 MFD.	450 V	R8	63-676	2.7M OHM	1 W	7	S7500	WAVE TRAP COIL ASSEMBLY	
C15	22-941	.1 MFD.	450 V	R9	63-593	47M OHM	½ W	8	85-171	WAVEMAGNET SWITCH	
C16	22-448	.004 MFD.	600 V	R10	63-673	470 M OHM	½ W	9	85-171	TELEVISION SWITCH	
C17	22-358	.002 MFD.	600 V	R11	63-596	220 M OHM	½ W	10	35-505	1ST I.F. TRANS.	
C18	22-956	.00035 MFD.	600 V	R12	63-597	470 M OHM	½ W	11	35-596	2ND I.F. TRANS.	
C19	22-326	.003 MFD.	400 V	R13	63-1057	47 OHM WIREWOUND	½ W	12	S6994	TONE CONTROL SW. ASSEM.	
C20	22-953	.0002 MFD.	600 V	R14	63-1066	280 OHM WIREWOUND	½ W	13	35 634	POWER TRANS. 60W 115 V	
C21	22-525	.005 MFD.	1000 V	R15	63-1066	18 OHM WIREWOUND	½ W	14	100-36	PILOT LIGHT 6.3V .25A.	
C22	22-868	COMPENSATING COND.		R16	63-1053	22 M OHM	1 W	15	100-80	PILOT LIGHT 110V 7W	



ZENITH RADIO CORPORATION

Models 7S487—7S488—7S490

Chassis No. 5725



CHAS. NO.	PART NO.	DESCRIPTION		CHAS. NO.	PART NO.	DESCRIPTION		CHAS. NO.	PART NO.	DESCRIPTION		CHAS. NO.	PART NO.	DESCRIPTION
C1	22-927	TWO GANG VARIABLE		C22	22-933	6 MFD. ELECTROLYTIC	450 V	R14	63-594	68 M OHM	½ W	13	95-627	POWER TRANS. 60~/115 V
C2	22-929	.05 MFD.	200 V	C23		16 MFD.	450 V	R15	63-677	33 M OHM	1 W	14	100-36	PILOT LIGHT 6.3 V. .25 A
C3	22-928	.05 MFD.	400 V	C24	22-719	.10 MFD.	350 V	R16	63-796	10 M OHM	½ W	15	57526	R.F. CHOKE
C4	22-716	.0005 MFD.	600 V	C25	22-358	.002 MFD.	600 V	R17	63-576	68 OHM	½ W	16	58442	LOOP LOADING COIL ASSEM. (NOTE: USED ON SOME MODELS)
C5	22-127	.25 MMFD.	600 V	C26	22-525	.005 MFD.	400 V	R18	63-998	3 SECTION CANDOHM				
C6	22-928	.1 MFD.	400 V	C27	22-162	.0001 MFD.	600 V	R19	63-737	15 M OHM	1 W			
C7	22-188	.0005 MFD.	600 V					R20	63-576	33 OHM	½ W	A		1ST I.F. TRANS. PRI.
C8	22-327	.02 MFD.	200 V									B		1ST I.F. - SEC.
C9	22-930	.02 MFD.	600 V	R1	63-588	10 M OHM	½ W					C		2ND I.F. - PRI.
C10	22-827	.1 MFD.	200 V	R2	63-1071	1.0 M OHM	1 W	1		WAVEMAGNET ASSEMBLY		D		2ND I.F. - SEC.
C11	22-854	.0005 MFD.	600 V	R3	63-587	4700 OHM	½ W	2	57504	ANTENNA COIL ASSEMBLY		E		WAVE TRAP
C12	22-719	.03 MFD.	200 V	R4	63-595	100 M OHM	½ W	3	57691	OSCILLATOR COIL ASSEMBLY		F		BROADCAST OSC. (SEE NOTE)
C13	22-627	.002 MFD.	1000 V	R5	63-593	47 M OHM	½ W	4	57507	OSC. COUPLER COIL ASSEM.		G		ANTENNA BROADCAST
C14	22-448	.004 MFD.	600 V	R6	63-643	1.0 M OHM	½ W	5	57649	AUTOMATIC TUNING UNIT -		K		SHORT WAVE OSC. (SEE NOTE)
C15	22-229	.005 MFD.	600 V	R7	63-603	1000 OHM	½ W	6	85-262	BAND SELECTOR SWITCH		M	22-988	SHORT WAVE DET.
C16	22-670	.0015 MFD.	400 V	R8	63-271	1 MEGOHM	½ W	7	57559	WAVE TRAP COIL ASSEMBLY		N		POLICE BAND OSC. (SEE NOTE)
C17	22-954	.00035 MFD.	600 V	R9	63-776	2.2 M OHM	½ W	8	85-171	WAVEMAGNET SWITCH		Q	22-988	POLICE BAND DET.
C18	22-698	.002 MFD.	600 V	R10	63-711	2.2 M OHM	½ W	9	85-171	TELEVISION SWITCH		J	22-963	BROADCAST PADDER
C19	22-868	COMPENSATING COND.		R11	63-296	2.2 M OHM	½ W	10	95-625	1ST I.F. TRANS.				NOTE: TRIMMER FK5W ARE MOUNTED ON STRIP # 22-950
				R12	63-597	4.7 M OHM	½ W	11	95-663	2ND I.F. TRANS.				
C21	22-930	DUAL OSC. PADDER		R13	63-1075	VOLUME CONTROL		12	57649	TONE CONTROL SW. ASSEM.				

Models 8S443—8S451—8S463

Chassis No. 5808

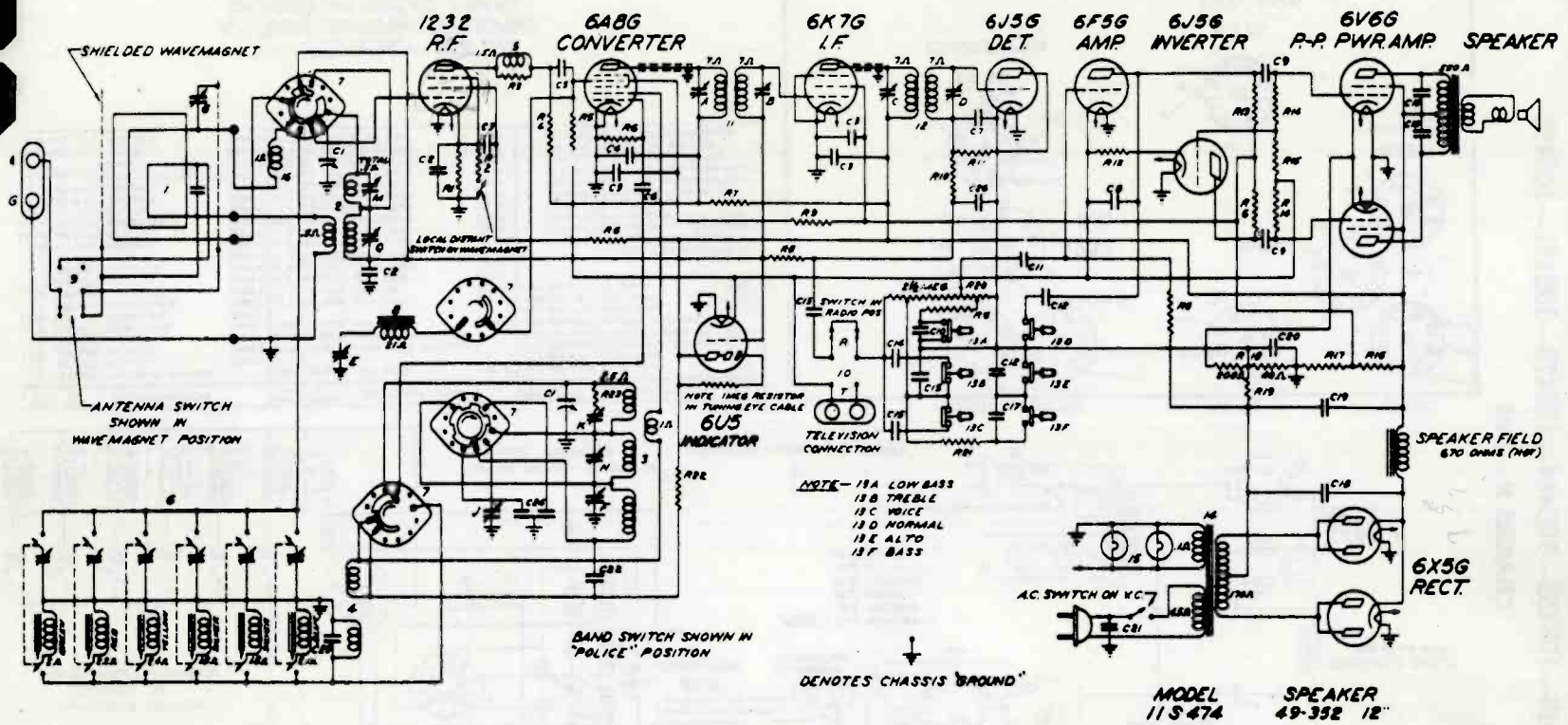
I.F. FREQUENCY 455 KC
8 TUBE SUPERHETERODYNE
CHASSIS Nº 5808 3 BAND
ZENITH RADIO CORPORATION

MANUAL OF 1940 MOST POPULAR SERVICE DIAGRAMS

Models 10S443—10S452—10S464—10S470—10S491—10S492

CHASSIS No. 1005

I.F. FREQUENCY 455 KC.
10 TUBE SUPERHETERODYNE
CHASSIS No. 1005 AC 3 BAND
ZENITH RADIO CORPORATION



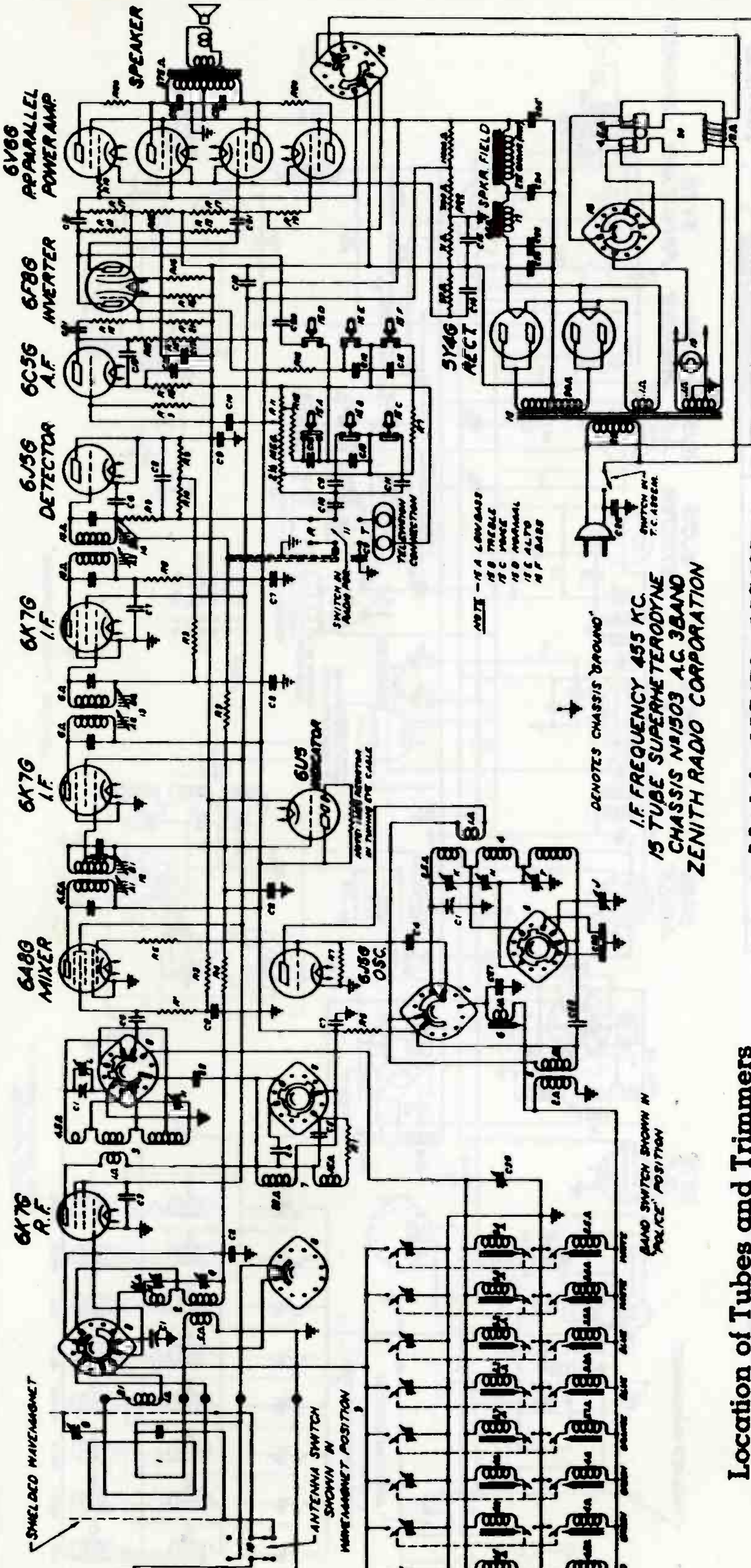
SCHEM NO	PART NO	DESCRIPTION		SCHEM NO	PART NO	DESCRIPTION		SCHEM NO	PART NO	DESCRIPTION		SCHEM NO	PART NO	DESCRIPTION
C1	22-367	TWO GANG VARIABLE		C28	20-388	.002 MFD.	600V	R16	63-1005	250 OHM	2 W	12	20-664	ANT. & TRANSFORMER
C2	22-368	.05 MFD.	400V					R17	63-676	67 M OHM	1 W	13	37643	TONE CONTROL SW ASSEM
C3	22-369	.05 MFD.	400V	C24	22-330	DUAL OSC. PADDER		R18	63-1060	6-SECTION CANDOHM		14	20-636	POWER TRANS 60~ 115V
C4	22-365	.1 MFD.	400V	C25	22-368	COMPENSATING COND.		R19	63-1050	10 OHM WIREWOUND	½ W	15	190-36	PILOT LIGHT 6.3V .25A
C5	22-367	.0005 MFD.	600V	C26	22-182	.0001 MFD.	600 W	R20	63-1070	VOLUME CONTROL		16	37642	LOOP LOADING COIL ASSEM
C6	22-127	.02 MFD.	600V					R21	63-696	68 M OHM	½ W			
C7	22-182	.0001 MFD.	600V	R1	63-683	.75 M OHM	½ W	R22	63-181	1.5 M OHM	1 W	A		1ST I.F. TRANS PRI.
C8	22-365	.1 MFD.	400V	R2	63-376	33 OHM	½ W	R23	63-676	68 OHM	½ W	B		1ST I.F. " SEC.
C9	22-171	.05 MFD.	400V	R3	63-1077	18 M OHM	1 W					C		2ND I.F. " PRI.
C10	22-229	.005 MFD.	600V	R4	63-587	4700 OHM	½ W					D		2ND I.F. " SEC.
C11	22-230	.02 MFD.	600V	R5	63-838	100 M OHM	½ W	1		WAVEMAGNET ASSEMBLY		E		WAVE TRAP
C12	22-468	.004 MFD.	600V	R6	63-833	47 M OHM	½ W	2	37604	ANTENNA COIL ASSEMBLY		F		BROADCAST OSC. (SEE NOTE)
C13	22-367	.02 MFD.	600V	R7	63-666	1000 OHM	½ W	3	37605	OSCILLATOR COIL ASSEMBLY		G		ANTENNA BROADCAST
C14	22-364	.0035 MFD.	400V	R8	63-871	1 MEGOHM	½ W	4	37601	ANT. COUPLER COIL ASSEM.		H		SHORT WAVE OSC. (SEE NOTE)
C15	22-370	.0001 MFD.	600V	R9	63-648	10 M OHM	½ W	5	37586	R.F. CHOKE		M	22-382	SHORT WAVE ANTENNA
				R10	63-711	22 M OHM	½ W	6	37649	AUTOMATIC TUNING UNIT		N		POLICE BAND OSC. (SEE NOTE)
C17	22-496	.002 MFD.	600V	R11	63-774	220 M OHM	½ W	7	35-902	BAND SELECTOR SWITCH		Q	22-382	POLICE BAND ANTENNA
C18	22-336	10 MFD ELECTROLYTIC	450V	R12	63-893	2200 OHM	½ W	8	37599	WAVE TRAP COIL ASSEMBLY		J	22-463	BROADCAST PADDER
C19	22-336	10 MFD ELECTROLYTIC	350V	R13	63-896	680 M OHM	½ W	9	35-171	WAVEMAGNET SWITCH				NOTE: TRIMMERS A.R.R.N.
C20	22-367	.1 MFD.	600V	R14	63-657	330 M OHM	½ W	10	35-171	TELEVISION SWITCH				ARE ACROSS COIL NO. 1
C21	22-525	.005 MFD.	1000V	R15	63-648	47 M OHM	½ W	11	35-626	1ST I.F. TRANSFORMER				TRIMMER 2

Model 11S474

Chassis No. 1103

I.F. FREQUENCY 455 KC.
11 TUBE SUPERHETERODYNE
CHASSIS NO. 1103 A.C. 3 BAND
ZENITH RADIO CORPORATION

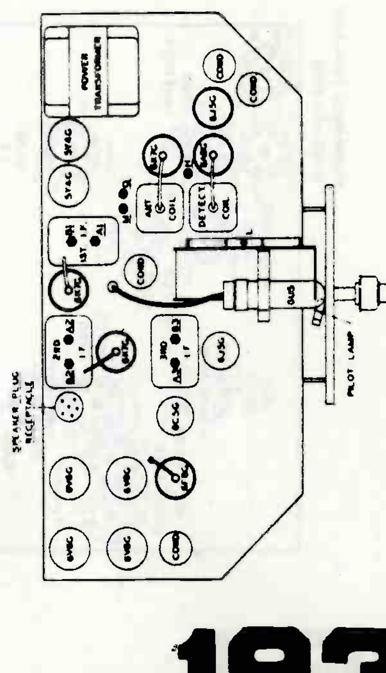
MANUAL OF 1940 MOST POPULAR SERVICE DIAGRAMS



Models 15S479—15S495

Chassis No. 1503

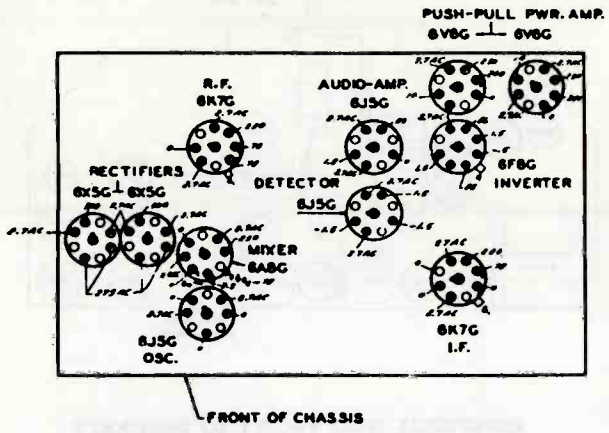
Location of Tubes and Trimmers



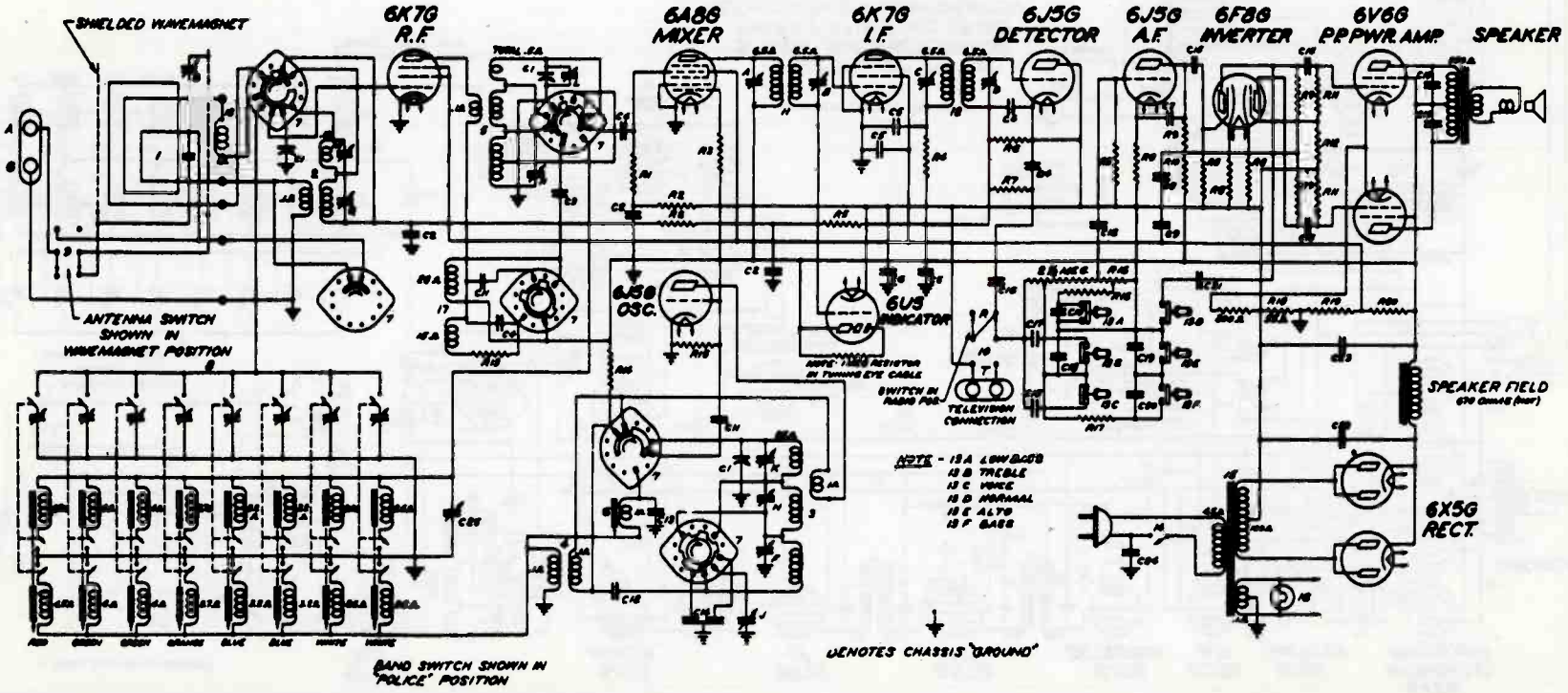
ZENITH RADIO CORPORATION

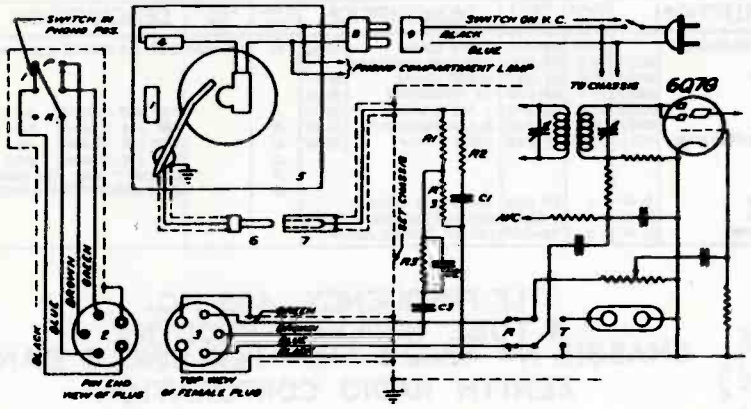
Models 12S445—12S453—12S471—12S475—12S494

CHASSIS No. 1207



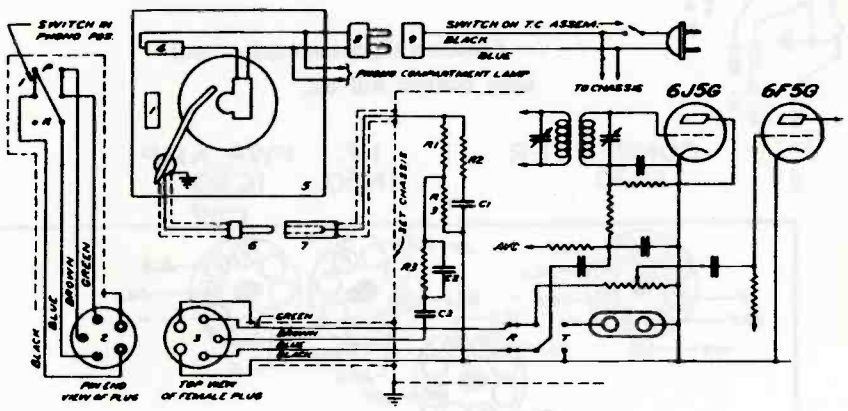
CHAS. NO.	PART NO.	DESCRIPTION		CHAS. NO.	PART NO.	DESCRIPTION		CHAS. NO.	PART NO.	DESCRIPTION		CHAS. NO.	PART NO.	DESCRIPTION
C1	22-961	THREE GANG VARIABLE	600 V	C24	22-934	.02 MFD.	600 V	R19	63-636	27 M OHM	1 W	A		1ST I.F. TRANS. PRI.
C2	22-939	.05 MFD.	200 V	C25		TRIMMER COND. (SEE NOTE)		R20	63-1005	22 M OHM	1 W	B		1ST I.F. " SEC.
C3	22-969	50 MMFD.	600 V									C		2ND I.F. " PRI.
C4	22-1521	.0001 MFD.	600 V									D		2ND I.F. " SEC.
C5	22-1520	.05 MFD.	600 V									E		BROADCAST OSC. (SEE NOTE)
C6	22-927	.1 MFD.	200 V	R1	63-637	470 M OHM	1/2 W	1		WAVEMAGNET ASSEMBLY		F		ANTENNA BROADCAST
C7	22-1564	.0005 MFD.	600 V	R2	63-536	100 M OHM	1/2 W	2	87796	ANTENNA COIL ASSEMBLY		G		DETECTOR BROADCAST
C8	22-938	.15 MFD. ELECTROLYTIC	350 V	R3	63-534	470 OHM	1/2 W	3	87666	OSCILLATOR COIL ASSEMBLY		H		SHORT WAVE OSC. (SEE NOTE)
C9		.1 MFD.	200 V	R4	63-605	1000 OHM	1/2 W	4	87666	OSC COUPLER COIL ASSEM.		N		SHORT WAVE DET. (SEE NOTE)
C10	22-1219	.005 MFD.	400 V	R5	63-671	1 MEGAOHM	1/2 W	5	37667	DETECTOR COIL ASSEMBLY		L		SHORT WAVE ANTENNA
C11	22-1571	.25 MMFD.	600 V	R6	63-635	220 M OHM	1/2 W	6	37636	TRIMMER COIL ASSEMBLY		M		POLICE BAND OSC. (SEE NOTE)
C12	22-1380	.008 MFD.	600 V	R7	63-591	22M OHM	1/2 W	7	88-809	BAND SELECTOR SWITCH		N		POLICE BAND ANTENNA
C13	22-1446	COMPENSATING COND.		R8	63-588	2200 OHM	1/2 W	8	37697	AUTOMATIC TUNING UNIT		Q		BROADCAST PADDER
C14	22-1530	DUAL OSC. PADDER		R9	63-648	47 M OHM	1/2 W	9	85-71	WAVEMAGNET SWITCH		J	88-853	
C15	22-171	.05 MFD.	600 V	R10	63-680	10 M OHM	1 W	10	85-71	TELEVISION SWITCH				
C16	22-1527	.10 MFD.	600 V	R11	63-657	330 M OHM	1/2 W	11	35-691	1ST I.F. TRANSFORMER				
C17	22-1564	.0005 MFD.	600 V	R12	63-647	33 M OHM	1/2 W	12	35-690	2ND I.F. TRANSFORMER				
C18	22-1570	.00015 MFD.	600 V	R13	63-1046	1100 OHM	1/2 W	13	37776	TONE CONTROL SW. ASSEM.				
C19	22-1569	.000 MFD.	600 V	R14	63-1065	15M OHM	1 W	14	87-1462	A.C. SWITCH				
C20	22-1568	.002 MFD.	600 V	R15	63-575	47 M OHM	1/2 W	15	35-689	POWER TRANS. 60 W. WITH				
C21	22-1567	.01 MFD.	600 V	R16	63-1070	VOLUME CONTROL		16	88-36	PILOT LIGHT 6.3 V. .25A.				
C22	22-970	50 MFD. ELECTROLYTIC	450 V	R17	63-534	470 M OHM	1/2 W	17	20-216	PLATE CHOKE COIL				
C23		30 MFD. ELECTROLYTIC	150 V	R18	63-1062	3 SECTION CARBOHM		18	20W	LOOP LOADING COIL ASSEM.				





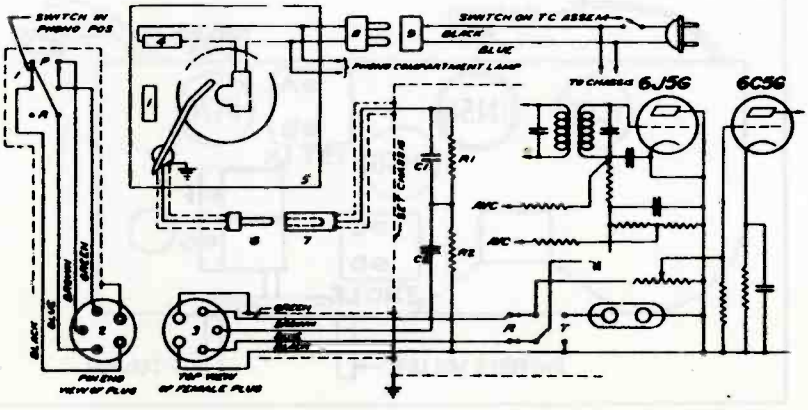
SYMBOL NO.	PART NO.	DESCRIPTION
C1	22-319	.005 MFD.
C2	22-320	.0025 MFD.
C3	22-807	.001 MFD.
R1	63-319	470 M OHM
R2	63-649	5 M OHM
R3	63-271	1 MEGOHM
1	37224	PHONO SW. & WIRE ASSEMBLY
2	38098	PLUG & WIRE ASSEMBLY
3	38070	PLUG & WIRE ASSEMBLY
4	65-191	A.C. SWITCH
5	49-36	WEBSTER AUTOMATIC RECORD PLAYER
6		CINCH No. 50 PLUG
7	38069	RECEPTACLE & WIRE ASSEM.
8		CINCH No. 21 PLUG WITH P-7002 CAP & LINER
9	38068	PLUG & WIRE ASSEMBLY

PHONO CIRCUIT DATA
MODEL SPEAKER
10S491 49-356 15"
10S492 49-352 12"
CHASSIS No. 1007



SYMBOL NO.	PART NO.	DESCRIPTION
C1	22-319	.005 MFD.
C2	22-320	.0025 MFD.
C3	22-807	.001 MFD.
R1	63-319	470 M OHM
R2	63-649	5 M OHM
R3	63-271	1 MEGOHM
1	37224	PHONO SW. & WIRE ASSEMBLY
2	38094	PLUG & WIRE ASSEMBLY
4	65-191	A.C. SWITCH
5	49-36	WEBSTER AUTOMATIC RECORD PLAYER
6		CINCH No. 50 PLUG
7	38069	RECEPTACLE & WIRE ASSEM.
8		CINCH No. 21 PLUG WITH P-7002 CAP & LINER
9	38068	PLUG & WIRE ASSEMBLY

PHONO CIRCUIT DATA
MODEL SPEAKER
12S494 49-355 15"
CHASSIS No. 1208

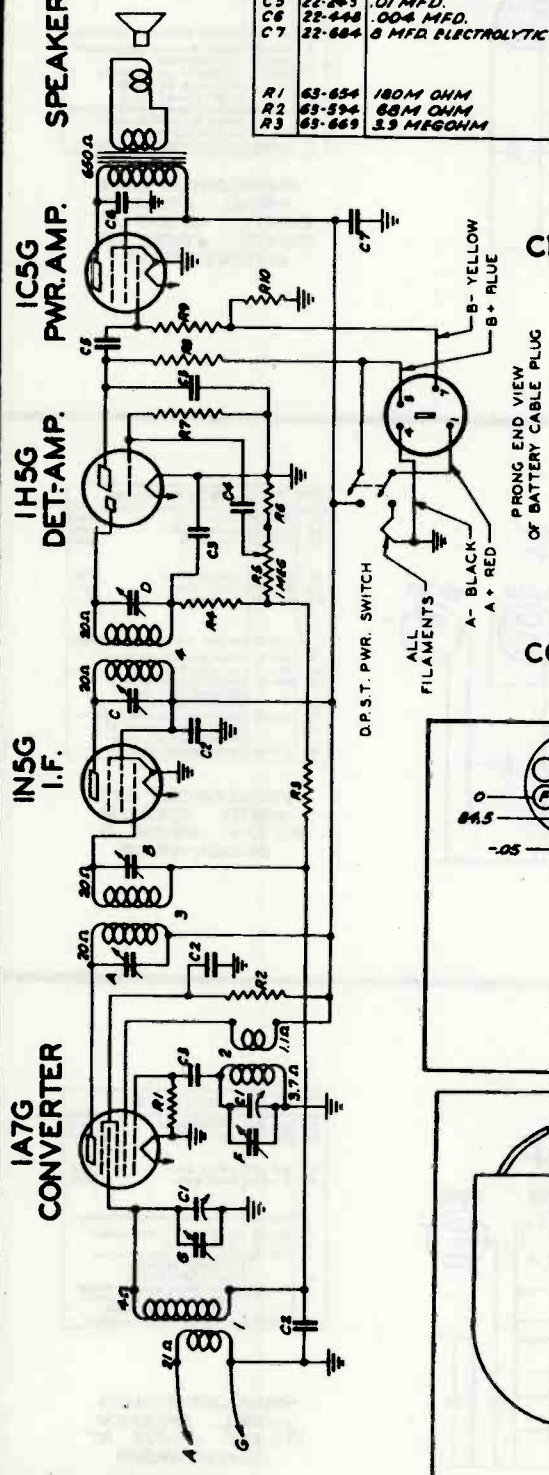


SYMBOL NO.	PART NO.	DESCRIPTION
C1	22-182	.0025 MFD.
C2	22-807	.001 MFD.
R1	63-597	470 M OHM
R2	63-649	5 M OHM
1	37224	PHONO SW. & WIRE ASSEMBLY
2	38098	PLUG & WIRE ASSEMBLY
4	65-191	A.C. SWITCH
5	49-36	WEBSTER AUTOMATIC RECORD PLAYER
6		CINCH No. 50 PLUG
7	38107	RECEPTACLE & WIRE ASSEM.
8		CINCH No. 21 PLUG WITH P-7002 CAP & LINER
9	38106	PLUG & WIRE ASSEMBLY

PHONO CIRCUIT DATA
MODEL SPEAKER
15S495 49-375 15"
CHASSIS No. 1504

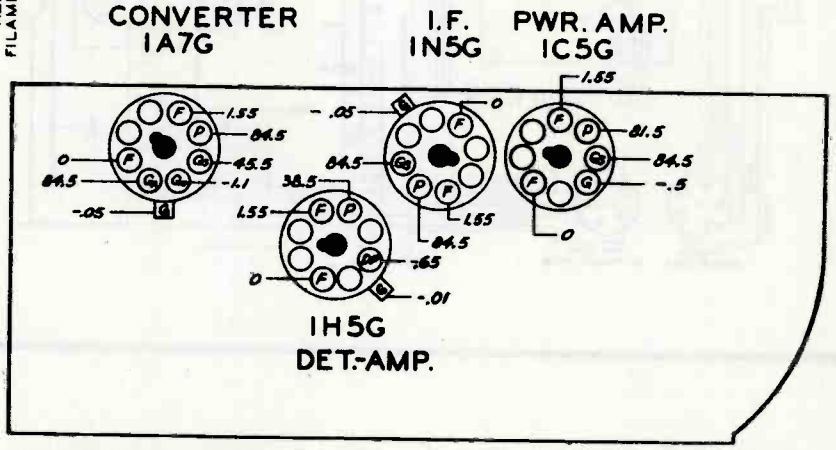
DIAG. Nº	PART. Nº	DESCRIPTION		DIAG. Nº	PART Nº	DESCRIPTION		DIAG. Nº	PART Nº	DESCRIPTION
C1	22-695	TWO GANG VARIABLE		R4	63-593	47M OHM	½ W.	4	95-590	2ND I.F. TRANS. ASSEM.
C2	22-829	.05 MFD.	200 V.	R5	63-1072	VOLUME CONTROL				
C3	22-162	.0001 MFD.	600 V.	R6	63-587	4700 OHM	½ W.			
C4	22-826	.01 MFD.	200 V.	R7	63-976	15 MEGOHM	½ W.			
C5	22-243	.01 MFD.	400 V.	R8	63-271	1 MEGOHM	½ W.	A		1ST I.F. TRANS. PRI.
C6	22-448	.004 MFD.	600 V.	R9	63-600	2.2 MEGOHM	½ W.	B		1ST I.F. TRANS. SEC.
C7	22-684	8 MFD ELECTROLYTIC	150 V.	R10	63-238	1000 OHM	½ W.	C		2ND I.F. TRANS. PRI.
								D		2ND I.F. TRANS. SEC.
R1	63-654	180M OHM	½ W.	1	20-208	ANTENNA COIL		F		OSCAST OSC. (ON GANG)
R2	63-594	68M OHM	½ W.	2	5-7815	OSCILLATOR COIL ASSEM.		G		ANT. BDCAST (ON GANG)
R3	63-669	3.9 MEGOHM	½ W.	3	95-589	1ST I.F. TRANS. ASSEM.				

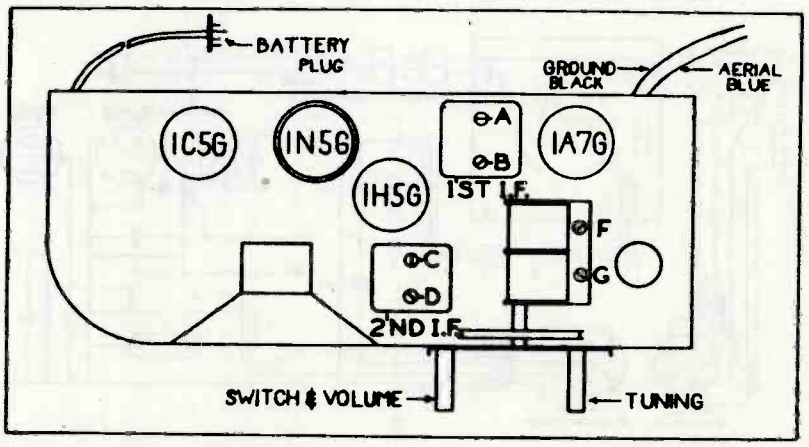
I.F. FREQUENCY 455 KC.
4 TUBE SUPERHETERODYNE
CHASSIS Nº 4A02 & 4A04-1½V.-SINGLE BAND
ZENITH RADIO CORPORATION



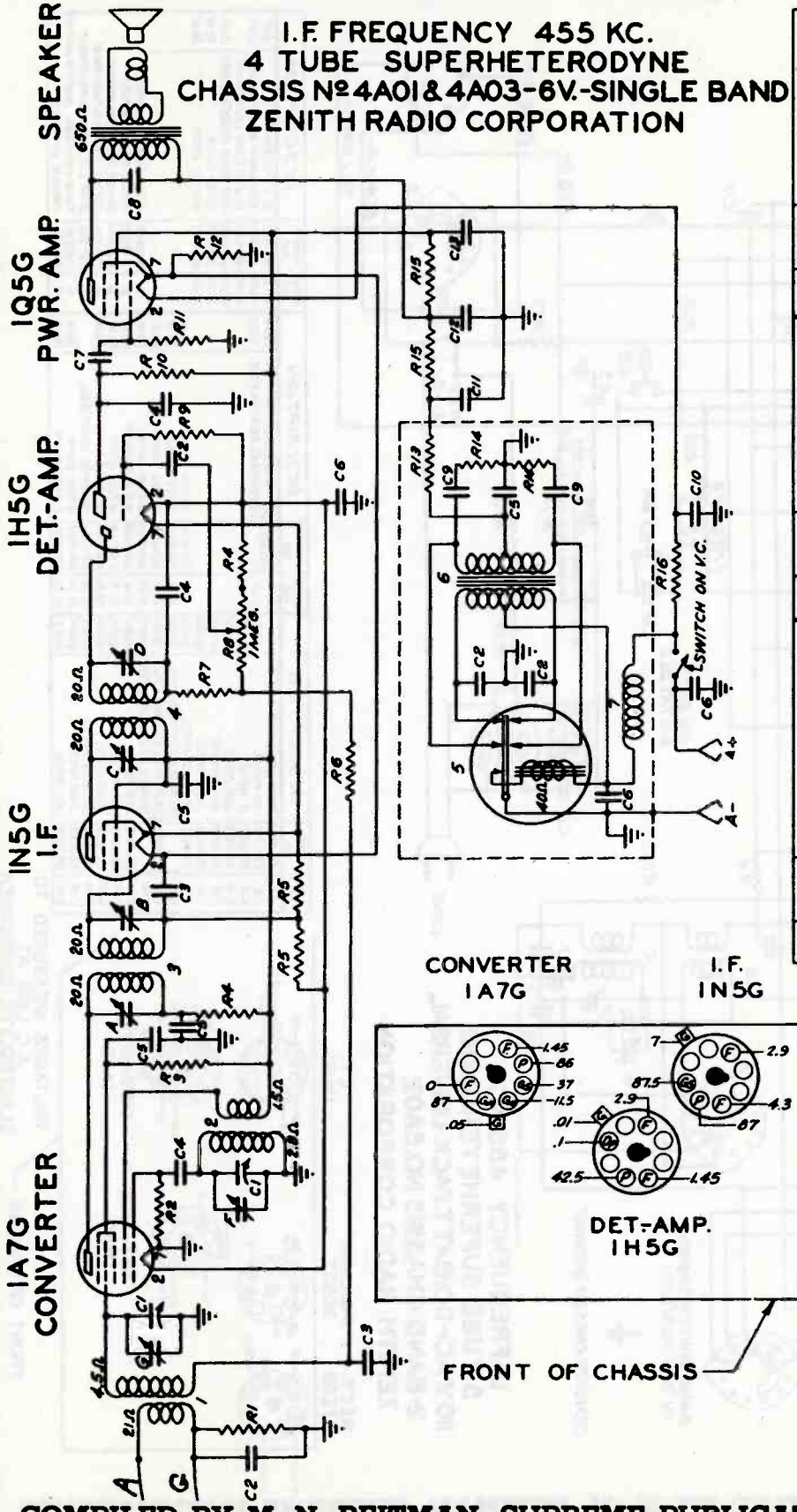
All voltages measured with a 1000 ohm per volt meter from chassis to socket contacts using a fresh Z28 battery pack.

Antenna disconnected — volume control full on.



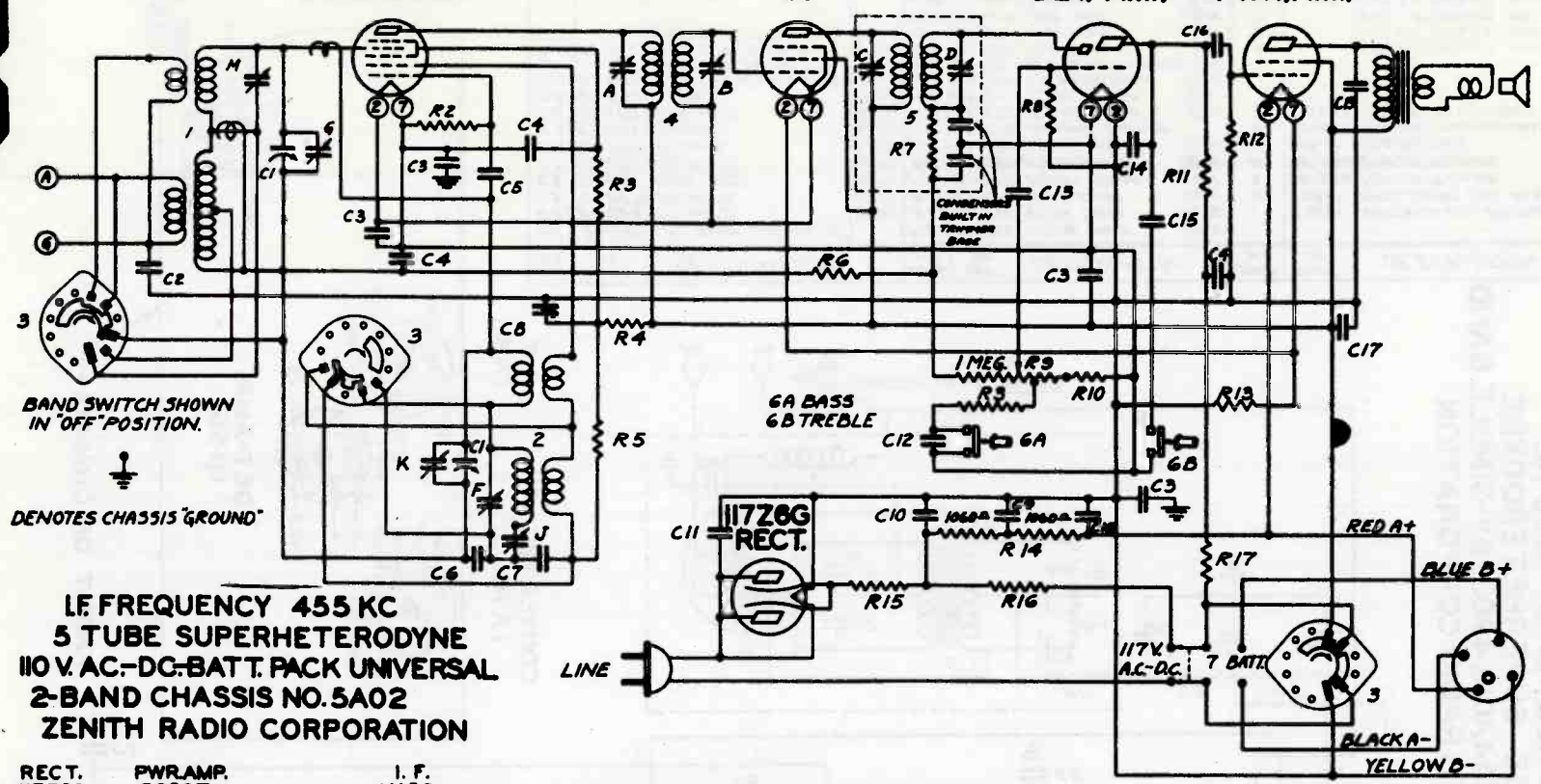


I.F. FREQUENCY 455 KC.
4 TUBE SUPERHETERODYNE
CHASSIS Nº 4A01 & 4A03-6V.-SINGLE BAND
ZENITH RADIO CORPORATION

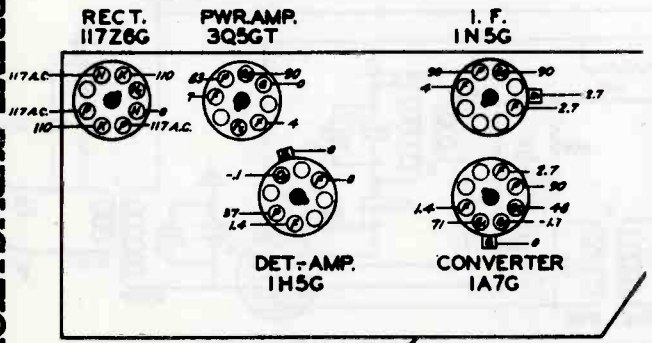


DIAG. Nº	PART Nº	DESCRIPTION
C1	22-635	TWO GANG VARIABLE
C2	22-826	.01 MFD.
C3	22-829	.05 MFD.
C4	22-162	.0001 MFD.
C5	22-828	.05 MFD.
C6	22-199	.5 MFD.
C7	22-243	.01 MFD.
C8	22-448	.004 MFD.
C9	22-966	.04 MFD.
C10	22-961	500MFD. ELECTROLYTIC
C11		75MFD. ELECTROLYTIC
C12	22-742	15 MFD. ELECTROLYTIC
C13		10MFD. ELECTROLYTIC
R1	63-597	470 M OHM
R2	63-595	100 M OHM
R3	63-594	68 M OHM
R4	63-583	1000 OHM
R5	63-296	220 M OHM
R6	63-669	3.9 MEGOHM
R7	63-598	47 M OHM
R8	63-1079	VOLUME CONTROL
R9	63-976	.15 MEGOHM
R10	63-271	1 MEGOHM
R11	63-600	2.2 MEGOHM
R12	63-1060	30 OHM WIREWOUND
R13	63-577	100 OHM
R14	63-697	100 OHM
R15	63-605	1000 OHM
R16	63-1061	7 OHM
		½ W.

DIAG. Nº	PART Nº	DESCRIPTION
1	57681	ANTENNA COIL ASSEMBLY
2	56381	OSCILLATOR COIL ASSEM.
3	95-589	1ST. I.F. TRANS.
4	95-590	2ND I.F. TRANS.
5	190-17	VIBRATOR
6	95-635	POWER TRANSFORMER
7	55043	CHOKE ASSEMBLY
A		1ST I.F. TRANS. PRI.
B		1ST I.F. TRANS. SEC.
C		2ND I.F. TRANS. PRI.
D		2ND I.F. TRANS. SEC.
E		BDCAST OSC. (ON GANG)
F		ANT. BDCAST (ON GANG)
G		

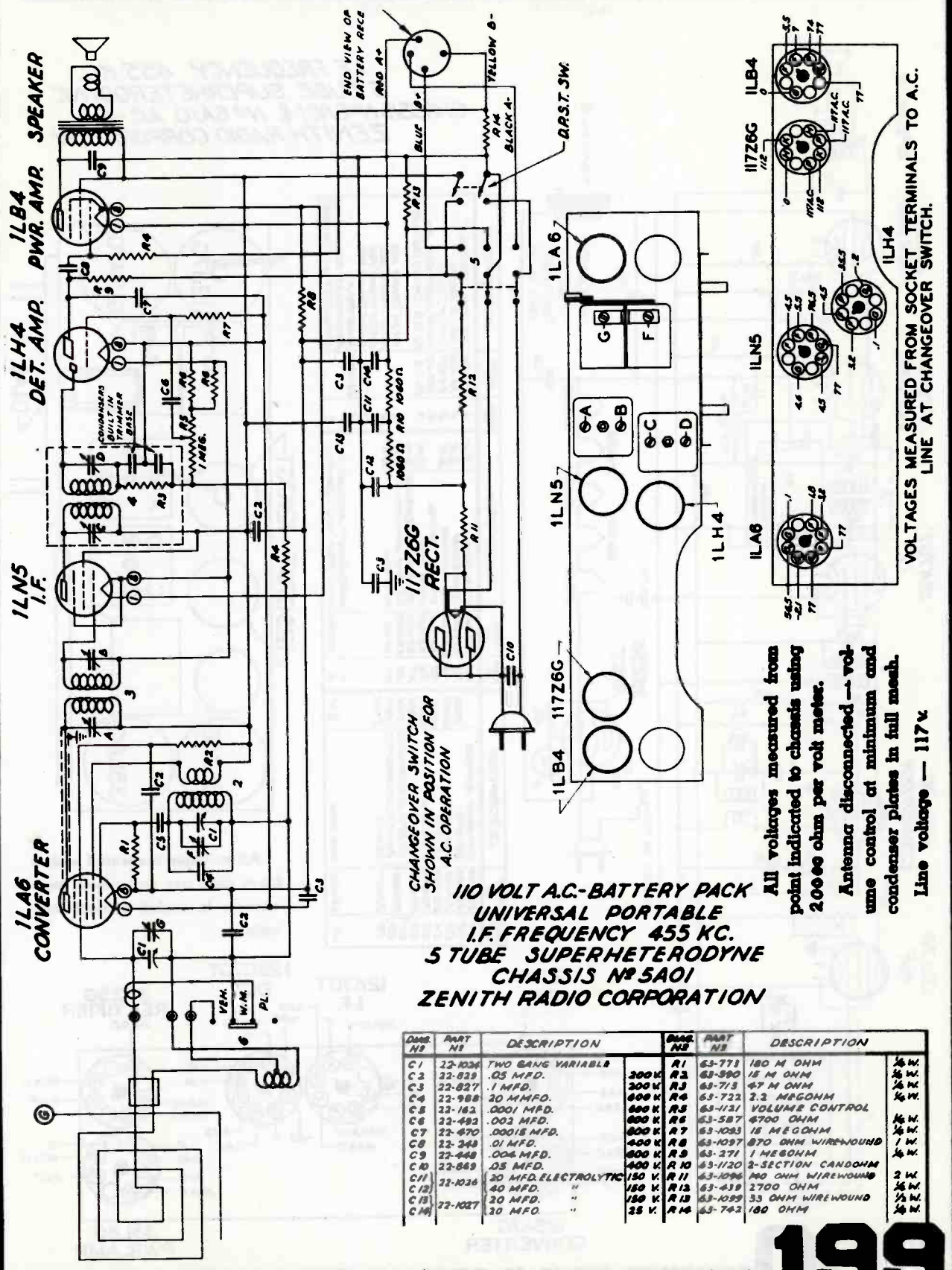


I.F. FREQUENCY 455 KC
5 TUBE SUPERHETERODYNE
110 V. AC.-DC.-BATT. PACK UNIVERSAL
2-BAND CHASSIS NO. 5A02
ZENITH RADIO CORPORATION



VOLTAGES MEASURED TO A.C. LINE AT ELECTROLYTIC CONDENSER

DIAG. NO.	PART NO.	DESCRIPTION		DIAG. NO.	PART NO.	DESCRIPTION		DIAG. NO.	PART NO.	DESCRIPTION	
C1	22-1046	TWO GANG VARIABLE		C17	22-1027	20 MFD. ELECTROLYTIC	150 V.	R12	63-600	2.2 MEGOHM	½ W.
C2	22-196	.01 MFD.	600 V.	C18		20 MFD. ELECTROLYTIC	25 V.	R13	63-1097	870 OHM WIREWOUND	1 W.
C3	22-827	.1 MFD.	200 V.					R14	63-1120	2-SECTION CANDOHM	
C4	22-829	.05 MFD.	200 V.					R15	63-1096	140 OHM WIREWOUND	2 W.
C5	22-289	50 MMFD.	600 V.					R16	63-685	1000 OHM	½ W.
C6	22-1002	.005 MFD.	600 V.					R17	63-597	470M OHM	½ W.
C7	22-182	.00025 MFD.	600 V.	R2	63-654	180M OHM	½ W.				
C8		10 MFD. ELECTROLYTIC	150 V.	R3	63-593	47M OHM	½ W.				
C9	22-1047	20 MFD. ELECTROLYTIC	150 V.	R4	63-636	3300 OHM	½ W.				
C10		30 MFD. ELECTROLYTIC	150 V.	R5	63-640	8200 OHM	½ W.	1	5-8609	ANT. COIL ASSEMBLY	
C11	22-869	.05 MFD.	400 V.	R6	63-669	33 MEGOHM	½ W.	2	5-8610	OSC. COIL ASSEMBLY	
C12	22-826	.01 MFD.	200 V.	R7	63-713	47M OHM	½ W.	3	88-232	BAND SELECTOR SWITCH	
C13	22-492	.002 MFD.	600 V.	R8	63-576	15 MEGOHM	½ W.	4	95-711	1ST I.F. TRANSFORMER	
C14	22-470	.00015 MFD.	600 V.	R9	63-1124	VOLUME CONTROL		5	95-712	2ND I.F. TRANSFORMER	
C15	22-867	.001 MFD.	600 V.	R10	63-587	4700 OHM	½ W.	6	5-8531	TONE CONTROL SWITCH ASSEM.	
C16	22-243	.01 MFD.	400 V.	R11	63-671	1 MEGOHM	½ W.	7	88-171	POWER SWITCH	



All voltages measured from point indicated to chassis using 2000 ohm per volt meter.

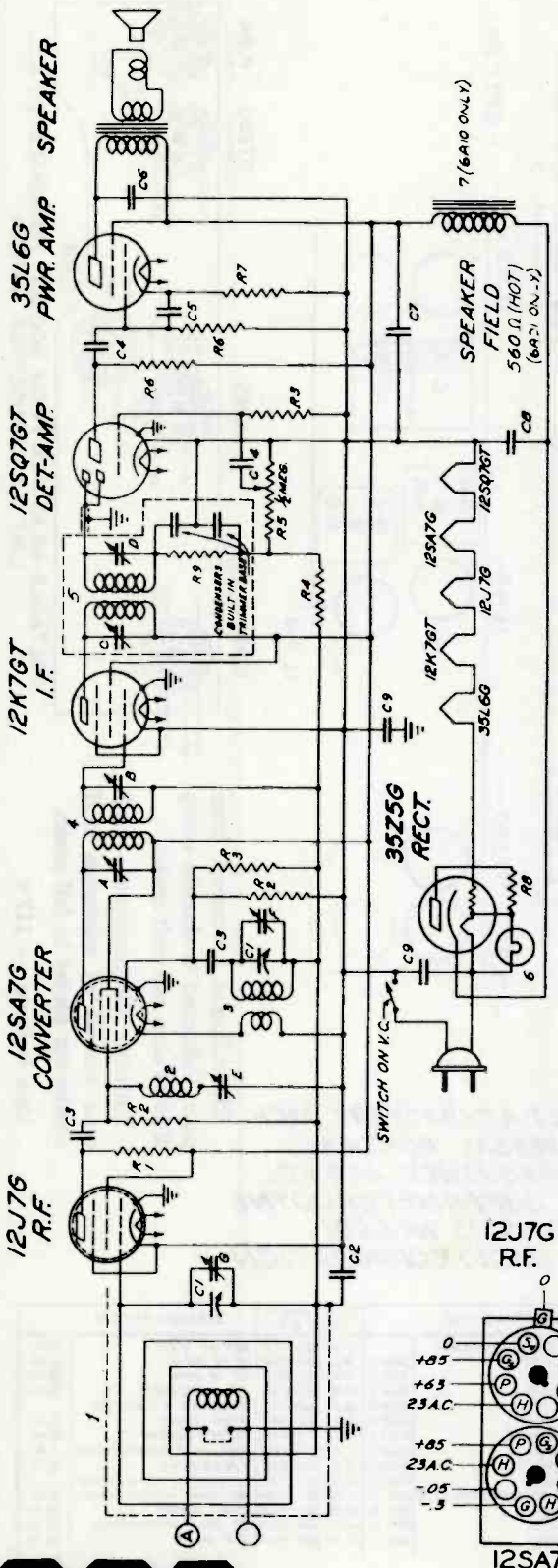
Antenna disconnected — volume control at minimum and condenser plates in full mesh.

Line voltage — 117 v.

110 VOLT A.C.-BATTERY PACK UNIVERSAL PORTABLE I.F. FREQUENCY 455 KC. 5 TUBE SUPERHETERODYNE CHASSIS Nº 5A01 ZENITH RADIO CORPORATION

DIAG. Nº	PART Nº	DESCRIPTION		DIAG. Nº	PART Nº	DESCRIPTION	
C1	22-1034	TWO GANG VARIABLE		R1	63-771	180 M OHM	
C2	22-829	.05 MFD.	200 V.	R2	63-390	15 M OHM	
C3	22-827	.1 MFD.	200 V.	R3	63-713	47 M OHM	
C4	22-988	20 MMFD.	600 V.	R4	63-722	2.2 MEGOHM	
C5	22-162	.0001 MFD.	600 V.	R5	63-1121	VOLUME CONTROL	
C6	22-492	.003 MFD.	600 V.	R6	63-587	4700 OHM	
C7	22-670	.00015 MFD.	600 V.	R7	63-1093	15 MEGOHM	
C8	22-249	.01 MFD.	400 V.	R8	63-1097	870 OHM WIREWOUND	
C9	22-448	.004 MFD.	600 V.	R9	63-271	1 MEGOHM	
C10	22-869	.05 MFD.	400 V.	R10	63-1120	2-SECTION CANDOHM	
C11	22-1036	20 MFD. ELECTROLYTIC	150 V.	R11	63-1096	140 OHM WIREWOUND	2 W.
C12		40 MFD. "	150 V.	R12	63-439	2700 OHM	
C13	22-1027	20 MFD. "	150 V.	R13	63-1099	33 OHM WIREWOUND	
C14		20 MFD. "	25 V.	R14	63-742	180 OHM	

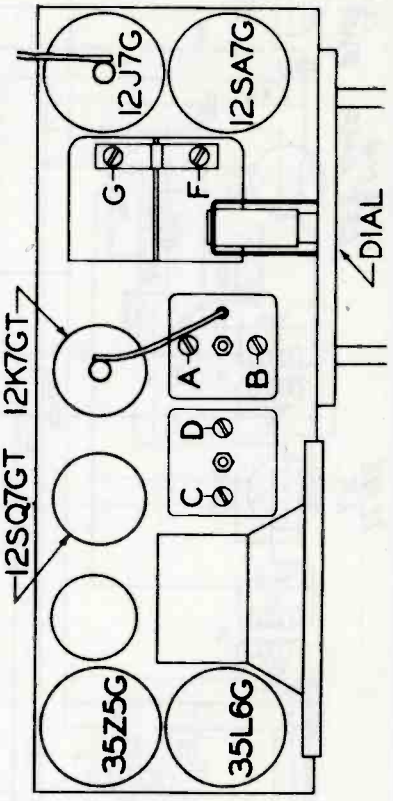
I.F. FREQUENCY 455 KC.
6 TUBE SUPERHETERODYNE
CHASSIS Nº 6A01 & Nº 6A10 A.C.-D.C.
ZENITH RADIO CORPORATION



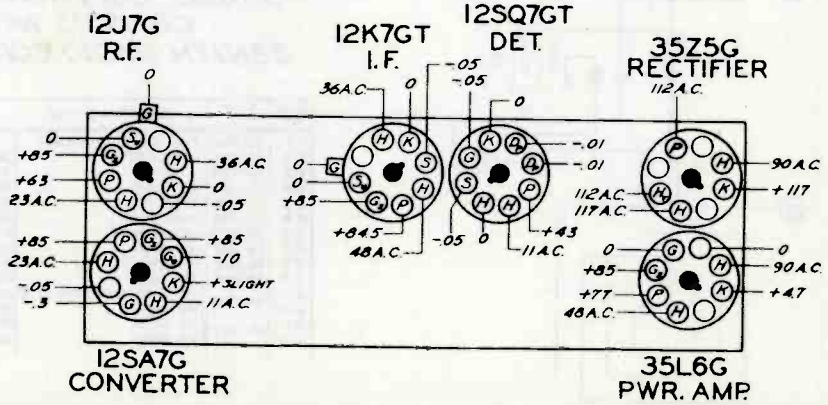
CASE NO	PART NO	DESCRIPTION
3	58936	OSC. COIL ASSEMBLY
4	95-696	1ST I.F. TRANS.
5	95-697	2ND I.F. TRANS.
6	100-67	PILOT LIGHT 6.3V .15A.
7	95-713	FILTER CHOKE (3000 OHMS RES.)
		1ST I.F. TRANS. PRI.
		1ST I.F. TRANS. SEC.
		2ND I.F. TRANS. PRI.
		2ND I.F. TRANS. SEC.
A	22-1015	WAVE TRAP
B		BROADCAST OSC. (ON 6A10)
C		BROADCAST ANT. (ON 6A10)

CASE NO	PART NO	DESCRIPTION		
C1	22-1006	TWO-GANG VARIABLE		
C2	22-829	.05 MFD.	200V	
C3	22-168	.0001 MFD.	600V	
C4	22-245	.01 MFD.	400V	
C5	22-854	.0005 MFD.	600V	
C6	22-1049	.03 MFD.	400V	
C7	22-1014	(.20 MFD ELECTROLYTIC	150V.	
C8	22-1017	(.20 MFD ELECTROLYTIC	150V.	
C9		.05 MFD.	200V.	
R1	63-339	10M OHM		½ W.

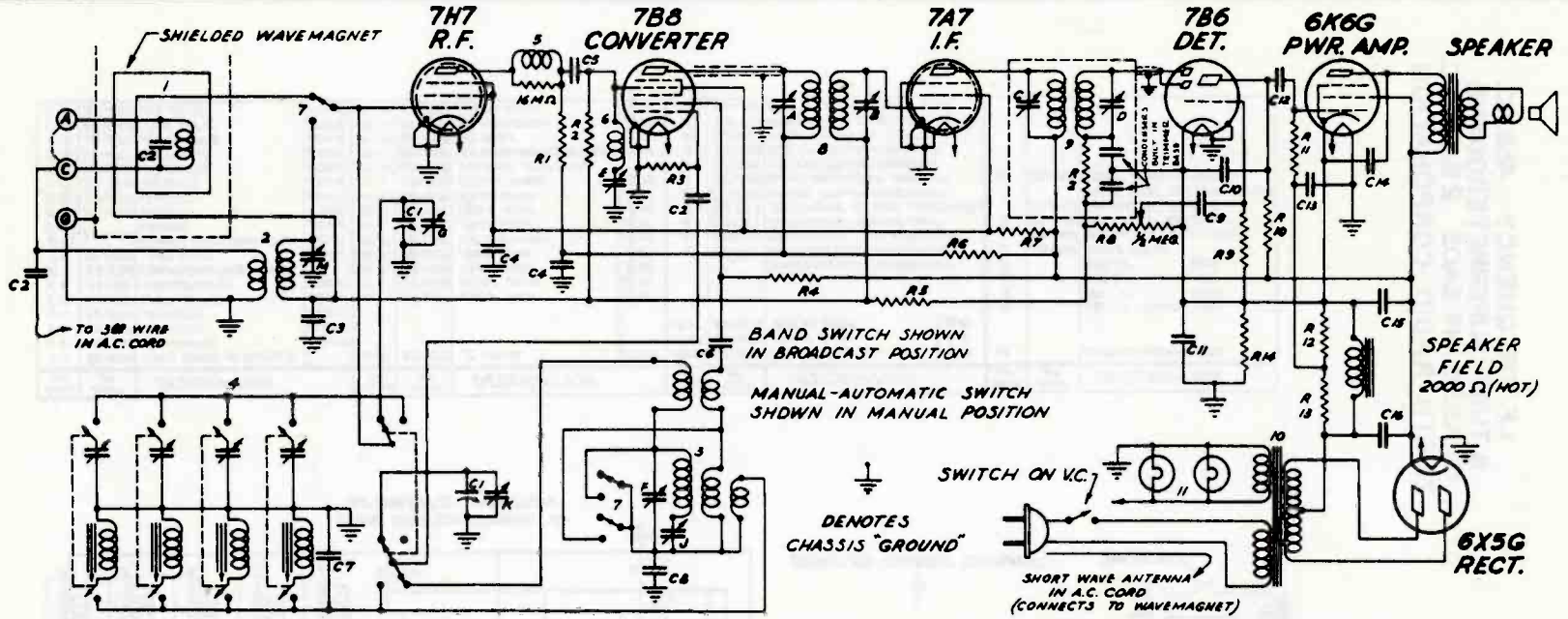
CASE NO	PART NO	DESCRIPTION	
R2	63-391	22M OHM	½ W.
R3	63-1033	15 MEGOHM	½ W.
R4	63-600	2.2 MEGOHM	½ W.
R5	63-1112	VOLUME CONTROL	
R6	63-597	470M OHM	½ W.
R7	63-686	150 OHM WIREWOUND	½ W.
R8	63-1023	2.2 OHM WIREWOUND	½ W.
R9	63-713	47 M OHM	½ W.
1	58926	WAVEMAGNET ASSEMBLY	
2		WAVE TRAP COIL ASSEMBLY	

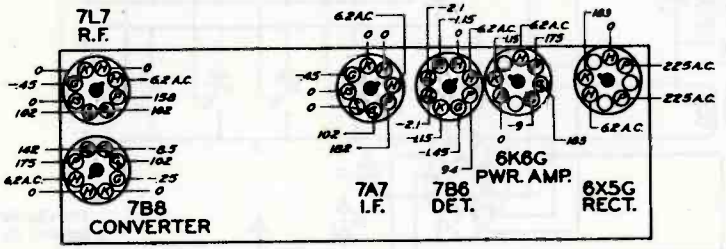


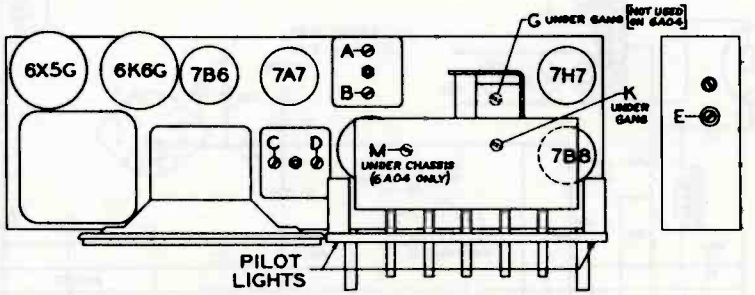
All voltages measured with a 20 M. ohm per volt meter from chassis to socket contact indicated.



MANUAL OF 1940 MOST POPULAR SERVICE DIAGRAMS







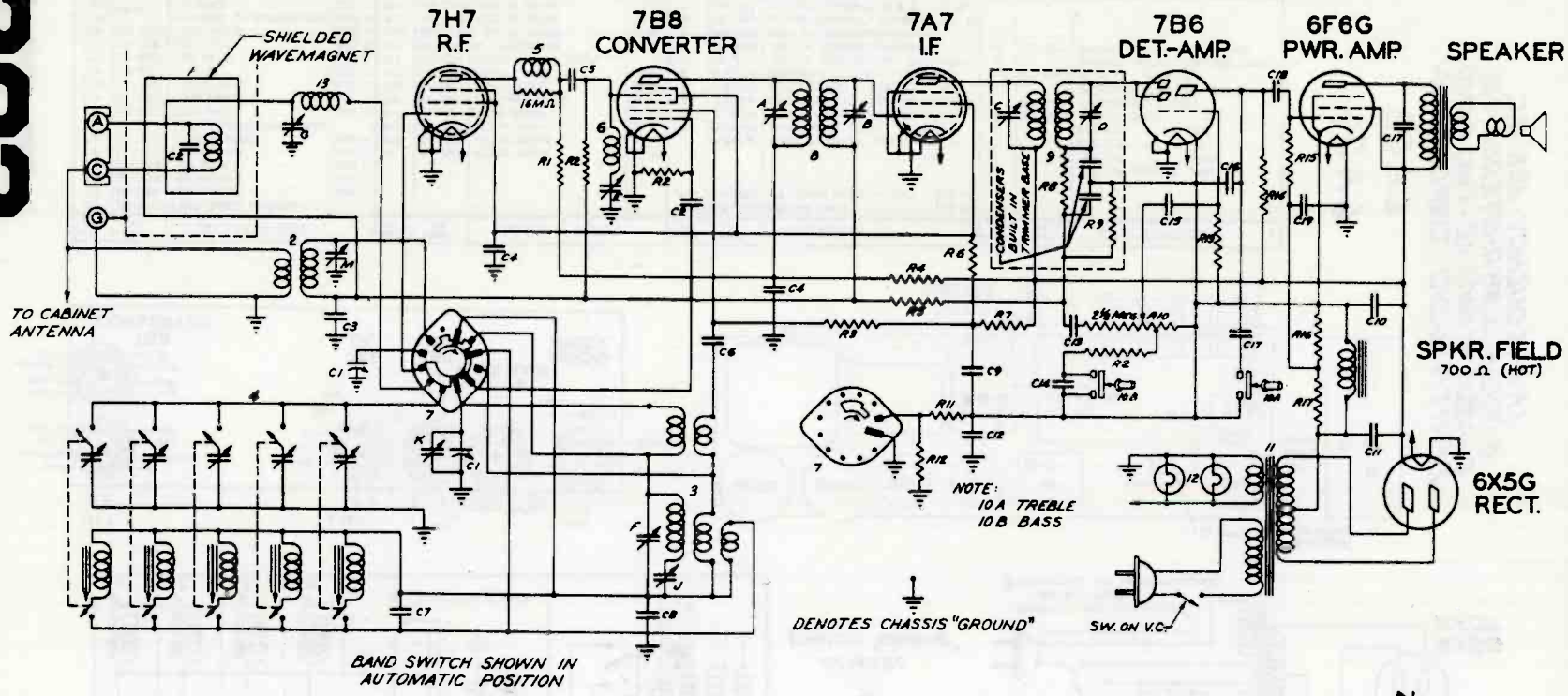
I.F. FREQUENCY 455 K.C. 6 TUBE SUPERHETERODYNE CHASSIS Nos 6A02-AC-TWO BAND ZENITH RADIO CORPORATION

6A02
6A04

DIAG. NO	PART NO	DESCRIPTION		DIAG. NO	PART NO	DESCRIPTION		DIAG. NO	PART NO	DESCRIPTION		DIAG. NO	PART NO	DESCRIPTION
C1	22-1007	TWO GANG VARIABLE						R13	63-659	470 M OHM	1/2 W.			
C2	22-389	.50 MMFD.	600 V.					R14	63-1098	42 OHM WIREWOUND	1/2 W.			
C3	22-829	.05 MFD.	200 V.									A		1ST I.F. TRANS. PRI.
C4	22-828	.05 MFD.	400 V.									B		1ST I.F. " SEC.
C5	22-162	.0001 MFD.	600 V.	R1	63-757	4700 OHM	1/2 W.					C		2ND I.F. " PRI.
C6	22-182	.00025 MFD.	600 V.	R2	63-713	47 M OHM	1/2 W.	1	5 8376	WAVEMAGNET ASSEMBLY		D		2ND I.F. " SEC.
C7	22-868	COMPENSATING COND.		R3	63-593	47 M OHM	1/2 W.	2	5 8347	ANTENNA COIL ASSEM.		E	22-1016	WAVETRAP
C8	22-1022	.008 MFD.	600 V.	R4	63-1054	10 M OHM	1/2 W.	3	5 8379	OSCILLATOR COIL ASSEM.		F	22-1011	BROADCAST OSC.
C9	22-493	.002 MFD.	600 V.	R5	63-599	1.5 MEGOHM	1/2 W.	4	5 8384	AUTOMATIC TUNING ASSEM.		G		B'DCAST ANT. (ON GANG)
C10	22-716	.0005 MFD.	600 V.	R6	63-703	1000 OHM	1/2 W.	5	5 8359	R.F. CHOKE & RES. ASSEM.		J	22-1023	B'DCAST PADDER
C11	22-827	.1 MFD.	200 V.	R7	63-151	15 M OHM	1 W.	6	5 8326	WAVETRAP COIL ASSEM.		K		SHORT WAVE OSC. (ON GANG)
C12	22-830	.02 MFD.	600 V.	R8	63-1118	VOLUME CONTROL		7	85-223	BAND SELECTOR SWITCH		M	22-1011	SHORT WAVE ANTENNA
C13	22-219	.03 MFD.	200 V.	R9	63-976	15 MEGOHM	1/2 W.	8	95-698	1ST I.F. TRANSFORMER				
C14	22-448	.004 MFD.	600 V.	R10	63-296	220 M OHM	1/2 W.	9	95-699	2ND I.F. TRANSFORMER				
C15	22-1039	.10 MFD. ELECTROLYTIC	250 V.	R11	63-597	470 M OHM	1/2 W.	10	95-700	PWR. TRANS. 50-60~ 117 V.				
C16		.15 MFD. "	350 V.	R12	63-260	100 M OHM	1/2 W.	11	100-67	PILOT LIGHT 6.3 V. .15 A.				

MANUAL OF 1940 MOST POPULAR SERVICE DIAGRAMS

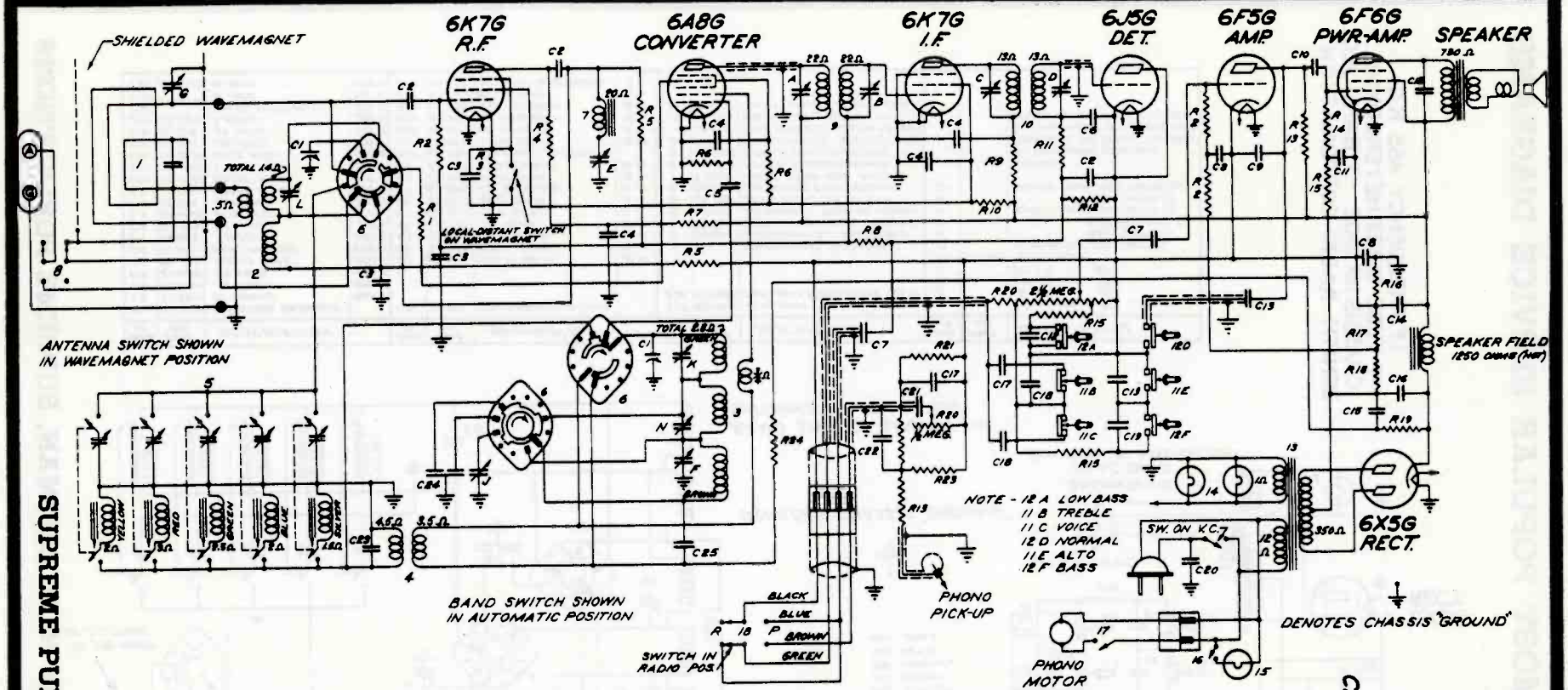
I.F. FREQUENCY 455 KC.
6 TUBE SUPERHETERODYNE
CHASSIS Nº 6A05 2 BAND A.C.
ZENITH RADIO CORPORATION



DIAG. Nº	PART Nº	DESCRIPTION		DIAG. Nº	PART Nº	DESCRIPTION		DIAG. Nº	PART Nº	DESCRIPTION		DIAG. Nº	PART Nº	DESCRIPTION
C1	22-1044	TWO GANG VARIABLE		C19	22-138	.2 MFD.	200 V.	R15	63-597	470 M OHM	½ W.	13		LOOP LOADING COIL
C2	22-289	50 MMFD.	600 V.					R16	63-656	180 M OHM	½ W.			
C3	22-829	.05 MFD.	200 V.					R17	63-656	270 M OHM	½ W.			
C4	22-828	.05 MFD.	400 V.									A		1ST I.F. TRANS. PRI.
C5	22-162	.0001 MFD.	600 V.	R1	63-637	4700 OHM	½ W.					B		1ST I.F. - SEC.
C6	22-182	.00025 MFD.	600 V.	R2	63-593	47 M OHM	½ W.					C		2ND I.F. - PRI.
C7	22-868	COMPENSATING COND.		R3	63-150	10 M OHM	½ W.	1		WAVEMAGNET ASSEMBLY		D		2ND I.F. - SEC.
C8	22-1022	.005 MFD.	600 V.	R4	63-583	1000 OHM	½ W.	2	S8507	ANTENNA COIL ASSEMBLY		E	22-1015	WAVE TRAP
C9	22-1034	.5 MFD. ELECTROLYTIC	450 V.	R5	63-599	1.5 MEGOHM	½ W.	3	S8508	OSCILLATOR COIL ASSEMBLY		F	22-1042	BROADCAST OSCILLATOR
C10		15 MFD. "	350 V.	R6	63-1102	15 M OHM	½ W.	4	S8457	AUTOMATIC TUNING UNIT		G	22-1042	BROADCAST ANTENNA
C11	22-1036	16 MFD. "	450 V.	R7	63-1101	8200 OHM	2 W.	5	S8359	R.F. CHOKE & RES. ASSEMBLY		J	22-1023	BROADCAST PADDER
C12	22-827	.1 MFD.	200 V.	R8	63-719	47 M OHM	½ W.	6	S8553	WAVE TRAP ASSEMBLY		K		SHORT WAVE OSC. (ON GANG)
C13	22-188	.02 MFD.	400 V.	R9	63-719	470 M OHM	½ W.	7	85-288	BAND SELECTOR SWITCH		M	22-1048	SHORT WAVE ANTENNA
C14	22-229	.005 MFD.	600 V.	R10	63-1123	VOLUME CONTROL		8	95-708	1ST I.F. TRANSFORMER				
C15	22-492	.002 MFD.	600 V.	R11	63-1098	42 OHM WIREWOUND		9	95-709	2ND I.F. TRANSFORMER				
C16	22-854	.0005 MFD.	600 V.	R12	63-624	68 OHM	½ W.	10	S8531	TONE CONTROL SWITCH				
C17	22-448	.004 MFD.	600 V.	R13	63-976	15 MEGOHM	½ W.	11	95-710	POWER TRANS. 50-60 ~ 117 V.				
C18	22-830	.02 MFD.	600 V.	R14	63-296	220 M OHM	½ W.	12	100-36	PILOT LIGHT 6.3 V. .25 A.				

SERVICE DIAGRAMS

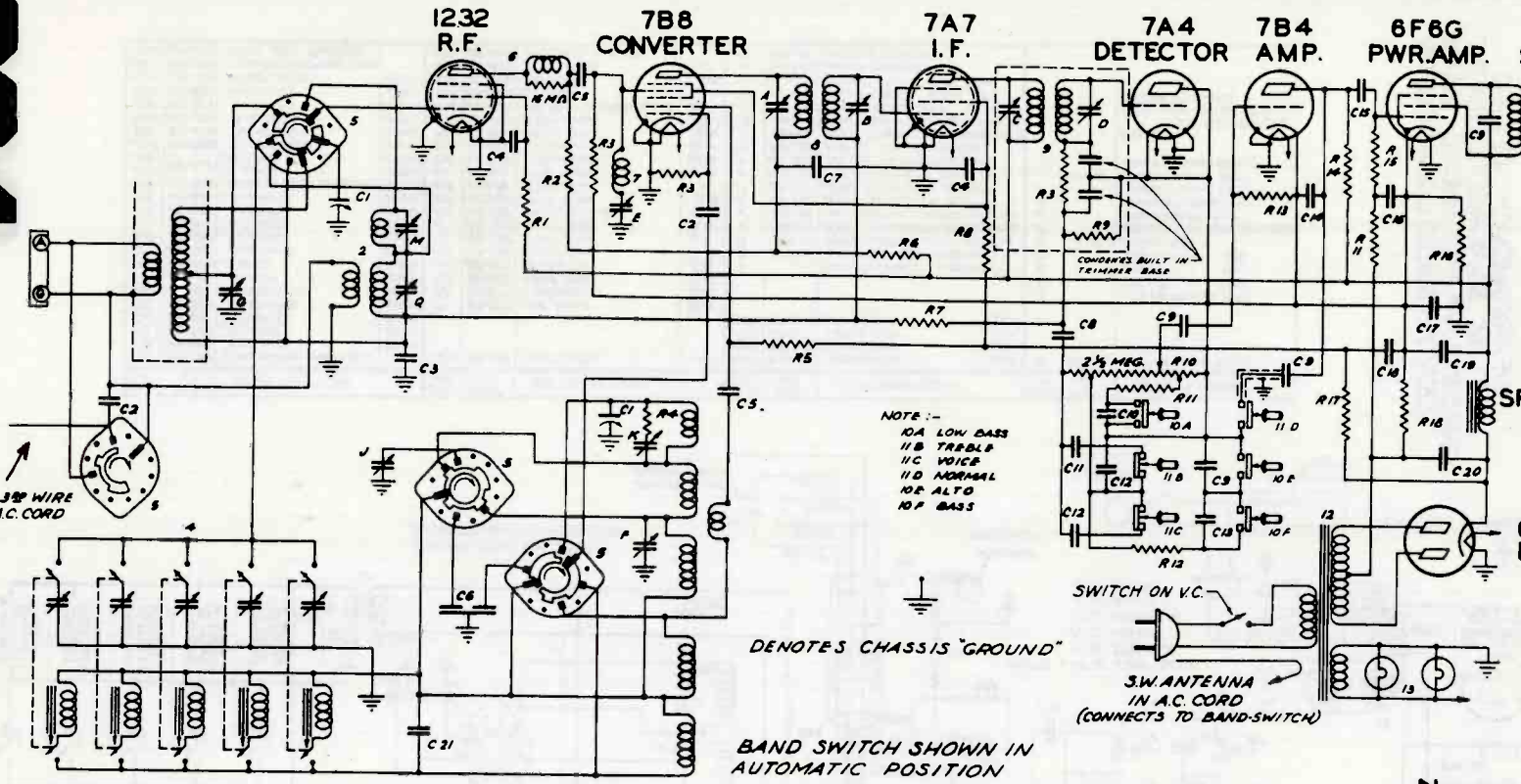
I.F. FREQUENCY 455 KC.
7 TUBE SUPERHETERODYNE
CHASSIS Nº 7A01 PHONO 3 BAND
ZENITH RADIO CORPORATION



DIAG Nº	PART Nº	DESCRIPTION		DIAG Nº	PART Nº	DESCRIPTION		DIAG Nº	PART Nº	DESCRIPTION		DIAG Nº	PART Nº	DESCRIPTION
C1	22-849	TWO-GANG VARIABLE	600K	C25	22-958	.002 MFD.	600K	R21	63-464	1 MEGOHM	½ W	18	85-198	PHONO SWITCH
C2	22-468	.0001 MFD.	600K					R22	63-719	470M OHM	½ W			
C3	22-889	.05 MFD.	200K					R23	63-717	220M OHM	½ W			
C4	22-828	.05 MFD.	400K					R24	63-1034	10M OHM	½ W			
C5	22-889	30 MMFD.	600K	R1	63-577	100 OHM	½ W					A		1ST I.F TRANS. PRI.
C6	22-182	.00025 MFD.	600K	R2	63-871	1 MEGOHM	½ W					B		1ST I.F. " SEC.
C7	22-196	.01 MFD.	600K	R3	63-588	6800 OHM	½ W					C		2ND I.F. " PRI.
C8	22-827	.1 MFD.	200K	R4	63-607	15M OHM	½ W	1		WAVEMAGNET ASSEMBLY		D		2ND I.F. " SEC.
C9	22-716	.0005 MFD.	600K	R5	63-586	100M OHM	½ W	2	37566	ANTENNA COIL ASSEMBLY		E	22-940	WAVE TRAP
C10	22-830	.02 MFD.	600K	R6	63-592	33M OHM	½ W	3	36937	OSCILLATOR COIL ASSEM.		F		BROADCAST OSC. (SEE NOTE)
C11	22-219	.03 MFD.	200K	R7	63-705	2200 OHM	½ W	4	36992	OSC. COUPLER COIL ASSEM.		G		BROADCAST ANT.
C12	22-829	.005 MFD.	600K	R8	63-599	1.5 MEGOHM	½ W	5	37044	AUTOMATIC TUNING ASSEM.		J		B'DCAST PADDER (. . .)
C13	22-468	.004 MFD.	600K	R9	63-583	1000 OHM	½ W	6	85-205	BAND SELECTOR SWITCH		K		SHORT WAVE OSC. (. . .)
C14	22-719	.16 MFD. ELECTROLYTIC	350K	R10	63-676	27M OHM	1 W.	7	37500	WAVE TRAP COIL ASSEM.		L	22-788	SHORT WAVE DET.
C15	22-941	.5 MFD. "	350K	R11	63-713	47M OHM	½ W.	8	85-171	WAVEMAGNET SWITCH		N		POLICE BAND OSC. (. . .)
C16		.15 MFD. "	450K	R12	63-719	470M OHM	½ W	9	95-600	1ST I.F. TRANSFORMER				
C17	22-956	.00035 MFD.	600K	R13	63-596	220M OHM	½ W	10	95-695	2ND I.F. TRANSFORMER				NOTE—
C18	22-470	.00015 MFD.	600K	R14	63-597	470M OHM	½ W	11	38940	TONE CONTROL ASSEM. (LEFT)				TRIMMERS F, J,
C19	22-498	.002 MFD.	600K	R15	63-593	47M OHM	½ W	12	38941	TONE CONTROL ASSEM. (RIGHT)				K & N ARE MOUNTED ON
C20	22-525	.005 MFD.	1000V	R16	63-1057	4.7 OHM WIREWOUND	½ W	13	95-694	PWR. TRANS. 117 V. 50-60~				STRIP Nº 22-881.
C21	22-526	.003 MFD.	400K	R17	63-1066	18 OHM "	½ W	14	100-38	PILOT LIGHT 6.3 V. .25 A.				
C22	22-987	.0002 MFD.	600K	R18	63-1056	280 OHM "	1½ W	15	100-80	PILOT LIGHT 110 V. 7 W.				
C23	22-868	COMPENSATING COND.		R19	63-1083	2.2 M OHM	1 W.	16	85-204	DOOR SWITCH				
C24	22-953	DUAL OSC. PADDER		R20	63-1115	VOLUME CONTROL		17	85-191	MOTOR SWITCH				

MANUAL OF 1940 MOST POPULAR SERVICE DIAGRAMS

I.F. FREQUENCY 455 K.C.
7 TUBE SUPERHETERODYNE
CHASSIS Nº 7A02 3 BAND A.C.
ZENITH RADIO CORPORATION



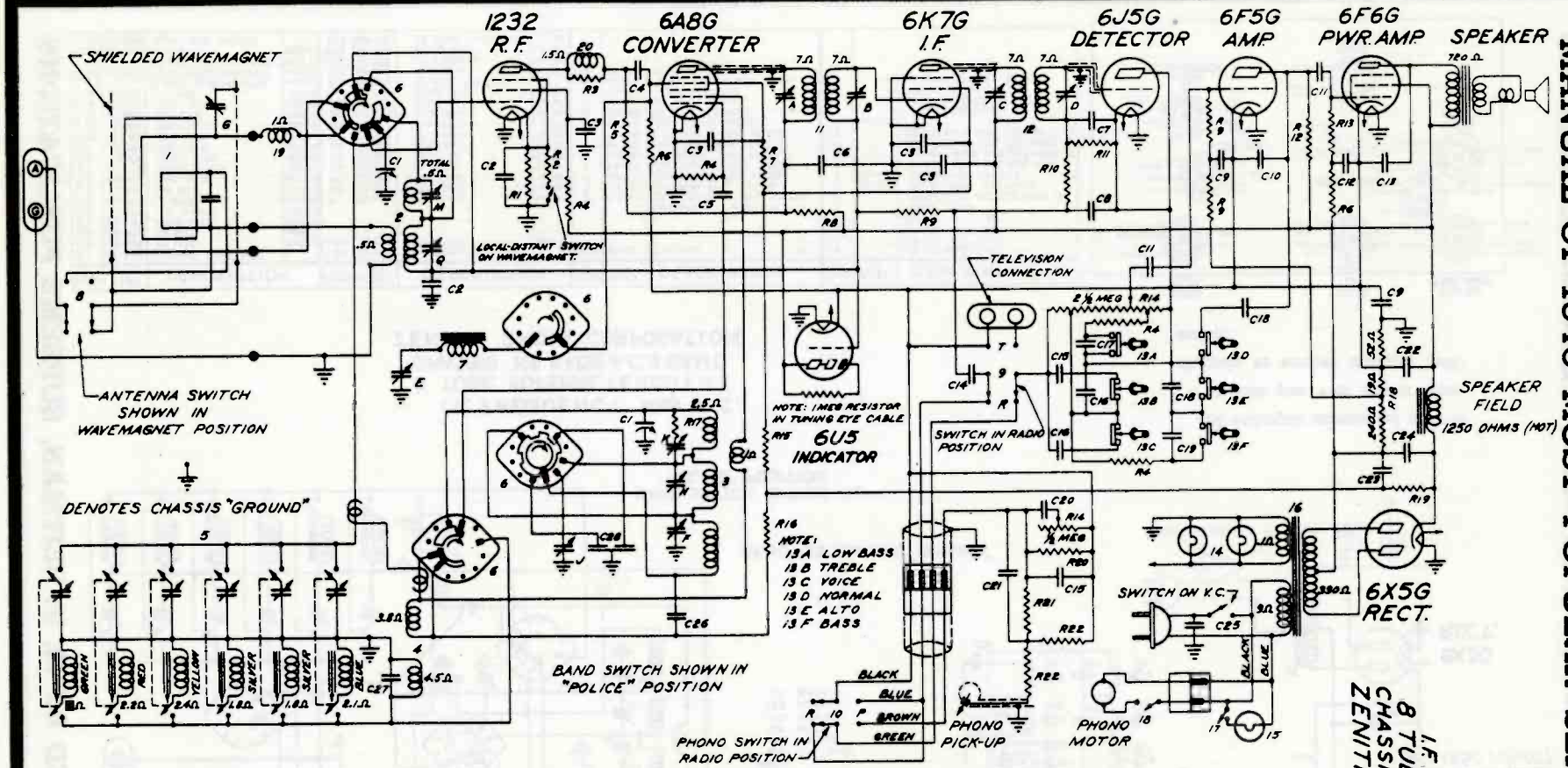
DIAG. Nº	PART Nº	DESCRIPTION		DIAG. Nº	PART Nº	DESCRIPTION		DIAG. Nº	PART Nº	DESCRIPTION
C1	22-1090	TWO GANG VARIABLE		C21	22-868	COMPENSATING COND.		R17	63-972	15 M OHM 1 W
C2	23-289	50 MMFD.	600 V.					R18	63-1086	280 OHM WIREWOUND 1½ W
C3	22-839	.05 MFD.	200 V.							
C4	23-838	.05 MFD.	400 V.							
C5	22-182	.00025 MFD.	600 V.	R1	63-260	100 M OHM	½ W.			
C6	22-1037	DUAL PADDER	600 V.	R2	63-587	4700 OHM	½ W.	1		WAVE MAGNET ASSEMBLY
C7	22-836	.1 MFD.	400 V.	R3	63-713	47 M OHM	½ W	2	58404	ANTENNA COIL ASSEMBLY
C8	23-327	.02 MFD.	200 V.	R4	63-621	39 OHM	½ W	3	58403	OSCILLATOR COIL ASSEM.
C9	23-448	.004 MFD.	600 V.	R5	63-589	10 M OHM	½ W.	4	58457	AUTOMATIC TUNING ASSEM.
C10	22-229	.005 MFD.	600 V.	R6	63-605	1000 OHM	½ W.	5	85-238	BAND SELECTOR SWITCH
C11	23-964	.00035 MFD.	600 V.	R7	63-599	1.5 MEGOHM	½ W	6	58359	R.F. CHOKE & RES. ASSEM.
C12	22-470	.00015 MFD.	600 V.	R8	63-960	68 M OHM	½ W.	7	58326	WAVE TRAP COIL ASSEM.
C13	22-492	.002 MFD.	600 V.	R9	63-719	470 M OHM	½ W.	8	95-703	1ST I.F. TRANSFORMER
C14	22-854	.0005 MFD.	600 V.	R10	63-1123	VOLUME CONTROL		9	95-704	2ND I.F. TRANSFORMER
C15	22-880	.05 MFD.	600 V.	R11	63-593	47 M OHM	½ W	10	58452	TONE CONTROL ASSEM. (LEFT)
C16	22-219	.03 MFD.	200 V.	R12	63-594	68 M OHM	½ W	11	58451	TONE CONTROL ASSEM. (RIGHT)
C17	22-827	.1 MFD.	200 V.	R13	63-976	15 MEGOHM	½ W	12	95-705	PWR. TRANS. 50-60~ 117 V.
C18	23-1034	5 MFD. ELECTROLYTIC	450 V.	R14	63-296	220 M OHM	½ W	13	100-36	PILOT LIGHT 6.3 V. .25 A.
C19		.15 MFD. "	350 V.	R15	63-597	470 M OHM	½ W			
C20	22-1036	.14 MFD. "	450 V.	R16	63-975	82 OHM WIREWOUND	½ W			

DIAG. Nº	PART Nº	DESCRIPTION
A		1ST I.F. TRANS. PRI.
B		1ST I.F. " SEC.
C		2ND I.F. " PRI.
D		2ND I.F. " SEC.
E	22-1015	WAVE TRAP
F		BROADCAST OSC. (NOTE 1)
G		" ANT. (NOTE 2)
J		" PADDER (NOTE 2)
K		SHORT WAVE OSC. (NOTE 1)
M		" " ANT. (NOTE 2)
Q		POLICE BAND ANT. (NOTE 2)
		NOTES:
		(1) TRIMMERS F & K ARE MOUNTED ON STRIP Nº 22-1033
		(2) TRIMMERS G, J, M & Q ARE MOUNTED ON STRIP Nº 22-1031

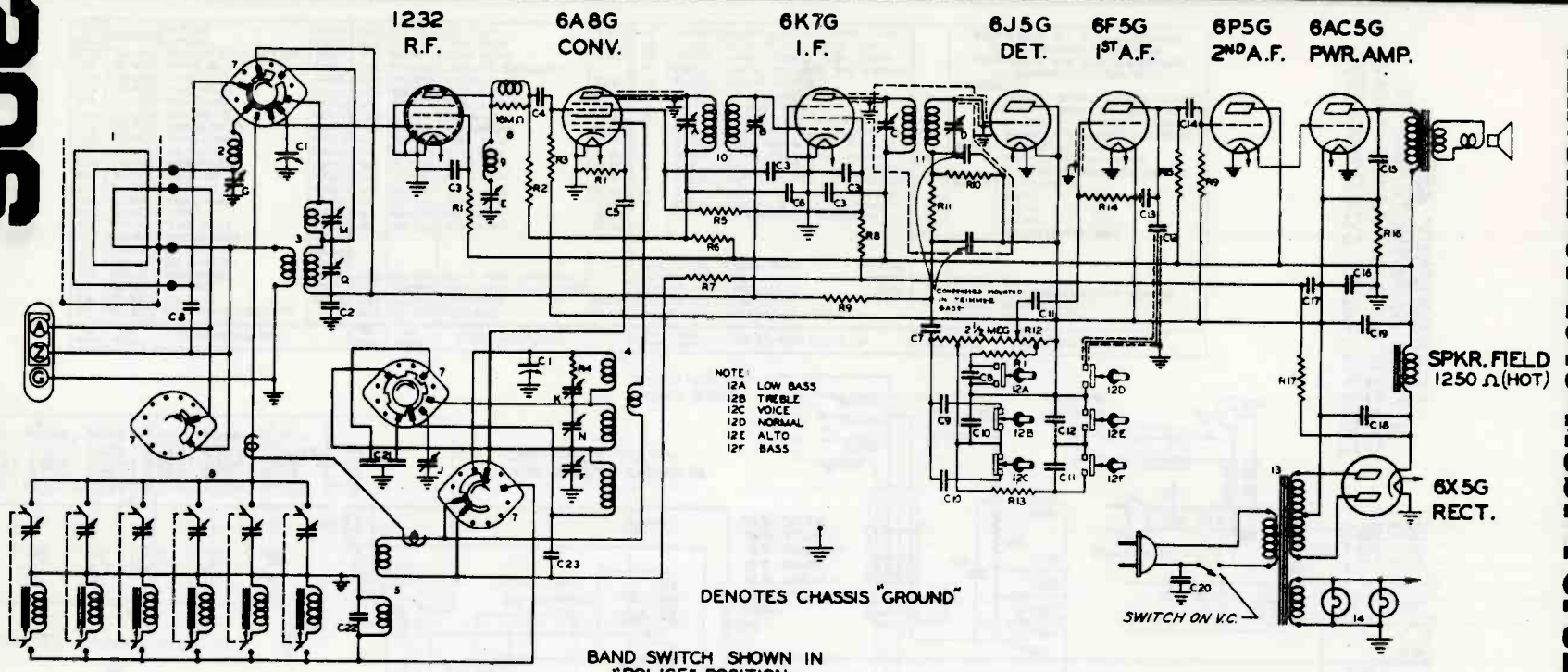
MANUAL OF 1940 MOST POPULAR SERVICE DIAGRAMS

205

I.F. FREQUENCY 455 KC.
8 TUBE SUPERHETERODYNE
CHASSIS Nº 8A01 3 BAND PHONO
ZENITH RADIO CORPORATION



DIAG. Nº	PART Nº	DESCRIPTION		DIAG. Nº	PART Nº	DESCRIPTION		DIAG. Nº	PART Nº	DESCRIPTION		DIAG. Nº	PART Nº	DESCRIPTION
C1	22-987	TWO-GANG VARIABLE		C25	22-585	.005 MFD.	1000 V.	R16	63-998	3-SECTION CANDOHM		17	85-203	DOOR SWITCH
C2	22-869	.05 MFD.	200 V.	C26	22-358	.002 MFD.	600 V.	R19	63-151	15 M OHM	1 W.	18	85-191	MOTOR SWITCH
C3	22-885	.05 MFD.	400 V.	C27	22-868	COMPENSATING COND.		R20	63-464	1 MEGOHM	½ W.	19	38142	LOOP LOADING COIL ASSEM.
C4	22-716	.0005 MFD.	600 V.	C28	22-930	DUAL OSC. PADDER		R21	63-719	470 M OHM	½ W.	20	37526	R.F. CHOKE
C5	22-187	25 MMFD.	600 V.					R22	63-717	220 M OHM	½ W.			
C6	22-885	.1 MFD.	400 V.											
C7	22-882	.00025 MFD.	600 V.									A		1ST I.F. TRANS. PRI.
C8	22-162	.0001 MFD.	600 V.	R1	63-539	10 M OHM	½ W.					B		1ST I.F. - SEC.
C9	22-827	.1 MFD.	200 V.	R2	63-576	33 OHM	½ W.	1		WAVEMAGNET ASSEMBLY		C		2ND I.F. - PRI.
C10	22-856	.0005 MFD.	600 V.	R3	63-1077	18M OHM	1 W.	2	37504	ANTENNA COIL ASSEMBLY		D		2ND I.F. - SEC.
C11	22-890	.02 MFD.	600 V.	R4	63-593	47M OHM	½ W.	3	37505	OSCILLATOR COIL ASSEM.		E	22-938	WAVE TRAP
C12	22-219	.03 MFD.	200 V.	R5	63-587	4700 OHM	½ W.	4	37507	OSC. COUPLER COIL ASSEM.		F		BROADCAST OSC. (SEE NOTE 1)
C13	22-906	.005 MFD.	1000 V.	R6	63-595	100M OHM	½ W.	5	37649	AUTOMATIC TUNING ASSEM.		G		BROADCAST ANTENNA
C14	22-327	.02 MFD.	200 V.	R7	63-643	18M OHM	½ W.	6	85-202	BAND SELECTOR SWITCH		J	22-469	BROADCAST PADDER
C15	22-954	.00085 MFD.	600 V.	R8	63-605	1000 OHM	½ W.	7	37559	WAVE TRAP COIL ASSEM.		K		SHORT WAVE OSC. (SEE NOTE 1)
C16	22-870	.00015 MFD.	600 V.	R9	63-671	1 MEGOHM	½ W.	8	85-171	WAVEMAGNET SWITCH		M		SHORT WAVE ANT. (SEE NOTE 2)
C17	22-889	.005 MFD.	600 V.	R10	63-711	22 M OHM	½ W.	9	85-171	TELEVISION SWITCH		N		POLICE BAND OSC. (SEE NOTE 1)
C18	22-446	.006 MFD.	600 V.	R11	63-717	220 M OHM	½ W.	10	85-192	PHONO SWITCH		Q		POLICE BAND ANT. (SEE NOTE 2)
C19	22-492	.002 MFD.	600 V.	R12	63-696	220 M OHM	½ W.	11	95-625	1ST I.F. TRANS.				NOTES-
C20	22-326	.009 MFD.	400 V.	R13	63-597	470 M OHM	½ W.	12	95-663	2ND I.F. TRANS.				(1) TRIMMERS F, K & N ARE MOUNTED ON STRIP Nº 22-850
C21	22-963	.0002 MFD.	600 V.	R14	63-1117	VOLUME CONTROL		13	58327	TONE CONTROL SW. ASSEM.				(2) TRIMMERS M & Q ARE MOUNTED ON STRIP Nº 22-982
C22	22-719	16 MFD. ELECTROLYTIC	350 V.	R15	63-677	33M OHM	1 W.	14	108-36	PILOT LIGHT 6.3V. .25A.				
C23	22-939	6 MFD. "	450 V.	R16	63-796	10M OHM	½ W.	15	100-80	PILOT LIGHT 110V. 7W.				
C24		16 MFD. "	450 V.	R17	63-576	60 OHM	½ W.	16	95-627	POWER TRANS. 50-60~ 117V.				



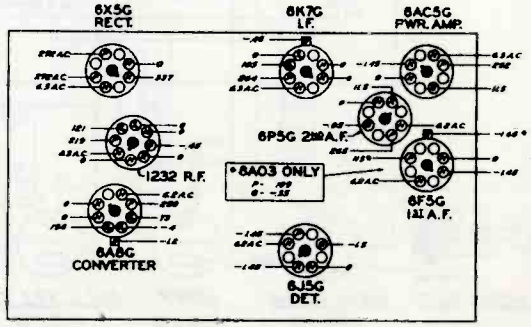
I.F. FREQUENCY 455 K C.
8 TUBE SUPERHETERODYNE
CHASSIS Nº 8A02 A.C. 3 BAND
ZENITH RADIO CORPORATION

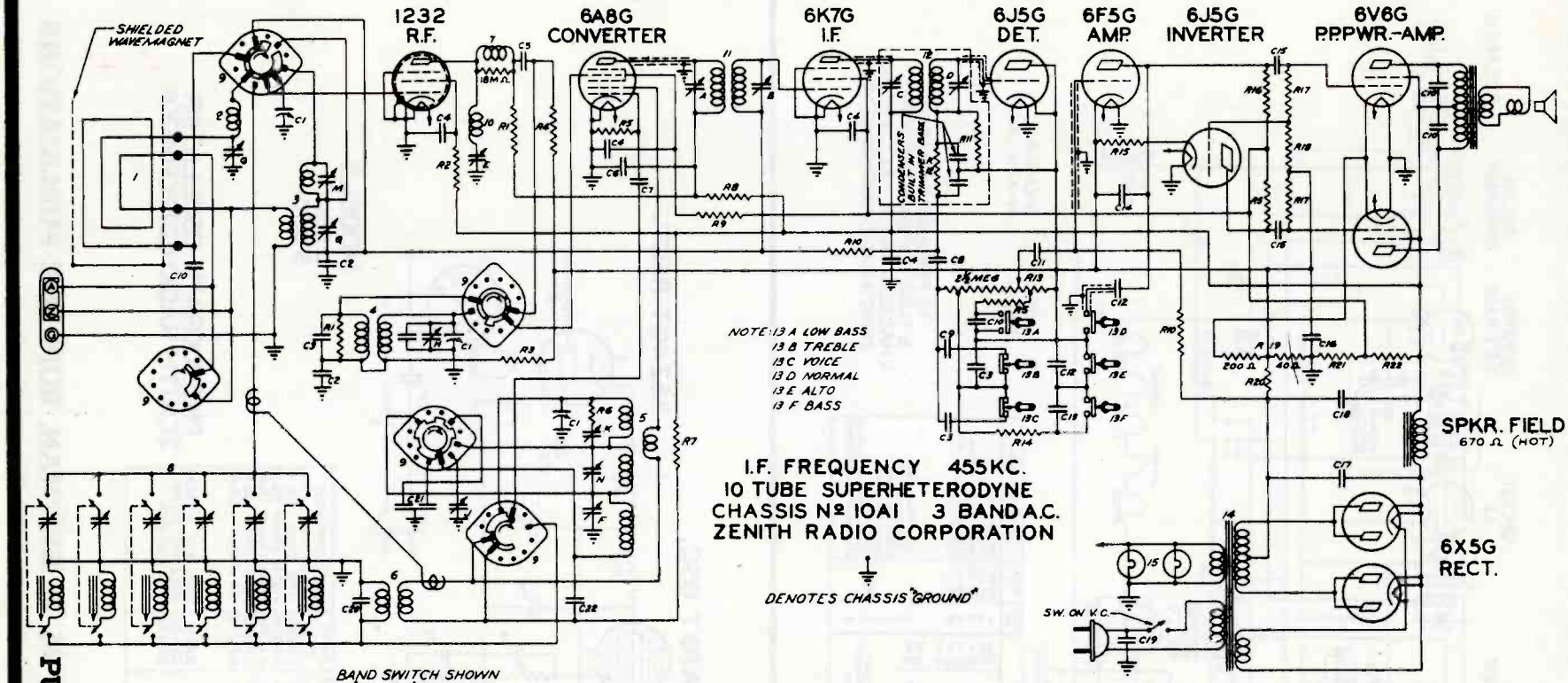
All voltages measured with a 20 M ohm per volt meter from chassis to socket contact indicated.

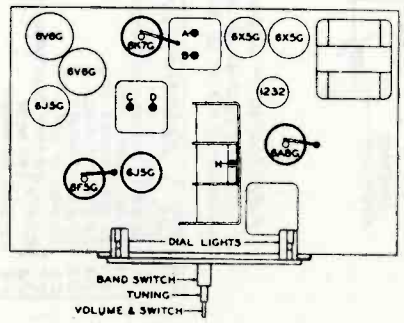
DIAG Nº	PART Nº	DESCRIPTION	
C 1	22-927	2-GANG VARIABLE	
C 2	22-829	.05 MFD.	200 V.
C 3	22-828	.05 MFD.	400 V.
C 4	22-147	.0005 MFD.	600 V.
C 5	22-127	.25 MMFD.	600 V.
C 6	22-825	.1 MFD.	400 V.
C 7	22-327	.02 MFD.	200 V.
C 8	22-229	.005 MFD.	600 V.
C 9	22-984	.00035 MFD.	600 V.
C 10	22-470	.00015 MFD.	600 V.
C 11	22-482	.002 MFD.	600 V.
C 12	22-448	.004 MFD.	600 V.
C 13	22-854	.0005 MFD.	600 V.
C 14	22-830	.02 MFD.	600 V.
C 15	22-1016	.005 MFD.	1000 V.
C 16	22-827	.1 MFD.	200 V.
C 17		5 MFD. ELECTROLYTIC	450 V.
C 18	22-1035	15 MFD. ELECTROLYTIC	450 V.
C 19		15 MFD. ELECTROLYTIC	350 V.
C 20	22-1041	.005 MFD.	600 V.
C 21	22-1039	DUAL OSC. PADDER	
C 22	22-868	COMPENSATING COND.	
C 23	22-358	.002 MFD.	600 V.
R 1	63-583	47M OHM	1/4 W
R 2	63-587	4700 OHM	1/4 W
R 3	63-590	15M OHM	1/4 W
R 4	63-578	68 OHM	1/4 W
R 5	63-643	18M OHM	1/4 W
R 6	63-605	1000 OHM	1/2 W
R 7	63-798	10M OHM	1/2 W
R 8	63-677	33M OHM	1 W
R 9	63-271	1 MEGOHM	1/4 W
R 10	63-717	220M OHM	1/4 W
R 11	63-711	2.2 M OHM	1/4 W
R 12	63-1075	VOLUME CONTROL	
R 13	63-594	68M OHM	1/4 W
R 14	63-976	15 MEGOHM	1/4 W
R 15	63-298	220M OHM	1/4 W
R 16	63-1100	52 OHMS WIREWND.	1/2 W
R 17	63-151	15M OHM	1 W
1		WAVEMAGNET ASSEMBLY	
2	5-8142	LOOP LOADING COIL ASSEM.	
3	5-8430	ANTENNA COIL ASSEM.	
4	5-7505	OSCILLATOR COIL ASSEM.	
5	5-8488	OSC. COUPLER COIL ASSEM.	
6	5-8495	AUTOMATIC TUN. ASSEM.	
7	85-229	BAND SELECTOR SWITCH	
8	5-8498	R.F. CHOKE & RES. ASSEM.	
9	5-8445	WAVE TRAP ASSEM.	
10	95-625	1ST I. F. TRANS.	
11	95-663	2ND I. F. TRANS.	
12	5-8491	TONE CONTROL	
13	95-627	PWR. TRANS. 60~ 117 V.	
14	100-36	PILOT LIGHT 6.3 V. .25A.	

DIAG Nº	PART Nº	DESCRIPTION
A		1ST I.F. TRANS. PRI.
B		1ST I.F. " SEC.
C		2ND I.F. " PRI.
D		2ND I.F. " SEC.
E		WAVE TRAP
F		BROADCAST OSC. (SEE NOTE 1)
G	22-1042	BROADCAST ANTENNA
J	22-688	BROADCAST PADDER
K		SHORT WAVE OSC. (SEE NOTE 1)
M		SHORT WAVE ANT. (SEE NOTE 2)
N		POLICE BAND OSC. (SEE NOTE 1)
Q		POLICE BAND ANT. (SEE NOTE 2)

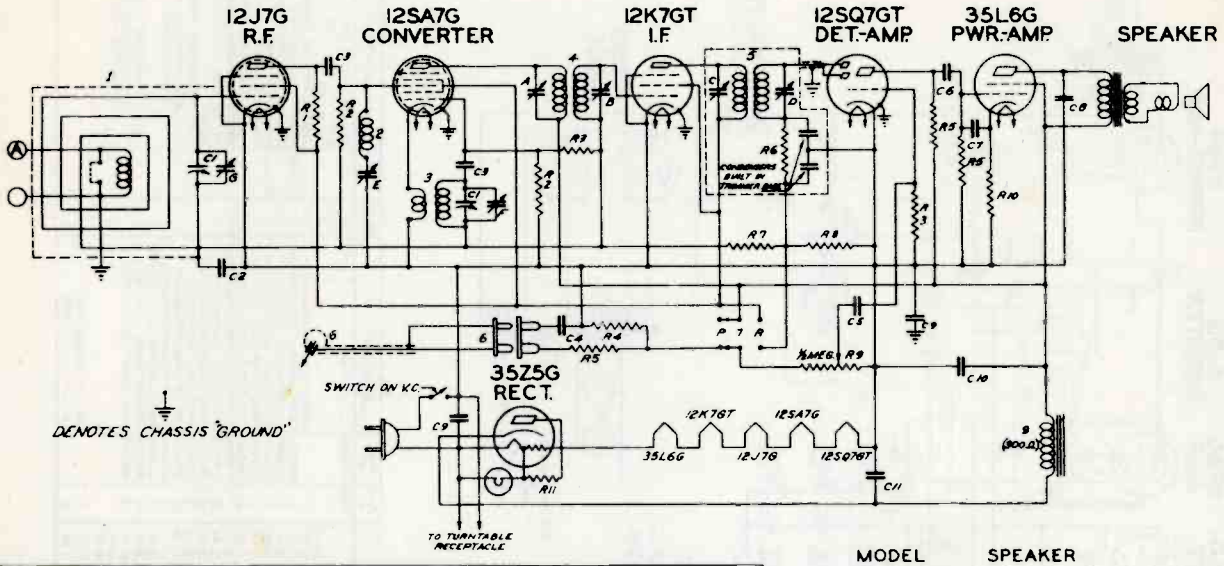
NOTES—
(1) TRIMMERS F, K & N ARE MOUNTED ON STRIP 22-850
(2) TRIMMERS M & Q ARE MOUNTED ON STRIP 22-1045







DIAG. Nº	PART Nº	DESCRIPTION		DIAG. Nº	PART Nº	DESCRIPTION		DIAG. Nº	PART Nº	DESCRIPTION		DIAG. Nº	PART Nº	DESCRIPTION
C 1	22-1049	THREE GANG VARIABLE						R 22	63-1058	22 M OHM	2 W.	C		2ND I.F. TRANS. PRI.
C 2	22-829	.05 MFD.	200V.									D		2ND I.F. - SEC.
C 3	22-470	.0001 5 MFD.	600 V.	R 1	63-587	4700 OHM	½ W.					E		WAVE TRAP
C 4	22-828	.05 MFD.	400 V.	R 2	63-595	100 M OHM	½ W.	1		WAVEMAGNET ASSEMBLY		F		BROADCAST OSC. (NOTE 1)
C 5	22-147	.0005 MFD.	600 V.	R 3	63-589	10 M OHM	½ W.	2	58142	LOOP LOADING COIL ASSEM.		G	22-1042	BROADCAST ANTENNA
C 6	22-825	.1 MFD.	400 V.	R 4	63-590	15 M OHM	½ W.	3	58430	ANTENNA COIL ASSEMBLY		H		BROADCAST DET. (ON GANG)
C 7	22-127	25 MMFD.	600 V.	R 5	63-593	47M OHM	½ W.	4	58588	DETECTOR COIL ASSEMBLY		J	22-688	BROADCAST PADDER
C 8	22-327	.02 MFD.	200 V.	R 6	63-578	68 OHM	½ W.	5	57505	OSCILLATOR COIL ASSEMBLY		K		SHORT WAVE OSC. (NOTE 1)
C 9	22-956	.00035 MFD.	608 V.	R 7	63-151	15M OHM	1 W.	6	58466	OSC. CPLR. COIL ASSEMBLY		M		SHORT WAVE ANT. (NOTE 2)
C 10	22-229	.005 MFD.	600 V.	R 8	63-605	1000 OHM	½ W.	7	58497	R.F. CHOKE & RES. ASSEMBLY		N		POLICE BAND OSC. (NOTE 1)
C 11	22-830	.02 MFD.	600 V.	R 9	63-643	18M OHM	½ W.	8	58495	AUTOMATIC TUNING UNIT		Q		POLICE BAND ANT. (NOTE 2)
C 12	22-448	.006 MFD.	600 V.	R 10	63-271	1 MEGOHM	½ W.	9	85-231	BAND SELECTOR SWITCH				NOTE:
C 13	22-492	.002 MFD.	600 V.	R 11	63-711	22 M OHM	½ W.	10	58445	WAVE TRAP ASSEMBLY				(1) TRIMMERS F, K & N ARE MOUNTED ON STRIP Nº 22-850.
C 14	22-854	.0005 MFD.	600 V.	R 12	63-711	22 M OHM	½ W.	11	95-625	1ST I.F. TRANSFORMER				
C 15	22-171	.05 MFD.	600 V.	R 13	63-1074	VOLUME CONTROL		12	95-664	2ND I.F. TRANSFORMER				
C 16	22-827	.1 MFD.	200 V.	R 14	63-594	68 M OHM	½ W.	13	58490	TONE CONTROL SW. ASSEM.				(2) TRIMMERS M & Q ARE MOUNTED ON STRIP Nº 22-1045
C 17	22-934	20 MFD. ELECTROLYTIC	450 V.	R 15	63-586	2200 OHM	½ W.	14	95-707	POWER TRANS. 117 V. 60 ~				
C 18		20 MFD. ELECTROLYTIC	350 V.	R 16	63-596	220 M OHM	½ W.	15	100-36	DIAL LIGHT 6.3 V. .25 A.				
C 19	22-1041	.005 MFD.	600 V.	R 17	63-657	330 M OHM	½ W.							
C 20	22-866	COMPENSATING COND.		R 18	63-648	47M OHM	½ W.							
C 21	22-1039	DUAL OSCILLATOR PADDER		R 19	63-1048	TWO SECTION CANDOHM		A		1ST I.F. TRANS. PRI.				
C 22	22-358	.002 MFD.	600 V.	R 20	63-1061	7 OHM WIREWOUND	1½ W.	B		1ST I.F. - SEC.				
				R 21	63-676	27 M OHM	1 W.							

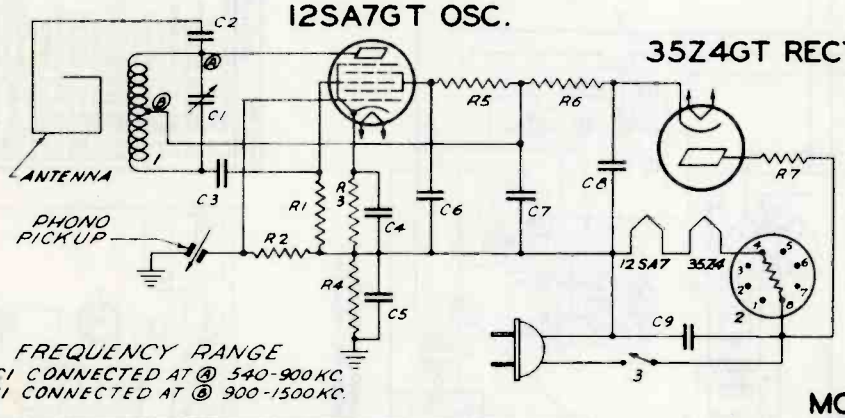


DIAG. NO.	PART NO.	DESCRIPTION		DIAG. NO.	PART NO.	DESCRIPTION		DIAG. NO.	PART NO.	DESCRIPTION
C1	22-1008	TWO GANG VARIABLE		R3	63-1093	15 MEGOHM	½ W.	5	25-697	2ND I.F. TRANS.
C2	22-829	.05 MFD.	200 V.	R4	63-715	100,M OHM	½ W.	6	ME-31	PICKUP & PLUG
C3	22-162	.0001 MFD.	600 V.	R5	63-719	470 M OHM	½ W.	7	85-260	PHONO-RADIO SWITCH
C4	22-187	.02 MFD.	200 V.	R6	63-713	47 M OHM	½ W.	8	100-67	PILOT LIGHT 6.3 V. .15 A.
C5	22-492	.002 MFD.	600 V.	R7	63-722	2.2 MEGOHM	½ W.	9	25-713	FILTER CHOKE
C6	22-243	.01 MFD.	400 V.	R8	63-726	10 MEGOHM	½ W.			
C7	22-856	.0005 MFD.	600 V.	R9	63-1112	VOLUME CONTROL				
C8	22-849	.03 MFD.	400 V.	R10	63-686	130 OHM WIREWOUND	½ W.			
C9	22-1017	.05 MFD.	200 V.	R11	63-1023	22 OHM WIREWOUND	½ W.	A		1ST I.F. TRANS. PRI.
C10	22-1014	150 MFD. ELECTROLYTIC	150 V.					B		1ST I.F. TRANS. SEC.
C11		20 MFD. ELECTROLYTIC	150 V.					C		2ND I.F. TRANS. PRI.
								D		2ND I.F. TRANS. SEC.
				1		WAVE MAGNET ASSEMBLY		E	22-1015	WAVE TRAP
				2	58326	WAVE TRAP COIL ASSEMBLY		F		BROADCAST OSC. (ON GANG)
R1	63-709	10M OHM	½ W.	3	58356	OSC. COIL ASSEMBLY		G		BROADCAST ANT. (ON GANG)
R2	63-711	22M OHM	½ W.	4	95-696	1ST I.F. TRANS.				

MODEL 6R583

SPEAKER 49-403 4"

I.F. FREQUENCY 455 KC.
6 TUBE SUPERHETERODYNE
CHASSIS Nº 6A08 – A.C. PHONO
ZENITH RADIO CORPORATION



DIAG. Nº	PART Nº	DESCRIPTION		DIAG. Nº	PART Nº	DESCRIPTION	
C1	22-690	TUNING CONDENSER		R3	63-701	470 OHM	¼ W.
C2	22-162	.0001 MFD.	600 V.	R4	63-296	220M OHM	½ W.
C3	22-182	.00025 MFD.	600 V.	R5	63-964	4700 OHM	½ W.
C4	22-829	.05 MFD.	200 V.	R6	63-803	2200 OHM	½ W.
C5	22-827	.1 MFD.	200 V.	R7	63-575	47 OHM	¼ W.
C6	22-243	.01 MFD.	400 V.				
C7	22-876	8 MFD. ELECTROLYTIC	150 V.				
C8		40 MFD. "	150 V.	1	58611	OSC. COIL ASSEM.	
C9	22-828	.05 MFD.	400 V.	2	100-76	BALLAST TUBE	
				3	85-170	A.C. SWITCH	
R1	63-591	22 M OHM	¼ W.				
R2	63-271	1 MEGOHM	¼ W.				

MODELS
S 8500
S 8501

PHONOGRAPH OSCILLATOR
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