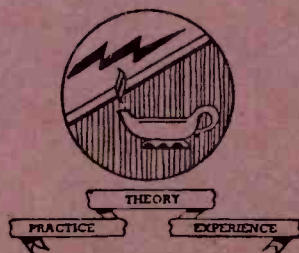


Most - Often - Needed

1942

RADIO
DIAGRAMS

and Servicing Information



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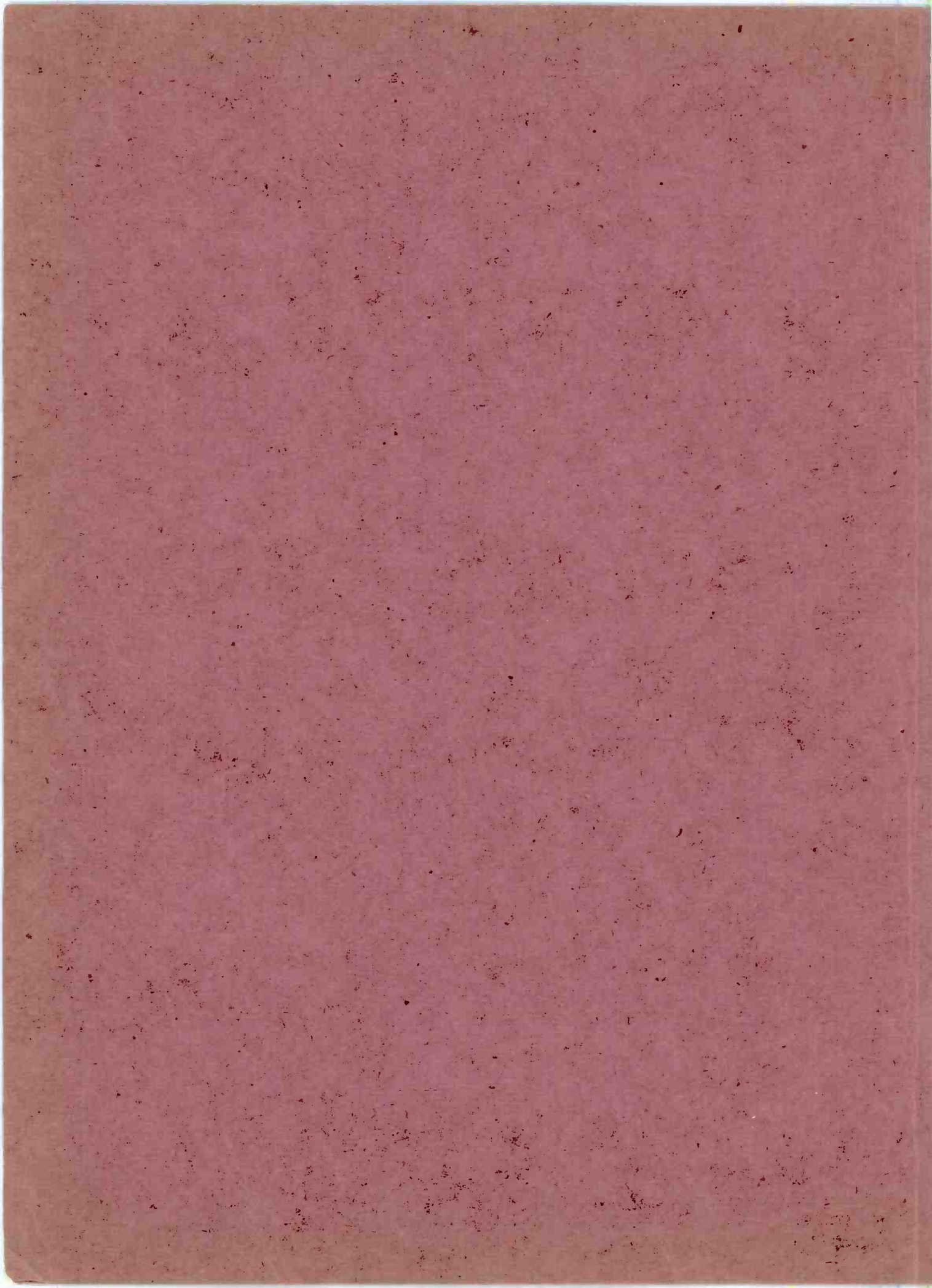
M. N. BEITMAN

SUPREME PUBLICATIONS

CHICAGO

VOLUME 5

\$2⁰⁰



Most - Often - Needed

10
37
113

1942

RADIO
DIAGRAMS
and Servicing Information

PREPARED UNDER THE DIRECTION OF

M. N. BEITMAN

B.S. in Mathematics, Illinois Institute of Technology
Radio Instructor, Chicago High Schools
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SUPREME PUBLICATIONS

CHICAGO

MANUAL OF 1942 MOST POPULAR SERVICE DIAGRAMS

Preface

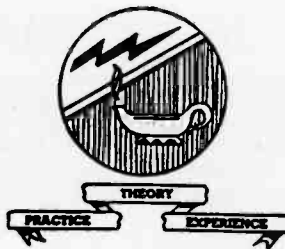
In this new Volume 5, you will find the radio circuits and service data of all popular 1942 sets. Together with the earlier four volumes, this book will permit you to do better servicing with less time per job.

Always use the index to find the page listing the set you are repairing. For the less common sets not listed in SUPREME manuals, try to find a diagram which is similar and use this information as an aid. Every type of circuit used during the 1942 radio season is included among these pages.

I wish to express my sincere thanks to all radio manufacturers who have cooperated with me. These firms are now engaged only on War orders, but we can depend on them to continue building fine radio receivers when the War is won. Meanwhile, my friends, radio servicemen of America, let us keep all radios in good working shape and do our part in helping civilian morale.

M. N. Beitman

April 1942.



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MANUAL OF 1942 MOST POPULAR SERVICE DIAGRAMS

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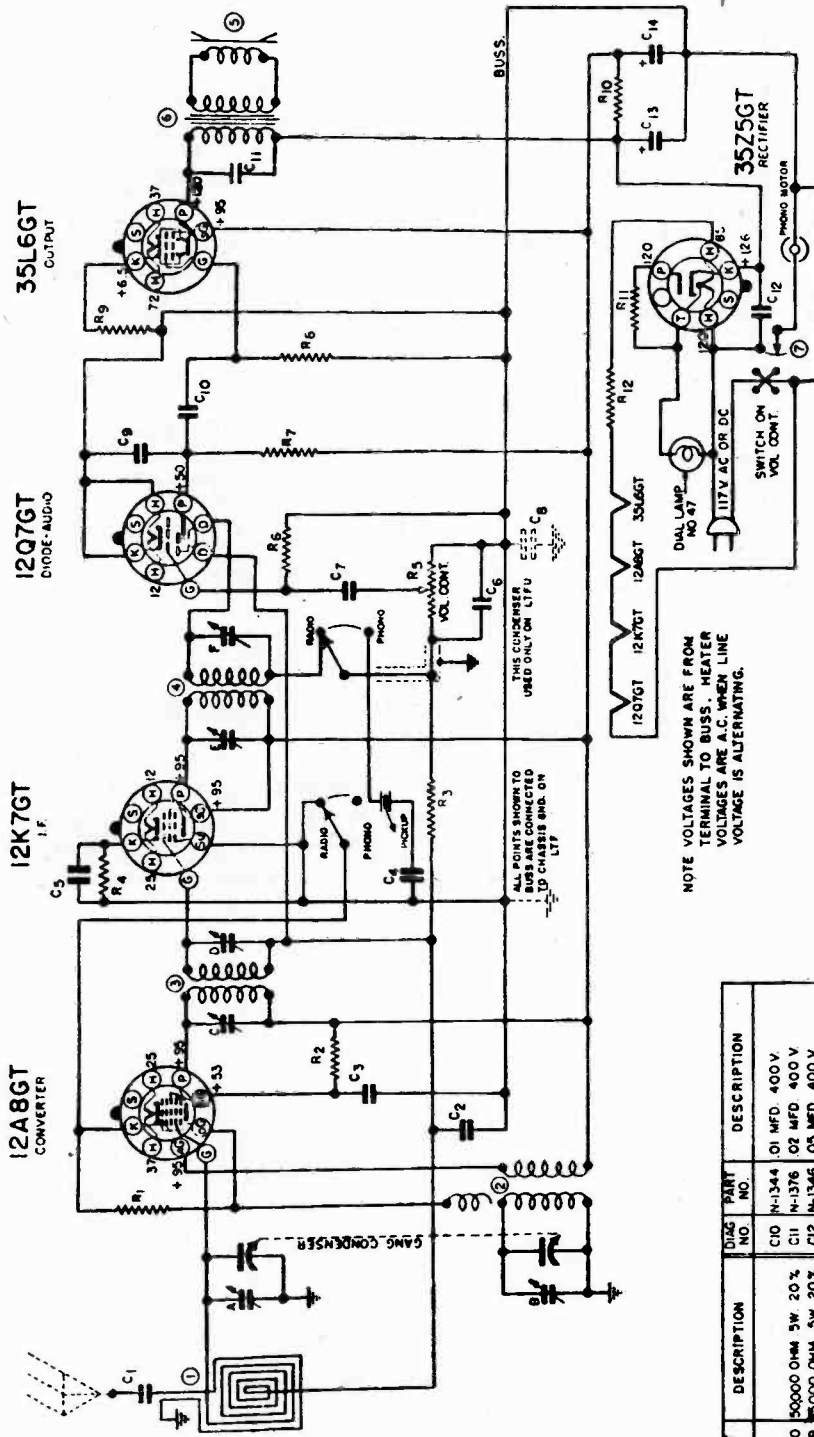
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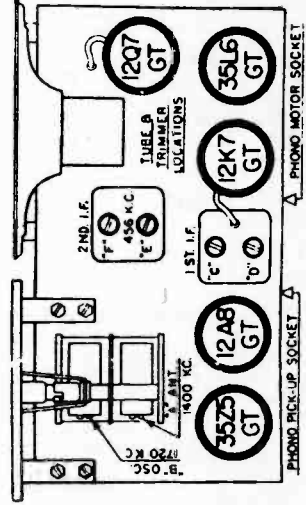


I.F. 456 KC.

D-170
5 TUBE AC-DC
SUPERMETEROBYNE
SINGLE RANO
PHONO COMBINATION

Allied Radio Corp.
(Sonora Radio make)

NOTE VOLTAGES SHOWN ARE FROM
TERMINAL TO BUSS. HEATER
VOLTAGES ARE A.C. WHEN LINE
VOLTAGE IS ALTERNATING.

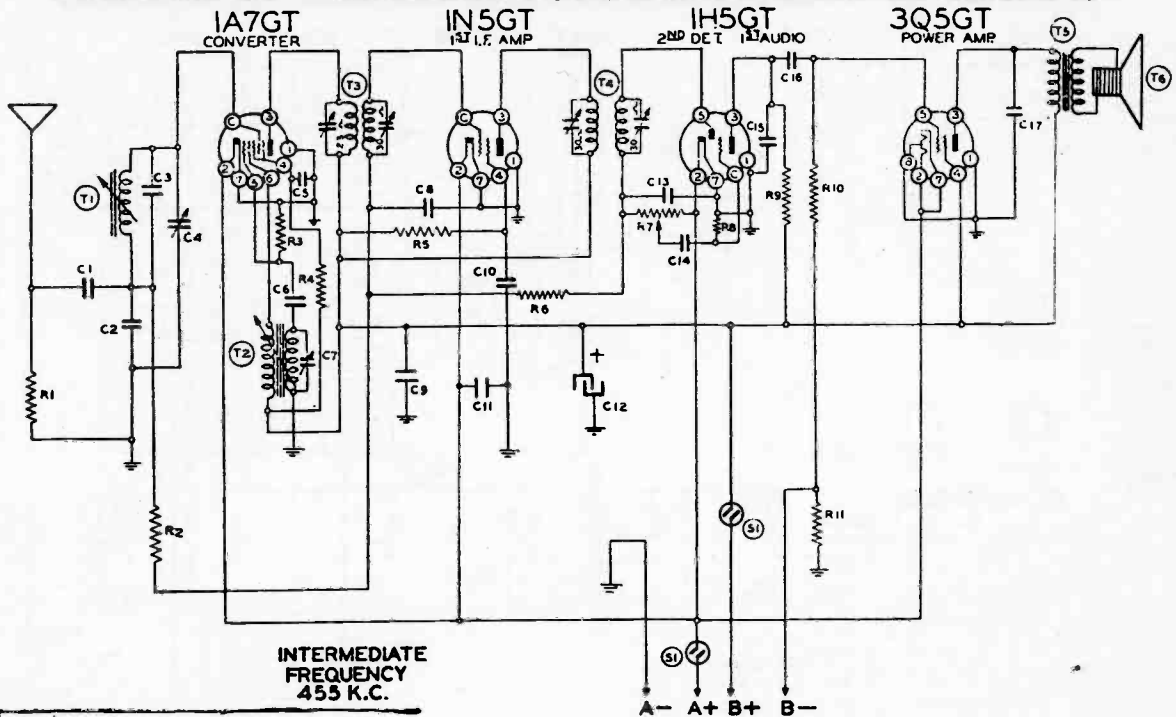


DIAG. NO.	PART NO.	DESCRIPTION	QTY	PART NO.	DESCRIPTION
R1	N-1260	50000 OHM .5W. 20%	1	N-1344	.01 MFD. 400V
R2	N-1259	15000 OHM .5W. 20%	1	N-1376	.02 MFD. 400 V
R3	N-1262	1 MEGOHM .5W. 20%	1	N-1346	.05 MFD. 400 V
R4	N-2487	200 OHM .5W. 20%	1	C13	N-2141 40 MFD. 50V (ELECTRO)
R5	N-3045	10 MEGOHM VOL. CON.	1	C14	N-2141 25 MFD. 150V
R6	N-1263	10 MEGOHM .5W. 20%	1	1	N-3041 LOOP ANTENNA COIL
R7	N-1377	200,000 OHM .5W. 20%	1	2	N-1452 OSCILLATOR COIL
R8	N-1264	500,000 OHM .5W. 20%	1	3	N-3043 1ST. I.F. TRANSFORMER
R9	N-1616	250 OHM .5W. 10%	1	4	N-3044 2ND. I.F. TRANSFORMER
R10	N-1257	2500 OHM .5W. 20%	1	5	N-2624 5" PM. SPEAKER
R11	N-1742	25 OHM .5W. 20%	1	6	N-3568 OUTPUT TRANSFORMER
R12	N-1618	80 OHM 2W. 10%	1	7	N-4136 PHONO MOTOR SWITCH
C1	N-1344	.01 MFD. 400V	1	N-3046	2 GANG CONDENSER
C2	N-1345	.05 MFD. 200V	1	N-3550	RADIO-PHONO SWITCH
C3	N-1345	.05 MFD. 200V	1	N-4188	CRYSTAL PICK-UP
C4	N-2842	.09 MFD. 200V	1	N-3443	PHONO MOTOR & TURNABLE
C5	N-1351	.1 MFD. 200V	1		
C6	N-1374	.0001 MFD. MICA	1		
C7	N-1344	.01 MFD. 400V	1		
C8	N-3080	22 MFD. 200V	1		
C9	N-1447	10005 MFD. 400V	1		

Allied Radio Corp.
Chicago, Ill.



MANUAL OF 1942 MOST POPULAR SERVICE DIAGRAMS



Code No.	Part No.	Description
RESISTORS		
R1	13017	10M ohm— $\frac{1}{2}$ w.
R2	1304	3 megohm— $\frac{1}{2}$ w.
R3	1309	200M ohm— $\frac{1}{2}$ w.
R4	130194	35M ohm— $\frac{1}{2}$ w.
R5	13094	50M ohm— $\frac{1}{2}$ w.
R6	1304	3 megohm— $\frac{1}{2}$ w.
R7	101250	1 megohm—Volume control and switch— $\frac{1}{2}$ w.
R8	130257	5 megohm— $\frac{1}{2}$ w.
R9	13019	1 megohm— $\frac{1}{2}$ w.
R10	130146	2 megohm— $\frac{1}{2}$ w.
R11	13079	400 ohm— $\frac{1}{2}$ w.

Code No.	Part No.	Description
CONDENSERS		
C1	12936	.0003 mica
C2	100112	.001 x 200 v.
C3	129177	.000045—Ceramicon
C4	124165	Antenna trimmer
C5	1009	.05 x 200 v.—Condenser
C6	12912	.00025 mica
C7	124165	Oscillator trimmer
C8	1009	.05 x 200 v. Condenser
C9	1006	.25 x 200 v. Condenser
C10	10020	.1 x 200 v.
C11	10017	.5 x 120 v.
C12	119117B	10 mfd. x 150 v. Lytic
C13	1295	.0001 mica
C14	10012	.003 x 600 v. Condenser
C15	1295	.0001 mica
C16	10026	.02 x 400 v. Condenser
C17	1007	.005 x 600 v.

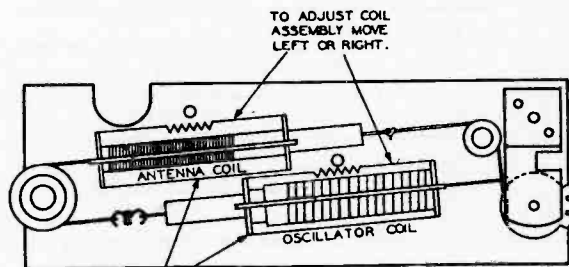
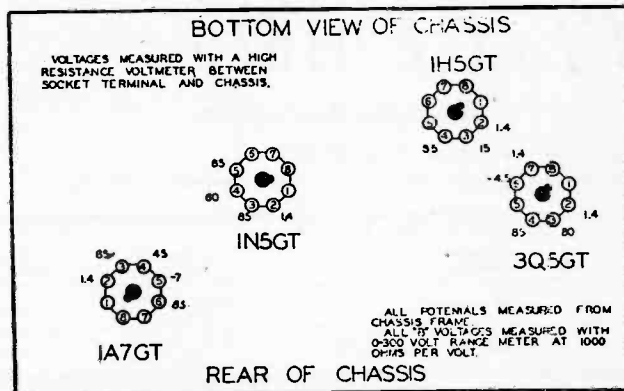
C4 and C7 are in same unit.

PARTS

T1	1364	Antenna Coil
T2	1364	Oscillator Coil
Permeability tuning assem. Complete.		
T3	108202	Input I. F. Coil 455 Kc.
T4	108153B	Output I. F. Coil 455 Kc.
T5	10591B	Output transformer
T6	114238	5" P.M. speaker
S1		Switch-on Volume Control

Belmont Radio Corp.

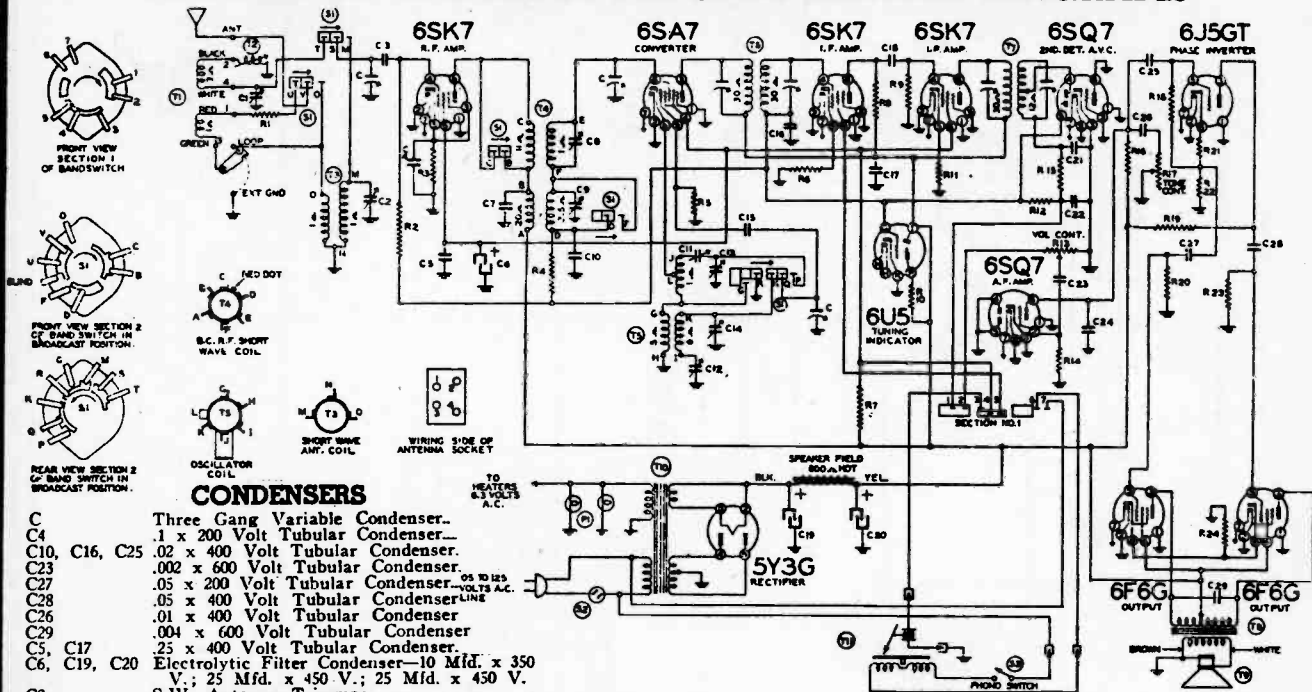
Model 4B16 Radio



NOTE: THE ANTENNA COIL ASSEMBLY IS MADE SO THAT IT IS MOVABLE LEFT OR RIGHT. WHEN MAKING THE ADJUSTMENT AS GIVEN IN THE ALIGNMENT PROCEDURE MOVE COIL ASSEMBLY VERY SLOWLY

COIL ASSEMBLY VIEW

MANUAL OF 1942 MOST POPULAR SERVICE DIAGRAMS



CONDENSERS

- C Three Gang Variable Condenser—
- C4 1 x 200 Volt Tubular Condenser—
- C10, C16, C25 .02 x 400 Volt Tubular Condenser.
- C23 .002 x 600 Volt Tubular Condenser.
- C27 .05 x 200 Volt Tubular Condenser—0.5 TO 125 VOLTS A.C.
- C28 .05 x 400 Volt Tubular Condenser—LINE
- C26 .01 x 400 Volt Tubular Condenser
- C29 .004 x 600 Volt Tubular Condenser
- C5, C17 25 x 400 Volt Tubular Condenser.
- C6, C19, C20 Electrolytic Filter Condenser—10 Mfd. x 350 V.; 25 Mfd. x 450 V.; 25 Mfd. x 450 V.
- C2 S.W. Antenna Trimmer
- C8, C9 S.W. and B.C. R.F. Trimmer—Dual.
- C13, C14 S.W. and B.C. Osc. Trimmer—Dual.
- C1 B.C. Antenna Trimmer
- C12 .000525 Compression Cond.—B.C. Pad
- C3, C18 .0005 Mica Type Condenser—20%
- C7 .0004 Mica Type Condenser—20%
- C15 .00005 Mica Type Condenser—20%
- C21, C22 .0001 Mica Type Condenser—20%
- C11 .0021 Compression Mica Condenser
- C24 .00025 Mica Type Condenser—20%



RESISTORS

- R13, S2 Volume Control and Switch (500M Ohms) Less Shaft
- R17 Tone Control (1 Megohm) Less Shaft
- R2, R18 Shaft Only for Volume and Tone Controls
- R4 1 Megohm— $\frac{1}{2}$ Watt Resistor—20%
- R5 300M Ohm— $\frac{1}{2}$ Watt Resistor—20%
- R6, R11 40M Ohm— $\frac{1}{2}$ Watt Resistor—20%
- R8 500 Ohm— $\frac{1}{2}$ Watt Resistor—20%
- R9, R19, R22 12M Ohm— $\frac{1}{2}$ Watt Resistor—20%
- R7 100M Ohm— $\frac{1}{2}$ Watt Resistor—20%
- R15 12M Ohm—2 Watt Resistor—10%
- R12 50M Ohm— $\frac{1}{2}$ Watt Resistor—20%
- R14 3 Megohm— $\frac{1}{2}$ Watt Resistor—25%
- R21 5 Megohm— $\frac{1}{2}$ Watt Resistor—30%
- R20, R23 2500 Ohm— $\frac{1}{2}$ Watt Resistor—20%
- R16 500M Ohm— $\frac{1}{2}$ Watt Resistor—20%
- R24 250M Ohm— $\frac{1}{2}$ Watt Resistor—20%
- R3 300 Ohm—1 Watt Resistor—20%
- R1 400 Ohm— $\frac{1}{2}$ Watt Resistor—20%
- R10 1 Megohm—In Eye Socket.

Model 11A25

Alignment Procedure

- Volume control—Maximum all adjustments.
- Connect dummy antenna value in series with generator output lead.

BAND	SIGNAL GENERATOR		Connect on to Radio	Position of Band Switch	Variable Condenser Setting	Trimmers Adjusted to Maximum (in Order Shown)
	Frequency Setting	Dummy Antenna				
I. F.	455 Kc	.1 MFD.	Grid of 6SK7 I. F.	Broadcast	Rotor full open (Plates out of mesh)	Two trimmers on top Output I. F.
	455 Kc	.1 MFD.	Grid of 6SA7 Mixer	Broadcast	Rotor full open (Plates out of mesh)	Two trimmers on top Input I. F.
SHORT WAVE BAND	17 Mc.	400 Ohms	External Antenna and Ground	Short Wave	Set Dial at 17 Mc.	C13, S.W. Osc.
	17 Mc.	400 Ohms	External Antenna and Ground	Short Wave	Set Dial at 17 Mc.	C8, S.W. R.F., C2 S.W. Antenna
	6 Mc.	400 Ohms	External Antenna and Ground	Short Wave	Set Dial at 6 Mc.	C11 S.W. Osc Series Pad See Note "A"
BROAD-CAST BAND	1580 Kc.	200 mmf.	Grid of 6SK7 R. F. Tube	Broadcast	Rotor full open (Plates out of mesh)	C14 B.C. Osc.
	540 Kc.	200 mmf.	Grid of 6SK7 R. F. Tube	Broadcast	Set Dial at 540 Kc. (Plates in Mesh)	C12 B.C. Osc. Series Pad
	1400 Kc.	200 mmf.	Grid of 6SK7 R. F. Tube	Broadcast	Set Dial at 1400 Kc.	C9 B.C. R.F.
LOOP ALIGNMENT	1400 Kc.	200 mmf.	External Antenna and Ground	Broadcast	Set Dial at 1400 Kc.	C1 B.C. Ant.
	600 Kc.	200 mmf.	External Antenna and Ground	Broadcast	Set Dial at 600 Kc.	T2 Iron Core Tracking Coil

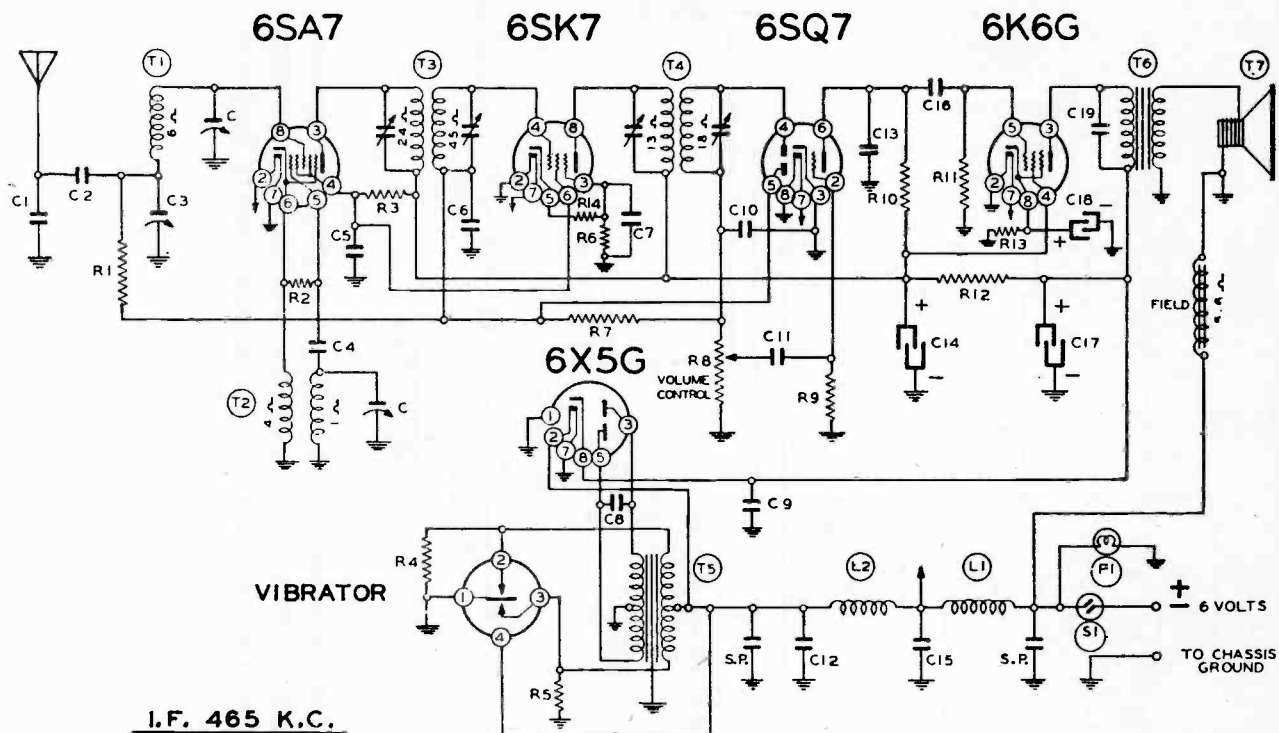
NOTE "A"—Turn the dial back and forth slightly (rock) and adjust trimmer until the peak of greatest intensity is obtained.

After each band is completed, repeat the procedure as a final check.

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MANUAL OF 1942 MOST POPULAR SERVICE DIAGRAMS

Belmont MODEL 579



I.F. 465 K.C.

Circuit Diagram Ref. Part No. No.

RESISTORS

Ref. No.	Part No.	Description
R1	13011	250M ohm— $\frac{1}{2}$ w.
R2	130236	30M ohm— $\frac{1}{2}$ w.
R3	130307	15M ohm—1 watt
R4	13060	100 ohm— $\frac{1}{2}$ w.
R5	13060	100 ohm— $\frac{1}{2}$ w.
R6	13070	500 ohm— $\frac{1}{2}$ w.
R7	1304	3 megohm— $\frac{1}{2}$ w.
R8	101110	1 megohm volume control
R9	130257	5 megohm— $\frac{1}{2}$ w.
R10	13011	250M ohm— $\frac{1}{2}$ w.
R11	1303	500M ohm— $\frac{1}{2}$ w.
R12	130199	1500 ohm—1 watt
R13	130308	750 ohm—1 watt
R14	130174	50 ohm— $\frac{1}{2}$ w.

CONDENSERS

Ref. No.	Part No.	Description
C	10269	2 gang variable condenser
C1	1293	.00002 mica
C2	10055	.01 x 400 volts
C3	12434	Adj. Antenna Trimmer
C4	12921	.0002 mica
C5	100115	.05 x 400 v.
C6	1009	.05 x 200 v.
C7	10020	.1 x 200 v.
C8	10034	.005 x 1200 v.

Circuit Diagram Ref. Part No. No.

DESCRIPTION

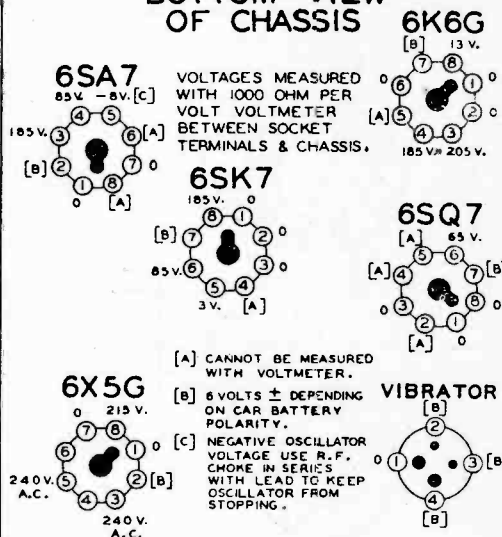
Ref. No.	Part No.	Description
C9	12912	.00025 mica
C10	1295	.0001 mica
C11	10025	.002 x 600 v.
C12	10031	.5 x 120 v.
C13	1292	.0005 mica
C14	119105	15 ufd. lytic x 350 w. v.
C15	10031	.5 x 120 v.
C16	10078	.01 x 200 v.
C17	119105	15 ufd. lytic x 350 w. v.
C18	119105	20 ufd. lytic x 25 w. v.
C19	10087	.01 x 600 v.

C14, C17 and C18 in same unit

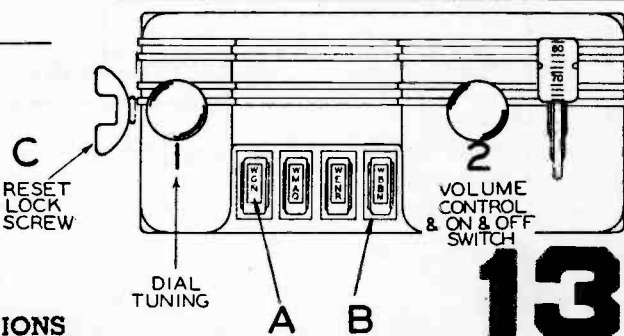
PARTS

Ref. No.	Part No.	Description
T1	11195B	Antenna Coil
T2	110146	Oscillator Coil
T3	108139	Input I. F. Coil—465 kc.
T4	108121B	Output I. F. Coil—465 kc.
T5	104131	Power Transformer
T6	10567	Output Transformer
T7	114114-R	5" Dynamic Speaker (5.6 ohm)
L1	10568	"A" Choke
L2	10566	"A" Choke
S1		Switch on volume control
P1	10797	Pilot light (T51) 6-8 volts
S.P.	11749	(2) Spark Plates

BOTTOM VIEW OF CHASSIS

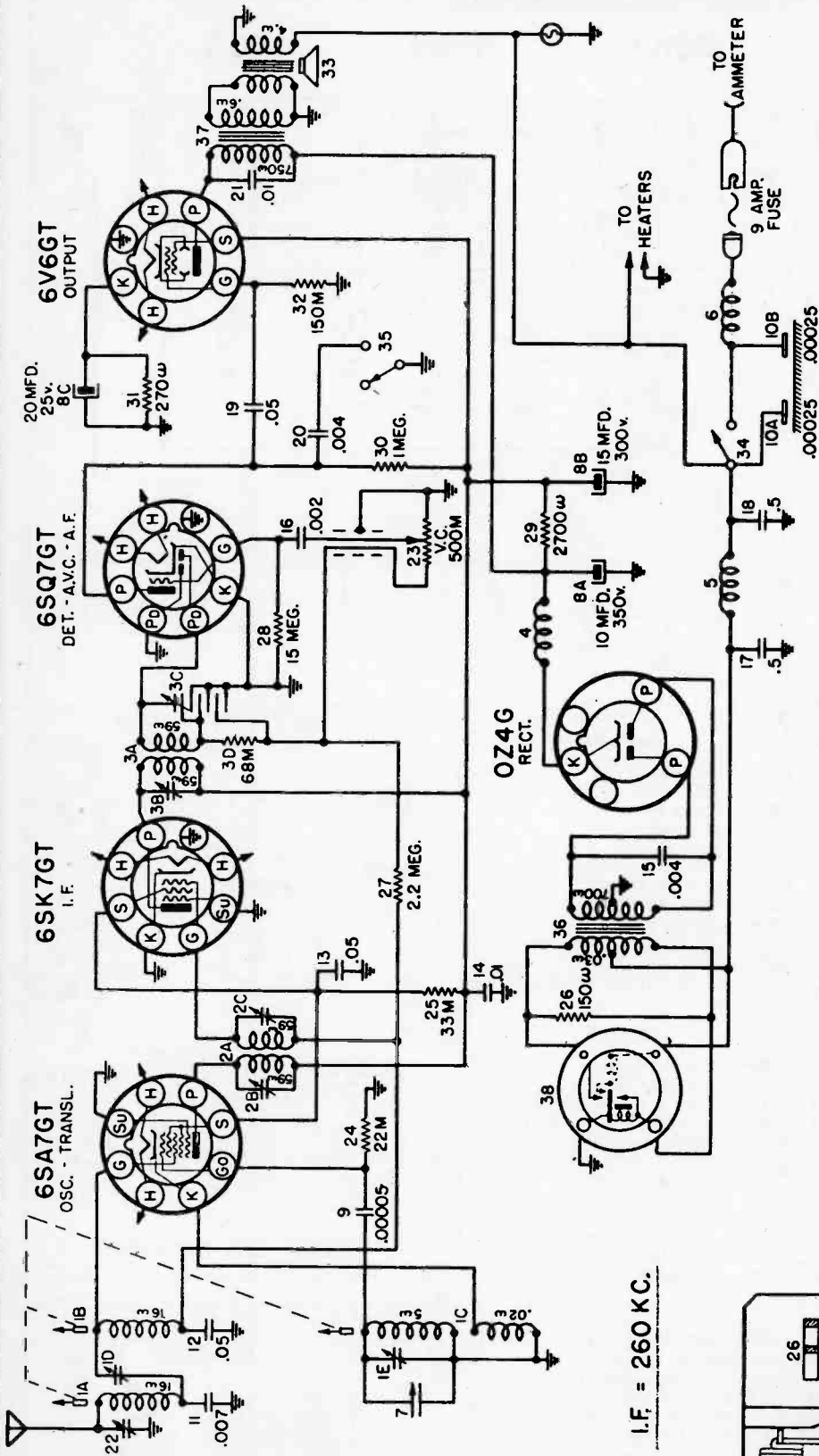


REAR OF CHASSIS

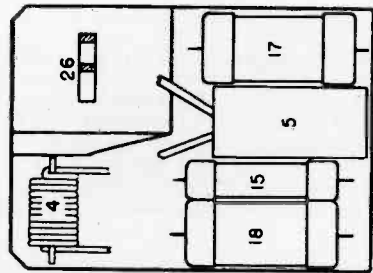


The ignition system of every automobile generates high frequency electrical disturbances which interfere to some extent with the operation of the radio receiver. This disturbance arises from the ignition coil, the distributor and associated wiring. It must either be suppressed at its origin or must be prevented from feeding into the input of the radio receiver through the common storage battery. By proper shielding and by-passing these disturbances are prevented from entering the receiver.

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The circuit used in this receiver is the superheterodyne type, employing the permeability method of tuning. An adjustable condenser is provided for matching the antenna circuit to the antenna. This adjustment is made near the high frequency end of the band (1400 kilocycles).

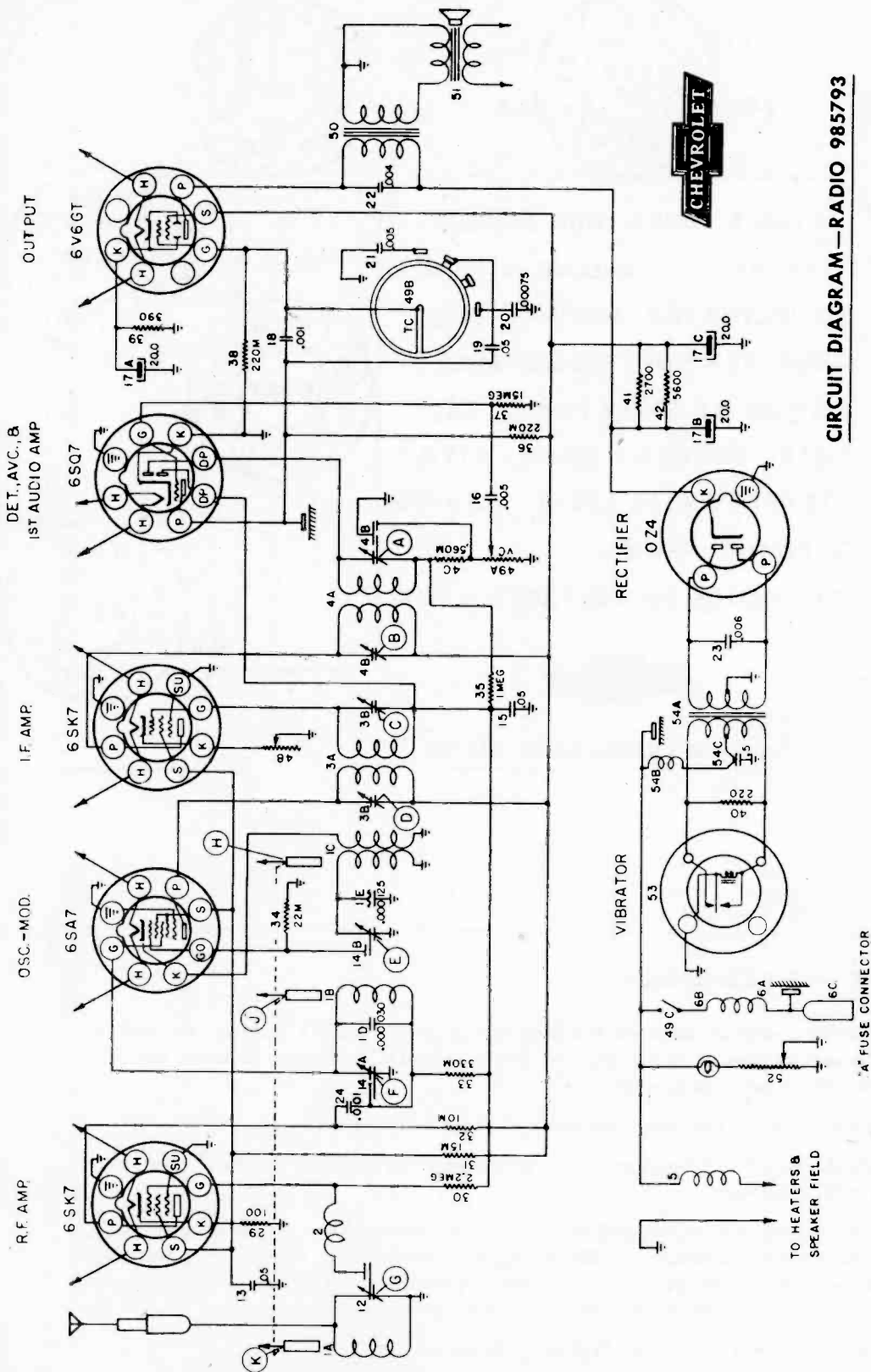


POWER PACK PARTS LAYOUT



CIRCUIT DIAGRAM—RADIO 985792

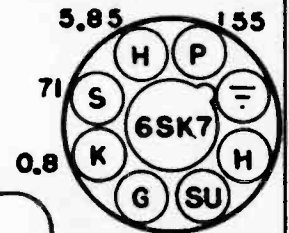
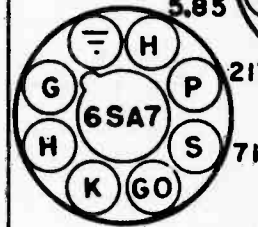
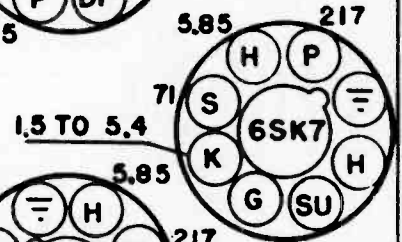
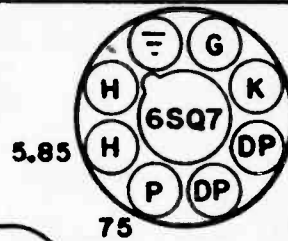
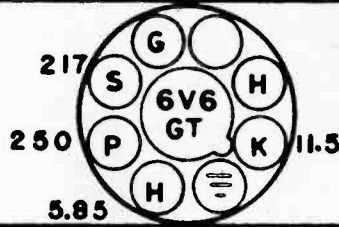
MANUAL OF 1942 MOST POPULAR SERVICE DIAGRAMS



CIRCUIT DIAGRAM—RADIO 985793

Antenna trimmer "G" must be adjusted to match the car antenna when receiver is installed. With the antenna fully extended, tune in a weak station near 1400 on the dial and adjust the antenna trimmers for maximum volume.

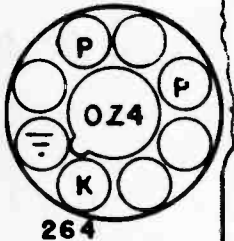
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VOLTAGES TAKEN FROM SOCKET
TERMINALS TO GROUND WITH A
DC VOLTMETER HAVING 1000
OHMS PER VOLT RESISTANCE.
6.0V DC AT SPARK PLATE 6A.
TOTAL CURRENT DRAIN WITH
SPEAKER & DIAL LIGHT 7.3 AMPS.
"B" DRAIN - 58 MA.
TOLERANCE ON VOLTAGES $\pm 10\%$



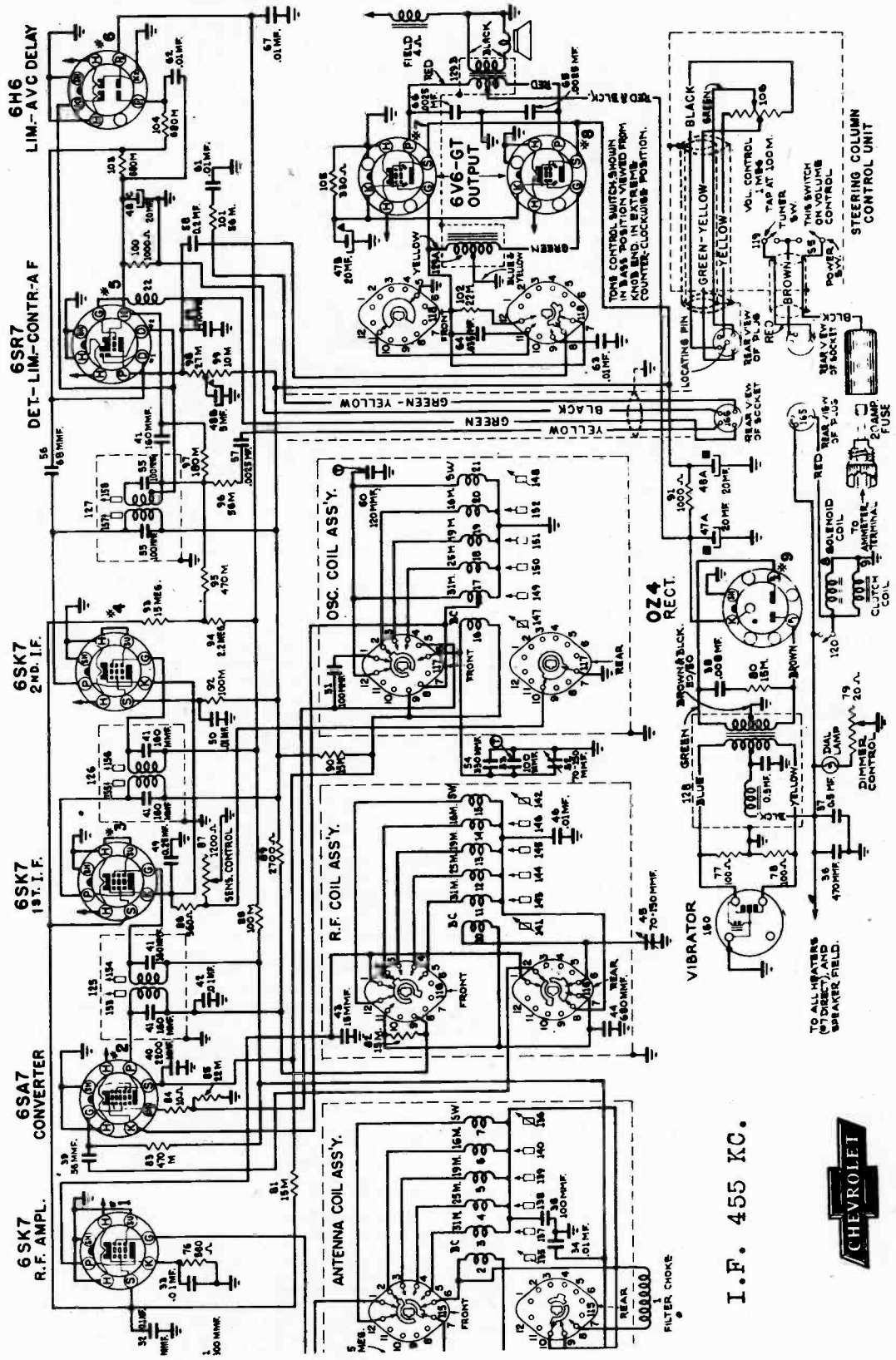
VOLTAGE CHART—RADIO 985793



I.F. Alignment at 262 Kilocycles

- Connect a 0.1 mfd. condenser between the plate prong of the 6V6GT output tube and one terminal of the output meter, to protect the meter from DC voltages. Connect the other terminal of the output meter to ground.
- Connect the ground lead of the signal generator to the chassis frame.
- Connect the signal lead of the signal generator to the grid (G) prong of the 6SA7 tube socket through a 0.1 mfd. condenser.
- Turn the set volume control on full and rotate the tone control knob to the center (Music) position. Adjust the signal generator to 262 kilocycles, and tune the receiver to a frequency where no squeals or beat notes may be heard and so that when the tuning control is moved through narrow limits no appreciable change in output is noticeable.
- Adjust the I.F. trimmers A, B, C, and D for maximum output.

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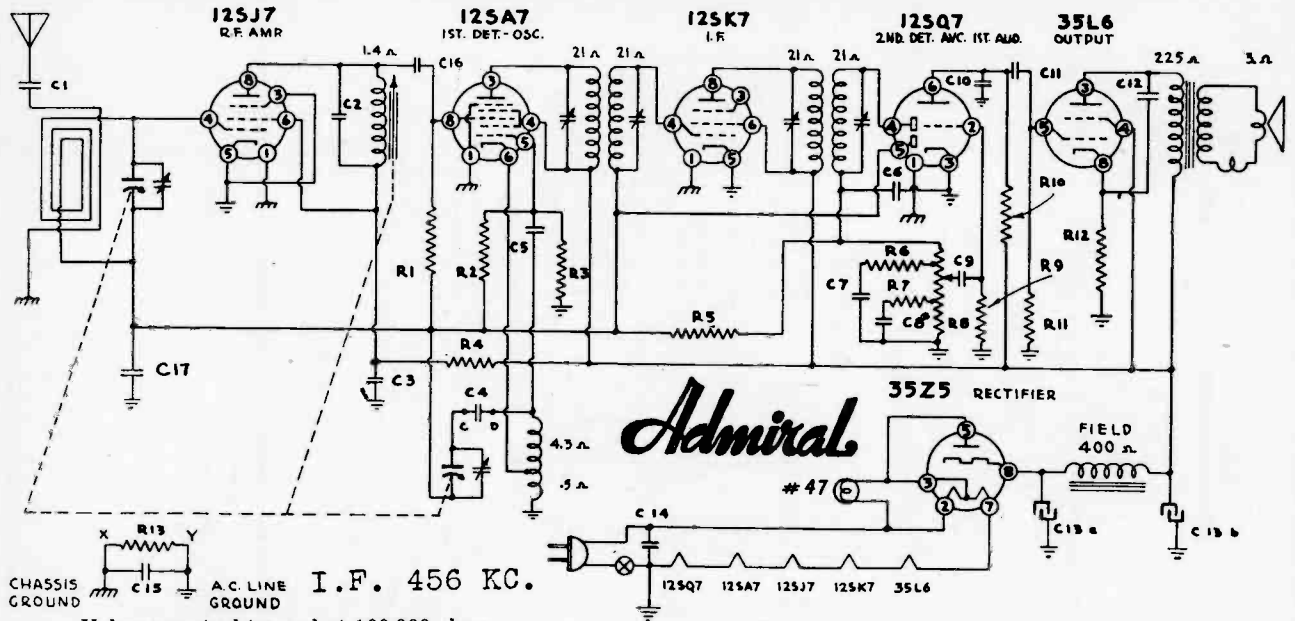


I.F. 455 KC.



CIRCUIT DIAGRAM—RADIO 985794

MANUAL OF 1942 MOST POPULAR SERVICE DIAGRAMS



Volume control tapped at 100,000 ohms and 200,000 ohms from zero end.

Admiral

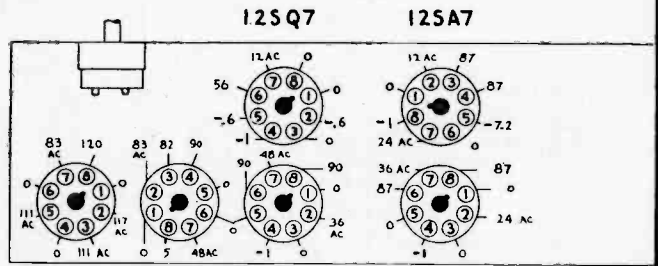
In model B6 only, X and Y are connected together. R13, C15, and C4 are not used. C is connected to D.

RESISTORS

No.	Ohms
R1	10,000
R2	10,000,000
R3	25,000
R4	100
R5	1,000,000
R6	50,000
R7	30,000
R8 V. C.	500,000
R9	5,000,000
R10	250,000
R11	500,000
R12	150
R13	150,000

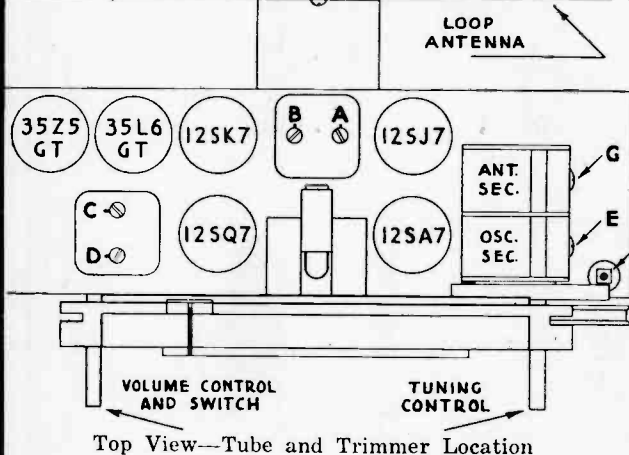
CONDENSERS

No.	Capacity (Mfd.)
C1	.005
C2	.000785
C3	.05
C4	.02
C5	.000005
C6	.00025
C7	.01
C8	.01
C9	.01
C10	.0005
C11	.01
C12	.02
C13a	30. Elect.
C13b	50. Elect.
C14	.05
C15	.2
C16	.00025
C17	.1

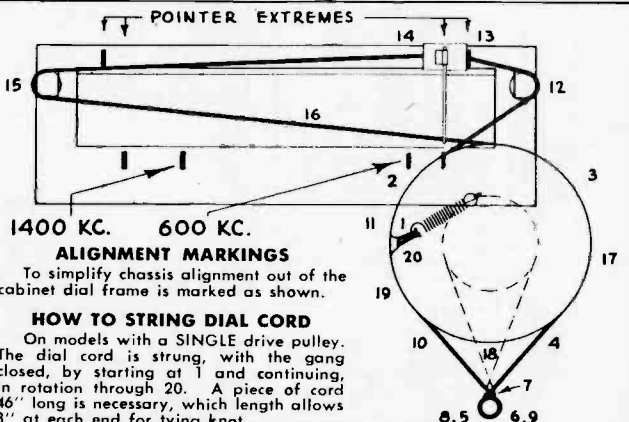


Bottom View—Voltage Chart

Voltages are positive D. C. unless noted. Measured from chassis with 20,000 ohm per volt meter. On XB6 Series use floating ground instead of chassis. Line—117 volts, 60 cycle A.C. Volume control at maximum. No station tuned in.



Top View—Tube and Trimmer Location



ALIGNMENT MARKINGS

To simplify chassis alignment out of the cabinet dial frame is marked as shown.

HOW TO STRING DIAL CORD

On models with a SINGLE drive pulley. The dial cord is strung, with the gang closed, by starting at 1 and continuing, in rotation through 20. A piece of cord 46" long is necessary, which length allows 3" at each end for tying knot.

On models with DOUBLE drive pulley the dial cord is in two pieces. The pointer cord is on the large pulley starting at 1 and continuing through 20 BUT in the following special order, 1, 2, 3, 4, 18, 19, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20. The drive cord is on the smaller dotted pulley, in the dotted position.

To clarify dial cord arrangement the dial frame is shown as transparent.

MANUAL OF 1942 MOST POPULAR SERVICE DIAGRAMS

FOR CROSLEY MODEL 62-TA, 62-TC, 62-TD — CHASSIS No. 37

ALIGNMENT PROCEDURE

Preliminary Output Meter Connections.....To Voice Coil Terminals of Speaker or to Plate of 35L6GT and Cathode of 35Z5GT
 Generator Ground Connections.....In Series with .001 MFD. Condenser
 Dummy Antenna.....400 Ohm Carbon Resistor in Series with Generator Output
 Position of Volume Control.....Fully On

ALIGNMENT CHART

Step	Signal Generator Frequency Setting	Input	Band Switch	Tuning Cond. Setting	Trimmer Adjusted	Remarks	Location
1 1-A	456 Kc. 456	Antenna Antenna	S. B. S. B.	Fully open Fully open	2nd I-F (2) 1st I-F (2) Wave trap	Adjust for maximum output. Adjust for minimum output.	Tops of I. F. Trans. Center Section of 3 Sec. Trimmer.
2	15.3 Mc.	Antenna	S. W.	Fully open	S. W. "OSC"	Adjust for maximum output.	Top of Tuning Condenser
3	15.0 Mc.	Antenna	S. W.	Approx. 15 on dial	S. W. "Ant."	Adjust for maximum output while rocking gang thru signal.	L. H. Section of 3 Sec. Trimmer.
4	1650 Kc.	Antenna	S. B.	Fully open	B. C. "OSC" (front trimmer right end of chassis)	Adjust for maximum output. Gang does not have to tune thru signal.	R. H. Section of 3 Sec. Trimmer.
5	1400 Kc.	Antenna	S. B.	Approx. 1400 on dial	B. C. "ANT"	Adjust for maximum output.	On Cabinet Back.

When aligning the short wave band "OSC" trimmer care must be exercised to see that the circuits are aligned on the correct frequency and not on the image which is approximately 910 kilocycles less as indicated on the dial. To check, increase generator output, tune-in the generator frequency and then tune-in the image frequency which should be weaker than the fundamental and come in approximately 910 kilocycles lower on the dial than the fundamental. If image cannot be tuned in, the "OSC" trimmer is adjusted to the wrong peak. (Correct peak is the second peak on trimmer from the closed position). Repeat original alignment procedure for more accurate adjustments. Always keep signal generator output low as possible to prevent action of A.S.C. circuit.

Socket Voltage is measured @ 117.5 V line

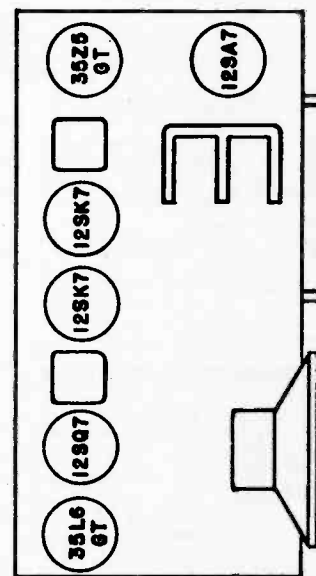
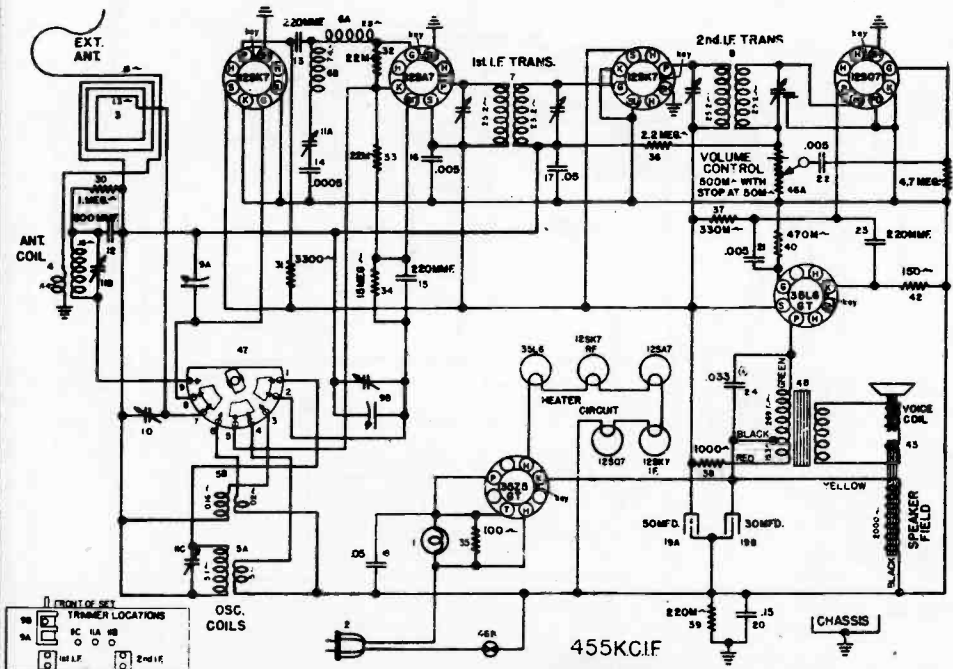
TUBE VOLTAGE CHART

(BETWEEN SOCKET PINS AND B-) WITH 1000 OHM PER VOLT—500 V. RANGE D. C. VOLTMETER

TUBE	FUNCTION	PIN NUMBER							
		1	2	3	4	5	6	7	8
12SK7	R. F. Amp.	.....	.....	0	Neg.	0	76	.....	40
12SA7	Osc. Mod.	.....	.....	76	76	Neg.	0	.....	Neg.
12SK7	I. F. Amp.	.....	.....	0	Neg.	0	76	.....	76
12SQ7	Det., Etc.	.....	0	0	0	Neg.	16*	.....	0
35L6	B. P. O.	.....	.....	92	76	0	.....	.....	4
35Z5	Rect.	.....	.....	.....	.....	113AC	.....	.....	100

All voltages may vary 10% of values indicated. Neg. indicates Neg. reading on Voltmeter Scale but of too small a value to record accurately.

* Measured on 100 V. Scale. Power consumption at 117.5 V. line, 30 watts. Drop across Speaker Field—100 V. Current thru Speaker Field—52 M.A.



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For Model 52-PA — Chassis No. 67

The chassis as employed in this model portable receiver is a five tube (including rectifier), single band super-heterodyne, designed to operate from an "A and B" Battery Pack, or 110 volts A.C. (50-60 cycle) or 110 volt D.C. electric circuits.

TUNING RANGE — 550-1600 Kilocycles — 546-187.5 Meters
TUBES USED — one 1A7GT, one—1N5GT, one—IH5GT, one—1T5GT and one—117Z6GT
BATTERIES REQUIRED — one No. CR67 Crosley "A and B" Battery Pack (6 Volt "A"—75 Volt "B") or equivalent.

Measured from "B" minus using 1000 Ω/V

Voltmeter, 100 V. Range, no signal input

Tube		@ 117.5-Volt Line				Battery Pack			
Type	Function	Filament Volt	Plate Volt	Screen Volt	Cathode Volt	Filament Volt	Plate Volt	Screen Volt	Cathode Volt
1A7GT	Osc. Modulator	1.3	80	34	.....	1.7	75	30	.....
1N5GT	I. F. Amplifier	3.8	80	80	.....	4.4	75	75	.....
1H5GT	Det.-A. S. C. 1st A. F.	2.6	7	.....	.....	3.0	6	.....	.....
1T5GT	Out Put	5.1	72	80	.....	6.0	68	75	.....
117Z6GT	Rectifier	117.5 A. C.	117.5 A. C.	.....	100	.....	.....	.....	.....

ALIGNMENT PROCEDURE

Volume Control on full Output meter connected to Plate and Screen of 1T5GT

SIGNAL GENERATOR

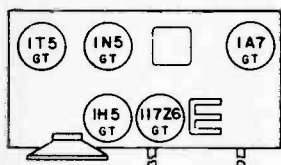
FREQUENCY SETTING	CONNECTION TO RADIO	DUMMY ANTENNA	TUNING COND. SETTING	TRIMMERS TO ADJUST (See Fig. 1)	REMARKS
455 Kc	Ant. Lead	.0001 MF	Fully open	2nd 1-F(1) front chassis flange	Adjust for maximum signal.
455 Kc	Ant. Lead	.0001 MF	Fully open	1st 1-F (2)	Adjust for maximum signal. Located top of 1st 1-F ass'y.
1650	Ant. Lead	.0001 MF	Fully open	"OSC" Shunt on gang	Adjust for maximum output. Gang does not have to tune through signal.
1400	Ant. Lead	.0001 MF	140 on dial	"ANT" shunt on gang	Adjust for maximum output.
600	Ant. Lead	.0001 MF	60 on dial	Iron core in "OSC" coil	Adjust for maximum signal while rocking gang.

Repeat above procedures for more accurate adjustments
 Maximum power output @ 75 V. "B" — approx. 200 M. W. undistorted

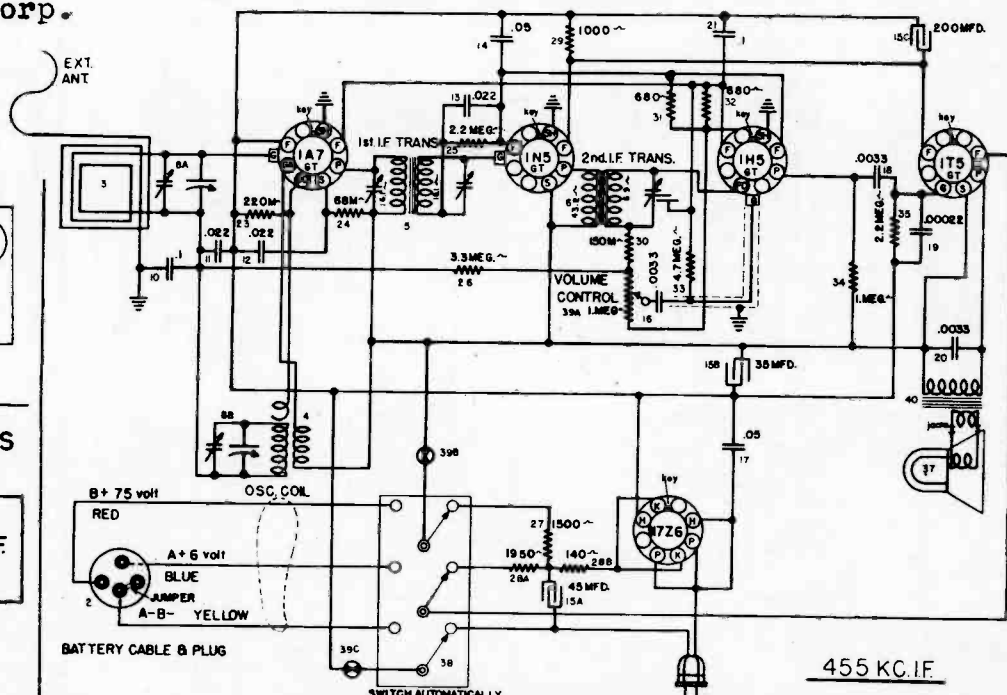
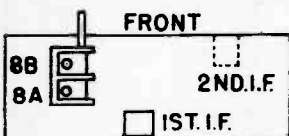
A Battery drain @ 6 volts, .05 Amp.; "B" Battery drain @ 75 V., 9 M. A.
 Power consumption @ 117.5 volts line — 20 Watts

The Crosley Corp.

TUBE LAYOUT



TRIMMER LOCATIONS



SWITCH AUTOMATICALLY OPERATED BY INSERTION OF A.C. PLUG

455 KC. I.F.

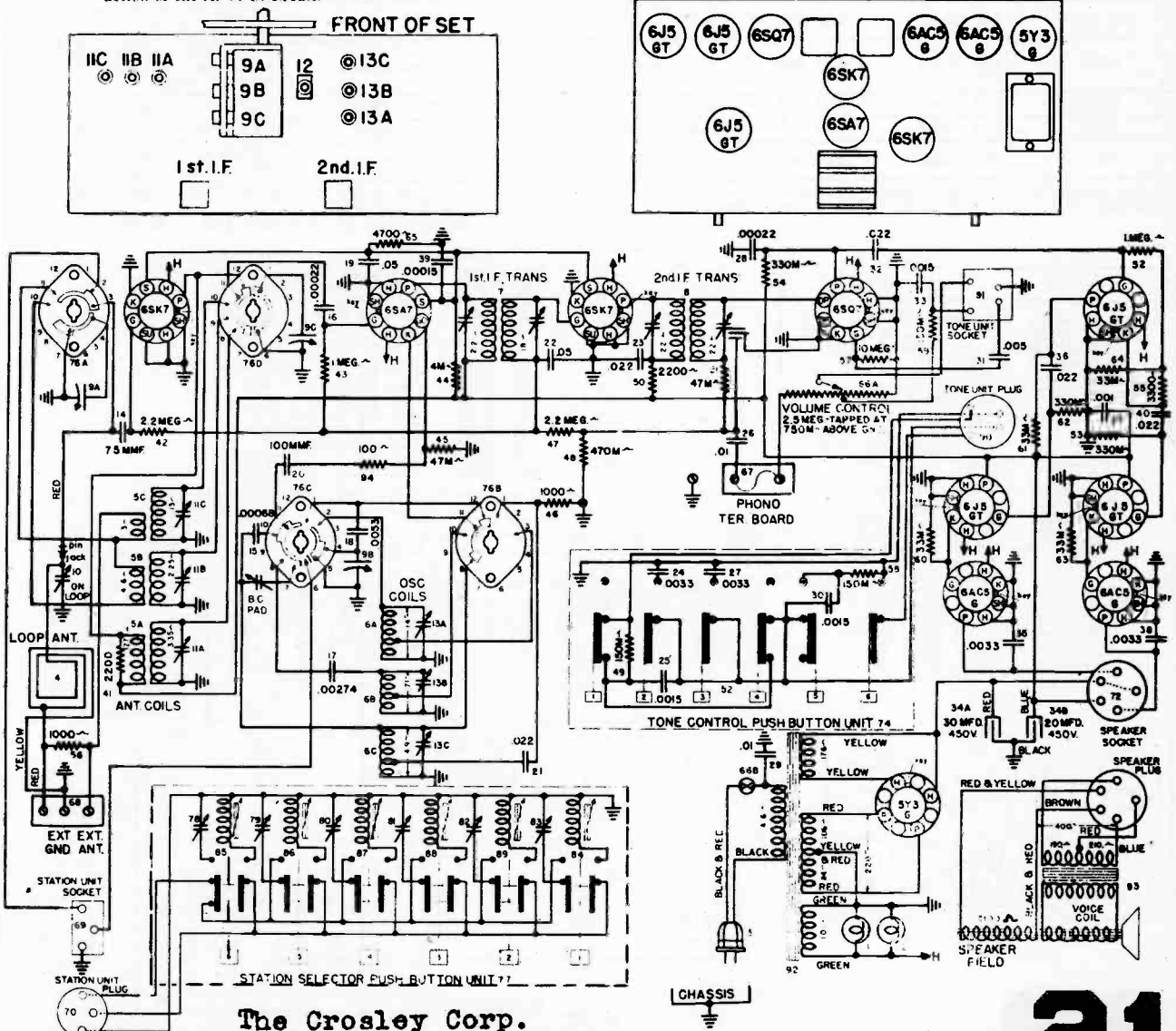
20

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MODELS 02CA AND 02CB — CHASSIS MODEL No. 55

Alignment Sequence	Dummy Antenna	Frequency Setting	Input Connection to Receiver	Band Switch	Tuning Cond. Setting	Trimmer Adjusted	Remarks
1.	.02 MF.	455 Kc.	Stator lug Rear section of Gang Cond.	B. C.	Fully open	2nd I-F (2) 1st I-F (2)	Adjust for Maximum. Adjust for Maximum.
2.	.0002 MF.	1630 Kc.	Ant. Terminal	B. C.	Fully open	B. C. "OSC" Trimmer	Adjust for peak; gang does not have to tune thru signal. Loop must be connected.
3.	.0002 MF.	600 Kc.	Ant. Terminal	B. C.	Approx. 60 on dial	B. C. "OSC" Series Trimmer	Adjust for maximum output while rocking gang thru signal.
4.	Repeat Step No. 2 to check possible shift due to series adjustment.						
5.	.0002 MF.	1400 Kc.	Ant. Terminal	B. C.	Approx. 140 on dial	B. C. "ANT" Trimmer B. C. "R-F" Trimmer	Adjust for maximum output do not touch B. C. Osc. Trimmer. Adjust for maximum output.
6.	400 ohm (carbon)	5.3 Mc.	Ant. Terminal	Police	Fully open	Pol "OSC"	Adjust for peak; gang does not have to tune thru signal.
7.	400 ohm (carbon)	5.0 Mc.	Ant. Terminal	Police	Approx. 5.0	Pol "ANT" Trimmer	Adjust for maximum output.
8.	400 ohm (carbon)	18.3 Mc.	Ant. Terminal	S. W.	Fully open	S. W. "OSC"	Adjust for peak. Gang does not have to tune thru signal.
9.	400 ohm (carbon)	18.0 Mc.	Ant. Terminal	S. W.	Approx. 18	S. W. "ANT" Trimmer	Adjust for maximum output while rocking gang thru signal.
10.	Repeat the above alignment procedure for more accurate adjustments. Always keep signal generator output as low as possible to prevent action of the A. V. C. circuit.						



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For Models 62-PA and 62-PB — Chassis No. 68

Portable Radios for Standard Broadcast Reception

Measured from "B" minus using 1000 Ω/V

Voltmeter, 100 V. Range, no signal input

Tube		@ 117.5-Volt Line				Battery Pack			
Type	Function	Filament Volt	Plate Volt	Screen Volt	Cathode Volt	Filament Volt	Plate Volt	Screen Volt	Cathode Volt
1N5GT	R. F. Amplifier	3.8	.....	.....	.....	4.6	75	75	.....
1A7GT	Osc. Modifier	2.6	80	31	.....	3.1	75	28	.....
1N5GT	I. F. Amplifier	5.0	80	80	.....	6.1	75	75	.....
1H5GT	Det.-A. V. C. 1st A. F.	1.3	7	.....	.....	1.6	4.5	.....	.....
1T5GT	Out Put	6.2	72	80	100	7.7	68	75	.....
117Z6GT	Rectifier	117.5 A. C.	117.5 A. C.	.....	.....	.....	.....	.....	.....

ALIGNMENT PROCEDURE

Volume Control on full Output meter connected to Plate and Screen of 1T5GT

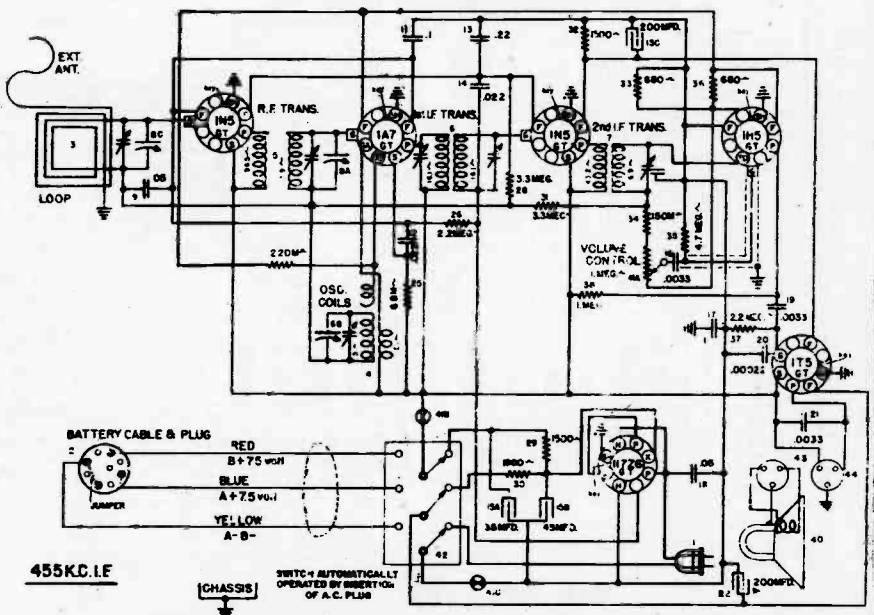
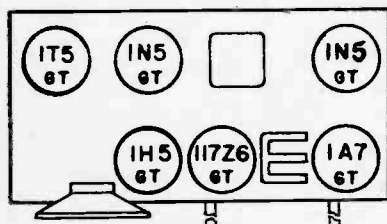
SIGNAL GENERATOR					
FREQUENCY SETTING	CONNECTION TO RADIO	DUMMY ANTENNA	TUNING COND. SETTING	TRIMMERS TO ADJUST (See Fig. 1)	REMARKS
455 Kc	Ant. Lead	.0001 MF	Fully open	2nd 1-F (1) front chassis flange	Adjust for maximum signal.
455 Kc	Ant. Lead	.0001 MF	Fully open	1st 1-F (2)	Adjust for maximum signal. Located top of 1st 1-F ass'y.
1650	Ant. Lead	.0001 MF	Fully open	"OSC" Shunt on gang	Adjust for maximum output. Gang does not have to tune through signal.
1400	Ant. Lead	.0001 MF	140 on dial	"ANT" shunt on gang	Adjust for maximum output.
1400	Ant. Lead	.0001 MF	140 on dial	"RF" shunt on gang	Adjust for maximum output.
600	Ant. Lead	.0001 MF	60 on dial	Iron core in "OSC" coil	Adjust for maximum output while rocking gang.

Repeat above for more accurate adjustments
Maximum power output @ 75 V. "B" — approx. 200 M. W.

A Battery drain @ 6 volts, .05 Amp.; "B" Battery drain @ 75 V., 9 M. A.;
Power consumption @ 117.5 volts line — 25 Watts

Item No.	Part No.	Description
1	—43775	Power Cable and Plug
2	—132205-1	Battery Cable and Plug
3	GB—132198-1	Loop Antenna Assem.
4	G623—32002	Osc. Coil
5	G116—32001	R.F. Trans.
6	G268—32004	1st I.F. Trans.
7	Wd. Scr. (5)	2nd I.F. Trans.
8A	—132168-1	Var. Cond. R.F. Section
8B		Var. Cond. Osc. Section
8C		Var. Cond. Ant. Sect.
9	G65—39001	Cond. .05 Mf. 200 V.
10	None	
11	G67—39001	Cond. .1 Mf. 200 V.
12	G63—39001	Cond. .022 Mf. 200 V.
13	G69—39001	Cond. .22 Mf. 200 V.
14	G63—39001	Cond. .022 Mf. 200 V.
15A	—132144-1	Cond. 35 Mfd. Electro
15B		Cond. 45 Mfd. Electro
15C		Cond. 200 Mfd. Electro
16	G10—39001	Cond. .0033 Mf. 600 V.
17	G67—39001	Cond. .1 Mf. 200 V.
18	G65—39001	Cond. .05 Mf. 200 V.
19	G10—39001	Cond. .0033 Mf. 600 V.
20	G9—39004	Cond. .00022 Mf.
21	G10—39001	Cond. .0033 Mf. 600 V.

25	G18—39002	Res. 68 M Ohm $\frac{1}{4}$ W.
26	G27—39002	Res. 2.2 Meg. Ohm $\frac{1}{4}$ W.
27	G21—89002	Res. 220 M Ohm $\frac{1}{4}$ W.
28	G28—39002	Res. 3.3 Meg. Ohm $\frac{1}{4}$ W.
29	G8—39002	Res. 1500 Ohm $\frac{1}{4}$ W.
30	—132502-1	Res. 1900 Ohm Candohm
31	G28—39002	Res. 3.3 Meg. Ohm $\frac{1}{4}$ W.
32	G8—39002	Res. 1500 Ohm $\frac{1}{4}$ W.
33	G8—39002	Res. 680 Ohm $\frac{1}{4}$ W.
34	G20—39002	Res. 150 M Ohm $\frac{1}{4}$ W.
35	G29—39002	Res. 4.7 Meg. Ohm $\frac{1}{4}$ W.
36	G8—39002	Res. 680 Ohm $\frac{1}{4}$ W.
37	G27—39002	Res. 2.2 Meg. Ohm $\frac{1}{4}$ W.
38	G25—39002	Res. 1 Meg. Ohm $\frac{1}{4}$ W.



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CROSLY MODELS 02CP, 02CQ — CHASSIS MODEL No. 70

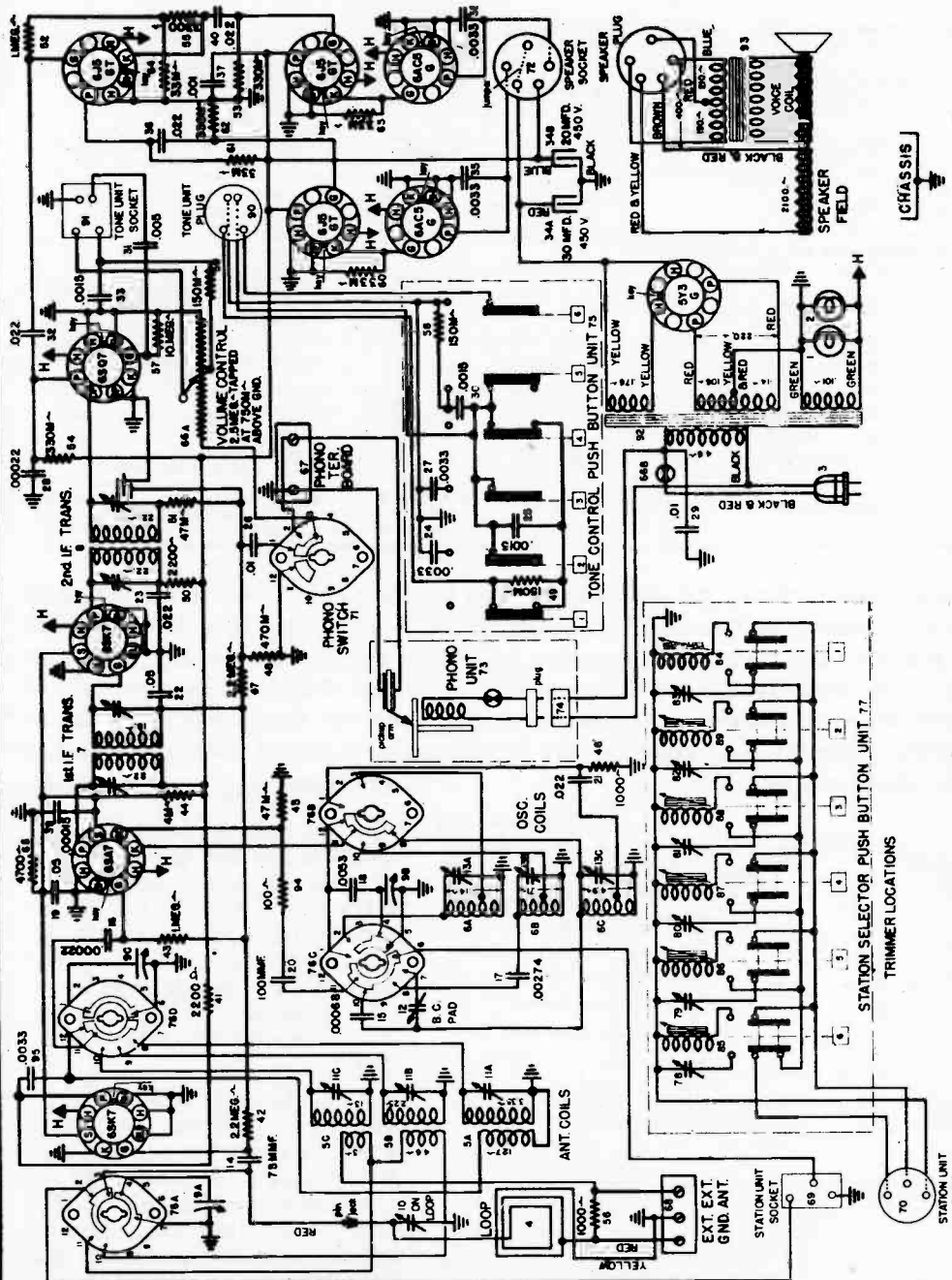
SOCKET VOLTAGES MEASURED AT 117.5 V. LINE (BETWEEN SOCKET PIN AND CHASSIS) WITH 1000 OHM PER VOLT,
500 V. RANGE VOLTMETER (D. C.)

TUBE	FUNCTION	PIN NUMBER							
		1	2	3	4	5	6	7	8
6SK7—R. F. Amplifier		Gnd.	Gnd.	Gnd.	0	Gnd.	74	6.3 A. C.	180
6SA7—Converter		Gnd.	Gnd.	180	74	0	{0-S. W. 4.0 B. C.}	6.3 A. C.	0
6SK7—I. F. Amplifier		Gnd.	Gnd.	Gnd.	0	Gnd.	74	6.3 A. C.	180
6SQ7—Det. A. S. C. 1st A. F.		Gnd.	0	Gnd.	0	0	75	6.3 A. C.	Gnd.
6J5GT—Phase Inverter		Gnd.	Gnd.	145	J. B.	0	J. B.	6.3 A. C.	40
6J5GT(2)—P. P. A. F. Drivers		Gnd.	Gnd.	180	0	0	J. B.	6.3 A. C.	6.5
6AC5GT(2)—P. P. Output		Gnd.	Gnd.	304	J. B.	6.5	J. B.	6.8 A. C.	Gnd.
5Y3G—Rectifier		N. C.	310	J. B.	308 A. C.	J. B.	308 A. C.	J. B.	310

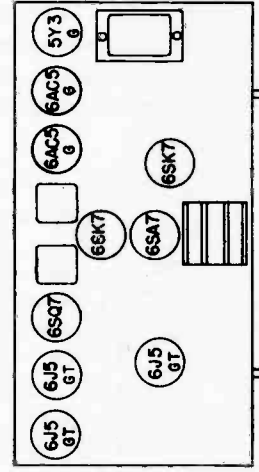
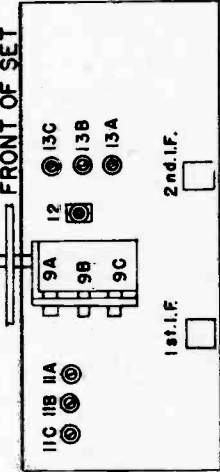
MAX. POWER OUTPUT.....12.0 WATTS
POWER CONSUMPTION.....90 WATTS
DROP ACROSS SPEAKER FIELD.....120 VOLTS

J. B.—Junction Block

N. C.—No Connection



TRIMMER LOCATIONS



MANUAL OF 1942 MOST POPULAR SERVICE DIAGRAMS

CROSLEY MODELS 02CP, 02CQ — CHASSIS MODEL No. 70

THE AUTOMATIC RECORD CHANGER

This record changer will automatically play a series of twelve 10" or ten 12" records of the standard 78 R. P. M. type. The records must be all one size when loading, and may consist of less records than listed above. Records with or without a starting groove will operate the changer satisfactorily and the inside stopping groove may be a spiral or an eccentric. This means that any type of record, regardless of make, will operate the automatic mechanism. Records of any size up to 12" may be played manually.

The records are supported for automatic operation in two points, in the center by the center post, and on the edge by the record holder post.

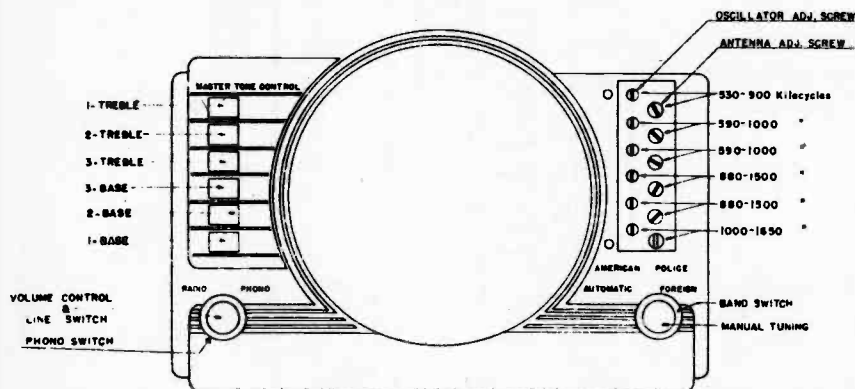
Alignment Sequence	Dummy Antenna	Frequency Setting	Input Connection to Receiver	Band Switch	Tuning Cond. Setting	Trimmer Adjusted	Remarks
1.	.02 MF.	455 Kc.	Stator lug Rear section of Gang Cond.	B. C.	Fully open	2nd I-F (2) 1st I-F (2)	Adjust for Maximum. Adjust for Maximum.
2.	.0002 MF.	1630 Kc.	Ant. Terminal	B. C.	Fully open	B. C. "OSC" Trimmer	Adjust for peak; gang does not have to tune thru signal. Loop must be connected.
3.	.0002 MF.	600 Kc.	Ant. Terminal	B. C.	Approx. 60 on dial	B. C. "OSC" Series Trimmer	Adjust for maximum output while rocking gang thru signal.
4.	Repeat Step No. 2 to check possible shift due to series adjustment.						
5.	.0002 MF.	1400 Kc.	Ant. Terminal	B. C.	Approx. 140 on dial	B. C. "ANT" Trimmer B. C. "R-F" Trimmer	Adjust for maximum output do not touch B. C. Osc. Trimmer. Adjust for maximum output.
6.	400 ohm (carbon)	5.3 Mc.	Ant. Terminal	Police	Fully open	Pol "OSC"	Adjust for peak; gang does not have to tune thru signal.
7.	400 ohm (carbon)	5.0 Mc.	Ant. Terminal	Police	Approx. 5.0	Pol "ANT" Trimmer	Adjust for maximum output.
8.	400 ohm (carbon)	18.3 Mc.	Ant. Terminal	S. W.	Fully open	S. W. "OSC"	Adjust for peak. Gang does not have to tune thru signal.
9.	400 ohm (carbon)	18.0 Mc.	Ant. Terminal	S. W.	Approx. 18	S. W. "ANT" Trimmer	Adjust for maximum output while rocking gang thru signal.
10.	Repeat the above alignment procedure for more accurate adjustments. Always keep signal generator output as low as possible to prevent action of the A. V. C. circuit.						

When aligning the shortwave bands "OSC" trimmers care must be exercised to see that the circuits are aligned on the correct frequency and not on the image which is approximately 910 kilocycles less as indicated on the Receiver dial. To check, increase generator output, tune-in the generator frequency and then tune-in the image frequency which should be weaker than the fundamental and come in approximately 910 kilocycles lower on the Receiver dial than the fundamental. If image cannot be tuned-in, the "OSC" trimmer is adjusted to the wrong peak. (Correct peak is the second peak on trimmer from the closed position).

SETTING THE PUSH BUTTONS

The six station selector push buttons are set up by means of two adjusting screws per button. These adjusting screws are made accessible by removing the station selector push button escutcheon. Pry off carefully being careful not to scratch the main escutcheon.

Select the call letter tabs of your six favorite broadcast stations from the station call letter sheets supplied. Place the call letter tabs in the window above that push button which is to be adjusted for that station.



MANUAL OF 1942 MOST POPULAR SERVICE DIAGRAMS

CROSELY RADIO MODEL 52-TP — CHASSIS No. 72

REPLACING TUBES—To gain access to the tubes, remove cabinet back, remove two screws holding loop antenna to rear of chassis and lay antenna down. Do not disconnect antenna from chassis.

If at any time it is necessary to replace one or more tubes, Figure 1 will show the correct position and function of each type of tube.

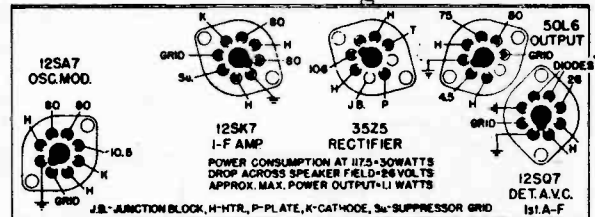
If your receiver fails to operate make sure all tubes are pressed down in their respective sockets and that power cord plug is tight in the house receptacle. Should a visual inspection fail to indicate the trouble, call a competent radio service man—preferably your nearest Crosley dealer.

Specially designed parts of the highest quality are used throughout in the construction of all Crosley products. In order that the original fine quality and excellent performance of this receiver may be maintained, it is recommended that only GENUINE CROSELY PARTS be used should service be required.

ALIGNMENT PROCEDURE

Preliminary

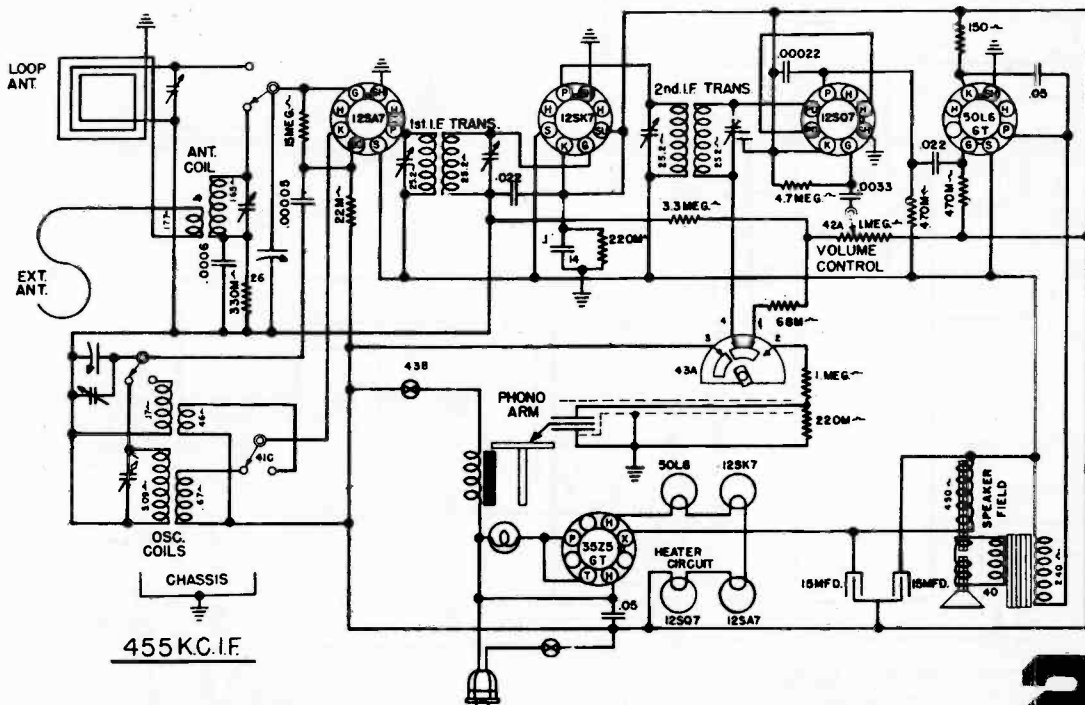
- Output Meter Connections Plate and screen of 50L6
- Generator Ground Connections Ground Lead and Chassis
- Dummy Antenna to be in series with generator output
- Position of Volume Control Fully on



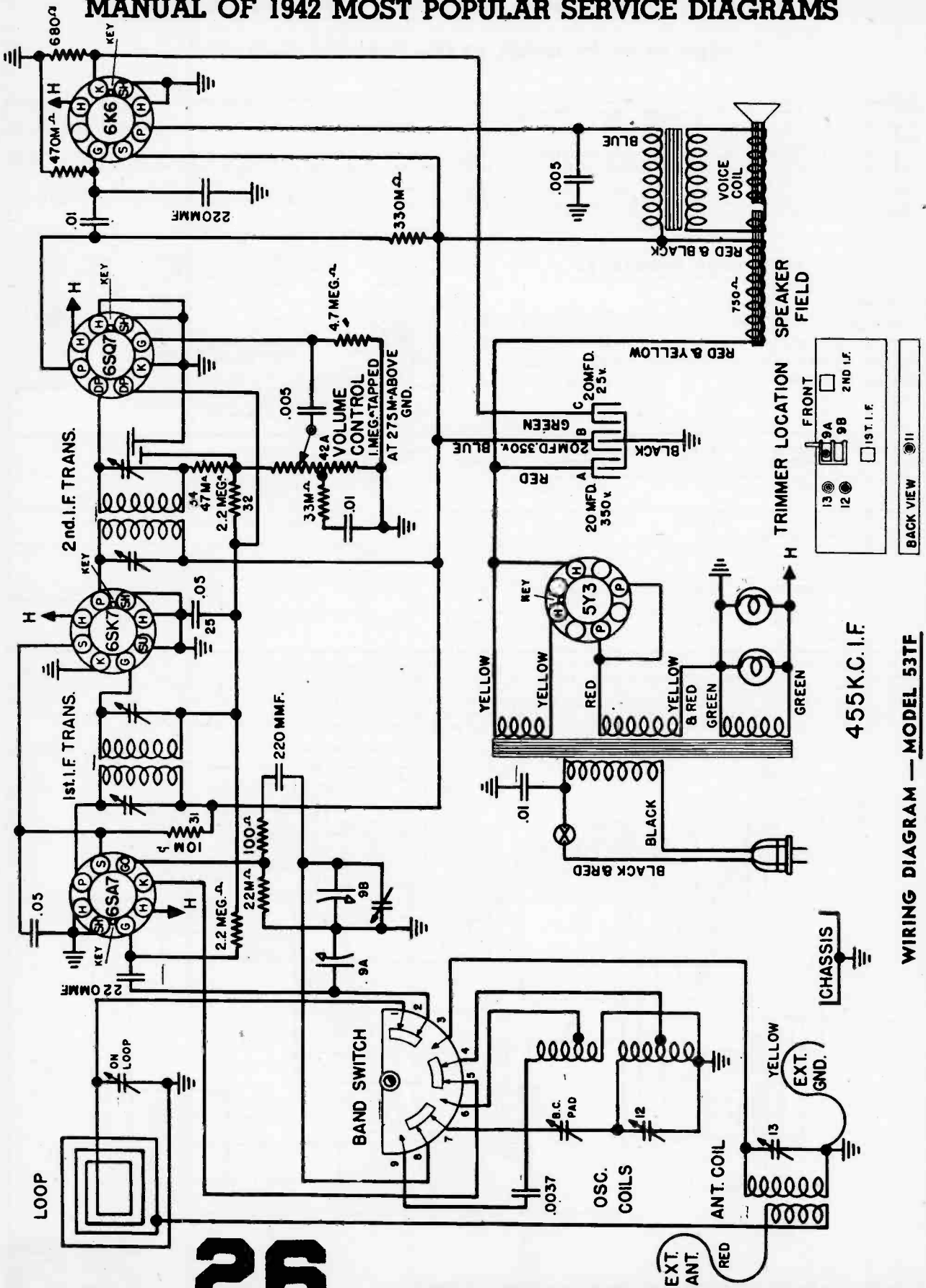
VOLTAGES MEASURED BETWEEN SOCKET PIN 8 GND. SIDE OF VOL. CONT. WITH 250VOLT, 1000 OHMS PER. VOLT. METER. READINGS MAY VARY 10%.

Alignment Sequence	Dummy Antenna	Frequency Setting	Input Connection to Receiver	Band Switch	Tuning Cond. Setting	Trimmer Adjusted	Remarks
1.	.0001 MF.	455 KC.	Antenna Lead	BC	Fully Open	1st I-F(2) 2nd I-F(2)	Adjust for maximum signal. Adjust for maximum signal.
2.	400 ohm Carbon Resistor	15.3 MC.	Antenna Lead (red)	S.W.	Fully Open	S.W. "Osc."	Adjust for maximum output.
3.	400 ohm Carbon	15.0 MC.	Antenna Lead (red)	S.W.	15 on Dial	S.W. "Ant."	Adjust for maximum signal while rocking gang through it.
4.	.0001 MF.	1650 KC.	Antenna Lead (red)	BC	Fully Open	B.C. "Osc."	Adjust for maximum output. Gang does not have to tune through signal.
5.	.0001 MF.	1400 KC.	Antenna Lead (red)	BC	140 Dial	B.C. "Ant."	Adjust for maximum output.

When aligning the shortwave band "OSC" trimmer, care must be exercised to see that the circuit is aligned on the correct frequency and not on the image which is approximately 910 kilocycles less as indicated on the dial. To check, increase generator output, tune in the generator frequency and then tune in the image frequency which should be weaker than the fundamental and come in approximately 910 kilocycles lower on the dial than the fundamental. If image cannot be tuned in, the "OSC" trimmer is adjusted to the wrong peak. (Correct peak is the second peak on trimmer from the closed position.) Repeat original alignment procedure for more accurate adjustments. Keep signal generator output low as possible to prevent action of A.S.C. circuit.



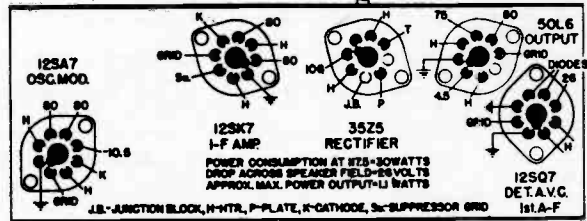
MANUAL OF 1942 MOST POPULAR SERVICE DIAGRAMS



MANUAL OF 1942 MOST POPULAR SERVICE DIAGRAMS

CROSLY RADIO MODELS 52TG, 52TG-U,—CHASSIS No. 74-74U

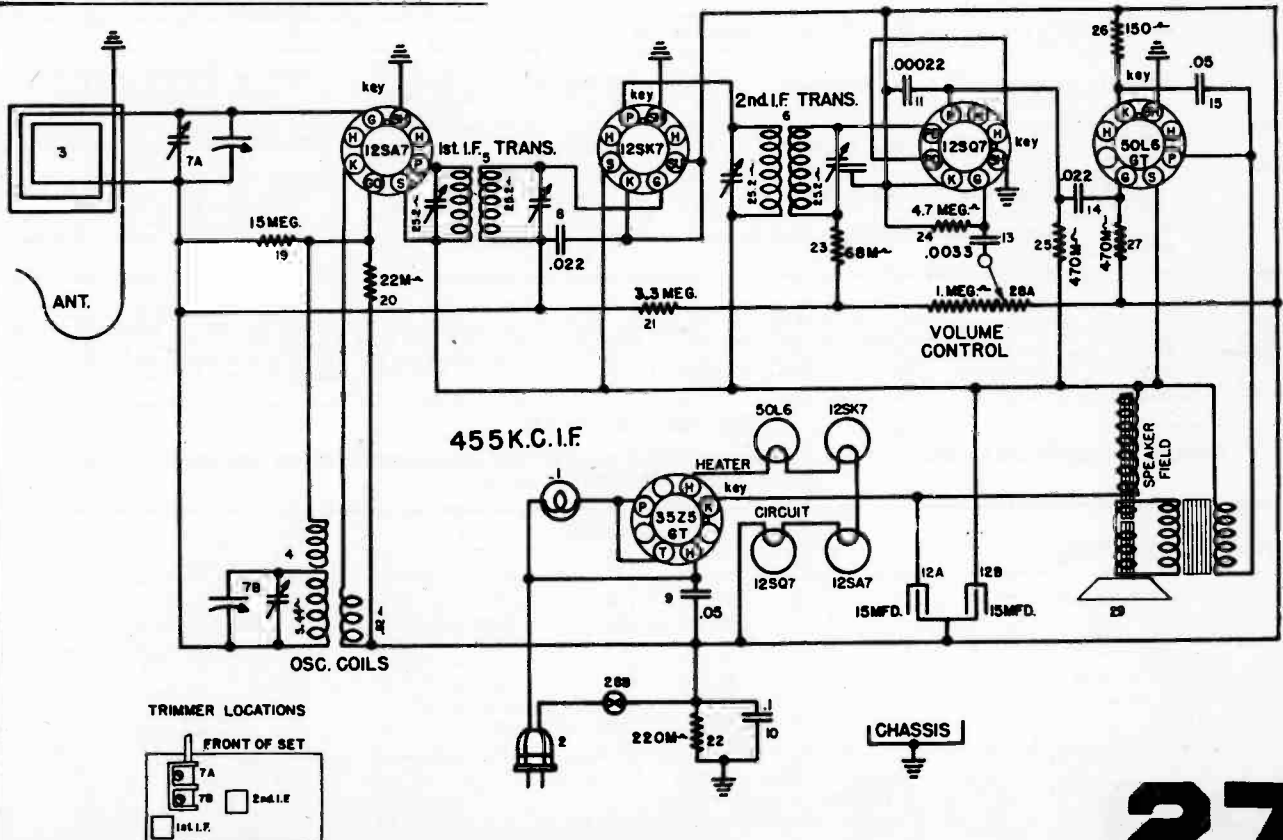
Item No.	Part No.	Description	Item No.	Part No.	Description	
1	—4858	Bulb Dial Light 6.3V.	16	NONE		
	L—132109	Dial Light Socket Assm.	17	NONE		
	—132099-2	Dial Face.	18	NONE		
	—132097-5	Dial Pointer.	19	—50671	Res. 15 Megohm ¼ W.	
	—132117-2	Celluloid Dial Lens.	20	G15—39002	Res. 22,000 Ohms ¼ W.	
	L—132131	Drive Cord Assm.	21	G28—39002	Res. 3.3 Megohm ¼ W.	
	—132119-4	Drive Shaft.	22	G21—39002	Res. 220,000 Ohms ¼ W.	
	—51071	Retaining Ring—Dr. Shaft.	23	G18—39002	Res. 68,000 Ohm ¼ W.	
	2	—132300-1	Power Cord & Plug.	24	G29—39002	Res. 4.7 Megohm ¼ W.
		—45738	Lock Plate Power Cord.	25	G23—39002	Res. 470,000 Ohm ¼ W.
	3	LB—132110	Loop Assm. Antenna.	26	G33—39002	Res. 150 Ohm ¼ W.
		—132102	Spacer—Loop Mtg. (2)	27	G23—39002	Res. 470,000 Ohm ¼ W.
		—23843	Screw—Loop Mtg. (2)	28A	—132138	Bracket—Speaker Mtg.
	4	G261—32002	Coil B. C. Osc.	28B	—49774	{Vol. Control 1 Meg. Power Switch.
	5	G266—32004	1st I. F. Trans.			
6	G267—32004	2nd I. F. Trans.				
7A	—49736-1	2 Gang Var. Cond. {Antenna Sec. Oscillator Sec.				
7B						
8	G63—39001	Cond. .022 Mfd., 200V.				
9	G65—39001	Cond. .05 Mfd., 200V.				
10	G67—39001	Cond. .1 Mfd., 200V.				
11	G9—39004	Cond. 200 Mmf., Mica.				
12A	—49664-B	{Cond. 15 Mfd., 140V., Elect. Cond. 15 Mfd., 120V., Elect.				
12B						
13	G10—39001	Cond. .0033 Mfd., 160V.				
14	G63—39001	Cond. .022 Mfd., 200V.				
15	G65—39001	Cond. .05 Mfd., 200V.				



ALIGNMENT PROCEDURE

Alignment Sequence	Dummy Antenna	Frequency Setting	Input Connection to Receiver	Band Switch	Tuning Cond. Setting	Trimmer Adjusted	Remarks
1.	.0001 MF.	455 KC.	Antenna Lead	BC	Fully Open	1st I-F(2) 2nd I-F(2)	Adjust for maximum signal. Adjust for maximum signal.
2.	.0001 MF.	1650 KC.	Antenna Lead	BC	Fully Open	B.C."Osc."	Adjust for maximum output. Gang does not have to tune through signal.
3.	.0001 MF.	1400 KC.	Antenna Lead	BC	140 Dial	B.C."Ant."	Adjust for maximum output.

Repeat the original alignment procedure for more accurate adjustments. Always keep signal generator output as low as possible to prevent action of the A.S.C. circuit.



MANUAL OF 1942 MOST POPULAR SERVICE DIAGRAMS

FOR CROSLEY MODELS 82CP, 82CQ—CHASSIS MODEL NO. 75

STARTING THE CHANGER—Turn the control knob clockwise to the "ON" position; after the turntable has attained speed, turn the control knob all the way counter clockwise to the "REJ." position for a few seconds and release. The bottom record will fall on the turntable and the unit will automatically play the entire stack of records. If the changing cycle should fail to start, repeat the above operation.

REJECTING A RECORD—To reject a record, it is only necessary to turn the control knob counter clockwise to the "REJ." position for a few seconds and release. A record can be rejected anytime the needle is in contact with the record.

UNLOADING THE CHANGER—Turn the control knob to the "OFF" position and remove the center spindle by pulling straight up. The played records may now be easily removed after which the center post should be replaced. The center spindle must be turned when being replaced so that it drops into correct position.

TO PLAY RECORDS MANUALLY

MANUAL OPERATION—Manual operation is used for all home recordings and for single records is desired. **CAUTION:** For playing records of less than 10" diameter always set the record holding shelf in same position as is used for playing 12" records. Otherwise "Floating Jewel Tone System" may be damaged. 1. Remove the center spindle by pulling straight up. 2. Place record on turntable with desired selection upward. 3. Turn the control knob to the "ON" position. 4. Place pickup on record so the needle enters the outside groove of the record. 5. Adjust volume control to desired level.

50 CYCLE OPERATION—(Phonograph)—If operation is desired on 50 cycle current, a small spring, see parts list, must be added to the motor shaft.

SERVICE—If your receiver fails to operate satisfactorily, check the tubes to see that all are pushed well down into their respective sockets and that all grid clips are securely in place on the top caps of the tubes. Check the antenna (loop terminals), and power supply connections for good contact. If this visual inspection does not reveal the source of the trouble, disconnect the receiver from the power supply and call a competent service man, preferably your Crosley Dealer.

ALIGNMENT PROCEDURE

Preliminary
 Output Meter Connections..... Plate to Plate of 6K6GT's
 Generator Ground Connection..... To Chassis or Ground Lead
 Dummy Antenna to be in series with generator output..... See Chart Below
 Position of Volume Control..... Fully On
 Position of Tone Control..... Treble or Speech

Alignment Sequence	Dummy Antenna	Frequency Setting	Input Connection to Receiver	Band Switch	Tuning Cond. Setting	Trimmer Adjusted	Remarks
1.	.02 MF.	455 Kc.	Stator lug Rear section of Gang Cond.	B. C.	Fully open	2nd I-F (2) 1st I-F (2)	Adjust for Maximum. Adjust for Maximum.
2.	.0002 MF.	1650 Kc.	Ant. Terminal	B. C.	Fully open	B. C. "OSC" Trimmer	Adjust for peak; gang does not have to tune thru signal. Loop must be connected.
3.	.0002 MF.	600 Kc.	Ant. Terminal	B. C.	Approx. 60 on dial	B. C. "OSC" Series Trimmer	Adjust for maximum output while rocking gang thru signal.
4.	Repeat Step No. 2 to check possible shift due to series adjustment.						
5.	.0002 MF.	1400 Kc.	Ant. Terminal	B. C.	Approx. 140 on dial	B. C. "ANT" Trimmer B. C. "R-F" Trimmer	Adjust for maximum output do not touch B. C. Osc. Trimmer. Adjust for maximum output.
6.	400 ohm (carbon)	18.3 Mc.	Ant. Terminal	S. W.	Fully open	S. W. "OSC"	Adjust for peak. Gang does not have to tune thru signal.
7.	400 ohm (carbon)	18.0 Mc.	Ant. Terminal	S. W.	Approx. 18	S. W. "ANT" Trimmer	Adjust for maximum output while rocking gang thru signal.
8.	Repeat the above alignment procedure for more accurate adjustments. Always keep signal generator output as low as possible to prevent action of the A. V. C. circuit.						

IMPORTANT ALIGNMENT NOTES—When aligning the shortwave bands "OSC" trimmers care must be exercised to see that the circuits are aligned on the correct frequency and not on the image which is approximately 910 kilocycles less as indicated on the Receiver dial. To check, increase generator output, tune-in the generator frequency and then tune-in the image frequency which should be weaker than the fundamental and come in approximately 910 kilocycles lower on the Receiver dial than the fundamental. If image cannot be tuned-in, the "OSC" trimmer is adjusted to the wrong peak. (Correct peak is the second peak on trimmer from the closed position).

TUBE VOLTAGE CHART

SOCKET VOLTAGES MEASURED AT 117.5 V. LINE (BETWEEN SOCKET PIN AND CHASSIS) WITH 1000 OHM PER VOLT, 500 V. RANGE VOLTMETER (D. C.)

TUBE	FUNCTION	PIN NUMBER							
		1	2	3	4	5	6	7	8
6SK7GT—R. F. Amplifier.....		0	0	0	0	0	82	6.3 A. C.	210
6SA7GT—OSC.—Mod.....		0	0	210	82BC	0	0	6.3 A. C.	0
6SK7GT—I. F. Amplifier.....		0	0	0	0	-6.5BC - -OSW -	82	6.3 A. C.	210
6SQ7—Det. A. S. C. 1st A. F.....		0	0	1.4	0	0	78	6.3 A. C.	0
6J5GT—Phase Inverter.....		0	0	125	N. C.	0	0	6.3 A. C.	5.2
6K6GT(2)—Output.....		0	0	200	210	0	0	6.3 A. C.	13
5Y3G—Rectifier.....		N. C.	300	N. C.	338	J. B.	338 A. C.	J. B.	300

MAX. POWER OUTPUT..... 6.5 WATTS
 POWER CONSUMPTION..... 85 WATTS
 DROP ACROSS SPEAKER FIELD..... 90 VOLTS

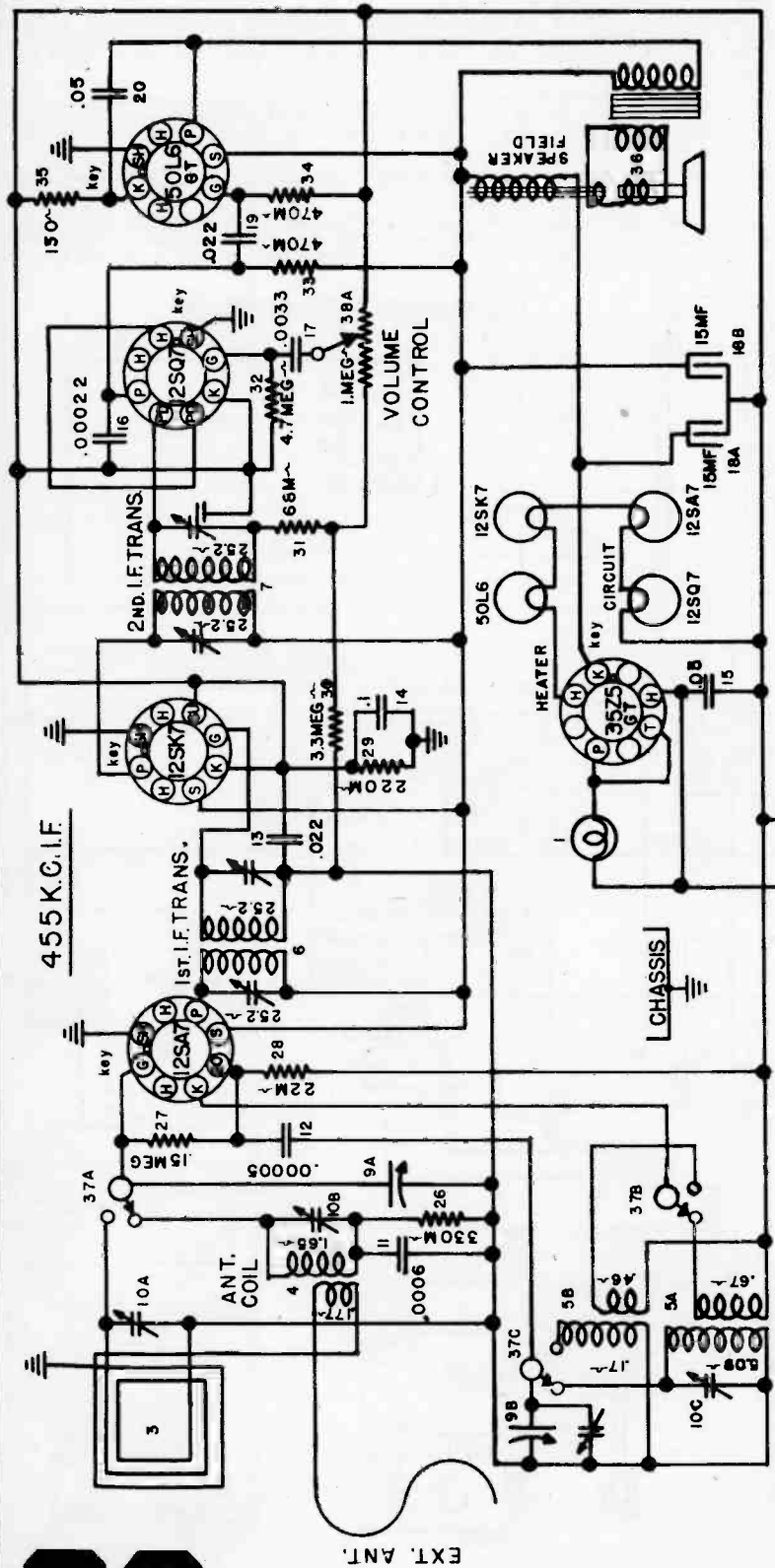
N. C.—No Connection

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MANUAL OF 1942 MOST POPULAR SERVICE DIAGRAMS

52TD, 52TD-U, 52TE, 52TE-U — CHASSIS No. 77

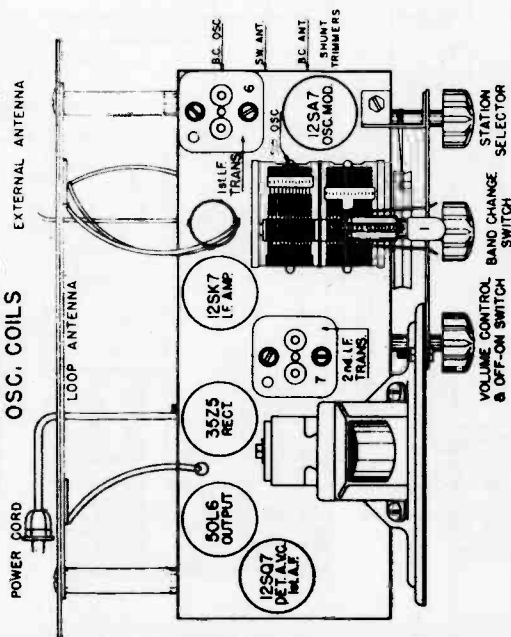
52TF, 52TF-U — CHASSIS No. 76



ALIGNMENT PROCEDURE

Dummy Antenna	Frequency Setting	Input Connection to Receiver	Band Switch	Tuning Cond. Setting	Trimmer Adjusted
Generator 0.001 M.F.	455 KC.	Antenna Lead	BC	Fully Open	2nd L-F(2) 1st L-F(2)
400 ohm Carbon Resistor	15.3 MC.	Antenna Lead (red)	S.W.	Fully Open	S.W., "Osc."
400 ohm Carbon Resistor	15.0 MC.	Antenna Lead (red)	S.W.	15 on Dial	S.W., "Ant."
0001 M.F.	1650 KC.	Antenna Lead (red)	BC	Fully Open	B.C., "Osc."
0001 M.F.	1400 KC.	Antenna Lead (red)	BC	140 Dial	B.C., "Ant."

CROSLLEY

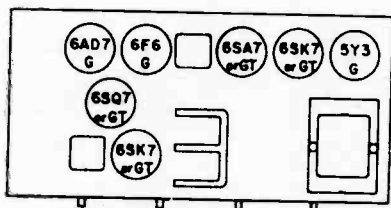


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MANUAL OF 1942 MOST POPULAR SERVICE DIAGRAMS

INSTALLATION, OPERATING AND SERVICE INSTRUCTIONS for Crosley Model 72CA — Chassis Model No. 80

Model 72CA is a seven tube, two band, superhetrodyne receiver. It is designed to operate on Alternating Current (A.C.) electric circuits as specified on the Model and License label.



SETTING THE PUSH BUTTONS

Note: When placing call tabs in the window be sure to arrange them according to their frequency (kilocycles) that is: the station whose frequency is well within the range covered by the No. 1 button, should be placed above that button and so on with the rest of the buttons to be set.

Remove station selector push button escutcheon. Turn the receiver on and let it operate for a sufficient length of time to permit the tubes to reach their normal operating conditions.

It is essential that the frequency (kilocycles) of the station selected be within the range of the push button to be set for that station. See Fig. 1.

1. Turn the band change switch to the "American" position. Using the station selector knob, carefully tune in the station to which the No. 1 push button is to be set. Note program.
2. Turn the band change switch to the "Automatic" position and using a small screw driver, carefully turn in a clockwise direction the Oscillator adjusting screw until the station previously tuned in manually is heard again. Adjust for maximum output in the speaker.
3. Adjust the Antenna adjusting screw for maximum volume in the speaker.
4. Turn band change switch from "Automatic" to "American" and back again to check if adjustment has been correctly made. There should be no change in tone quality when switched from one to the other.
5. Repeat above procedure for the remaining push buttons.

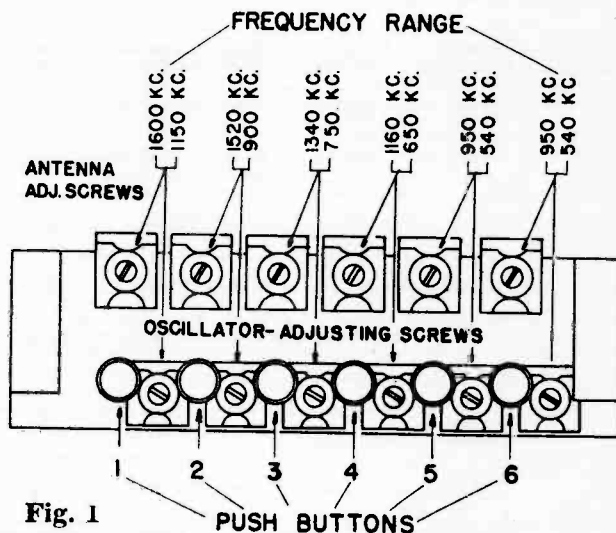
To tune the receiver with the push buttons, set the band change switch on "Automatic" and depress completely the button corresponding to the station you wish to hear.

TUBE VOLTAGE CHART

SOCKET VOLTAGES MEASURED AT 117.5 V. LINE (BETWEEN SOCKET PIN AND CHASSIS) WITH 1000 OHM PER VOLT, 500 V. RANGE VOLTMETER (D. C.)

TUBE	FUNCTION	PIN NUMBER							
		1	2	3	4	5	6	7	8
6SK7—R. F. Amplifier		0	0	0	0	0	80	6.3 A. C.	235
6SA7—OSC.—Mod.		0	0	280	80	0	0	6.3 A. C.	0
6SK7—I. F. Amplifier		0	0	0	0	0	80	6.3 A. C.	260
6SQ7—Det. A. S. C. 1st A. F.		0	0	0	0	0	85	6.3 A. C.	0
6AD7—Phase Inverter		0	0	255	260	0	180	6.3 A. C.	23
6F6—Output		0	0	255	260	0	235	6.3 A. C.	23
5Y3G—Rectifier		N. C.	330	J. B.	300A.C.	J. B.	300 A. C.	J. B.	330

MAX. POWER OUTPUT..... 6.5 WATTS
POWER CONSUMPTION..... 85 WATTS
DROP ACROSS SPEAKER FIELD..... 70 VOLTS
J. B.—Junction Block. N. C.—No Connection



MANUAL OF 1942 MOST POPULAR SERVICE DIAGRAMS

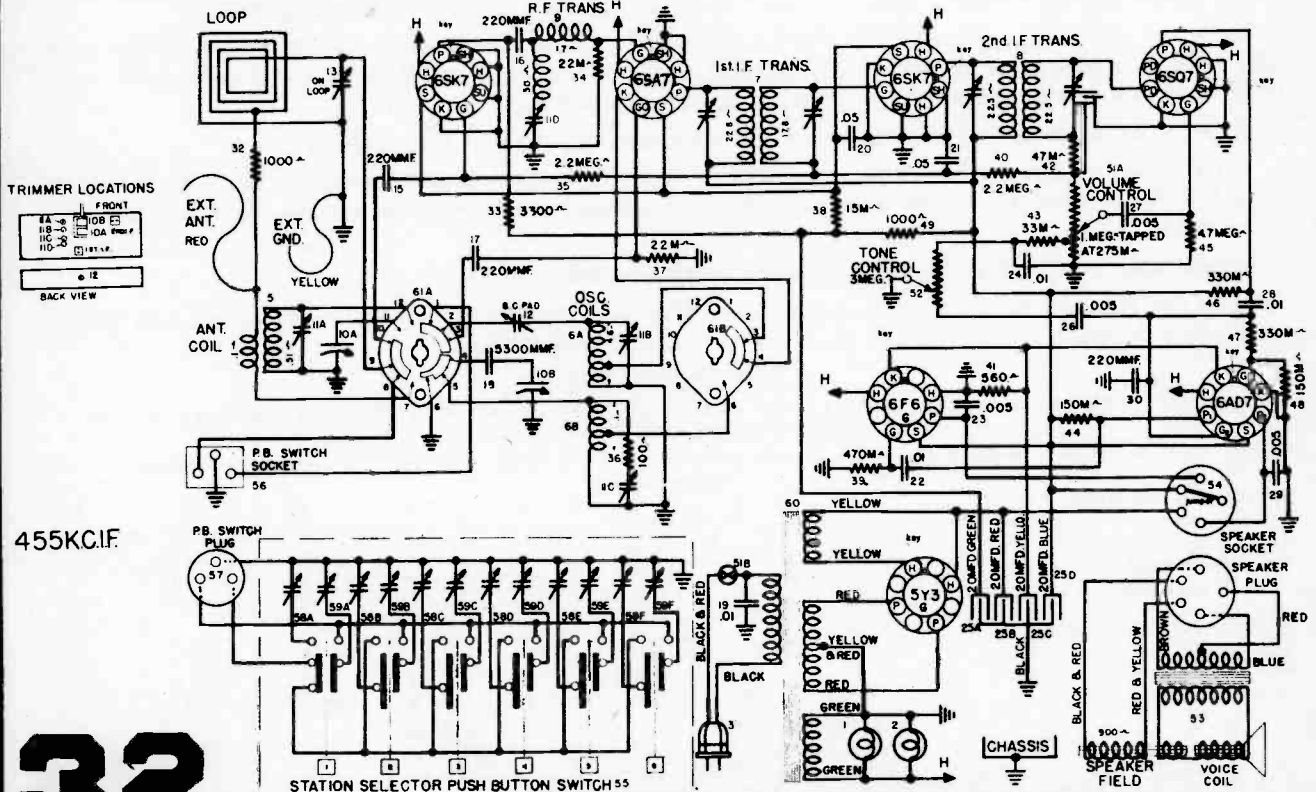
Crosley Model 72CA — Chassis Model No. 80

ALIGNMENT PROCEDURE

Output Meter Connections..... Plate of 6AD7 to Plate of 6F6
 Generator Ground Connection..... To Chassis or Ground Lead
 Dummy Antenna to be in series with generator output..... See Chart Below
 Position of Volume Control..... Fully On
 Position of Tone Control..... Treble or Speech

Align-ment Sequence	Dummy Antenna	Frequency Setting	Input Connection to Receiver	Band Switch	Tuned Cond. Setting	Trimmer Adjusted	Remarks
1.	.02 MF.	455 Kc.	Stator lug Rear section of Gang Cond.	B. C.	Fully open	2nd I-F (2) 1st I-F (2)	Adjust for Maximum. Adjust for Maximum.
2.	.02 MF.	455 Kc.	Stator lug Rear section of Gang Cond.	B. C.	Fully Open	Adj. Wave Trap Trimmer.	Adjust for Minimum.
3.	.0002 MF.	1650 Kc.	Ant. Terminal	B. C.	Fully open	B. C. "OSC" Trimmer	Adjust for peak; gang does not have to tune thru signal. Loop must be connected.
4.	.0002 MF.	600 Kc.	Ant. Terminal	B. C.	Approx. 80 on dial	B. C. "OSC" Series Trimmer	Adjust for maximum output while rocking gang thru signal.
5.	Repeat Step No. 3 to check possible shift due to series adjustment.						
6.	.0002 MF.	1400 Kc.	Ant. Terminal	B. C.	Approx. 140 on dial	B. C. LOOP "ANT" Trimmer	Adjust for maximum output do not touch B. C. Osc. Trimmer.
7.	400 ohm (carbon)	18.3 Mc.	Ant. Terminal	S. W.	Fully open	S. W. "OSC"	Adjust for peak. Gang does not have to tune thru signal.
8.	400 ohm (carbon)	18.0 Mc.	Ant. Terminal	S. W.	Approx. 18	S. W. "ANT" Trimmer	Adjust for maximum output while rocking gang thru signal. do not touch B. C. Osc. Trimmer.
9.	Repeat the above alignment procedure for more accurate adjustments. Always keep signal generator output as low as possible to prevent action of the A. S. C. circuit.						

IMPORTANT ALIGNMENT NOTES—When aligning the shortwave band "OSC" trimmer care must be exercised to see that the circuit is aligned on the correct frequency and not on the image which is approximately 910 kilocycles less as indicated on the Receiver dial. To check, increase generator output, tune-in the generator frequency and then tune-in the image frequency which should be weaker than the fundamental and come in approximately 910 kilocycles lower on the Receiver dial than the fundamental. If image cannot be tuned-in, the "OSC" trimmer is adjusted to the wrong peak. (Correct peak is the second peak on trimmer from the closed position.)





Automatic Record Changer

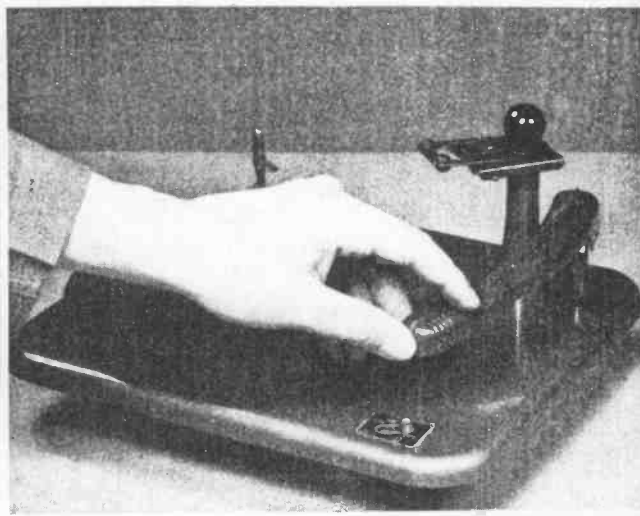
Model N-100 and N-200

Turn **automatic record support** for the size of record to be played—10-inch or 12-inch—and flip the **record alignment plate** away from the turntable.

Tonearm should be moved to engage notch marked "A" (automatic) on base of **tonearm** (See Fig. 3).

Place a series of up to twelve ten-inch records or a series of up to ten twelve-inch records on **center spindle** and **automatic record support**. Flip **record alignment plate** on to records.

Move **control lever** to "ON" position, hold for about 1/2 second to start automatic operation, then release.



THE AUTOMATIC REJECT OPERATION

If, while playing a record, you desire to skip the remainder of the recording and pass immediately to the next record of the series, move the **control lever** to "REJ" (reject) position, then release.

THE MANUAL REJECT OPERATION

If you desire to skip a number of records:

1. Lift the **tonearm** off the record and place in its normal or rest position, clear of the records.
2. Turn the **manual reject knob** clockwise, then release, dropping one record. Repeat until desired record is obtained, then carefully replace needle on edge of record.

TO REMOVE RECORDS

Always drop all the records from the **automatic record support** (see "manual-reject operation") before removing the records from the **spindle**.

1. Flip **record alignment plate** away from records.
2. Remove **tonearm** to its normal or rest position.
3. Lift records vertically.

To play a home recording disc, up to 10 inches in diameter, move **control lever** to "OFF" position, then:

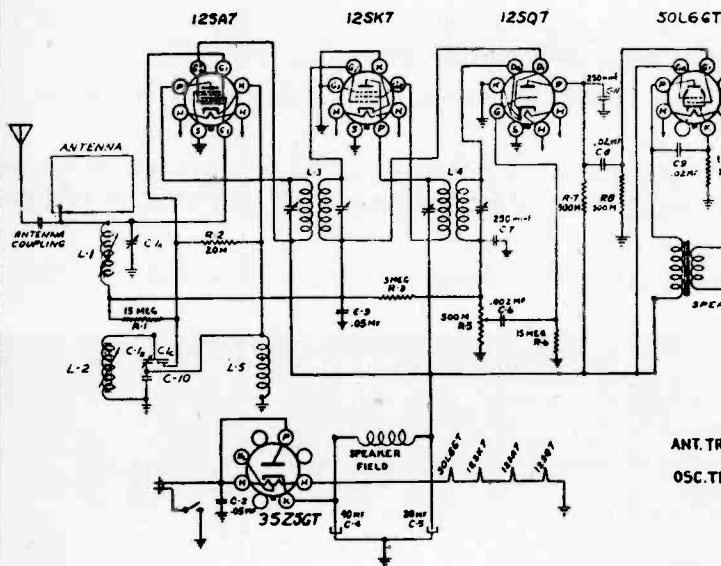
1. Turn **automatic record support** for a 12-inch record.
2. **Tonearm** should be moved to engage notch marked "H" (home recording) on base of **tonearm** (See Fig. 2).
3. Move **control lever** to "ON" position and allow **tonearm** to go through its record changing cycle. If the home recording disc is 10" in diameter, the **tonearm** will fall correctly on the record; but for smaller records, the **tonearm** must be placed on the record by hand.
4. At the conclusion of the home recording selection, either return the **tonearm** to the rest position by hand or move the **control lever** to "REJ" position, then release.

SEMI-AUTOMATIC OPERATION

Old records that have neither a standard eccentric nor spiral finishing groove do not operate the automatic trip mechanism. They may be played either in a series or singly by moving the **control lever** to the "REJ" position at the conclusion of each selection.

MANUAL OF 1942 MOST POPULAR SERVICE DIAGRAMS

DETROLA MODEL 441

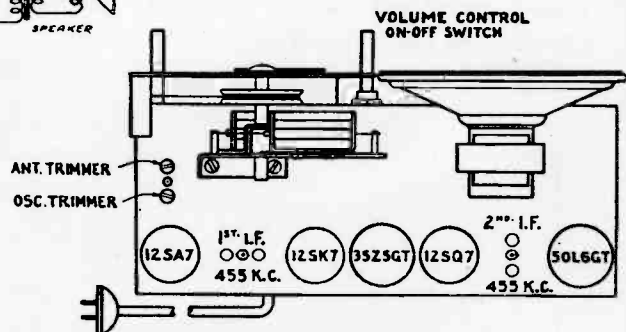


A signal generator which will provide an accurately calibrated signal at the frequencies listed.

An output meter.

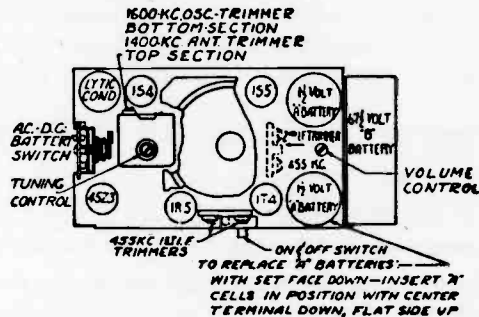
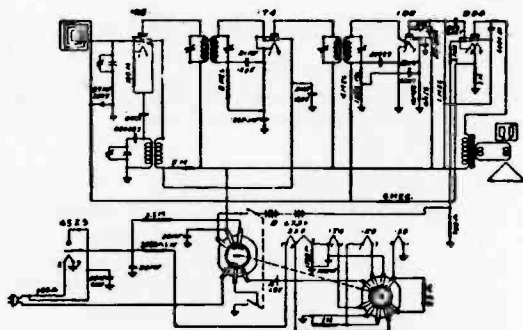
A non-metallic screw driver.

Dummy antennae—.1 mfd., 200 mml.

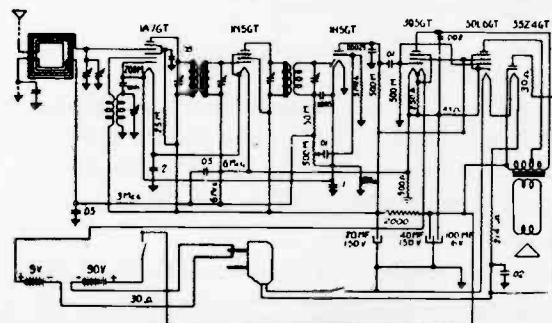
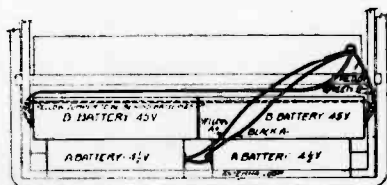


GENERATOR	CONNECTION AT RADIO	DUMMY ANTENNA	DIAL	TRIMMER TO TUNE	REMARKS
I.F. 455 kc.	12SA7 Grid	.1 mfd.	H. F. end	I.F. Transformers	Tune to Max.
1720 kc	Ext. Ant. Wire	200 mml.	H. F. end	Oscillator Trimmer	Set Limit of band
1400 kc	Ext. Ant. Wire	200 mml.	1400	Antenna Trimmer	Tune to Max.

MODEL 3782 AC-DC AND BATTERY PERSONAL RADIO



MODELS 389 SERIES



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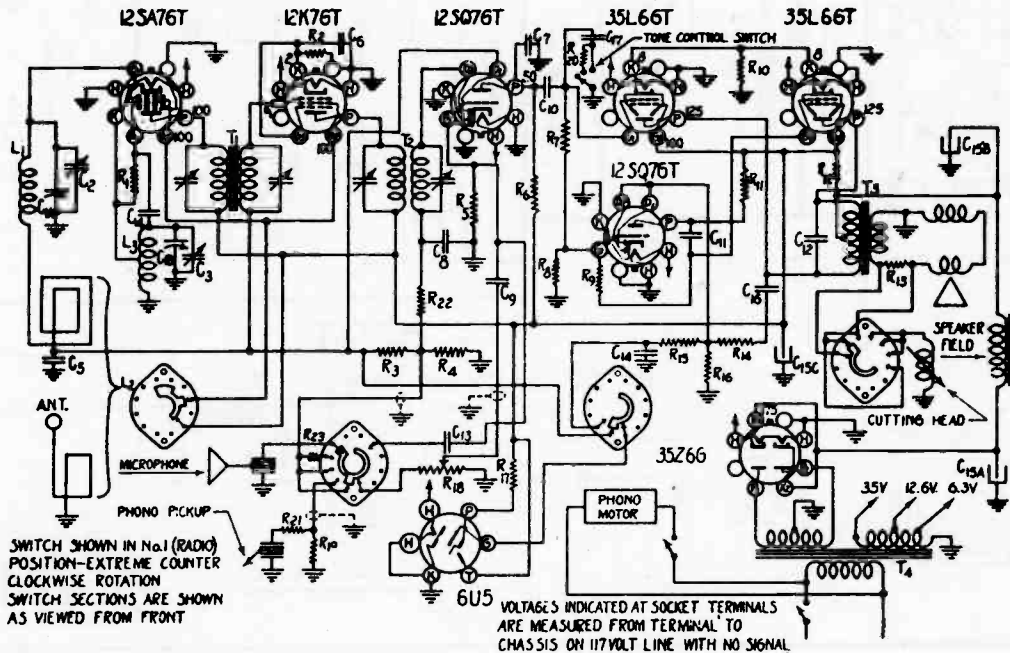
Detrola Radio
I.F. 455 KC.

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MANUAL OF 1942 MOST POPULAR SERVICE DIAGRAMS

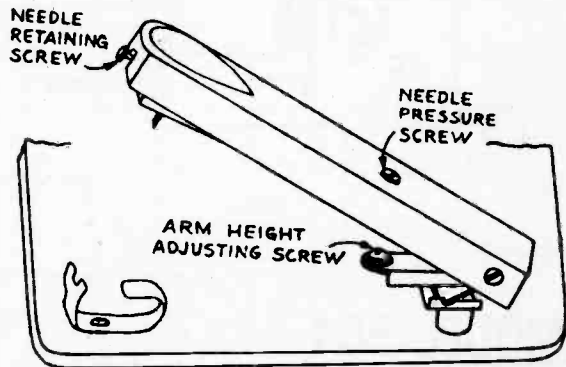
DETROLA CORPORATION

MODEL 390



Schematic Location	Part Number	Description	Schematic Location	Part Number	Description
		CHASSIS PARTS	R3,4,14,16		Resistor, 1 Meg. 1/3 Watt
	4417	Button, Snap (Dial Mounting)	R5		Resistor, 10 Meg. 1/3 Watt
	8931	Cable, Tuning Tube	R6,7,8,9,11		Resistor, 200M. 1/3 Watt
	2163	Cable, drive	R10		Resistor, 120 Ohm, 1/2 Watt
R18	3227	Cap, Grid	R12		Resistor, 1000 Ohm, 1 Watt
	8910	Control, Volume and Switch	R13		Resistor, 35 Ohm, 1/2 Watt
	1732	Cord, Line	R15		Resistor, 2 Meg. 1/3 Watt
	6424	Clamp, Linecord	R17		Resistor, 1 Meg (in Tuning Tube Socket)
	4314	Clamp, Tapped—For Tuning Tube	R19,20,21,22		Resistor, 50M, 1/3 Watt
	4315	Clamp, Plain—For Tuning Tube	R23		Resistor, 4 Meg. 1/3 Watt
L3	8422	Coil, Oscillator			
L1	8423	Coil, Tracking			
C1a,b	8911	Condenser, Variable (with Pulley)			
C2,3	8504	Condenser, Dual Trimmer			
C15a,b,c	8425	Condenser, Electrolytic (20-250)—(20-150)—(20-150)			
C4		Condenser, 100 Mmf. Mica			
C5,14		Condenser, 1 Mfd. 200 v.			
C6		Condenser, .05 Mfd. 200 v.			
C7		Condenser, 250 Mmf. Mica			
C8		Condenser, 100 Mmf. Mica			
C9		Condenser, .002 Mfd. 600 v.			
C10,16		Condenser, .01 Mfd. 400 v.			
C11		Condenser, .05 Mfd. 400 v.			
C12,13		Condenser, .001 Mfd. 600 v.			
C17		Condenser, .005 Mfd. 600 v.			
	7209	Grommet, Tuner Assembly Mtg.			
	9121	Dial Chart			
	8941	Microphone Socket Assembly			
	6244	Pulley, Idler			
	5026	Pointer			
	6158	Pilot Lite			
	1207	Retainer, "C" Washer (Holds Tuning Shaft)			
R1		Resistor, 20M, 1/3 Watt			
R2		Resistor, 200 Ohm, 1/3 Watt			

RECORDING ARM ADJUSTMENTS



MANUAL OF 1942 MOST POPULAR SERVICE DIAGRAMS

Emerson Radio

MODELS: EC-296, EC-301, EC-314, EC-315, EC-327, EC-336, EC-347, EC-353, EC-366, EC-242, EC-376 and EC-425

R1	20,000 ohm ¼ watt carbon resistor
R2, R6	15 megohm ¼ watt carbon resistor
R3	140 ohm ½ watt wire-wound resistor
R4	3 megohm ¼ watt carbon resistor
R5	Volume control .5 megohm
R7, R8	500,000 ohm ¼ watt carbon resistor
R11	200,000 ohm ¼ watt carbon resistor
C1, C2	Two-gang variable condenser
C3, C16	0.002 mf, 600 volt tubular condenser
C4, C15	0.0002 mf, 600 volt tubular condenser
C5, C11	Trimmers, part of variable condenser
C6, C7, C8, C9	Trimmers, part of i-f transformers
C10	0.05 mf, 200 volt tubular condenser
C14	0.05 mf, 400 volt tubular condenser
C17, C18	0.02 mf, 400 volt tubular condenser
C26	0.2 mf, 200 volt tubular condenser.

I-f Alignment

Swing the variable condenser to the minimum capacity position. Feed 455 kc to the grid of the 12SA7 tube through a .01 mf condenser and adjust the four i-f trimmers for maximum response.

Note: The grid of the 12SA7 tube is connected to the stator lug of the rear variable condenser section. Connection may be made with a test clip.

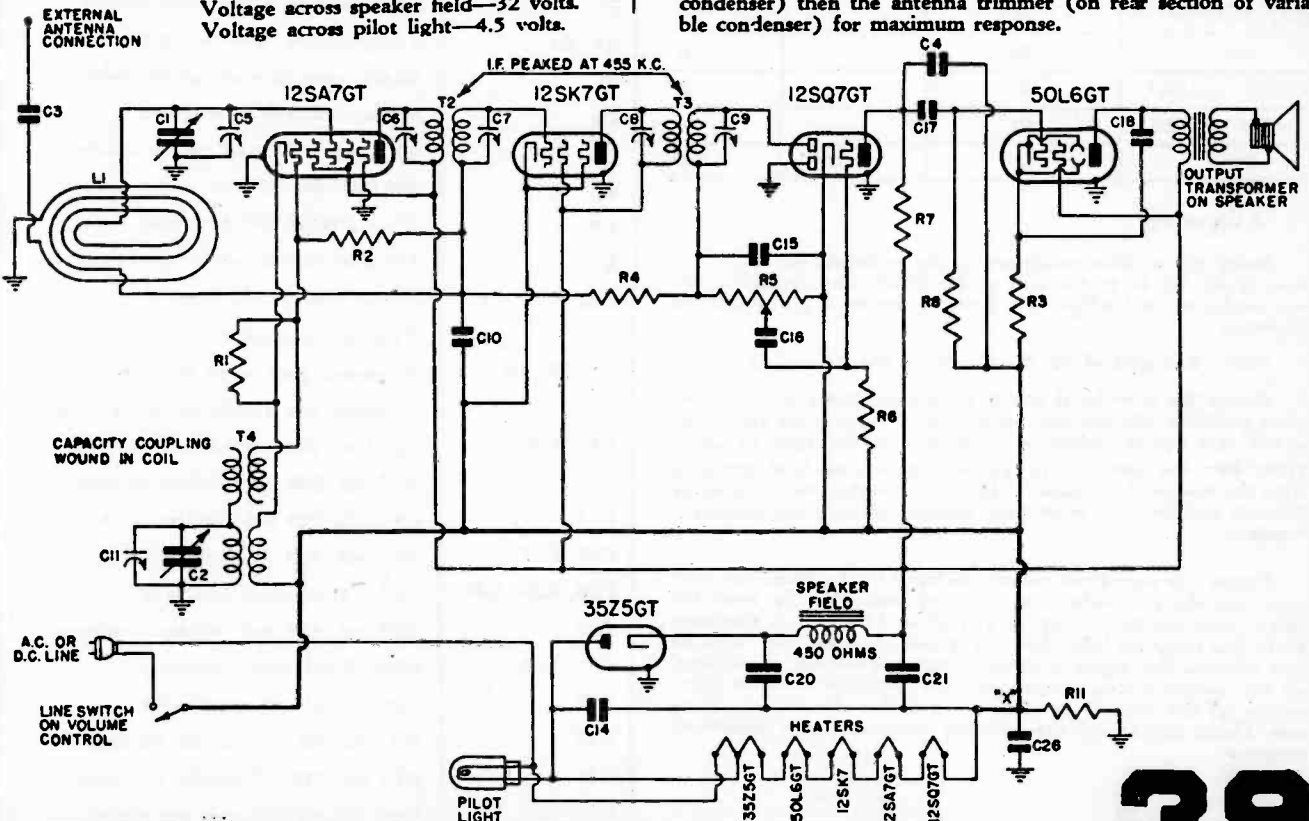
VOLTAGE ANALYSIS

Tube	Plate	Screen	Cathode
12SA7	88	88	0
12SK7	88	88	0
12SQ7	30	—	0
50L6	82	88	5.6

Voltage at 35Z5 cathode—120 volts.
Voltage across speaker field—32 volts.
Voltage across pilot light—4.5 volts.

R-f Alignment

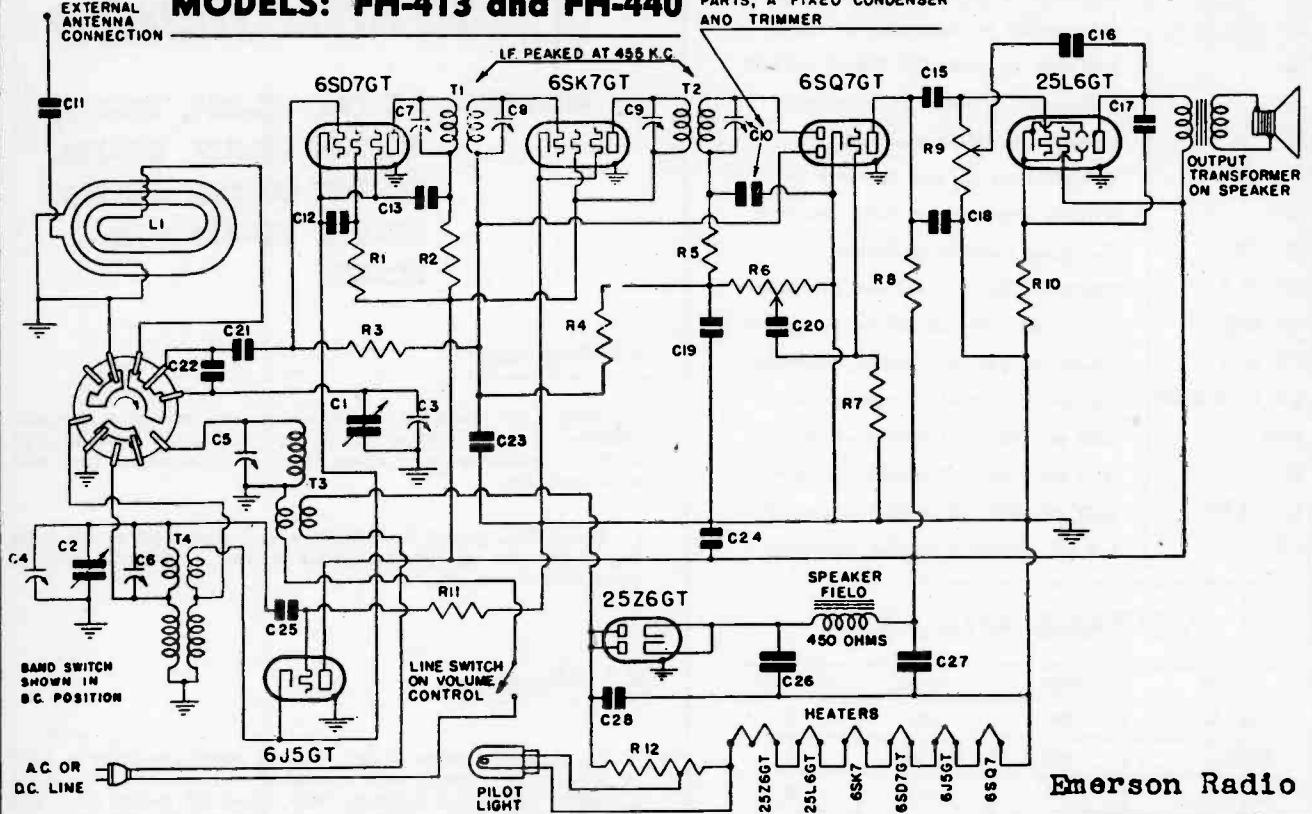
Set the dial pointer at 140. Set the signal generator at 1400 kc and feed its output into a loop of wire about 12 inches in diameter. Hold this radiating loop about 12 inches from and parallel to the receiver loop antenna. Advance the output of the signal generator until deflection is obtained on the output meter. Adjust first the oscillator trimmer (on front section of variable condenser) then the antenna trimmer (on rear section of variable condenser) for maximum response.



MANUAL OF 1942 MOST POPULAR SERVICE DIAGRAMS

MODELS: FH-413 and FH-440

C10 IS COMPOSED OF TWO PARTS, A FIXED CONDENSER AND TRIMMER



Emerson Radio

Tube	Plate	Screen	Cath
6SG7, 6SD7 or 7H7	92	63	0
6J5	102	—	0
6SK7 or 7A7	102	102	0
6SQ7 or 7B6	30	—	—
25L6	92	102	6.5

Alignment

Swing the variable condenser to the minimum capacity position. Feed 455 kc to the grid of the 6SD7 tube through a .01 mf condenser and adjust the four i-f trimmers for maximum response.

Note: The grid of the 6SD7 tube is the No. 4 pin.

Rotate the wave-band switch counter-clockwise to the short-wave position. Set the dial pointer at 12 megacycles and using a 400 ohm carbon resistor as a dummy antenna feed 12 megacycles from the generator to the external antenna lead emerging from the rear of the chassis. Adjust first the short-wave oscillator trimmer and then the short-wave antenna trimmer for maximum response.

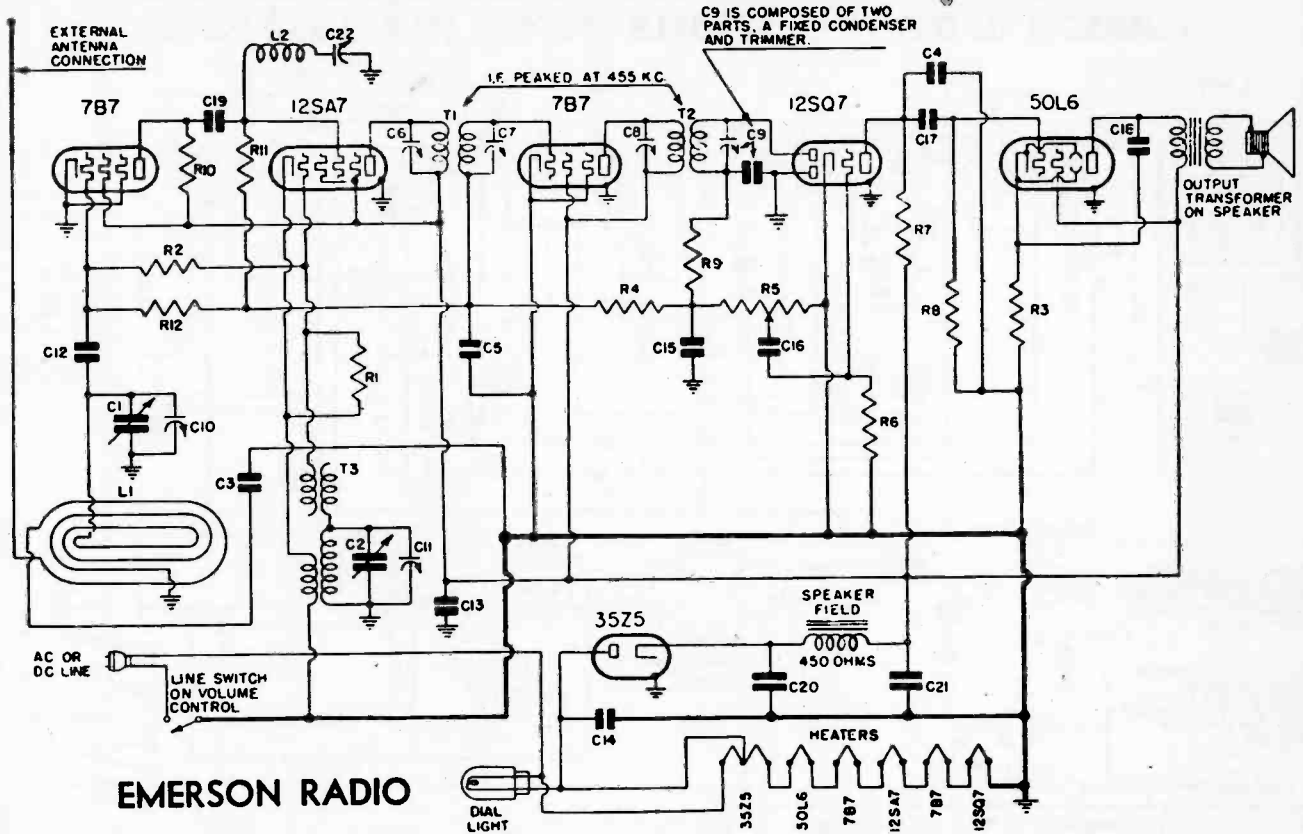
Rotate the wave-band switch clockwise to the broadcast position. Set the dial pointer at 160 and feed 1600 kc from the signal generator into a loop of wire about 12 inches in diameter. Hold this radiating loop about 12 inches from the loop antenna and advance the signal generator until a deflection is obtained on the output meter. Adjust first the oscillator trimmer (rear section of the variable condenser) and then the antenna trimmer (front section of the variable condenser) for maximum response.

R1, R11	50,000 ohm ¼ watt carbon resistor.
R2	5,000 ohm ¼ watt carbon resistor
R3, R4	3 megohm ¼ watt carbon resistor.
R5	50,000 ohm ¼ watt carbon resistor
R6	Volume control: .5 megohm
R7	10 megohm ¼ watt carbon resistor.
R8	500,000 ohm ¼ watt carbon resistor
R9	Tone control: 400,000 ohm
R10	140 ohm ½ watt wire-wound resistor
R12	Ballast resistor, 155 ohm
†C6	Trimmer, part of T4.
†C7, C8, C9	Trimmers, part of i-f transformers.
†C10	Trimmer and 0.0001 mf, mica condenser
C11, C20	0.002 mf, 600 volt tubular condenser
C12	0.02 mf, 200 volt tubular condenser
C13	0.05 mf, 200 volt tubular condenser.
C15, C17	0.02 mf, 400 volt tubular condenser
C16, C18, C21	0.00022 mf, mica condenser
C28	0.05 mf, 400 volt tubular condenser
C19, C25	0.00011 mf, mica condenser
C22	0.00046 mf, mica condenser
C23	0.1 mf, 200 volt tubular condenser.
C24	0.01 mf, 400 volt tubular condenser
C26, C27	Dual 20 mf, 150 volt dry electrolytic

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MANUAL OF 1942 MOST POPULAR SERVICE DIAGRAMS



EMERSON RADIO

FL-414, FL-415, FL-416, FL-417, FL-418 and FL-419

R1	20,000 ohm ¼ watt carbon resistor.....
R2	10 megohm ¼ watt carbon resistor.....
R3	140 ohm ¼ watt wire-wound resistor....
R4	3 megohm ¼ watt carbon resistor.....
R5	Volume control .5 megohm
R6	15 megohm ¼ watt carbon resistor
R7, R8	500,000 ohm ¼ watt carbon resistor
R9	50,000 ohm ¼ watt carbon resistor
R10	10,000 ohm ¼ watt carbon resistor.....
R11	25,000 ohm ¼ watt carbon resistor.....
R12	1 megohm ¼ watt carbon resistor.....
C1, C2	Two-gang variable condenser.....
C3, C16	0.002 mf, 600 volt tubular condenser...
C4	0.0002 mf, 600 volt tubular condenser
C5, C13	0.05 mf, 200 volt tubular condenser.....
C6, C7, C8	Trimmers, part of i-f transformers.
C9	Trimmer and fixed condenser
C10, C11	Trimmers, part of variable condenser.
C12	0.00022 mica condenser.....
C14	0.05 mf, 400 volt tubular condenser...
C15, C19	0.00011 mica condenser.....
C17	0.02 mf, 400 volt tubular condenser...
C18	0.03 mf, 400 volt tubular condenser...
C20, C21	Dual 20 mf, 150 volt dry electrolytic

Location of Coils and Trimmer Adjustments

The first i-f transformer is mounted on top of the chassis deck to the left 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 7B7 tube and the speaker. The trimmers are accessible through holes in the top of the can.

The 455 kc wave-trap is located below the chassis deck.

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.

VOLTAGE ANALYSIS

Tube	Plate	Screen	Cathode
7B7 (r-f)	18	88	0
I2SA7	88	88	0
7B7	88	85	0
I2SQ7	30	—	0
50L6GT	82	88	5.6

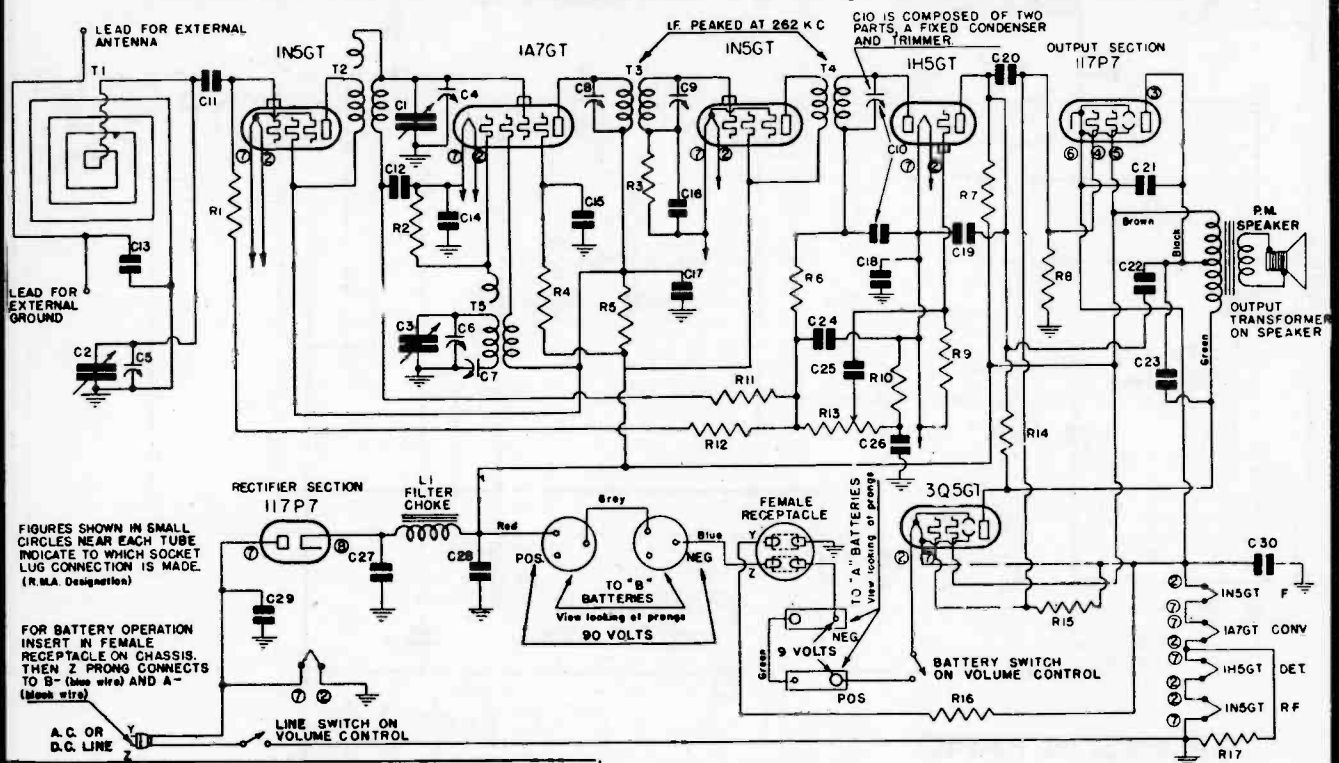
Voltage at 35Z5GT cathode—120 volts.

Voltage across speaker field—32 volts.

Voltage across pilot light—4.5 volts.

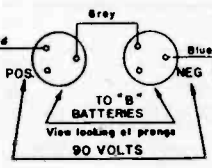
MANUAL OF 1942 MOST POPULAR SERVICE DIAGRAMS

EMERSON RADIO MODELS: FU-424, FU-427 and FU-428



FIGURES SHOWN IN SMALL CIRCLES NEAR EACH TUBE INDICATE TO WHICH SOCKET LUG CONNECTION IS MADE. (R.M.A. Designation)

FOR BATTERY OPERATION INSERT IN FEMALE RECEPTACLE ON CHASSIS. THEN 2 PRONG CONNECTS TO B- (blue wire) AND A- (black wire)



R1	2 megohm 1/4 watt carbon resistor.
R2	200,000 ohm 1/4 watt carbon resistor
R3	5 megohm 1/4 watt carbon resistor.....
R4	30,000 ohm 1/4 watt carbon resistor/
R5	1,000 ohm 1/4 watt carbon resistor....
R6	47,000 ohm 1/4 watt carbon resistor
R7, R8	500,000 ohm 1/4 watt carbon resistor
R9	10 megohm 1/4 watt carbon resistor
R10	4,000 ohm 1/4 watt carbon resistor
R11, R12, R14, R15	3 megohm 1/4 watt carbon resistor
R13	Volume control .5 megohm
R16	1,200 ohm 1/4 watt carbon resistor
R17	860 ohm 1/2 watt wire-wound resistor
C1, C2, C3	Three-gang variable condenser.....
C4, C5, C6	Part of variable condenser.
C7	Padder condenser
C8, C9, C10	Trimmers, part of i-f transformers.
C11, C12, C16, C17	0.05 mf, 200 volt tubular condenser
C13, C23, C25	0.002 mf, 600 volt condenser.....
C14, C18, C26	0.25 mf, 100 volt tubular condenser
C15	0.02 mf, 200 volt tubular condenser
C16, C17	0.05 mf, 200 volt tubular condenser.
C19	0.0004 mf, 600 volt tubular condenser
C20	0.02 mf, 400 volt tubular condenser
C21	0.01 mf, 400 volt tubular condenser
C22	0.00006 mf, mica condenser.....
C24	0.00011 mf, mica condenser.....
C26	0.25 mf, 100 volt tubular condenser.
C27, C28	Dual 20 mf, 150 volt dry electrolytic
C29	0.05 mf, 400 volt tubular condenser.....
C30	40 mf, 25 volt dry electrolytic condenser

Location of Coils and Trimmer Adjustments

The oscillator coil is located beneath the chassis. The trimmer for the oscillator is on the middle section of the variable condenser.

The interstage coil is the shielded coil located beneath the chassis. Its trimmer is on the front section of the variable condenser.

The trimmer for the loop antenna is on the last section of the variable condenser (the section nearest the loop).

The i-f transformers are mounted on top of the chassis. The first i-f transformer is mounted next to the loop. The second i-f transformer is mounted next to the dial.

The series padder is located between the variable condenser and the shielded 1N5 tube.

Note: This receiver has an i-f of 262 kc.

Swing variable condenser to minimum capacity position.

Feed 262 kc to the grid of the 1A7 tube through a 0.01 mf condenser. Adjust the three i-f trimmers for maximum response.

Set the dial pointer at 140. Feed 1400 kc from the signal generator into a loop of wire about one foot in diameter. Hold this radiating loop approximately one foot away from and parallel to the receiver loop and advance the output of the signal generator until a suitable deflection is obtained on the output meter. Adjust first the oscillator trimmer (middle section) then the interstage and loop trimmers for maximum response. Move dial pointer to 60 and feed 600 kc into the radiating loop and adjust the series padding condenser (while rocking the variable condenser back and forth) for maximum response. Realign at 1400 kc.

MANUAL OF 1942 MOST POPULAR SERVICE DIAGRAMS

Emerson Radio

MODEL: GC-448

CHASSIS MODEL: GC

R1, R10	3 megohm ¼ watt carbon resistor.....
R2	100,000 ohm ¼ watt carbon resistor.
R3	15,000 ohm ¼ watt carbon resistor....
R4, R6	15 megohm ¼ watt carbon resistor....
R5	75 ohm ½ watt carbon resistor.....
R7, R9	1 megohm ¼ watt carbon resistor.....
R8	5 megohm ¼ watt carbon resistor.....
R11	2500 ohm 1 watt carbon resistor.....
R12	10 megohm ¼ watt carbon resistor....
R13	Volume control 3. megohm.....
R14	500 ohm 1 watt carbon resistor.....
R15	980 ohm ½ watt wire-wound, moulded
R16	1500 ohm 5 watt wire-wound, ceramic
R17	950 ohm 5 watt wire-wound, ceramic
C5, C17	0.02 mf, 100 volt tubular condenser....
C6, C7, C9	0.25 mf, 100 volt tubular condenser....
C8	0.00005 mf, ceramic condenser.....
C10, C11	Trimmer, part of i-f transformer.
C12	0.01 mf, 100 volt tubular condenser....
C13	Fixed condenser, part of i-f transformer.
C14, C19	0.0001 mf, ceramic condenser.....
C15	0.001 mf, 100 volt tubular condenser....
C16, C21	0.002 mf, 150 volt tubular condenser....
C18	40. mf, 40 volt dry electrolytic condenser
C20	0.001 mf, 100 volt flat wound condenser

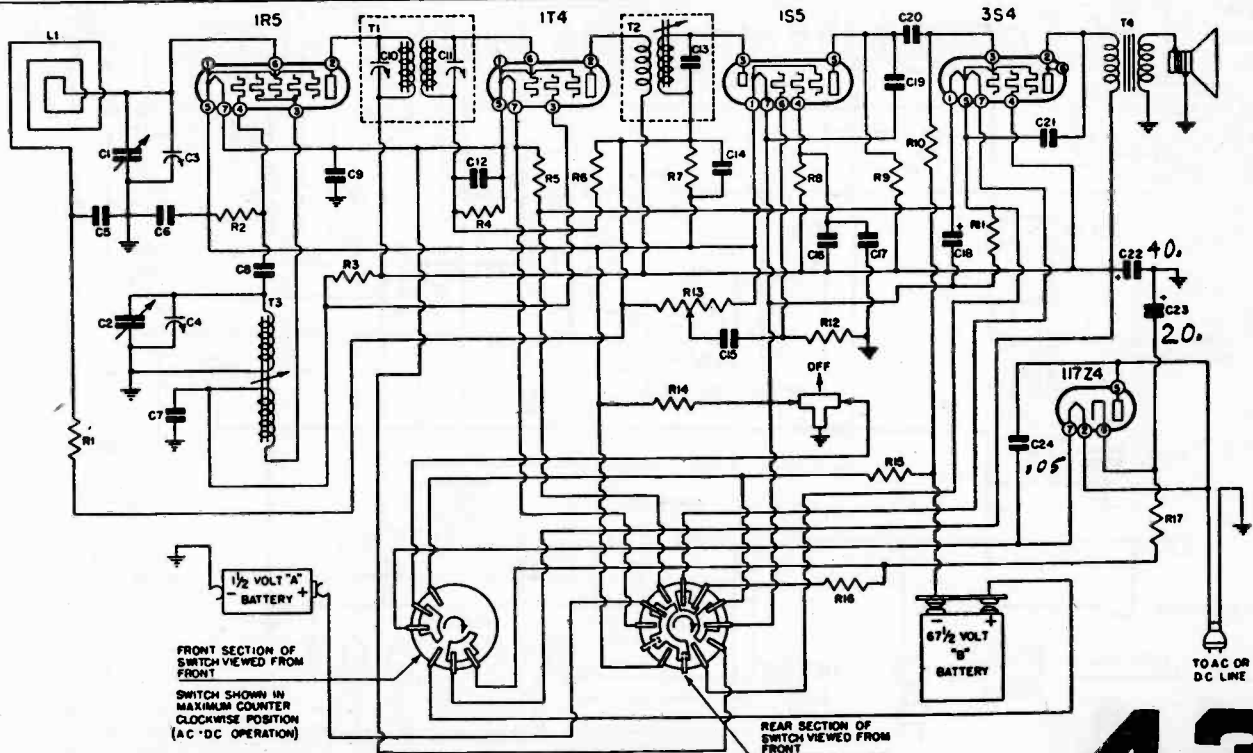
I-f Alignment

Rotate variable condenser to minimum capacity position.

Feed 455 kc to the grid of the 1R5 tube through a 0.01 mf condenser. Adjust the three i-f trimmer screws for maximum response. (Clip the i-f input to the stator lug of the larger variable condenser section.)

R-f Alignment

Set the dial pointer at 160. Set the signal generator at 1600 kc and feed its output into a loop of wire about one foot in diameter. Hold this radiating loop about one foot away from and parallel to the receiver loop antenna. Advance the output of the generator until deflection is obtained on the output meter. Adjust first the oscillator trimmer (smaller section of variable condenser) then the antenna trimmer (larger section of variable condenser) for maximum response. Set the dial pointer at 60. Feed 600 kc and rock the variable condenser while adjusting the oscillator core adjustment for maximum response. Return to 1600 and check alignment. If re-adjustment is necessary return to 600 and repeat entire procedure.



MANUAL OF 1942 MOST POPULAR SERVICE DIAGRAMS

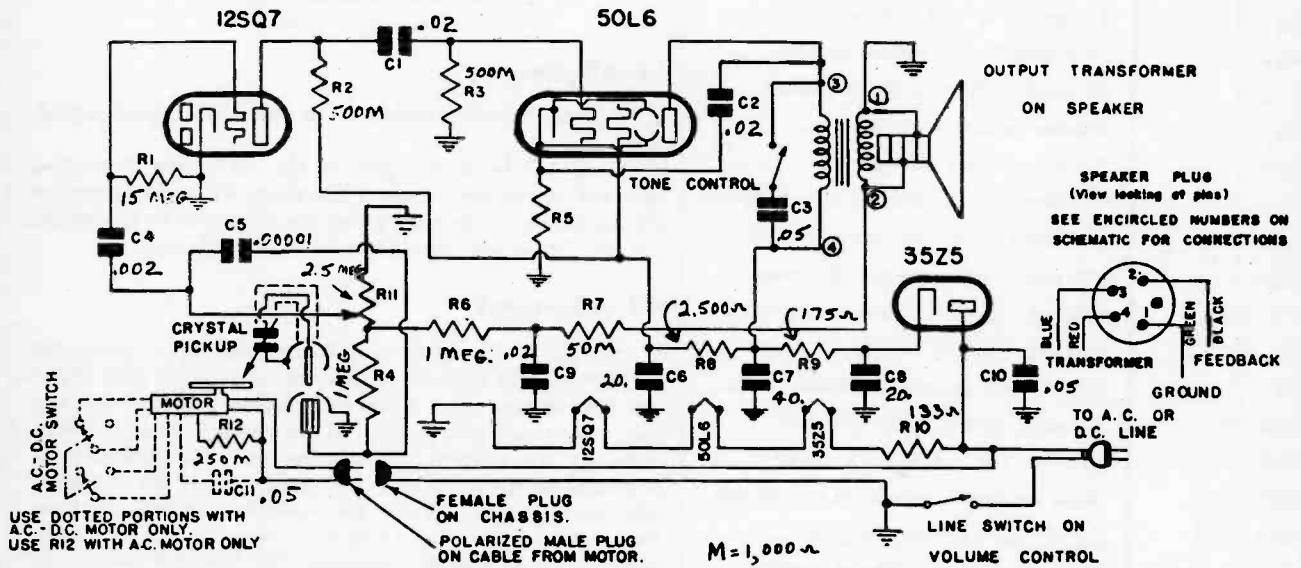
Emerson Radio

MODEL: FY-434

CHASSIS MODEL: FY

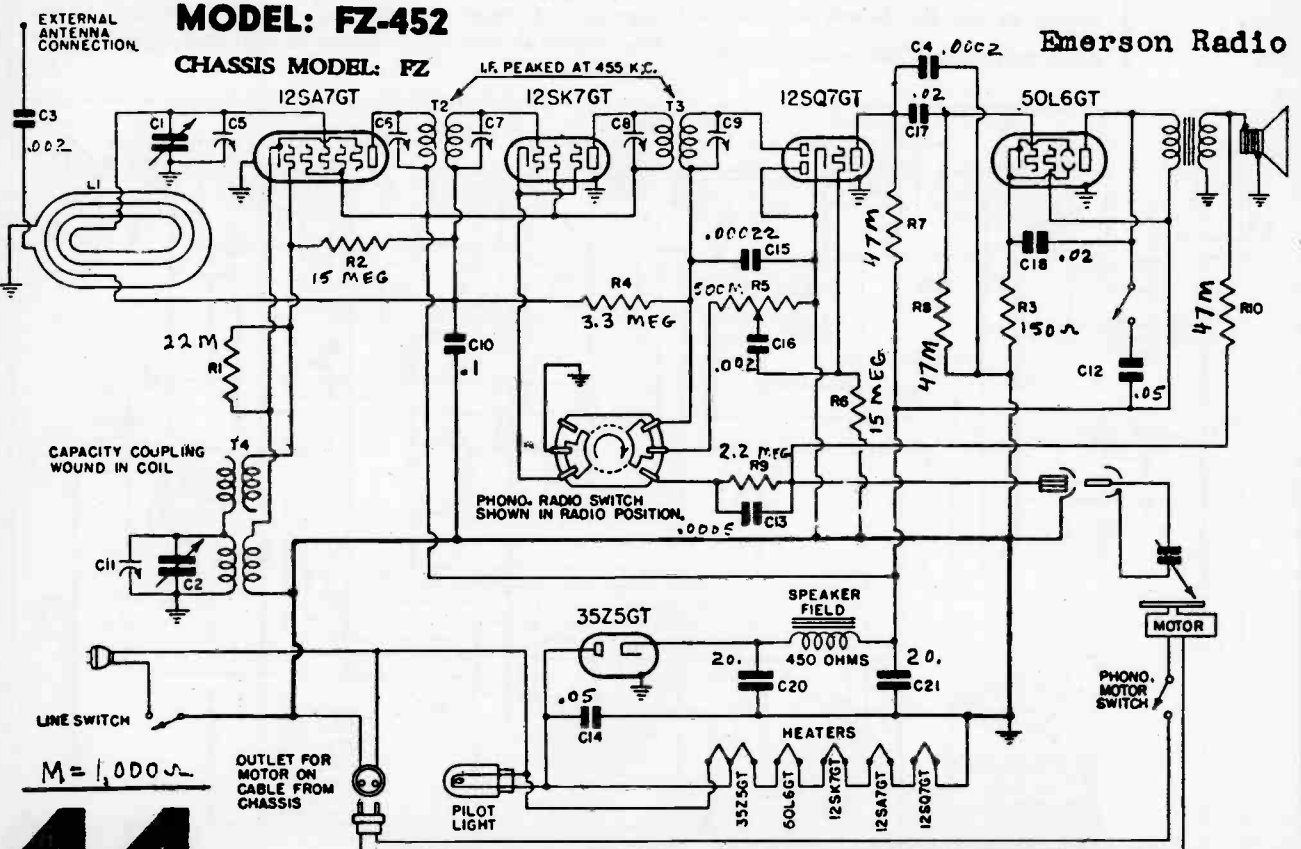
MODEL: FY2-434 A.C.-D.C.

CHASSIS MODEL: FY2



MODEL: FZ-452

CHASSIS MODEL: FZ



MANUAL OF 1942 MOST POPULAR SERVICE DIAGRAMS

Emerson Radio

- R1, R7, R18, R19 } 1 megohm 1/4 watt carbon resistor.....
- R2 } 20,000 ohm 1/4 watt carbon resistor.....
- R3 } 140 ohm 1/2 watt wire wound resistor
- R4 } 3 megohm 1/4 watt carbon resistor.....
- R5 } Volume control 2.5 meg.....
- R6 } 10 megohm 1/4 watt carbon resistor....
- R8, R16, R17, R20 } 500,000 ohm 1/4 watt carbon resistor..
- R9, R10, R24 } 50,000 ohm 1/4 watt carbon resistor....
- R11 } 175 ohm 1 watt carbon resistor.....
- R12 } 750 ohm 1 watt wire-wound resistor.
- R13 } 10,000 ohm 1/4 watt carbon resistor....
- R14 } 25,000 ohm 1/4 watt carbon resistor....
- R15, R23 } 100,000 ohm 1/4 watt carbon resistor.
- R21, R22 } 100,000 ohm 1/4 watt carbon resistor.
- R25 } 30,000 ohm 1/4 watt carbon resistor....
- R26, R27, R28 } Ballast resistor: R26—233 ohm, 6 watt; R27—190 ohm, 5 watt; R28—250 ohm, 3 watt
- C1, C2 } Two-gang variable condenser.....
- C3, C16 } 0.002 mf, 600 volt tubular condenser..
- C4 } 0.0004 mf, 600 volt tubular condenser..
- C5 } Trimmer, part of loop assembly.
- C6, C7, C8, C9 } Trimmers, part of variable condenser.
- C11 } Trimmer, part of variable condenser.
- C10 } 0.1 mf, 200 volt tubular condenser.....
- C12 } 0.0006 mf, 600 volt tubular condenser
- C13 } 0.0015 mf, 600 volt tubular condenser
- C14 } 0.05 mf, 400 volt tubular condenser.....
- C15 } 0.0002 mf, 600 volt tubular condenser
- C17 } 0.02 mf, 400 volt tubular condenser....
- C18 } 0.00011 mf, mica condenser.....
- C19 } 0.005 mf, 400 volt tubular condenser
- C20, C21, C22 } Multiple dry electrolytic condenser: 150 volt; C20—20 mf; C21—80 mf; C22—40 mf
- C23 } 0.00025 mf, mica condenser.....
- C24, C27, C30 } 0.05 mf, 200 volt tubular condenser..
- C31, C32 } 0.000026 mf, mica condenser.....
- C25 } 0.001 mf, 600 volt tubular condenser
- C26 } 0.00022 mf, mica condenser.....
- C28 } 0.0003 mf, mica condenser.....
- C29 } 0.0003 mf, mica condenser.....

I-f and Wave-trap Alignment

Swing the variable condenser to the minimum capacity position. Feed 455 kc to the grid of the 12SA7 tube through a .01 mf condenser and adjust the four i-f trimmers for maximum response.

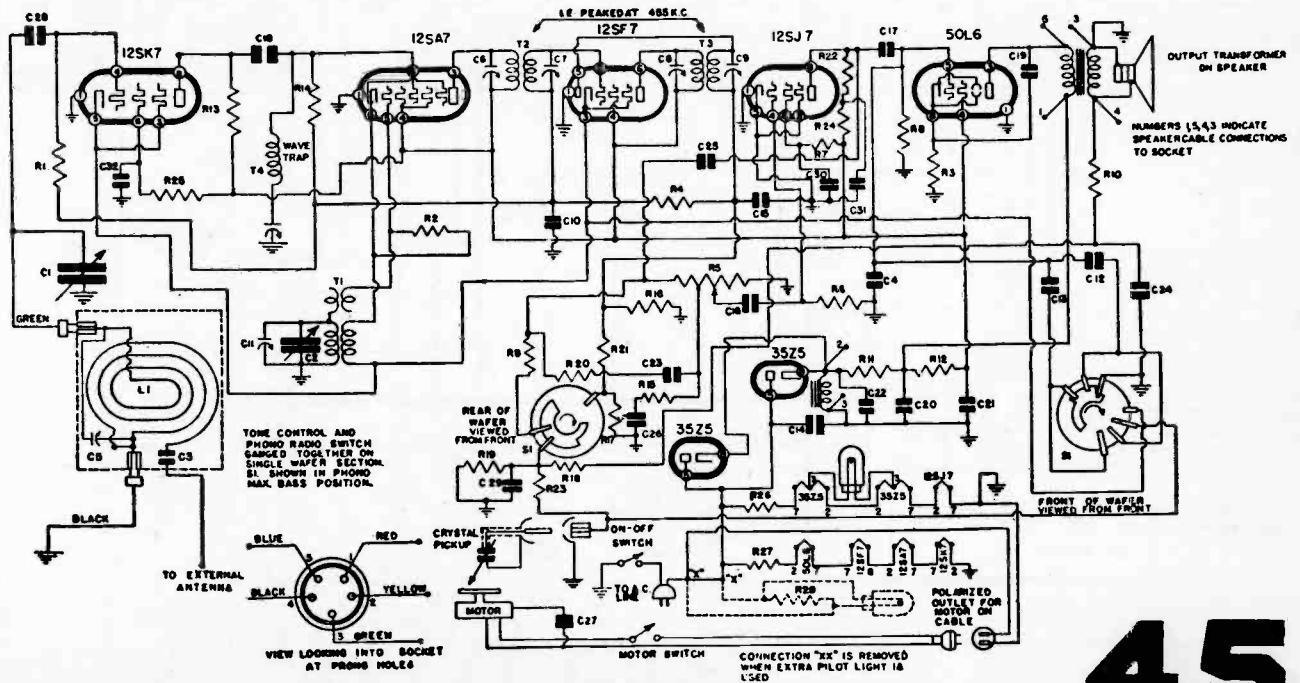
Feed 455 kc to the external antenna lead and adjust the wave-trap for minimum response.

Note: The grid of the 12SA7 tube is the No. 8 pin.

VOLTAGE ANALYSIS

Tube	Plate	Screen	Cathode
12SA7	88	88	0
12SK7	48	46	0
12SF7	89	89	0
12SJ7	8	14	—
50L6GT	108	89	5.1

MODEL: GH-437, GH-447
CHASSIS MODEL: GH
MODEL: GH2-447
CHASSIS MODEL: GH2



MANUAL OF 1942 MOST POPULAR SERVICE DIAGRAMS

Emerson Radio

MODELS: GA-439 and GA-441
CHASSIS MODEL: GA

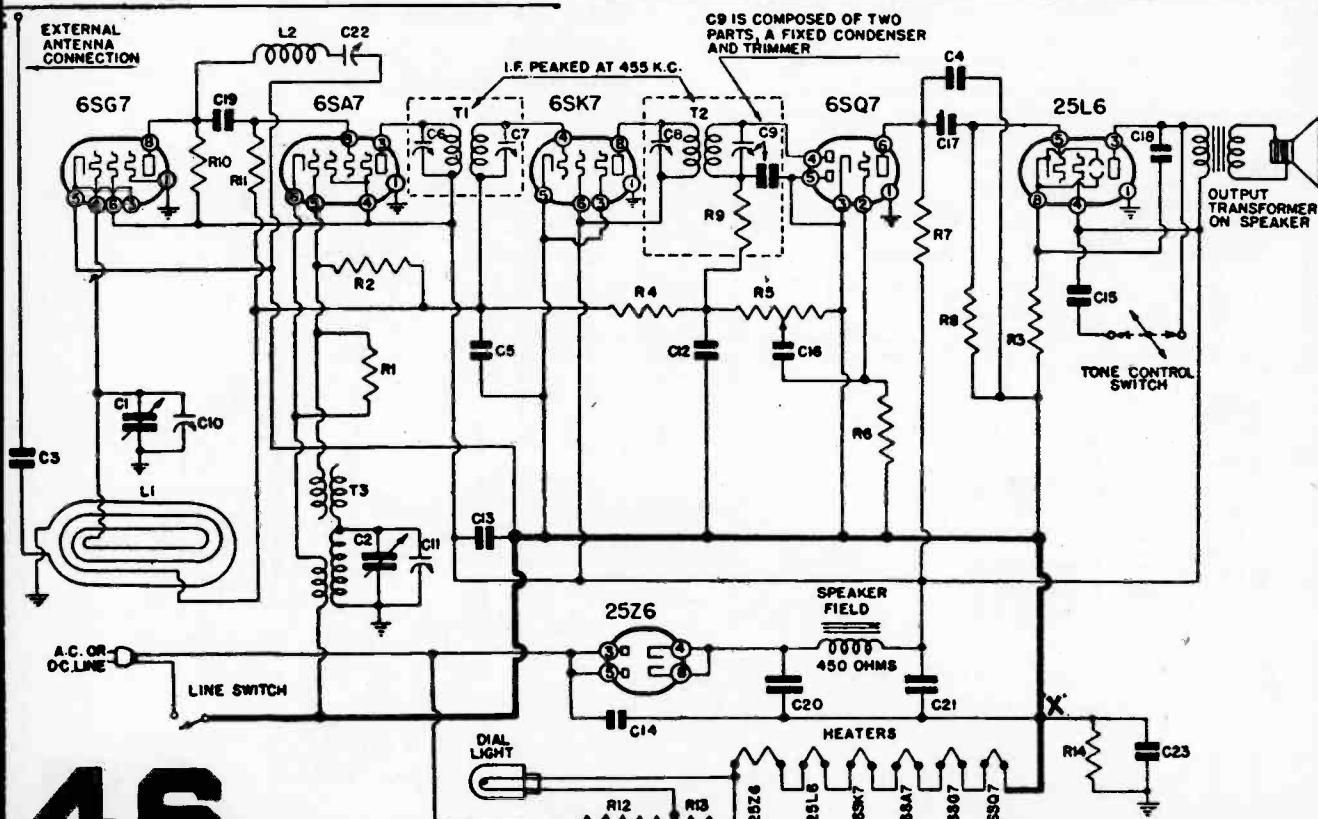
MODELS: GA1-439 and GA1-441
CHASSIS MODEL: GA1

R-f Alignment

Set the dial pointer at 140. Feed 1400 kc from the signal generator into a loop of wire about one foot in diameter. Hold this radiating loop about 12 inches away from and parallel to the receiver loop antenna. Advance the input to the loop until a satisfactory deflection is obtained on the output meter. Adjust first the oscillator trimmer then the antenna trimmer for maximum response. If the loop antenna has been replaced it may be necessary to retrack the loop inductance. With the dial set at 60 feed 600 kc to the antenna lead. A portion of the outside may be swung to either side of the center to give maximum response. Repeat the trimmer alignment at 140.

R1	20,000 ohm 1/4 watt carbon resistor....
R2, R6	15 megohm 1/4 watt carbon resistor....
R3	140 ohm 1/2 watt wire-wound resistor
R4	2 megohm 1/4 watt carbon resistor....
R5	Volume control .5 meg. (Model 431)
R5	Volume control .5 meg. (Model 439)
R7, R8	500,000 ohm 1/4 watt carbon resistor
R9	50,000 ohm 1/4 watt carbon resistor
R10	10,000 ohm 1/4 watt carbon resistor
R11	25,000 ohm 1/4 watt carbon resistor
R12, R13	R12—130 ohm, 12.5 watt; R13—25 ohm
R14	220,000 ohm 1/4 watt carbon resistor....
C1, C2	Two-gang variable condenser.....
C3, C16	0.002 mf, 600 volt tubular condenser.
C4	0.0002 mf, 600 volt tubular condenser
C5	0.05 mf, 200 volt tubular condenser
C12, C19	0.00022 mica condenser.....
C13	0.05 mf, 200 volt tubular condenser.
C14	0.05 mf, 400 volt tubular condenser.
C15	0.04 mf, 200 volt tubular condenser.
C17, C18	0.02 mf, 400 volt tubular condenser.
C19	0.00022 mica condenser.....
C20, C21	Dual 20 mf, 150 volt, dry electrolytic
C22	Trimmer, part of L2.
C23	0.2 mf, 200 volt tubular condenser

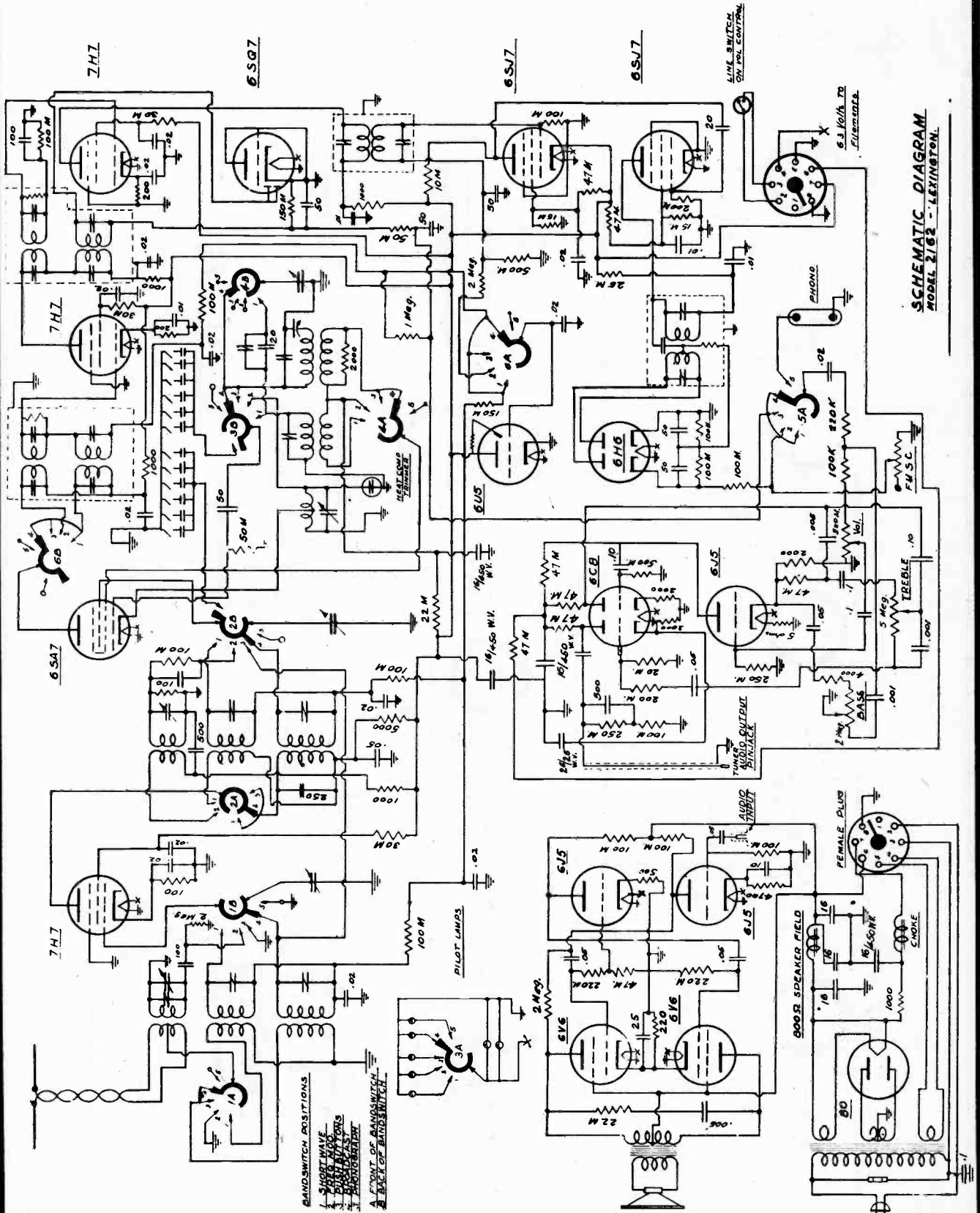
Tube	Plate	Screen	Cathode
6SG7 or 7H7	87	39	0
6SA7	87	87	0
6SK7 or 7A7	87	87	0
6SQ7 or 7B6	32	—	0
25L6	79	87	6.0



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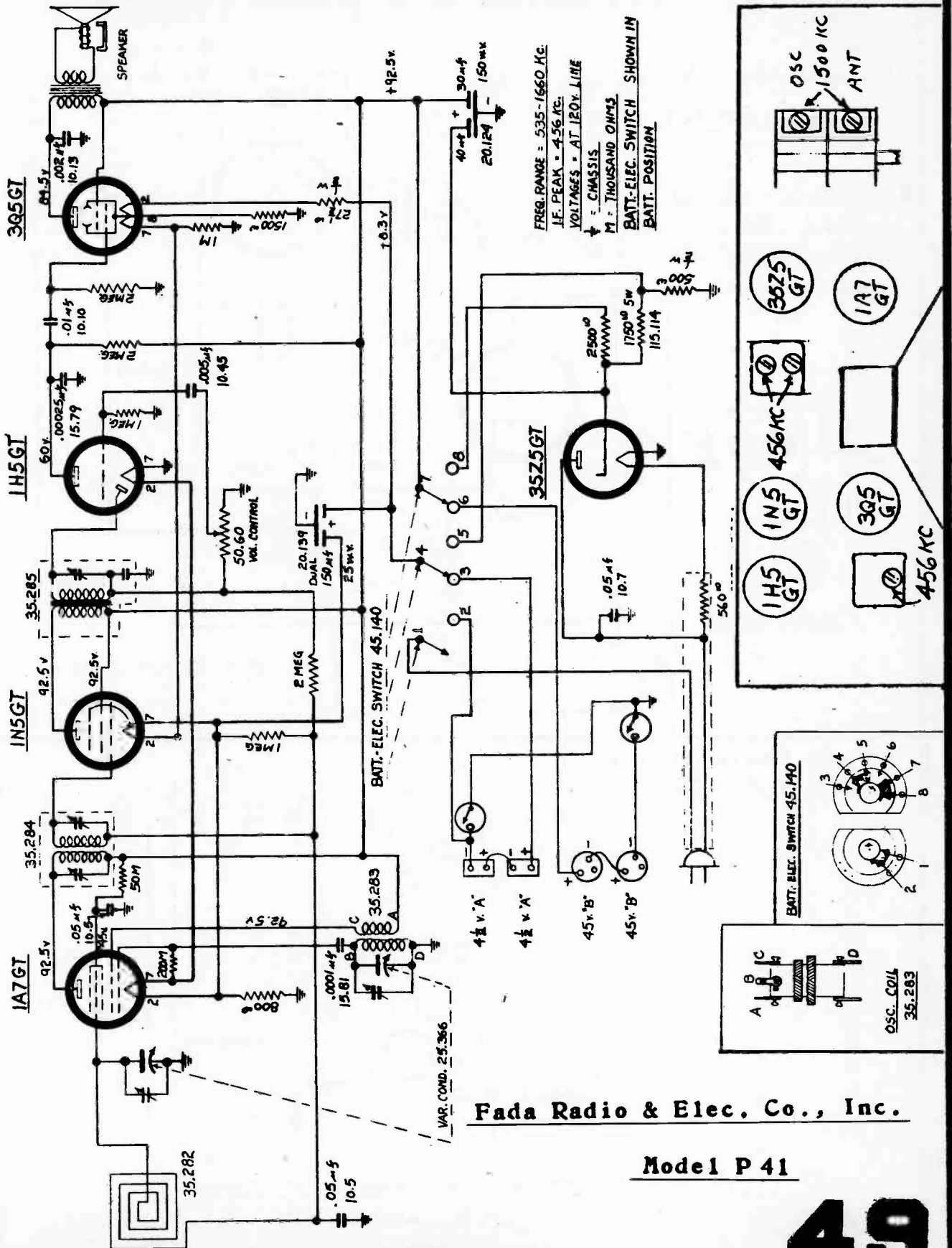


**SCHEMATIC DIAGRAM
MODEL 2162 - LEXINGTON.**

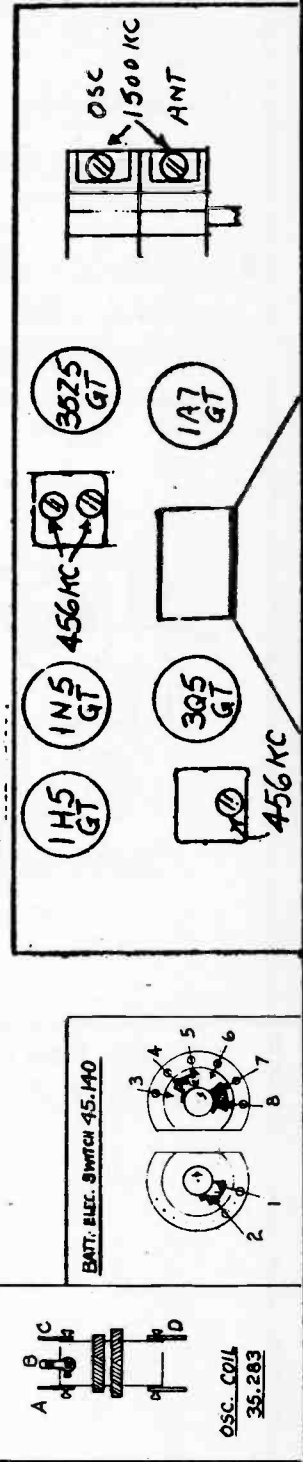
Espey Mfg. Co., Inc.

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MANUAL OF 1942 MOST POPULAR SERVICE DIAGRAMS



FREQ. RANGE = 535 - 1660 KC.
 IF. PEAK = 4.56 KC.
 VOLTAGES = AT 120V. LINE
 † = CHASSIS
 M = THOUSAND OHMS
 BATT.-ELEC. SWITCH SHOWN IN
 BATT. POSITION



Fada Radio & Elec. Co., Inc.

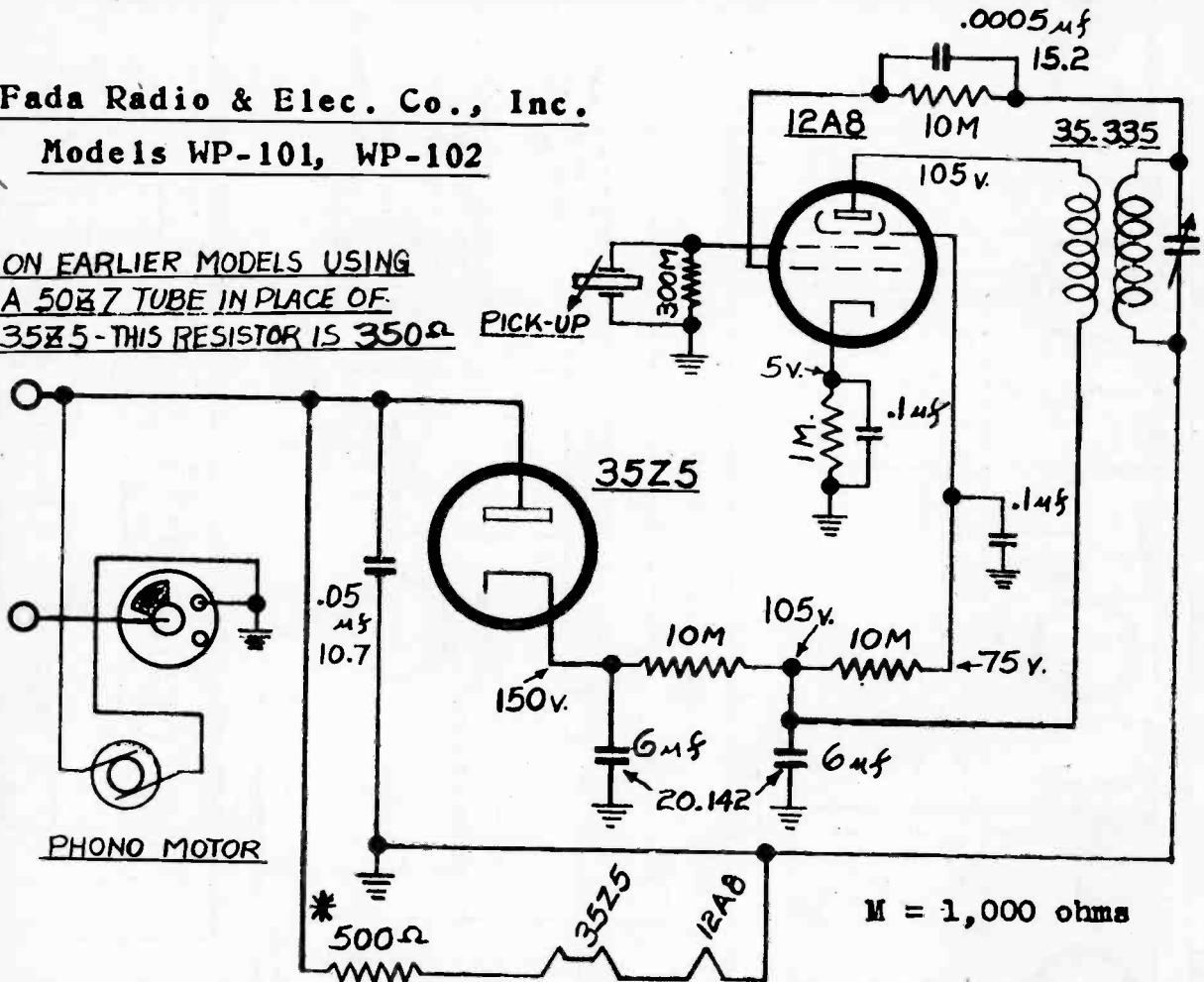
Model P 41

MANUAL OF 1942 MOST POPULAR SERVICE DIAGRAMS

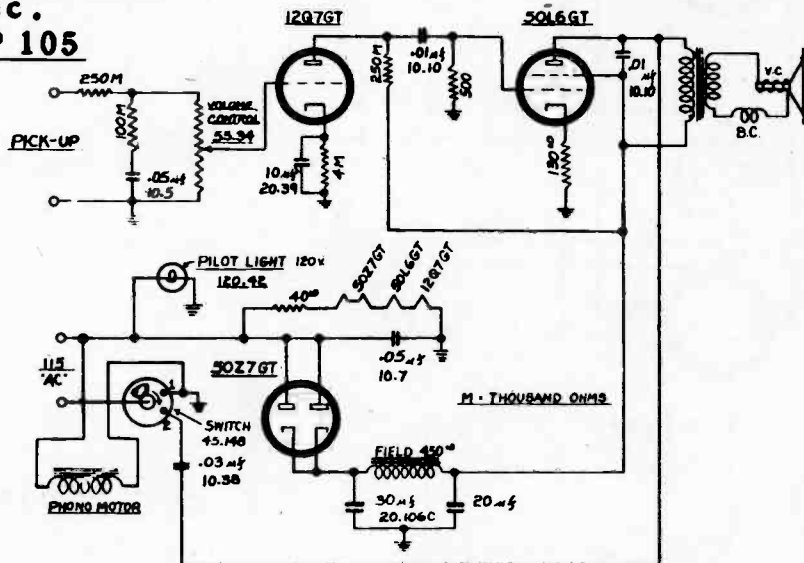
Fada Radio & Elec. Co., Inc.

Models WP-101, WP-102

* ON EARLIER MODELS USING
A 50Z7 TUBE IN PLACE OF
35Z5 - THIS RESISTOR IS 350Ω



Fada Radio & Elec.
Models AP 104, AP 105



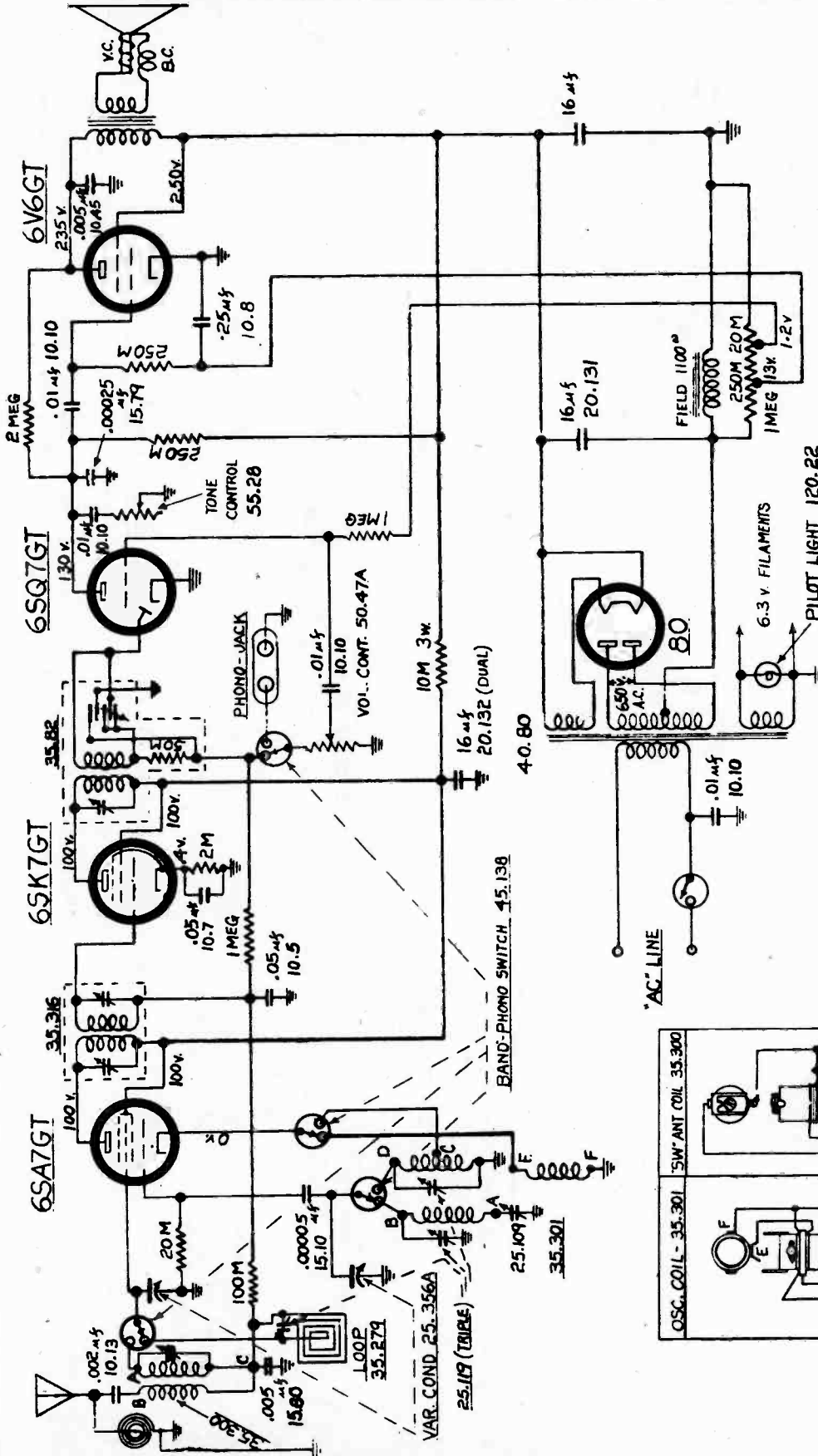
SWITCH 45.148 SHOWN IN "OFF" POSITION

CONTACT 1 = MOTOR & UNIT "ON" - TREBLE TONE

" 1&2 = " " " " - BASS "

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MANUAL OF 1942 MOST POPULAR SERVICE DIAGRAMS

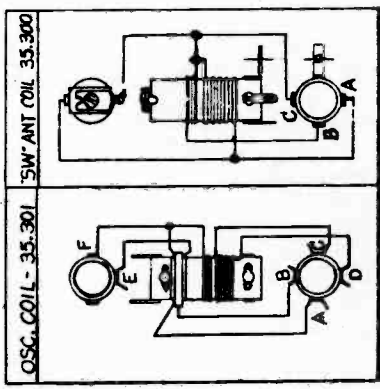
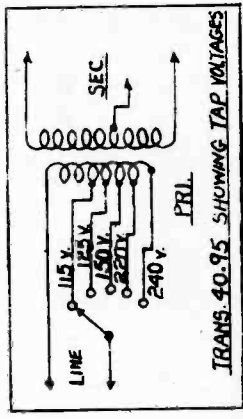


I.F. 456 KC.

SPEC'S - VOLTAGES MEASURED TO CHASSIS WITH 1000 OHMS PER VOLT VOLTMETER

M = THOUSAND OHMS
 = CHASSIS

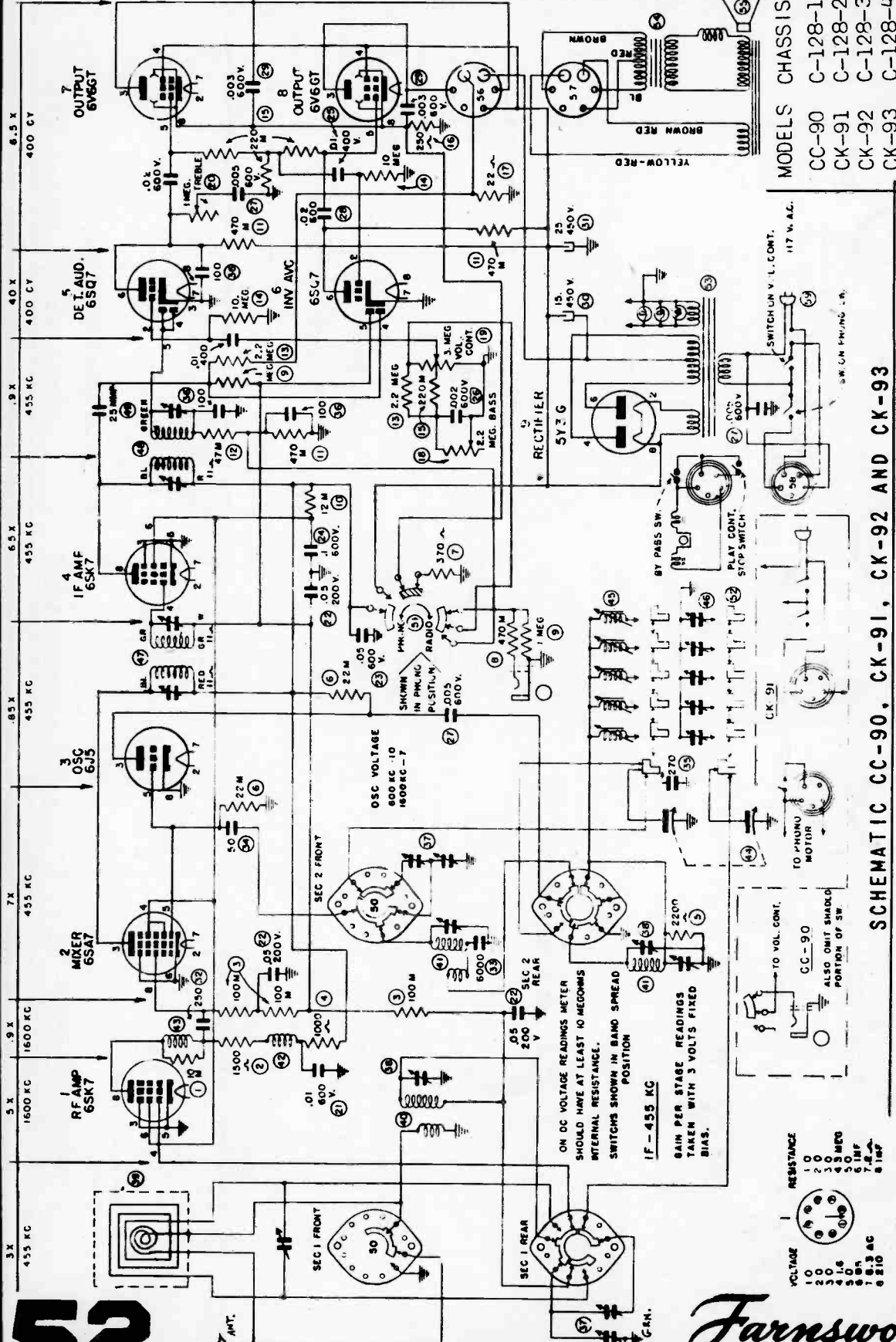
SWITCH 45.138 SHOWN IN 'BC' POSITION



COVERAGE -
 BROADCAST - 538-1625 KC.
 SHORT WAVE - 4.7-16.5 MC.

Fada Radio Model 256

MANUAL OF 1942 MOST POPULAR SERVICE DIAGRAMS



MODELS CHASSIS

CC-90	C-128-1
CK-91	C-128-2
CK-92	C-128-3
CK-93	C-128-4

VOLTAGE RESISTANCE

VOLTAGE	RESISTANCE
1 OPEN	10
2 2835	2.0
3 30P	3.0
4 400	4.0
5 50P	5.0
6 60P	6.0
7 70P	7.0
8 80P	8.0
9 885	8.85

VOLTAGE RESISTANCE

VOLTAGE	RESISTANCE
10	10
11	11
12	12
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VOLTAGE RESISTANCE

VOLTAGE	RESISTANCE
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VOLTAGE RESISTANCE

VOLTAGE	RESISTANCE
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199	199
200	200

VOLTAGE RESISTANCE

VOLTAGE	RESISTANCE
201	201
202	202
203	203
204	204
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VOLTAGE RESISTANCE

VOLTAGE	RESISTANCE
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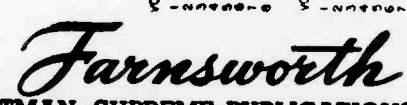
VOLTAGE RESISTANCE

VOLTAGE	RESISTANCE
281	281
282	282
283	283
284	284
285	285
286	286
287	287
288	288
289	289
290	290
291	291
292	292
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300	300

VOLTAGE RESISTANCE

VOLTAGE	RESISTANCE
301	301
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303	303
304	304
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320	320

SCHEMATIC CC-90, CK-91, CK-92 AND CK-93



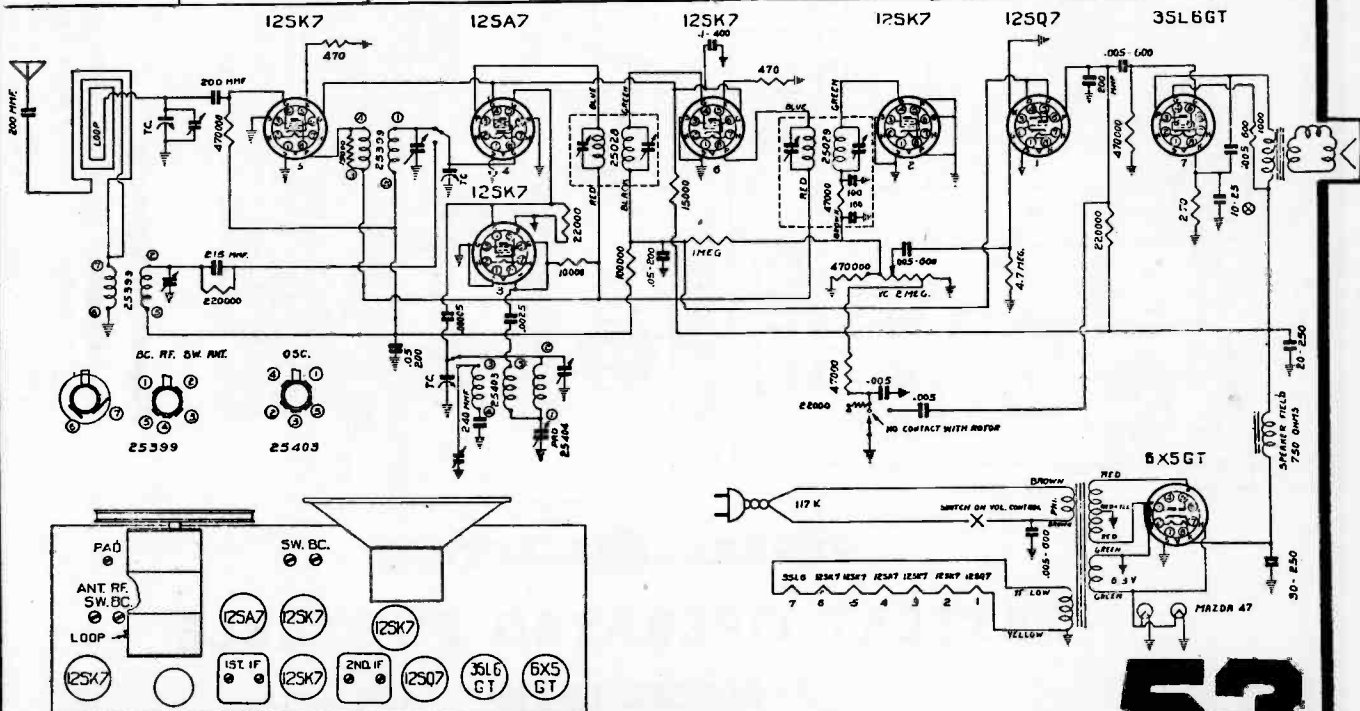
MANUAL OF 1942 MOST POPULAR SERVICE DIAGRAMS

GAMBLE-SKOGMO INC.

MINNEAPOLIS, MINNESOTA

Model 1682A

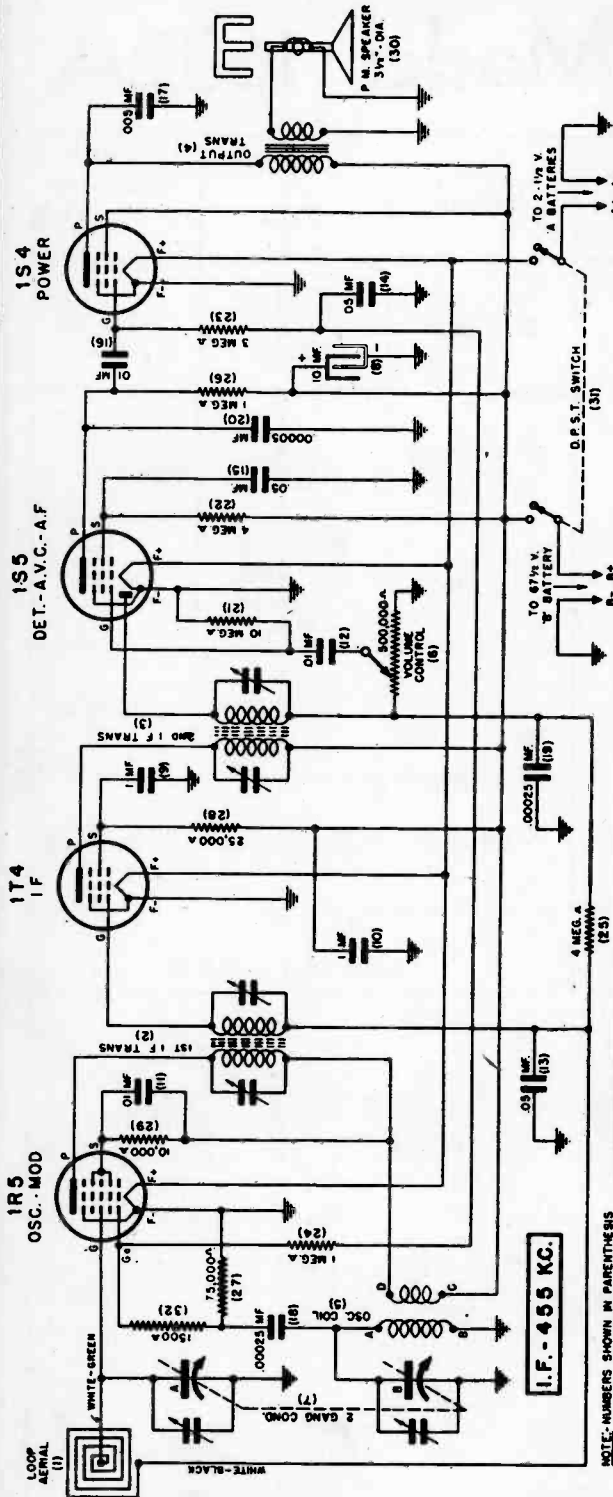
Generator Frequency	Connection at Radio	Dummy Antenna	Range Switch Setting	Dial Setting	Trimmers to Tune	Approx. Sensitivity .05 Watt O. P
I. F. 456 k.c.	Center Stator of Var. Cond.	.1 Mfd.	B. C.	H. F. End	I. F. Trans. Tune to Max.	65 to 75 Mv.
B. C. 1650 k.c.	Ant.	200 Mmf.	B. C.	H. F. Limit of Travel	B., C. Osc.	—
1400 k.c.	"	"	"	1400— See Note "A"	B. C. RF. " " Loop Tune to Max.	20 Mv.
600 k.c.	"	"	"	600— Rock Rotor	Padder	15 Mv.
11.6 m.c.	Ant.	400 Ohms	S. W.	11.6 m.c.	S. W. Osc	40 to 50 Mv.
9.6 m.c.	Ant.	400 Ohms	S. W.	Check Dial at 9.6 Mc.		



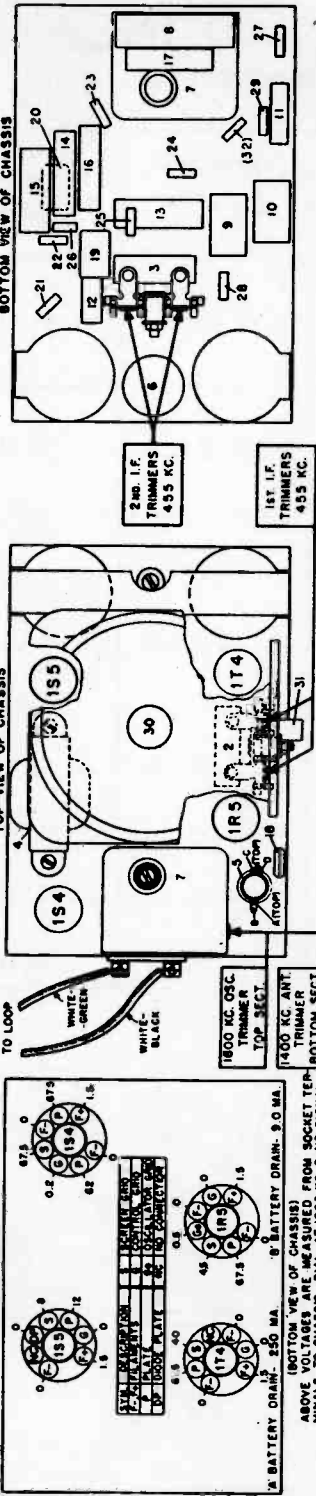
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MANUAL OF 1942 MOST POPULAR SERVICE DIAGRAMS



NOTE: NUMBERS SHOWN IN PARENTHESES ARE ILLUSTRATION NUMBERS



Battery Specification..... 2-1 1/2 Volt "A" Eveready No. 950 or Equivalent 1-67 1/2 Volt "B" Eveready No. 467 or Equivalent
 Intermediate Frequency..... 455 K.C.
 Tuning Frequency Range..... 540-1600 K.C.
 Maximum Power Output..... 175 Milliwatts
 Loud Speaker..... Cone Diameter 3 Inches
 Voice Coil Impedance..... (400 Cycles) 3.5 Ohms
 Tubes: Converter-Oscillator 1R5, I.F. 1T4, Detector A.V.C. 1S5, Power Output 1S4.

ALIGNMENT PROCEDURE

Alignment Frequencies I.F. 455 K.C.
 R.F. 1600 & 1400 K.C.

LF. Alignment Connect an output meter across the voice coil. Rotate the volume to maximum. Set test oscillator to 455 K.C. and apply signal to lug on stator of gang condenser to which loop is connected through a .05 MFD. capacitor. Align the second I.F. transformer trimmers, next adjust the first I.F. transformer trimmers. Keep test oscillator

R.F. Alignment Couple test oscillator output to loop in receiver dial to exactly 1600 K.C. Peak 1600 K.C. oscillator trimmer for maximum output. Change test oscillator signal and receiver dial to approximately 1400 K.C. Then while rocking gang condenser trim 1400 K.C. antenna trimmer for maximum output.

output as low as a readable meter reading will permit.

GENERAL ELECTRIC

BATTERY OPERATED PORTABLE

MODEL LB412

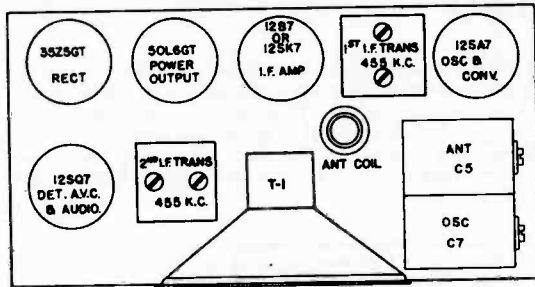
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MANUAL OF 1942 MOST POPULAR SERVICE DIAGRAMS

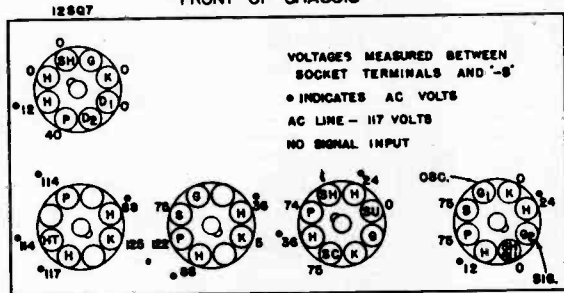
GENERAL ELECTRIC Alignment Frequencies

ALIGNMENT PROCEDURE

MODELS L500, L510, L550, L560



FRONT OF CHASSIS



BOTTOM VIEW OF CHASSIS

C1	CAPACITOR—.05 mfd., 200 V. paper.....
C2	CAPACITOR—.20 mfd., 400 V. paper.....
C3	CAPACITOR—470 mmf., mica.....
C6a, 6b	CONDENSER—Tuning condenser.....
C8	CAPACITOR—.05 mfd., 200 V. paper.....
C14	CAPACITOR—330 mmf., mica.....
C15	CAPACITOR—.005 mfd., 600 V. paper.....
C16	CAPACITOR—330 mmf., mica.....
C17	CAPACITOR—.01 mfd., 600 V. paper.....
C18	CAPACITOR—.02 mfd., 600 V. paper.....
C19a	CAPACITOR—20 mfd., 150 V. electrolytic
C19b	CAPACITOR—30 mfd., 150 V. electrolytic
C21	CAPACITOR—.05 mfd., 600 V. paper.....
C22	CAPACITOR—100 mmf., mica.....
R1	RESISTOR—330,000 ohms, 1/4 W. carbon.....
R2	RESISTOR—22,000 ohms, 1/4 W. carbon.....
R3	RESISTOR—2.2 megohms, 1/4 W. carbon.....
R4	VOL. CONTROL—.5 megohm control.....
R5	RESISTOR—4.7 megohms, 1/4 W. carbon.....
R6	RESISTOR—270,000 ohms, 1/4 W. carbon.....
R7	RESISTOR—470,000 ohms, 1/4 W. carbon.....
R8	RESISTOR—150 ohms, 1/4 W. carbon.....
R9	RESISTOR—2,700 ohms, 1 W. carbon.....
R11	RESISTOR—13 ohms, 1/4 W. carbon.....

I.F. 455 KC
 R.F. 1500 KC
 The location of all trimmers is shown in Fig. 1.

I.F. Alignment

Connect an output meter across the voice coil. Turn the volume control to maximum. Set test oscillator to 455 KC and keep the oscillator output as low as a readable meter reading will permit.

Apply signal to the converter grid through a .05 mfd. capacitor and align progressively the trimmers in the 2nd and 1st I.F. transformer cans.

R.F. Alignment

Close the gang condenser by rotating the tuning control. Slide the pointer along the cord until it lines up with the first dial marking on the left. Now rotate the tuning control until the pointer is over the 1500 KC dial mark. Apply a 1500 KC signal to the receiver antenna post through a standard I.R.E. dummy antenna. Align the oscillator trimmer (C-7) to bring in the signal and peak the signal by adjusting the antenna trimmer (C-5). (See Fig. 1 for trimmer locations.)

Precaution

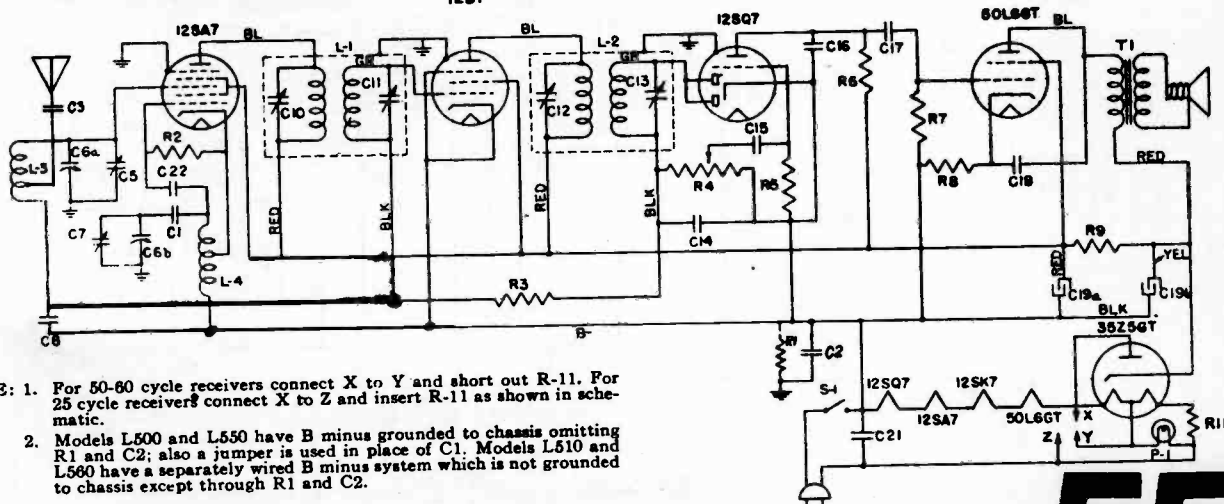
If the signal generator is AC operated, use an isolating transformer between the power supply and the radio receiver power input. The use of an isolating capacitor is not recommended as AC current through the capacitor will introduce hum modulation and/or create the possibility of a burned-out signal generator attenuator.

Special Service Information

The following information will be very useful in servicing receivers if a vacuum tube voltmeter or similar voltage measuring instrument is available.

- Stage Gains*
 Antenna Post to Converter Grid.... 4.0 at 1000 KC
 I.F. on Converter Grid to I.F. on I.F.
 Amplifier Grid..... 50 at 455 KC
 I.F. Amplifier Grid to Diode Plate... 45 at 455 KC
- 0.20-volt, 400-cycle signal across the volume control will give 1/2-watt speaker output.* (Volume control turned to maximum.)
- Average DC voltage developed across oscillator grid leak..... 6 volts

* Variations of ±20% permissible. All readings obtained with enough signal input to give 1/2-watt speaker output.



NOTE: 1. For 50-80 cycle receivers connect X to Y and short out R-11. For 25 cycle receivers connect X to Z and insert R-11 as shown in schematic.
 2. Models L500 and L550 have B minus grounded to chassis omitting R1 and C2; also a jumper is used in place of C1. Models L510 and L560 have a separately wired B minus system which is not grounded to chassis except through R1 and C2.

MANUAL OF 1942 MOST POPULAR SERVICE DIAGRAMS

GENERAL ELECTRIC

Six-tube Superheterodyne with Electric Tuning Keys

MODEL L-660

Alignment Frequencies

RF 1500 KC
 IF 455 KC

The chassis must be removed from the cabinet as described above to make the following alignments. The locations of all trimmers is shown in Fig. 1.

IF Alignment

Connect an output meter across the voice coil. Turn the volume control to maximum. Set test oscillator to 455 KC and keep the oscillator output as low as a readable meter reading will permit.

Apply signal to the 12SA7 converter grid through a .05 mfd. capacitor and align progressively the trimmers in the 2nd and 1st IF transformers.

RF Alignment

When making the following alignment the loop antenna must be bolted to the chassis by the two mounting screws. Since the glass dial scale is fastened to the cabinet, it cannot be used for reference during the alignment of the chassis outside the cabinet. Use must be made therefore of the four calibration marks at the bottom flange of the dial scale reflector plate (immediately below end of dial scale pointer). These marks referring from left to right are as follows: Reference point, 580 KC, 1000 KC, and 1500 KC.

The RF signal should be capacity coupled to the receiver loop by placing a two foot piece of wire for an antenna on the test oscillator output post (high side). Keeping this antenna two feet or more from the receiver loop will generally insure freedom from too much coupling.

With the gang condenser plates completely closed, the end of the pointer should line up with the first mark to the left of the dial reflector plate. If it doesn't the pointer can be moved on the dial cord until it does. Set the signal generator to 1500 KC. Set pointer to the 1500 KC mark (extreme right flange mark) and align (C2B) to the signal. Peak (C2A) for maximum output.

Part No.	Symbol	Description
KC-7003	C1A, 1B	CONDENSER—Variable Condenser (with trimmer SA, SB mounted)
RC-624	C2A	CAPACITOR—100 Mfd., min.
RC-674	C2B	CAPACITOR—250 Mfd., min.
RC-675	C2C	CAPACITOR—100 Mfd., min.
RC-676	C2D	CAPACITOR—100 Mfd., min.
RC-677	C2E	CAPACITOR—100 Mfd., min.
RC-678	C2F	CAPACITOR—100 Mfd., min.
RC-679	C2G	CAPACITOR—100 Mfd., min.
RC-680	C2H	CAPACITOR—100 Mfd., min.
RC-681	C2I	CAPACITOR—100 Mfd., min.
RC-682	C2J	CAPACITOR—100 Mfd., min.
RC-683	C2K	CAPACITOR—100 Mfd., min.
RC-684	C2L	CAPACITOR—100 Mfd., min.
RC-685	C2M	CAPACITOR—100 Mfd., min.
RC-686	C2N	CAPACITOR—100 Mfd., min.
RC-687	C2O	CAPACITOR—100 Mfd., min.
RC-688	C2P	CAPACITOR—100 Mfd., min.
RC-689	C2Q	CAPACITOR—100 Mfd., min.
RC-690	C2R	CAPACITOR—100 Mfd., min.
RC-691	C2S	CAPACITOR—100 Mfd., min.
RC-692	C2T	CAPACITOR—100 Mfd., min.
RC-693	C2U	CAPACITOR—100 Mfd., min.
RC-694	C2V	CAPACITOR—100 Mfd., min.
RC-695	C2W	CAPACITOR—100 Mfd., min.
RC-696	C2X	CAPACITOR—100 Mfd., min.
RC-697	C2Y	CAPACITOR—100 Mfd., min.
RC-698	C2Z	CAPACITOR—100 Mfd., min.
RC-699	C3	CAPACITOR—50 Mfd., 100 V. dry
RC-700	C4	CAPACITOR—50 Mfd., 100 V. dry
RC-701	C5	CAPACITOR—50 Mfd., 100 V. dry
RC-702	C6	CAPACITOR—50 Mfd., 100 V. dry
RC-703	C7	CAPACITOR—50 Mfd., 100 V. dry
RC-704	C8	CAPACITOR—50 Mfd., 100 V. dry
RC-705	C9	CAPACITOR—50 Mfd., 100 V. dry
RC-706	C10	CAPACITOR—50 Mfd., 100 V. dry
RC-707	C11	CAPACITOR—50 Mfd., 100 V. dry
RC-708	C12	CAPACITOR—50 Mfd., 100 V. dry
RC-709	C13	CAPACITOR—50 Mfd., 100 V. dry
RC-710	C14	CAPACITOR—50 Mfd., 100 V. dry
RC-711	C15	CAPACITOR—50 Mfd., 100 V. dry
RC-712	C16	CAPACITOR—50 Mfd., 100 V. dry
RC-713	C17	CAPACITOR—50 Mfd., 100 V. dry
RC-714	C18	CAPACITOR—50 Mfd., 100 V. dry
RC-715	C19	CAPACITOR—50 Mfd., 100 V. dry
RC-716	C20	CAPACITOR—50 Mfd., 100 V. dry
RC-717	C21	CAPACITOR—50 Mfd., 100 V. dry
RC-718	C22	CAPACITOR—50 Mfd., 100 V. dry
RC-719	C23	CAPACITOR—50 Mfd., 100 V. dry
RC-720	C24	CAPACITOR—50 Mfd., 100 V. dry
RC-721	C25	CAPACITOR—50 Mfd., 100 V. dry
RC-722	C26	CAPACITOR—50 Mfd., 100 V. dry
RC-723	C27	CAPACITOR—50 Mfd., 100 V. dry
RC-724	C28	CAPACITOR—50 Mfd., 100 V. dry
RC-725	C29	CAPACITOR—50 Mfd., 100 V. dry
RC-726	C30	CAPACITOR—50 Mfd., 100 V. dry
RC-727	C31	CAPACITOR—50 Mfd., 100 V. dry
RC-728	C32	CAPACITOR—50 Mfd., 100 V. dry
RC-729	C33	CAPACITOR—50 Mfd., 100 V. dry
RC-730	C34	CAPACITOR—50 Mfd., 100 V. dry
RC-731	C35	CAPACITOR—50 Mfd., 100 V. dry
RC-732	C36	CAPACITOR—50 Mfd., 100 V. dry
RC-733	C37	CAPACITOR—50 Mfd., 100 V. dry
RC-734	C38	CAPACITOR—50 Mfd., 100 V. dry
RC-735	C39	CAPACITOR—50 Mfd., 100 V. dry
RC-736	C40	CAPACITOR—50 Mfd., 100 V. dry
RC-737	C41	CAPACITOR—50 Mfd., 100 V. dry
RC-738	C42	CAPACITOR—50 Mfd., 100 V. dry
RC-739	C43	CAPACITOR—50 Mfd., 100 V. dry
RC-740	C44	CAPACITOR—50 Mfd., 100 V. dry
RC-741	C45	CAPACITOR—50 Mfd., 100 V. dry
RC-742	C46	CAPACITOR—50 Mfd., 100 V. dry
RC-743	C47	CAPACITOR—50 Mfd., 100 V. dry
RC-744	C48	CAPACITOR—50 Mfd., 100 V. dry
RC-745	C49	CAPACITOR—50 Mfd., 100 V. dry
RC-746	C50	CAPACITOR—50 Mfd., 100 V. dry
RC-747	C51	CAPACITOR—50 Mfd., 100 V. dry
RC-748	C52	CAPACITOR—50 Mfd., 100 V. dry
RC-749	C53	CAPACITOR—50 Mfd., 100 V. dry
RC-750	C54	CAPACITOR—50 Mfd., 100 V. dry
RC-751	C55	CAPACITOR—50 Mfd., 100 V. dry
RC-752	C56	CAPACITOR—50 Mfd., 100 V. dry
RC-753	C57	CAPACITOR—50 Mfd., 100 V. dry
RC-754	C58	CAPACITOR—50 Mfd., 100 V. dry
RC-755	C59	CAPACITOR—50 Mfd., 100 V. dry
RC-756	C60	CAPACITOR—50 Mfd., 100 V. dry
RC-757	C61	CAPACITOR—50 Mfd., 100 V. dry
RC-758	C62	CAPACITOR—50 Mfd., 100 V. dry
RC-759	C63	CAPACITOR—50 Mfd., 100 V. dry
RC-760	C64	CAPACITOR—50 Mfd., 100 V. dry
RC-761	C65	CAPACITOR—50 Mfd., 100 V. dry
RC-762	C66	CAPACITOR—50 Mfd., 100 V. dry
RC-763	C67	CAPACITOR—50 Mfd., 100 V. dry
RC-764	C68	CAPACITOR—50 Mfd., 100 V. dry
RC-765	C69	CAPACITOR—50 Mfd., 100 V. dry
RC-766	C70	CAPACITOR—50 Mfd., 100 V. dry
RC-767	C71	CAPACITOR—50 Mfd., 100 V. dry
RC-768	C72	CAPACITOR—50 Mfd., 100 V. dry
RC-769	C73	CAPACITOR—50 Mfd., 100 V. dry
RC-770	C74	CAPACITOR—50 Mfd., 100 V. dry
RC-771	C75	CAPACITOR—50 Mfd., 100 V. dry
RC-772	C76	CAPACITOR—50 Mfd., 100 V. dry
RC-773	C77	CAPACITOR—50 Mfd., 100 V. dry
RC-774	C78	CAPACITOR—50 Mfd., 100 V. dry
RC-775	C79	CAPACITOR—50 Mfd., 100 V. dry
RC-776	C80	CAPACITOR—50 Mfd., 100 V. dry
RC-777	C81	CAPACITOR—50 Mfd., 100 V. dry
RC-778	C82	CAPACITOR—50 Mfd., 100 V. dry
RC-779	C83	CAPACITOR—50 Mfd., 100 V. dry
RC-780	C84	CAPACITOR—50 Mfd., 100 V. dry
RC-781	C85	CAPACITOR—50 Mfd., 100 V. dry
RC-782	C86	CAPACITOR—50 Mfd., 100 V. dry
RC-783	C87	CAPACITOR—50 Mfd., 100 V. dry
RC-784	C88	CAPACITOR—50 Mfd., 100 V. dry
RC-785	C89	CAPACITOR—50 Mfd., 100 V. dry
RC-786	C90	CAPACITOR—50 Mfd., 100 V. dry
RC-787	C91	CAPACITOR—50 Mfd., 100 V. dry
RC-788	C92	CAPACITOR—50 Mfd., 100 V. dry
RC-789	C93	CAPACITOR—50 Mfd., 100 V. dry
RC-790	C94	CAPACITOR—50 Mfd., 100 V. dry
RC-791	C95	CAPACITOR—50 Mfd., 100 V. dry
RC-792	C96	CAPACITOR—50 Mfd., 100 V. dry
RC-793	C97	CAPACITOR—50 Mfd., 100 V. dry
RC-794	C98	CAPACITOR—50 Mfd., 100 V. dry
RC-795	C99	CAPACITOR—50 Mfd., 100 V. dry
RC-796	C100	CAPACITOR—50 Mfd., 100 V. dry
RC-797	C101	CAPACITOR—50 Mfd., 100 V. dry
RC-798	C102	CAPACITOR—50 Mfd., 100 V. dry
RC-799	C103	CAPACITOR—50 Mfd., 100 V. dry
RC-800	C104	CAPACITOR—50 Mfd., 100 V. dry
RC-801	C105	CAPACITOR—50 Mfd., 100 V. dry
RC-802	C106	CAPACITOR—50 Mfd., 100 V. dry
RC-803	C107	CAPACITOR—50 Mfd., 100 V. dry
RC-804	C108	CAPACITOR—50 Mfd., 100 V. dry
RC-805	C109	CAPACITOR—50 Mfd., 100 V. dry
RC-806	C110	CAPACITOR—50 Mfd., 100 V. dry
RC-807	C111	CAPACITOR—50 Mfd., 100 V. dry
RC-808	C112	CAPACITOR—50 Mfd., 100 V. dry
RC-809	C113	CAPACITOR—50 Mfd., 100 V. dry
RC-810	C114	CAPACITOR—50 Mfd., 100 V. dry
RC-811	C115	CAPACITOR—50 Mfd., 100 V. dry
RC-812	C116	CAPACITOR—50 Mfd., 100 V. dry
RC-813	C117	CAPACITOR—50 Mfd., 100 V. dry
RC-814	C118	CAPACITOR—50 Mfd., 100 V. dry
RC-815	C119	CAPACITOR—50 Mfd., 100 V. dry
RC-816	C120	CAPACITOR—50 Mfd., 100 V. dry
RC-817	C121	CAPACITOR—50 Mfd., 100 V. dry
RC-818	C122	CAPACITOR—50 Mfd., 100 V. dry
RC-819	C123	CAPACITOR—50 Mfd., 100 V. dry
RC-820	C124	CAPACITOR—50 Mfd., 100 V. dry
RC-821	C125	CAPACITOR—50 Mfd., 100 V. dry
RC-822	C126	CAPACITOR—50 Mfd., 100 V. dry
RC-823	C127	CAPACITOR—50 Mfd., 100 V. dry
RC-824	C128	CAPACITOR—50 Mfd., 100 V. dry
RC-825	C129	CAPACITOR—50 Mfd., 100 V. dry
RC-826	C130	CAPACITOR—50 Mfd., 100 V. dry
RC-827	C131	CAPACITOR—50 Mfd., 100 V. dry
RC-828	C132	CAPACITOR—50 Mfd., 100 V. dry
RC-829	C133	CAPACITOR—50 Mfd., 100 V. dry
RC-830	C134	CAPACITOR—50 Mfd., 100 V. dry
RC-831	C135	CAPACITOR—50 Mfd., 100 V. dry
RC-832	C136	CAPACITOR—50 Mfd., 100 V. dry
RC-833	C137	CAPACITOR—50 Mfd., 100 V. dry
RC-834	C138	CAPACITOR—50 Mfd., 100 V. dry
RC-835	C139	CAPACITOR—50 Mfd., 100 V. dry
RC-836	C140	CAPACITOR—50 Mfd., 100 V. dry
RC-837	C141	CAPACITOR—50 Mfd., 100 V. dry
RC-838	C142	CAPACITOR—50 Mfd., 100 V. dry
RC-839	C143	CAPACITOR—50 Mfd., 100 V. dry
RC-840	C144	CAPACITOR—50 Mfd., 100 V. dry
RC-841	C145	CAPACITOR—50 Mfd., 100 V. dry
RC-842	C146	CAPACITOR—50 Mfd., 100 V. dry
RC-843	C147	CAPACITOR—50 Mfd., 100 V. dry
RC-844	C148	CAPACITOR—50 Mfd., 100 V. dry
RC-845	C149	CAPACITOR—50 Mfd., 100 V. dry
RC-846	C150	CAPACITOR—50 Mfd., 100 V. dry
RC-847	C151	CAPACITOR—50 Mfd., 100 V. dry
RC-848	C152	CAPACITOR—50 Mfd., 100 V. dry
RC-849	C153	CAPACITOR—50 Mfd., 100 V. dry
RC-850	C154	CAPACITOR—50 Mfd., 100 V. dry
RC-851	C155	CAPACITOR—50 Mfd., 100 V. dry
RC-852	C156	CAPACITOR—50 Mfd., 100 V. dry
RC-853	C157	CAPACITOR—50 Mfd., 100 V. dry
RC-854	C158	CAPACITOR—50 Mfd., 100 V. dry
RC-855	C159	CAPACITOR—50 Mfd., 100 V. dry
RC-856	C160	CAPACITOR—50 Mfd., 100 V. dry
RC-857	C161	CAPACITOR—50 Mfd., 100 V. dry
RC-858	C162	CAPACITOR—50 Mfd., 100 V. dry
RC-859	C163	CAPACITOR—50 Mfd., 100 V. dry
RC-860	C164	CAPACITOR—50 Mfd., 100 V. dry
RC-861	C165	CAPACITOR—50 Mfd., 100 V. dry
RC-862	C166	CAPACITOR—50 Mfd., 100 V. dry
RC-863	C167	CAPACITOR—50 Mfd., 100 V. dry
RC-864	C168	CAPACITOR—50 Mfd., 100 V. dry
RC-865	C169	CAPACITOR—50 Mfd., 100 V. dry
RC-866	C170	CAPACITOR—50 Mfd., 100 V. dry
RC-867	C171	CAPACITOR—50 Mfd., 100 V. dry
RC-868	C172	CAPACITOR—50 Mfd., 100 V. dry
RC-869	C173	CAPACITOR—50 Mfd., 100 V. dry
RC-870	C174	CAPACITOR—50 Mfd., 100 V. dry
RC-871	C175	CAPACITOR—50 Mfd., 100 V. dry
RC-872	C176	CAPACITOR—50 Mfd., 100 V. dry
RC-873	C177	CAPACITOR—50 Mfd., 100 V. dry
RC-874	C178	CAPACITOR—50 Mfd., 100 V. dry
RC-875	C179	CAPACITOR—50 Mfd., 100 V. dry
RC-876	C180	CAPACITOR—50 Mfd., 100 V. dry
RC-877	C181	CAPACITOR—50 Mfd., 100 V. dry
RC-878	C182	CAPACITOR—50 Mfd., 100 V. dry
RC-879	C183	CAPACITOR—50 Mfd., 100 V. dry
RC-880	C184	CAPACITOR—50 Mfd., 100 V. dry
RC-881	C185	CAPACITOR—50 Mfd., 100 V. dry
RC-882	C186	CAPACITOR—50 Mfd., 100 V. dry
RC-883	C187	CAPACITOR—50 Mfd., 100 V. dry
RC-884	C188	CAPACITOR—50 Mfd., 100 V. dry
RC-885	C189	CAPACITOR—50 Mfd., 100 V. dry
RC-886	C190	CAPACITOR—50 Mfd., 100 V. dry
RC-887	C191	CAPACITOR—50 Mfd., 100 V. dry
RC-888	C192	CAPACITOR—50 Mfd., 100 V. dry
RC-889	C193	CAPACITOR—50 Mfd., 100 V. dry
RC-890	C194	CAPACITOR—50 Mfd., 100 V. dry
RC-891	C195	CAPACITOR—50 Mfd., 100 V. dry
RC-892	C196	CAPACITOR—50 Mfd., 100 V. dry
RC-893	C197	CAPACITOR—50 Mfd., 100 V. dry
RC-894	C198	CAPACITOR—50 Mfd., 100 V. dry
RC-895	C199	CAPACITOR—50 Mfd., 100 V. dry
RC-896	C200	CAPACITOR—50 Mfd., 100 V. dry
RC-897	C201	CAPACITOR—50 Mfd., 100 V. dry
RC-898	C202	CAPACITOR—50 Mfd., 100 V. dry
RC-899	C203	CAPACITOR—50 Mfd., 100 V. dry
RC-900	C204	CAPACITOR—50 Mfd., 100 V. dry
RC-901	C205	CAPACITOR—50 Mfd., 100 V. dry
RC-902	C206	CAPACITOR—50 Mfd., 100 V. dry
RC-903	C207	CAPACITOR—50 Mfd., 100 V. dry
RC-904	C208	CAPACITOR—50 Mfd., 100 V. dry
RC-905	C209	CAPACITOR—50 Mfd., 100 V. dry
RC-906	C210	CAPACITOR—50 Mfd., 100 V. dry
RC-907	C211	CAPACITOR—50 Mfd., 100 V. dry
RC-908	C212	CAPACITOR—50 Mfd., 10

MANUAL OF 1942 MOST POPULAR SERVICE DIAGRAMS

IF ALIGNMENT WITH OSCILLOSCOPE—"FM" CHANNEL


Step	Input Signal Connected to	Input Frequency	Band and Pointer Setting	Trimmer Adjustment	Comments
1	6SG7 converter grid in series with 22 mmf.	4.3 MC & ±200 KC Sweep	"FM" Band 42 MC	C52 C53	<p>Connect high side of oscilloscope in series with 470,000 ohm resistor to R19 at point "B." Connect low side to chassis ground. Peak trimmers for resultant curve shown</p> 
2	6SG7 converter grid in series with 22 mmf.	4.3 KC & ±200 KC Sweep	"FM" Band 42 MC	C35 C36	
3	Repeat Step 1				
4	Repeat Step 2				
5	6SG7 converter grid in series with 22 mmf.	4.3 MC & ±200 KC Sweep	"FM" Band 42 MC	C60 C58	<p>Connect high side of oscilloscope in series with 470,000 ohm resistor to R36, point "A." Connect low side to chassis ground. Peak trimmers for resultant curve shown in Fig. 4. C60 is aligned when curve crosses midway in vertical plane. Proper alignment of C58 gives straightest sides to curve near crossover point.</p>

Table II IF ALIGNMENT WITH METER—"FM" CHANNEL

Step	Input Signal Connected to	Input Frequency	Band and Pointer Setting	Trimmer Adjustment	Comments
1	6SG7 converter grid in series with 22 mmf.	Unmodulated 4.3 MC signal	"FM" Band 42 MC	C52 C53 C35 C36	<p>Connect the 10-volt scale of a 20,000 ohm per volt voltmeter in series with a 470,000 ohm resistor between point "B" and ground. Peak all trimmers for maximum output using just enough input signal to give a satisfactory output reading.</p>
2	Repeat Step 1				
3	6SG7 converter grid in series with 22 mmf.	Unmodulated 4.3 MC signal	"FM" Band 42 MC	C60 C58	<p>Connect the 10-volt scale of a 20,000 ohm per volt voltmeter in series with a 470,000-ohm resistor between points "A" and ground. <i>With C60 purposely detuned</i>, peak C58 for maximum meter reading. Align C60 for the 0 voltage point where the meter reading changes from a positive to negative value. Use as low a signal input as necessary to give a satisfactory meter reading.</p>

Table III RF ALIGNMENT—"FM" CHANNEL

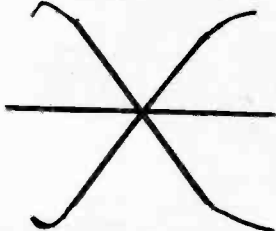
Step	Input Signal Connected to	Input Frequency	Band and Pointer Setting	Trimmer Adjustment	Comments
1	Direct to "FM" Antenna Post	Unmodulated 49 MC signal	"FM" Band 49 MC	C4 (Osc.)	<p>Connect the 10-volt range of a 20,000 ohm per volt voltmeter in series with a 470,000-ohm resistor to point "B." The other side of the voltmeter lead connects to chassis ground. Peak trimmers for maximum meter reading using just enough signal input to give satisfactory meter reading.</p> 
2	Direct to "FM" Antenna Post	Unmodulated 49 MC Signal	"FM" Band 49 MC	C2 C30	
3	Direct to "FM" Antenna Post	Unmodulated 43 MC Signal	"FM" Band 43 MC	C76 (Osc.)	
4	Direct to "FM" Antenna Post	Unmodulated 43 MC Signal	"FM" Band 43 MC	C75 C77	
5	Direct to "FM" Antenna Post	Unmodulated 46 MC Signal	"FM" Band 46 MC	C1	
6	Repeat Step 1				
7	Repeat Step 2				

Fig. 4

Table IV IF, "BC," and "SW" ALIGNMENT—"AM" CHANNEL

Step	Input Signal Connected to	Input Frequency	Band and Pointer Setting	Trimmer Adjustment	Comments
1	6SG7 converter grid in series with .05 mfd.	455 KC Modulated	"BC" Band 550 KC	C50 C39 C34 C33	<p>Connect 5.0-volt AC voltmeter across the voice coil of the speaker. Peak all trimmers for maximum output. All RF alignments must be made with the chassis in the cabinet.</p> <p>*When aligning the SW oscillator trimmer, use maximum capacity peak. The image frequency should appear at 18,710 KC.</p> <p>**Rock gang condenser when making alignment.</p>
2	Capacity Coupled	17.8 MC Modulated	"SW" Band 17.8 MC	C23*	
3	Capacity Coupled	17.8 MC Modulated	"SW" Band 17.8 MC	C19** C11	
4	Capacity Coupled	1500 KC Modulated	"BC" Band 1500 KC	C24	
5	Capacity Coupled	1500 KC Modulated	"BC" Band 1500 KC	C17 C8	
6	Capacity Coupled	580 KC Modulated	"BC" Band 580 KC	C25**	
7	Repeat Steps 4 and 5				

A-FM COMBINATION RECEIVERS

Models LF-115 & LF-116

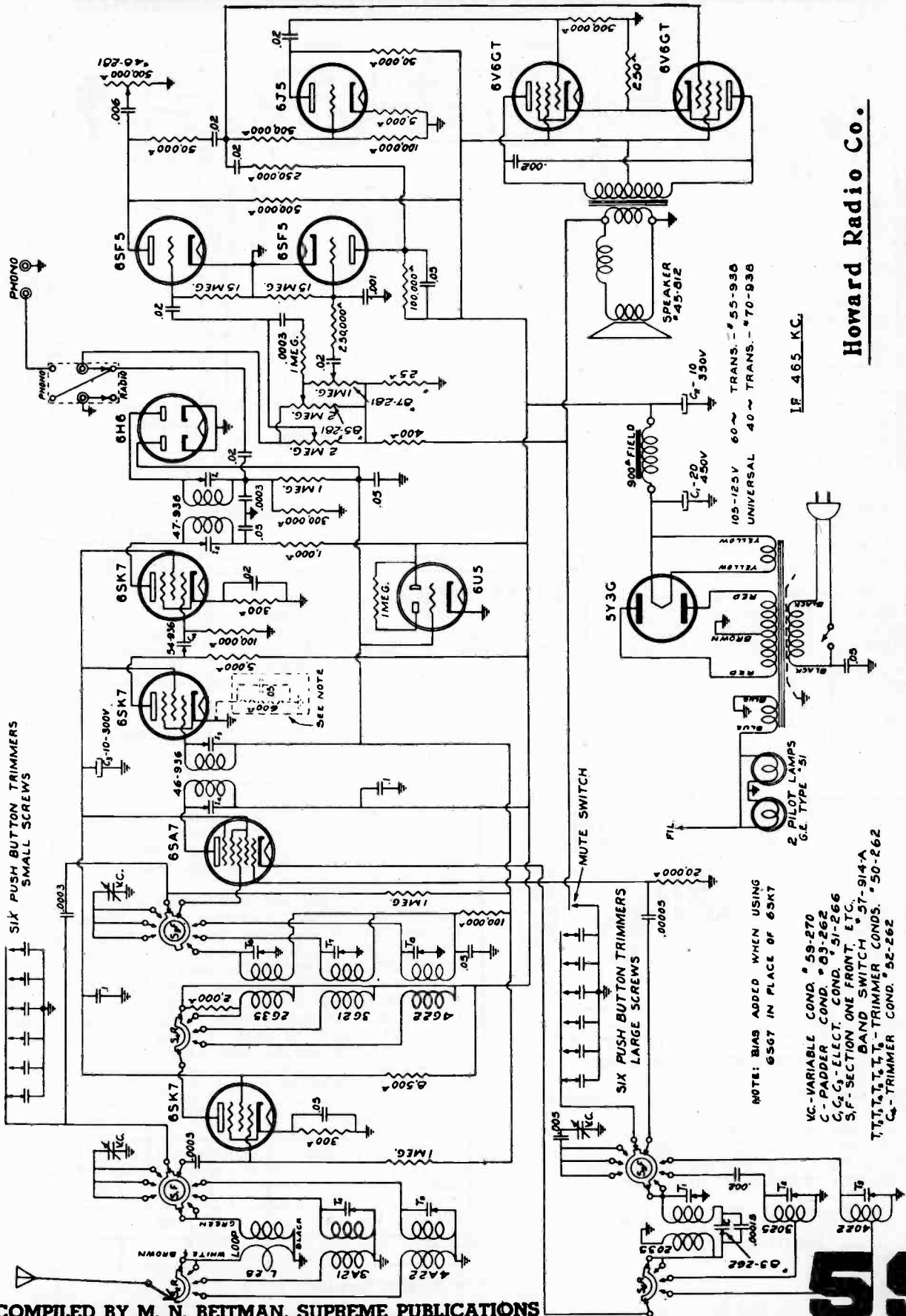
A-FM PHONOGRAPH COMBINATION RECEIVERS

Models LFC-1118, LFC-1128 & LFC-1228

COMPILED BY M. N. BEITMAN, SUPREME PUBLICATIONS

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MANUAL OF 1942 MOST POPULAR SERVICE DIAGRAMS



COMPILED BY M. N. BEITMAN, SUPREME PUBLICATIONS

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Howard Radio Co.

RADIO CHASSIS MODEL 718 SERIES X

NOTE: BIAS ADDED WHEN USING 6SG7 IN PLACE OF 6SK7

VC-VARIABLE COND. # 59-270
 C-PADDER COND. # 03-262
 C.C.-ELECT. COND. # 51-266
 S.F.-SECTION ONE FRONT, ETC.
 T₁, T₂, T₃, T₄ - BAND SWITCH # 57-914-A
 C₁ - TRIMMER COND. # 50-262
 C₂ - TRIMMER COND. # 52-262

IF 465 KC.

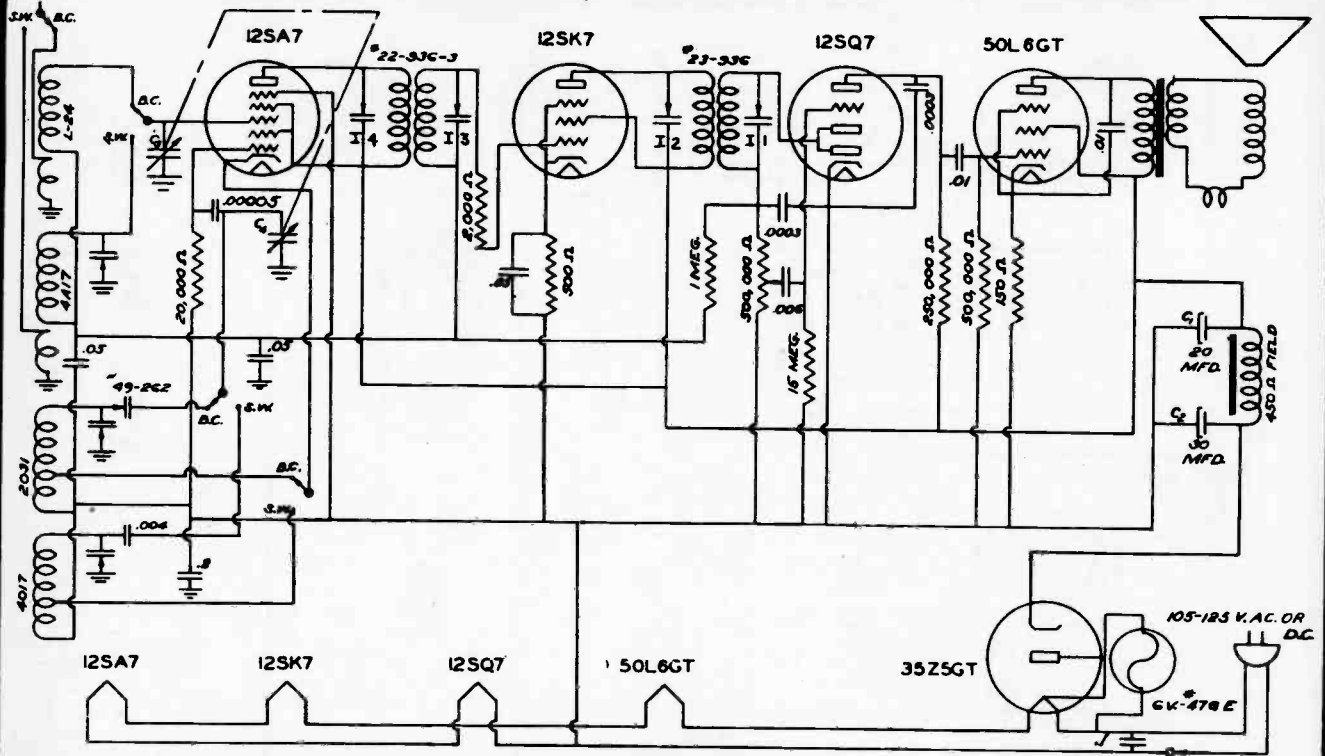
900^Ω FIELD
 C₁ - 20
 C₂ - 10
 105-125V 60~ TRANS. # 55-936
 UNIVERSAL 40~ TRANS. # 70-936

MUTE SWITCH

SIX PUSH BUTTON TRIMMERS
 LARGE SCREWS

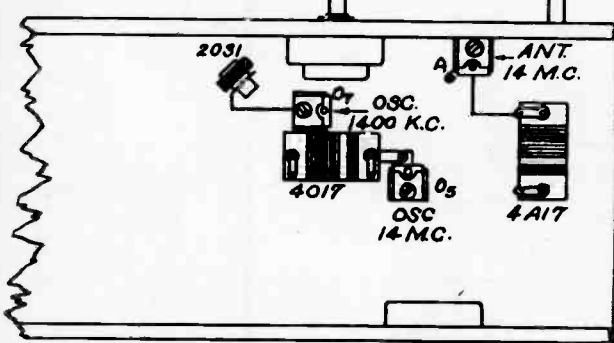
SIX PUSH BUTTON TRIMMERS
 SMALL SCREWS

MANUAL OF 1942 MOST POPULAR SERVICE DIAGRAMS



ALIGNMENT PROCEDURE

Wave-Band Switch Position	Position of Dial Pointer	Signal Generator Frequency	Signal Generator Connection	See Note	Trimmers Adjusted (In order shown)	Trimmer Function	Check for Image at
KC	540	465	Grid of 12SA7	A	I_1, I_2, I_3, I_4	IF	
MC	14 MC	14 MC	Ant. (Brown)	B	O_5, A_6	Osc. Ant.	13 MC
KC	1400 KC	1400 KC	Ant. (Brown)		O_7	Osc.	



SOCKET VOLTAGE READINGS

Voltage taken from B- with line voltage at 117 V. A.C.

High voltage reading off rectifier = 115V.

Drop across speaker field = 29V.

Use at least a 1000 Ohm per volt meter.

High voltage reading off rectifier = 121V.

Howard Radio Co.
Model 802

60

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 14 MC, then a weaker image will be heard at 13,070 KC, in other words 930 KC less on the dial.

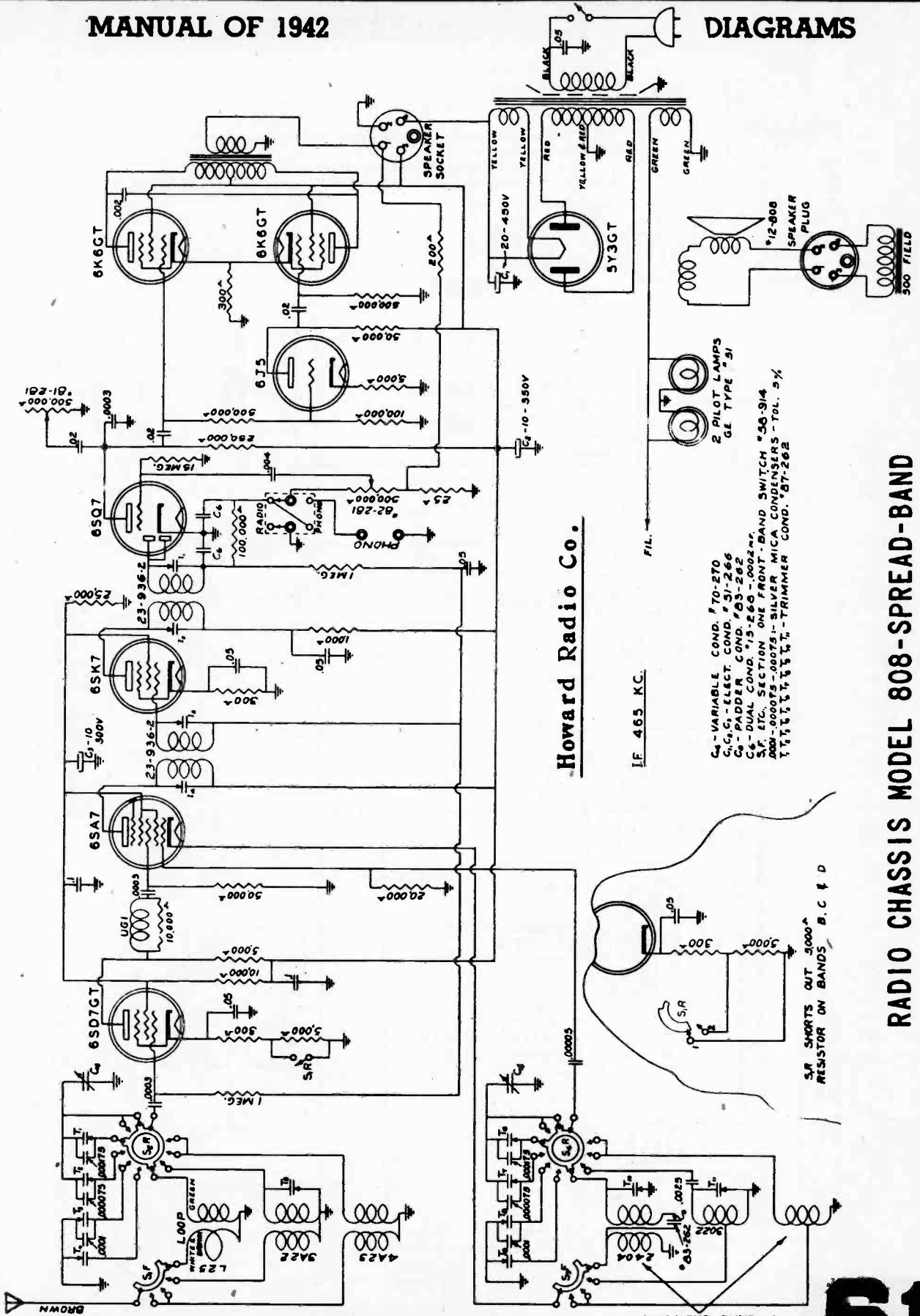
The tubes are connected in series in the order as shown by the schematic diagram.

The dual section filter condenser has a common negative, but note that it does not return to ground as the can is insulated from the chassis.

TUBE	FUNCTION	CATH.	SG.	PLATE
12SA7	Mixer	*	92 4	92 3
12SK7	I.F. Amp	2.1	5 92 6	92 8
12SQ7	Det.			42 6
50L6GT	Output	6	8 92 4	82 3
35Z5GT	Rectifier	121	8	

* Socket Terminal Number.

COMPILED BY M. N. BEITMAN, SUPREME PUBLICATIONS



Howard Radio Co.

IF 465 KC.

- C₄ - VARIABLE COND. #70-270
- C₅, C₆ - ELECT. COND. #31-266
- C₇ - PADDER COND. #35-262
- C₈ - DUAL COND. #5-265
- S₄ - DUAL SECTION ONE FRONT-BAND SWITCH #58-914
- TRIMMER COND. #35-262
- T₁, T₂, T₃, T₄, T₅ - TRIMMER COND. #35-262

S.P. SHORTS OUT 5000Ω
RESISTOR ON BANDS B, C & D

ON SAME COIL FORM

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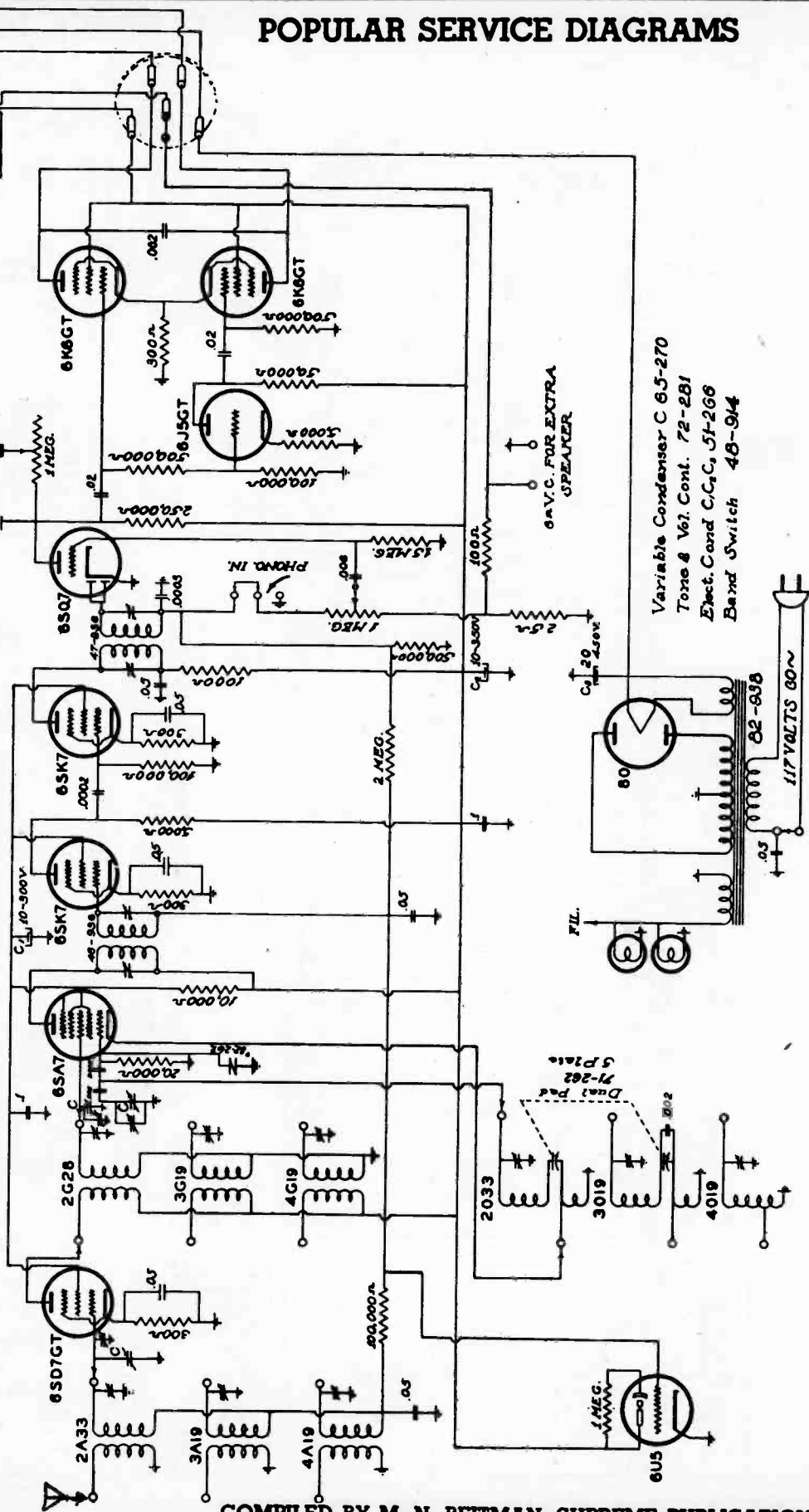
Howard Radio Co.

MODEL 868

10 Tube, 3 Band,
Electrical Band Spread, R.F.
Stage, Inverse Feed Back,
Push-Pull Output

I. F. 465 K. C.

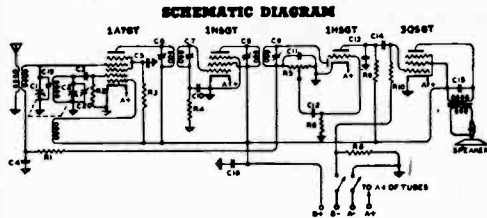
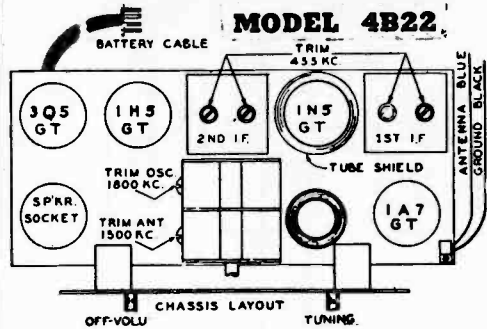
AS SWITCH IS SET TO HIGHER FREQUENCY BANDS THE SECONDARY COILS
OF THE LOWER FREQUENCY BANDS ARE SHORTED OUT



POPULAR SERVICE DIAGRAMS

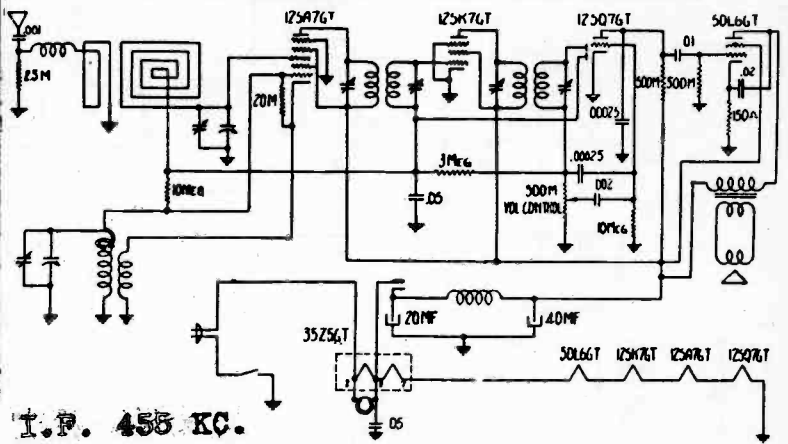
Variable Condenser C 65-270
Tone & Vol. Cont. T2-2B1
Elect. Cond. C₁C₂ C₃ 5F-200
Band Switch 4B-9/4

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Schematic Location	Description	Schematic Location	Description
R9	20K ohm	300K ohm	Resistor
R10	500 ohm	1M ohm	Resistor
R11	200K ohm	200K ohm	Resistor
R12	200K ohm	200K ohm	Resistor
R13	100K ohm	100K ohm	Resistor
R14	100K ohm	100K ohm	Resistor
R15	100K ohm	100K ohm	Resistor
R16	100K ohm	100K ohm	Resistor
R17	100K ohm	100K ohm	Resistor
R18	100K ohm	100K ohm	Resistor
R19	100K ohm	100K ohm	Resistor
R20	100K ohm	100K ohm	Resistor
R21	100K ohm	100K ohm	Resistor
R22	100K ohm	100K ohm	Resistor
R23	100K ohm	100K ohm	Resistor
R24	100K ohm	100K ohm	Resistor

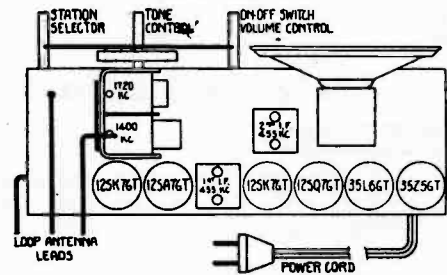
SCHEMATIC DIAGRAM MODEL 5T10 & 5T10W



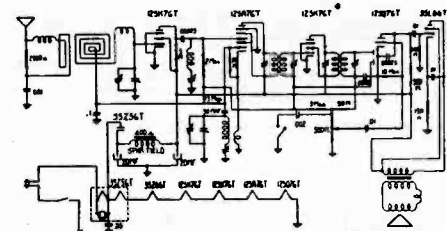
MODEL 6T23

Factory No. 4501X

TUBE LAYOUT

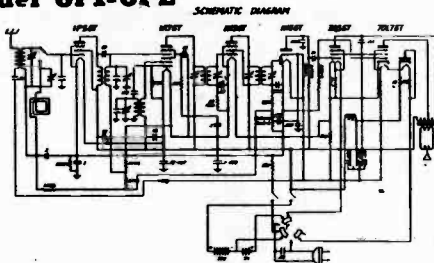


SCHEMATIC DIAGRAM

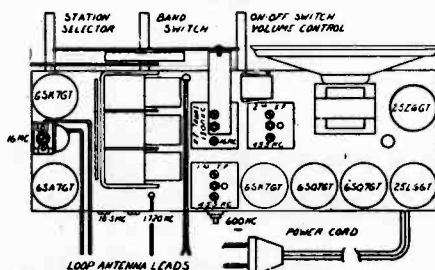


MAJESTIC RADIO AND TELEVISION CORP.
2600 WEST 50TH STREET CHICAGO, ILLINOIS

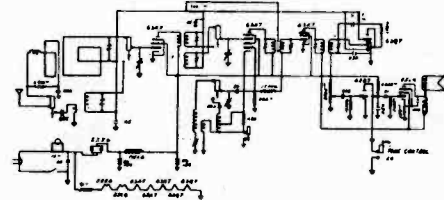
Model 6P1-6P2



MODEL 7T20

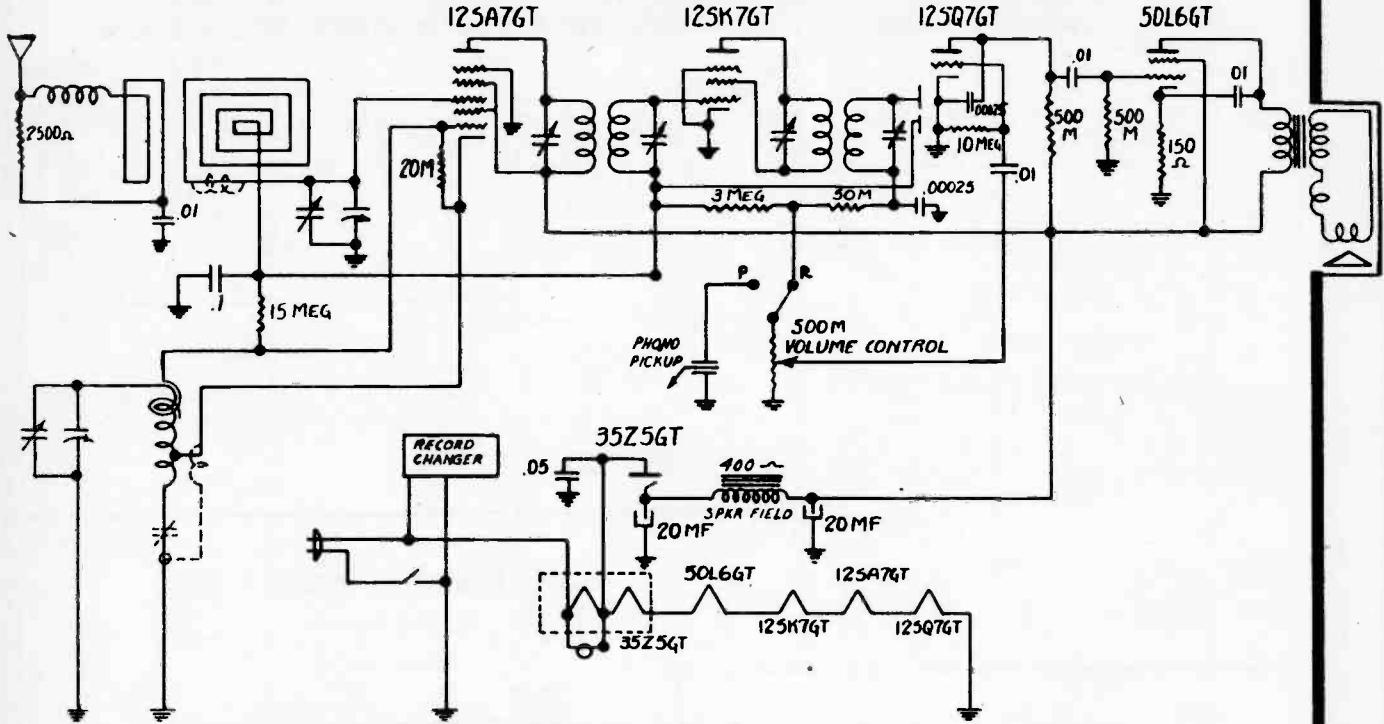


SCHEMATIC DIAGRAM



MAJESTIC RADIO AND TELEVISION CORP.

MANUAL OF 1942 MOST POPULAR SERVICE DIAGRAMS



Majestic Radio & Television Corporation

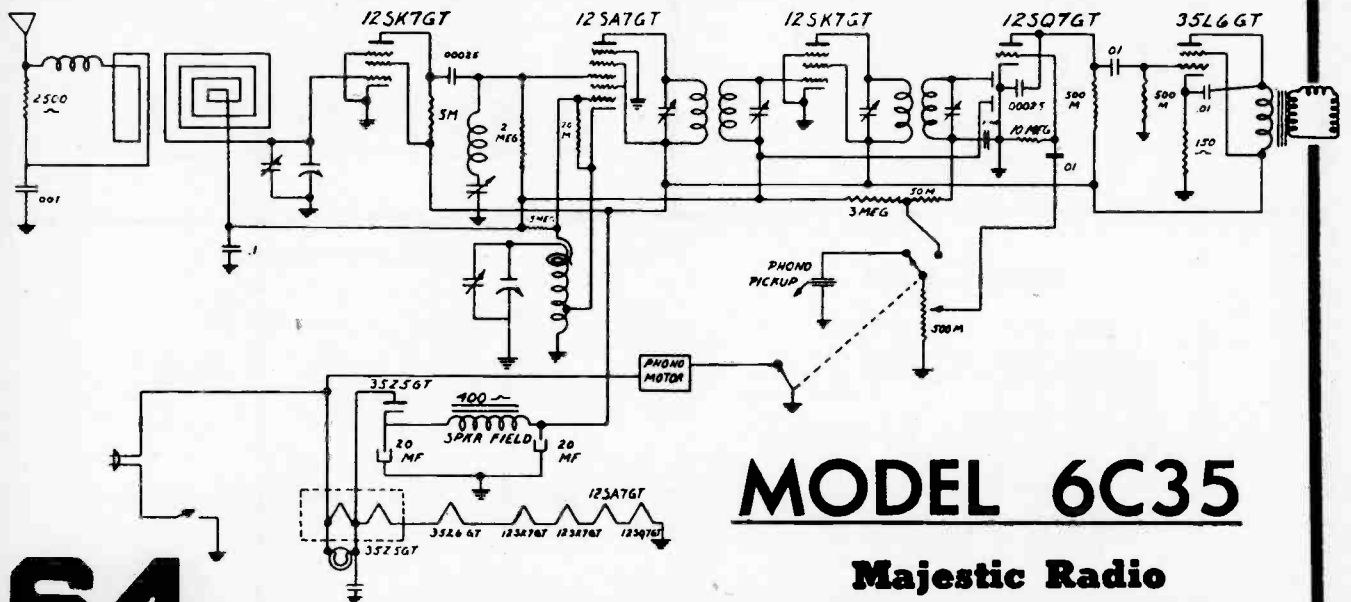
THE RECORD-CHANGER NEEDLE:

The needle supplied with this unit has a special durable point. No attempt should be made to use ordinary steel or fibre needles. They wear rapidly and will give poor reproduction. Only needles with a point durable enough to play 10 records or more without damaging them should be used.

MODEL 5C36

LOADING THE RECORDS FOR AUTOMATIC OPERATION:

This mechanism automatically plays in sequence up to twelve 10" records or ten 12" records at one set-up. ALL RECORDS MUST BE THE SAME SIZE FOR EACH SET-UP.



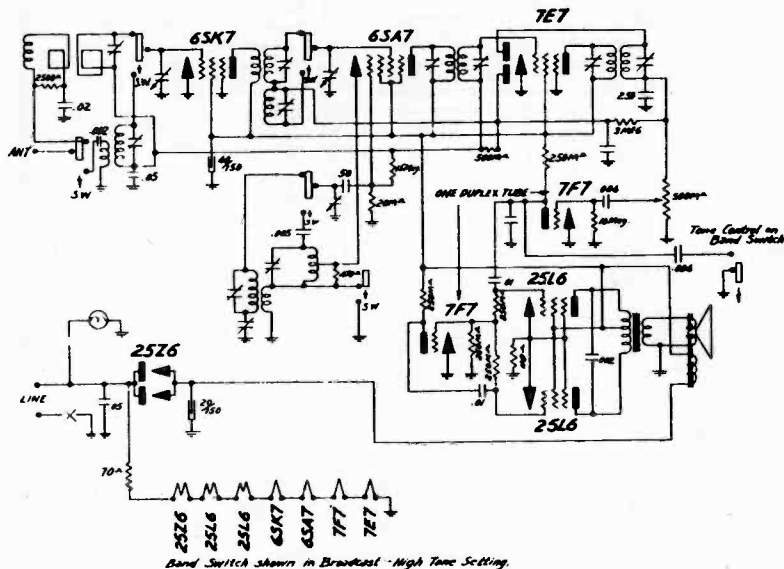
MODEL 6C35

Majestic Radio

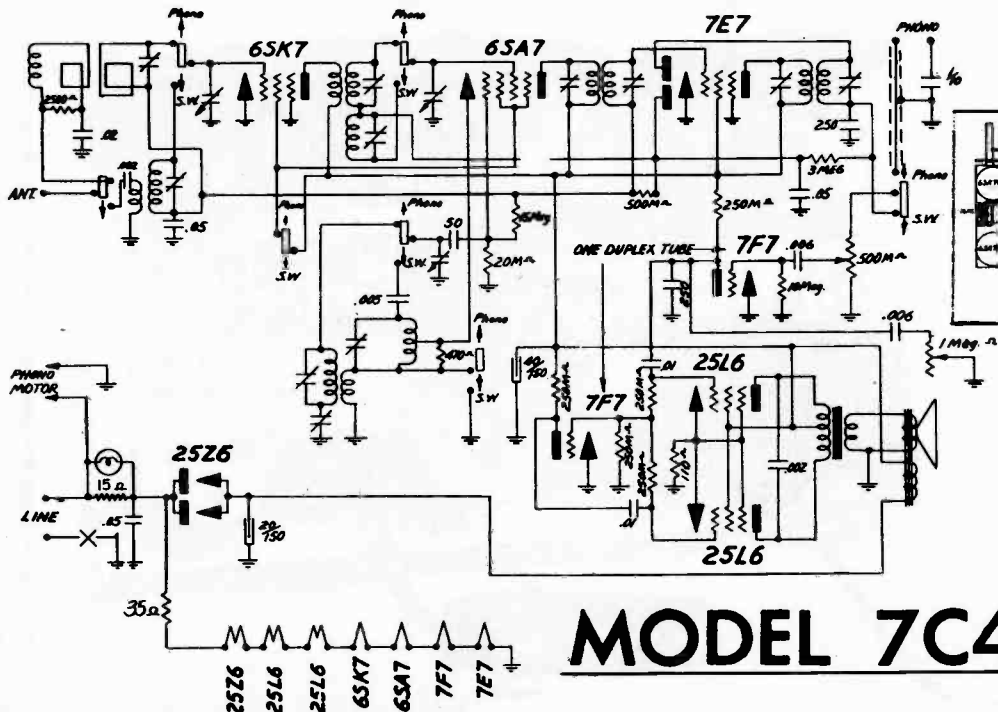
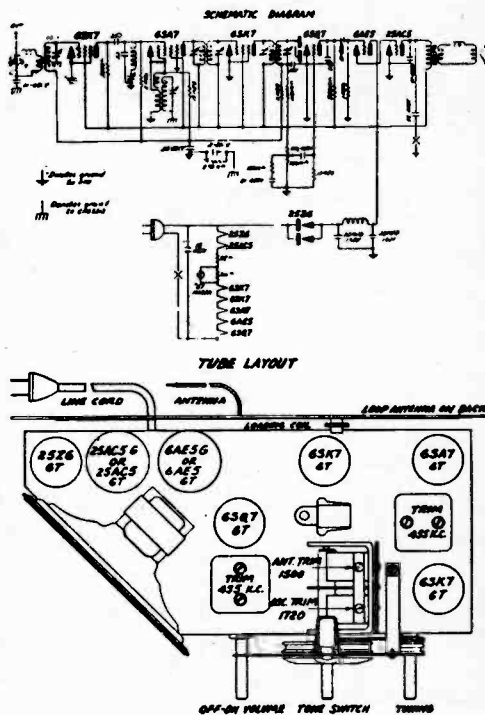
64

MANUAL OF 1942 MOST POPULAR SERVICE DIAGRAMS

Majestic Radio & Television Corporation



MODEL 7K60

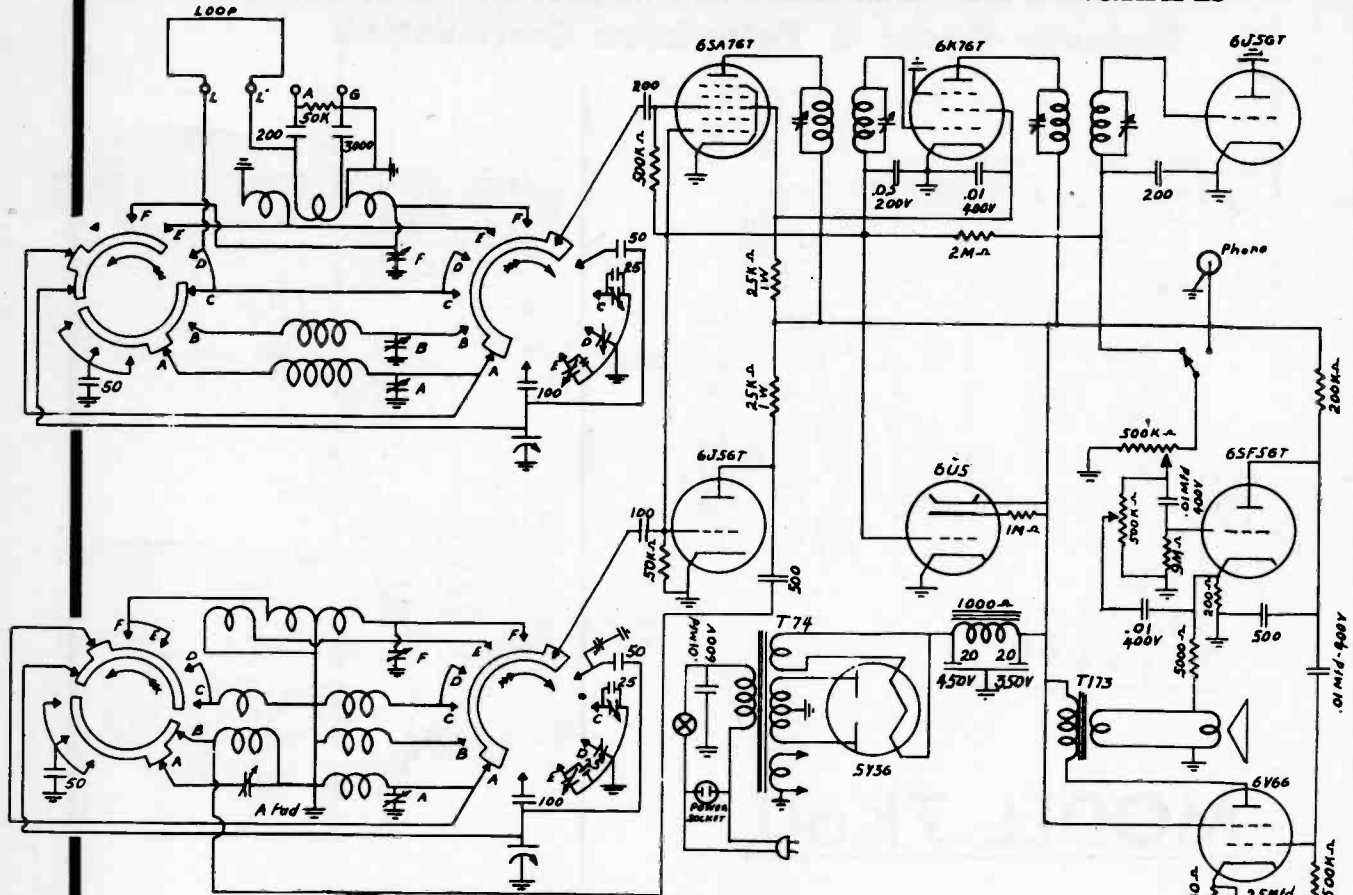


MODEL 7C40

Band switch sections shown in Broadcast setting.

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MANUAL OF 1942 MOST POPULAR SERVICE DIAGRAMS

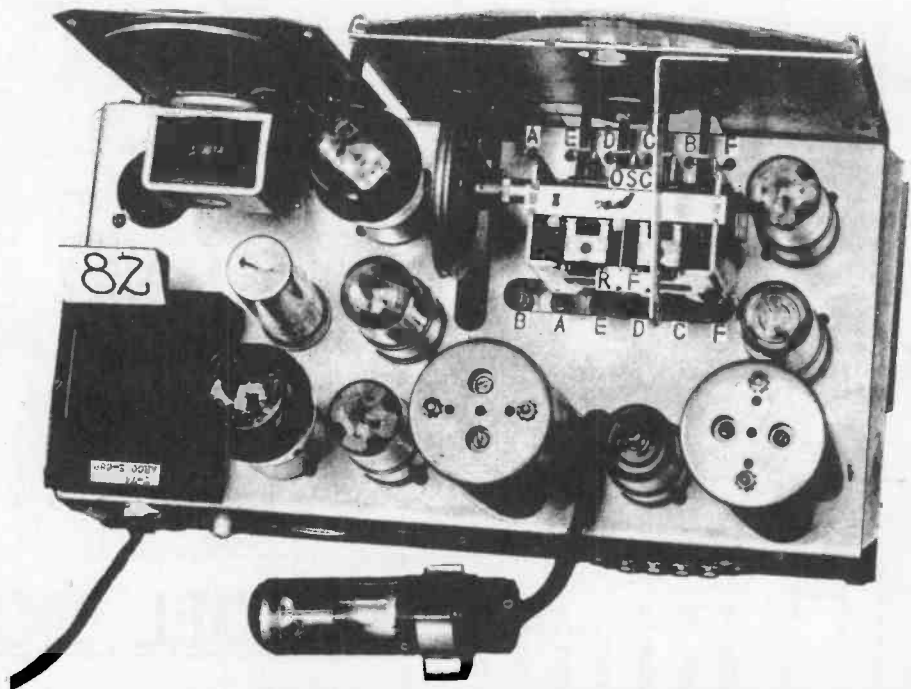


ALIGNMENT FREQUENCIES

- | | | | |
|-------------|-------------|-------------|-------------|
| IF - 456 KC | A - 1400 KC | C - 9.8 MC | E - 15.7 MC |
| | B - 6.6 MC | D - 11.7 MC | F - 24 MC |

MODEL 82 RECEIVER

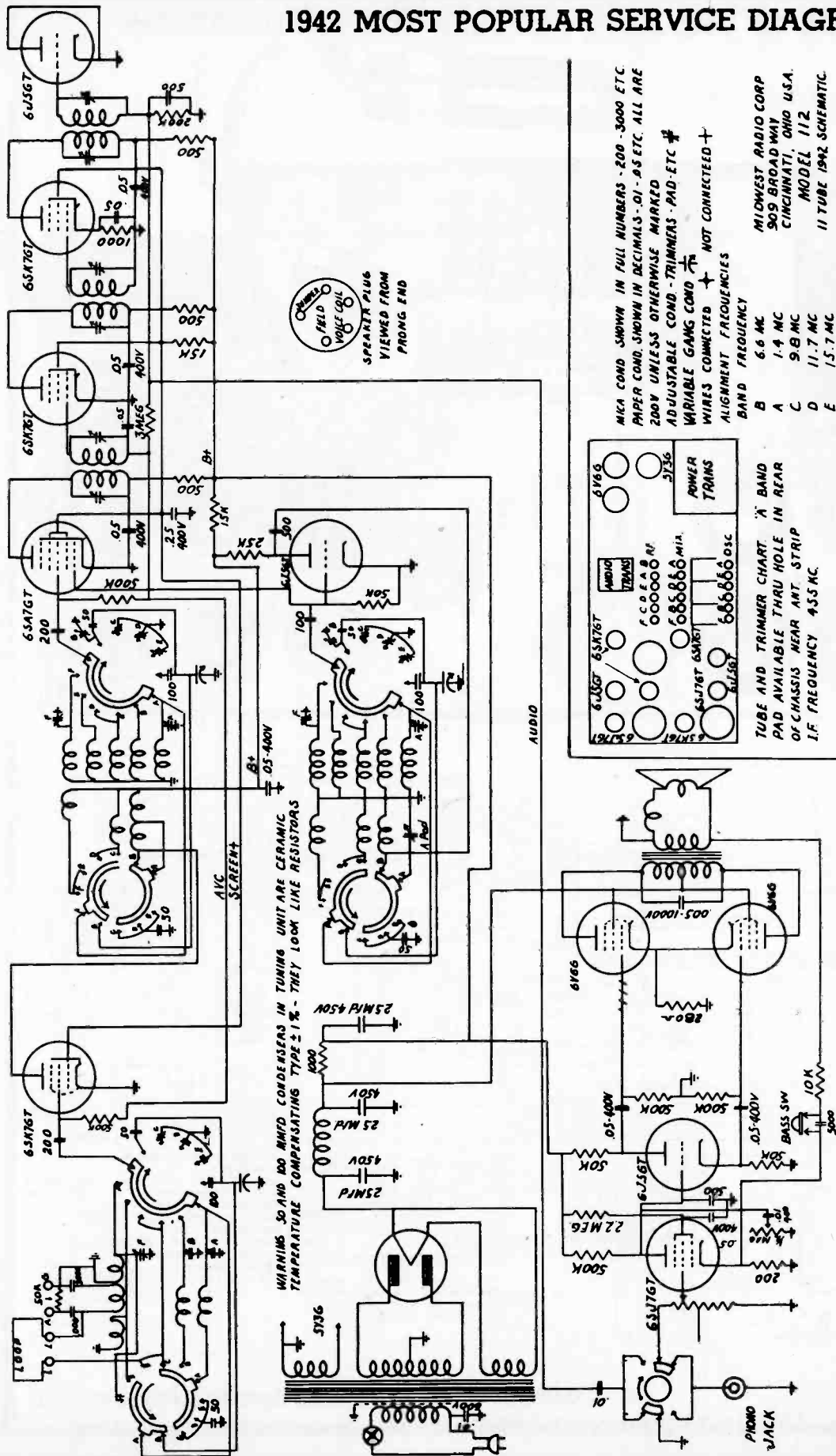
MIDWEST RADIO CORPORATION
909 Broadway
Cincinnati, Ohio



66

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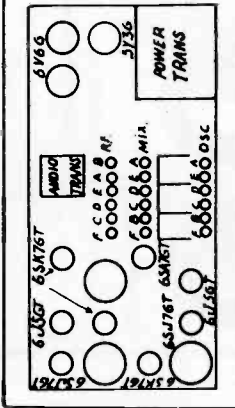
1942 MOST POPULAR SERVICE DIAGRAMS



WARNING: 50 AND 100 MMFD CONDENSERS IN TUNING UNIT ARE CERAMIC TEMPERATURE COMPENSATING TYPE ±1% - THEY LOOK LIKE RESISTORS



MICA COND. SHOWN IN FULL NUMBERS - .200 - .3000 ETC
PAPER COND. SHOWN IN DECIMALS - .01 - .05 ETC. ALL ARE
200V UNLESS OTHERWISE MARKED
ADJUSTABLE COND. - TRIMMERS - PAD - ETC #
VARIABLE GANG COND. + NOT CONNECTED +
ALIGNMENT FREQUENCIES
BAND FREQUENCY
B 6.6 MC
A 1.4 MC
C 9.8 MC
D 11.7 MC
E 15.7 MC
F 29.0 MC
ALIGN B BAND FIRST.



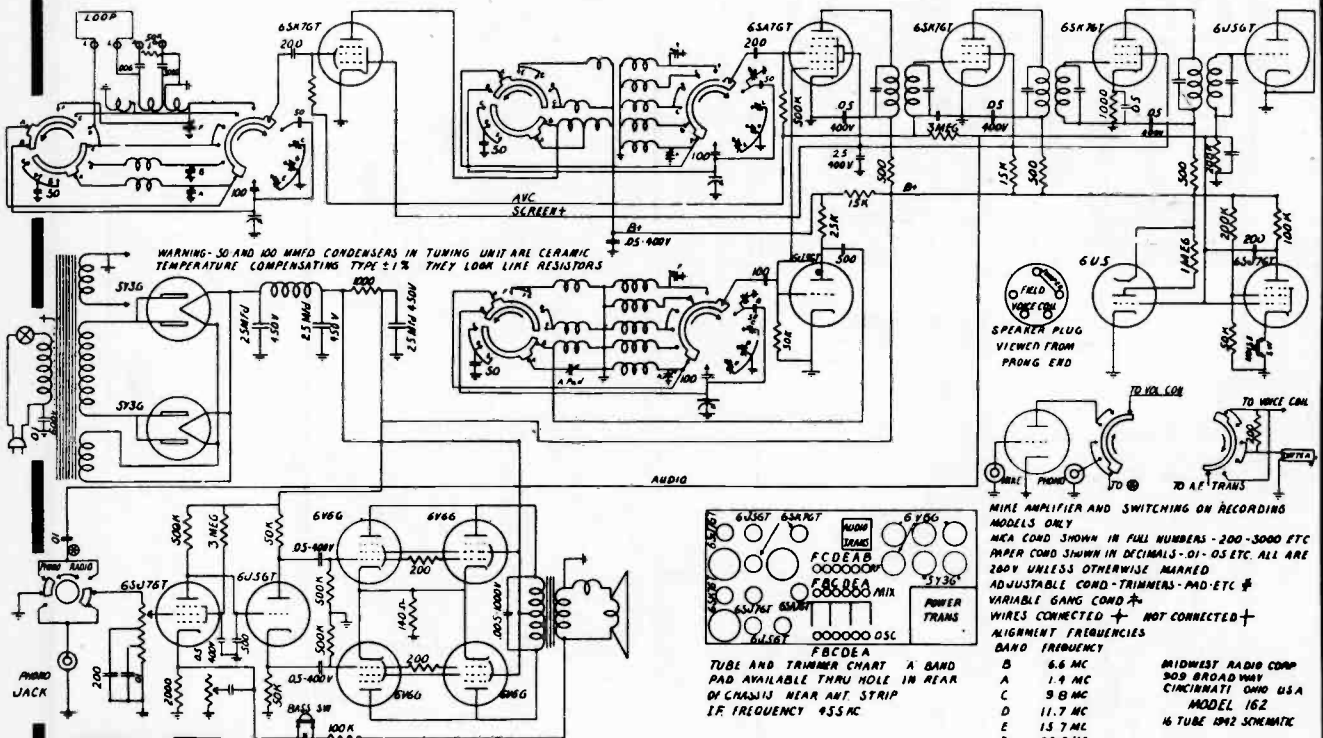
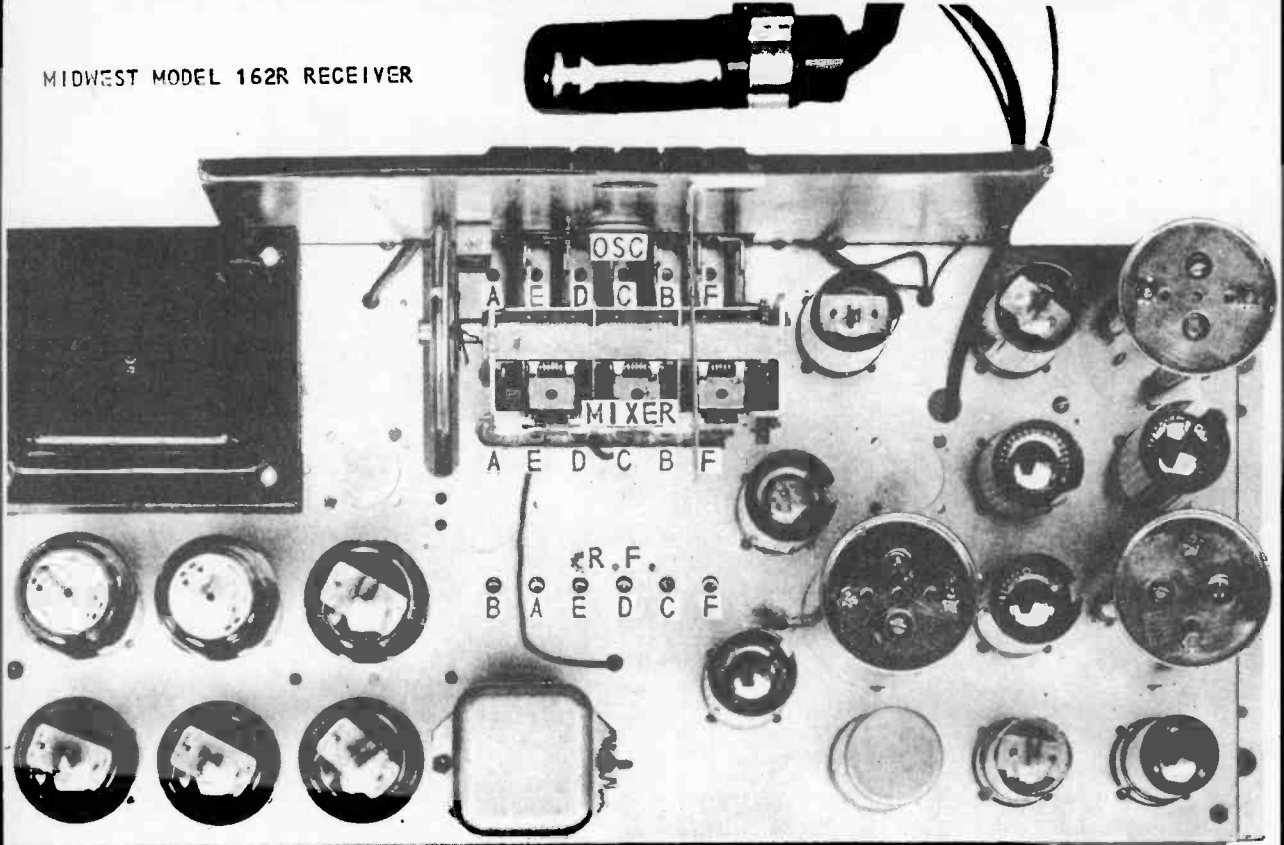
TUBE AND TRIMMER CHART 'A' BAND
PAD AVAILABLE THRU HOLE IN REAR
OF CHASSIS NEAR ANT STRIP
I.F. FREQUENCY 455 KC

MODEL 112

MIDWEST 11 TUBE 1942 RADIO

MANUAL OF 1942 MOST POPULAR SERVICE DIAGRAMS

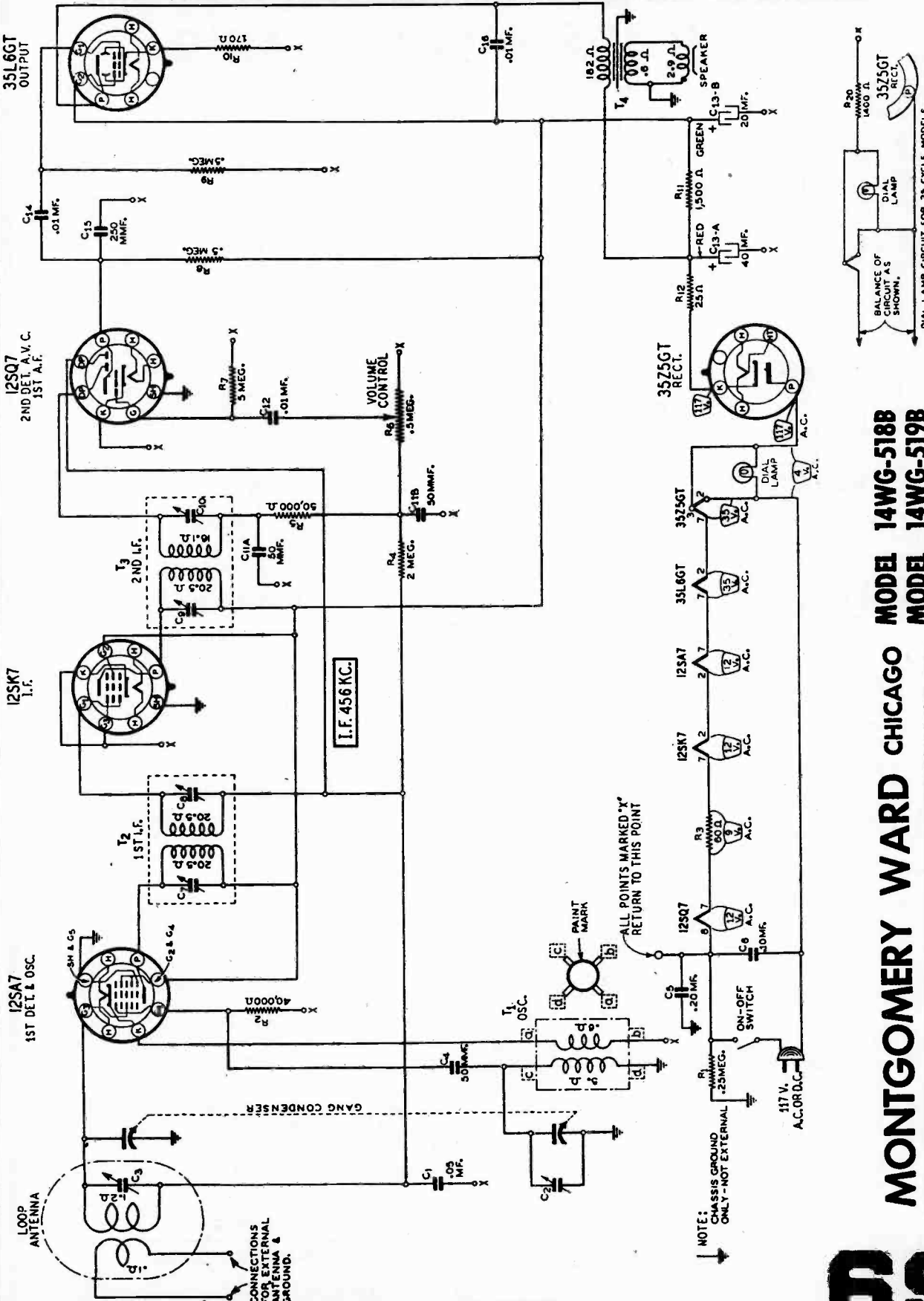
MIDWEST MODEL 162R RECEIVER



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MANUAL OF 1942 MOST POPULAR SERVICE DIAGRAMS



COMPILED BY M. N. BEITMAN, SUPREME PUBLICATIONS

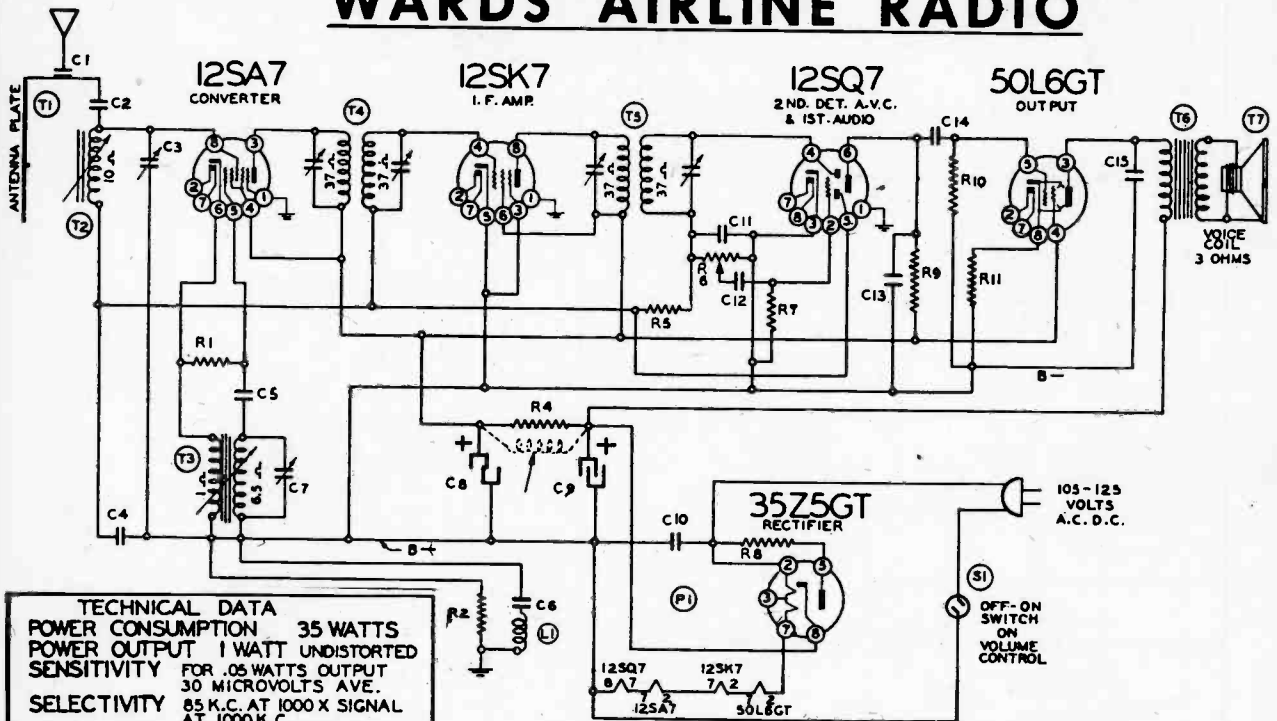
MONTGOMERY WARD CHICAGO
MODEL 14WG-518B
MODEL 14WG-519B

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25 CYCLE MODELS

MANUAL OF 1942 MOST POPULAR SERVICE DIAGRAMS

WARDS AIRLINE RADIO



TECHNICAL DATA
 POWER CONSUMPTION 35 WATTS
 POWER OUTPUT 1 WATT UNDISTORTED
 SENSITIVITY FOR .05 WATTS OUTPUT
 30 MICROVOLTS AVE.
 SELECTIVITY 85 K.C. AT 1000 X SIGNAL
 AT 1000 K.C.
 TUNING RANGE 535 TO 1720 K.C.
 INTERMEDIATE FREQUENCY 455 K.C.

RESISTORS

- R1 BE130176 20M ohm— $\frac{1}{2}$ w.
- R2 BE130100 150M ohm— $\frac{1}{2}$ w.
- R4 BE130279 1M ohm—1 w.
- R5 BE1304 3 megohm— $\frac{1}{2}$ w.
- R6 BE101255 500M ohm—Volume control and switch
- R7 BE130257 5 megohm— $\frac{1}{2}$ w.
- R8 BE130240 30 ohm— $\frac{1}{2}$ w.
- R9 BE130100 150M ohm— $\frac{1}{2}$ w.
- R10 BE13011 250M ohm— $\frac{1}{2}$ w.
- R11 BE130166 150 ohm— $\frac{1}{2}$ w.

- C1 BE131262 .0001 washer condenser (antenna clip on back plate)
- C2 BE129114 .0003 mica
- C3 BE124137 Trimmer on antenna coil
- C4 BE1009 .05 x 200 v.
- C5 BE12939 .00005 mica
- C6 BE10091 .15 x 400 v.
- C7 BE124137 Trimmer on oscillator coil
- C8 BE11992 20 Mfd. lytic x 150 w.v.
- C9 BE11992 40 mfd. lytic x 150 w. v.
- C10 BE10013 .05 x 400 v.
- C11 BE12912 .00025 mica
- C12 BE10025 .002 x 600 v.
- C13 BE1292 .0005 mica
- C14 BE10011 .01' x 400 v.

C15 BE10026 .02 x 400 v.

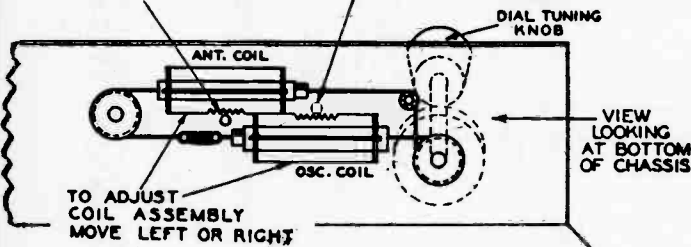
C3 and C7 are in same unit
 C8 and C9 are in same unit

CONDENSERS

PARTS

- T1 BE115597-18 Antenna plate (Walnut) or BE115597-9 Antenna plate (Ivory)
- T2 BE111181 Antenna permeability coil
- T3 BE110153 Oscillator permeability coil
- T4 BE108157-H Input I.F. coil—455 kc.
- T5 BE108157-I Output I.F. coil—455 kc.
- T6 BE105128 Output transformer
- T7 BE114199 4" PM speaker
- or
- T7 BE114259 4" Electrodynamic speaker
- S1 Switch on Volume control
- L1 BE105138 R.F. choke

NOTE "A" THE ANTENNA COIL ASSEMBLY IS MADE SO THAT IT IS MOVABLE LEFT OR RIGHT. WHEN MAKING THE ADJUSTMENT AS GIVEN IN THE ALIGNMENT PROCEDURE MOVE THE COIL ASSEMBLY VERY SLOWLY. IT CAN BE MOVED BY HAND OR BY PIVOTING ONE EDGE OF THE BLADE OF A SCREWDRIVER IN THE HOLE AND ENGAGING THE BLADE IN THE GEAR TEETH OF THE COIL FORM.



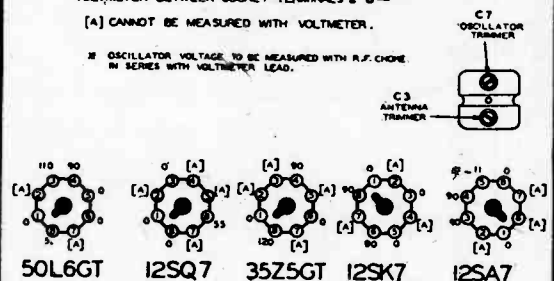
COIL ASSEMBLY VIEW

BOTTOM VIEW OF CHASSIS

VOLTAGES MEASURED WITH A HIGH RESISTANCE VOLTMETER BETWEEN SOCKET TERMINALS & B—

[A] CANNOT BE MEASURED WITH VOLTMETER.

* OSCILLATOR VOLTAGE TO BE MEASURED WITH R.F. CHOKER IN SERIES WITH VOLTMETER LEAD.



REAR OF CHASSIS VOLTAGE CHART

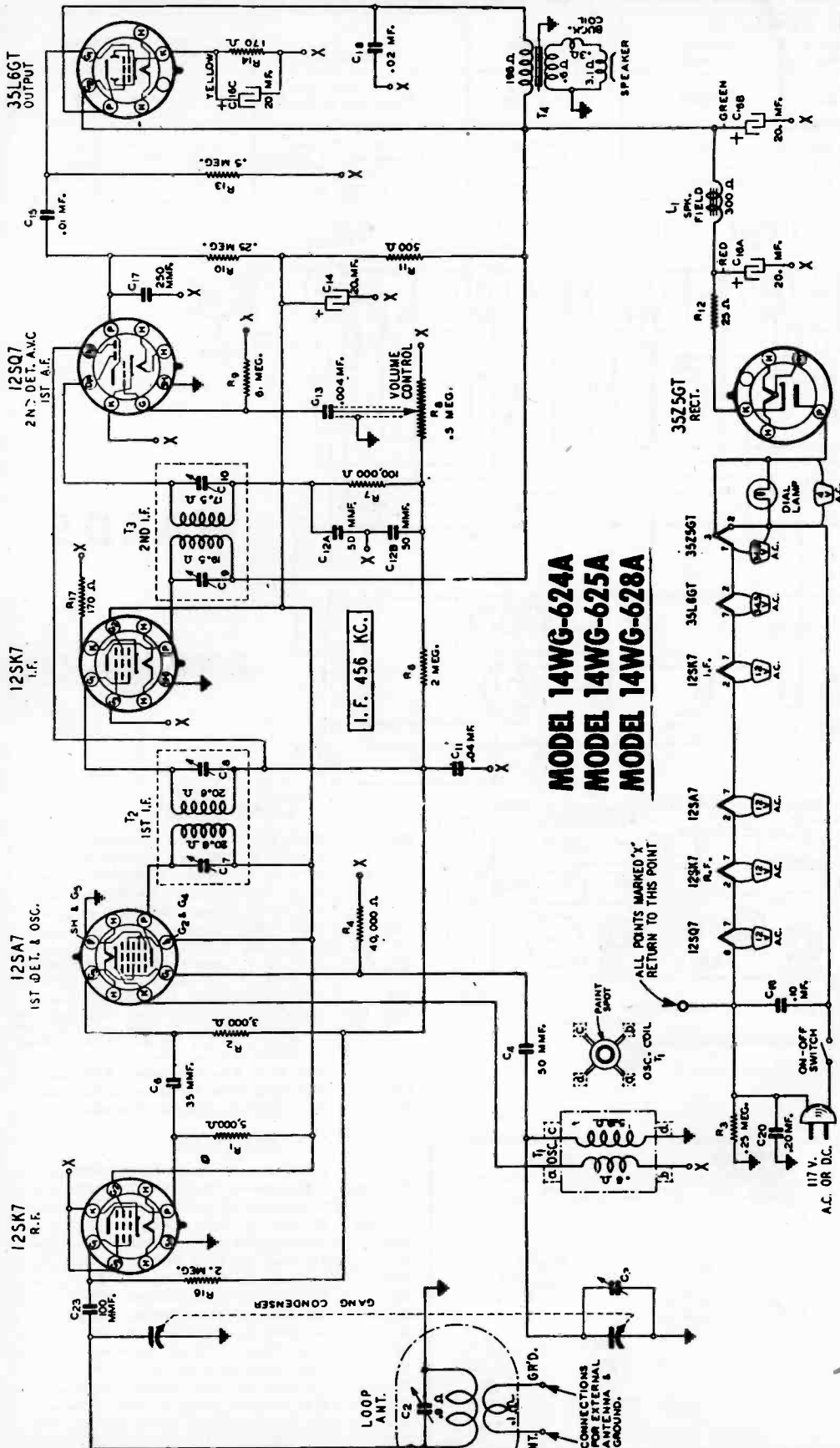
MODEL 14BR-521A

MODEL 14BR-522A

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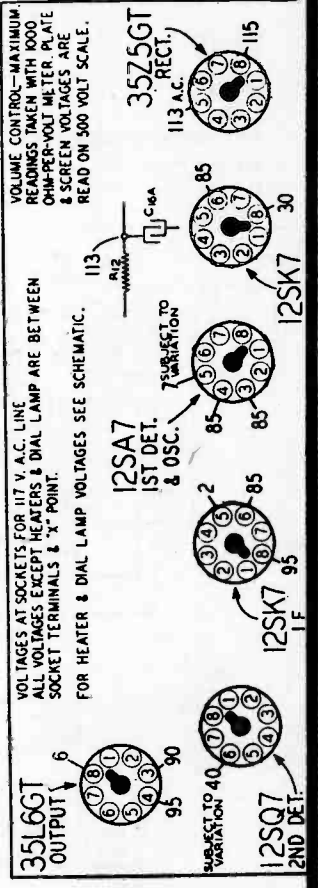
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MANUAL OF 1942 MOST POPULAR SERVICE DIAGRAMS



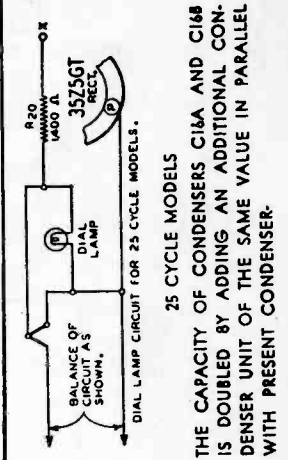
I.F. 456 KC.

ALL POINTS MARKED "X"
RETURN TO THIS POINT



VOLTAGES AT SOCKETS FOR 117 V. A.C. LINE. ALL VOLTAGES EXCEPT HEATERS & DIAL LAMP ARE BETWEEN SOCKET TERMINALS & "X" POINT. FOR HEATER & DIAL LAMP VOLTAGES SEE SCHEMATIC.

35L6GT OUTPUT
SUBJECT TO 40% VARIATION

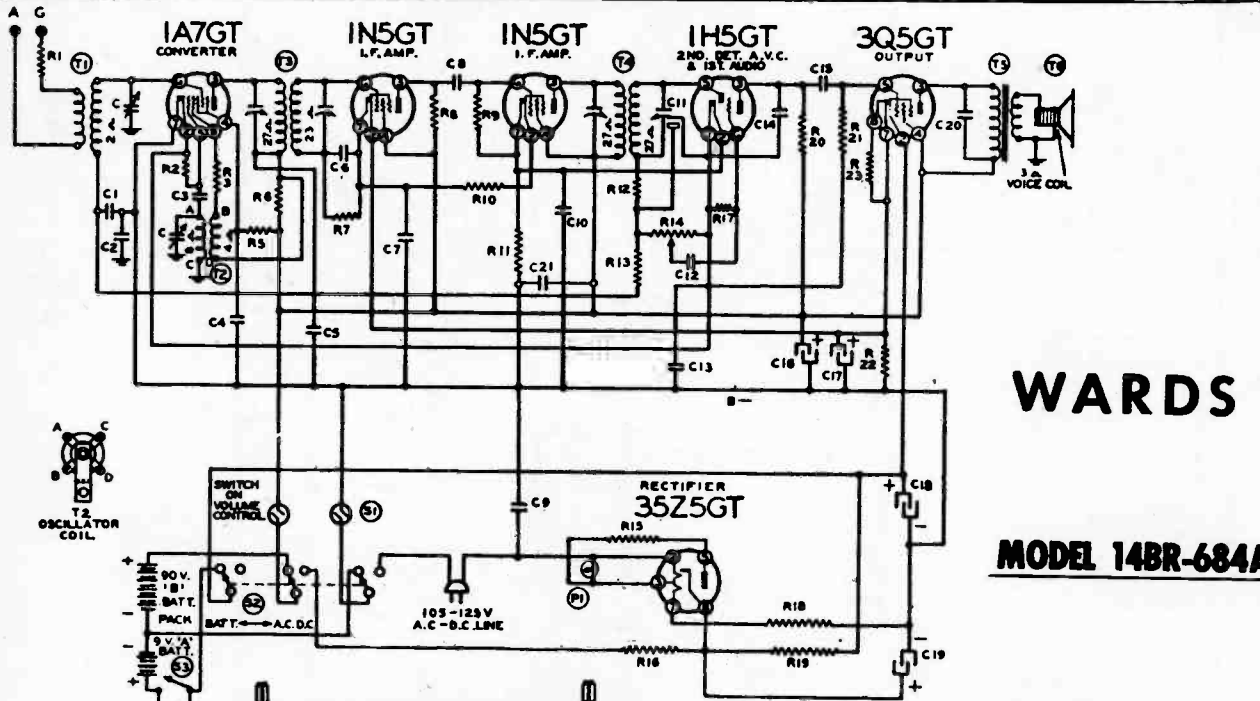


25 CYCLE MODELS

THE CAPACITY OF CONDENSERS C16A AND C16B IS DOUBLED BY ADDING AN ADDITIONAL CONDENSER UNIT OF THE SAME VALUE IN PARALLEL WITH PRESENT CONDENSER.

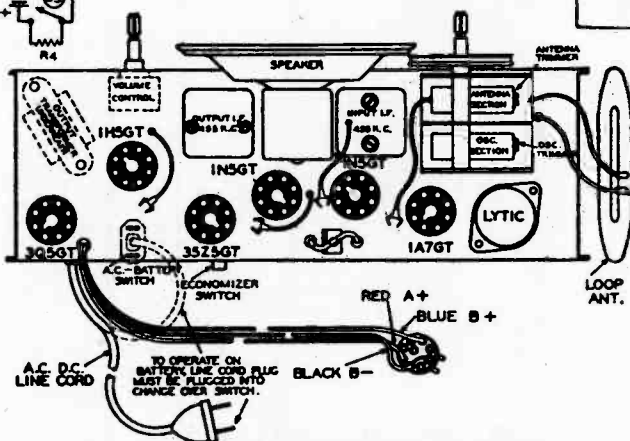
MANUAL OF 1942 MOST POPULAR SERVICE DIAGRAMS

BAND	SIGNAL GENERATOR		Connection to Radio	Dial Setting	Trimmers Adjusted (in Order Shown)
	Frequency Setting	Dummy Antenna			
455 Kc. I. F.	455 Kc.	.1 MFD.	Connect to Grid of 1A7	Rotor full open (Plates out of mesh)	Input and Output Trimmers on Top of I. F. cans
BROADCAST BAND	1600 Kc.	.1 MFD.	Connect to Grid of 1A7	Rotor full open (Plates out of mesh)	Osc. Trimmer on gang (See chassis view)
	1400 Kc.	200 MMF.	Connect to Antenna Clip	Set dial at 1400 Kc.	Ant. Trimmer on gang (See chassis view)



WARDS

MODEL 14BR-684A

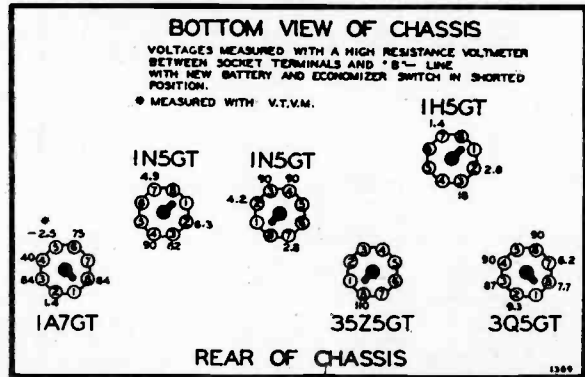


CONDENSERS

- C20 .004 x 600 V. Tubular Condenser.....
- C2 .2 x 400 V. Tubular Condenser.....
- C4, C6 .01 x 120 V. Tubular Condenser.....
- C1 .05 x 120 V. Tubular Condenser.....
- C5 .1 x 200 V. Tubular Condenser.....
- C12 .006 x 120 V. Tubular Condenser.....
- C7, C10, C13 .25 x 200 V. Tubular Condenser.....
- C15, C14 .01 x 200 V.; .0001 x 200 V. Dual Tubular Condenser.....
- C21 .1 x 200 V. Tubular Condenser.....
- C16, C17, C18, C19 Electrolytic Filter Condenser 20 Mfd. x 50 V.; 40 Mfd. x 150 V.; 40 Mfd. x 150 V.; 200 Mfd. x 10 V. 50-60 Cycles.....
- C8 .0005 Mica Type Condenser—20%.....
- C3 .0001 Mica Type Condenser—20%.....
- C9 .02 x 400 Volt Tubular Condenser.....

RESISTORS

- R20 1 Megohm—1/2 Watt Resistor—20%.....
- R13, R21 3 Megohm—1/2 Watt Resistor—20%.....
- R7, R9, R17 5 Megohm—1/2 Watt Resistor—25%.....
- R4, R15 20 Ohm—1/2 Watt Resistor—10%.....
- R16 2500 Ohm—1/2 Watt Resistor—10%.....
- R11 2M Ohm—1/2 Watt Resistor—10%.....
- R10 15 Ohm—1/2 Watt Resistor—10%.....
- R8 5M Ohm—1/2 Watt Resistor—20%.....
- R3, R6 3M Ohm—1/2 Watt Resistor—20%.....
- R22 700 Ohm—1/2 Watt Resistor—10%.....
- R2 200M Ohm—1/2 Watt Resistor—20%.....
- R5 65M Ohm—1/2 Watt Resistor—10%.....
- R1 1M Ohm—1/2 Watt Resistor—20%.....
- R12 47M Ohm—1/2 Watt Resistor—20%.....
- R18 545 Ohm—14 Watt W.W. Resistor—5%.....
- R19 1975 Ohm—6 Watt W.W. Resistor—5%.....
- R23 350 Ohm—1/2 Watt Resistor—10%.....

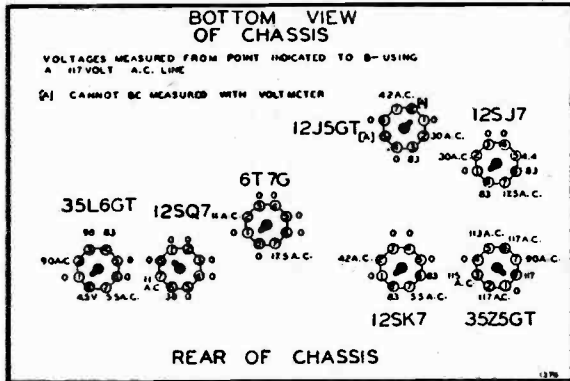


MANUAL OF 1942 MOST POPULAR SERVICE DIAGRAMS

● Connect B—of radio chassis to ground post of signal generator through .1 Mfd. condenser.

BAND	SIGNAL GENERATOR Frequency Setting	Dummy Antenna	Connection to Radio	Position of Band Switch	Variable Condenser Setting	Trimmers Adjusted to Maximum
I. F.	455 Kc.	.1 MFD.	Grid of 12SK7 I. F.	Broadcast	Rotor full open (Plates out of mesh)	Two trimmers on top of Output I. F.
	455 Kc.	.1 MFD.	Grid of 12SJ7 Mixer	Broadcast	Rotor full open (Plates out of mesh)	Two trimmers on top of Input I. F.
SHORT WAVE BAND	12 Mc.	400 Ohms	External Antenna and B—	Short Wave	Set Dial at 12 Mc.	S.W. Osc. trimmer C10 S.W. Ant. trimmer C3
BROADCAST BAND	1600 Kc.	.1 mmf.	Grid of 12SJ7	Broadcast	Rotor full open (Plates out of mesh)	B.C. Osc. trimmer C12 on Gang
	1400 Kc.	200 mmf.	External Antenna and B—	Broadcast	Set Dial at 1400 K. C.	B.C. Ant. trimmer C6

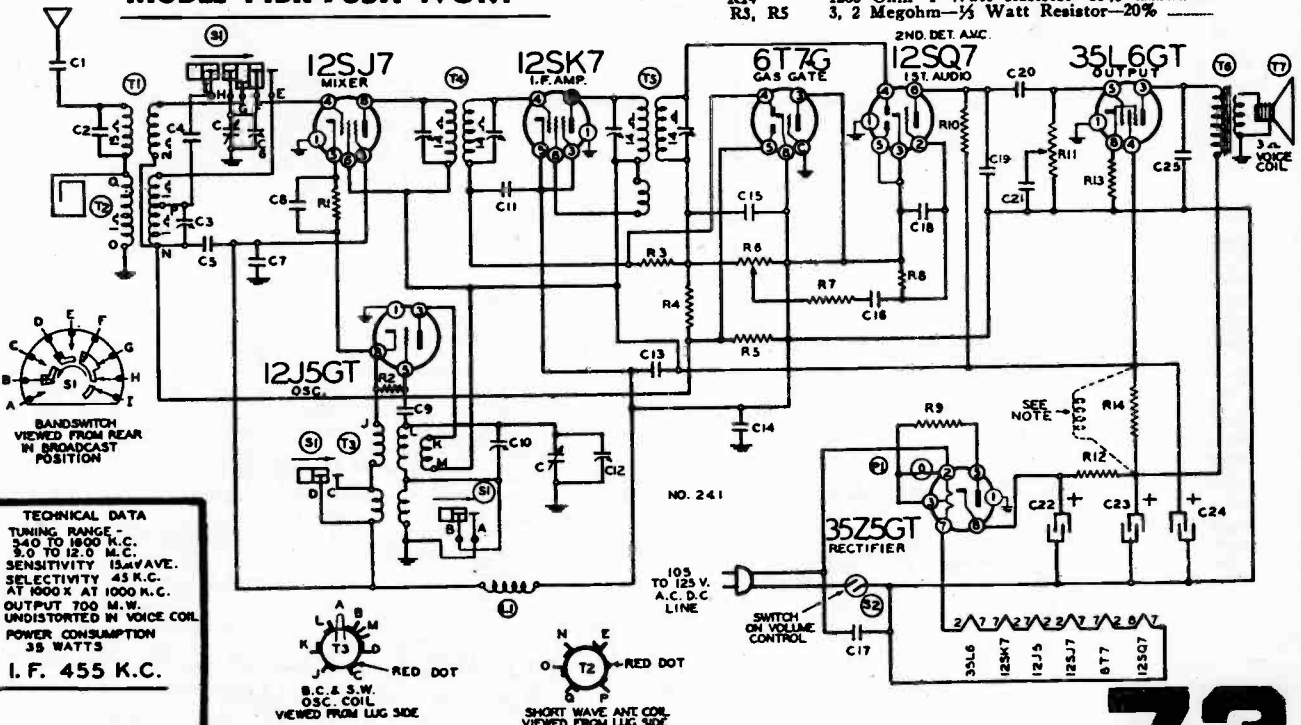
NOTE: The Oscillator Frequency is lower than the signal frequency and should be aligned accordingly.



The loop antenna should be connected to the radio when making all adjustments.

- C11 .05 x 200 Volt Tubular Condenser
- C16, C21 .006 x 600 Volt Tubular Condenser
- C13 .1 x 200 Volt Tubular Condenser
- C25, C20 .02 x 400 Volt Tubular Condenser
- C1 .003 x 600 Volt Tubular Condenser
- C7, C14 .1 x 400 Volt Tubular Condenser
- C8 .01 x 120 Volt Tubular Condenser
- C5 .05 x 120 Volt Tubular Condenser
- C17 .03 x 400 Volt Tubular Condenser
- Electrolytic Filter Cond. added for 25 cycle only. 40 mfd. x 150 Volts across C22 and 20 Mfd. x 150 Volts across C23
- C22, C23, C24 Electrolytic Filter Condenser—40 mfd.—20 mfd.—20 mfd. x 150 Volts
- C3, C10 S. W. Antenna and Oscillator Trimmer Condenser
- C9, C18 .0001 Mica Type Condenser—20%
- C15 .0002 Mica Type Condenser—20%
- C2 .00015 Mica Type Condenser—10%
- C4 .00045 Mica Type Condenser—3%
- C19 .00025 Mica Type Condenser
- R10 200M ohm—1/4 Watt Resistor—20%
- R2, R7 50M ohm—1/4 Watt Resistor—20%
- R4 2 Megohm—1/4 Watt Resistor—20%
- R12 200 Ohm—1/4 Watt Resistor—20%
- R9 20 Ohm—1/4 Watt Resistor—20%
- R13 150 Ohm—1/4 Watt Resistor—10%
- R1 5M Ohm—1/4 Watt Resistor—10%
- R8 5 Megohm—1/4 Watt Resistor—25%
- R14 1200 Ohm—1 Watt Resistor—10%
- R3, R5 3, 2 Megohm—1/4 Watt Resistor—20%

MODEL 14BR-734A BROWN MODEL 14BR-735A IVORY

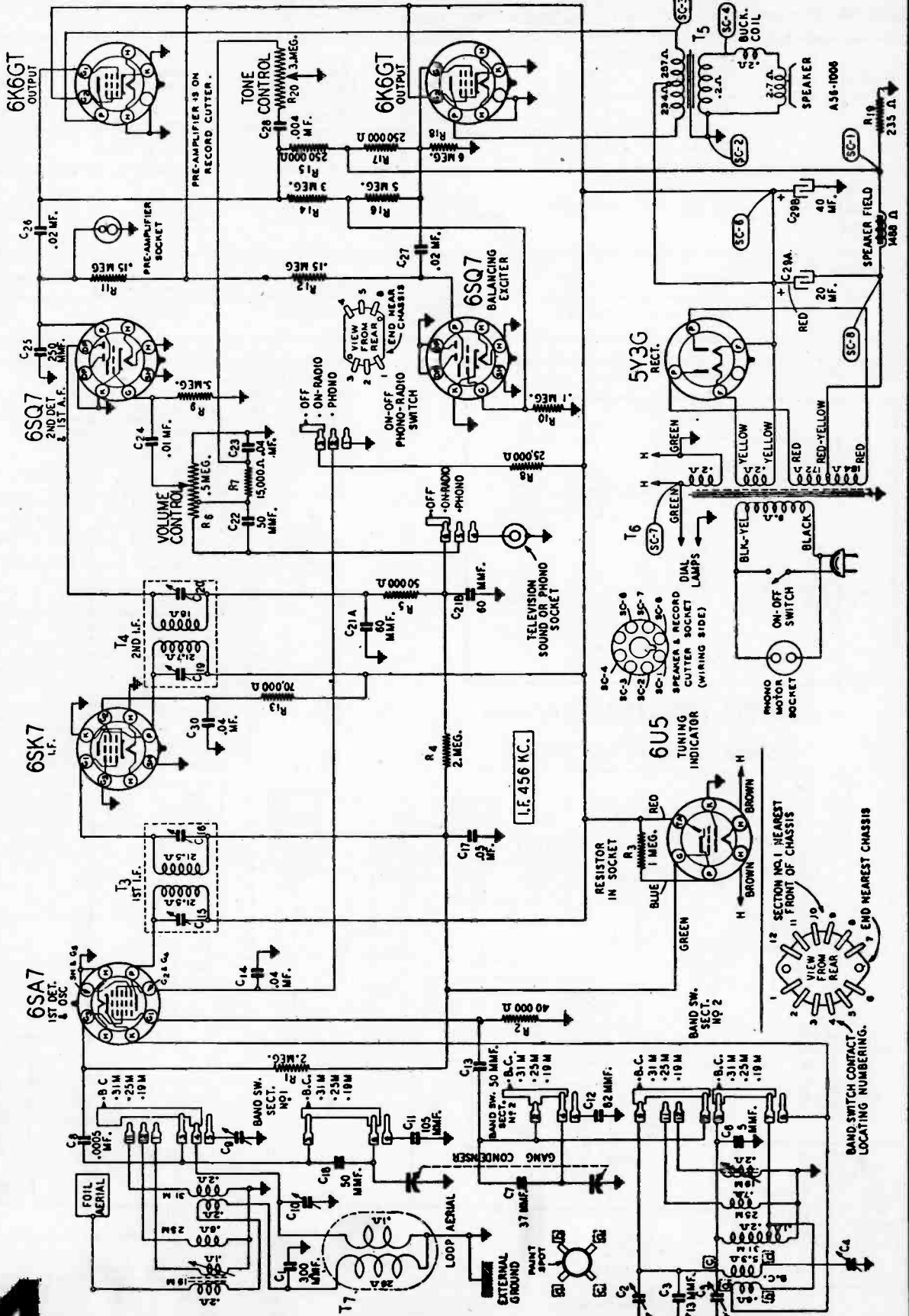


MANUAL OF 1942 MOST POPULAR SERVICE DIAGRAMS

MODEL 14WG-808W
14WG-808M

MONTGOMERY WARD CHICAGO

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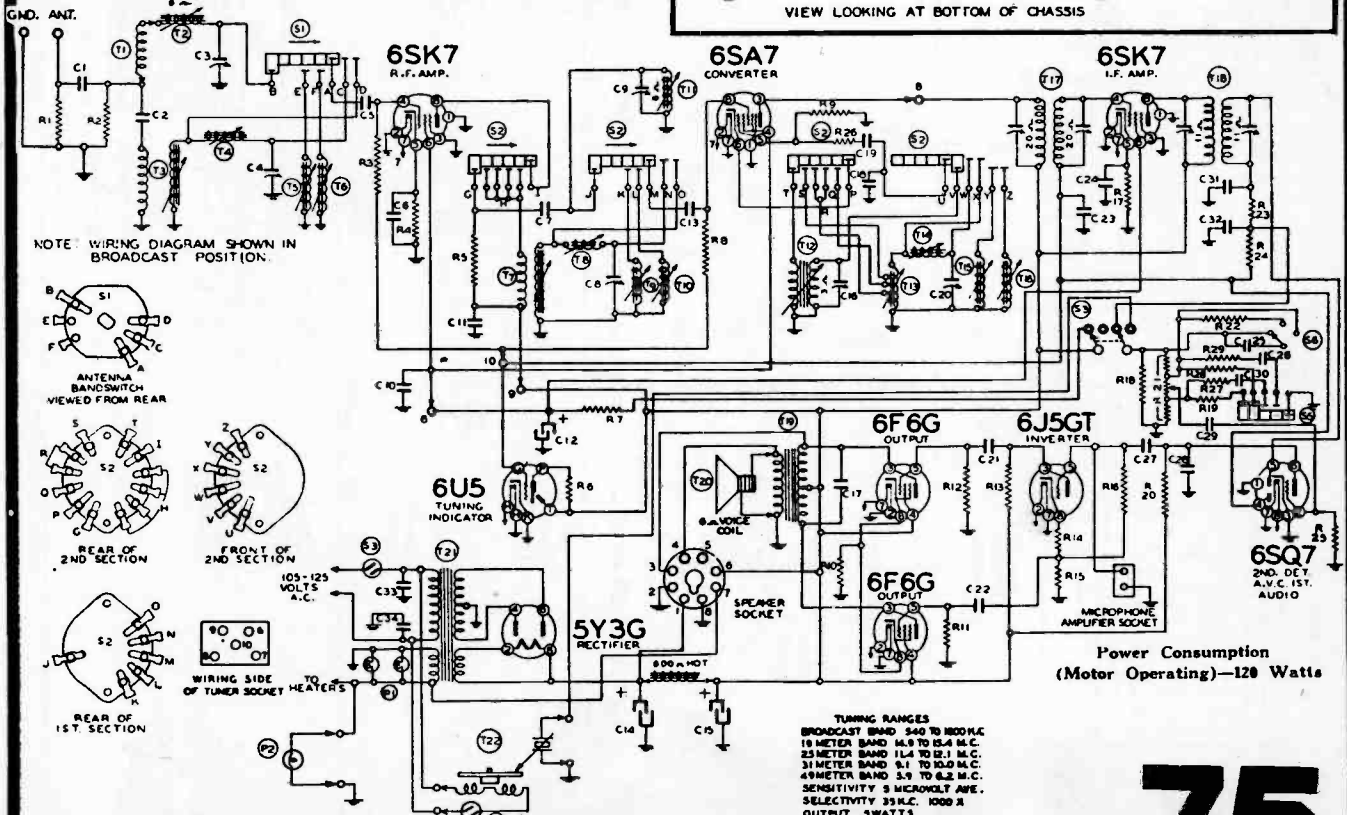
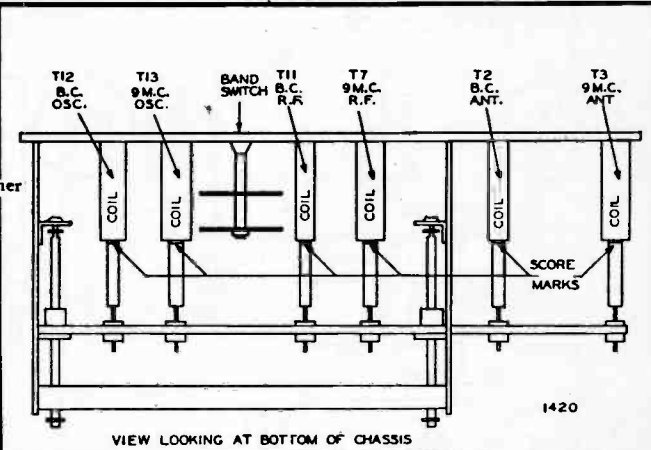
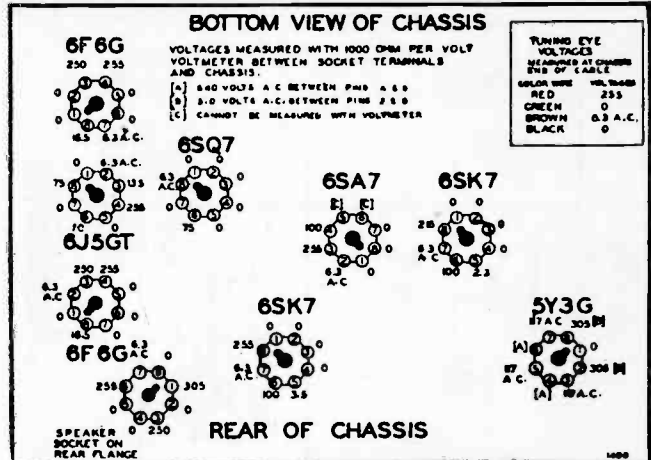
MANUAL OF 1942 MOST POPULAR SERVICE DIAGRAMS

MONTGOMERY WARD

MODEL 14BR-912A

- R1 25M ohm— $\frac{1}{4}$ w.
- R2 25M ohm— $\frac{1}{4}$ w.
- R3 1 megohm— $\frac{1}{4}$ w.
- R4 250 ohm— $\frac{1}{4}$ w.
- R5 5M ohm— $\frac{1}{4}$ w.
- R6 1 megohm in tuning
- R7 12,500 ohm—3 w.
- R8 1 megohm— $\frac{1}{4}$ w.
- R9 25M ohm— $\frac{1}{4}$ w.
- R10 300 ohm—1 w.
- R11 500M ohm— $\frac{1}{4}$ w.
- R12 500M ohm— $\frac{1}{4}$ w.
- R13 100M ohm— $\frac{1}{4}$ w.
- R14 5M ohm— $\frac{1}{4}$ w.
- R15 100M ohm— $\frac{1}{4}$ w.
- R16 1 megohm— $\frac{1}{4}$ w.
- R17 500 ohm— $\frac{1}{4}$ w.
- R18 500M ohm— $\frac{1}{4}$ w.
- R19 500M ohm— $\frac{1}{4}$ w.
- R20 250M ohm— $\frac{1}{4}$ w.
- R21 2.8 megohm—volume control
- R22 1.5 megohm— $\frac{1}{4}$ w.
- R23 50M ohm— $\frac{1}{4}$ w.
- R24 3 megohm— $\frac{1}{4}$ w.
- R25 5 megohm— $\frac{1}{4}$ w.
- R26 50 ohm— $\frac{1}{4}$ w.
- R27 40M ohm— $\frac{1}{4}$ w.
- R28 150M ohm— $\frac{1}{4}$ w.
- R29 80M ohm— $\frac{1}{4}$ w.
- C1 .0005 mica
- C2 .002 x 600 v.
- C3 B.C. antenna trimmer
- C4 9 mc. antenna trimmer
- C5 .0005 mica

- C6 .1 x 200 v. tubular condenser
- C7 .00001 mica
- C8 9 mc. R.F. trimmer
- C9 B.C. R.F. trimmer
- C10 .1 x 400 v.
- C11 .1 x 400 v.
- C12 10.0 mfd. x 350 v. v. lytic
- C13 10.0 mfd. x 350 w. v. lytic
- C14 15.0 mfd. x 450 w. v. lytic
- C15 15.0 mfd. x 450 w. v. lytic
- C16 15.0 mfd. x 450 w. v. lytic
- C17 BE10071 .004 x 600 v.
- C18 BE129167 .0002 silver mica
- C19 BE129165 .00005 mica
- C20 BE124145 9 mc. oscillator trimmer
- C21 BE10013 .05 x 400 v.
- C22 BE1009 .05 x 200 v.
- C23 BE10026 .02 x 400 v.
- C24 BE10020 .1 x 200 v.
- C25 BE12951 .000125 mica
- C26 BE1002 .003 x 300 v.
- C27 BE10026 .02 x 400 v.
- C28 BE12921 .0002 mica
- C29 BE10019 .006 x 600 v.
- C30 BE100139 .0015 x 200 v.
- C31 BE129165 .00005 mica
- C32 BE129165 .00005 mica
- C33 BE10061 .02 x 600 v. Bakelite
- C34 BE10061 .02 x 600 v. Bakelite

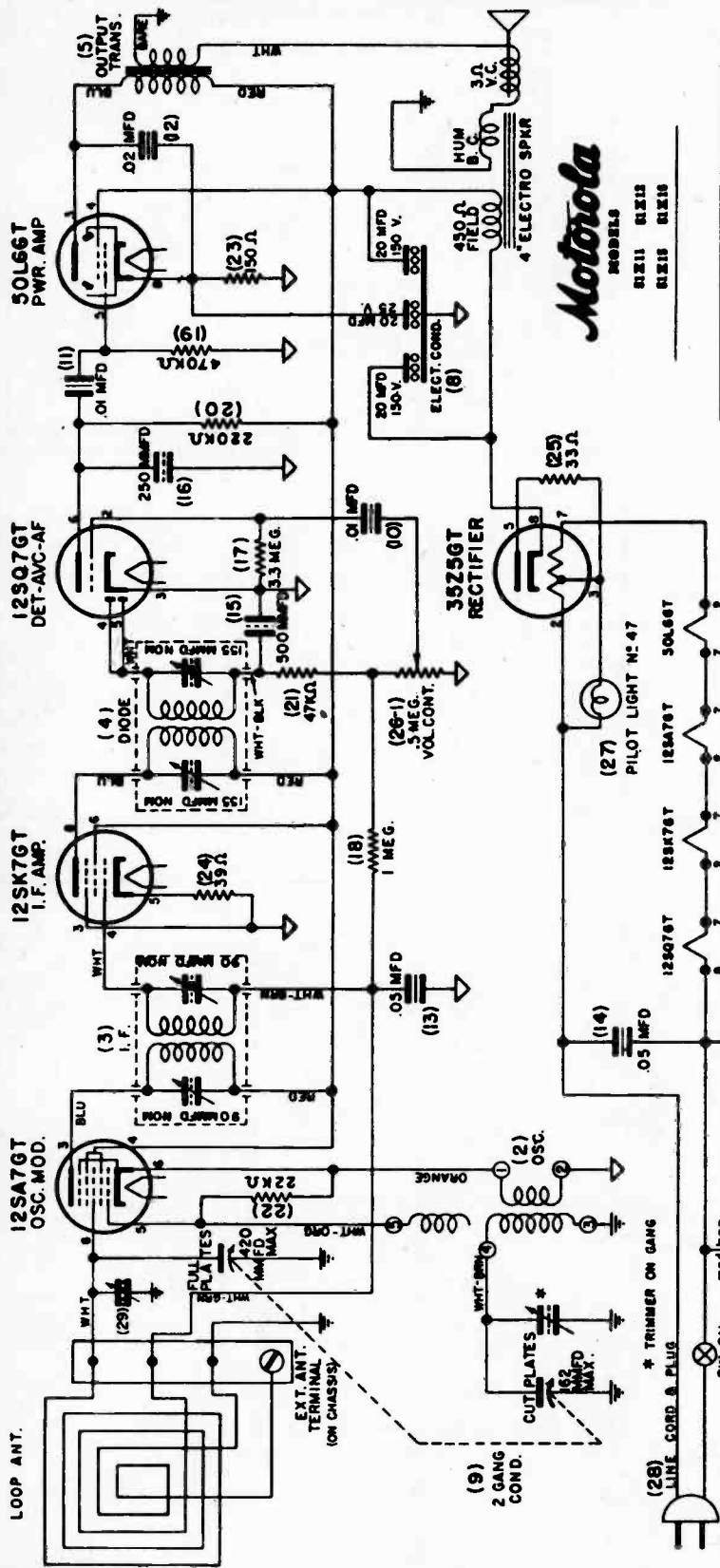


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TUNING RANGES
 BROADCAST BAND 540 TO 1800 K.C.
 16 METER BAND 16.9 TO 18.4 M.C.
 25 METER BAND 11.4 TO 12.1 M.C.
 31 METER BAND 9.1 TO 10.0 M.C.
 49 METER BAND 5.9 TO 6.2 M.C.
 SENSITIVITY 3 MICROWATT AVE.
 SELECTIVITY 25 K.C. 1000 X
 OUTPUT 5 WATTS
 UNDISTORTED IN VOICE CHL.
 POWER CONSUMPTION
 100 WATTS A.C.
 I.F. 483 K.C.

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MANUAL OF 1942 MOST POPULAR SERVICE DIAGRAMS



Motorola
MODELS
61X11 61X13
61X15 61X16

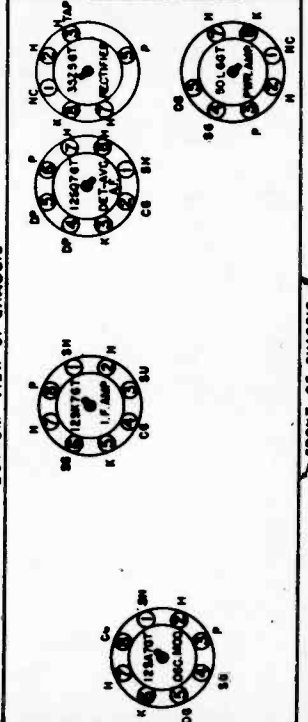
MODELS 51X11, 12, 15 & 16 SCHEMATIC DIAGRAM PARTS LIST

DIAG. NO.	PART NO.	DESCRIPTION
1	112810	BACK & LOOP ASSEMBLY (MODEL 51X11 ONLY)
2	112811	BACK & LOOP ASSEMBLY (MODEL 51X12 ONLY)
3	112812	BACK & LOOP ASSEMBLY (MODEL 51X13 ONLY)
4	112813	BACK & LOOP ASSEMBLY (MODEL 51X16 ONLY)
5	112814	OSC. COIL & LOOP ASSEMBLY
6	112815	OSC. COIL & LOOP ASSEMBLY
7	112816	DIODE COIL & SHIELD ASSEMBLY
8	112817	OUTPUT TRANSFORMER
9	112818	SPEAKER (1" ELECTRO)
10	112819	R.F. CHOKES ASSEMBLY
11	112820	ELECT. COND. A STRAP (80-20/150V & 20/20V)
12	112821	WIND & PULLEY ASSEMBLY (2 GANG)
13	112822	TUBULAR CONDENSER (1-01-100V)
14	112823	TUBULAR CONDENSER (2-01-100V)
15	112824	TUBULAR CONDENSER (05-100V)
16	112825	TUBULAR CONDENSER (05-100V)
17	112826	MALTED MICA CONDENSER (500 MFD 20V)
18	112827	MALTED MICA CONDENSER (500 MFD 20V)
19	112828	CARBON RESISTOR (3-3 MEG-1/2-20) 1W.
20	112829	CARBON RESISTOR (100,000-1/2-20) 1W.
21	112830	CARBON RESISTOR (22,000-1/2-20) 1W.
22	112831	CARBON RESISTOR (10,000-1/2-20) 1W.
23	112832	CARBON RESISTOR (5,000-1/2-20) 1W.
24	112833	CARBON RESISTOR (2,000-1/2-20) 1W.
25	112834	CARBON RESISTOR (150-1/2-10) N.I.
26	112835	CARBON RESISTOR (50-1/2-10) N.I.
27	112836	CARBON RESISTOR (35-1/2-20) N.I.
28	112837	VEL. CONTROL & SWITCH (3 MEG)
29	112838	LINE COIL & PLUG (6 CT.) 60T
30	112839	TRIMMER CONDENSER (7 MFD 10V)

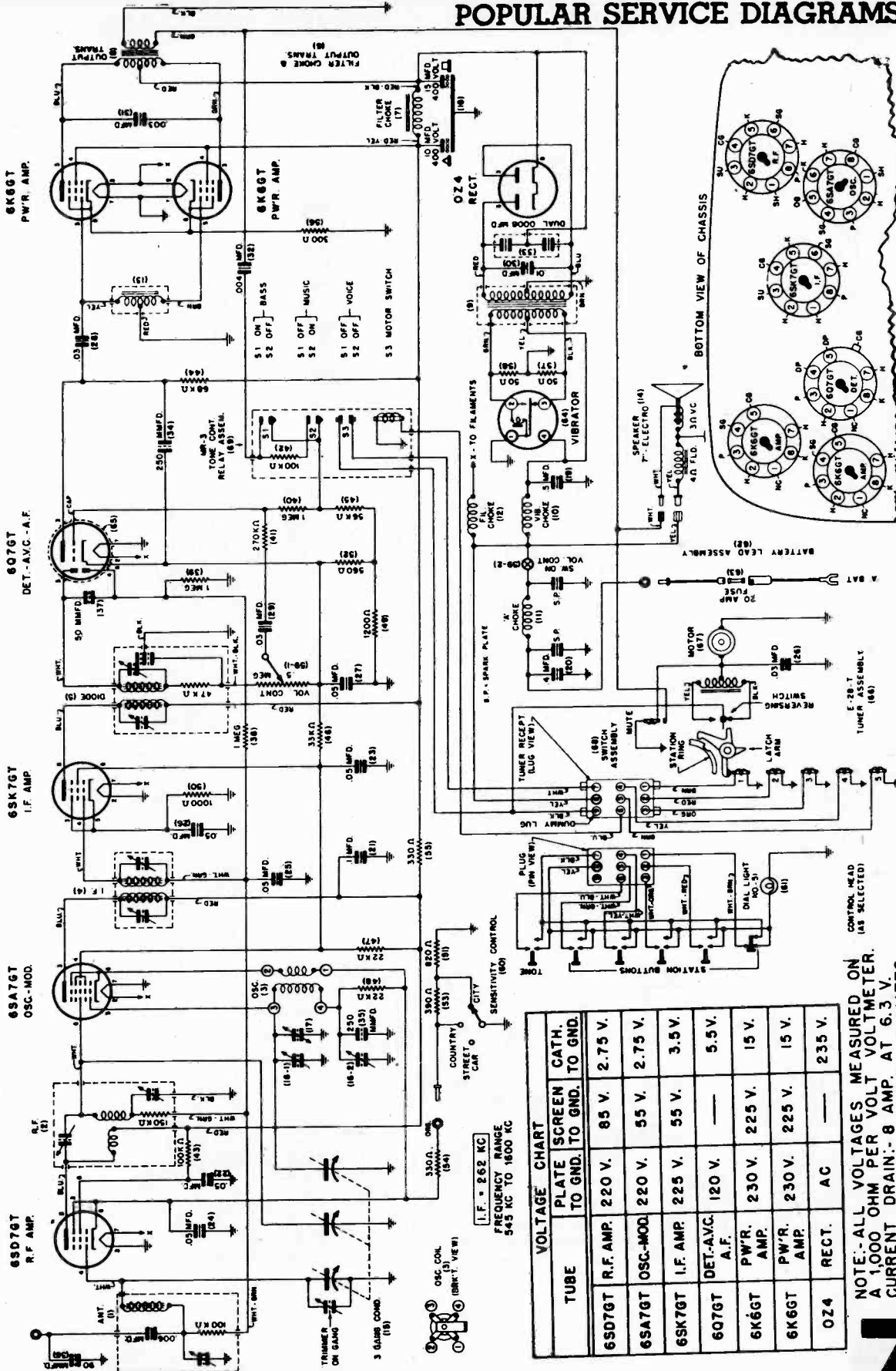
1. F. = 455 K.C.
FREQ RANGE 530KC TO 1720 KC
MAX PWR. OUTPUT 1.35 WATTS

TUBE	PLATE SCREEN TO B- TO G-	CATH.
12SA7GT	80V. 80V. 0	0
12SK7GT	80V. 80V. 0	0
12SQ7GT	48V. 0	0
50L6GT	75V. 80V. 0	0
35Z5GT	RECT.	A.C. 105V.

NOTE: ALL VOLTAGES MEASURED ON A 1000 OHMS PER VOLT VOLTMETER INPUT: 117 V. A.C.



POPULAR SERVICE DIAGRAMS



TUBE	PLATE TO GND.	SCREEN TO GND.	CATH. TO GND.
6S07GT R.F. AMP.	220 V.	85 V.	2.75 V.
6SA7GT OSC.-MOD.	220 V.	55 V.	2.75 V.
6SK7GT I.F. AMP.	225 V.	55 V.	3.5 V.
607GT DET.-AVC. A.F.	120 V.	—	5.5 V.
6K6GT P.W.R. AMP.	230 V.	225 V.	15 V.
6K6GT P.W.R. AMP.	230 V.	225 V.	15 V.
OZ4 RECT.	AC	—	235 V.

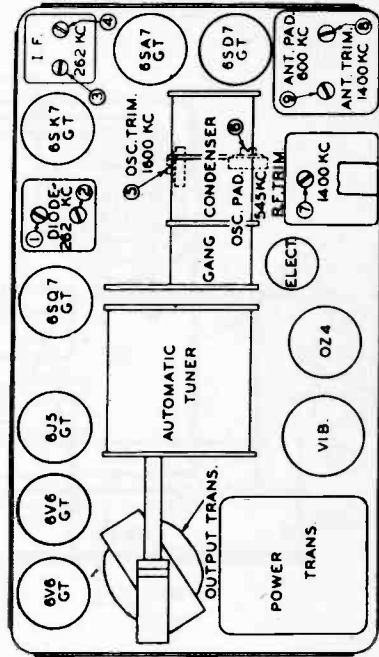
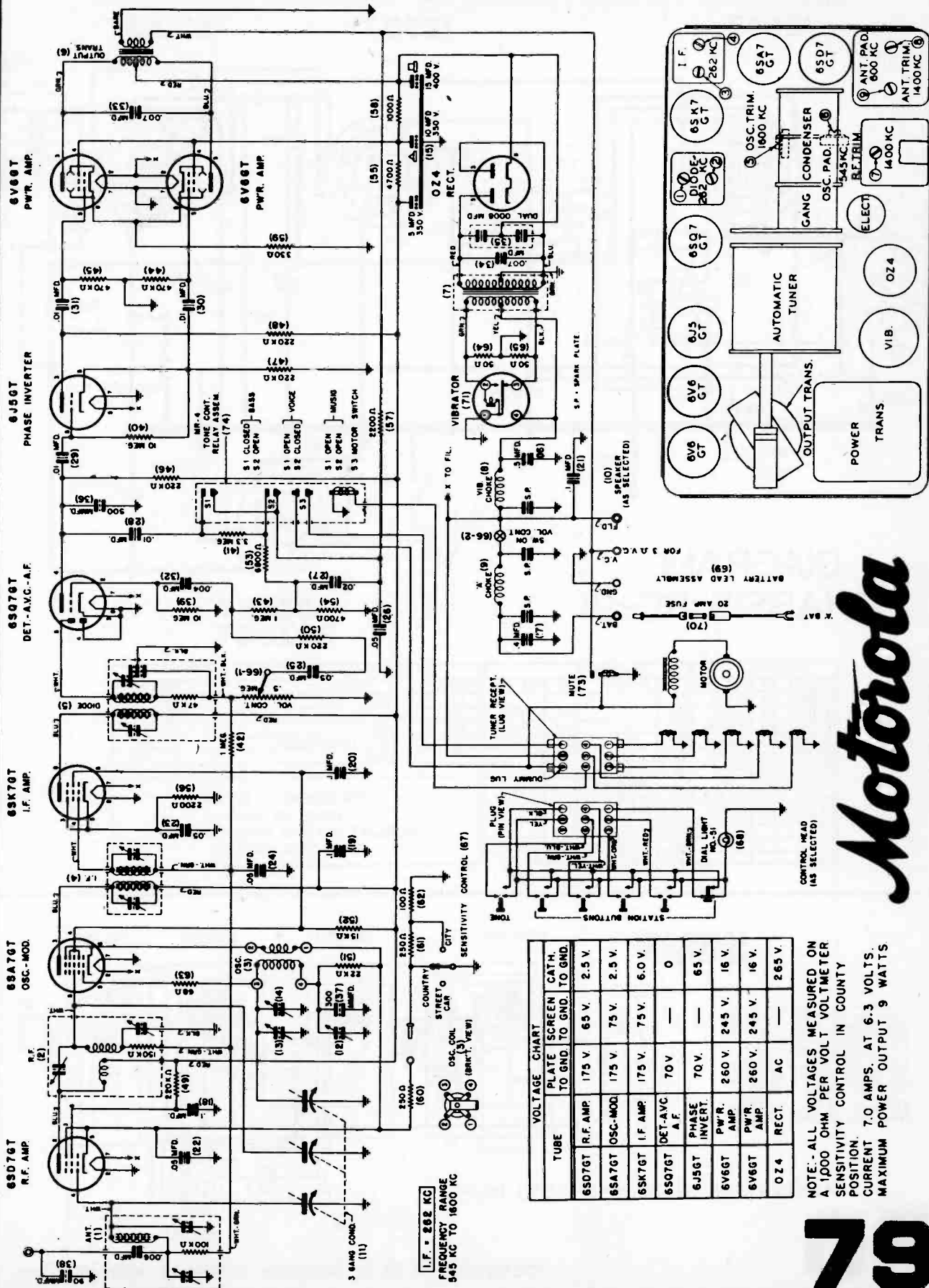
NOTE: ALL VOLTAGES MEASURED ON A 1,000 OHM PER VOLT VOLTMETER. CURRENT DRAIN: 8 AMP. AT 6.3 V. MAXIMUM POWER OUTPUT: 7 WATTS.

Motorola

Model 501



MANUAL OF 1942 MOST POPULAR SERVICE DIAGRAMS



VOLTAGE CHART

TUBE	PLATE	SCREEN	CATH. TO GND.	TO GND.
6SD7GT	R.F. AMP	175 V.	65 V.	2.5 V.
6SA7GT	OSC.-MOD.	175 V.	75 V.	2.5 V.
6SK7GT	I.F. AMP	175 V.	75 V.	6.0 V.
6S07GT	DET.-AVC. A.F.	70 V.	—	0
6J5GT	PHASE INVERT.	70 V.	—	65 V.
6V6GT	P.W.R. AMP.	260 V.	245 V.	16 V.
6V6GT	P.W.R. AMP.	260 V.	245 V.	16 V.
OZ4	RECT.	AC	—	265 V.

NOTE: - ALL VOLTAGES MEASURED ON A 1000 OHM PER VOLT VOLTMETER. SENSITIVITY CONTROL IN COUNTY POSITION. CURRENT 7.0 AMPS. AT 6.3 VOLTS. MAXIMUM POWER OUTPUT 9 WATTS.

Motorola

Model 551

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MANUAL OF 1942 MOST POPULAR SERVICE DIAGRAMS

12SA7

12SQ7

50L6GT

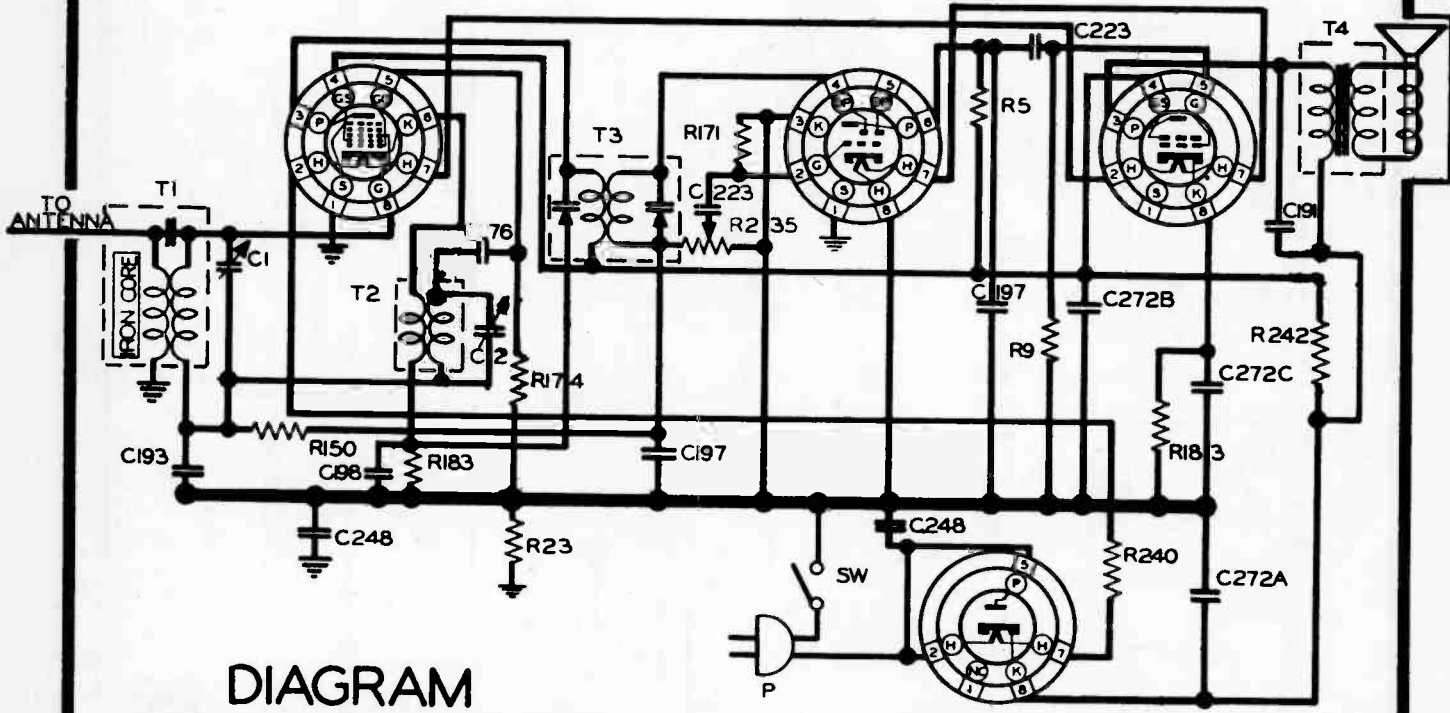


DIAGRAM
CHASSIS RE-91

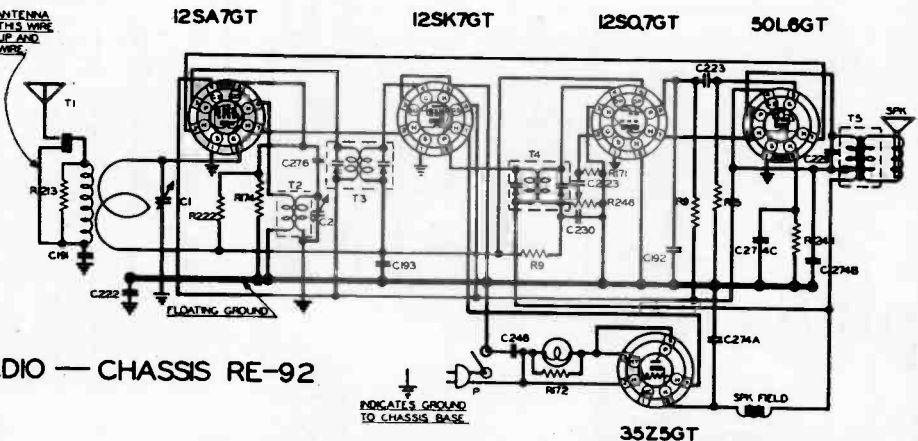
35Z4GT OR
35Z5GT

RESISTORS				CONDENSERS			MISCELLANEOUS UNITS			
R	OHM	W	PART NO.	C	CAPACITY	VOLT	PART NO.	SYMBOL	DESCRIPTION	PART NO.
174	20 K.	1/4	17-14291	193	.05	200	17-14274	T1	ANTENNA COIL	00-17130
9	1 M.	1/4	17-2080	248	.05	400	17-14366	T2	OSCILLATOR COIL	00-17223
171	15 M.	1/4	17-14288	198	.005	400	17-14279	T3	I.F. COIL	00-17210
5	500K.	1/4	17-2070	223	.002	400	17-14318	T4	OUTPUT TRANSFORMER	00-17131
183	150	1/4	17-14318	191	.01	400	17-14272	SPK.	SPEAKER	17-17208
235	2 M.	V.C.	17-17117	1	TWO GANG					
23	250K.	1/4	17-3011	2	VARIABLE		17-17115			
240	47	1	17-14397	272A	40 MFD.	150		FREQUENCY RANGE 1750 TO 540 KC. NOBLITT-SPARKS INDUSTRIES, INC. COLUMBUS, INDIANA		
150	5 M.	1/4	17-14242	272B	20 MFD.	150	17-14398			
242	2000	1	17-14399	272C	20 MFD.	25				
				197	.0001	600	17-14278			
				278	.00005	600	17-14404			

WHEN EXTERNAL ANTENNA IS USED, REMOVE THIS WIRE FROM ANTENNA CLIP AND INSERT ANTENNA WIRE.

RESISTORS	CONDENSERS
174 20K 1/4 17-14291	193 .05 200 17-14274
9 1M 1/4 17-2080	248 .05 400 17-14366
171 15M 1/4 17-14288	198 .005 400 17-14279
5 500K 1/4 17-2070	223 .002 400 17-14318
183 150 1/4 17-14318	191 .01 400 17-14272
235 2M V.C. 17-17117	1 TWO GANG
23 250K 1/4 17-3011	2 VARIABLE 17-17115
240 47 1 17-14397	272A 40 MFD. 150
150 5M 1/4 17-14242	272B 20 MFD. 150 17-14398
242 2000 1 17-14399	272C 20 MFD. 25
	197 .0001 600 17-14278
	278 .00005 600 17-14404

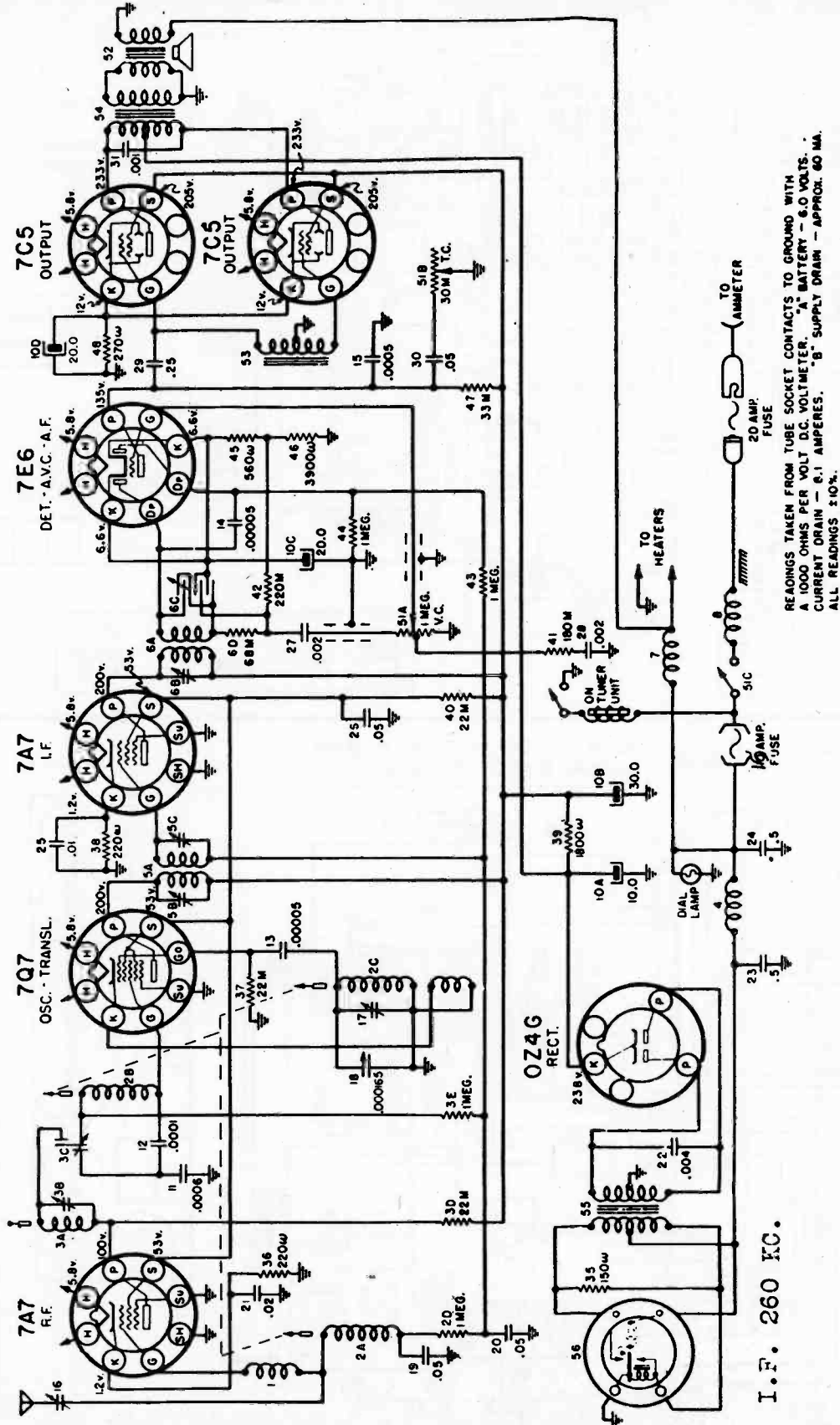
ARVIN HOME RADIO — CHASSIS RE-92



35Z5GT

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MANUAL OF 1942 MOST POPULAR SERVICE DIAGRAMS

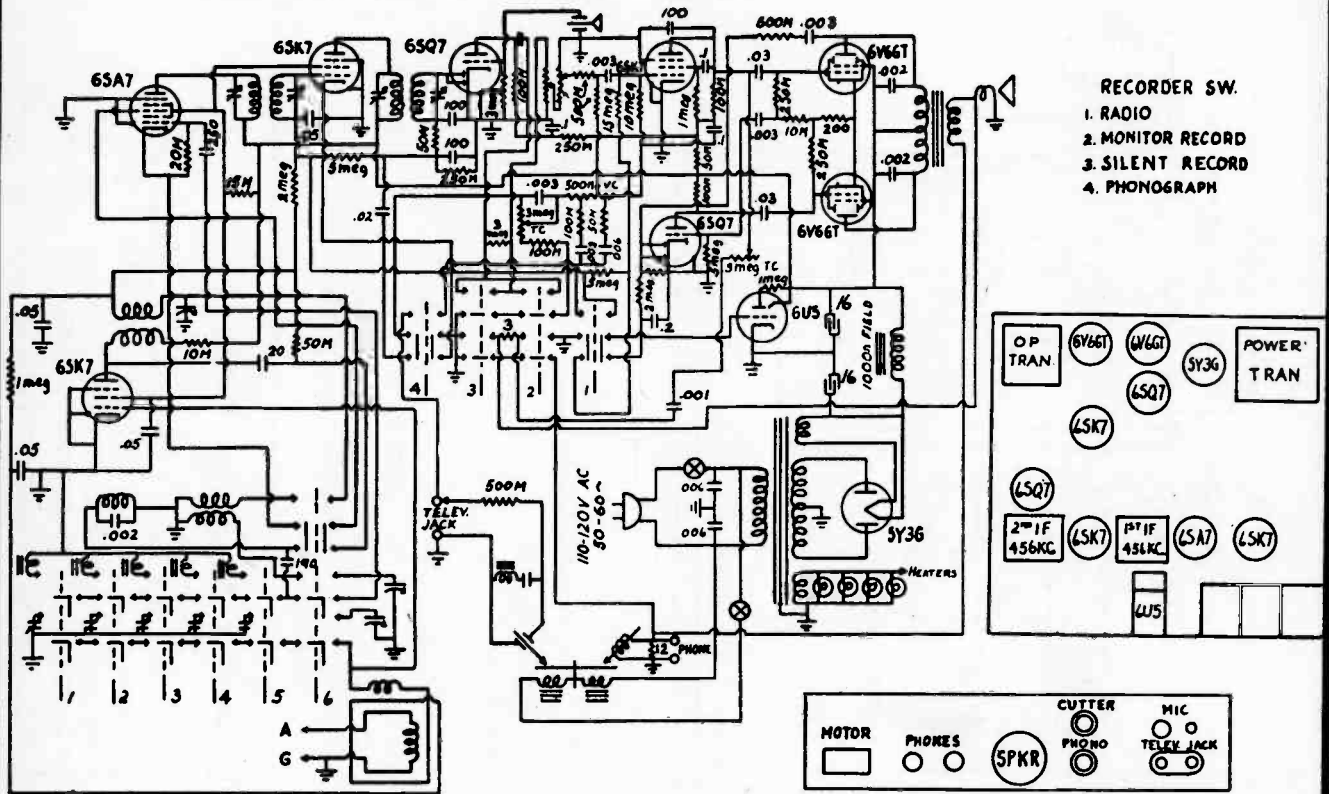


Oldsmobile Models 982282 (similar to Model 982215)

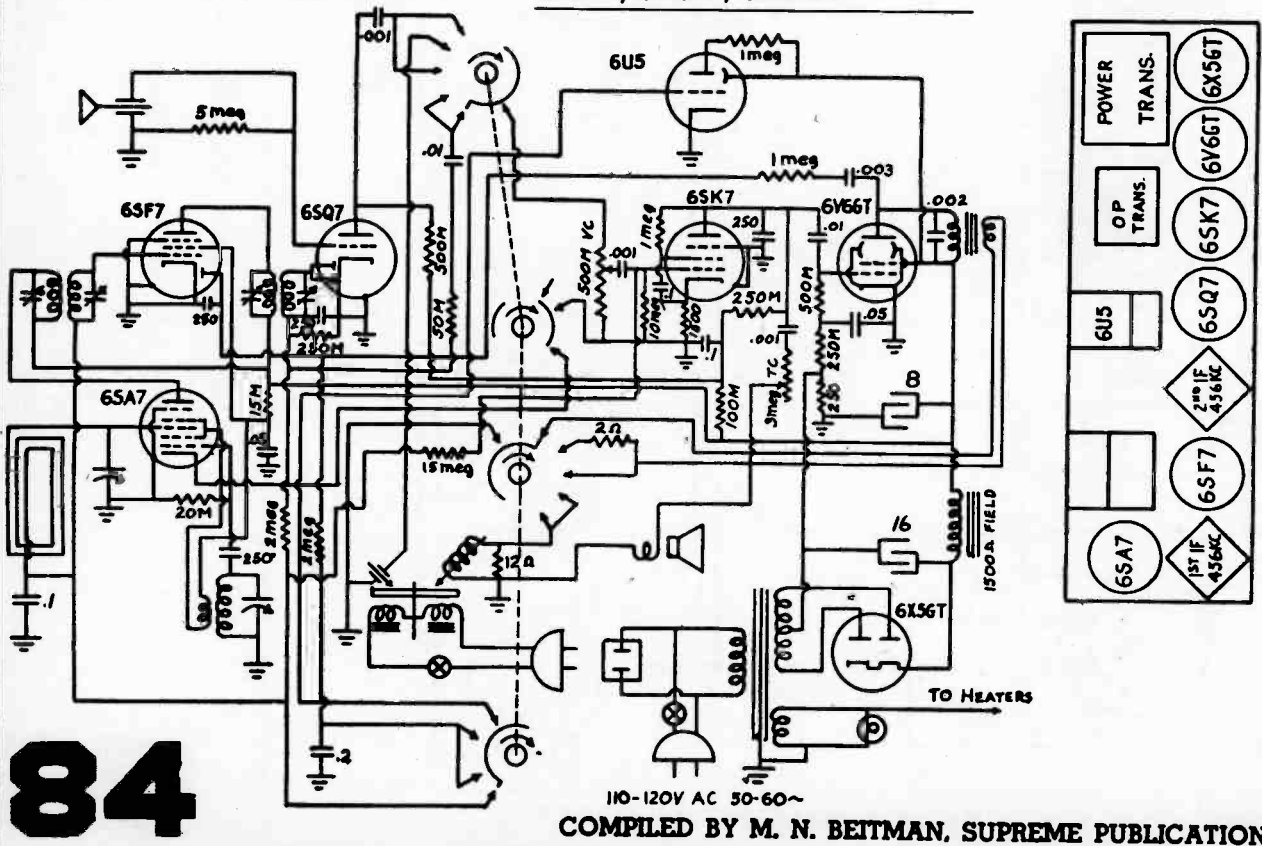
All of the adjustable condensers in this receiver are very accurately adjusted at the factory and will need no further adjustment (excepting antenna condenser "F") unless tampered with or a defective coil has been replaced. If realignment is found to be necessary, the circuits can be properly adjusted only with the use of a calibrated test oscillator or signal generator and an output meter.

MANUAL OF 1942 MOST POPULAR SERVICE DIAGRAMS

PACKARD BELL MODEL 51BPR

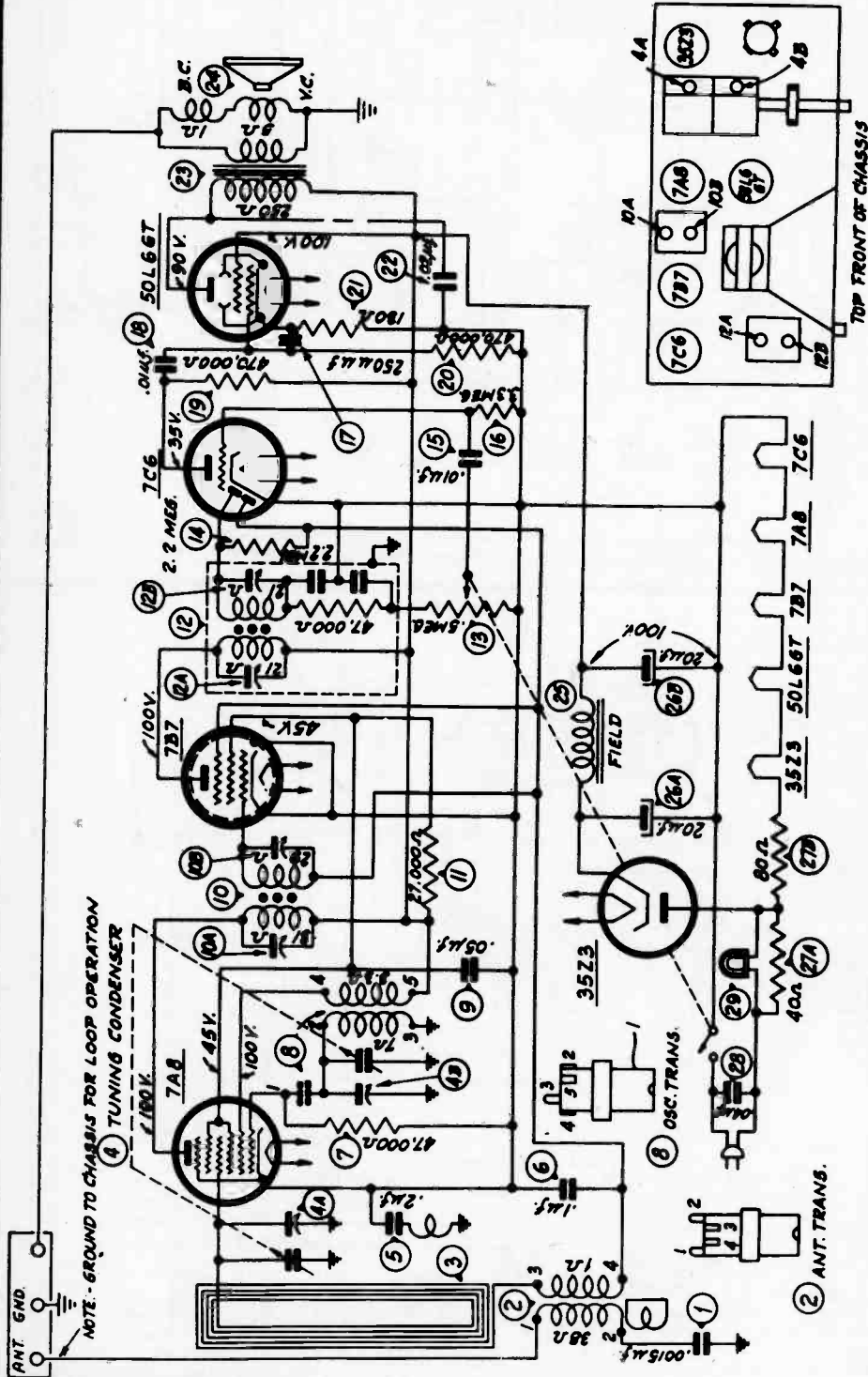


PACKARD BELL MODELS 67B, 67BR, 67BPR, 67BPR DL, 67BA, 67BK, 67BKA.



PHILCO

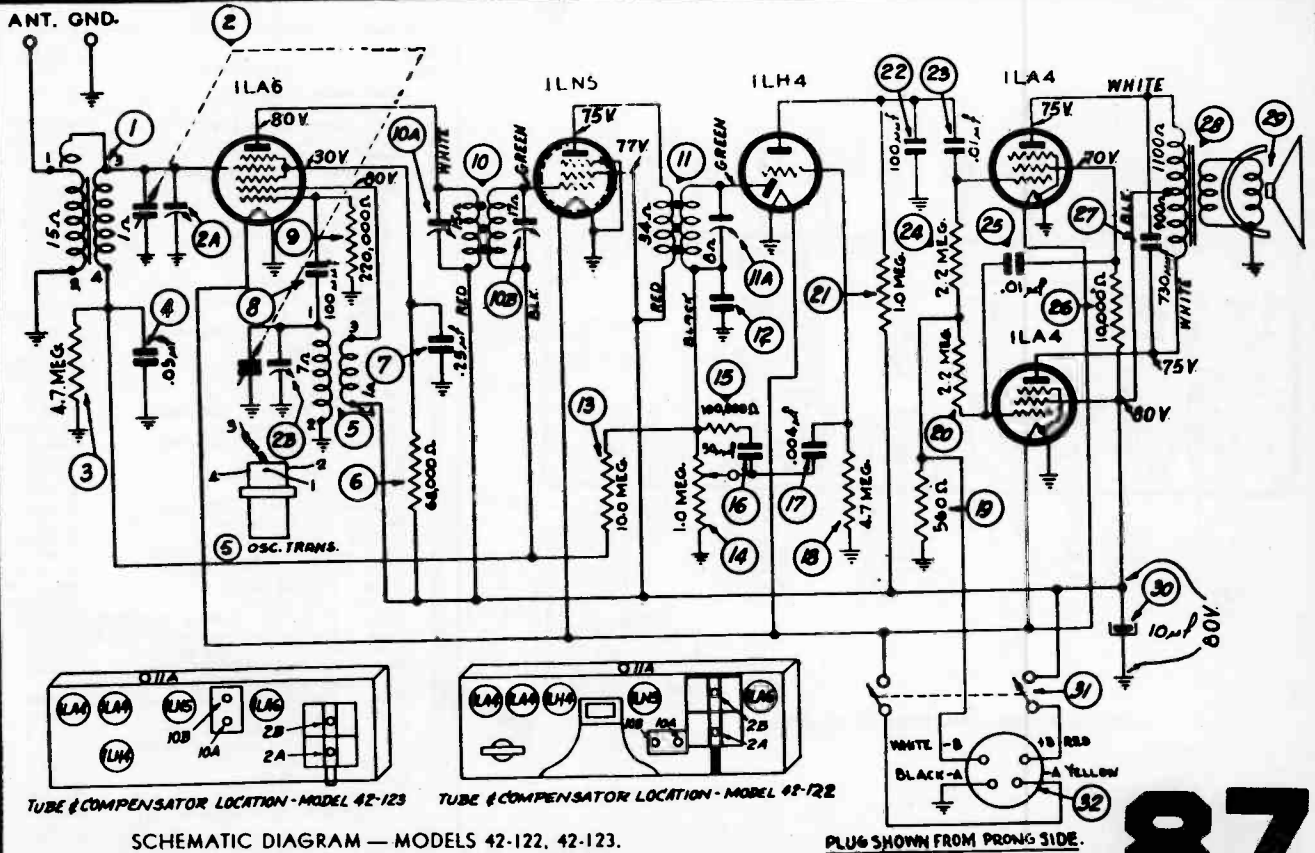
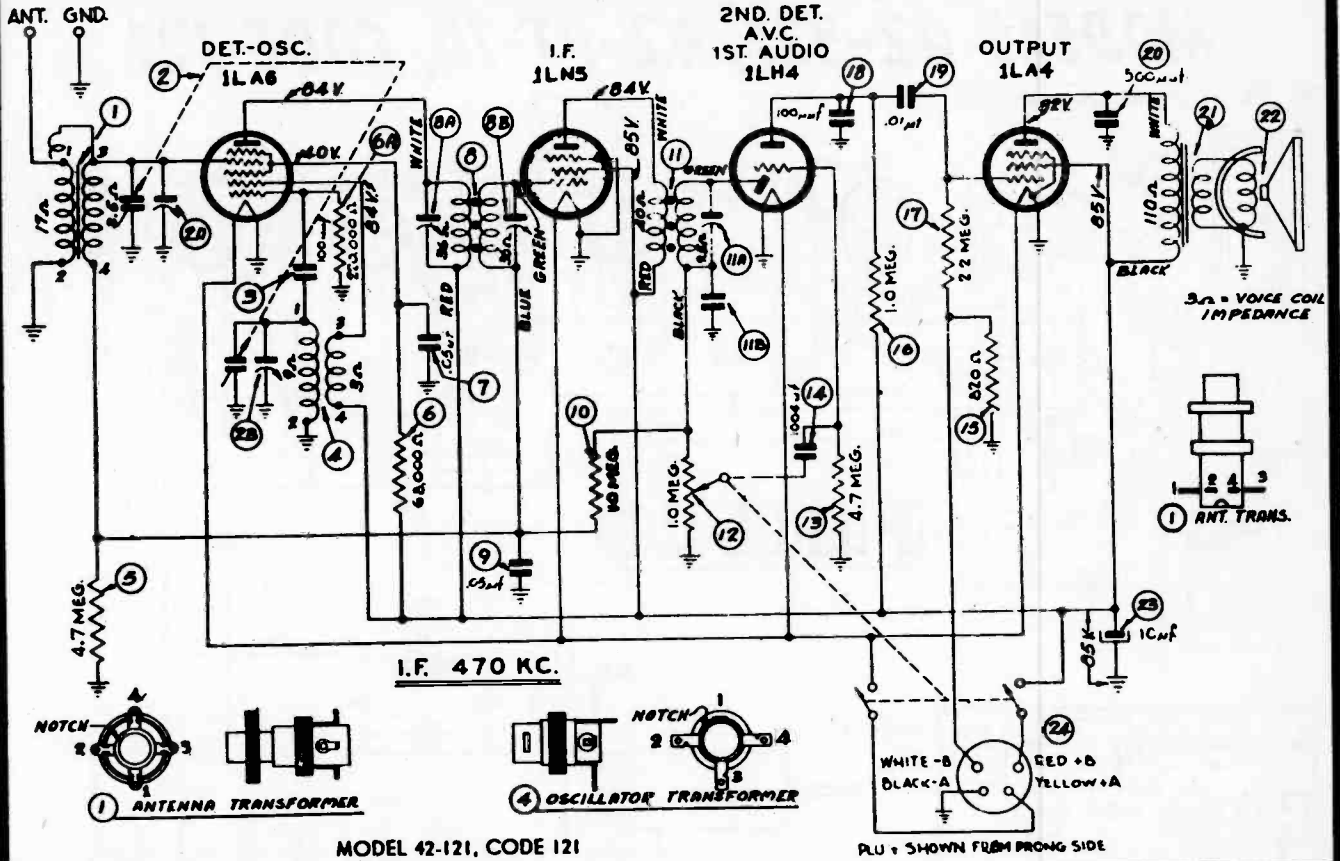
Models PT-91, PT-92, PT-93, PT-94, PT-95



SCHMATIC DIAGRAM — MODELS PT-91, PT-92, PT-93, PT-94, PT-95
 The tube socket voltages indicated on the diagram were measured with a 1,000 ohms per voltmeter — PHILCO Model 027, line voltage 117 volts A.C.

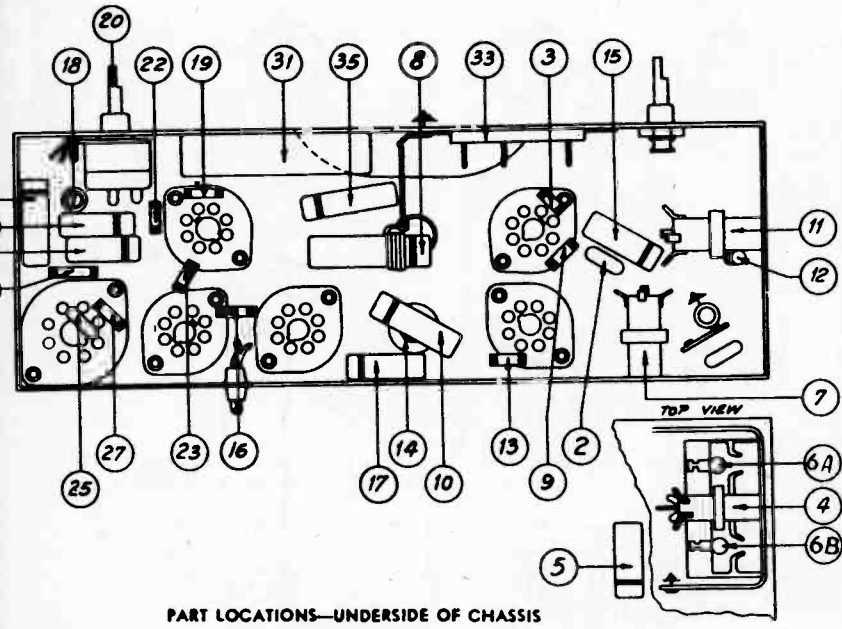
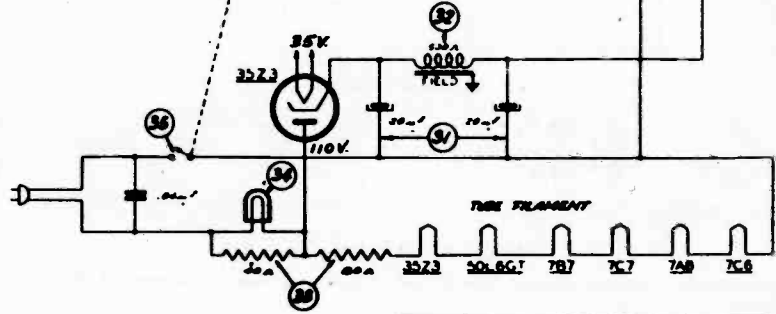
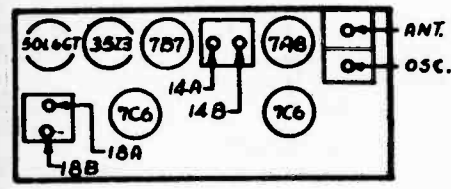
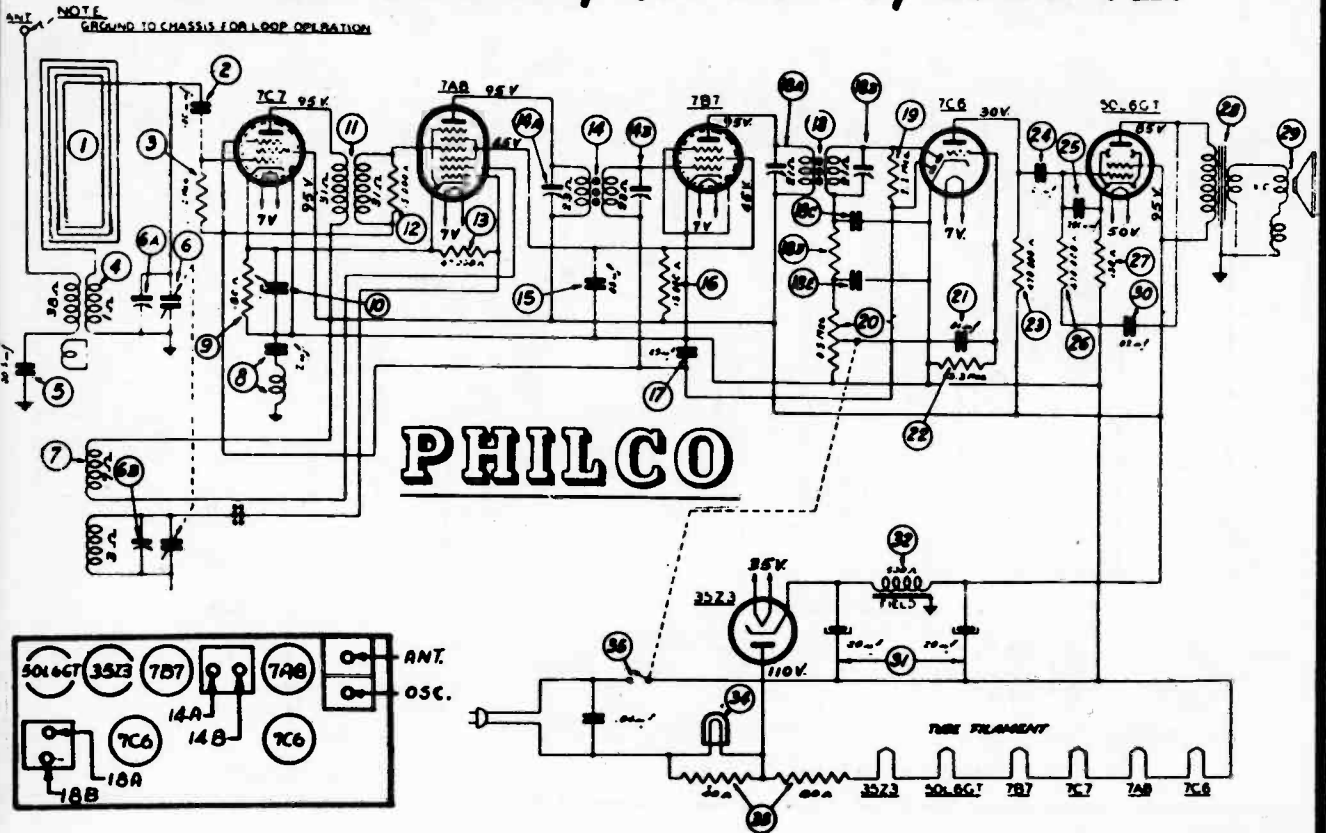
Operations in Order	SIGNAL GENERATOR		RECEIVER	
	Output Connections to Receiver	Dial Setting	Dial Setting	Control Setting
1.	Ant. Section of tuning	455 K.C.	500 K.C. Tuning Cond. Closed	Vol. Max.
2.	Loop	1500 K.C.	1500 K.C.	Vol. Max.
3.	see above instructions	1500 K.C.	1500 K.C.	Vol. Max.
				Adjust Compensators in Order
				12A, 12B, 10A, 10B
				4B
				4A

MANUAL OF 1942 MOST POPULAR SERVICE DIAGRAMS



MANUAL OF 1942 MOST POPULAR SERVICE DIAGRAMS

MODELS 42-321, 42-PT-10, CODE 121

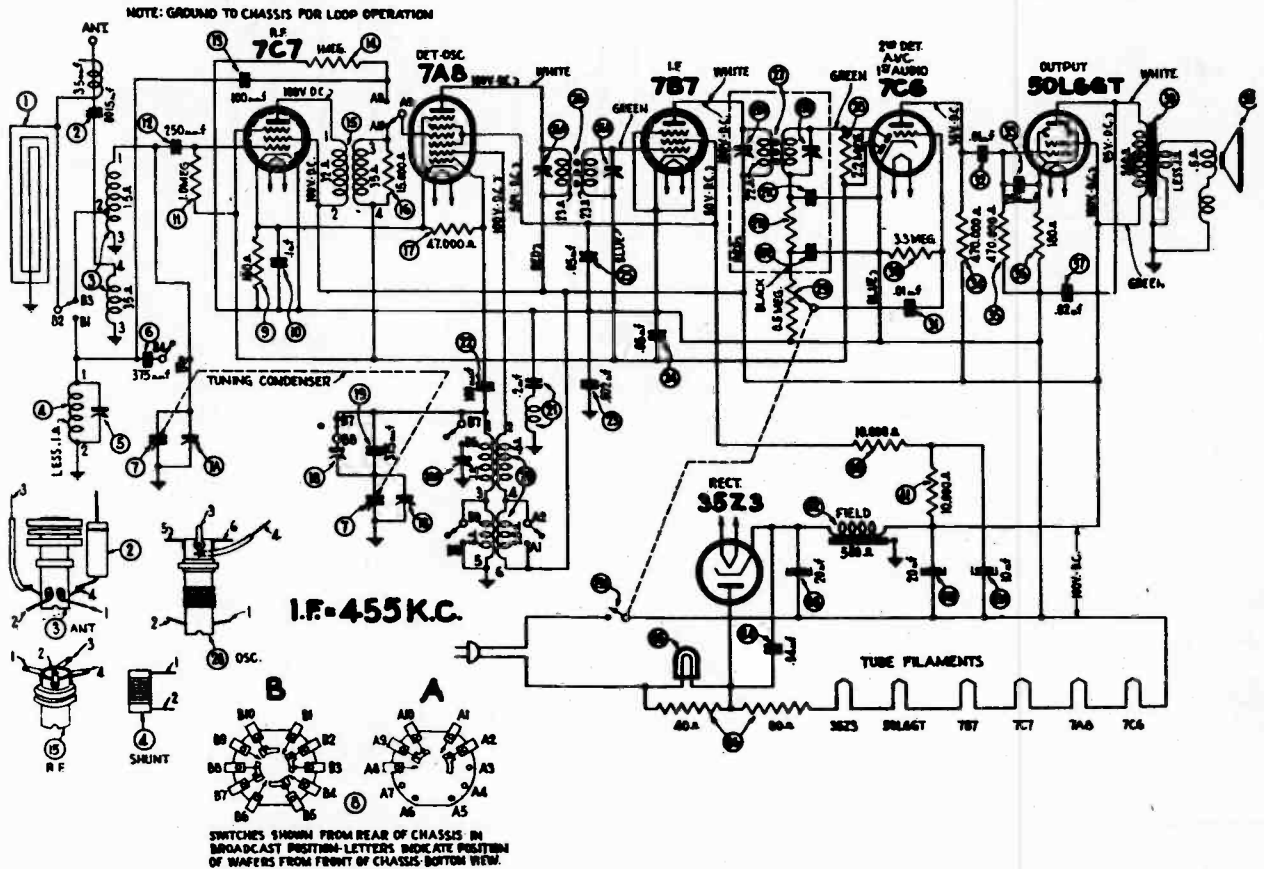


PART LOCATIONS—UNDERSIDE OF CHASSIS

SCHE. No.	DESCRIPTION	PART No.
1	Loop Aerial (42-321T1)	76-1196
	Loop Aerial (PT-10) Part of Cabinet.	
2	Mica Condenser (100 mmfd.)	60-110157
3	Resistor (1.0 megohms)	33-510154
4	Aerial Transformer	32-3394
5	Condenser (.0015 mfd., 400 volts)	30-4421
6	Tuning Condenser	31-2527
	Pointer	54-2076
	Spring (Drive Cord)	28-8954
	Shaft Assembly (42-321)	31-2591
	Shaft Assembly (PT-10)	31-2531
	Drive Cord	31-2529
7	Oscillator Transformer	32-3613
8	Condenser and Choke Assembly	76-1198
9	Resistor (180 ohms)	33-118324
10	Condenser (.11 mfd., 200 volts)	30-4584
11	R. F. Transformer	32-3595
12	Resistor (15,000 ohms)	33-315339
13	Resistor (47,000 ohms)	33-347339
14	1st I. F. Transformer	32-3614
15	Condenser (.05 mfd., 200 volts)	30-4519
16	Resistor (15,000 ohms)	33-315339
17	Condenser (.06 mfd., 200 volts)	30-4519
18	2nd I. F. Transformer	32-3604
19	Resistor (2.2 megohms)	33-522339
20	Volume Control	33-5469
21	Condenser (.01 mfd., 400 volts)	30-4572
22	Resistor (3.3 megohms)	33-533339
23	Resistor (470,000 ohms)	33-447339
24	Condenser (.01 mfd., 400 volts)	30-4572
25	Mica Condenser (250 mmfd.)	60-125157
26	Resistor (470,000 ohms)	33-447339
27	Resistor (130 ohms)	33-113334
28	Output Trans. (for Speaker 34-1533-9)	32-8164
29	Cone Assembly (for Speaker 34-1533-9)	34-4190
30	Condenser (.02 mfd., 400 volts)	30-4516
31	Electrolytic Condenser (20-20 mfd.)	30-2382
32	Field Coil (Replace Speaker 34-1533-9)	
33	Resistor (Wirewound, 40-80 ohms)	33-3408
34	Pilot Lamp	34-2068
35	Condenser (.04 mfd., 400 volts)	30-4119
MISCELLANEOUS PARTS		
	Cabinet (42-321T)	10548A
	Cabinet (42-321T1)	10548B
	Cabinet (PT-10)	76-1195
	Cardboard Back (PT-10)	27-9817

MANUAL OF 1942 MOST POPULAR SERVICE DIAGRAMS

PHILCO MODEL 42-322, CODE 121



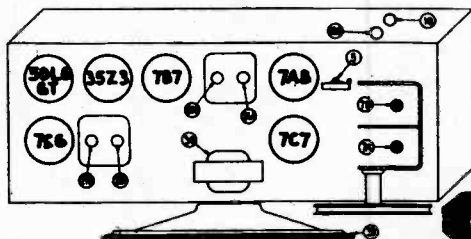
Operations in Order	SIGNAL GENERATOR		RECEIVER			SPECIAL INSTRUCTIONS
	Output Connections to Receiver	Dial Setting	Dial Setting	Control Setting	Adjust Compensators in Order	
1	Lug on the Ant. Section of Tuning	455 K.C.	540 K.C. Tuning Cond. Closed	Vol. Max. Range Switch Brdcast.	27A, 27B 26A, 26B	
2	Loop See Above Instructions	1500 K.C.	1500 K.C.	Vol. Max. Band Switch Brdcast.	7B, 7A	Note A
3	Loop See Above Instructions	580 K.C.	580 K.C.	Vol. Max. Band Switch Brdcast.	(10)	Roll Tuning Condenser
4	Loop See Above Instructions	Repeat Operation 2				
5	Loop See Above Instructions	15 M.C.	15 M.C.	Band Switch S.W.	(18A, 5) Note B	Roll Tuning Condenser When Padding 5

NOTE A—DIAL POINTER CALIBRATION: In order to adjust the receiver correctly, the pointer must be adjusted to track properly with the tuning condenser. To do this, turn the tuning condenser to the maximum capacity (plates fully meshed). With the condenser in this position, set the tuning pointer on the first small line stamped in the scale plate on the left side.

NOTE B—To accurately adjust the high frequency oscillator compensator to the fundamental instead of the image signal, turn the oscillator compensator (18A) to the maximum capacity position (clockwise). From this position slowly turn the compensator counter-clockwise until a second peak is obtained on the output meter. Adjust the compensator for maximum output at this second peak.

If the above procedure is correctly performed, the image signal will be found (much weaker) by turning the signal generator dial 910 K.C. above the frequency being used on any high frequency range.

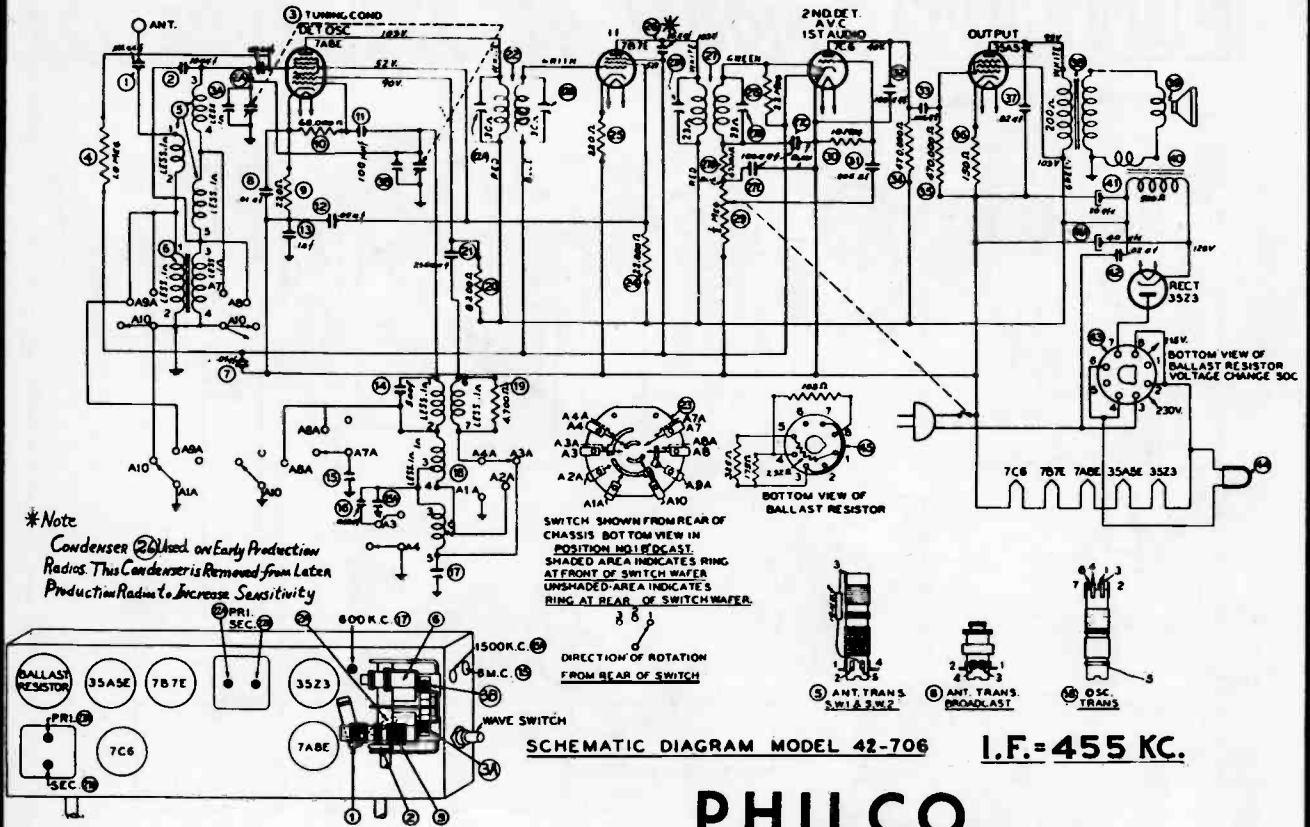
The aerial paddler (5) must be adjusted to maximum by rolling the tuning condenser. If two signal peaks occur when turning the paddler, adjust to maximum output on the first signal peak from the tight position (screw all the way down) of the paddler.



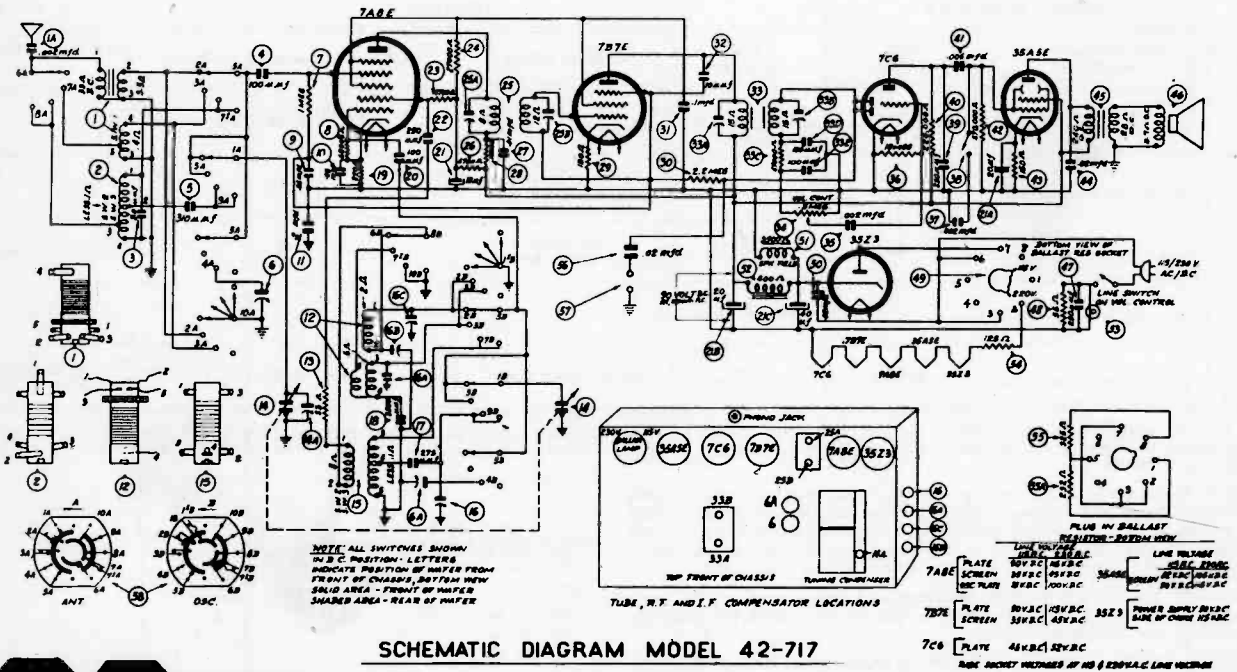
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MANUAL OF 1942 MOST POPULAR SERVICE DIAGRAMS

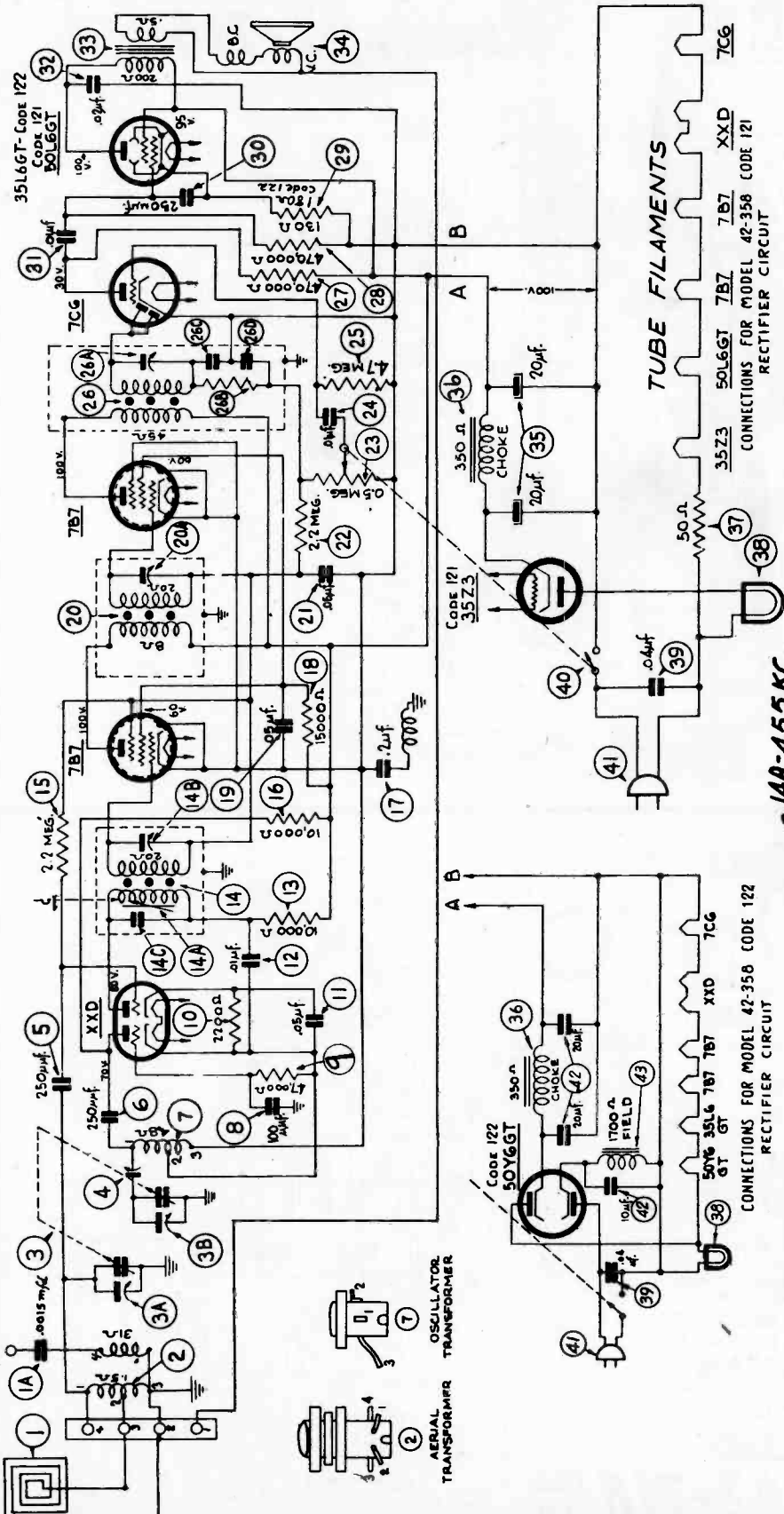


Philco Radio



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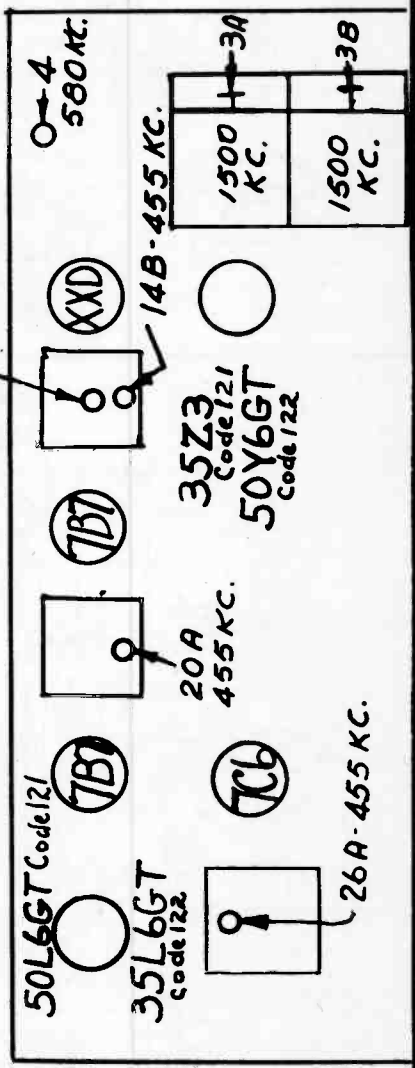
MANUAL OF 1942 MOST POPULAR SERVICE DIAGRAMS



DIAGRAM—Model 42-358, Codes 121-122

PILCO

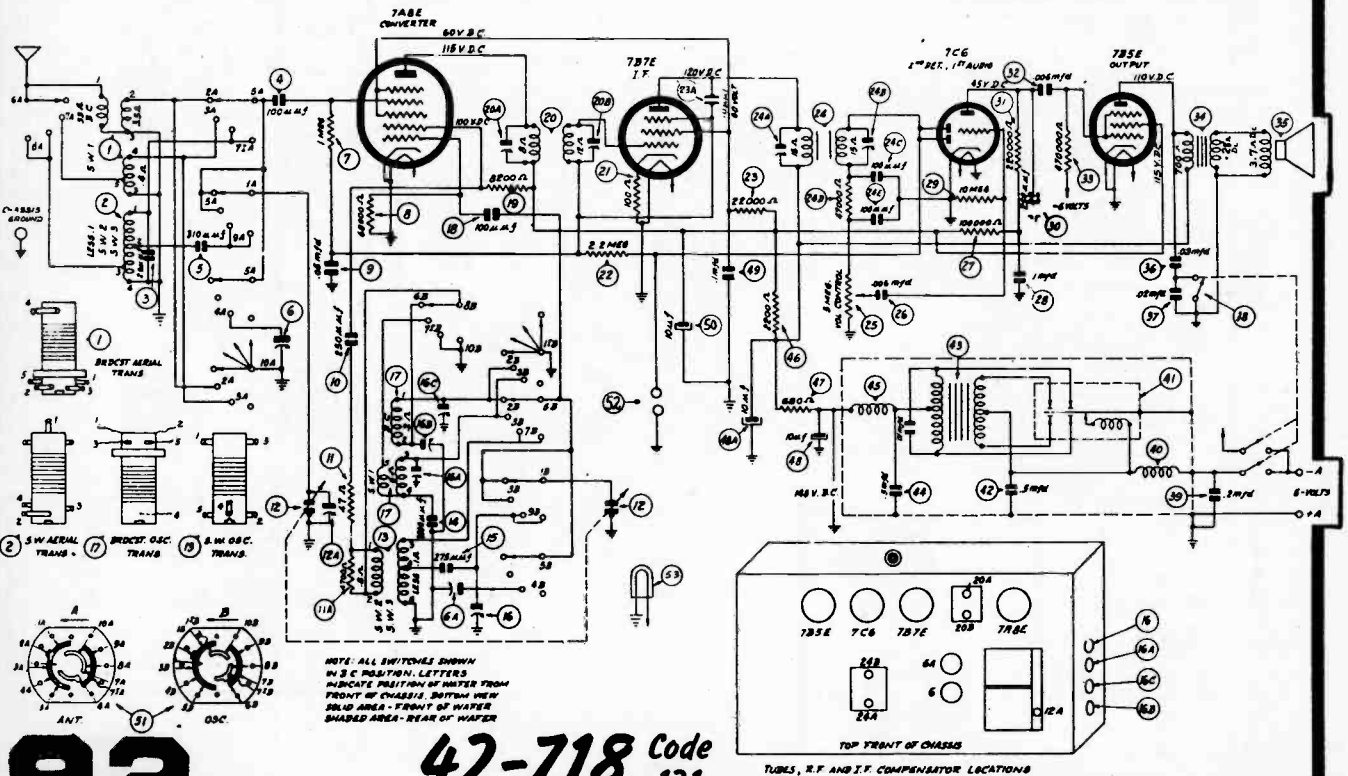
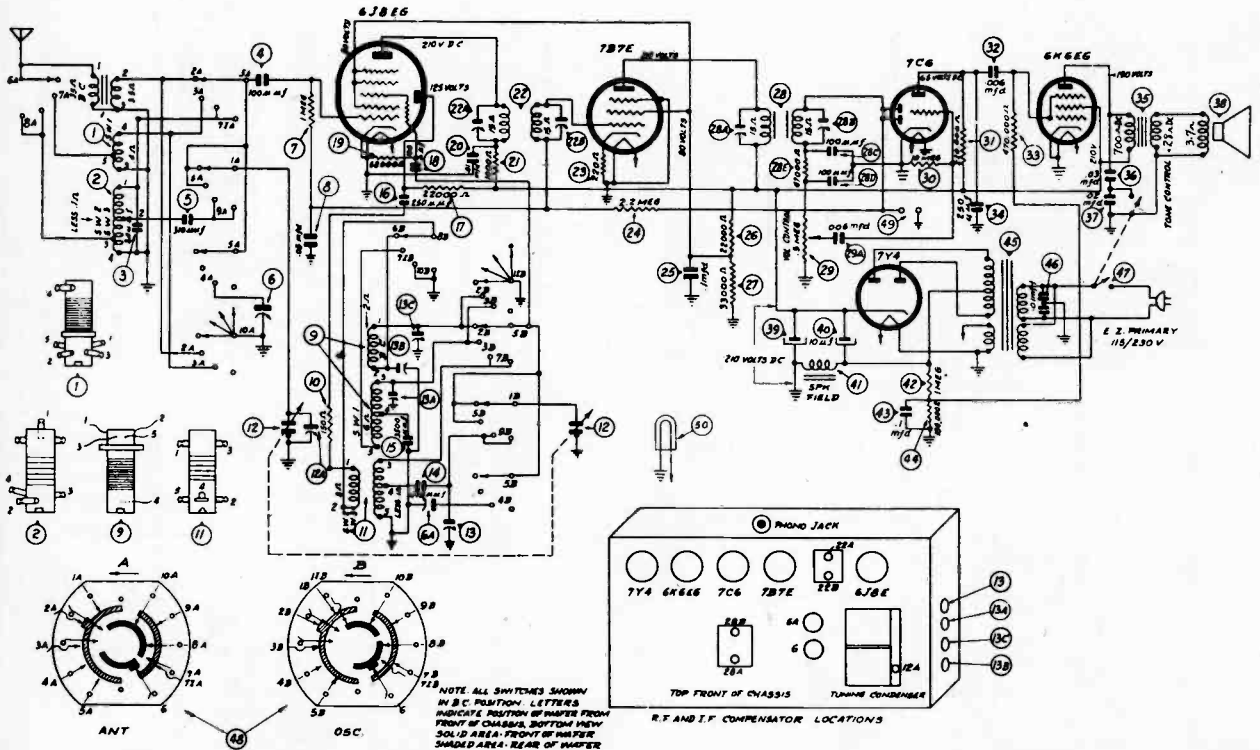
Intermediate Frequency: 455 KC.
 Tuning Bands: 540 to 1620 KC.
 Power Supply: 115 volts, A. C.-D. C.
 Audio Output: 1 watt.



MANUAL OF 1942 MOST POPULAR SERVICE DIAGRAMS

PHILCO

Models 42-716

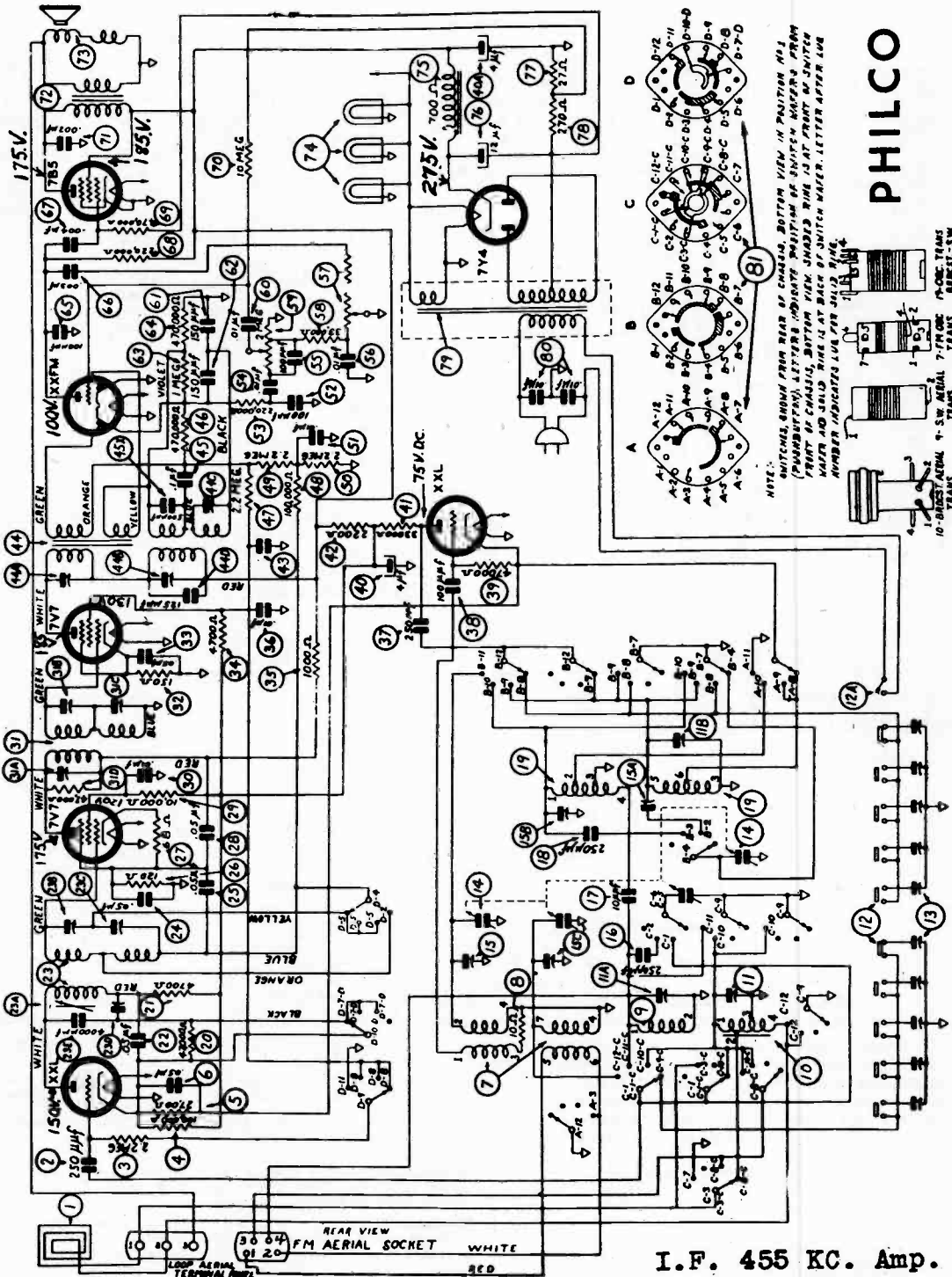


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42-718 Code 121

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FREQUENCY MODULATION Model 42-350, Code 121

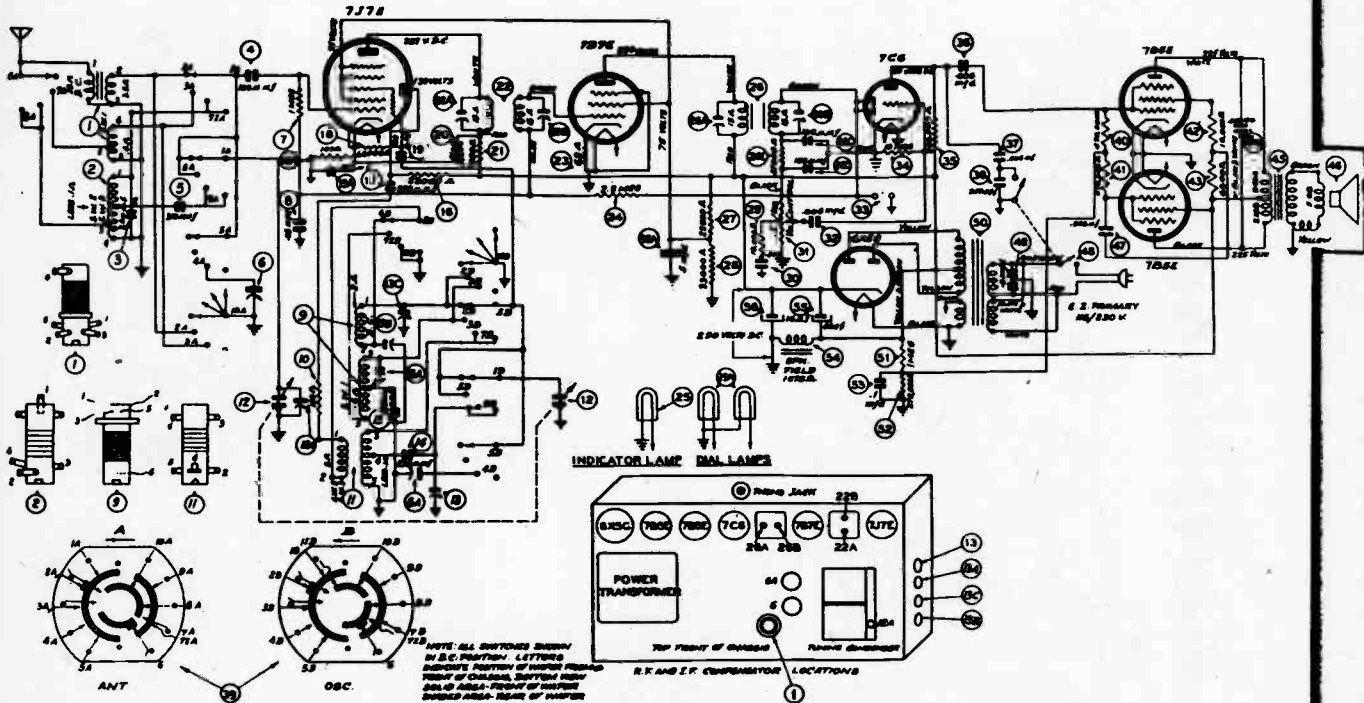


PHILCO

I.F. 455 KC. Amp.
I.F. 4.3 M.C. F.M.

MANUAL OF 1942 MOST POPULAR SERVICE DIAGRAMS

PHILCO Model 42-724, Code 121



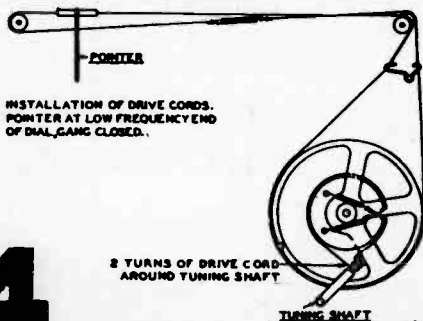
Operations In Order	SIGNAL GENERATOR			RECEIVER			SPECIAL
	Output Connections to Radio	Dummy Aerial Note A	Dial Setting	Dial Setting	Control Settings	Adjust Compensators	
1	Lug of aerial tuning cond.	.1 mfd.	455 K.C.	580 K.C.	Band Switch "Brdcast" Volmax	26A, 26B, 22A, 22B	
2	Aerial	400 ohms	21 M.C.	21 M.C.	Band Switch S. W. 3	13, 12A	Note B Note C
3	Aerial	400 ohms	12 M.C.	12 M.C.	Band Switch S. W. 2	6A, 6	Note C
4	Aerial	400 ohms	6 M.C.	6 M.C.	Band Switch S. W. 1	13A	
5	Aerial	200 mmfd.	1500 K.C.	1500 K.C.	Band Switch "Brdcast"	13C	
6	Aerial	200 mmfd.	580 K.C.	580 K.C.	Band Switch "Brdcast"	13B	Roll tuning condenser
7	Aerial	200 mmf.	1500 K.C.	1500 K.C.	Band Switch "Brdcast"	13C	

NOTE A—The "Dummy Aerial" consists of a condenser or resistor connected in series with the signal generator output lead (highside). Use the capacity or resistance as specified in each step of the above procedure.

NOTE B—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 first mark on the left edge (low frequency end) of the broadcast scale.

NOTE C—When adjusting the osc. compensators, be sure to tune in the fundamental signal (21 M.C.) (12 M.C.) instead of the image signal. If the compensator is correctly adjusted the image signal will be found by turning the signal generator dial 910 K.C. above the fundamental signal which will be 21,910 M.C. or 12,910 M.C.



SIGNAL GENERATOR: Such as Philco Model 070, A.C. operated or Model 177 battery operated. These signal generators cover all frequencies required in aligning these models.

INDICATING DEVICE: To obtain maximum signal strength and accurate adjustments of the padders, a vacuum tube voltmeter similar to Philco Models 027 and 028 are recommended. These instruments also contain an audio output meter which may be used as an aligning indicator. The method of connecting either of these instruments is listed below.

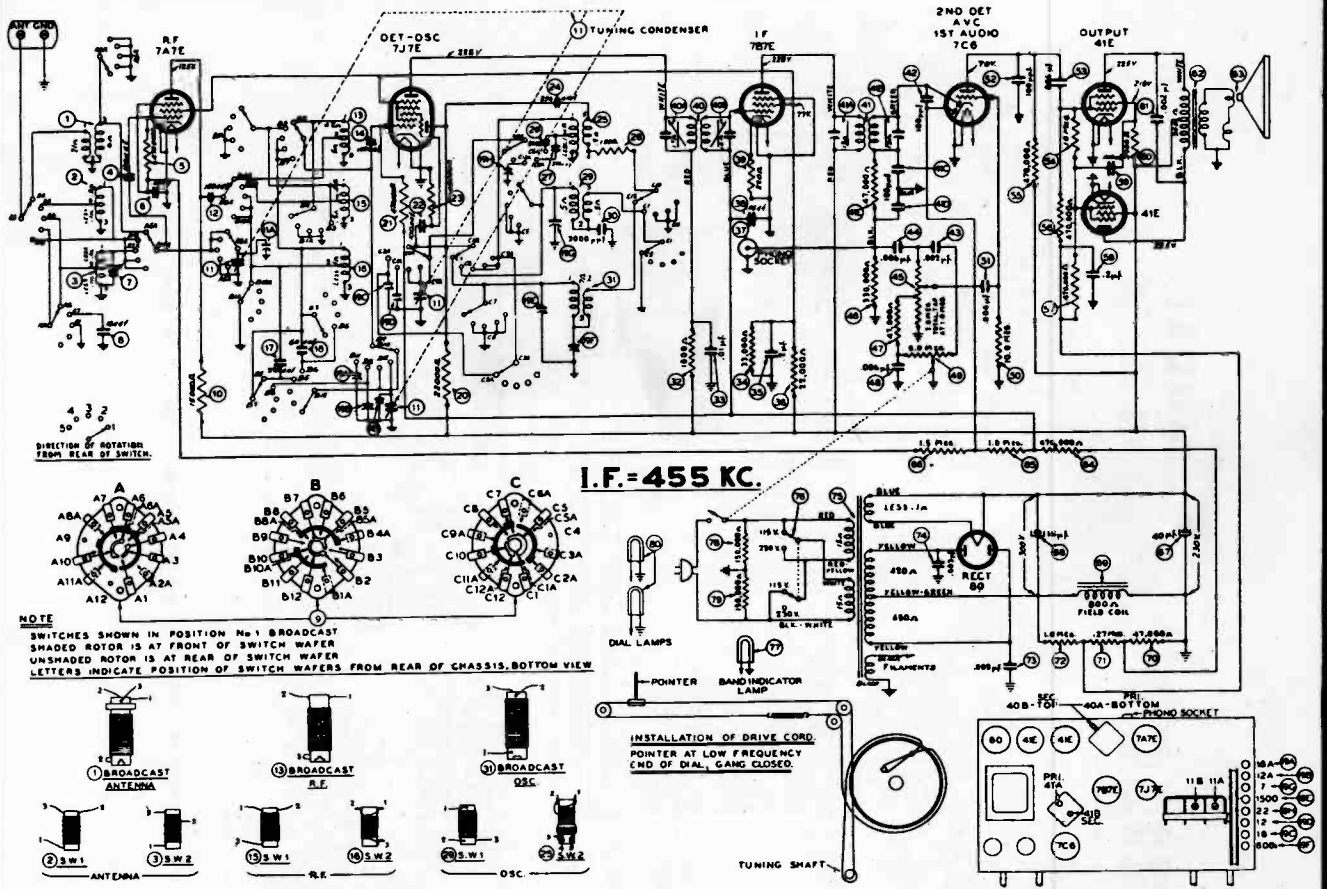
ALIGNING TOOLS: Fibre handle screw driver, Philco Part No. 45-2610. Service Alianina Scale. Part No. 45-2909.

NOTE: The dial scale in these models is mounted on the cabinet. For convenience, when aligning the chassis outside of the cabinet, a special service aligning scale, Part No. 45-2909, is available. This service dial scale is attached to the dial background plate. If the radio is aligned in the cabinet, the cabinet dial scale is used.

MANUAL OF 1942 MOST POPULAR SERVICE DIAGRAMS

PHILCO

MODEL 42-730, CODE 121



SIGNAL GENERATOR				RECEIVER		SPECIAL INSTRUCTIONS
Ouput Connections to Radio	Dummy Aerial Note A	Dial Setting	Dial Setting	Control Settings	Adjust Compensators	
Lug of aerial tuning cond.	.1 mfd.	455 KC.	580 KC.	Band Switch "Brdcst" Volmax	41A, 41B, 40A, 40B	
Aerial	400 ohms	22 MC.	22 MC.	Band Switch SW 2	19H, 11B, 11A	Note B Note C
Aerial	400 ohms	7 MC.	7 MC.	Band Switch SW 1	19G	Roll tuning cond. Note C
Aerial	200 mmfd.	1500 KC.	1500 KC.	Band Switch "Brdcst"	19E	Roll tuning cond.
Aerial	200 mmfd.	600 KC.	600 KC.	Band Switch "Brdcst"	19F	Roll tuning cond.
Aerial	200 mmf.	1500 KC.	1500 KC.	Band Switch "Brdcst"	19E	Roll tuning cond.
Aerial	400 ohms	18 MC.	18 MC.	Band Switch 16 & 19 M.	19C, 19A	Note C
Aerial	400 ohms	12 MC.	12 MC.	Band Switch 25 to 31 M.	19D, 19B	Note C

NOTE A—The "Dummy Aerial" consists of a condenser or resistor connected in series with the signal generator output lead (highside). Use the capacity or resistance as specified in each step of the above procedure.

NOTE B—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 first mark on the left edge (low frequency end) of the broadcast scale.

NOTE C—When adjusting the oscillator compensators, be sure to tune in the fundamental signal instead of the image signal. If the compensator is correctly adjusted the image signal will be found by turning the signal generator dial 910 KC. above the fundamental signal.

Tuning Band Frequencies:

Broadcast 540 to 1720 kc.

SW 1 2.3 to 7.5 mc.

SW 2 7.0 to 22 mc.

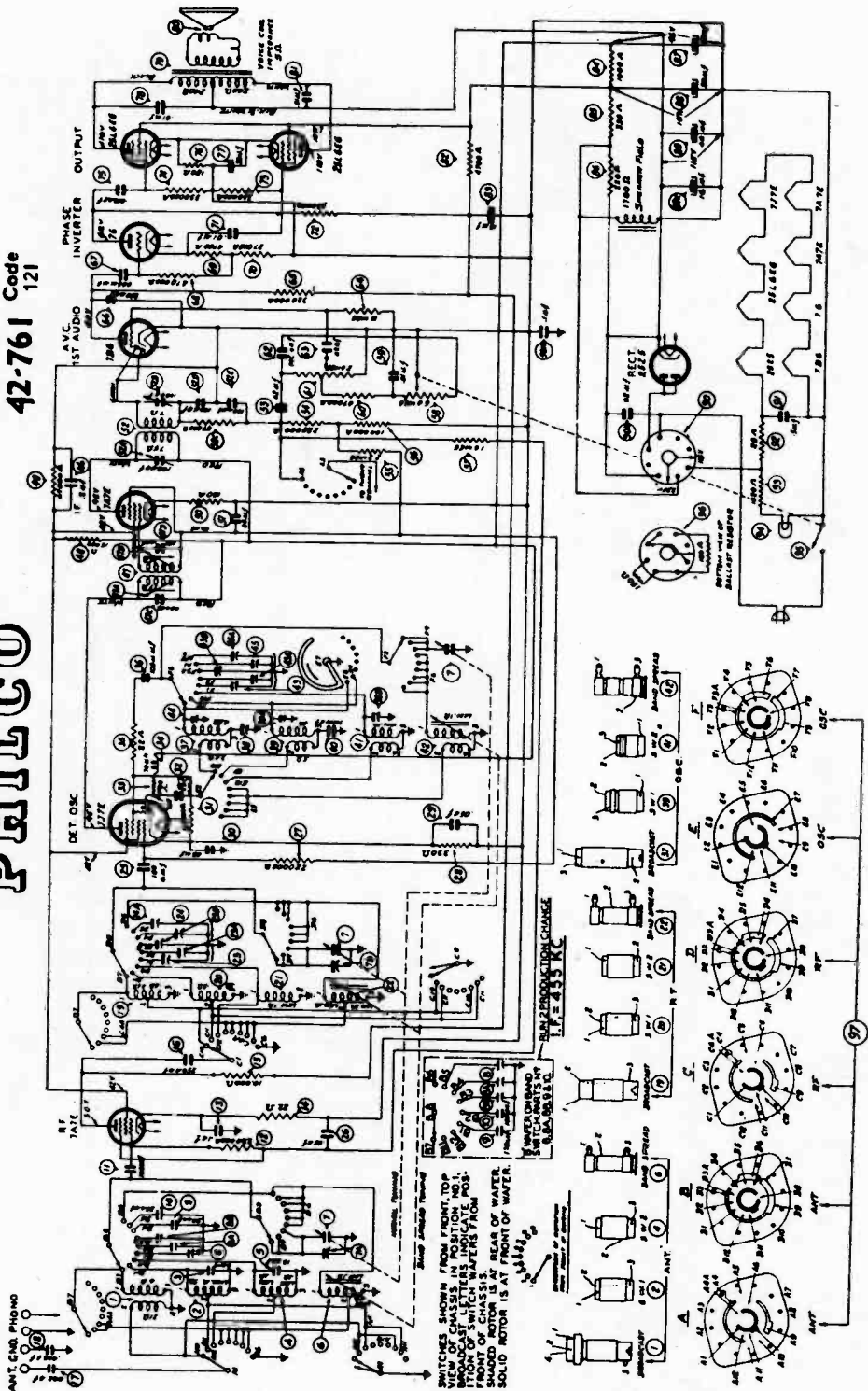
Spread Band 1 9.4 to 12 mc.

Spread Band 2 15.1 to 18 mc.

MANUAL OF 1942 MOST POPULAR SERVICE DIAGRAMS

MODEL
42-761 Code
121

PHILCO



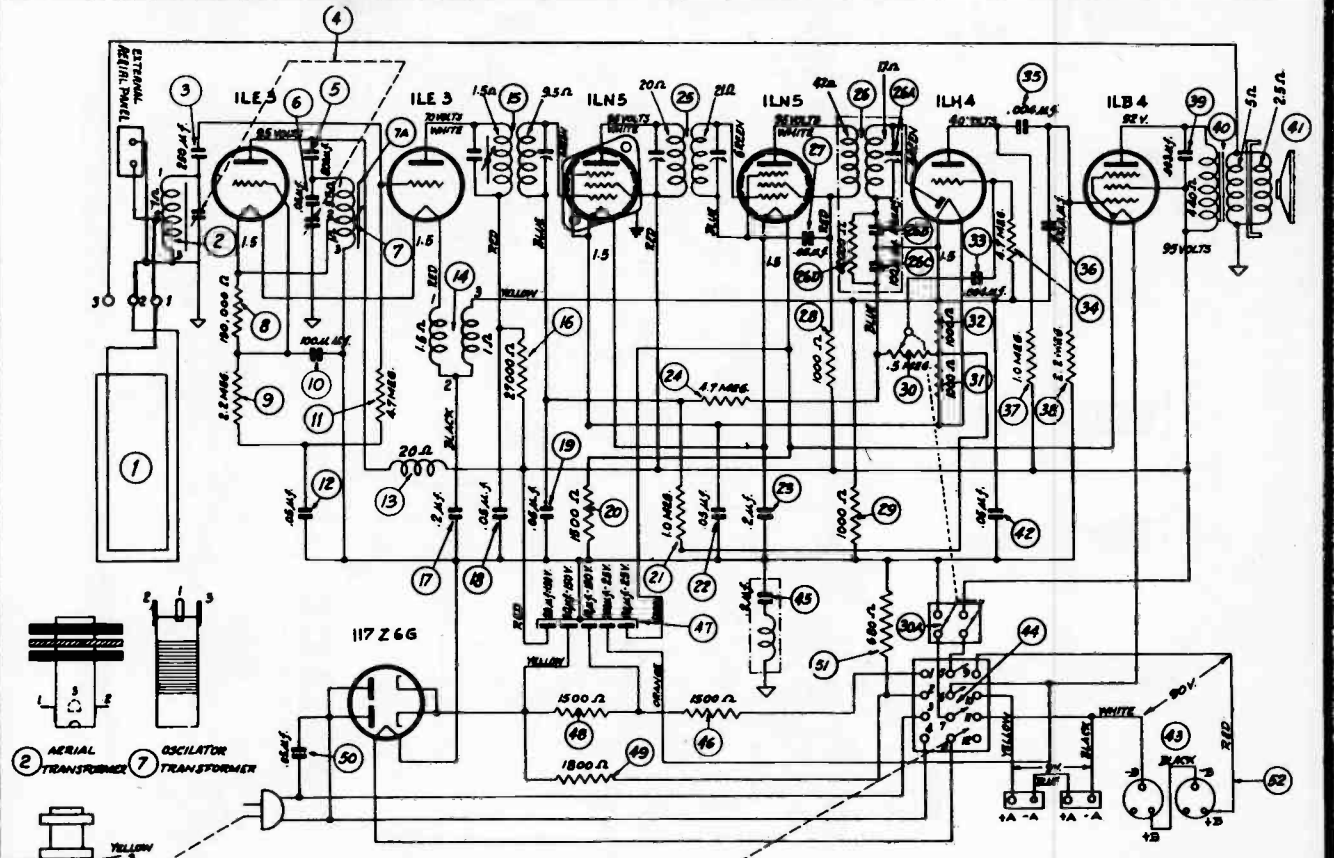
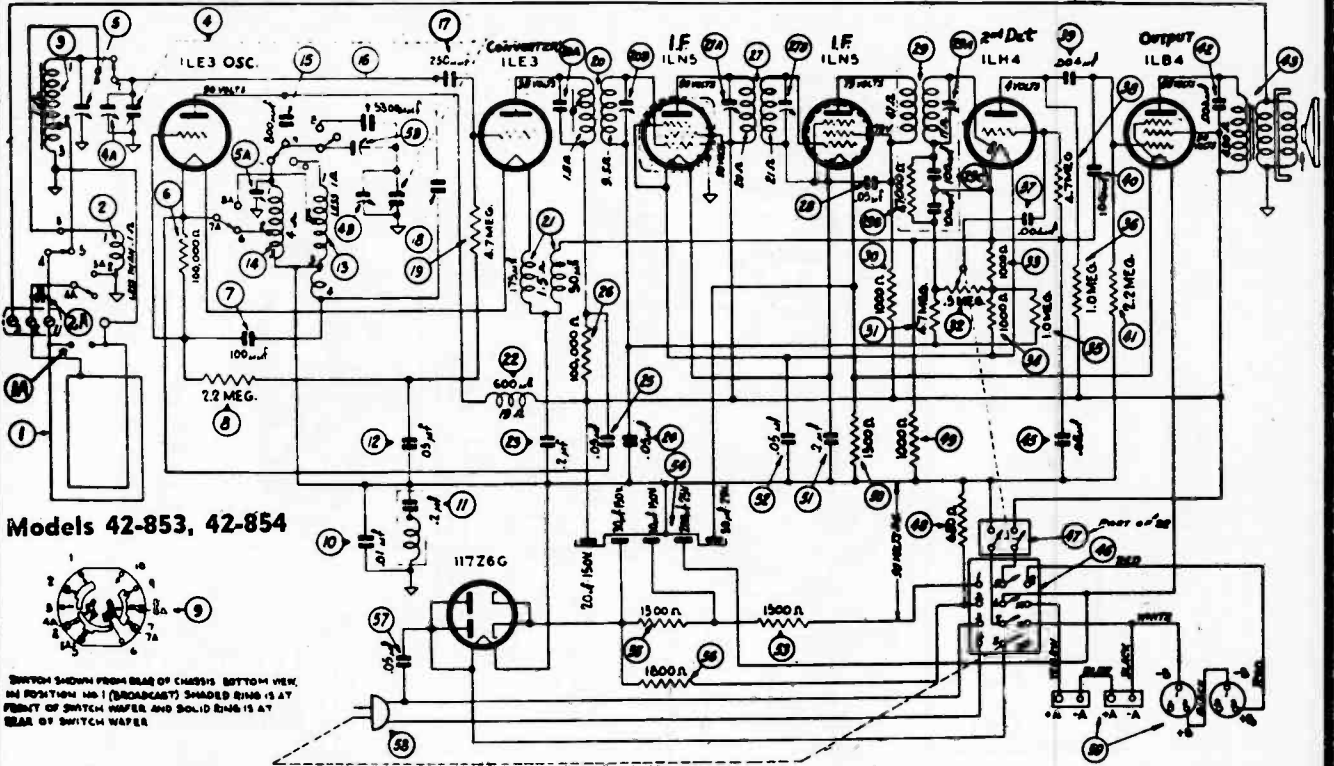
SWITCHES SHOWN FROM FRONT TOP VIEW OF CHASSIS IN POSITION NO. 1. POSITION OF SWITCH WATERS FROM FRONT OF CHASSIS. REAR OF WATER. SOLID ROTOR IS AT FRONT OF WATER.

SWITCH-BOARD SWITCHES: 6BE9A, 6BE9B, 6BE9C, 6BE9D, 6BE9E, 6BE9F, 6BE9G, 6BE9H, 6BE9I, 6BE9J, 6BE9K, 6BE9L, 6BE9M, 6BE9N, 6BE9O, 6BE9P, 6BE9Q, 6BE9R, 6BE9S, 6BE9T, 6BE9U, 6BE9V, 6BE9W, 6BE9X, 6BE9Y, 6BE9Z.

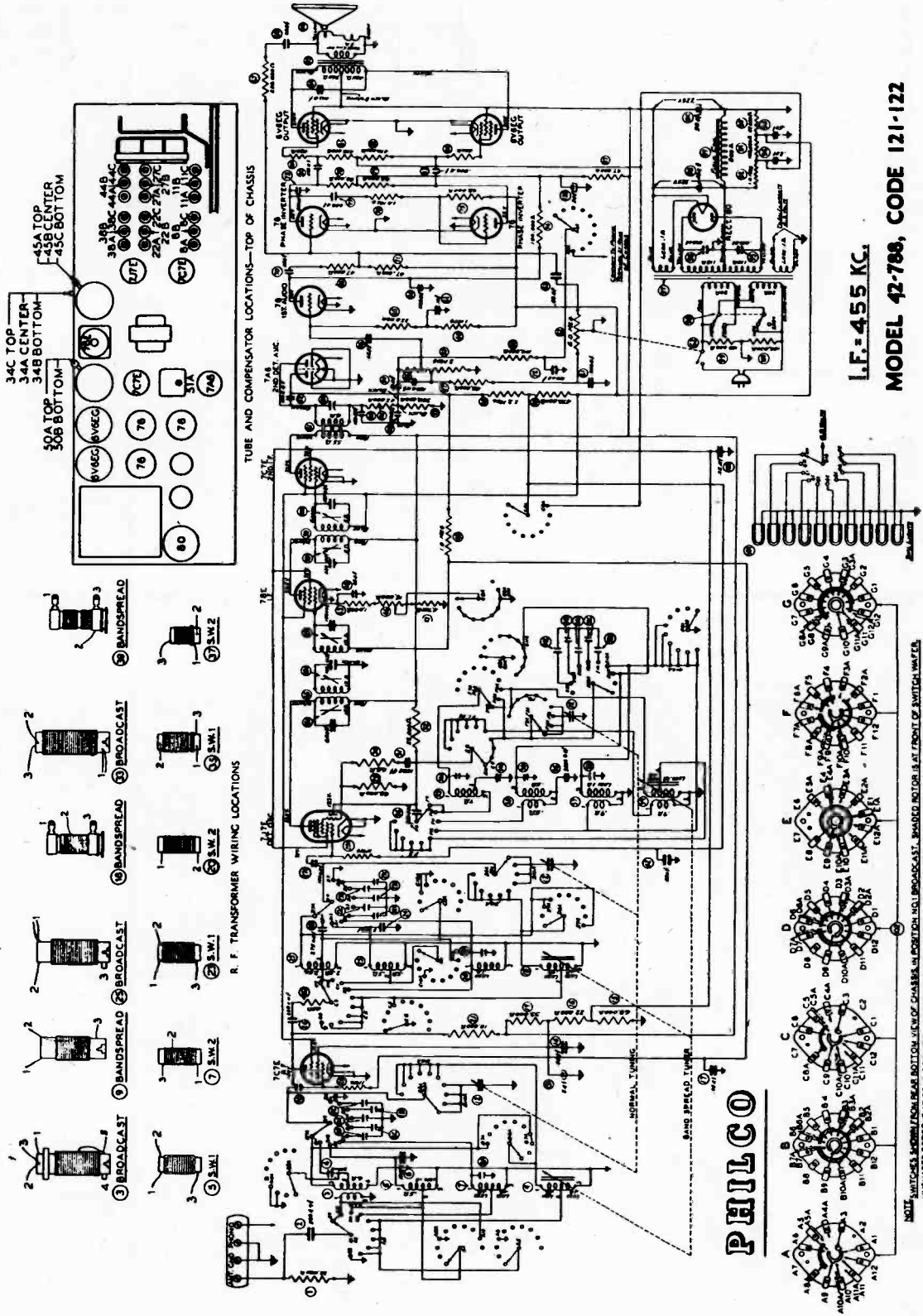
SHARP SECTION IS REAR OF WATER

The voltages indicated at the tube elements above were measured with a 1000 ohms per volt voltmeter. Philco Model 87, line voltage 117 volts. A. C. band switch (breakdown). No mention being received.

MANUAL OF 1942 MOST POPULAR SERVICE DIAGRAMS

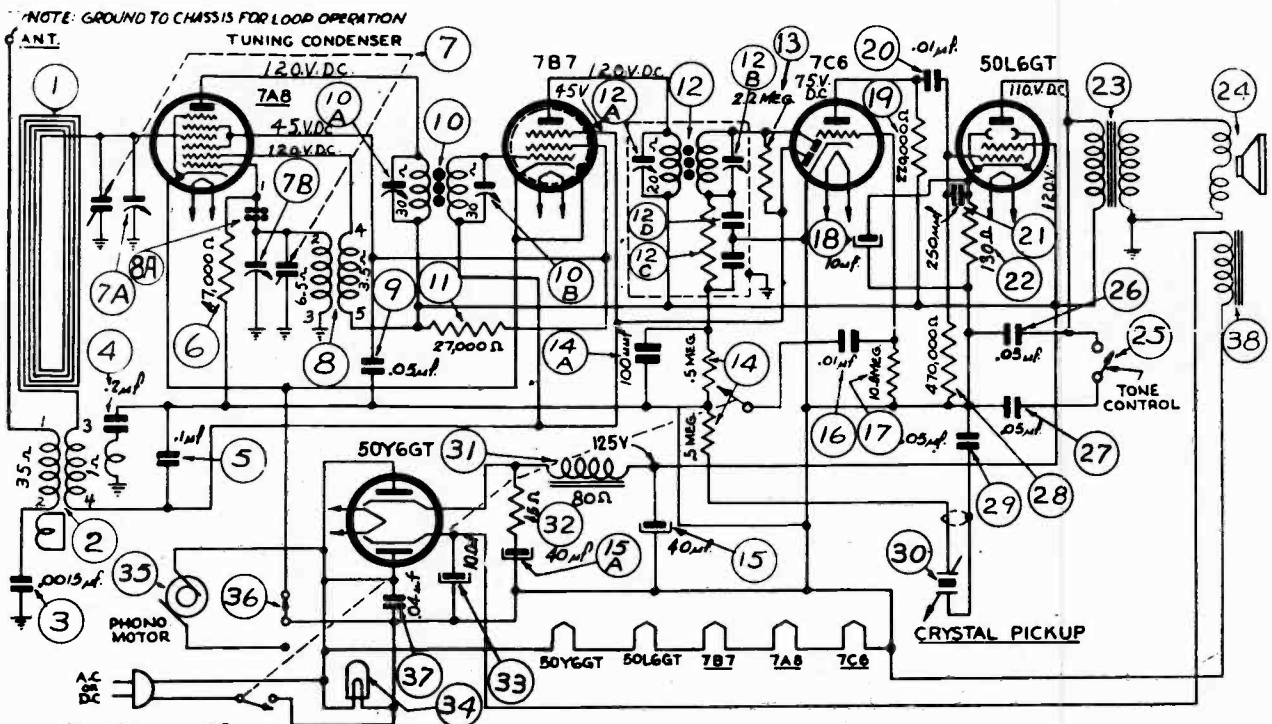
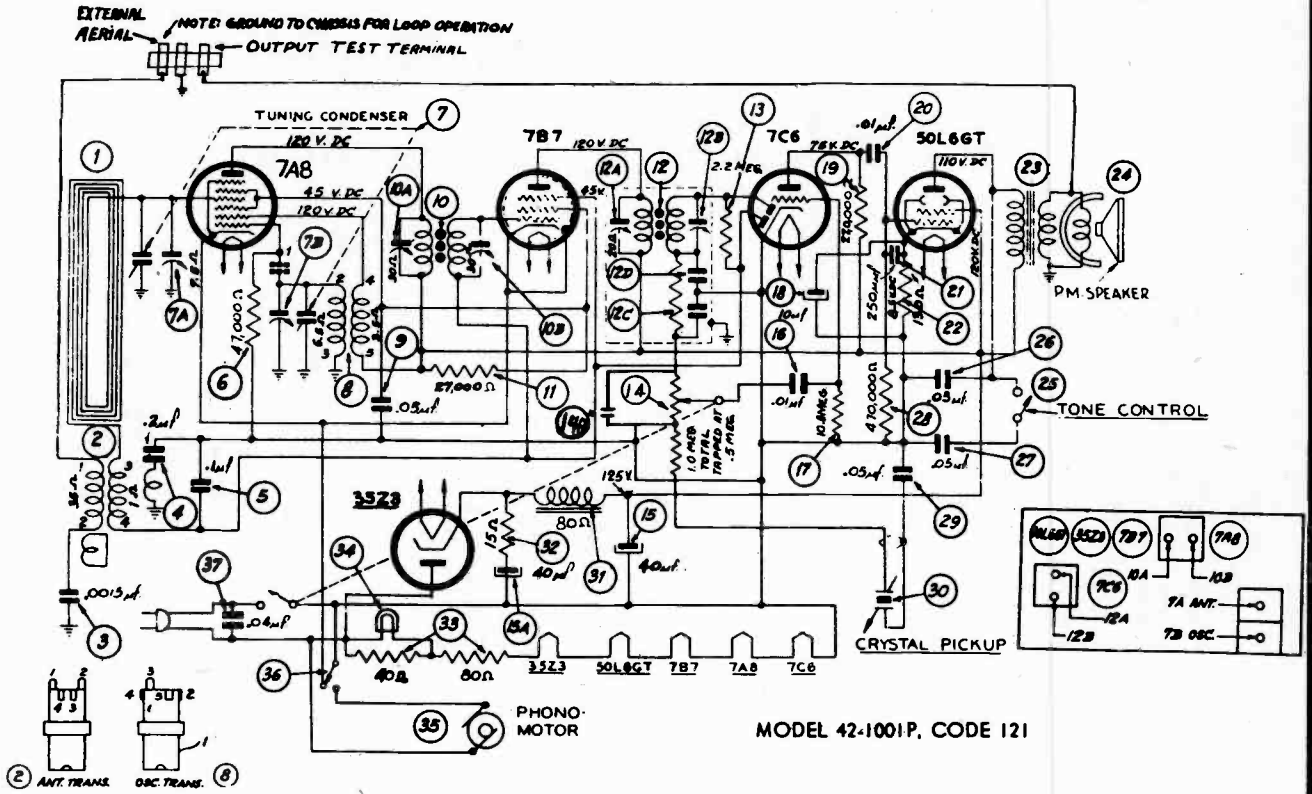


MANUAL OF 1942 MOST POPULAR SERVICE DIAGRAMS



L.F.—455 KC.
MODEL 42-788, CODE 121-122

MANUAL OF 1942 MOST POPULAR SERVICE DIAGRAMS

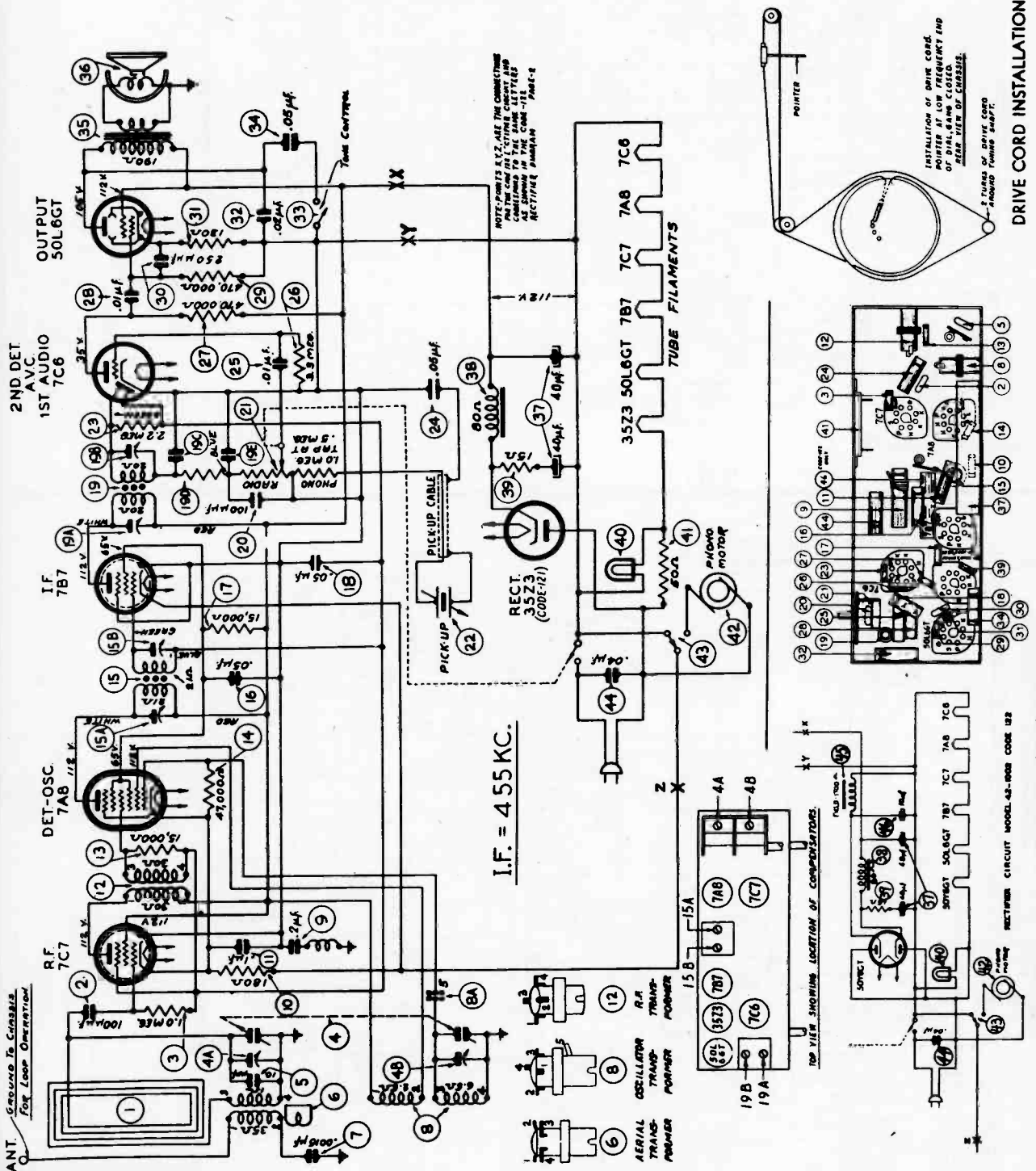


PHILCO

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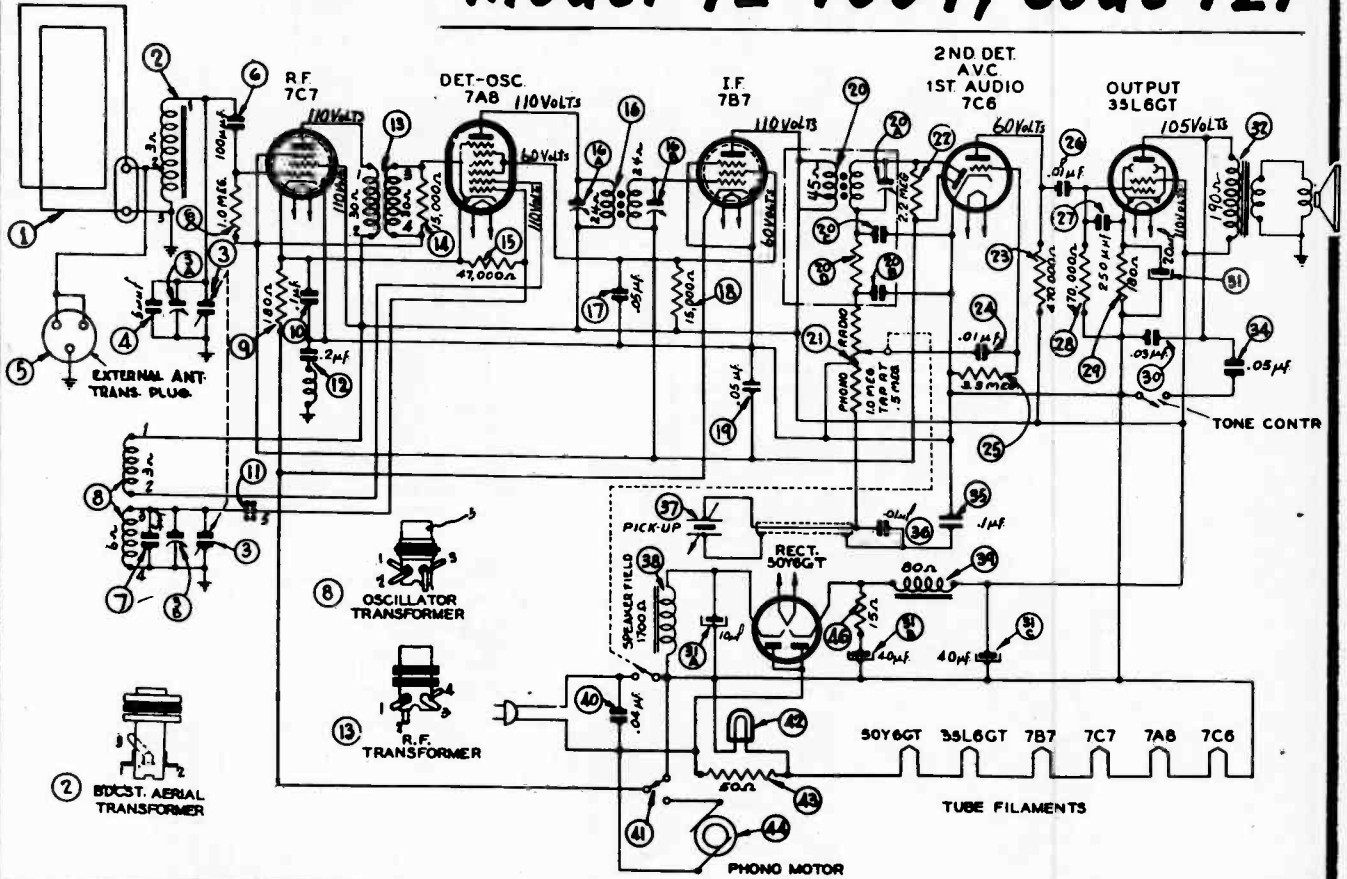
Radio-Phonograph Model 42-1002, Codes 121-122; PHILCO



MANUAL OF 1942 MOST POPULAR SERVICE DIAGRAMS

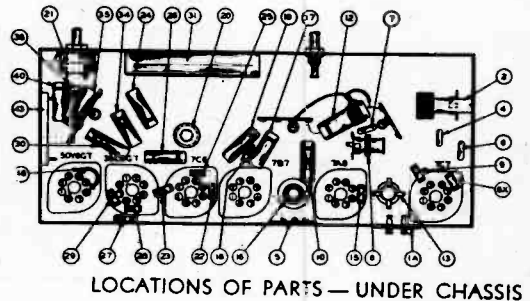
PHILCO

Radio-Phonograph Model 42-1004, Code 121

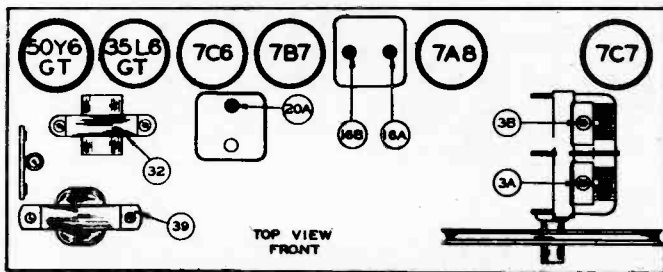


Operations in Order	SIGNAL GENERATOR		RECEIVER			SPECIAL INSTRUCTIONS
	Output Connections to Receiver	Dial Setting	Dial Setting	Control Setting	Adjust Compensators in Order	
1	Ant. Section of tuning	455 K.C.	540 K.C. Tuning Cond. Closed	Vol. Max.	20A, 16B, 16A	
2	Loop see above instructions	1600 K.C.	1600 K.C.	Vol. Max.	3B, 3A	Note A

NOTE A:—DIAL CALIBRATION: In order to adjust the receiver correctly, the dial must be aligned to track properly with the tuning condenser. To do this, proceed as follows: Turn the tuning condenser to the maximum capacity position (plates fully meshed). With the condenser in this position, set the tuning pointer on the small dot below 540 K.C.

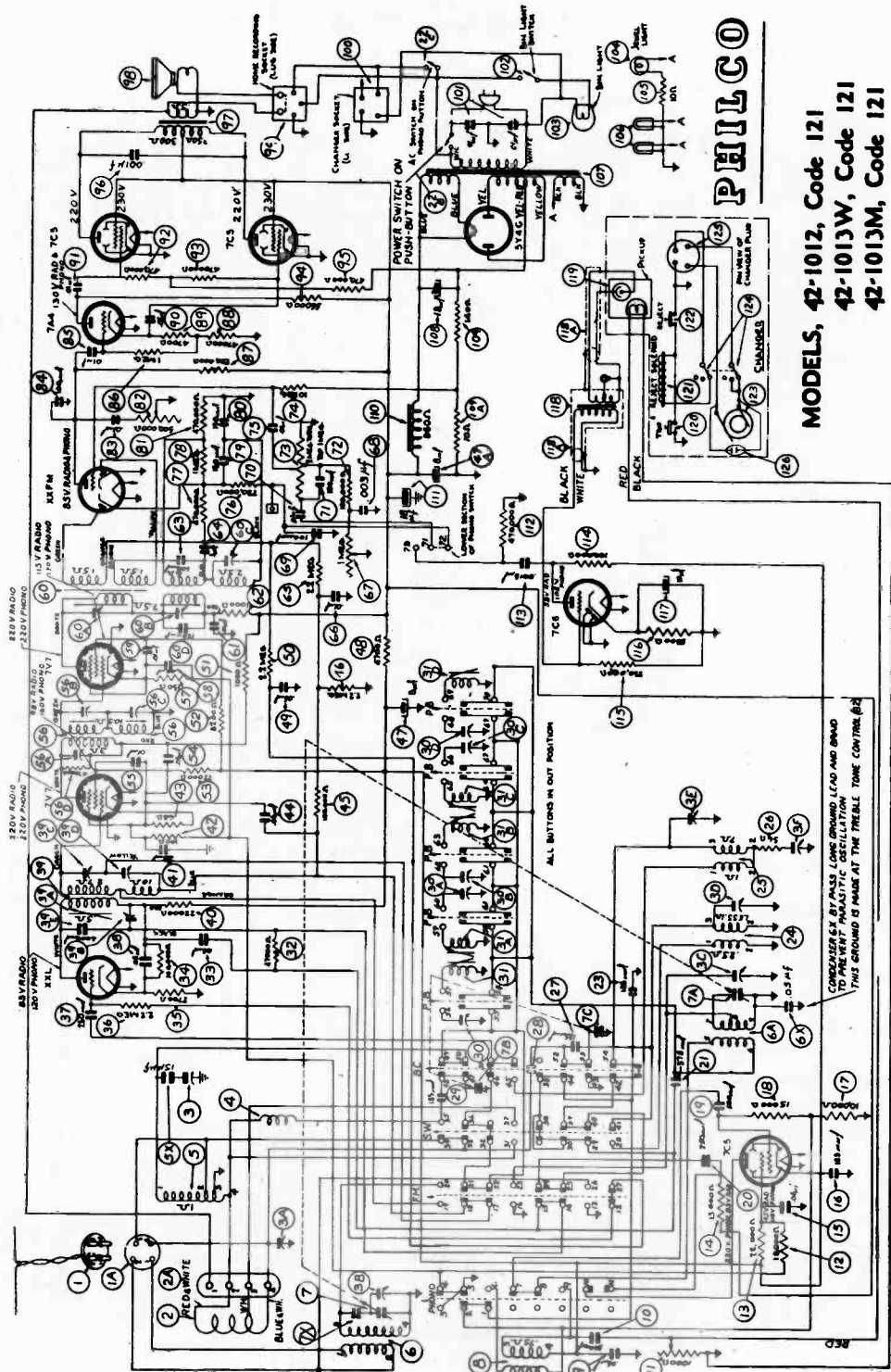


LOCATIONS OF PARTS — UNDER CHASSIS



LOCATIONS OF COMPENSATORS

MANUAL OF 1942 MOST POPULAR SERVICE DIAGRAMS



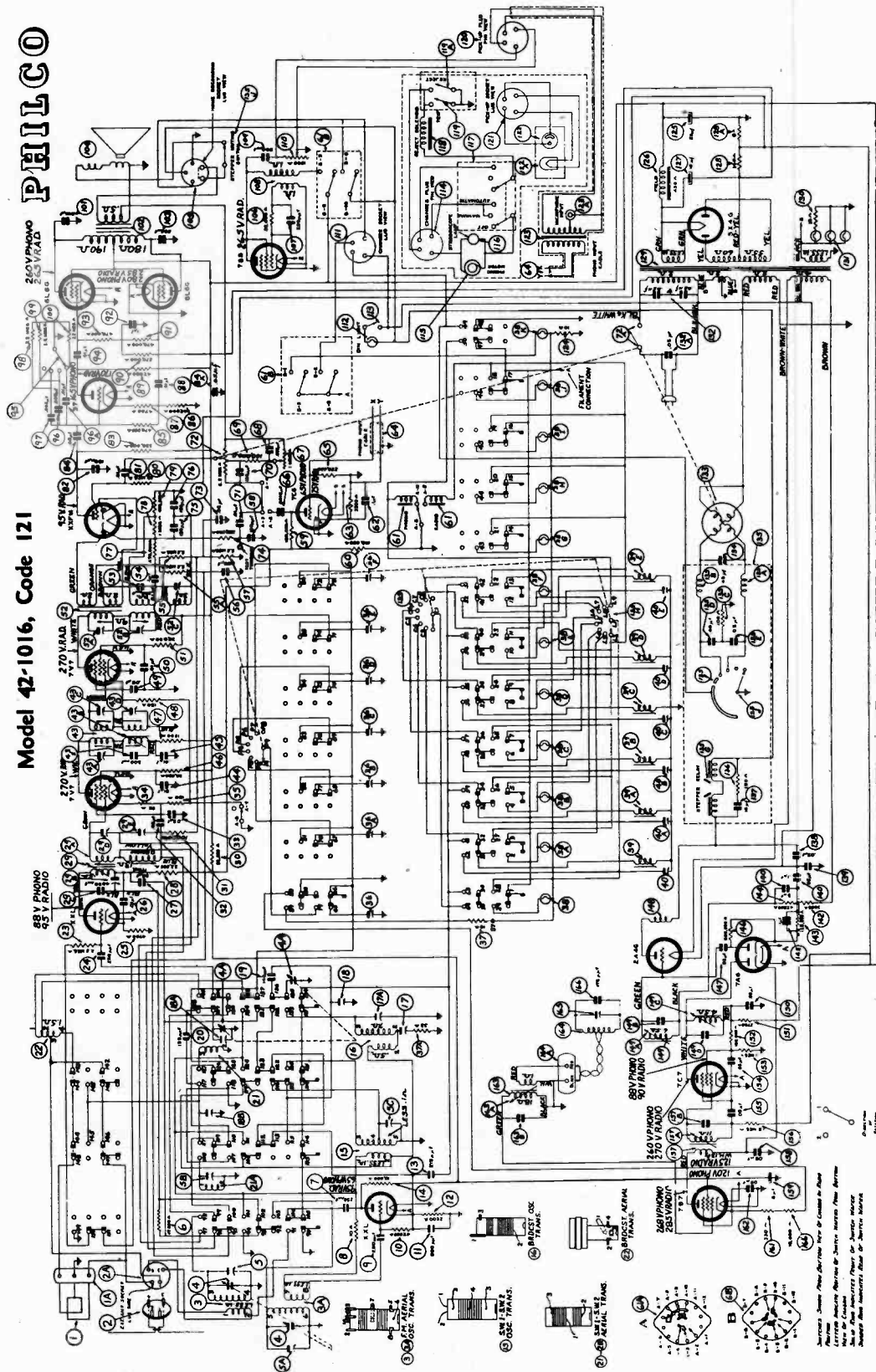
PHILCO

**MODELS, 42-1012, Code 121
42-1013W, Code 121
42-1013M, Code 121**

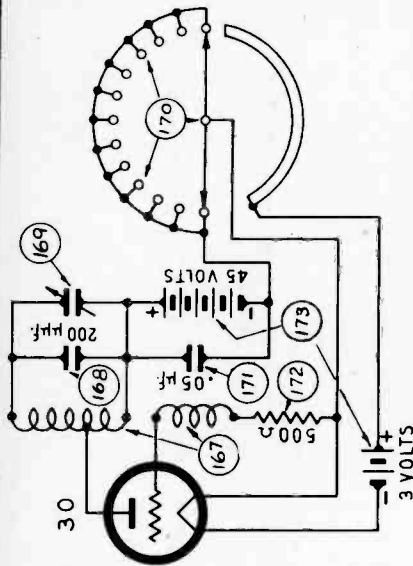
MANUAL OF 1942 MOST POPULAR SERVICE DIAGRAMS

PHILCO

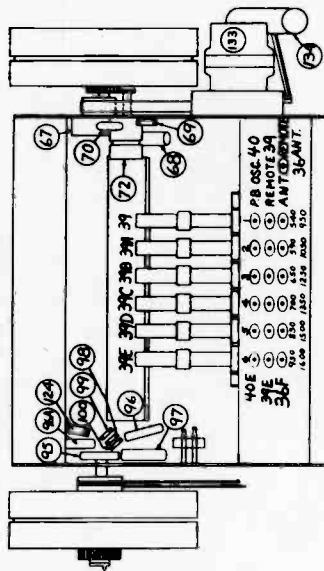
Model 42-1016, Code 121



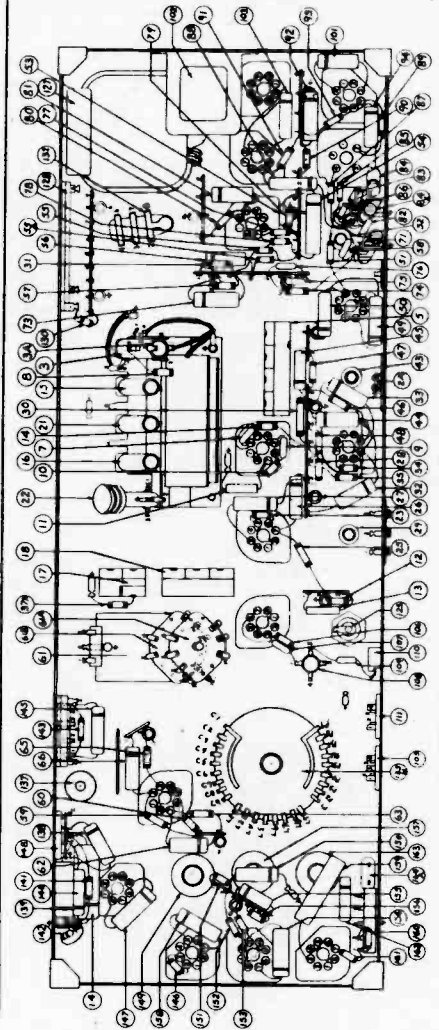
MANUAL OF 1942 MOST POPULAR SERVICE DIAGRAMS



SCHEMATIC DIAGRAM OF WIRELESS REMOTE CONTROL UNIT

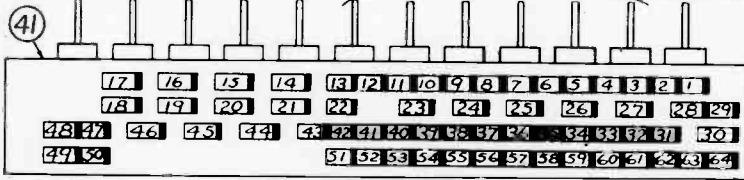


LOCATIONS OF PARTS, TUNING UNIT

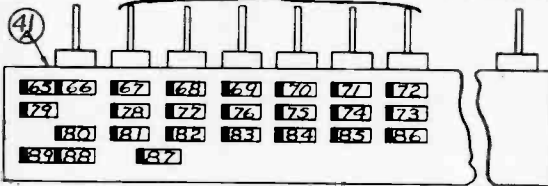


PART LOCATIONS—UNDER CHASSIS, MODEL 42-1016

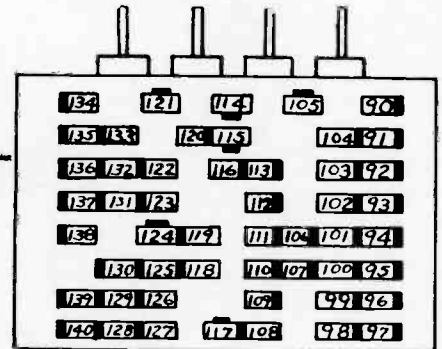
PHONO REJECT F.M. SW2 SW1 BRDCAST. PB. STATIONS REMOTE



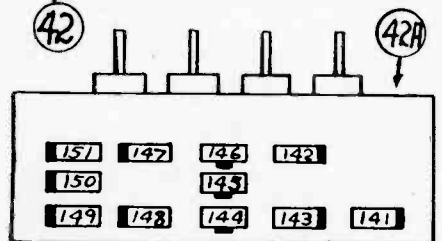
REMOTE PB. STATIONS PHONO REJECT



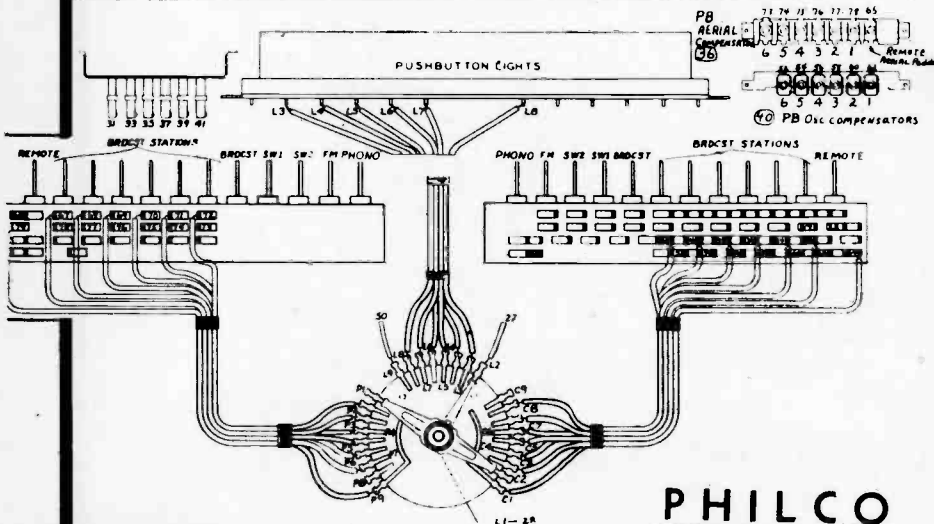
CONTACT LOCATIONS OF STATIONS AND LIGHTS, P. B. SWITCH—TOP 41, BOTTOM 41A



42



42A



PHILCO

104

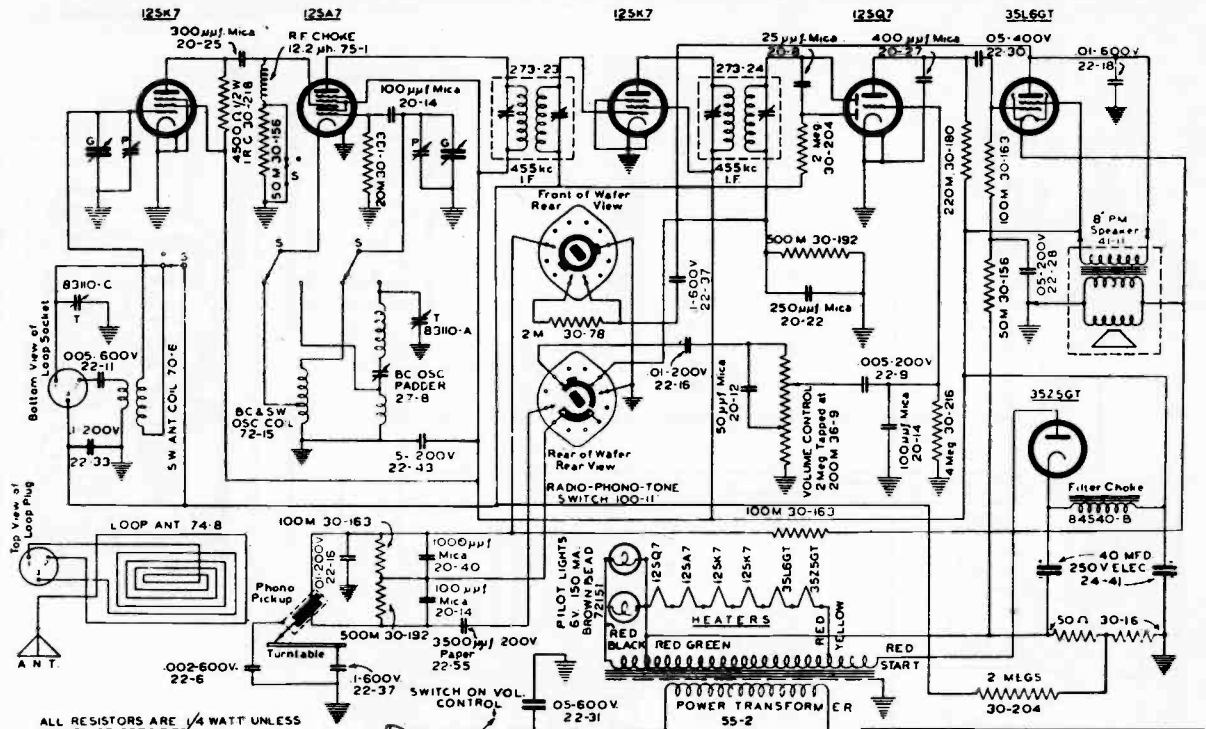
CABLE WIRING

Model 42-1016, Code 121

CONTACT LOCATIONS OF TUNING BAND, P. B. SWITCH—42, BOTTOM; 42A, TOP SECTION

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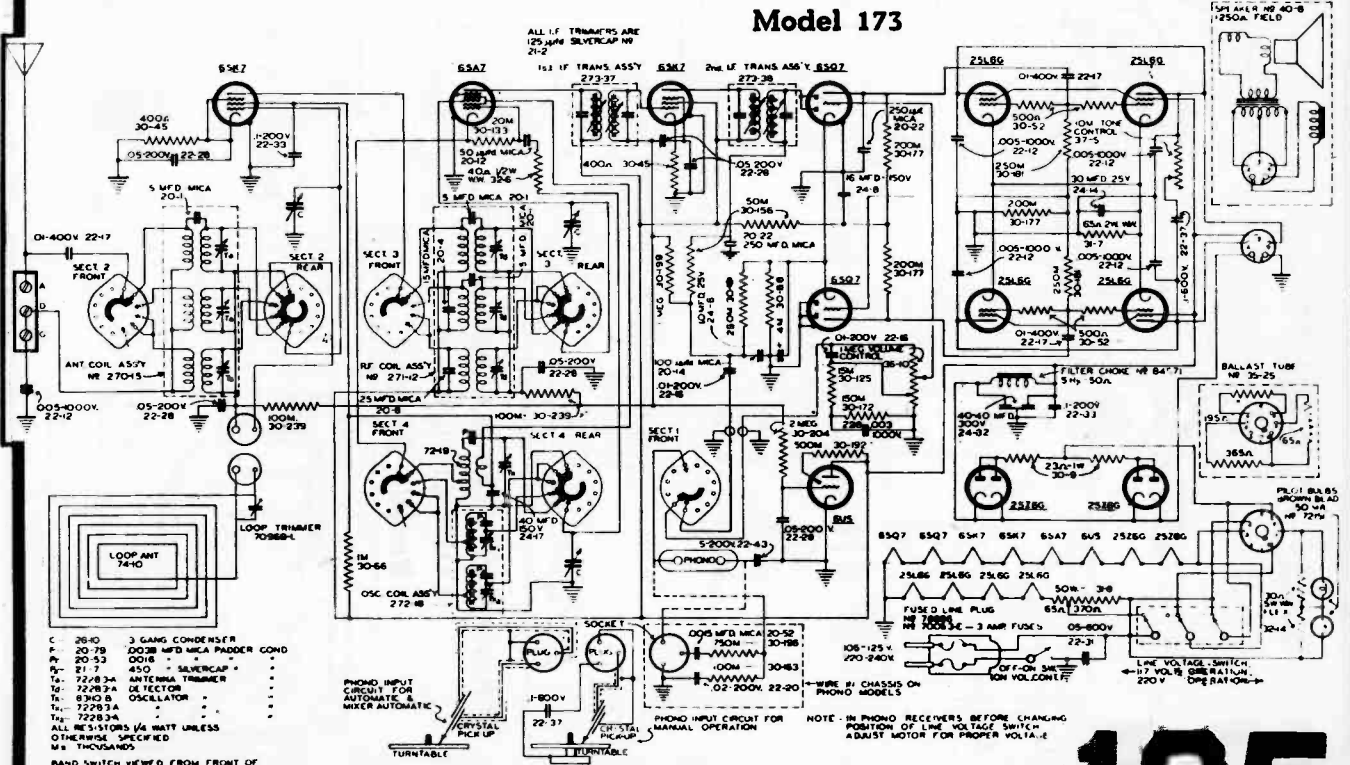


ALL RESISTORS ARE 1/4 WATT UNLESS OTHERWISE SPECIFIED
 C - GANG CONDENSER 26-9
 P - TRIMMERS ON GANG
 T - TRIMMER CONDENSERS
 S - BAND SWITCH 100-10 SHOWN IN SW POSITION
 RADIO-PHONO-TONE SWITCH SHOWN IN EXTREME COUNTERCLOCKWISE POSITION (No 1)
 No 1 - RADIO VOICE
 No 2 - TREBLE
 No 3 - BASS
 No 4 - PHONO VOICE
 No 5 - TREBLE
 No 6 - BASS

OPERATION	CONNECT A To	CONNECT B To	CONNECT
117 "	RED-BLACK	RED-YELLOW	NO PRIMARY
150 "	RED-GREEN	RED	NO PRIMARY
230 "	RED-GREEN	BLACK	BLACK-YELLOW TO RED-YELLOW

Pilot

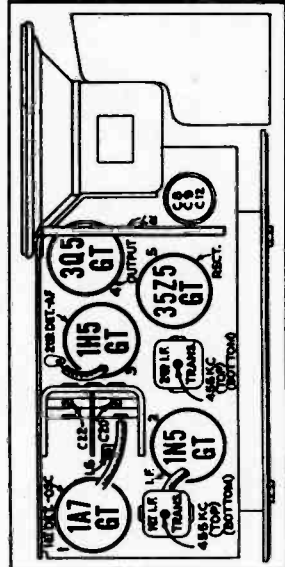
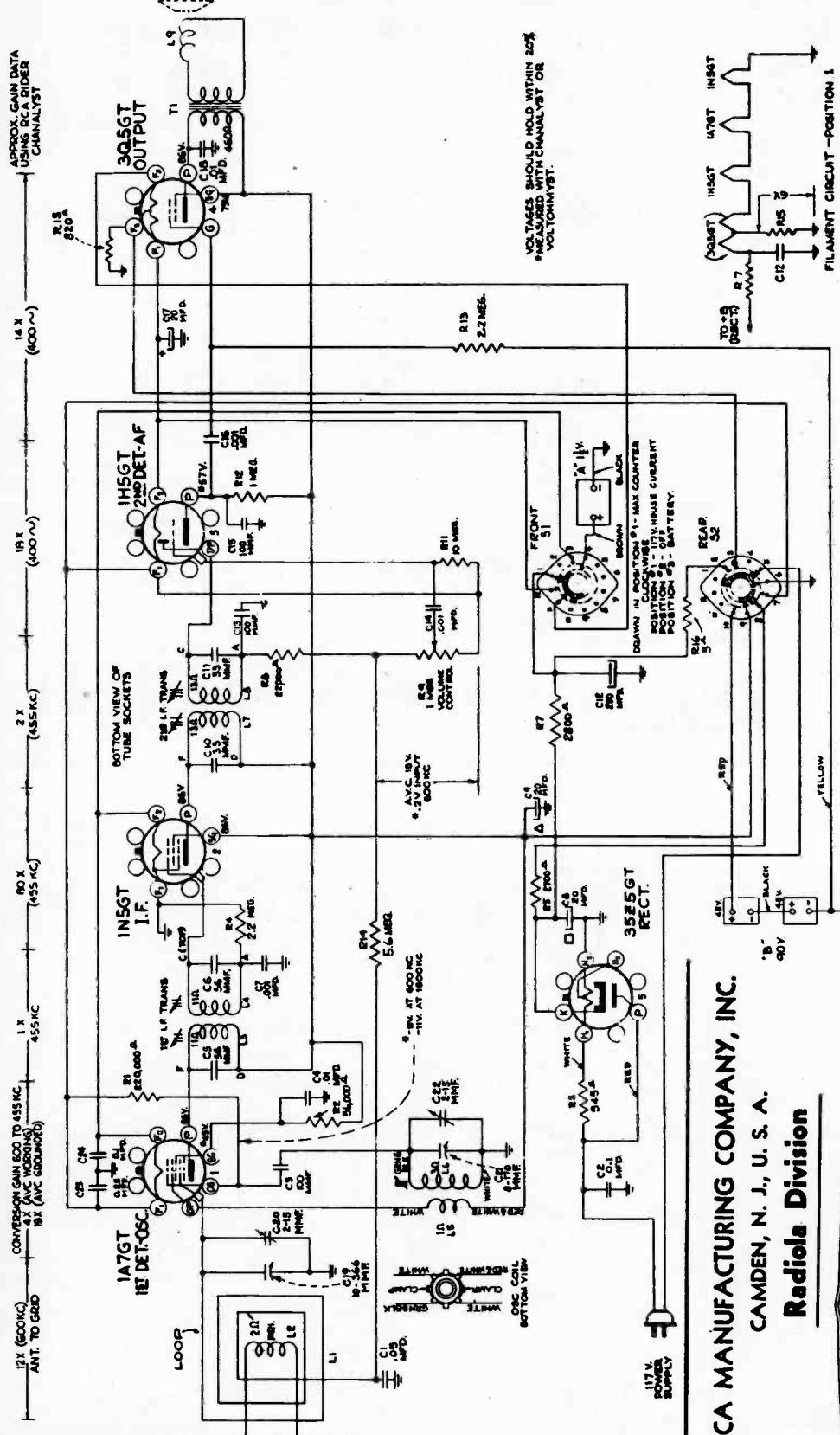
Model TP-32



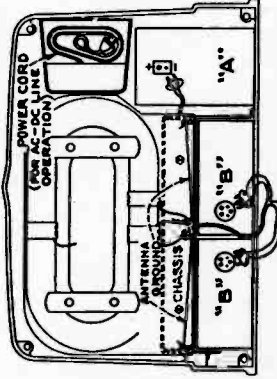
26-40 3 GANG CONDENSER
 P- 20-78 0038 MFD MICA PADDER COND
 P- 20-53 0016 " " " " "
 P- 21-7 450 - SILVERCAP
 T- 72-8 2A ANTENNA TRIMMER
 T- 72-28 2A DEFECTION OSCILLATOR
 T- 72-28 2A DEFECTION OSCILLATOR
 T- 72-28 2A DEFECTION OSCILLATOR
 T- 72-28 2A DEFECTION OSCILLATOR
 T- 72-28 2A DEFECTION OSCILLATOR
 T- 72-28 2A DEFECTION OSCILLATOR
 T- 72-28 2A DEFECTION OSCILLATOR

NOTE: IN PHONO RECEIVERS BEFORE CHANGING POSITION OF LINE VOLTAGE SWITCH ADJUST MOTOR FOR PROPER VOLTAGE

MANUAL OF 1942 MOST POPULAR SERVICE DIAGRAMS

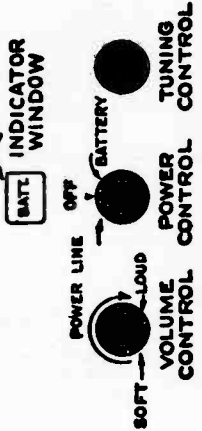


RCA MANUFACTURING COMPANY, INC.
CAMDEN, N. J., U. S. A.
Radio Division



ONE 1.5V 24" - EVEREADY No. 743 OR EQUAL.
 TWO 48V. "B" - EVEREADY No. 483 OR EQUAL.

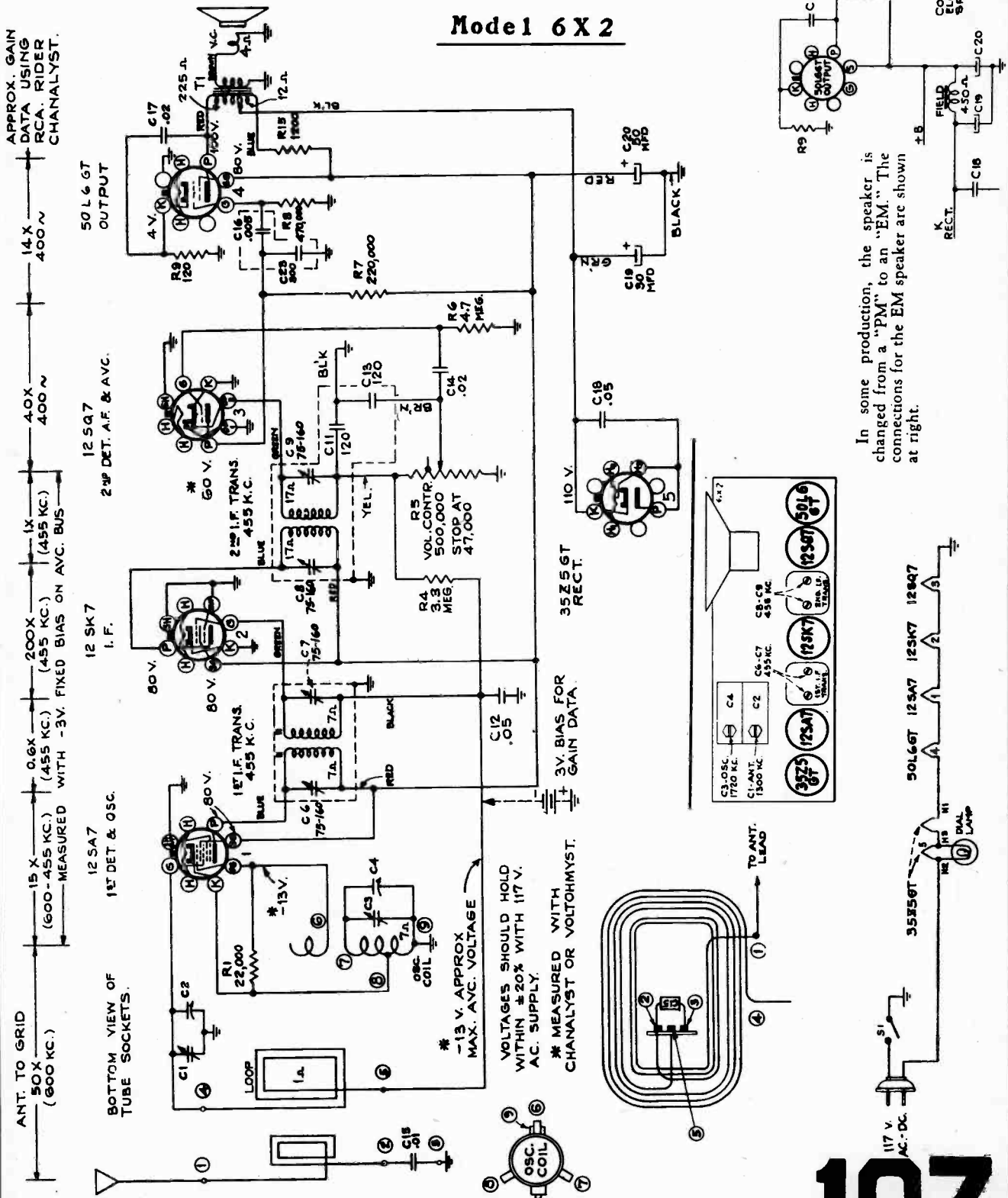
Model P-5 Portable



MANUAL OF 1942 MOST POPULAR SERVICE DIAGRAMS

RCA Victor

Model 6X2



In some production, the speaker is changed from a "PM" to an "EM." The connections for the EM speaker are shown at right.

RCA Victor

25X

APPROX. GAIN DATA USING RCA RIDER CHANNELYST

14X 400 ~

50L6GT OUTPUT

40X 400 ~

1X (455 KC) (455 KC) 2ND DET. AF. & AVC

200X (455 KC) (455 KC) 12SK7 I.F.

0.6X (455 KC) (455 KC) 15X (600 KC) (600 KC) 12SA7 1ST DET & OSC

MEASURED WITH -3V. FIXED BIAS ON AVC. BUS

ANT TO GRID 50X (600 KC)

1.0

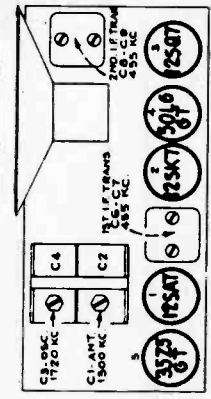
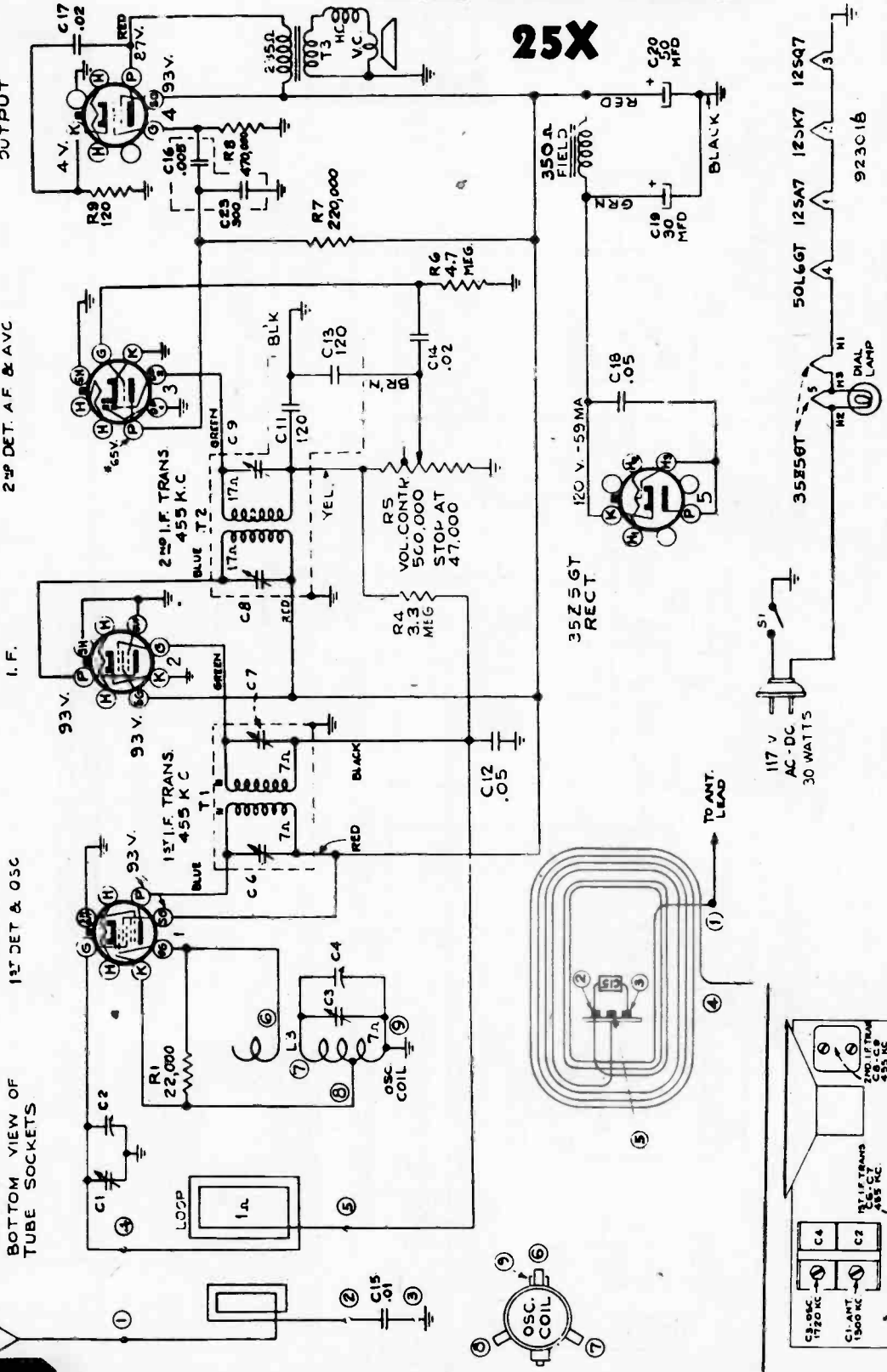
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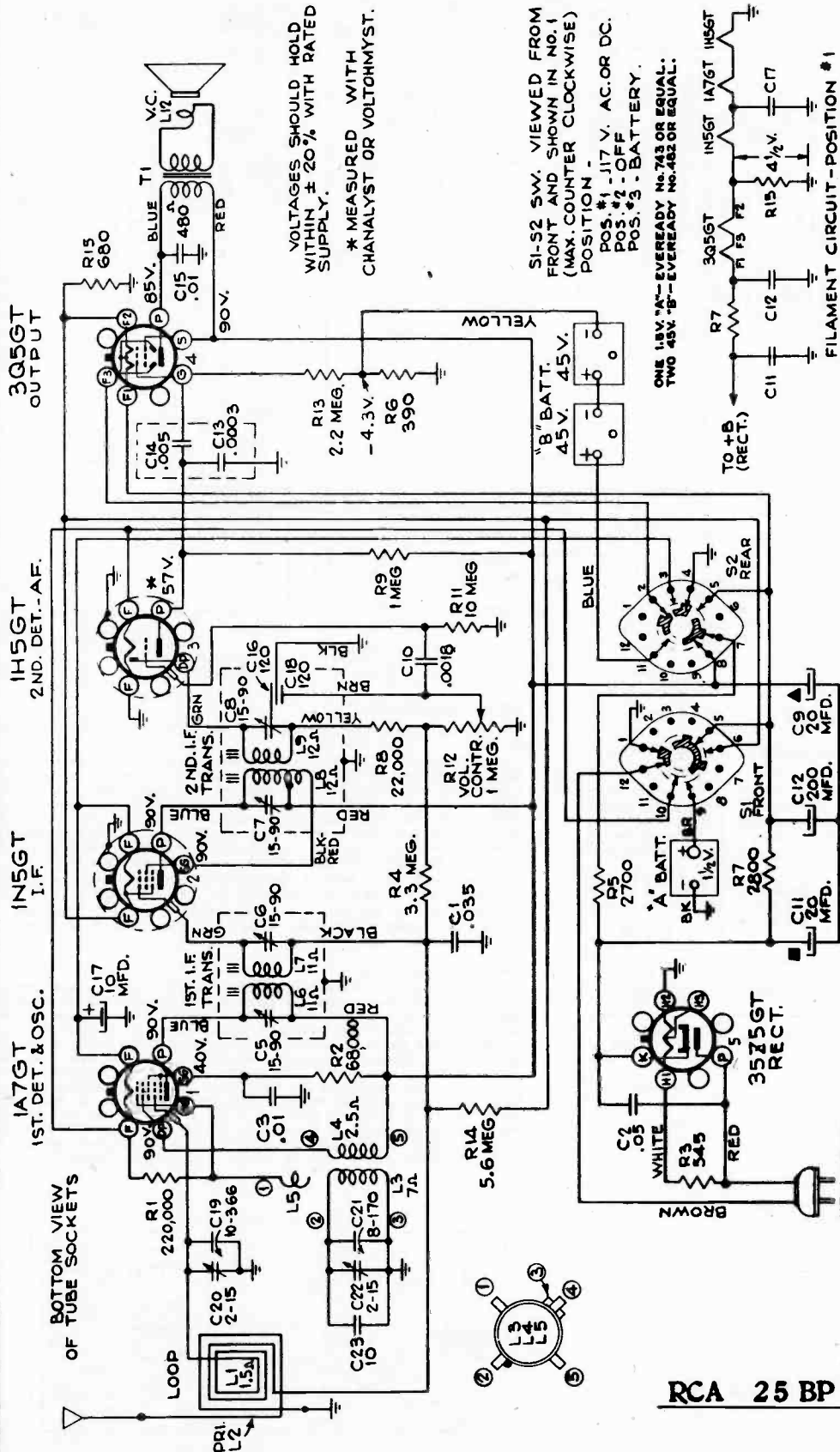
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MANUAL OF 1942 MOST POPULAR SERVICE DIAGRAMS

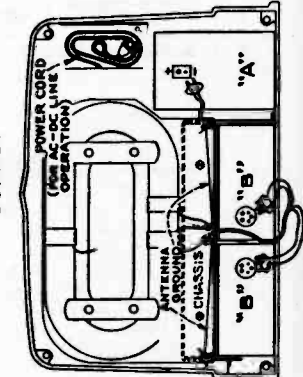
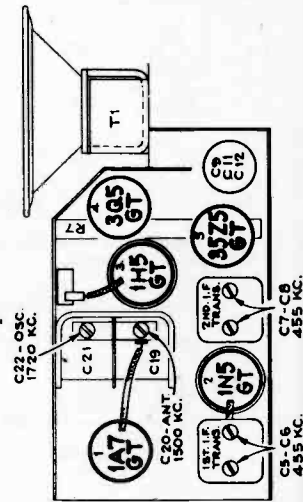


VOLTAGES SHOULD HOLD WITHIN $\pm 20\%$ WITH RATED SUPPLY.
* MEASURED WITH CHANALYST OR VOLTHOMYST.

SI-S2 SW. VIEWED FROM FRONT AND SHOWN IN NO. 1 (MAX. COUNTER CLOCKWISE) POSITION -
POS. #1 - 117 V. AC OR DC.
POS. #2 - OFF
POS. #3 - BATTERY.
ONE 1.8V. "A"-EVEREADY No. 743 OR EQUAL.
TWO 45V. "B"-EVEREADY No. 482 OR EQUAL.

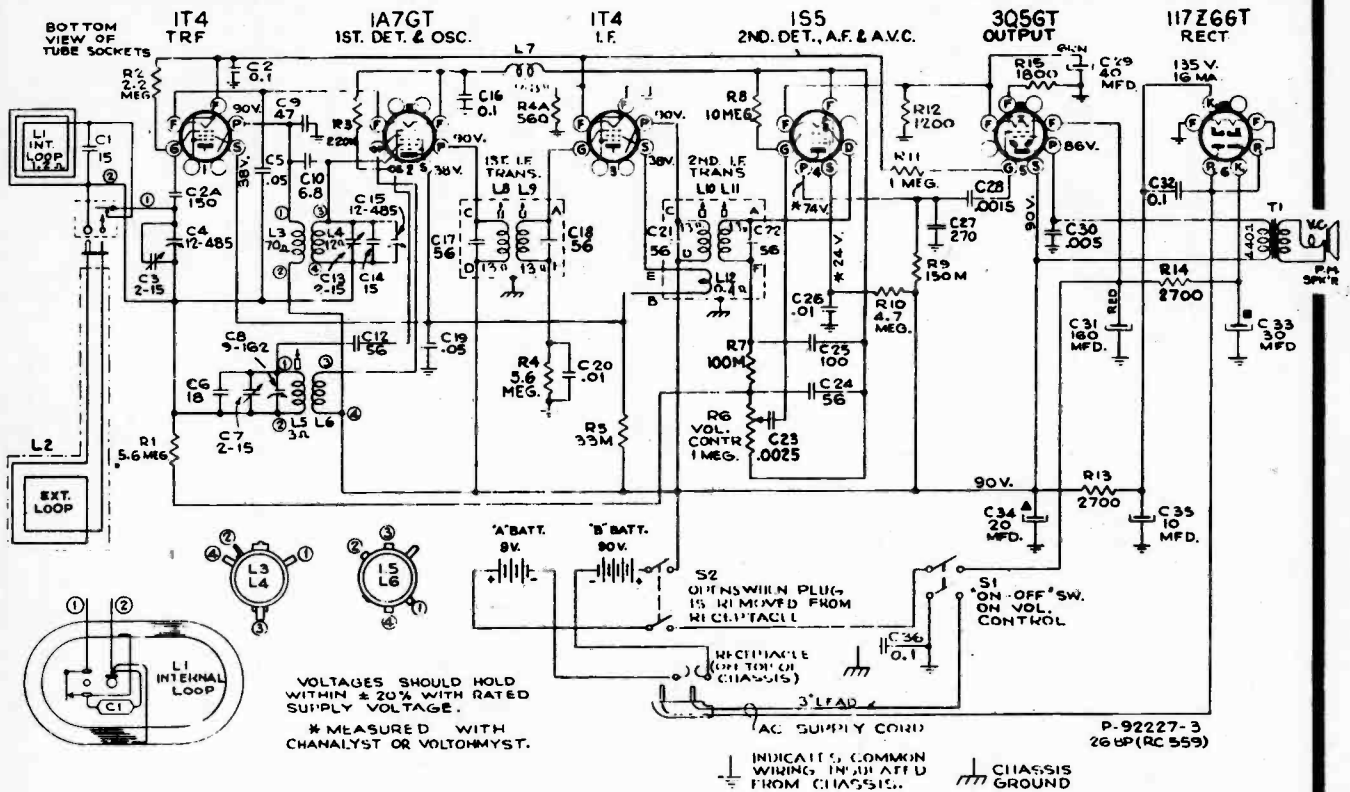
FILAMENT CIRCUIT-POSITION # 1

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	I-F grid cap. in series with .01 mfd.	455 kc	Quiet point at 1,600 kc end of dial	C8, C7 (2nd I-F trans.)
2	1st-Det. grid cap. in series with .01 mfd.	radiated signal 1,720 kc	Gang at min. capacity	C5, C6 (1st I-F trans.)
3	radiated signal 1,400 kc	radiated signal 1,400 kc	Osc. Trimmer	C22
4	radiated signal 1,400 kc	radiated signal 1,400 kc	Ant. Trimmer	C20



RCA 25 BP Portable

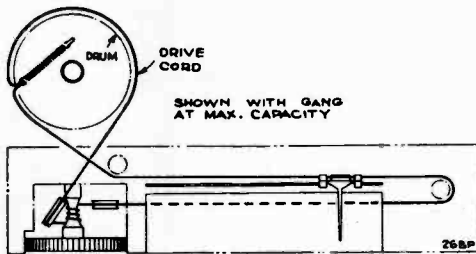
MANUAL OF 1942 MOST POPULAR SERVICE DIAGRAMS



Alignment

With gang in full mesh, the pointer should be 1/16-inch to the left of the 550 kc dial mark.

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	I-F grid, in series with .01 mfd.	455 kc	Quiet point at 1,600 kc end of dial	L10, L11 (2nd I-F trans.)
2	1st-Det. grid cap, in series with .01 mfd.	1,600 kc	1,600 kc	L8, L9 (1st I-F trans.)
3	radiated signal at 1,600 kc	600 kc	600 kc	C7 (osc.) C3 (ant.) C13 (det.)
4	radiated signal 600 kc			L5 (Rock in)
5	Repeat steps 3 and 4			



RCA 26 BP Portable

AC-DC Operation.—

This receiver will operate on 105 to 125 volts, AC 50 or 60 cycles, or DC.

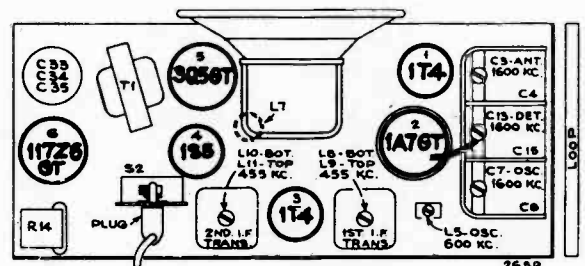
A power cord is housed in the bottom right hand corner looking inside the cabinet as shown in the illustration. Open the cabinet like a suit case, first pushing to one side the little pins under the handle ends to raise the clips. Then pull the power cord plug out of its socket in the top right hand corner as shown, and take out and unroll the power cord. A slot in the bottom allows the closing of the cabinet with the power cord passing through. Close the cabinet with the cord extending and insert the plug into a convenient electrical outlet.

When returning to battery operation, be sure to replace the power plug in its socket inside the case with the cord rolled up.

NOTE.—If reception is not obtained on DC, reverse plug in outlet receptacle. This may also reduce hum on AC operation.

Using External Loop.—

A loop antenna is housed inside the cabinet. Under normal conditions this will give satisfactory reception. If however the receiver is used in a location remote from broadcasting stations where signals are weak, or where interference is excessive, or in a shielded compartment such as an automobile, airplane or railroad train, an RCA Magic Wave Magnifier Antenna with suction cup fastener may be purchased from your dealer. This antenna has a strap connector cord ending in a two-prong plug for attachment to the loop antenna frame. Open the case, plug the antenna cord into the socket (it will only go in one way), bring the strap out at the slot in the case and attach the Antenna by means of the suction cup to any convenient vertical surface. The RCA Magic Wave Magnifier may be attached inside the back case, when not in use, by means of three snap fasteners.



MANUAL OF 1942 MOST POPULAR SERVICE DIAGRAMS

RCA Models 26X-1, 26X-3

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

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

Calibration Scale.—The glass tuning dial may be easily removed from the cabinet and temporarily attached to the dial backing plate for quick reference during alignment.

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.

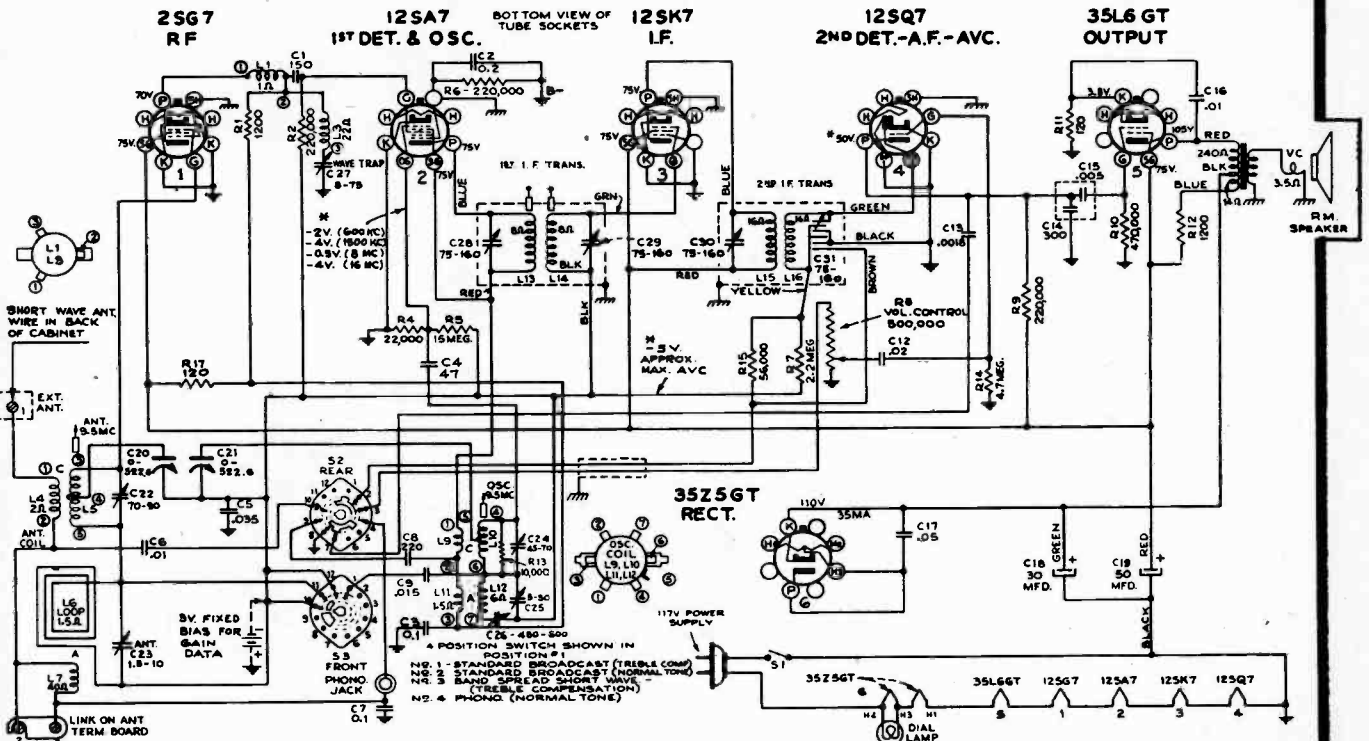
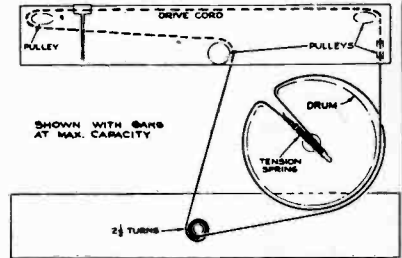
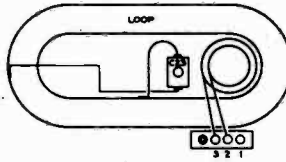
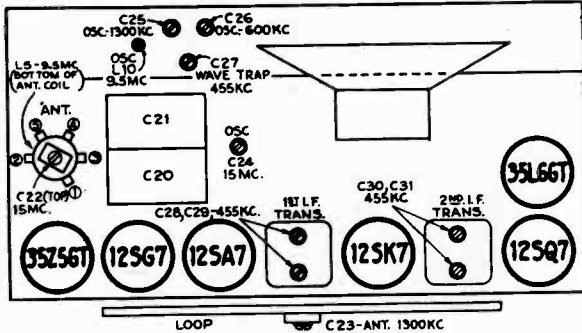
Precautionary Lead Dress

1. Dress output tube plate lead to speaker and output bypass condenser away from terminal board and yellow lead in cable.
2. Dress brown and yellow leads from 2nd I.F. transformer away from output plate and bypass condenser.
3. Dress .02 capacitor C12 away from output capacitor C16.
4. Dress all leads or parts as far as possible away from oscillator coil.
5. Dress lead from C13 to band switch down along front apron of chassis.
6. Dress lead from trimmer condenser on loop to S.W. Ant. coil around outside of rectifier tube. Other leads between rectifier and R.F. tube.

Steps	Connect high side of the test oscillator to—	Tune test osc. to—	Turn radio dial to—	Adjust the following for maximum peak output
1	I.F. grid in series with 0.1 mfd.	455 kc	Quiet Point at 1,700 kc end of dial	C30, C31 2nd I-F trans.
2	1st det. grid in series with 0.1 mfd.			
3	R.F. grid in series with 0.1 mfd.			C-27** Wave trap
4	Ant. terminal in series with 47 mmf. (link open)	15 mc	15 mc "C" Band	C-24 (osc.)* C-22 (ant.)
5		9.5 mc	9.5 mc "C" Band	L-10 (osc.) Lr5 (ant.)
6	Repeat steps 4 and 5.			
7	Ant. terminal in series with 220 mmf. (link open)	1,300 kc	1,300 kc "A" Band	C-25 (osc.) C-23 (ant.)
8		600 kc	600 kc "A" Band	C-26 (osc.)
9	Repeat steps 7 and 8.			

*Use minimum capacity peak if two peaks can be obtained.
**Adjust C-27 for minimum signal with 455 kc applied to R.F. grid.

Note.—Oscillator tracks 455 kc above signal on all bands.

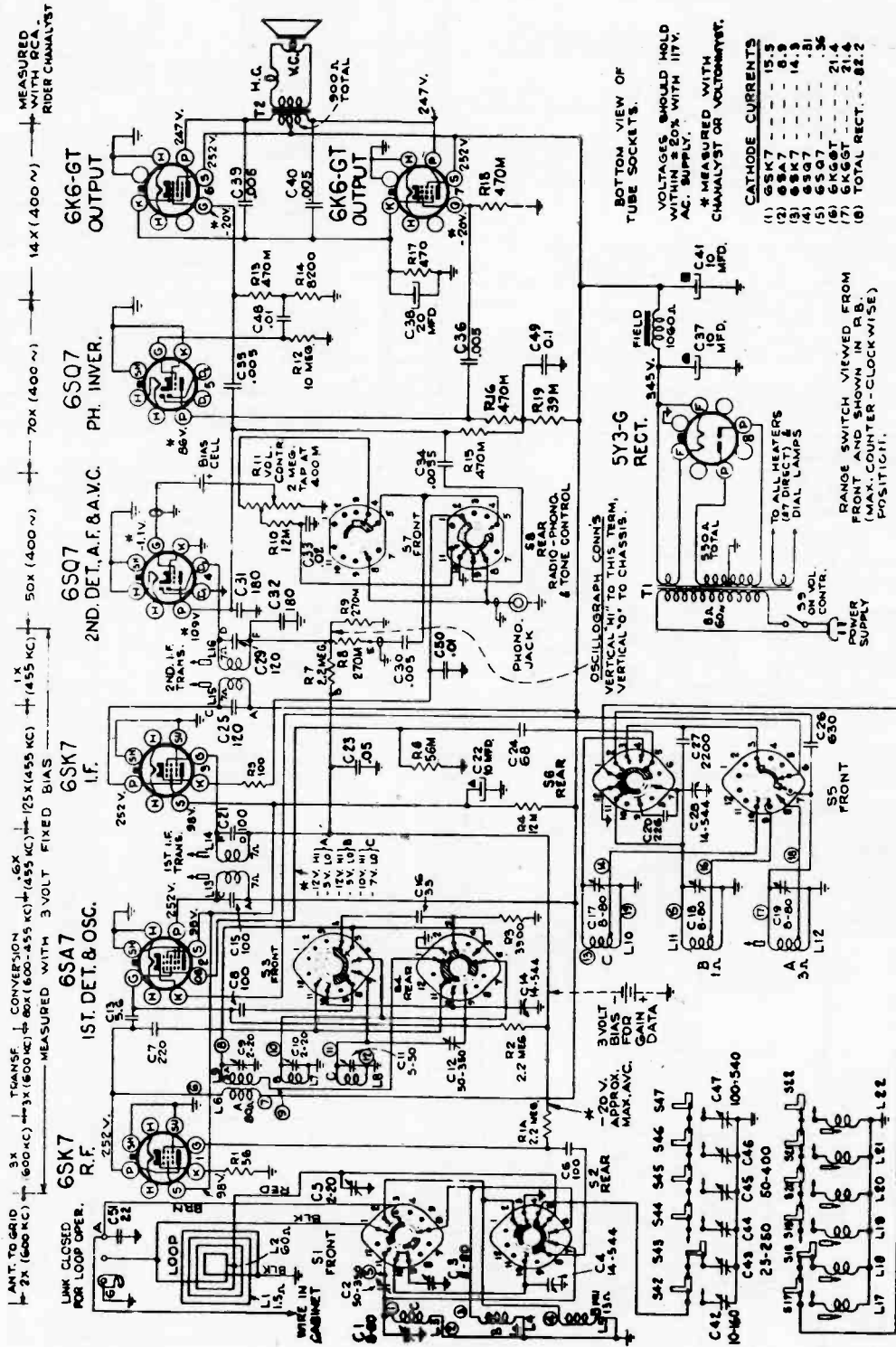


VOLTAGES SHOULD HOLD WITHIN ± 20% WITH 117 V. AC SUPPLY.
* MEASURED WITH CHANALYST OR VOLTOMYST.

COMPILED BY M. N. BEITMAN, SUPREME PUBLICATIONS

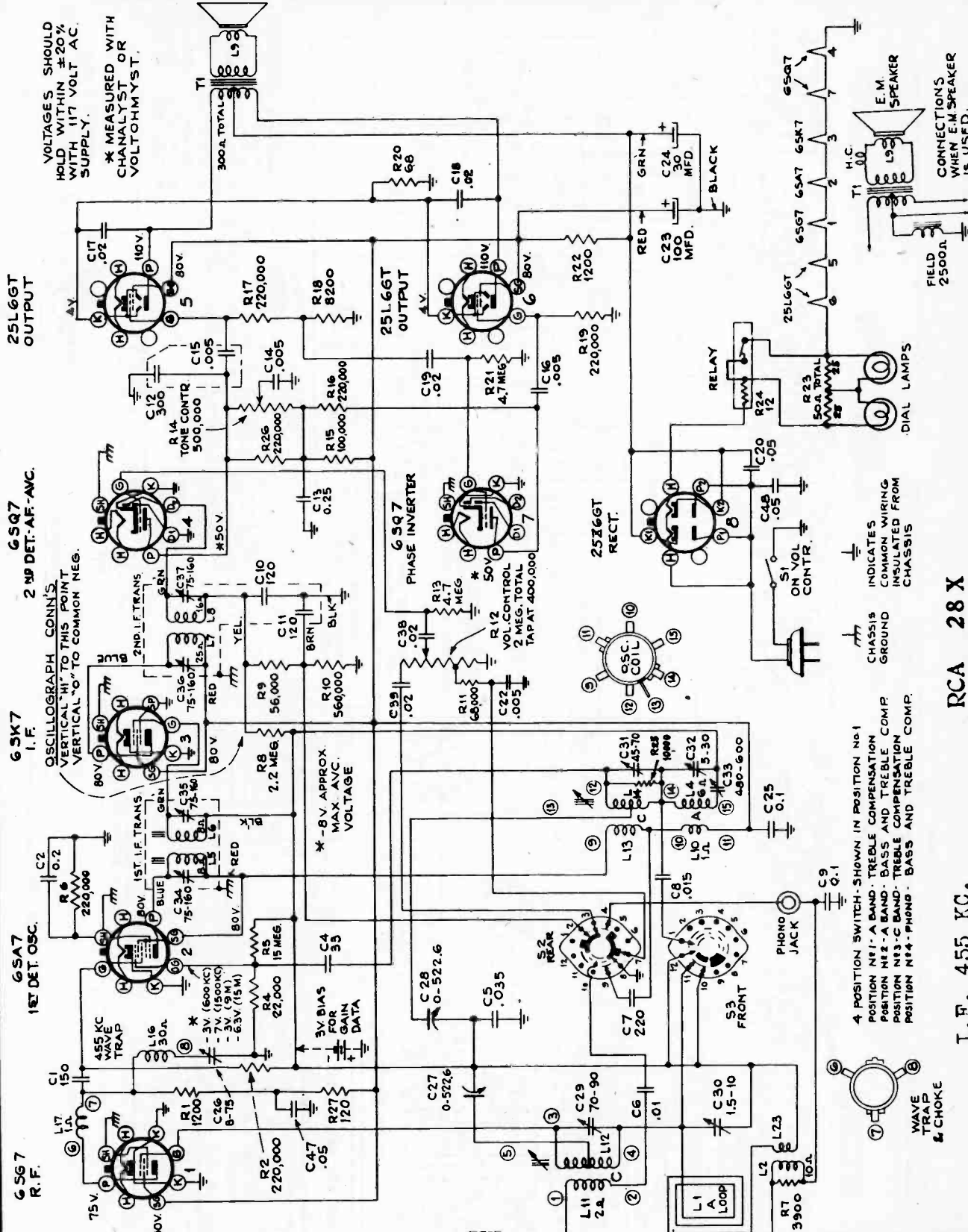
MANUAL OF 1942 MOST POPULAR SERVICE DIAGRAMS

RCA Victor Model 28 T

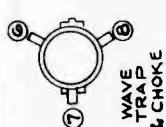


I.F. 455 KC.

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VOLTAGES SHOULD HOLD WITHIN $\pm 20\%$ WITH 117 VOLT A.C. SUPPLY.
* MEASURED WITH CHANALYST OR VOLTOHMYST.

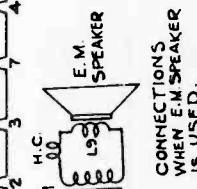


4 POSITION SWITCH - SHOWN IN POSITION No 1
POSITION No 1 - A BAND - TREBLE COMPENSATION
POSITION No 2 - A BAND - BASS AND TREBLE COMP
POSITION No 3 - C BAND - TREBLE COMPENSATION
POSITION No 4 - PHONO - BASS AND TREBLE COMP.

CHASSIS COMMON WIRING GROUND INSULATED FROM CHASSIS

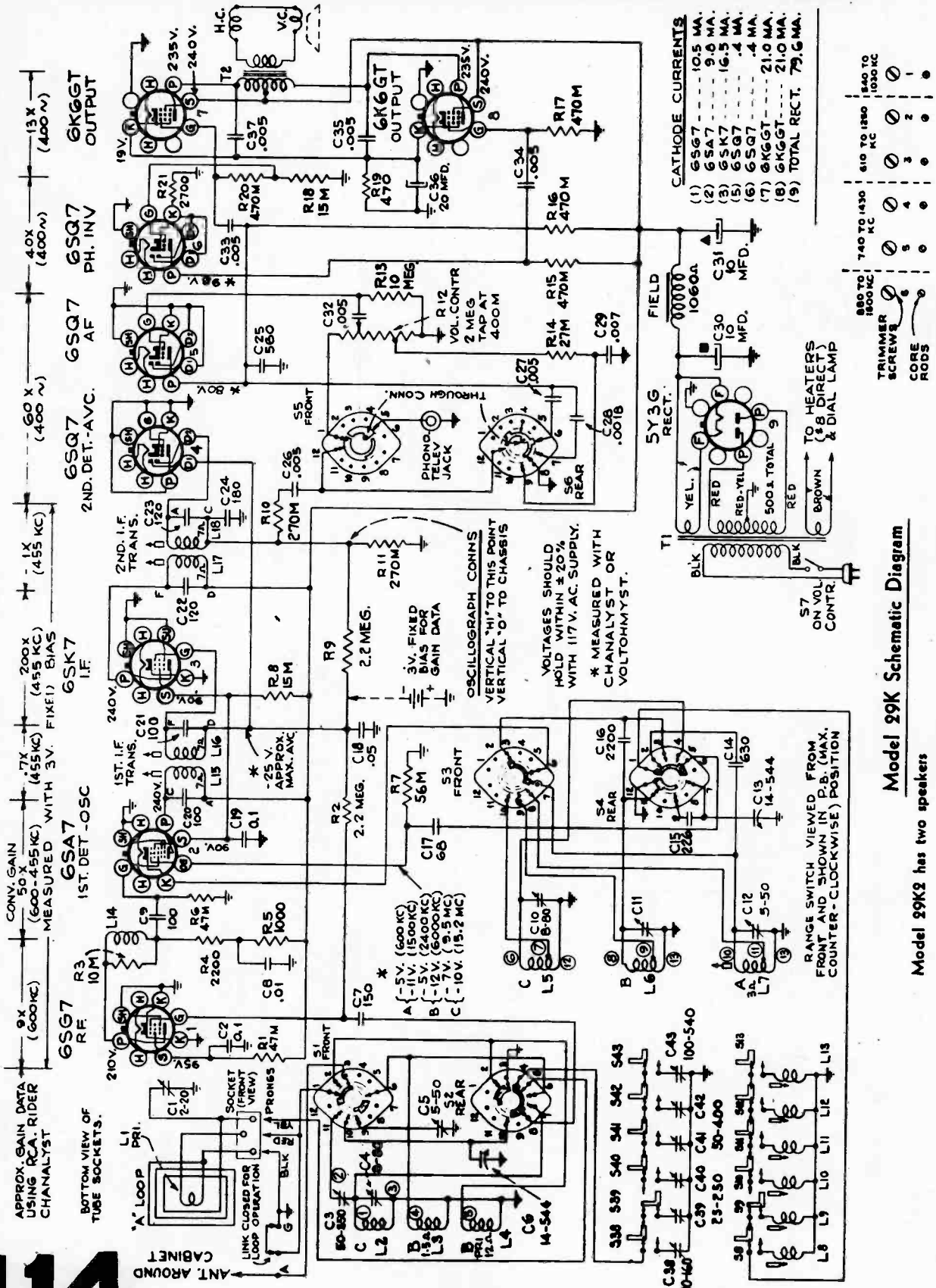
RELAY

FIELD 2500 Ω



113

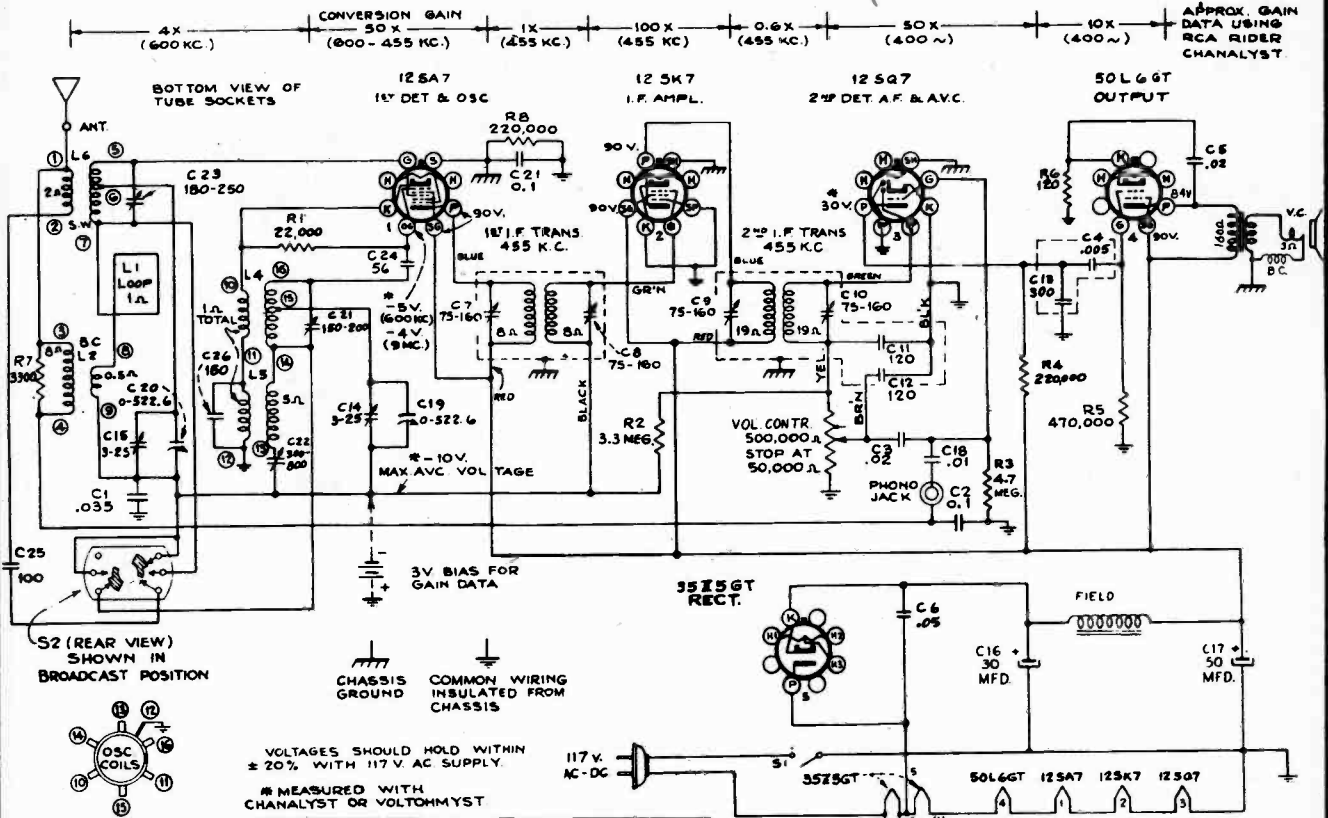
MANUAL OF 1942 MOST POPULAR SERVICE DIAGRAMS



Model 99K Schematic Diagram

Model 99K has two speakers

MANUAL OF 1942 MOST POPULAR SERVICE DIAGRAMS



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.

Electronic Voltmeter.—The electronic voltmeter in the Chanalyst or VoltOhmyst provides an unexcelled output indicator. It should be connected to the AVC bus.

Test Oscillator.—Connect the low side of the test oscillator to the receiver chassis through a .01 mfd. capacitor. When the electronic voltmeter is used as an alignment indicator the output of the test oscillator should be adjusted to produce several volts of AVC. With the output meter alignment method the test oscillator output should be kept as low as possible.

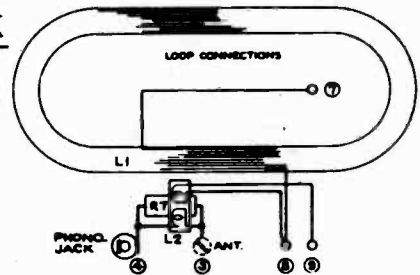
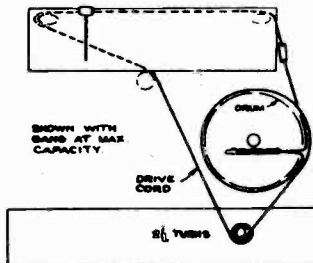
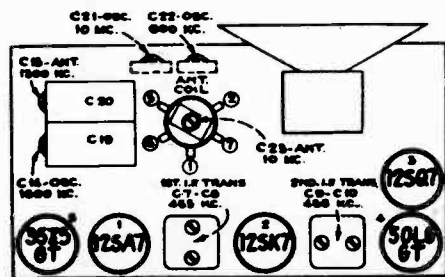
Power-Supply Polarity.—For operation on d-c, the power plug must be inserted in the outlet for correct polarity. If the set does not function, reverse the plug. On a-c, reversal of the plug may reduce hum.

* It is recommended that this step be repeated using a received station of known frequency.

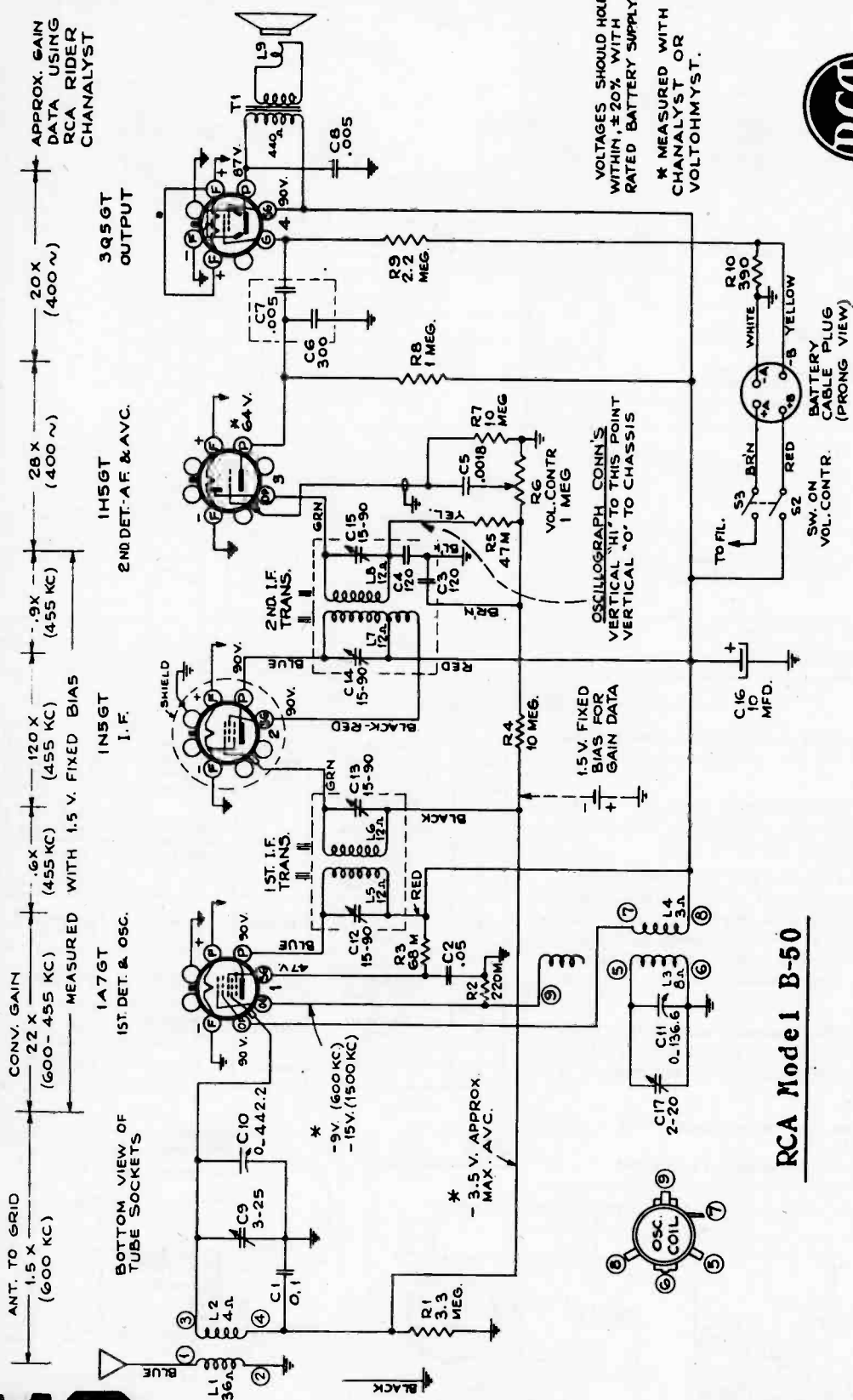
** Use minimum capacity if two peaks can be obtained.

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	12SK7 grid in series with 0.1 mfd.	455 kc	Quiet Point at 1,600 kc end of dial	C10, C9 2nd I-F Transformer
2	12SA7 grid in series with 0.1 mfd.			C8, C7 1st I-F Transformer
3	Antenna term. in series with 47 mmf.	10 mc*	10 mc	C21 (osc.)** C23 (ant.)
4	Antenna term. in series with 200 mmfd.	1,600 kc	1,600 kc	C14 (osc.)
5	Radiation Loop	1,300 kc	Resonance on Signal	C15 (ant.)
6	Radiation Loop	600 kc	600 kc	C92 Osc. Rock in

RCA 34 X



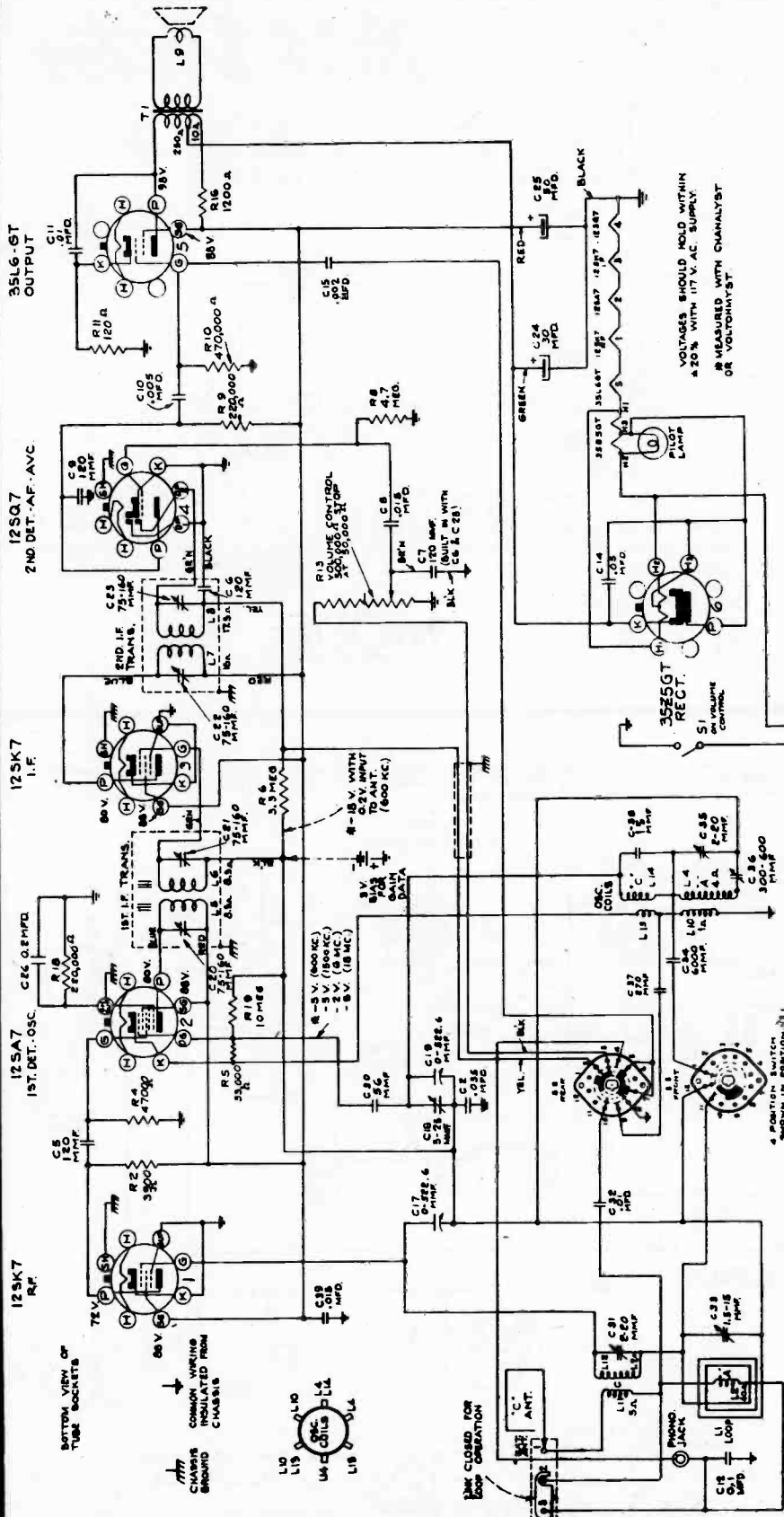
MANUAL OF 1942 MOST POPULAR SERVICE DIAGRAMS



VOLTAGES SHOULD HOLD WITHIN, ± 20% WITH RATED BATTERY SUPPLY.
* MEASURED WITH CHANALYST OR VOLTOHMYST.

- Precautionary Lead Dress.—**
1. The lead from the 9Q5 plate to output transformer should be dressed under clip and away from audio input leads.
 2. Keep AVC lead connecting C1 away from the 1A7GT plate.
 3. Keep blue plate leads coming from IF transformers short and close to the chassis.
 4. All filament wires should be dressed close to chassis.

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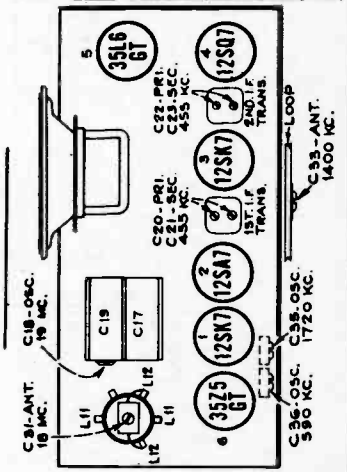
Steps	Connect the high side of test-osc. to—	Tune test osc. to	Turn radio dial to—	Adjust the following for max. peak output—
4	Radiated Signal, 18 mc		"C" Band Resonance on Signal	C31 (ant.)
5	Radiated Signal, 6.1 mc		"A" Band Resonance on Signal	C35 (osc.)
6	Ant. terminal in series with 200 mmfd.	1,730 kc	Resonance on Signal	C33 (ant.)
7	Radiated signal (Link closed)			C36 (osc.)
8	Ant. terminal in series with 200 mmfd.	590 kc	"A" Band 590 kc	
9	Repeat steps 6, 7 and 8			

Alignment Procedure

Calibration Scale.—The glass tuning dial may be easily removed from the cabinet and temporarily attached to the dial backing plate for quick reference during alignment.

Steps	Connect the high side of test-osc. to—	Tune test osc. to—	Turn radio dial to—	Adjust the following for max. peak output—
1	I-F grid in series with 0.1 mfd.	455 kc	"A" Band Quiet Point 1,600 kc end of dial	C35, C32 and I-F Trans.
2	1st Det. grid in series with 0.1 mfd.		"C" Band 19 mc	C31, C50 1st I-F Trans.
3	Ant. terminal in series with 47 mmfd.	19 mc	"C" Band 19 mc	C18 (osc.)

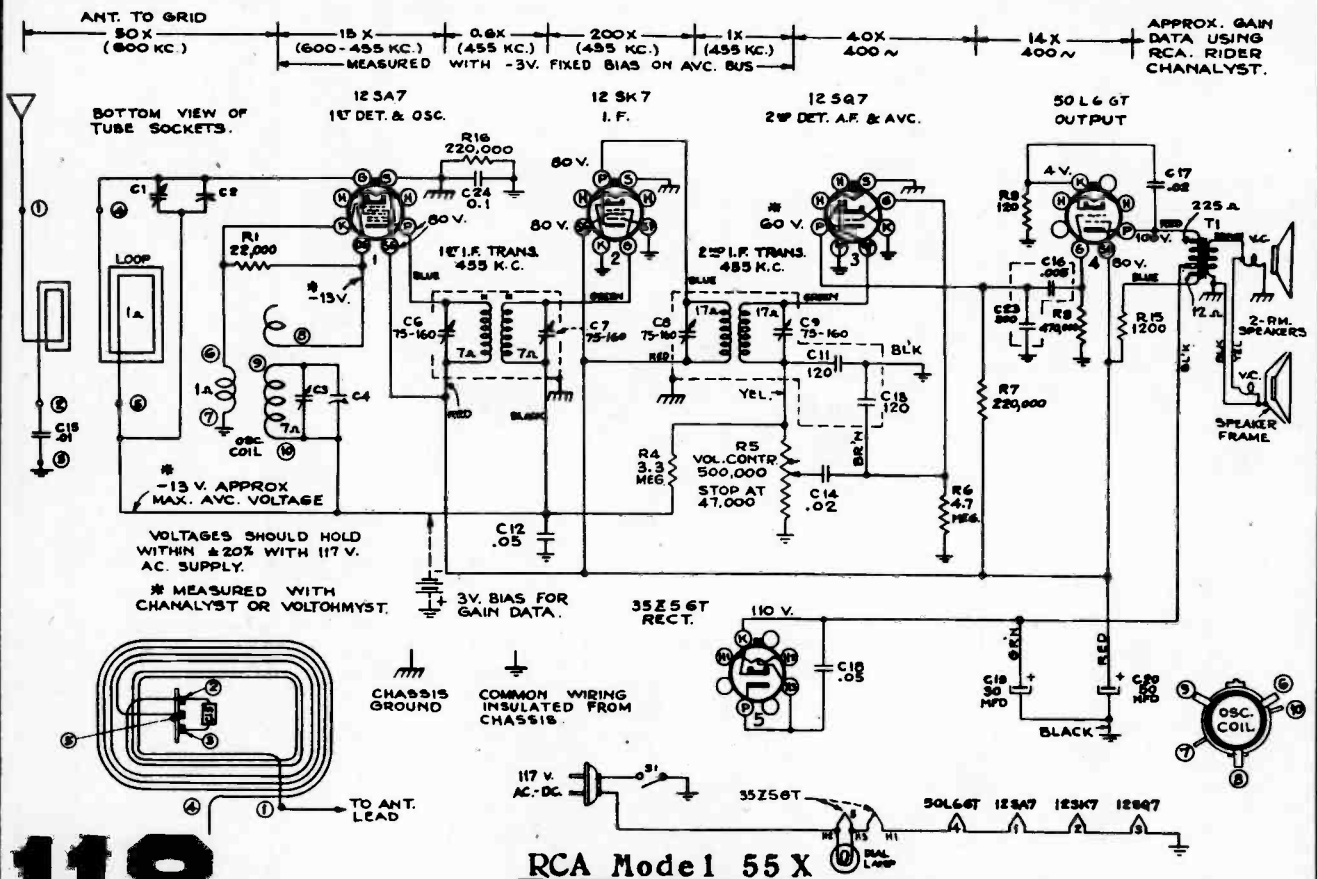
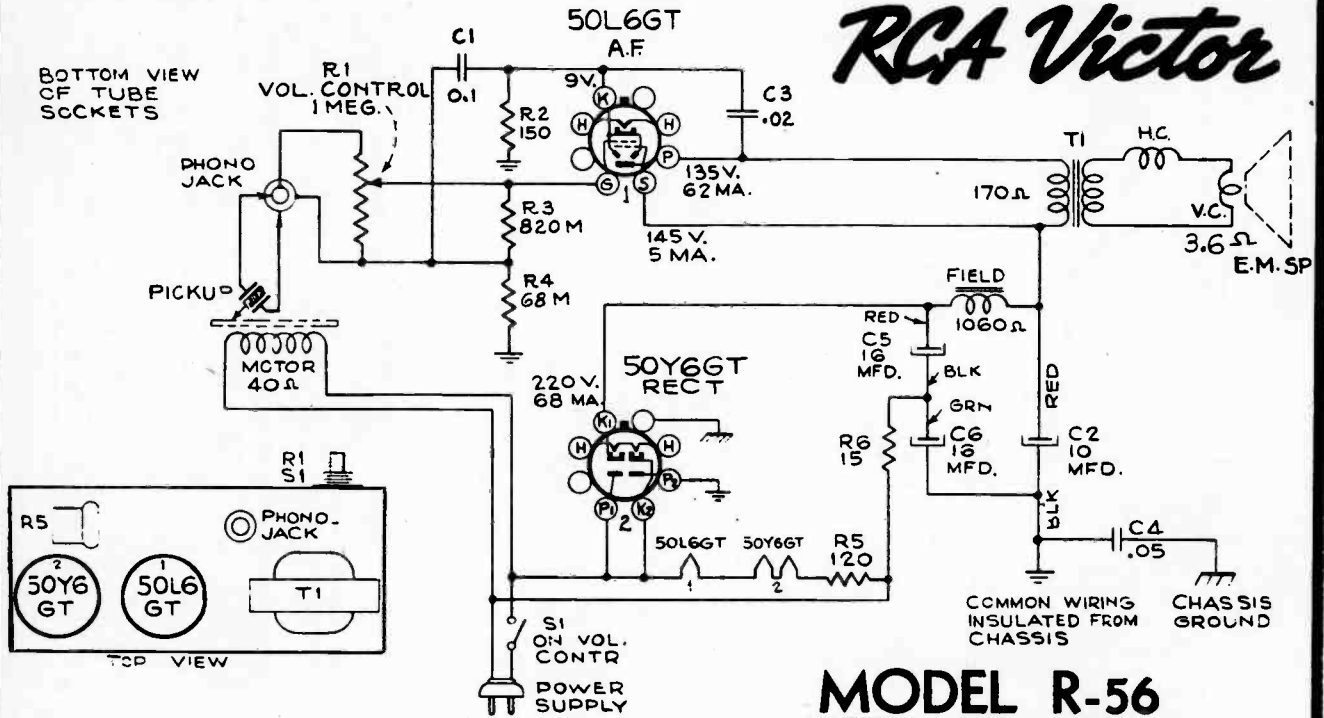
RCA 515



* Adjust by dressing proximity of AVC lead to coil.

MANUAL OF 1942 MOST POPULAR SERVICE DIAGRAMS

RCA Victor

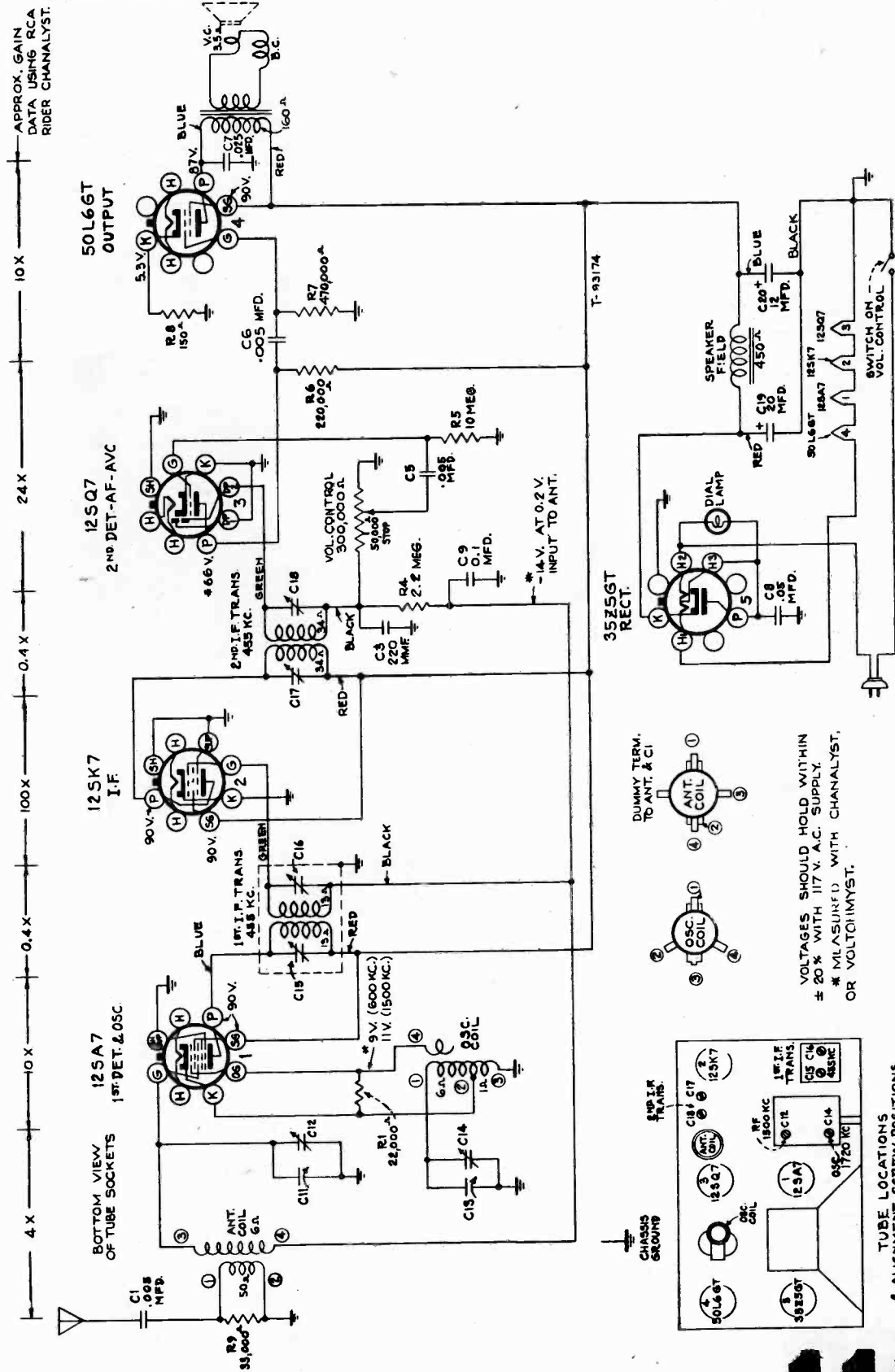


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MANUAL OF 1942 MOST POPULAR SERVICE DIAGRAMS

RCA Models 500, 501



MANUAL OF 1942 MOST POPULAR SERVICE DIAGRAMS

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.

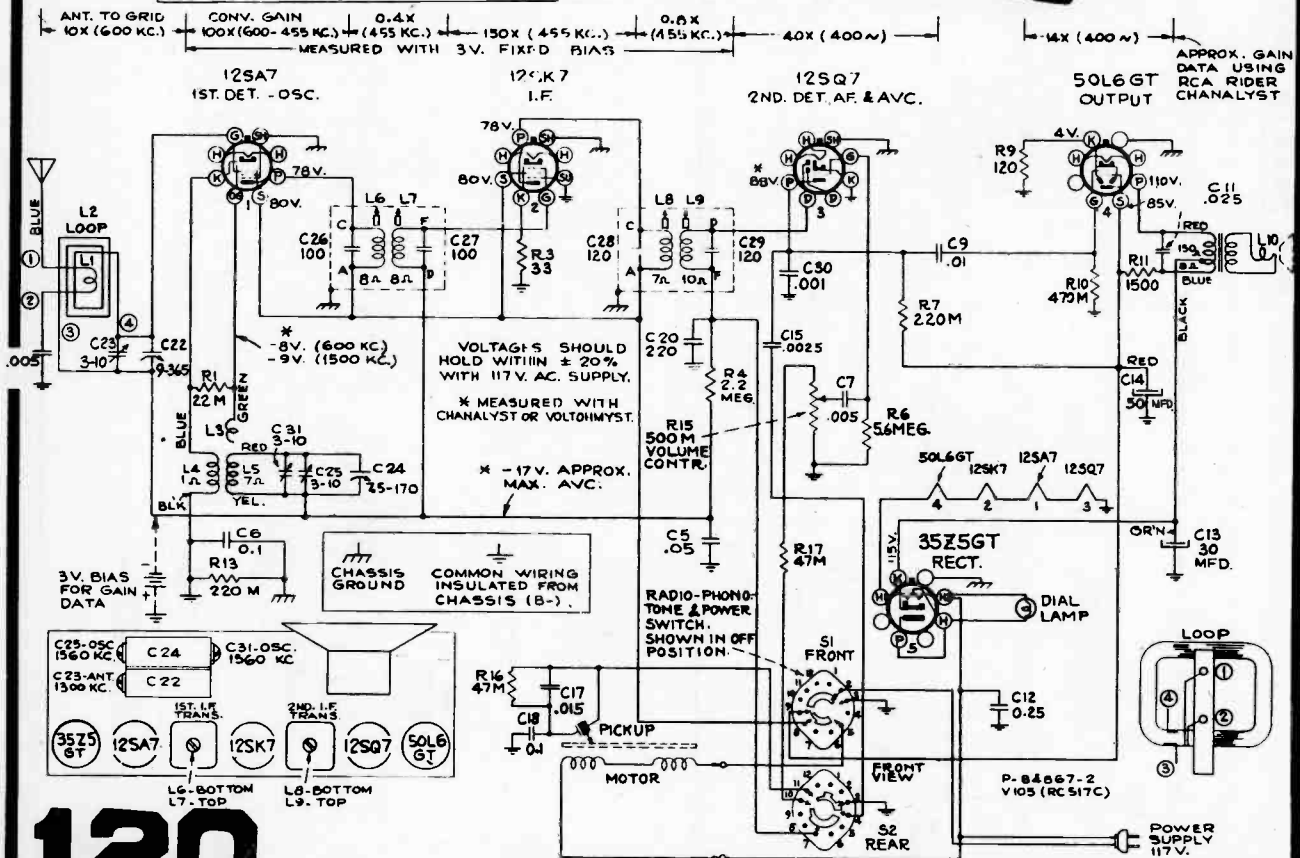
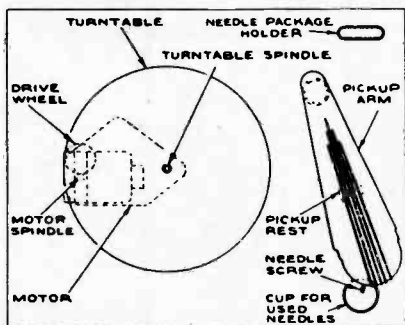
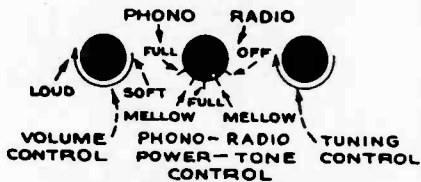
Steps	Connect the high side of test-oscillator to—	Tune test-osc. to—	Turn radio dial to—	Adjust the following for max. peak output
1	I-F grid, in series with .01 mfd.	455 kc	Quiet point 1,600 kc end of dial	L8 and L9 2nd I-F transformer
2	1st Det. grid in series with .01 mfd.			L6 and L7 1st I-F transformer
3	Ant. terminal in series with 200 mmfd.	1,650 kc	Gang at minimum	C25 (osc.) C31 (osc.)
4	Radiated signal 1300 kc		Signal Frequency	C23 (ant.)
5	Repeat steps 3 and 4.			

RCA Model V-105

Phonograph Motor Service Data:—

The phonograph motor is of the self starting synchronous type and operates the turntable through friction drive between the motor drive spindle and the rubber tired idler on the rim of the turntable.

The motor should be lubricated once or twice a year by placing a few drops of S. A. E. 20 (or equivalent) on the turntable spindle and saturating the oil retaining felt pads on the motor shaft with S. A. E. 10 oil. Caution—The motor drive spindle and the rubber tire on the idler must be kept clean and entirely free from bil and grease at all times.

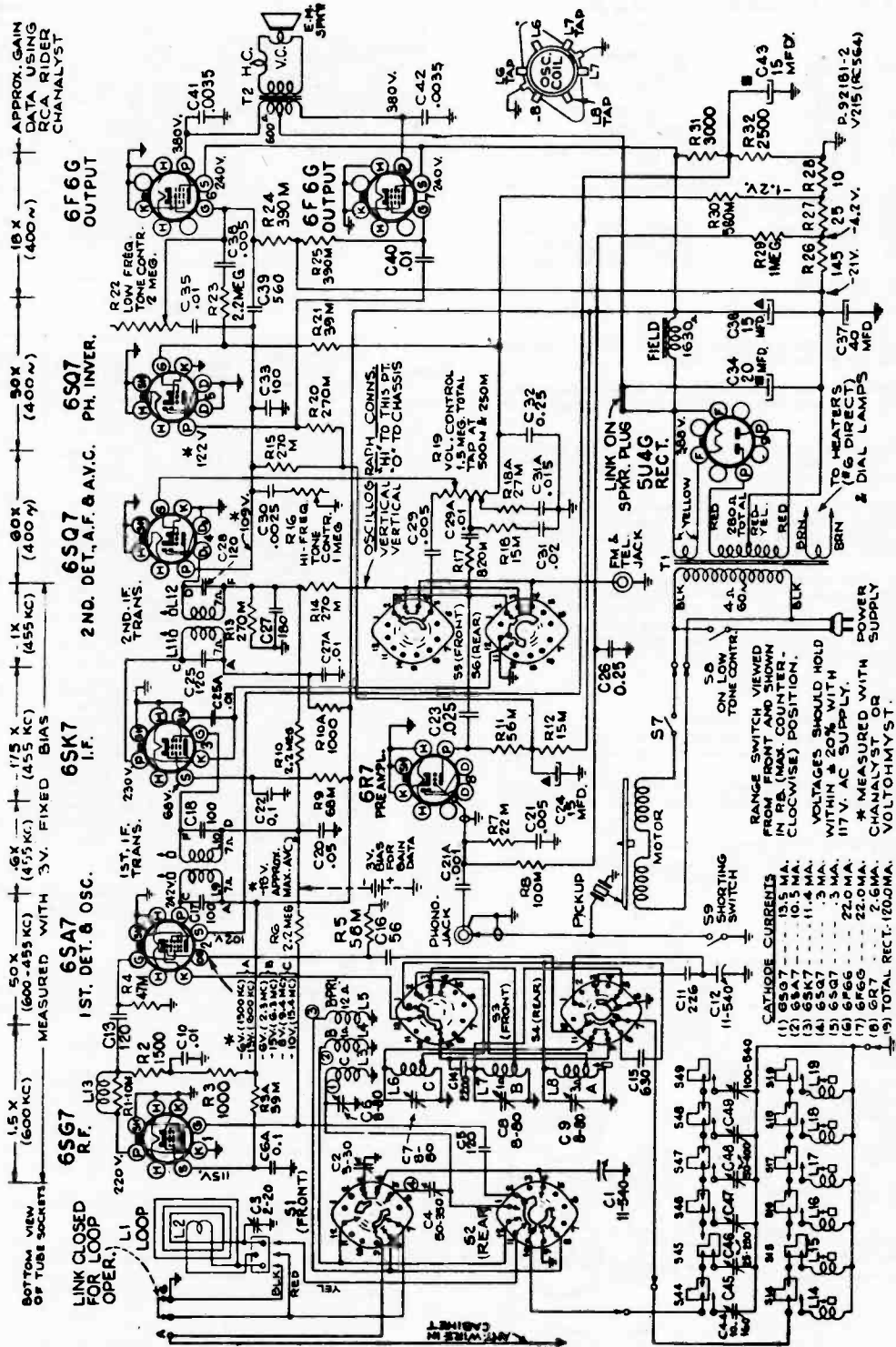


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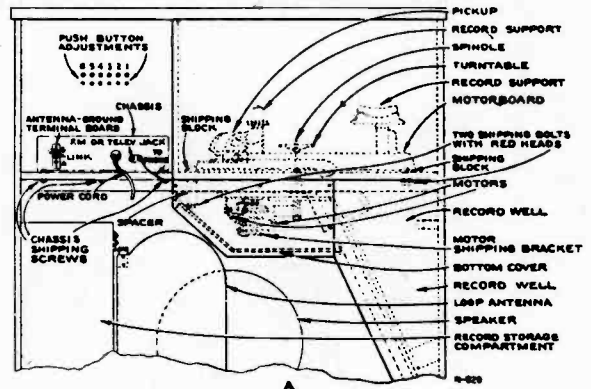
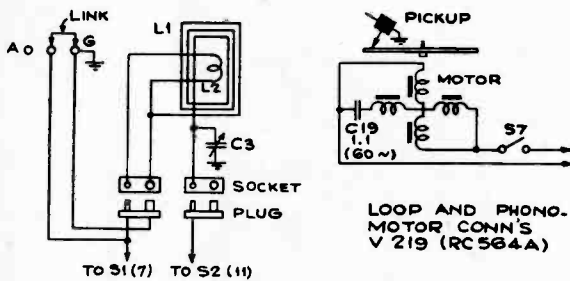
MANUAL OF 1942 MOST POPULAR SERVICE DIAGRAMS

RCA Models V-215, V-219, V-221, V-225



MANUAL OF 1942 MOST POPULAR SERVICE DIAGRAMS

RCA Models V-215, V-219, V-221, V-225



Model V-225

Cathode-Ray Alignment is the preferable method. Connections for the oscillograph are shown in the schematic diagram.

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.

Electronic Voltmeter.—The electronic voltmeter in the Chanalyst or VoltOhmyst provides an unexcelled output indicator. It should be connected to the AVC bus, and the test-oscillator output adjusted to produce several volts of AVC.

Calibration Scale.—The glass tuning dial may be easily removed from the cabinet and temporarily attached to the chassis for quick reference during alignment. In the event that only the chassis is returned for service, and the cabinet with its tuning dial is left in the customer's home, the full size calibration scale printed in this service note can be used as an accurate and convenient substitute for the regular dial.

Using Tuning Dial.—

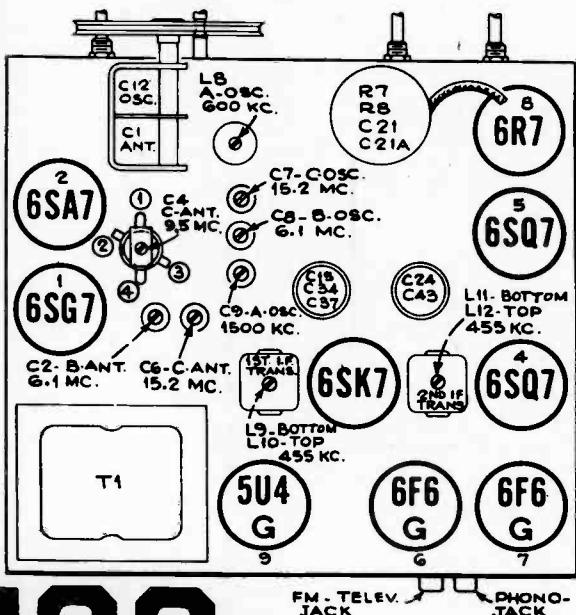
1. Remove the dial glass from the cabinet.
2. With gang at full mesh move the pointer to a point (1/16) inch to the left of the reference mark at the left hand end of the dial backing plate.
3. Place the glass dial under the pointer so that the extreme left scale graduations coincide with the pointer. Use scotch tape to hold the glass dial in place.

Using Dial Scale Printed In This Service Note.—

Follow the procedure above, substituting the dial scale printed in this service note for the glass dial in the cabinet.

Steps	Connect high side of test osc. to—	Tune test osc. to—	Turn radio dial to—	Adjust the following for maximum peak output—
1	I-F grid in series with .01 mfd.	455 kc	"A" Band 540 kc	L12, L11 (2nd I-F Trans.)
2	1st Det. grid in series with .01 mfd.			L10, L9 (1st I-F Trans.)
3	Yellow loop lead in series with 200 mmf. (link closed)	1,500 kc	"A" Band 1,500 kc	C9 (osc.)
4		600 kc	"A" Band 600 kc	L8 (osc.)
5	Repeat steps 3 and 4			
6	Ant. terminal in series with 47 mmf. (link closed)	6.1 mc	"B" Band 6.1 mc	C8 (osc.)* C2 (ant.)
7		15.2 mc	"C" Band 15.2 mc	C7 (osc.)* C6 (ant.)
8		9.5 mc	"C" Band 9.5 mc	C4 (ant.)
9	Repeat steps 7 and 8			
10	Install and connect chassis in cabinet, with link closed. Tune in a radiated oscillator signal at 1,500 kc and peak the "A" band ant. trimmer C3 (on loop). Rock in L8 for peak output at 600 kc.			

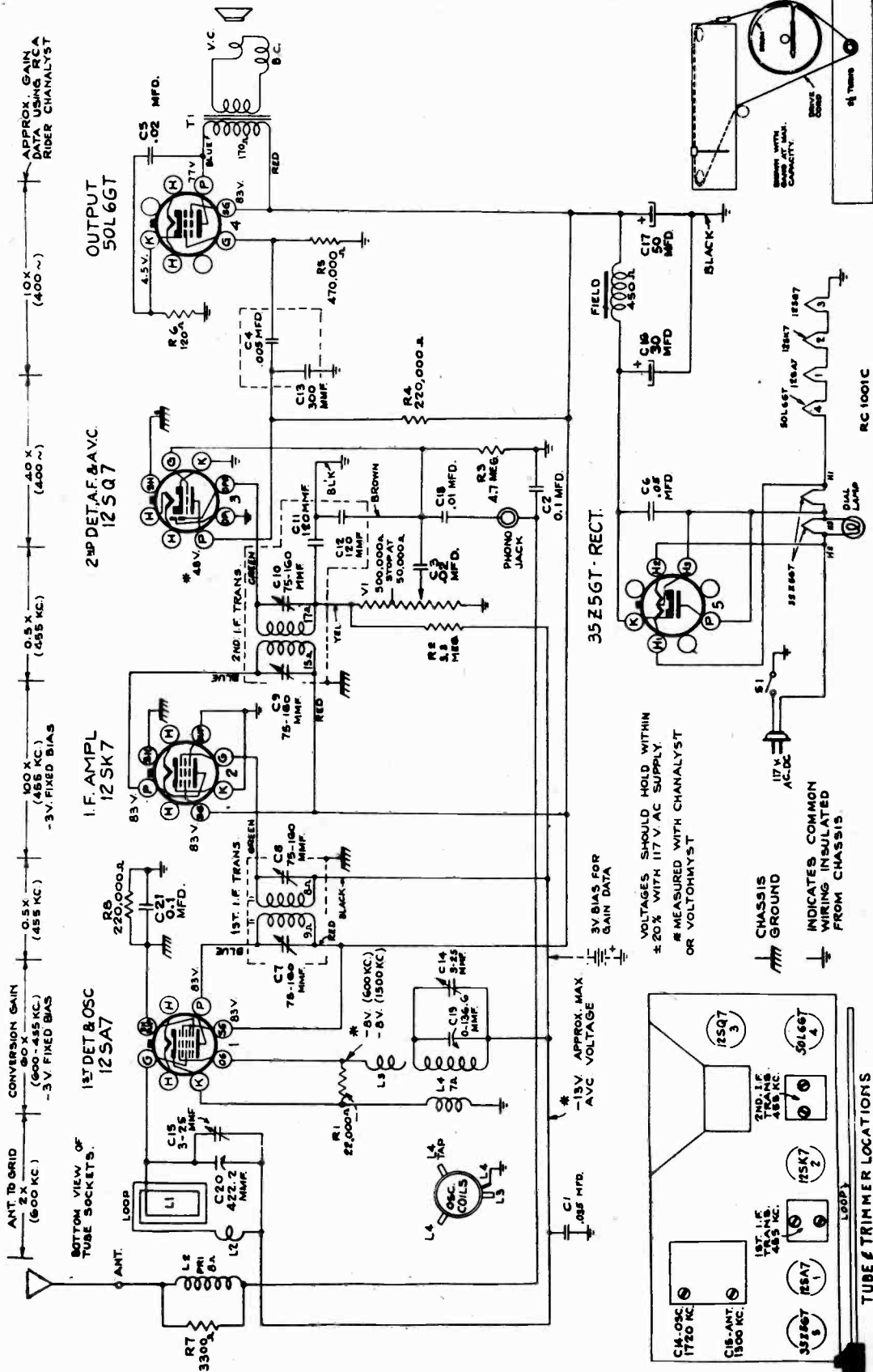
* Use minimum capacity peak if two peaks can be obtained. Oscillator tracks 455 kc above signal on all bands.



Critical Lead Dress

1. Push button, R.F. and oscillator leads should be separated as much as possible to reduce degeneration on push button reception.
2. R.F. choke in plate circuit of 6SG7 should be dressed towards the back apron.
3. Dress green push button lead under clamp and away from "C" band series capacitor.
4. Dress heater leads away from grids and diodes.
5. Dress phono. cables up and away from all wiring.
6. Dress all excess leads from transformer towards back towards transformer.
7. Keep output plate leads short and dressed close to chassis.
8. Dress green lead from 6SA7 screen to electrolytic down close to chassis.
9. Dress "C" band coil lead from oscillator coil to range switch down towards green lead.
10. Keep yellow loop lead clear of all wiring.
11. Dress ground bus of large electrolytic away from mounting lug.
12. Remove all excess slack from pilot light assembly and dress it close to chassis base away from volume control.
13. Dress oscillator grid capacitor (56 mmfd.) up and away from the screen and plate of 6SA7 socket.
14. A-C leads to "off-on" switch should be kept away from tone control cable to reduce hum.
15. Peaking coil should be dressed away from R-F grid resistor to reduce degeneration in R-F stage.
16. Dress oscillator push button lead in weld clamp on front apron away from 220 mmf. series condenser.
17. Keep all leads away from Phono-FM jack to prevent audio oscillation and hum. Dress underneath the shield provided.

MANUAL OF 1942 MOST POPULAR SERVICE DIAGRAMS



RCA Models 516, 517

- Precautionary Lead Dress.—**
1. Dress the power cable to switch on the volume control close to the chassis and away from all grid and diode leads and condensers.
 2. Dress capacitors in the 12SQ7 grid circuit away from all wiring.
 3. Green and black phono wires should be twisted and dressed away from other parts and leads.
 4. 50L6-CT filament wires should be dressed to rear of chassis and away from the second I-F transformer leads.
 5. Dress brown lead from second I-F transformer to 12SQ7 away from power cable.
 6. Dress wire to No. 1 grid of the 12SA7 away from pilot lamp leads.
 7. Dress wire from loop to variable condenser away from chassis.
 8. Dress all capacitors, leads, etc. which come close to oscillator coil rigidly and as far as possible from it.

MANUAL OF 1942 MOST POPULAR SERVICE DIAGRAMS

RCA Models 526, 527

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

Electronic Voltmeter.—The electronic voltmeter in the Chanalyst or VoltOhmyst provides an unexcelled output indicator. It should be connected to the AVC bus.

Test Oscillator.—Connect the low side of the test oscillator to the receiver chassis through a .01 mfd. capacitor. When the electronic voltmeter is used as an alignment indicator the output of the test oscillator should be adjusted to produce several volts of AVC. With the output meter alignment method the test oscillator output should be kept as low as possible.

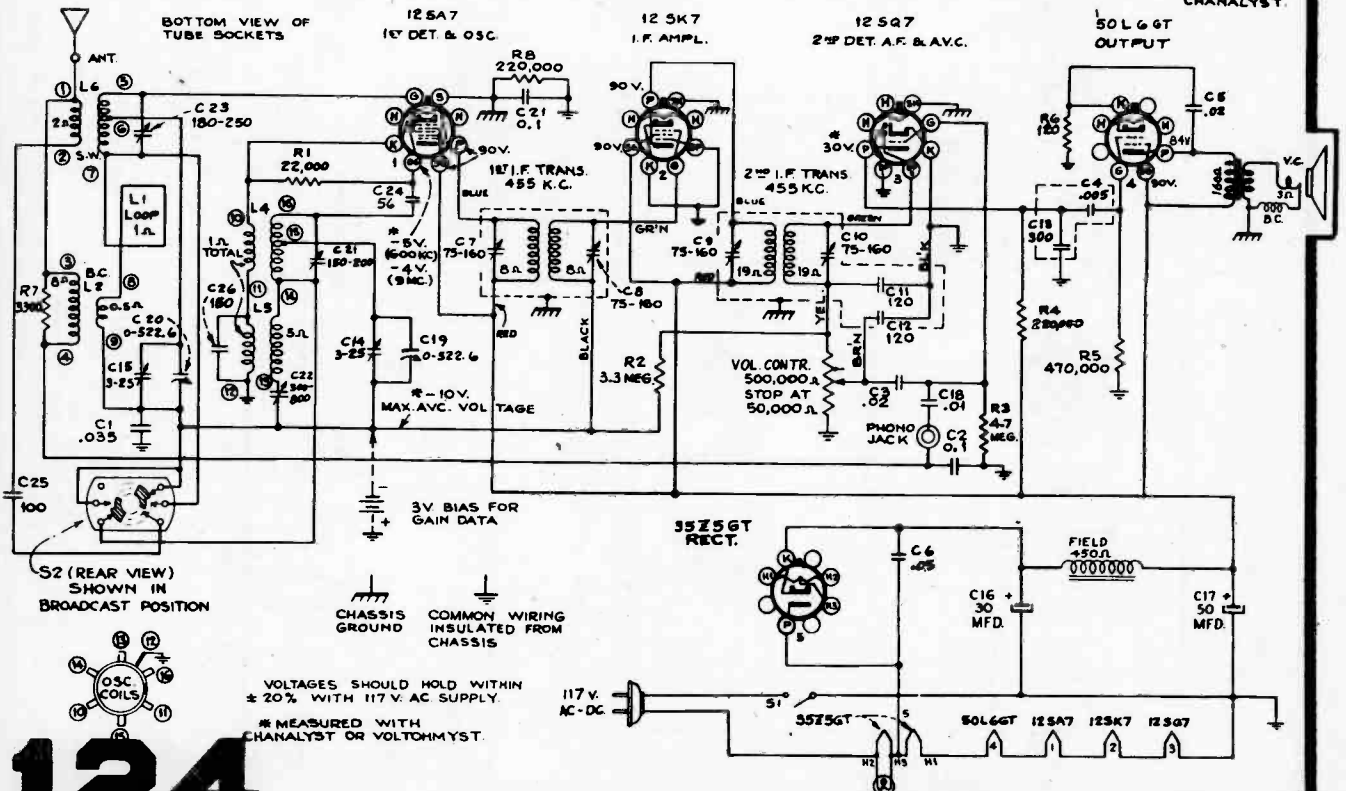
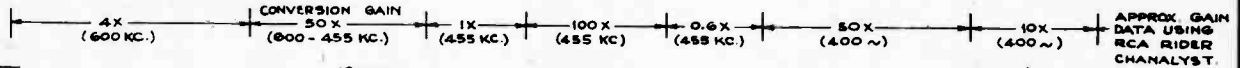
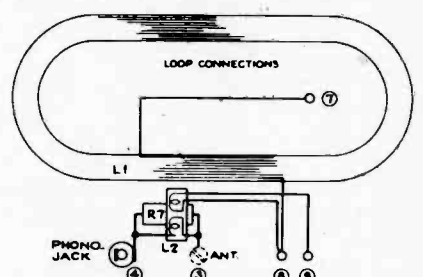
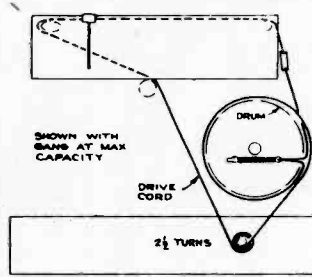
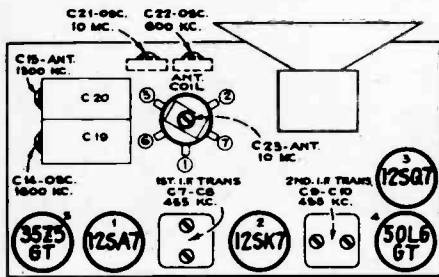
Calibration Scale.—The glass tuning dial may be easily removed from the cabinet and temporarily attached to the dial backing plate for quick reference during alignment.

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.

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	12SK7 grid in series with 0.1 mfd.	455 kc	Quiet Point at 1,600 kc end of dial	C10, C9 2nd I-F Transformer
2	12SA7 grid in series with 0.1 mfd.			C8, C7 1st I-F Transformer
3	Antenna term. in series with 47 mmf.	10 mc*	10 mc	C21 (osc.)** C23 (ant.)
4	Antenna term. in series with 200 mmfd.	1,600 kc	1,600 kc	C14 (osc.)
5	Radiation Loop	1,300 kc	Resonance on Signal	C15 (ant.)
6	Radiation Loop	600 kc	600 kc	C22 Osc. Rock in

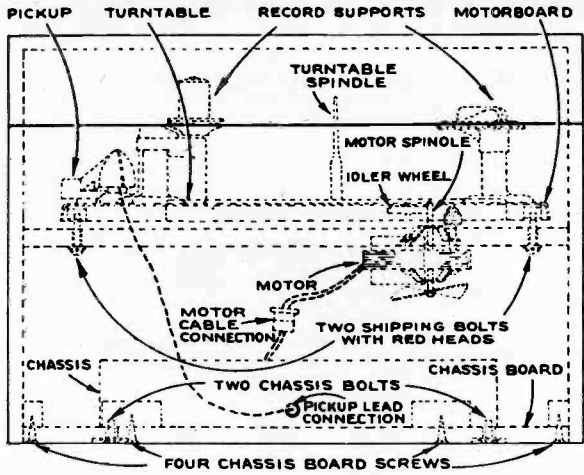
* It is recommended that this step be repeated using a received station of known frequency.

** Use minimum capacity if two peaks can be obtained.



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MANUAL OF 1942 MOST POPULAR SERVICE DIAGRAMS

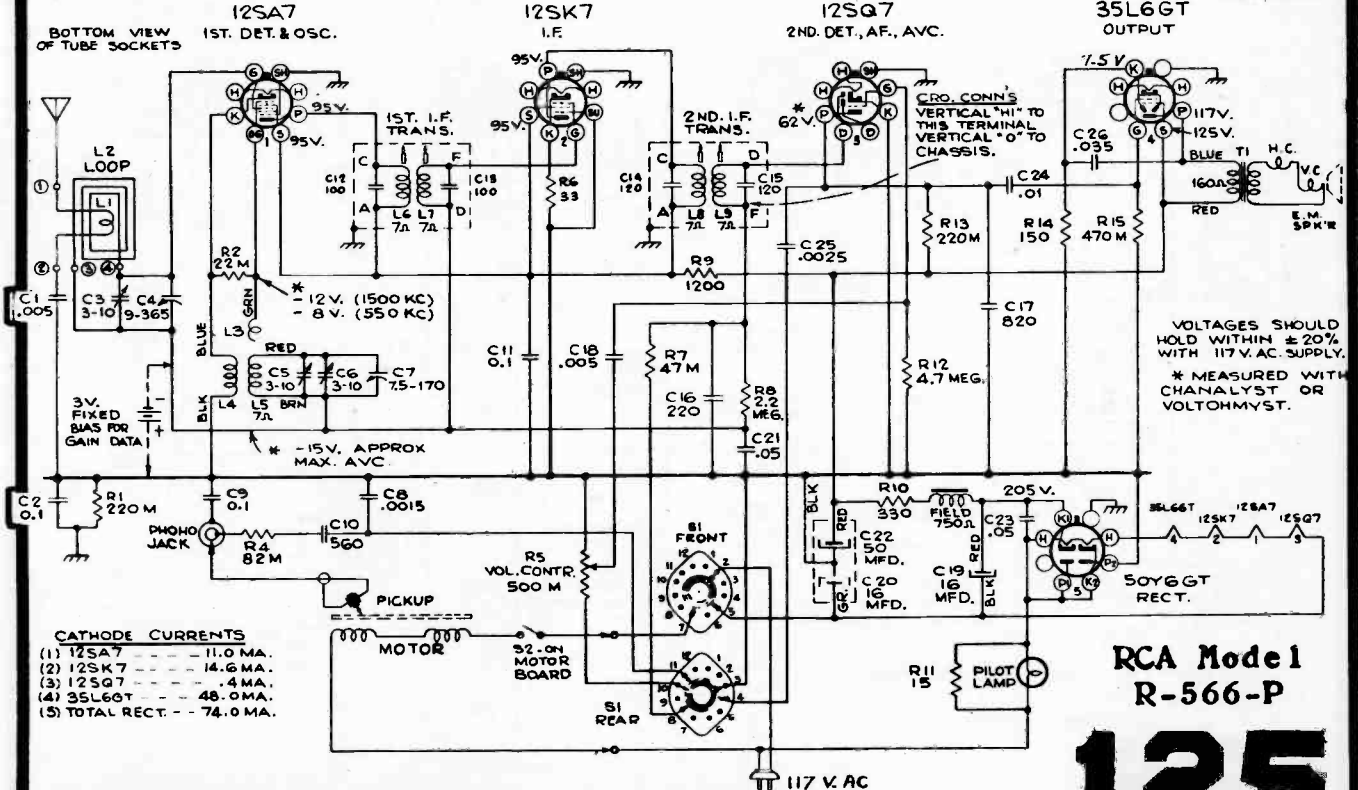
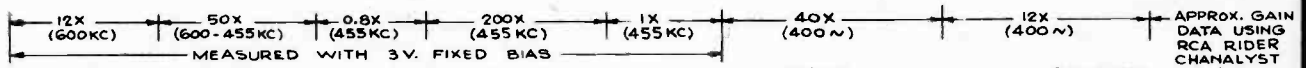
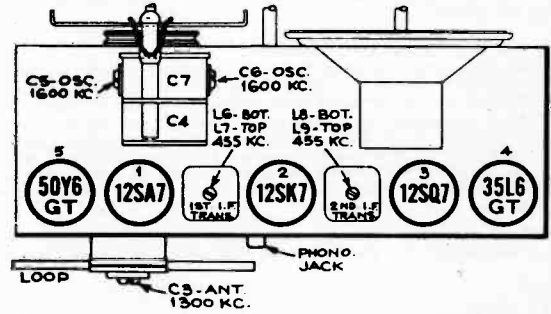
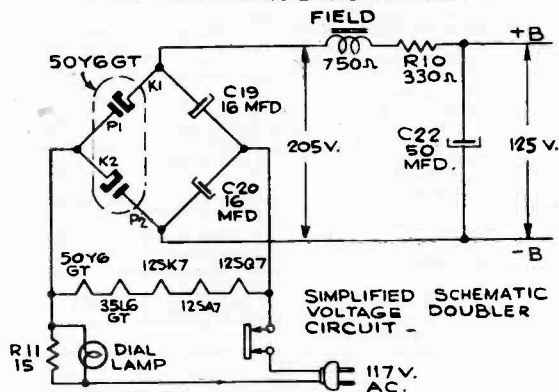


Cathode-Ray Alignment is the preferable method. Connections for the oscillograph are shown in the schematic diagram.

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 common negative, and keep the output as low as possible to avoid a-v-c action.

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	I-F grid, in series with .01 mfd.	455 kc	Quiet point 1,600 kc end of dial	L8 and L9 2nd I-F transformer
2	1st Det. grid in series with .01 mfd.			L6 and L7 1st I-F transformer
3	Ant. terminal in series with 200 mmfd.	1,600 kc	Gang at minimum	C5 (osc.) C6 (osc.)
4	Radiated signal 1,300 kc		Signal Frequency	C3 (ant.)
5	Repeat steps 3 and 4.			

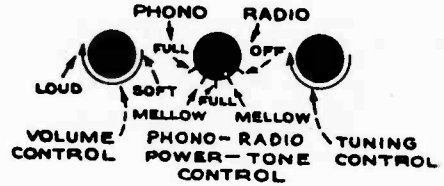
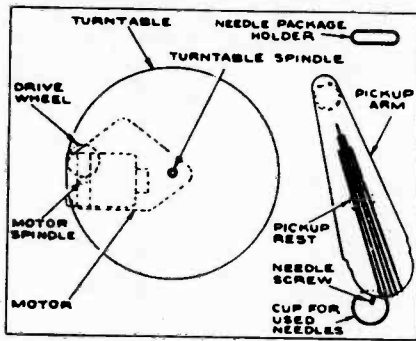


RCA Model R-566-P

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RCA Model R-560-P



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.

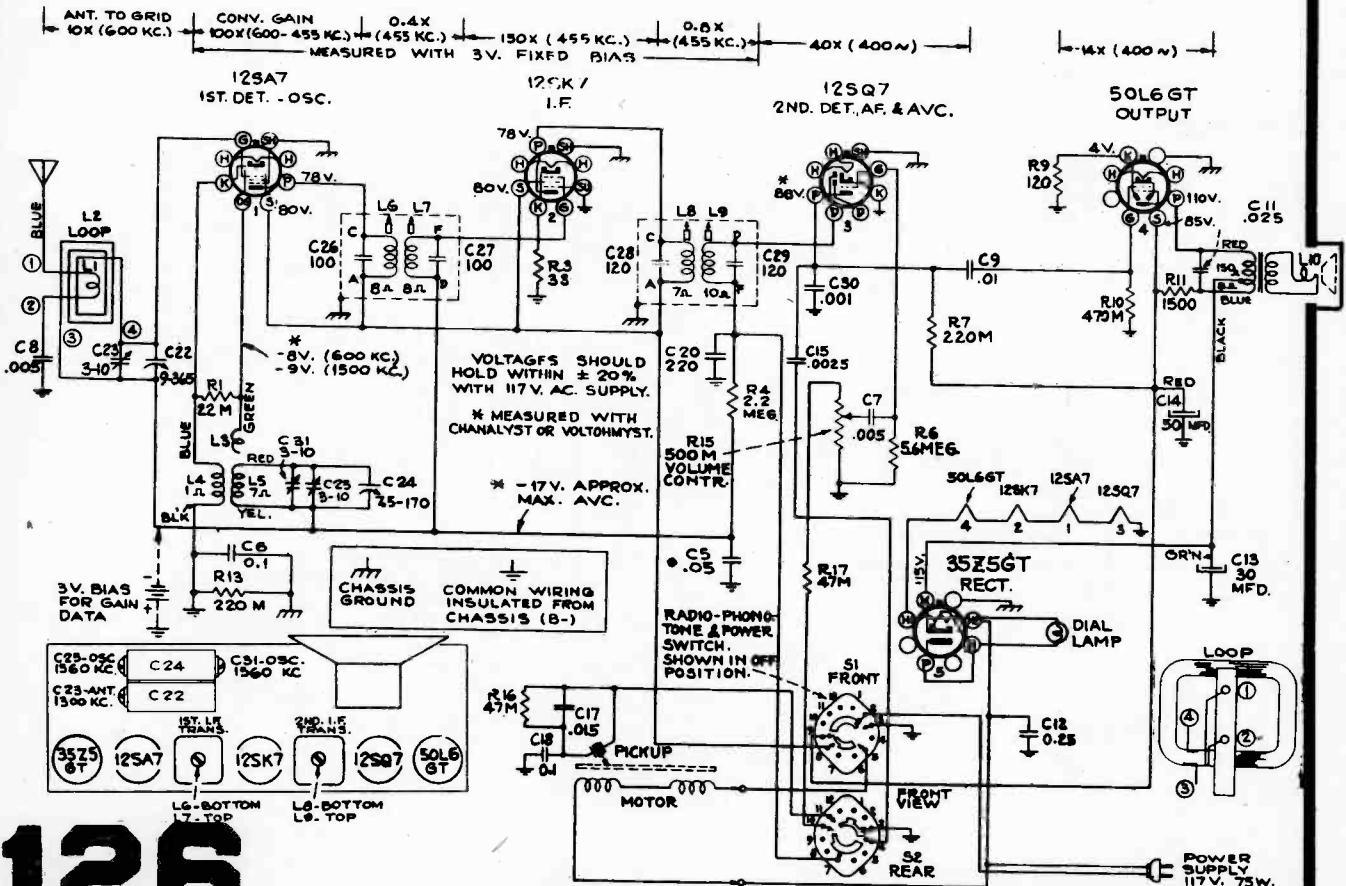
Phonograph Motor Service Data:—

The phonograph motor is of the self starting synchronous type and operates the turntable through friction drive between the motor drive spindle and the rubber tired idler on the rim of the turntable.

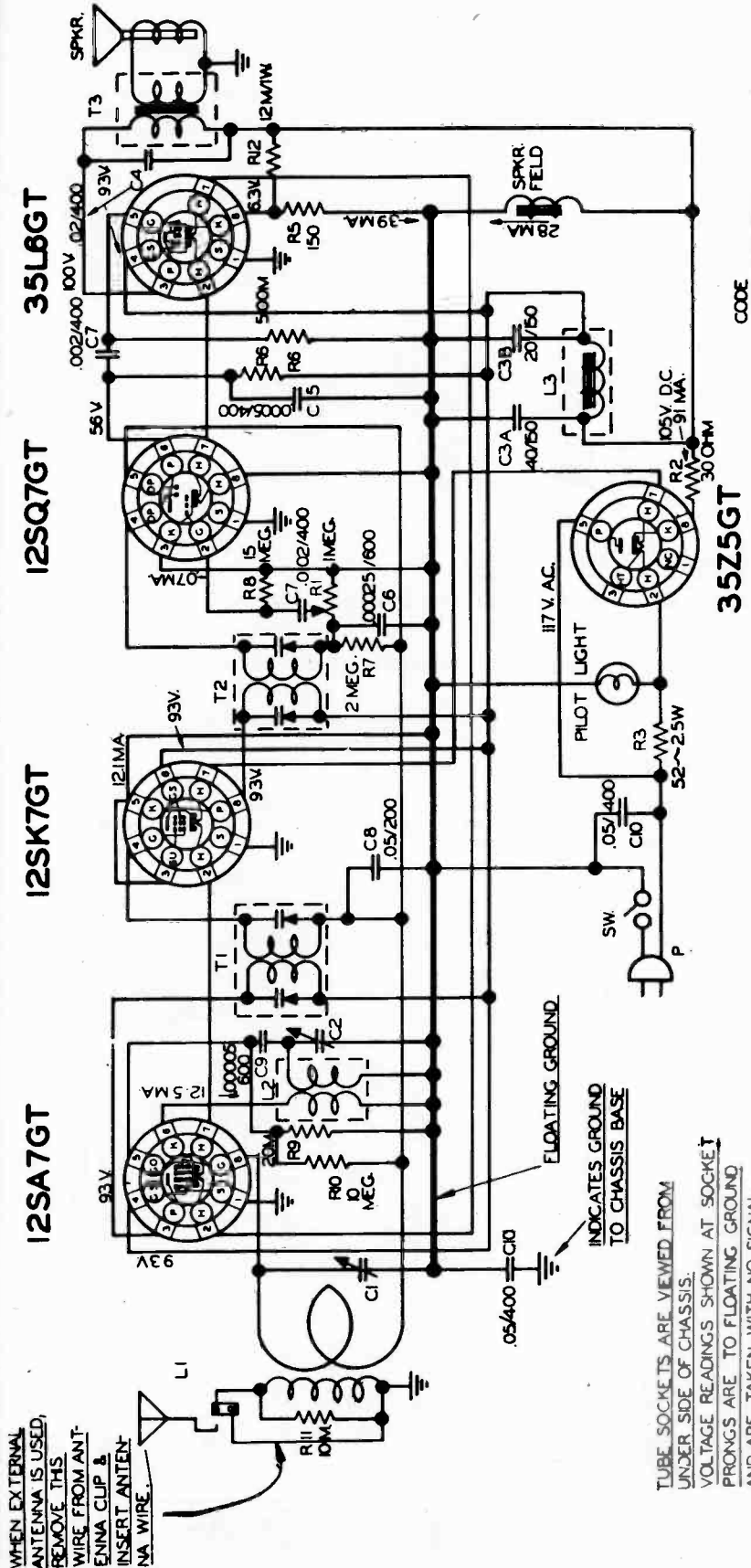
The motor should be lubricated once or twice a year by placing a few drops of S. A. E. 20 (or equivalent) on the turntable spindle and saturating the oil retaining felt pads on the motor shaft with S. A. E. 10 oil. **Caution**—The motor drive spindle and the rubber tire on the idler must be kept clean and entirely free from oil and grease at all times.

Power Supply.—Although this model employs an ac-dc chassis, it is not suitable for use on d.c., as this would damage the motor.

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	I-F grid, in series with .01 mfd.	455 kc	Quiet point 1,800 kc end of dial	L8 and L9 2nd I-F transformer
2	1st Det. grid in series with .01 mfd.			L6 and L7 1st I-F transformer
3	Ant. terminal in series with 200 mmfd.	1,650 kc	Gang at minimum	C25 (osc.) C31 (osc.)
4	Radiated signal 1300 kc		Signal Frequency	C23 (ant.)
5	Repeat steps 3 and 4.			



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WHEN EXTERNAL ANTENNA IS USED, REMOVE THIS WIRE FROM ANTENNA CLIP & INSERT ANTENNA WIRE.

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

12SA7GT
12SK7GT
12SQ7GT
35L6GT
35Z5GT

CODE
MEG. = MEGOHM
M. = 1000 OHM

132.814

Models 7020 and 7022
Factory No. 132.814

SEARS, ROEBUCK AND CO.

MANUAL OF 1942 MOST POPULAR SERVICE DIAGRAMS

Sears, Roebuck and Co. Model 7057. Factory No. 141.418

Output meter connection Across loudspeaker voice coil
 Output meter reading to indicate 500 milliwatts 1.25 volts
 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 clockwise
 Position of Tone Control HI
 Position of Dial Pointer with variable fully closed On first mark to left of
 540 kc calibration mark.

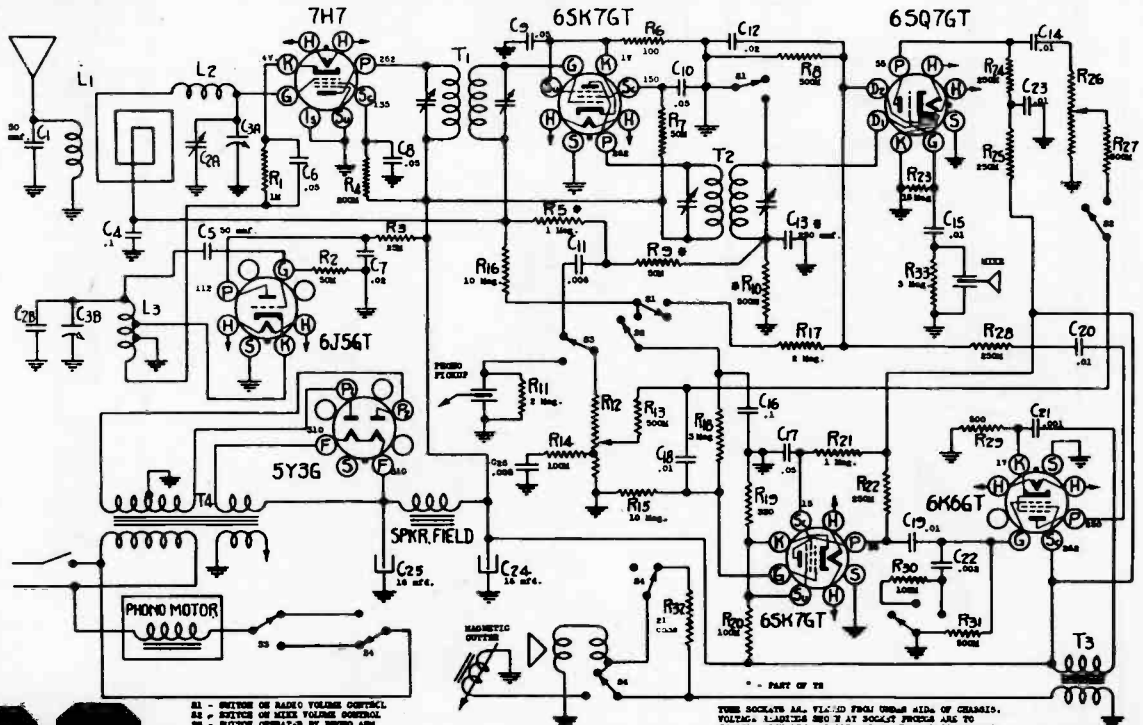
POSITION OF VARIABLE	GENERATOR FREQUENCY	DUMMY ANTENNA	GENERATOR CONNECTION	TRIMMERS ADJUSTED (IN ORDER SHOWN)	TRIMMER FUNCTION	ANT. COUPLED APPROXIMATE MICROVOLTS
Open	455 kc	.1 mfd.	7H7 Grid	T2, T1	IF	--
Fully open	1720 kc	.00005 mfd.	Ant. Lead	C2B*	Oscillator	--
1400 kc	1400 kc	.00005 mfd.	Ant. Lead	C2A*	Antenna	80**

IMPORTANT ALIGNMENT NOTES

- * C2 A and B are best adjusted when the receiver is in the cabinet, through holes provided in the back cover.
- ** 120 microvolts per meter using standard Hazeltine alignment loop 24 inches from receiver loop.

For operation of the chassis outside the cabinet with the phonograph plug disconnected, connect a jumper wire across the two top terminals of the phono socket, and between the two terminals marked "X" on the Recorder socket shown below.

The alignment procedure should be repeated stage by stage, in the original order, for greatest accuracy. Always keep the output from the test oscillator at its lowest possible value to make the AVC action of the receiver ineffective.



A1 - SWITCH OF RADIO VOLUME CONTROL
 A2 - SWITCH OF MIXER VOLUME CONTROL
 A3 - SWITCH OPERATED BY PHONO ARM
 A4 - SWITCH OPERATED BY RECORDING ARM
 ALL SWITCHES SHOWN IN SAME POSITION

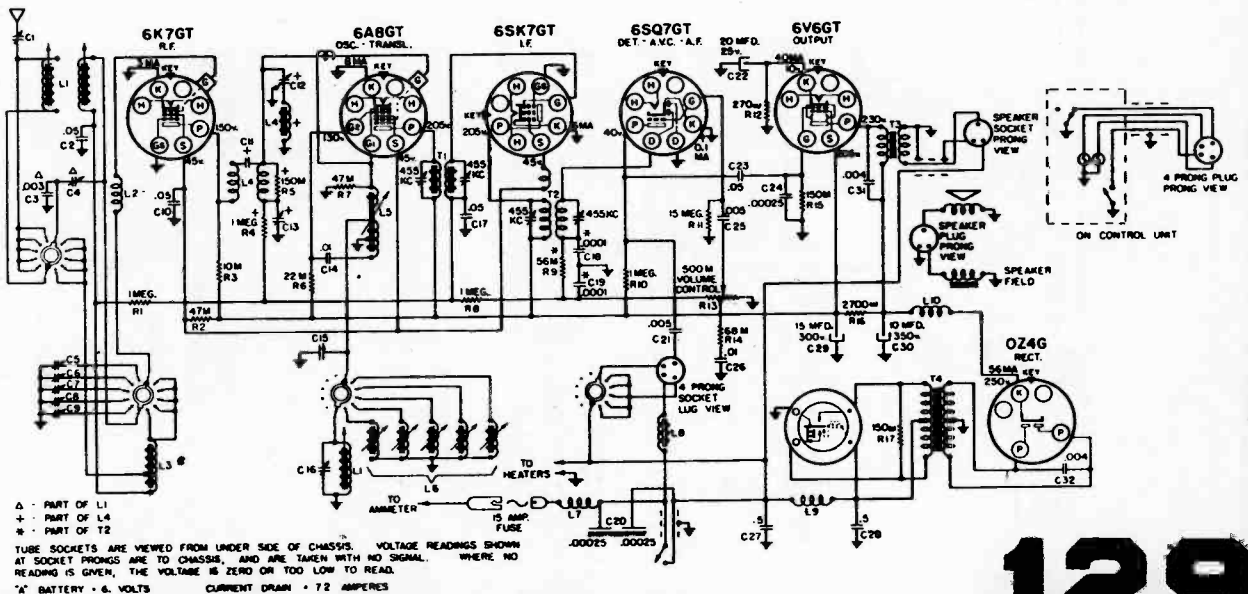
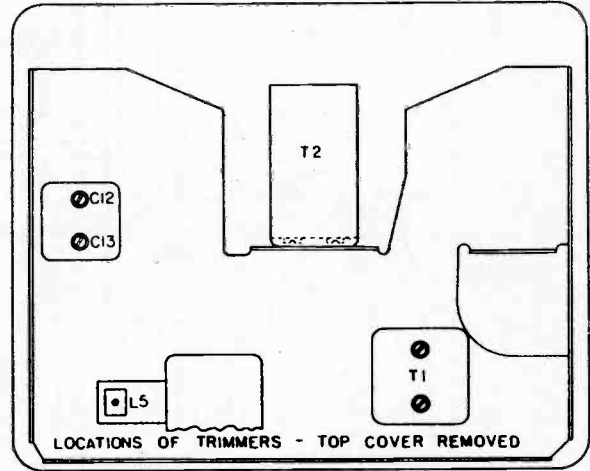
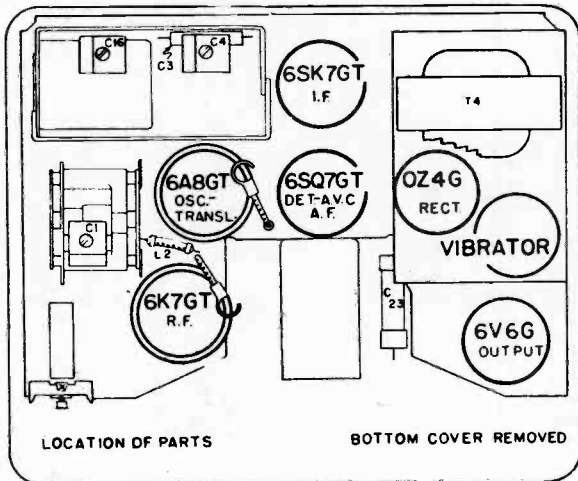
THIS SOCKET HAS VARIOUS TYPES OF CHASSIS.
 VOLTAGE INDICATES SIZE OF SOCKET. FIGURES ARE TO
 CHASSIS. 115V LINE AT 117 VOLTS, 1000 OHM PER
 VOLT VOLTCHECK. 1000 OHM 1000 OHM 1000 OHM
 VOLTCHECK IS ALSO ON TOP LEFT TO READ

MANUAL OF 1942 MOST POPULAR SERVICE DIAGRAMS SEARS, ROEBUCK AND CO.

Model 7094. Factory No. 101.667

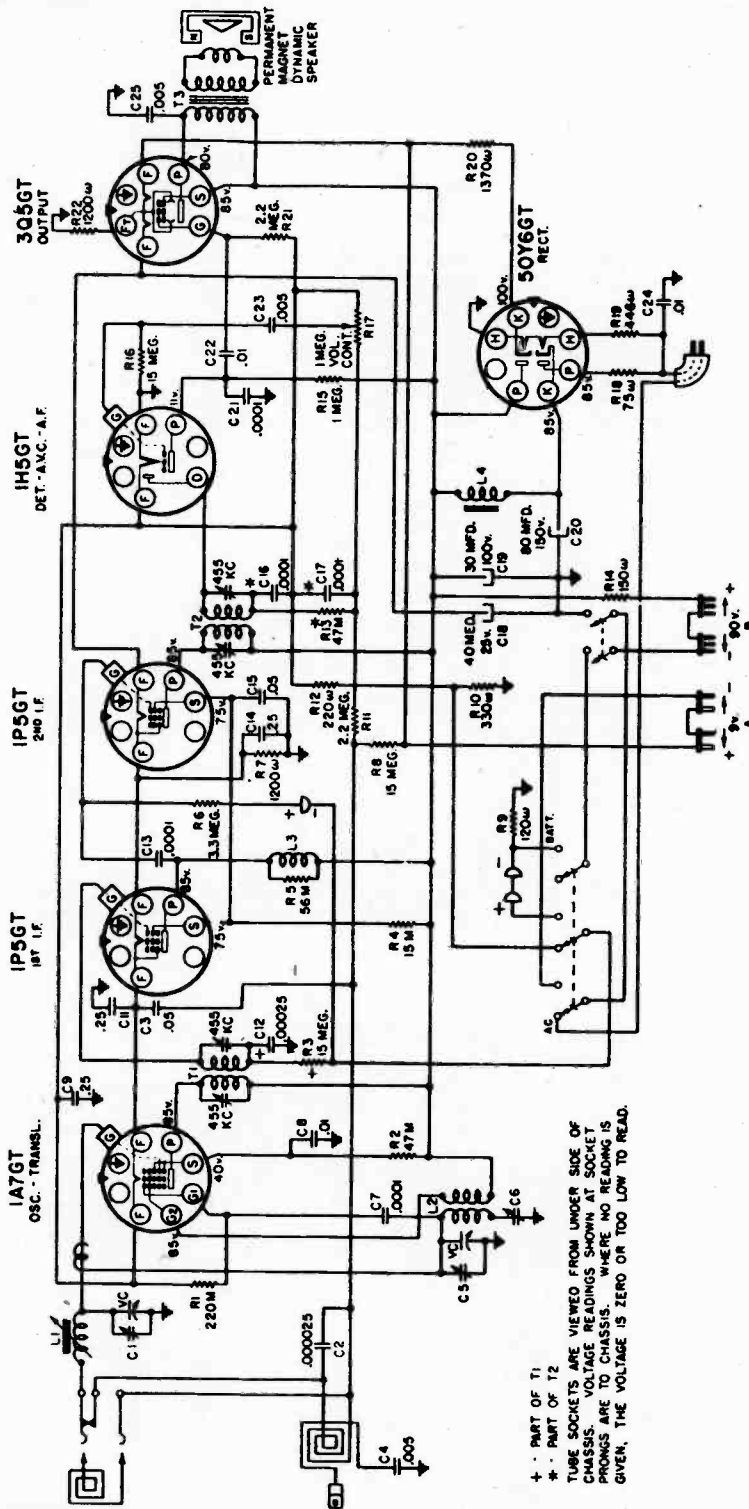
Output meter connections Across loud speaker voice coil
 Connection of signal generator ground lead Receiver Chassis
 Connection of signal generator output lead See chart below
 Dummy antenna value to be in series with generator output. See chart below
 Position of Volume Control Fully on
 Position of Tone Control Brilliant

POSITION OF TUNER	GENERATOR FREQUENCY	DUMMY ANTENNA	GENERATOR CONNECTION	TRIMMER ADJUSTMENTS (IN ORDER SHOWN)	TRIMMER FUNCTION
Low Freq. Limit	455 kc	.1 mfd.	Transl. Grid	T2, T1	IF
Low Freq. Limit	455 kc	.1 mfd.	Transl. Grid	C12*	IF Wave Trap
Hi Freq. Limit	1610 kc	.00005 mfd.	Ant. Conn.	C16	Oscillator
Hi Freq. Limit	2520 kc	.00005 mfd.	Ant. Conn.	C13*	Image Rejector
Hi Freq. Limit	1610 kc	.00005 mfd.	Ant. Conn.	C16	Oscillator
Hi Freq. Limit	1610 kc	.00005 mfd.	Ant. Conn.	C1	Antenna
Hi Freq. Limit	1610 kc	.00005 mfd.	Ant. Conn.	C4	R.F.
600 kc (rock)	600 kc	.00005 mfd.	Ant. Conn.	L5	Padder



MANUAL OF 1942 MOST POPULAR SERVICE DIAGRAMS

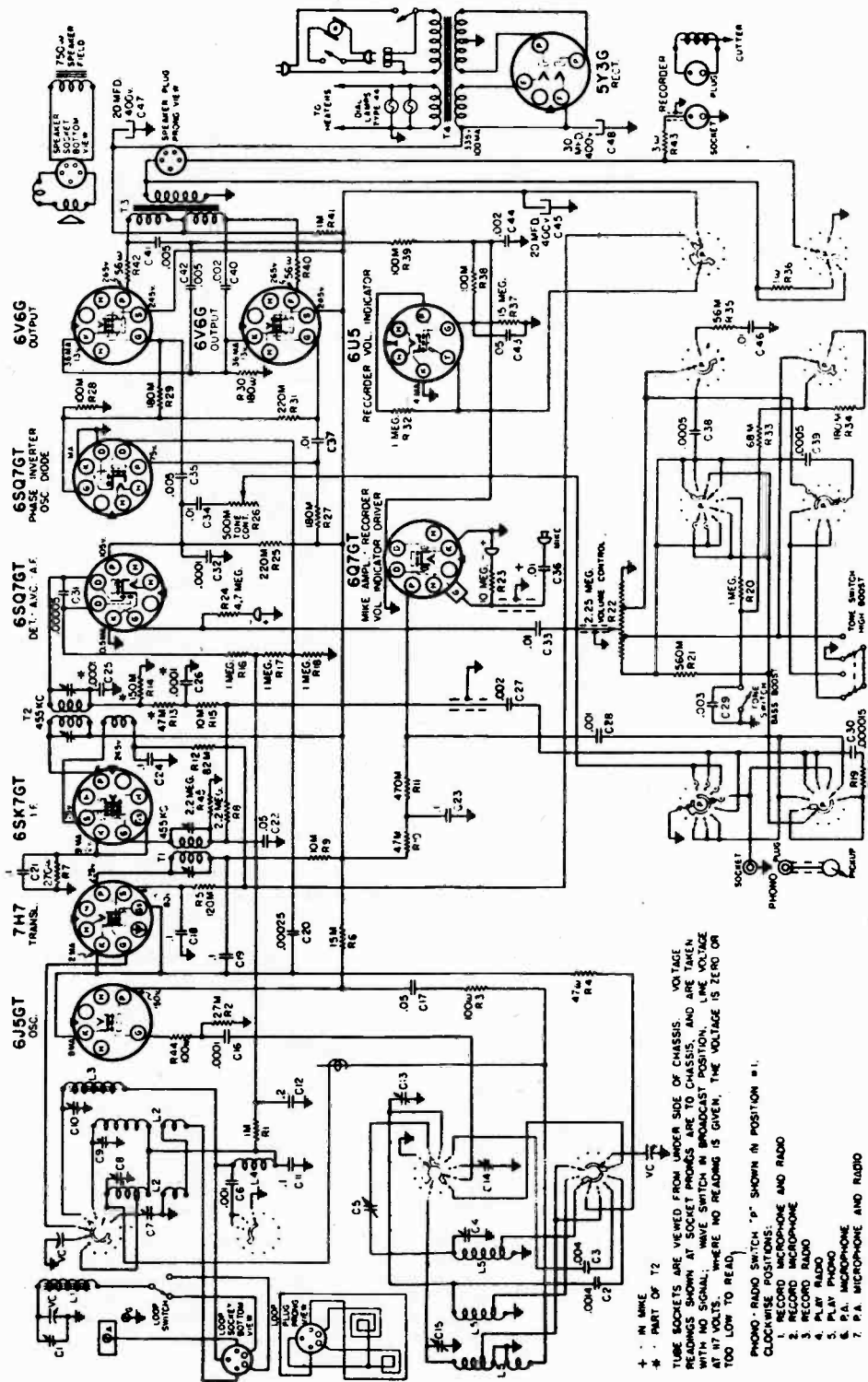
Sears, Roebuck and Co. Model 7083. Factory No. 101.686



POSITION OF VARIABLE	GENERATOR FREQUENCY	DUMMY ANTENNA	GENERATOR CONNECTION	TRIMMER ADJUSTMENT (IN ORDER SHOWN)	TRIMMER FUNCTION
Closed	455 kc	+1 mfd.	1A7GT Translator Grid	T2, T1	IF
Open	1620 kc	-	Radiating Loop	C5	Oscillator
1400 mc.	1400 kc	-	Radiating Loop	C1	Translator
600 kc (rock)	600 kc	-	Radiating Loop	C6, L1	Padde.

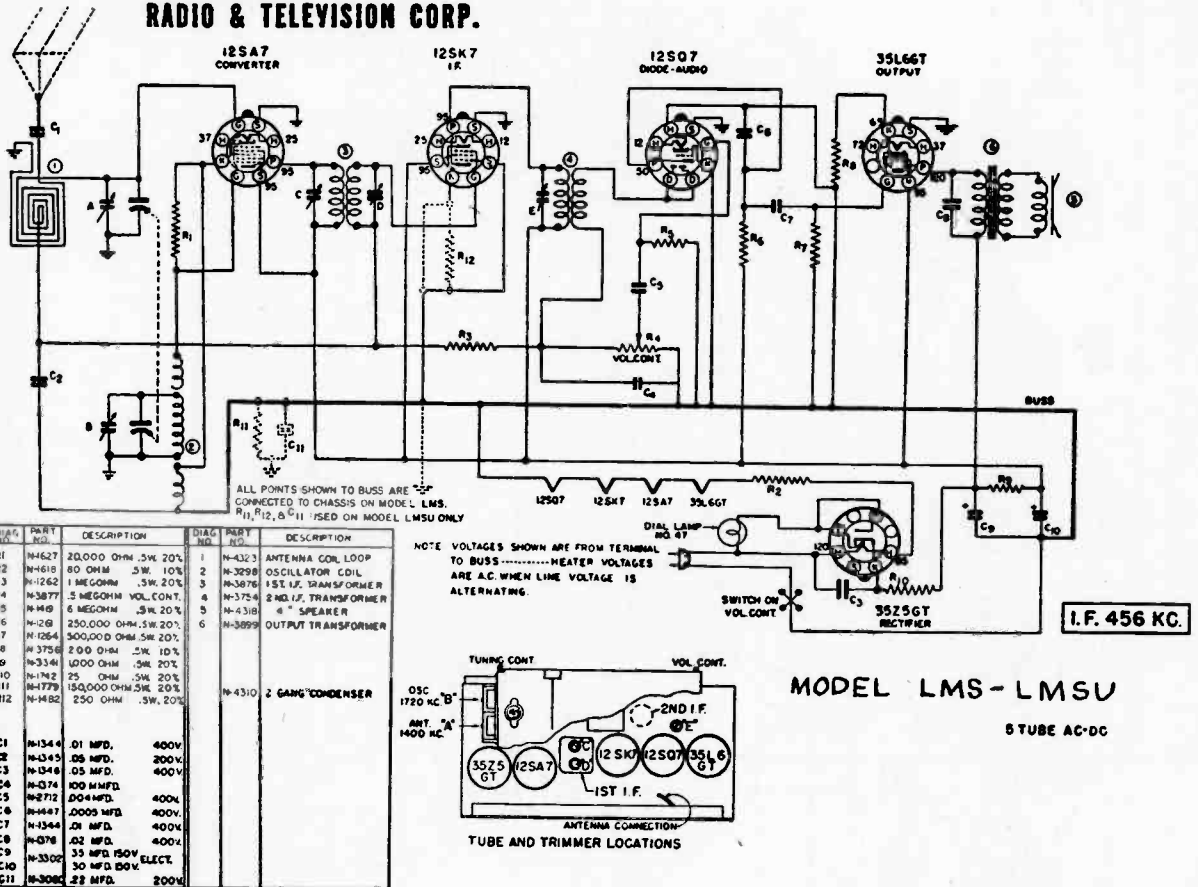
+ - PART OF T1
 * - PART OF T2
 TUBE SOCKETS ARE VIEWED FROM UNDER SIDE OF CHASSIS. VOLTAGE READINGS SHOWN AT SOCKET PRONGS ARE TO CHASSIS. WHERE NO READING IS GIVEN, THE VOLTAGE IS ZERO OR TOO LOW TO READ.

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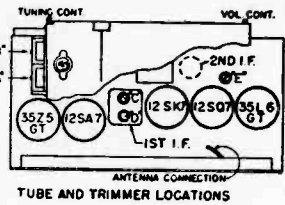
Sears, Roebuck and Co. Model 7070. Factory No. 101.682

MANUAL OF 1942 MOST POPULAR SERVICE DIAGRAMS



DIAG. NO.	PART NO.	DESCRIPTION	DIAG. NO.	PART NO.	DESCRIPTION
R1	N-4627	20,000 OHM .5W. 20%	1	N-4323	ANTENNA COIL LOOP
R2	N-4618	80 OHM .5W. 10%	2	N-3298	OSCILLATOR CDIL
R3	N-1262	1 MEG OHM .5W. 20%	3	N-3876	1ST I.F. TRANSFORMER
R4	N-3877	5 MEG OHM VOL. CONT.	4	N-3754	2ND I.F. TRANSFORMER
R5	N-469	6 MEG OHM .5W. 20%	5	N-4318	4" SPEAKER
R6	N-126	250,000 OHM .5W. 20%	6	N-3899	OUTPUT TRANSFORMER
R7	N-1264	500,000 OHM .5W. 20%			
R8	N-3758	200 OHM .5W. 10%			
R9	N-3141	1,000 OHM .5W. 20%			
R10	N-192	25 OHM .5W. 20%			
R11	N-1779	150,000 OHM .5W. 20%			
R12	N-482	250 OHM .5W. 20%			
			N-4310		2 GANG CONDENSER
C1	N-1344	.01 MFD. 400V.			
C2	N-1345	.05 MFD. 200V.			
C3	N-1346	.05 MFD. 400V.			
C4	N-374	100 MFD.			
C5	N-272	.004 MFD. 400V.			
C6	N-447	.0005 MFD. 400V.			
C7	N-1344	.01 MFD. 400V.			
C8	N-378	.02 MFD. 400V.			
C9	N-3302	33 MFD. 150V. ELECT.			
C10		30 MFD. 150V.			
C11	N-3082	28 MFD. 200V.			

NOTE: VOLTAGES SHOWN ARE FROM TERMINAL TO BUSS. HEATER VOLTAGES ARE A.C. WHEN LINE VOLTAGE IS ALTERNATING.



MODEL LMS-LMSU
5 TUBE AC-DC

Voltages shown on the circuit diagram are from socket terminals to ground buss. In measuring voltages use a voltmeter having a resistance of at least 1000 ohms per volt. Allowances should be made for variations in line voltage.

ALIGNMENT PROCEDURE

GENERAL DATA. The alignment of this receiver requires the use of a test oscillator that will cover the frequencies of 456, 600, 1400 and 1720 KC and an output meter to be connected across the primary and secondary of the output transformer. If possible, all alignments should be made with the volume control on maximum and the test oscillator output as low as possible to prevent the AVC from operating and giving false readings.

CORRECT ALIGNMENT PROCEDURE. The intermediate frequency (I.F.) stages should be aligned properly as the first step. After the I.F. transformers have been properly adjusted and peaked, the broadcast band should be adjusted.

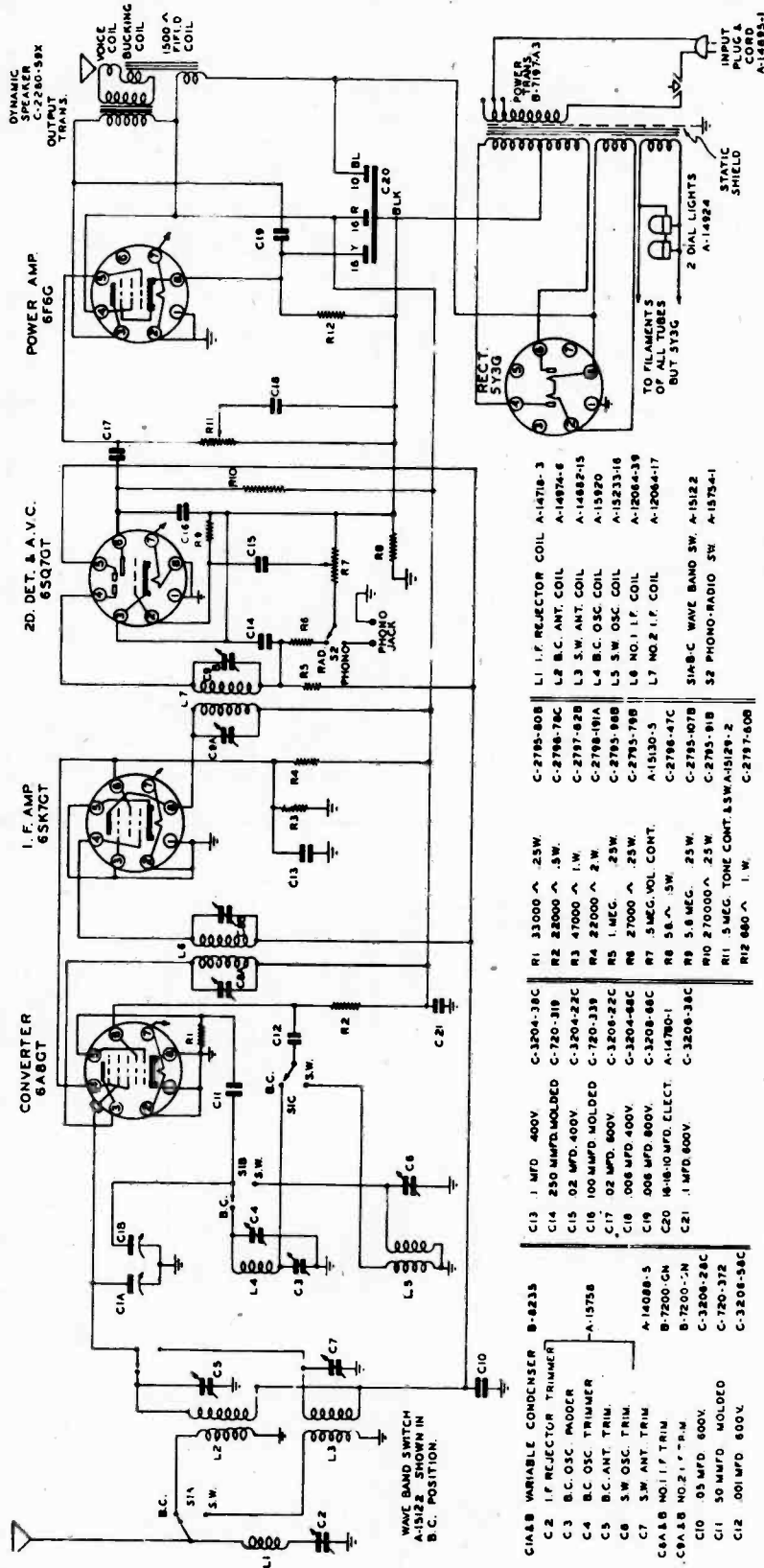
I. F. ALIGNMENT. Remove the chassis and loop antenna from the cabinet and set them up on the bench so that they occupy exactly the same respective positions on the bench as they did in the cabinet. Care should be taken to have no iron or other metal near

the loop. Do not make this set-up on a metal bench. With the gang condenser set at minimum, adjust the test oscillator to 456 KC and connect the output to the grid of the first detector tube (12SA7) through a .05 or .1 mfd. condenser. The ground on the test oscillator should be connected to the ground buss, indicated on the circuit diagram. Align all three I.F. trimmers to peak or maximum reading on the output meter.

BROADCAST BAND ALIGNMENT. Connect the test oscillator to the antenna of the set through a 100 mmfd. (.0001) condenser. With the gang condenser set at minimum capacity, set the test oscillator at 1720 KC, and adjust the oscillator (or 1720 KC trimmer) on gang condenser. Next—set the test oscillator at 1400 KC, and tune in the signal on the gang condenser. Adjust the antenna trimmer (or 1400 KC trimmer) for maximum signal. Next set the test oscillator at 800 KC, and tune in signal on condenser to check alignment of coils.

MANUAL OF 1942 MOST POPULAR SERVICE DIAGRAMS

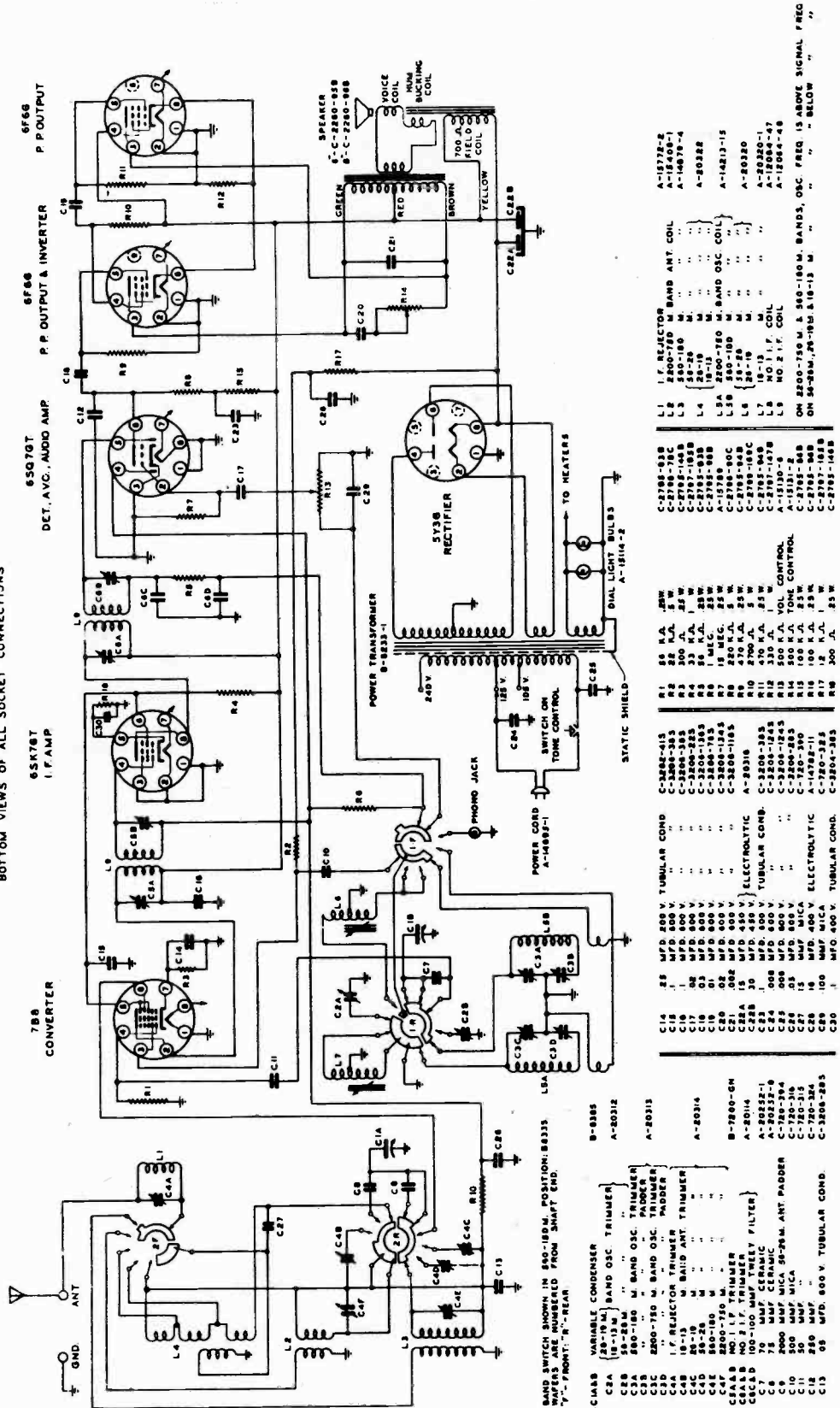
SPARTON SUPERHETERODYNE MODEL 531-X & 532-X INTERMEDIATE FREQUENCY 456 K.C. BOTTOM VIEW OF ALL SOCKET CONNECTIONS



B.C. OSC. CIRCUIT FREQUENCY IS ABOVE
S.W. OSC. CIRCUIT FREQ. IS BELOW
ANTENNA FREQ.

MANUAL OF 1942 MOST POPULAR SERVICE DIAGRAMS

SPARTON SUPERHETERODYNE MODELS 652-X & 652-XD INTERMEDIATE FREQUENCY 456 K.C. BOTTOM VIEWS OF ALL SOCKET CONNECTIONS



- WAVE SWITCH SHOWN IN 850-1820 POSITION: 85335
TUBULAR COND. FROM 50MFT. END
"F" - FRONT; "R" - REAR
- | | |
|-------|------------------------------|
| C1A-B | VARIABLE CONDENSER |
| C2A | 20-10 M. BAND OSC. TRIMMER |
| C2B | 10-15 M. BAND OSC. TRIMMER |
| C2C | 250-180 M. BAND OSC. PADDER |
| C2D | 250-180 M. BAND OSC. PADDER |
| C2E | I.F. REJECTOR TRIMMER |
| C2F | 18-15 M. BAND ANT. TRIMMER |
| C2G | 25-28 M. BAND ANT. TRIMMER |
| C2H | 850-180 M. BAND ANT. TRIMMER |
| C2I | 850-180 M. BAND ANT. TRIMMER |
| C2J | NO. 1 I.F. COIL |
| C2K | NO. 2 I.F. COIL |
| C2L | NO. 3 I.F. COIL |
| C2M | NO. 4 I.F. COIL |
| C2N | NO. 5 I.F. COIL |
| C2O | NO. 6 I.F. COIL |
| C2P | NO. 7 I.F. COIL |
| C2Q | NO. 8 I.F. COIL |
| C2R | NO. 9 I.F. COIL |
| C2S | NO. 10 I.F. COIL |
| C2T | NO. 11 I.F. COIL |
| C2U | NO. 12 I.F. COIL |
| C2V | NO. 13 I.F. COIL |
| C2W | NO. 14 I.F. COIL |
| C2X | NO. 15 I.F. COIL |
| C2Y | NO. 16 I.F. COIL |
| C2Z | NO. 17 I.F. COIL |
| C30 | 50 MFD. 600 V. TUBULAR COND. |

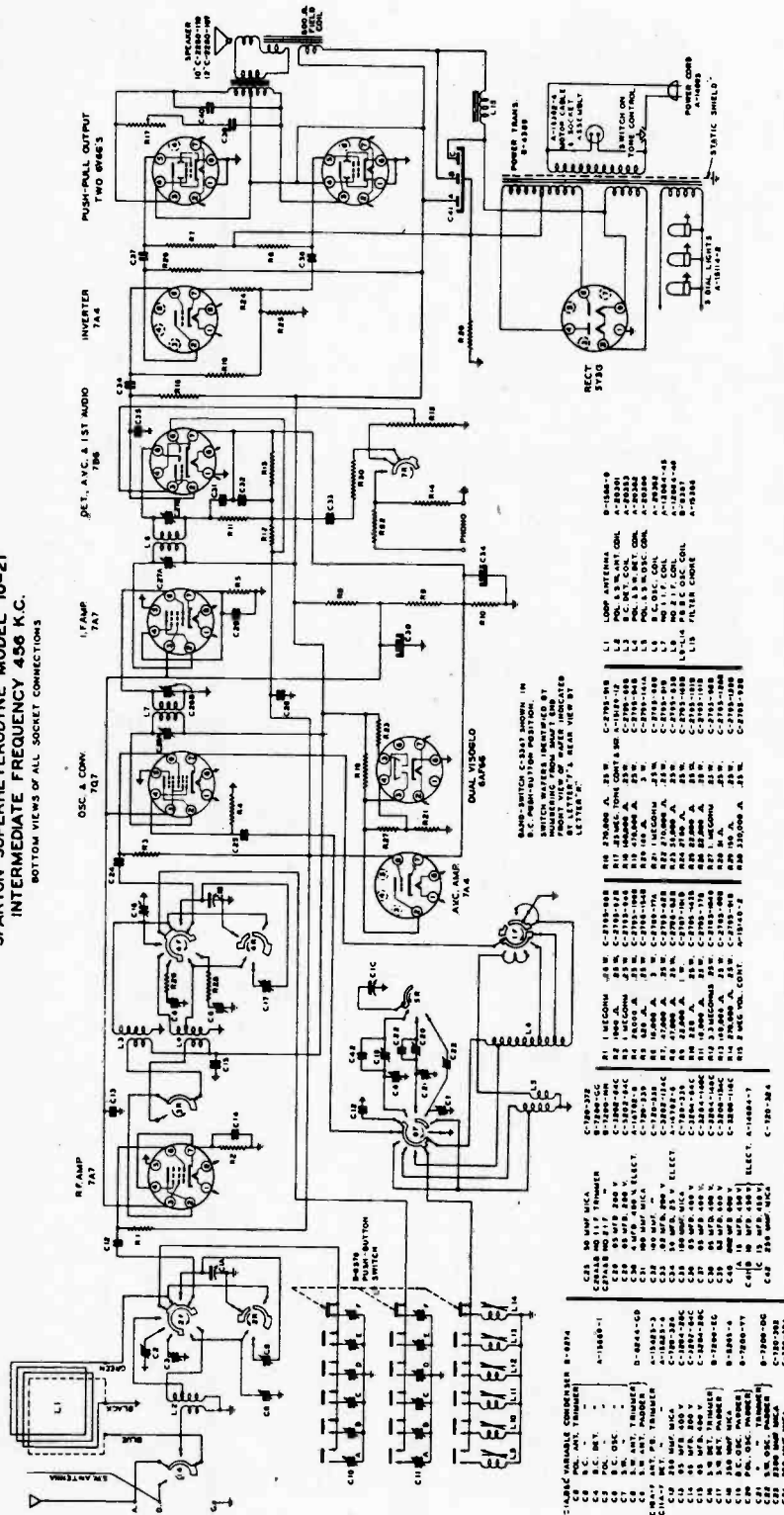
- | | |
|-----|---------------------------|
| L1 | 250-180 M. BAND ANT. COIL |
| L2 | 250-180 M. BAND ANT. COIL |
| L3 | 250-180 M. BAND ANT. COIL |
| L4 | 250-180 M. BAND ANT. COIL |
| L5 | 250-180 M. BAND ANT. COIL |
| L6 | 250-180 M. BAND ANT. COIL |
| L7 | 250-180 M. BAND ANT. COIL |
| L8 | 250-180 M. BAND ANT. COIL |
| L9 | 250-180 M. BAND ANT. COIL |
| L10 | 250-180 M. BAND ANT. COIL |
| L11 | 250-180 M. BAND ANT. COIL |
| L12 | 250-180 M. BAND ANT. COIL |
| L13 | 250-180 M. BAND ANT. COIL |
| L14 | 250-180 M. BAND ANT. COIL |
| L15 | 250-180 M. BAND ANT. COIL |
| L16 | 250-180 M. BAND ANT. COIL |
| L17 | 250-180 M. BAND ANT. COIL |
| L18 | 250-180 M. BAND ANT. COIL |
| L19 | 250-180 M. BAND ANT. COIL |
| L20 | 250-180 M. BAND ANT. COIL |
| L21 | 250-180 M. BAND ANT. COIL |
| L22 | 250-180 M. BAND ANT. COIL |
| L23 | 250-180 M. BAND ANT. COIL |
| L24 | 250-180 M. BAND ANT. COIL |
| L25 | 250-180 M. BAND ANT. COIL |
| L26 | 250-180 M. BAND ANT. COIL |
| L27 | 250-180 M. BAND ANT. COIL |
| L28 | 250-180 M. BAND ANT. COIL |
| L29 | 250-180 M. BAND ANT. COIL |
| L30 | 250-180 M. BAND ANT. COIL |

- | | |
|-----|------------------------------|
| C1 | 25 MFD. 200 V. TUBULAR COND. |
| C2 | 10 MFD. 200 V. TUBULAR COND. |
| C3 | 10 MFD. 200 V. TUBULAR COND. |
| C4 | 10 MFD. 200 V. TUBULAR COND. |
| C5 | 10 MFD. 200 V. TUBULAR COND. |
| C6 | 10 MFD. 200 V. TUBULAR COND. |
| C7 | 10 MFD. 200 V. TUBULAR COND. |
| C8 | 10 MFD. 200 V. TUBULAR COND. |
| C9 | 10 MFD. 200 V. TUBULAR COND. |
| C10 | 10 MFD. 200 V. TUBULAR COND. |
| C11 | 10 MFD. 200 V. TUBULAR COND. |
| C12 | 10 MFD. 200 V. TUBULAR COND. |
| C13 | 10 MFD. 200 V. TUBULAR COND. |
| C14 | 10 MFD. 200 V. TUBULAR COND. |
| C15 | 10 MFD. 200 V. TUBULAR COND. |
| C16 | 10 MFD. 200 V. TUBULAR COND. |
| C17 | 10 MFD. 200 V. TUBULAR COND. |
| C18 | 10 MFD. 200 V. TUBULAR COND. |
| C19 | 10 MFD. 200 V. TUBULAR COND. |
| C20 | 10 MFD. 200 V. TUBULAR COND. |
| C21 | 10 MFD. 200 V. TUBULAR COND. |
| C22 | 10 MFD. 200 V. TUBULAR COND. |
| C23 | 10 MFD. 200 V. TUBULAR COND. |
| C24 | 10 MFD. 200 V. TUBULAR COND. |
| C25 | 10 MFD. 200 V. TUBULAR COND. |
| C26 | 10 MFD. 200 V. TUBULAR COND. |
| C27 | 10 MFD. 200 V. TUBULAR COND. |
| C28 | 10 MFD. 200 V. TUBULAR COND. |
| C29 | 10 MFD. 200 V. TUBULAR COND. |
| C30 | 10 MFD. 200 V. TUBULAR COND. |

- | | |
|-----|------------------------------|
| C1A | 25 MFD. 200 V. TUBULAR COND. |
| C1B | 10 MFD. 200 V. TUBULAR COND. |
| C1C | 10 MFD. 200 V. TUBULAR COND. |
| C1D | 10 MFD. 200 V. TUBULAR COND. |
| C1E | 10 MFD. 200 V. TUBULAR COND. |
| C1F | 10 MFD. 200 V. TUBULAR COND. |
| C1G | 10 MFD. 200 V. TUBULAR COND. |
| C1H | 10 MFD. 200 V. TUBULAR COND. |
| C1I | 10 MFD. 200 V. TUBULAR COND. |
| C1J | 10 MFD. 200 V. TUBULAR COND. |
| C1K | 10 MFD. 200 V. TUBULAR COND. |
| C1L | 10 MFD. 200 V. TUBULAR COND. |
| C1M | 10 MFD. 200 V. TUBULAR COND. |
| C1N | 10 MFD. 200 V. TUBULAR COND. |
| C1O | 10 MFD. 200 V. TUBULAR COND. |
| C1P | 10 MFD. 200 V. TUBULAR COND. |
| C1Q | 10 MFD. 200 V. TUBULAR COND. |
| C1R | 10 MFD. 200 V. TUBULAR COND. |
| C1S | 10 MFD. 200 V. TUBULAR COND. |
| C1T | 10 MFD. 200 V. TUBULAR COND. |
| C1U | 10 MFD. 200 V. TUBULAR COND. |
| C1V | 10 MFD. 200 V. TUBULAR COND. |
| C1W | 10 MFD. 200 V. TUBULAR COND. |
| C1X | 10 MFD. 200 V. TUBULAR COND. |
| C1Y | 10 MFD. 200 V. TUBULAR COND. |
| C1Z | 10 MFD. 200 V. TUBULAR COND. |

MANUAL OF 1942 MOST POPULAR SERVICE DIAGRAMS

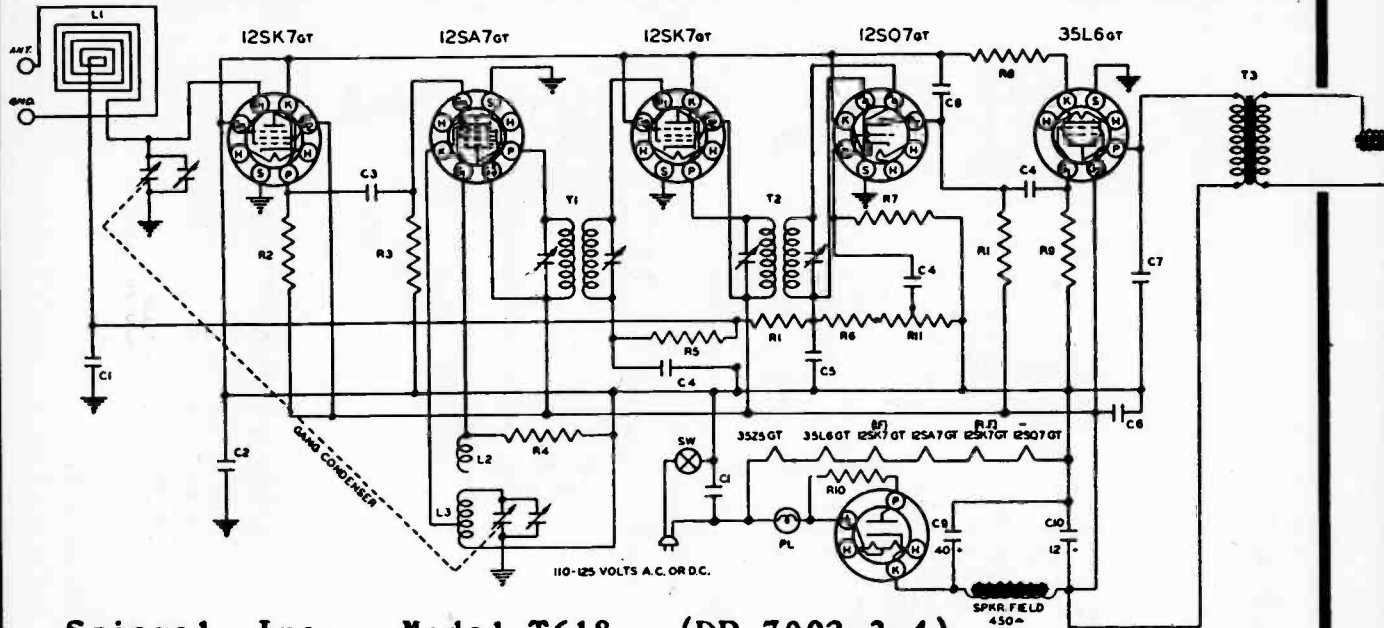
SPARTON SUPERHETERODYNE MODEL 10-21 INTERMEDIATE FREQUENCY 456 K.C. BOTTOM VIEWS OF ALL SOCKET CONNECTIONS



TUBE	Voltage of Socket Prongs to Gnd. See Prong Nos. on Schematic Dia.									
	No. 1	No. 2	No. 3	No. 4	No. 5	No. 6	No. 7	No. 8	No. 9	
7A7	0	260	75	3.8	0	0	3.8	6.2*	0	
7A7	0	260	75	-2.3	0	0	0	6.2*	0	
7B6	0	260	75	3	0	0	3	6.2*	0	
7A4	0	223	50	1.1	0	0	.5	6.2*	0	
7A4	0	40	160	0	0	0	17	6.2*	0	
6Y6G	0	0	260	265	-17	-17.5	6.3*	0	0	
6Y6G	0	0	260	265	-17	265	6.3*	0	0	
5Y3G	0	390	0	355*	0	355*	0	390	0	
6AF6G	0	0	40	17	260	0	6.2*	0	0	

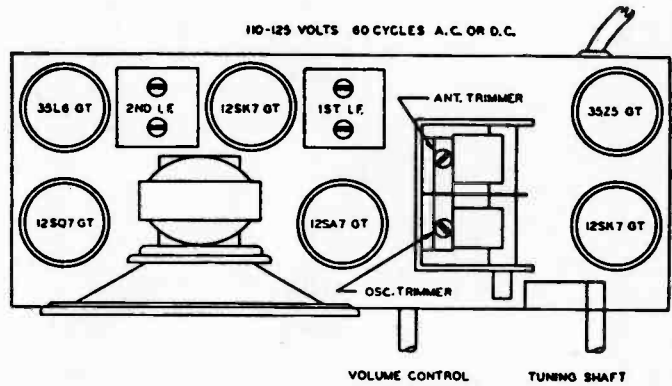
Notes: Voltage readings are for schematic diagram on back of sheet. Allow 15% + or - on all measurements. Always use meter scale which will give greatest deflection within scale limits. All DC measurements made with 20,000 ohms per volt voltmeter. All AC voltages made with rectifier type voltmeter. *AC volts.

MANUAL OF 1942 MOST POPULAR SERVICE DIAGRAMS

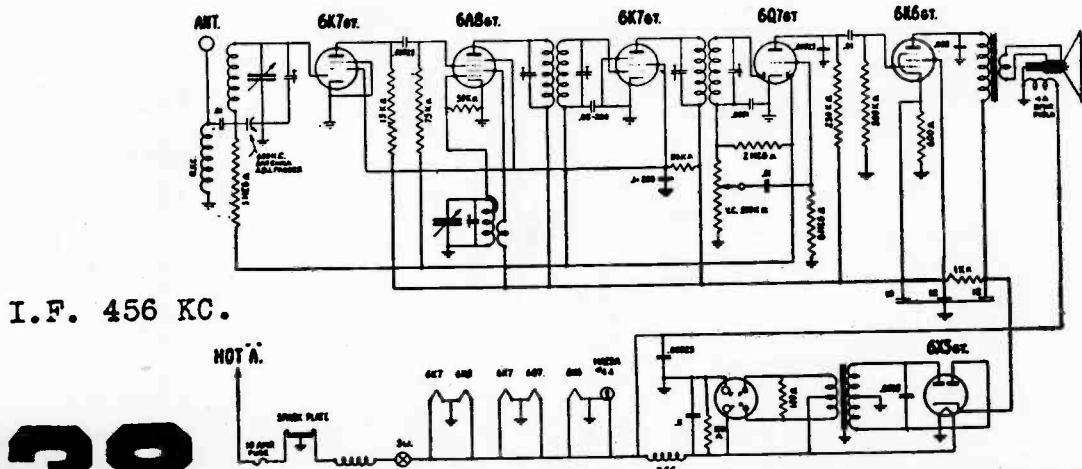


Spiegel, Inc. Model T618. (DP-7002-3-4)

PART NO.	SCHEMATIC LOCATION	DESCRIPTION
3-6	R1	1 MEG. 1/2 WATT 20K RESISTOR
3-36	R2	1500 - " " " "
3-17	R3	100000 - " " " "
3-26	R4	30000 - " " " "
3-141	R5	6 MEG. - " " " "
3-4	R6	50000 - " " " "
3-2	R7	2 MEG. - " " " "
3-34	R8	100 - " " " "
3-1	R9	500000 - " " " "
3-33	R10	50 - " " " "
5-301	{ R11	1 MEGOHM VOLUME CONTROL
	{ SW	SWITCH
6-14	C1	.05 MFD. 400 VOLTS CONDENSER
6-30	C2	.25 - 200 - " " " "
6-8	C3	.0001 - MICA - " " " "
6-3	C4	.01 - 400 VOLTS - " " " "
6-10	C5	.00025 - MICA - " " " "
6-306	C6	.0005 - 600 VOLTS - " " " "
6-308	C7	.005 - " " " "
6-28	C8	.1 - 400 - " " " "
7-301	{ C9	40 - 150 - } ELECTROLYTIC
	{ C10	12 - 150 - }

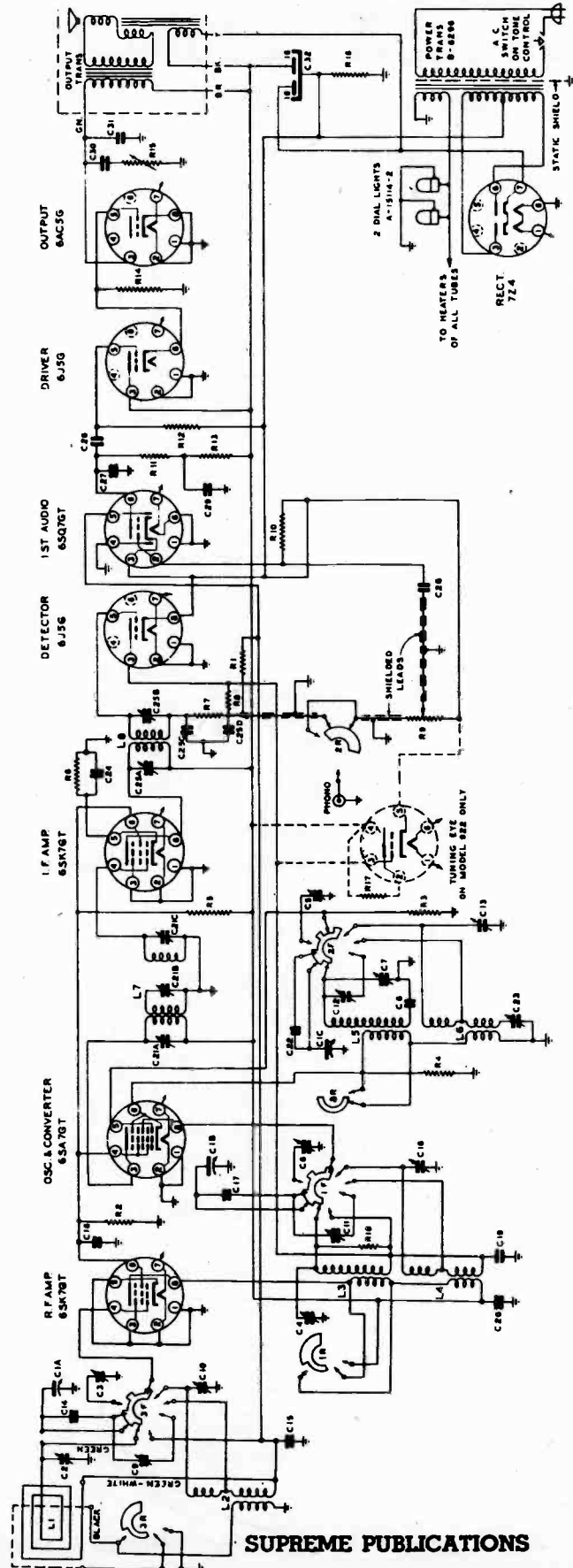


Spiegel, Inc. Model TA616. (DP-7450 and EP-2450)



MANUAL OF 1942 MOST POPULAR SERVICE DIAGRAMS

AIR CASTLE SUPERHETERODYNE MODELS 822 & 922
INTERMEDIATE FREQUENCY 456 K.C.
BOTTOM VIEWS OF ALL SOCKET CONNECTIONS



SUPREME PUBLICATIONS

BAND-SWITCH B-2837 SHOWN IN B.C. POSITION
WAGERS NUMBERED FROM SHAFT END.
"F"-FRONT, "R"-REAR

Spiegel, Inc. Models 822 and 922. (DP-7014)

C1A, B, C	3-GANG VARIABLE CONDENSER	B-2935-1028	25 W	C-2793-1028	L1	LOOP ANTENNA	C-3390-7	TABLE MODEL
C2	B.C. ANT. TRIMMER	B-2935-3	1 W	C-2793-9338	L2	5.7-72.74-10.0 MC. ANT. COIL	(D-1608-10	CONSOL.
C3	B.C. DET. TRIMMER	A-15088-7	25 W	C-2793-1518	L3	5.7-72.74-10.0 MC. ANT. COIL	A-14980-9	
C4	B.C. DET. TRIMMER	A-15088-7	25 W	C-2793-1028	L4	5.7-72.74-10.0 MC. ANT. COIL	A-15938-1	
C5	B.C. DET. TRIMMER	C-3204-38C	25 W	C-2793-1028	L5	5.7-72.74-10.0 MC. ANT. COIL	A-15937-4	
C6	B.C. DET. TRIMMER	C-3204-38C	25 W	C-2793-1028	L6	5.7-72.74-10.0 MC. ANT. COIL	A-15937-4	
C7	B.C. OSC. TRIMMER	B-4483-1	25 W	C-2793-1028	L7	5.7-72.74-10.0 MC. OSC. COIL	A-15937-4	
C8	B.C. OSC. TRIMMER	B-4483-1	25 W	C-2793-1028	L8	5.7-72.74-10.0 MC. OSC. COIL	A-15937-4	
C9	B.C. OSC. TRIMMER	A-15451-10	5 MEG.	C-2793-1028			A-15937-4	
C10	1 MFD. 400 V.	A-20114	25 W	C-2793-918			A-15937-4	
C11	1 MFD. 400 V.	A-20114	25 W	C-2793-918			A-15937-4	
C12	1 MFD. 400 V.	A-20114	25 W	C-2793-918			A-15937-4	
C13	1 MFD. 400 V.	A-20114	25 W	C-2793-918			A-15937-4	
C14	1 MFD. 400 V.	A-20114	25 W	C-2793-918			A-15937-4	
C15	1 MFD. 400 V.	A-20114	25 W	C-2793-918			A-15937-4	
C16	1 MFD. 400 V.	A-20114	25 W	C-2793-918			A-15937-4	
C17	1 MFD. 400 V.	A-20114	25 W	C-2793-918			A-15937-4	
C18	1 MFD. 400 V.	A-20114	25 W	C-2793-918			A-15937-4	
C19	1 MFD. 400 V.	A-20114	25 W	C-2793-918			A-15937-4	
C20	1 MFD. 400 V.	A-20114	25 W	C-2793-918			A-15937-4	
C21	1 MFD. 400 V.	A-20114	25 W	C-2793-918			A-15937-4	
C22	1 MFD. 400 V.	A-20114	25 W	C-2793-918			A-15937-4	
C23	1 MFD. 400 V.	A-20114	25 W	C-2793-918			A-15937-4	
C24	1 MFD. 400 V.	A-20114	25 W	C-2793-918			A-15937-4	
C25	1 MFD. 400 V.	A-20114	25 W	C-2793-918			A-15937-4	
C26	1 MFD. 400 V.	A-20114	25 W	C-2793-918			A-15937-4	
C27	1 MFD. 400 V.	A-20114	25 W	C-2793-918			A-15937-4	
C28	1 MFD. 400 V.	A-20114	25 W	C-2793-918			A-15937-4	
C29	1 MFD. 400 V.	A-20114	25 W	C-2793-918			A-15937-4	
C30	1 MFD. 400 V.	A-20114	25 W	C-2793-918			A-15937-4	
C31	1 MFD. 400 V.	A-20114	25 W	C-2793-918			A-15937-4	
C32	1 MFD. 400 V.	A-20114	25 W	C-2793-918			A-15937-4	
C33	1 MFD. 400 V.	A-20114	25 W	C-2793-918			A-15937-4	
C34	1 MFD. 400 V.	A-20114	25 W	C-2793-918			A-15937-4	
C35	1 MFD. 400 V.	A-20114	25 W	C-2793-918			A-15937-4	
C36	1 MFD. 400 V.	A-20114	25 W	C-2793-918			A-15937-4	
C37	1 MFD. 400 V.	A-20114	25 W	C-2793-918			A-15937-4	
C38	1 MFD. 400 V.	A-20114	25 W	C-2793-918			A-15937-4	
C39	1 MFD. 400 V.	A-20114	25 W	C-2793-918			A-15937-4	
C40	1 MFD. 400 V.	A-20114	25 W	C-2793-918			A-15937-4	
C41	1 MFD. 400 V.	A-20114	25 W	C-2793-918			A-15937-4	
C42	1 MFD. 400 V.	A-20114	25 W	C-2793-918			A-15937-4	
C43	1 MFD. 400 V.	A-20114	25 W	C-2793-918			A-15937-4	
C44	1 MFD. 400 V.	A-20114	25 W	C-2793-918			A-15937-4	
C45	1 MFD. 400 V.	A-20114	25 W	C-2793-918			A-15937-4	
C46	1 MFD. 400 V.	A-20114	25 W	C-2793-918			A-15937-4	
C47	1 MFD. 400 V.	A-20114	25 W	C-2793-918			A-15937-4	
C48	1 MFD. 400 V.	A-20114	25 W	C-2793-918			A-15937-4	
C49	1 MFD. 400 V.	A-20114	25 W	C-2793-918			A-15937-4	
C50	1 MFD. 400 V.	A-20114	25 W	C-2793-918			A-15937-4	
C51	1 MFD. 400 V.	A-20114	25 W	C-2793-918			A-15937-4	
C52	1 MFD. 400 V.	A-20114	25 W	C-2793-918			A-15937-4	
C53	1 MFD. 400 V.	A-20114	25 W	C-2793-918			A-15937-4	
C54	1 MFD. 400 V.	A-20114	25 W	C-2793-918			A-15937-4	
C55	1 MFD. 400 V.	A-20114	25 W	C-2793-918			A-15937-4	
C56	1 MFD. 400 V.	A-20114	25 W	C-2793-918			A-15937-4	
C57	1 MFD. 400 V.	A-20114	25 W	C-2793-918			A-15937-4	
C58	1 MFD. 400 V.	A-20114	25 W	C-2793-918			A-15937-4	
C59	1 MFD. 400 V.	A-20114	25 W	C-2793-918			A-15937-4	
C60	1 MFD. 400 V.	A-20114	25 W	C-2793-918			A-15937-4	
C61	1 MFD. 400 V.	A-20114	25 W	C-2793-918			A-15937-4	
C62	1 MFD. 400 V.	A-20114	25 W	C-2793-918			A-15937-4	
C63	1 MFD. 400 V.	A-20114	25 W	C-2793-918			A-15937-4	
C64	1 MFD. 400 V.	A-20114	25 W	C-2793-918			A-15937-4	
C65	1 MFD. 400 V.	A-20114	25 W	C-2793-918			A-15937-4	
C66	1 MFD. 400 V.	A-20114	25 W	C-2793-918			A-15937-4	
C67	1 MFD. 400 V.	A-20114	25 W	C-2793-918			A-15937-4	
C68	1 MFD. 400 V.	A-20114	25 W	C-2793-918			A-15937-4	
C69	1 MFD. 400 V.	A-20114	25 W	C-2793-918			A-15937-4	
C70	1 MFD. 400 V.	A-20114	25 W	C-2793-918			A-15937-4	
C71	1 MFD. 400 V.	A-20114	25 W	C-2793-918			A-15937-4	
C72	1 MFD. 400 V.	A-20114	25 W	C-2793-918			A-15937-4	
C73	1 MFD. 400 V.	A-20114	25 W	C-2793-918			A-15937-4	
C74	1 MFD. 400 V.	A-20114	25 W	C-2793-918			A-15937-4	
C75	1 MFD. 400 V.	A-20114	25 W	C-2793-918			A-15937-4	
C76	1 MFD. 400 V.	A-20114	25 W	C-2793-918			A-15937-4	
C77	1 MFD. 400 V.	A-20114	25 W	C-2793-918			A-15937-4	
C78	1 MFD. 400 V.	A-20114	25 W	C-2793-918			A-15937-4	
C79	1 MFD. 400 V.	A-20114	25 W	C-2793-918			A-15937-4	
C80	1 MFD. 400 V.	A-20114	25 W	C-2793-918			A-15937-4	
C81	1 MFD. 400 V.	A-20114	25 W	C-2793-918			A-15937-4	
C82	1 MFD. 400 V.	A-20114	25 W	C-2793-918			A-15937-4	
C83	1 MFD. 400 V.	A-20114	25 W	C-2793-918			A-15937-4	
C84	1 MFD. 400 V.	A-20114	25 W	C-2793-918			A-15937-4	
C85	1 MFD. 400 V.	A-20114	25 W	C-2793-918			A-15937-4	
C86	1 MFD. 400 V.	A-20114	25 W	C-2793-918			A-15937-4	
C87	1 MFD. 400 V.	A-20114	25 W	C-2793-918			A-15937-4	
C88	1 MFD. 400 V.	A-20114	25 W	C-2793-918			A-15937-4	
C89	1 MFD. 400 V.	A-20114	25 W	C-2793-918			A-15937-4	
C90	1 MFD. 400 V.	A-20114	25 W	C-2793-918			A-15937-4	
C91	1 MFD. 400 V.	A-20114	25 W	C-2793-918			A-15937-4	
C92	1 MFD. 400 V.	A-20114	25 W	C-2793-918			A-15937-4	
C93	1 MFD. 400 V.	A-20114	25 W	C-2793-918			A-15937-4	
C94	1 MFD. 400 V.	A-20114	25 W	C-2793-918			A-15937-4	
C95	1 MFD. 400 V.	A-20114	25 W	C-2793-918			A-15937-4	
C96	1 MFD. 400 V.	A-20114	25 W	C-2793-918			A-15937-4	
C97	1 MFD. 400 V.	A-20114	25 W	C-2793-918			A-15937-4	
C98	1 MFD. 400 V.	A-20114	25 W	C-2793-918			A-15937-4	
C99	1 MFD. 400 V.	A-20114	25 W	C-2793-918			A-15937-4	
C100	1 MFD. 400 V.	A-20114	25 W	C-2793-918			A-15937-4	

MANUAL OF 1942 MOST POPULAR SERVICE DIAGRAMS

STEWART-WARNER 205A & 205B CHASSIS

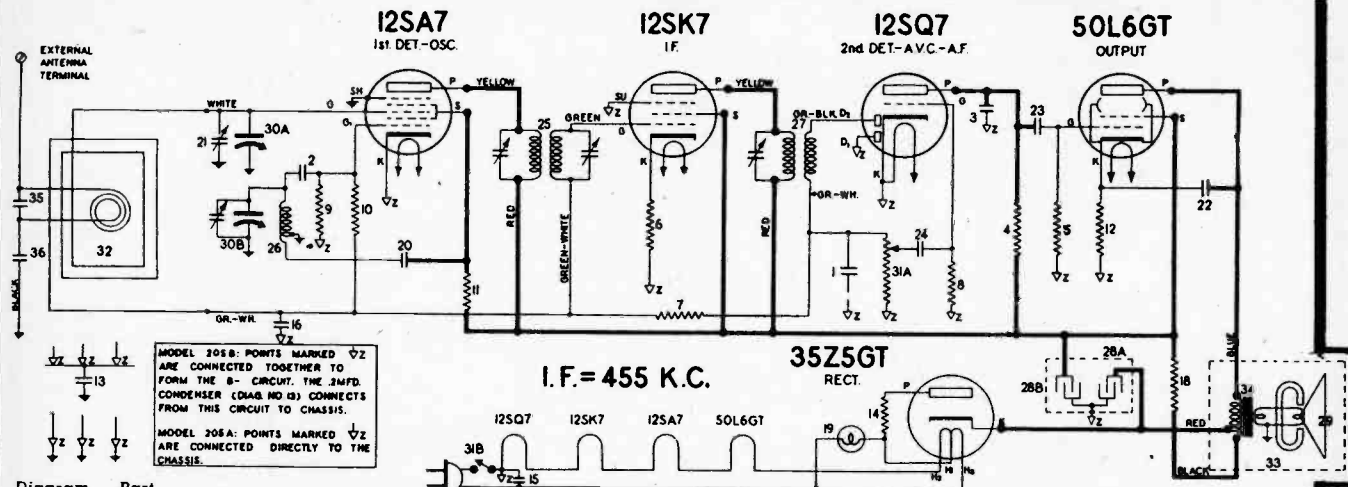
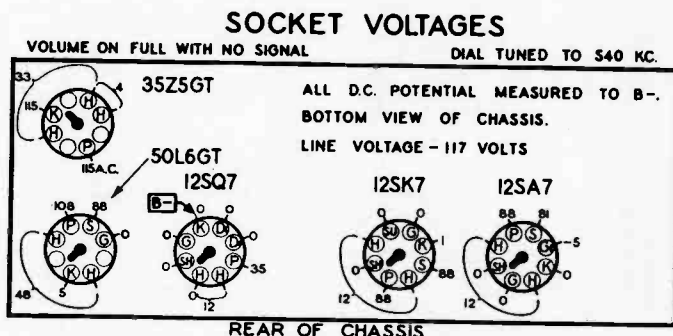


Diagram Number	Part Number	Description
1	83539	Condenser—mica, 260 mmfd.
2	83783	Condenser—mica, 110 mmfd.
3	85394	Condenser—mica, 510 mmfd.
4	110533	Resistor—carbon, 220,000 ohms 1/4 watt
5	110559	Resistor—carbon, 470,000 ohms 1/4 watt
6	110560	Resistor—carbon, 100 ohms 1/4 watt
7	110570	Resistor—carbon, 2.2 meg. 1/4 watt
8	110580	Resistor—carbon, 3.3 meg. 1/4 watt
9	112958	Resistor—carbon, 18,000 ohms 1/4 watt
10	112975	Resistor—carbon, 10 meg. 1/4 watt
11	116068	Resistor—carbon, 680 ohms 1/4 watt
12	116092	Resistor—140 ohms 1 watt W.W.
13	116706	Condenser—.2 mfd. 600 volt (205B only)
14	116752	Resistor—33 ohms 1 watt W.W.
15, 16	116819	Condenser—.05 mfd. 600 volt
18	118824	Resistor—carbon, 1500 ohms 1/2 watt
19	118921	Lamp Dial (Mazda No. 47)
20	119133	Condenser—.01 mfd. 600 volt
21	119345	Condenser—Trimmer
22	119414	Condenser—.02 mfd. 600 volt
23	119417	Condenser—.006 mfd. 600 volt
24	119817	Condenser—.004 mfd. 600 volt
25	500131	Transformer—1st I.F.



Use a voltmeter of 1000 ohms per volt.

ALIGNMENT PROCEDURE

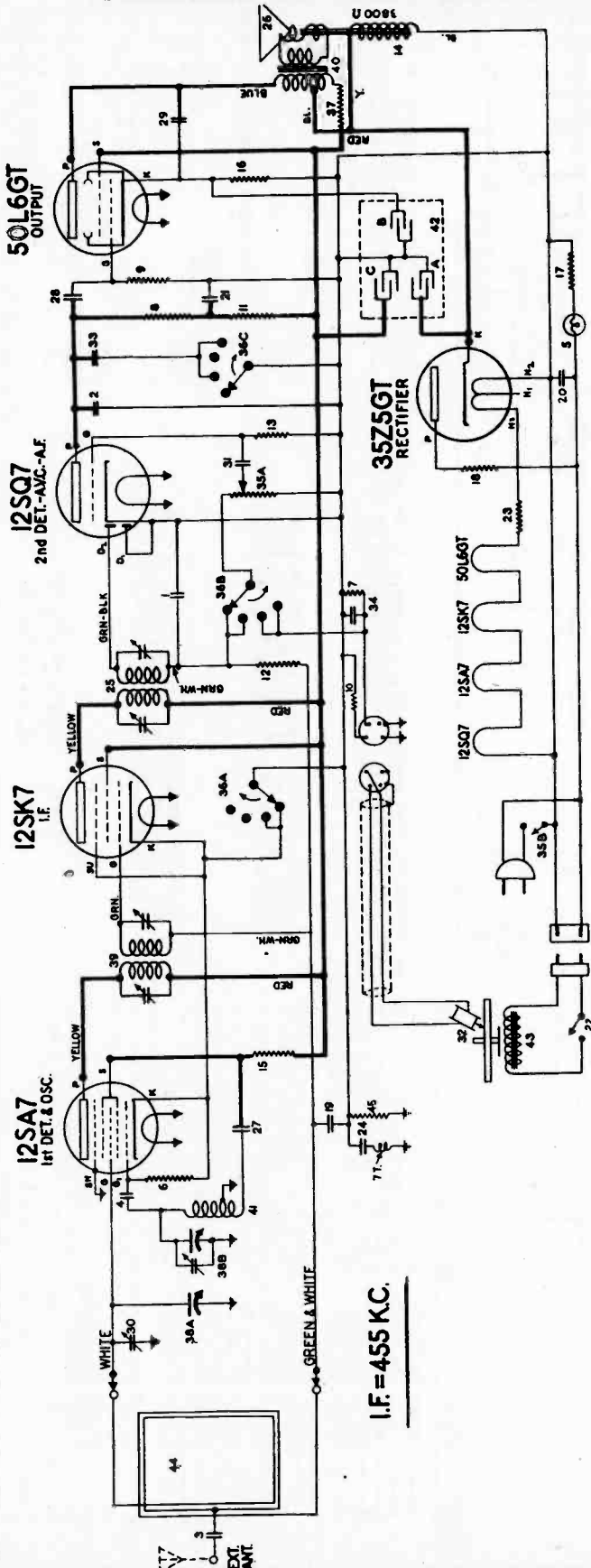
1. Connect output meter across the voice coil; or from 50L6GT plate to B— as shown on voltage chart.
2. Connect the ground lead of the signal generator to the chassis through a .25 mfd. condenser.
3. Set the volume control to the maximum volume position.
4. Set dial pointer to lowest frequency point on dial scale with gang in full mesh.
5. Connect the antenna lead of the signal generator to the lug on the top of the rear section of the gang, using a 200 mmfd. mica condenser in series.
6. Set the signal generator to 455 KC. Set receiver dial to a point where it does not affect signal. Adjust the trimmer screws on the top of each I.F. Transformer for maximum output.
7. Connect the output of the signal generator in series with a 200 mmfd. mica condenser to the antenna terminal on the cabinet back. Set the receiver dial to 1500 KC.
8. Set the signal generator to 1500 KC and adjust the trimmer on the front section of the gang condenser for maximum output of the oscillator signal.
9. Place the loop antenna in its correct position at the rear of the cabinet and adjust the trimmer screw on the back of the chassis for maximum output at 1500 KC.

Diagram Number	Part Number	Description
26	500232	Coil—Oscillator
27	500236	Transformer—2nd I.F.
28A-28B	500256	Condenser—Electrolytic A—40 mfd.—150 volt } B—20 mfd.—150 volt }
29	C-500329	Cone and voice coil for C-500594 speaker
30A-30B	500443	Condenser—variable tuning, with drum
31A-31B	500480	Volume Control—1 meg. (with switch)
32	500566	Loop Antenna & Cabinet Back (205AA & 205BA)
	500567	Loop Antenna & Cabinet Back (205AB & 205BB)
	500576	Loop Antenna & Cabinet Back (205AC & 205BC)
33	C-500594	Speaker—P.M. (4")
34	C-500615	Transformer—output for C-500594 speaker
35	83783	Condenser—mica, 110 mmfd.
36	119133	Condenser—.01 mfd. 600 volt (205A only)

MISCELLANEOUS PARTS

Part Number	Description
116467	Base for mounting electrolytic condenser
114955	Clamp for dial cord
112745	Clip—coil mounting
117057	Cord—drive supplied in 3' lengths
500562	Dial Scale
500422	Knob (for 205AA & 205AC) (205BA & 205BC)
500428	Knob (for 205AB & 205BB)
500527	Pointer
81145	Retaining ring for tuning shaft
116690	Socket—octal base
160392	Socket—octal (rectifier)
500499	Socket—pilot lamp (with leads)
161384	Spring—dial cord tension
500497	Stud—dial scale retaining
111456	Washer—spring washer for tuning shaft

MANUAL OF 1942 MOST POPULAR SERVICE DIAGRAMS



SOCKET VOLTAGES
Volume on full with no signal. Dial tuned to 540 KC.

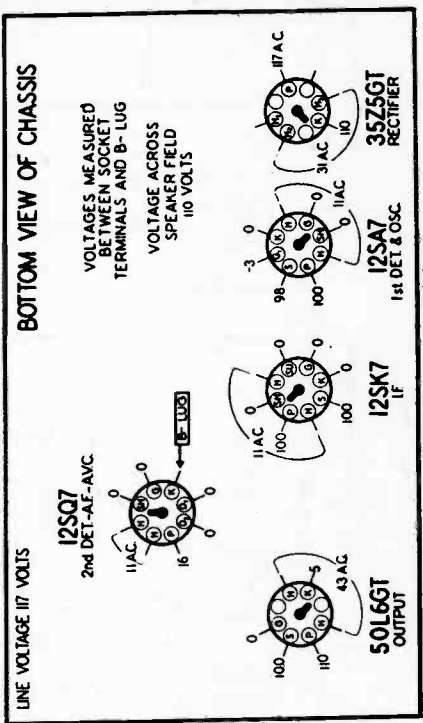
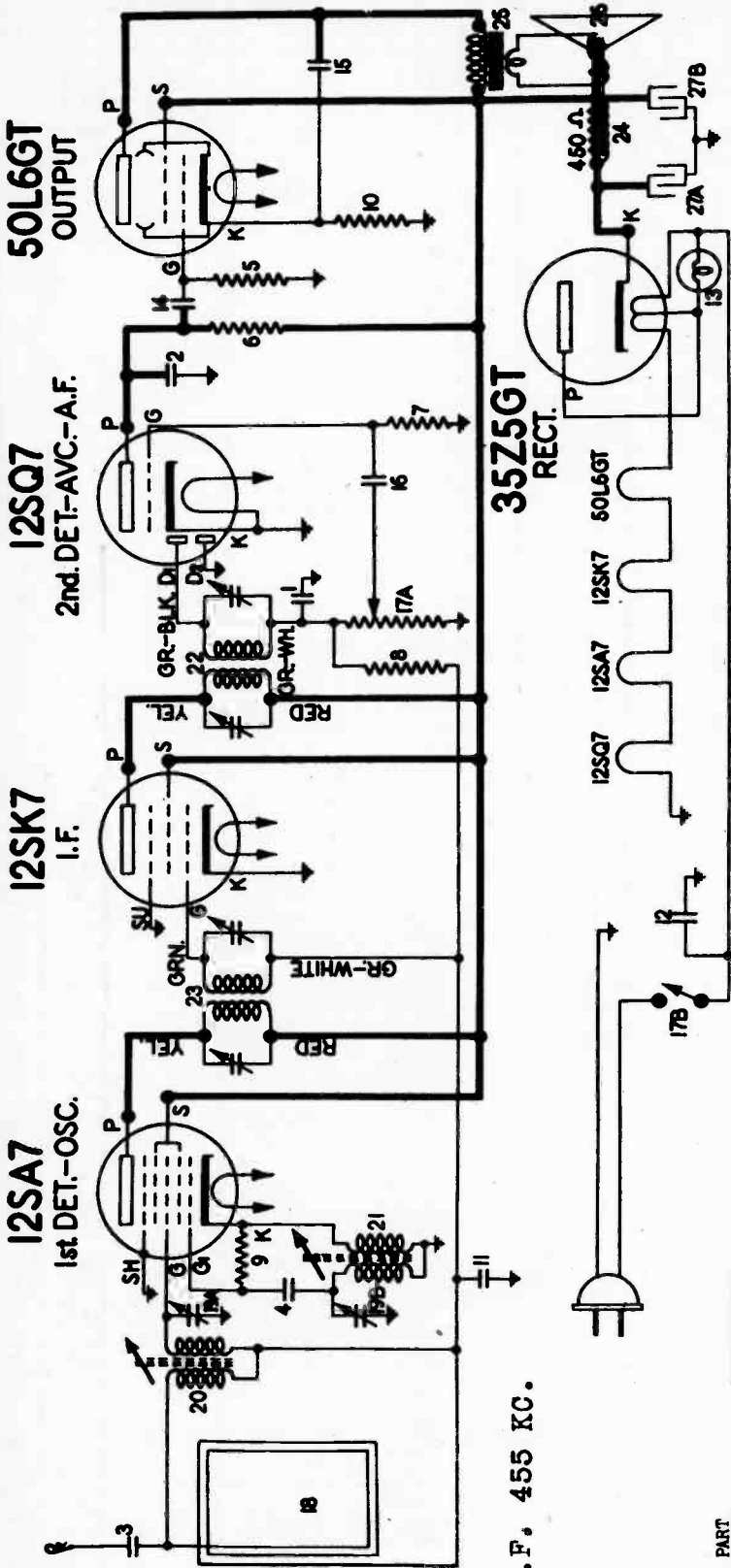


Diagram Number	Description
1-2	Condenser—mica 260 mmfd.
3	Condenser—mica 110 mmfd.
4	Condenser—mica 51 mmfd.
5	Lamp-dial (Mazda No. C7)
6	Resistor—carbon 47,000 ohms 1/4 watt
7	Resistor—carbon 150,000 ohms 1/4 watt
8-9	Resistor—carbon 470,000 ohms 1/4 watt
10	Resistor—carbon 680,000 ohms 1/4 watt
11	Resistor—carbon 100,000 ohms 1/4 watt
12	Resistor—carbon 2.2 meg. 1/4 watt
13	Resistor—carbon 10 meg. 1/4 watt
14	Speaker—dynamic (5")
15	Resistor—680 ohms 1/4 watt
16	Resistor—140 ohms 1 watt W.W.
17	Resistor—220 ohms 1 watt W.W.
18	Resistor—33 ohms 1 watt wire wound
19 to 21	Condenser—.05 mfd. 600 volt.
22	Switch—"on-off" for phono motor
23	Resistor—20 ohms 1 watt
24	Condenser—1 mfd. 600 volts
25	Transformer—2nd I.F.
26	Cone & Voice Coil for R-501204 speaker
27 to 29	Condenser—.01 mfd. 600 volt
30	Condenser—trimmer
31	Condenser—.002 mfd. 600 volt
32	Crystal cartridge
33-34	Condenser—.002 mfd. 600 volt
35A-35B	Volume control—1 meg. (with switch)
36A-36B-36C	Switch—tone & phonograph (See table for switch positions)
37	Resistor—2000 ohms 1 watt
38A-38B	Condenser—variable tuning
39	Transformer—1st I.F.
40	Transformer—output for R-501204 Speaker
41	Coil—oscillator
42A-42B-42C	Condenser—electrolytic, A—40 mfd.—200 volt; B—20 mfd.—25 volt; C—20 mfd.—200 volt
43	Phonograph motor—60 cycle (less turntable)
44	Loop antenna & back (complete)
45	Resistor—carbon 220,000 ohms 1/4 watt

(RECEIVER MODEL 205FA)

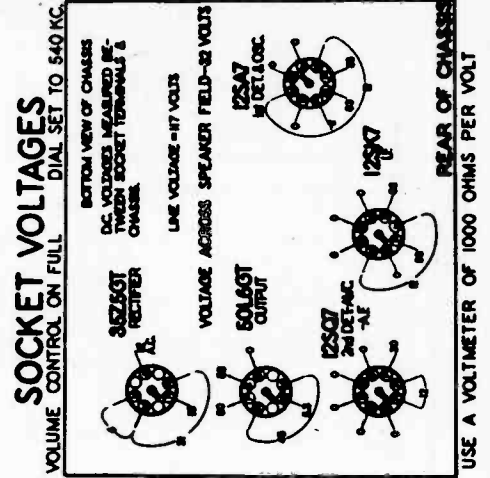
STEWART-WARNER 205F CHASSIS Use a Voltmeter of 1000 ohms per volt.



I. F. 455 KC.

STEWART-WARNER 205G CHASSIS MODELS 205GA TO 205GZ

DIAGRAM NUMBER	PART NUMBER	DESCRIPTION
1-2	83539	Condenser - mica 260 mmd.
3	86061	Condenser - mica 51 mmd.
4	88686	Condenser - mica 200 mmd.
5	112871	Resistor - insulated, 470,000 ohm $\frac{1}{2}$ watt
6	112887	Resistor - insulated, 220,000 ohm $\frac{1}{2}$ watt
7	116050	Resistor - insulated, 10 meg. $\frac{1}{2}$ watt
8	116056	Resistor - 2.2 meg. $\frac{1}{2}$ watt
9	118059	Resistor - insulated, 22,000 ohm $\frac{1}{2}$ watt
10	118092	Resistor - 140 ohm, 1 watt-wire wound
11-12	118819	Condenser - .05 mfd., 800 volt
13	118921	Lamp-Dial (Mazda #47)
14-15	119193	Condenser - .01 mfd., 600 volt
16	119875	Condenser - .002 mfd., 800 volt
17A-17B	500223	Volume Control - 1 meg. (with switch)
18	501368	Loop Antenna
19A-19B	501223	Condenser - trimmer (2 sections) (A-35 mmd.) (B-238 mmd.)
20	501157	Coil - antenna (with slug)
21	501158	Coil - oscillator (with slug)
22	501166	Transformer - 2nd I.F.
23	501233	Transformer - 1st I.F.
24	R-500916	Speaker - dynamic (4")
25	R-501163	Transformer - output for R-500916 Spkr.
26	R-501164	Cone & Voice Coil for R-500916 Spkr.
27A-27B	501213	Electrolytic Capacitor (A-40 mfd. - 150 volt) (B-20 mfd. - 150 volt)

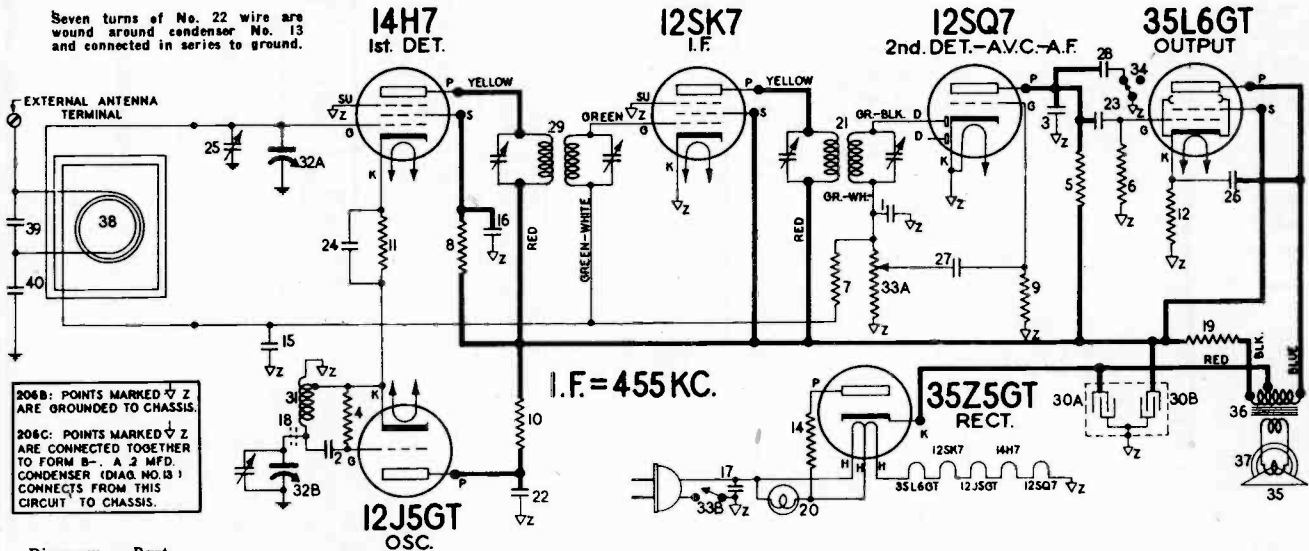


MANUAL OF 1942 MOST POPULAR SERVICE DIAGRAMS

STEWART-WARNER 206B & 206C CHASSIS

Receiver Models 206BA to 206BZ & 206CA to 206 CZ

Seven turns of No. 22 wire are wound around condenser No. 13 and connected in series to ground.



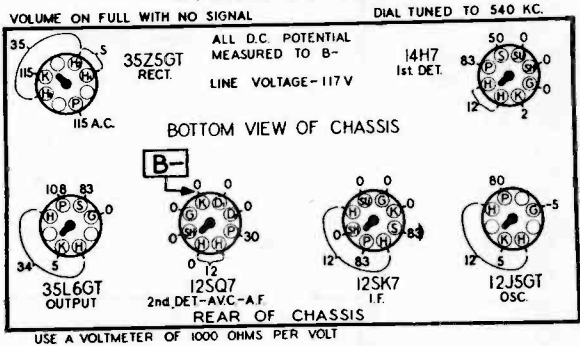
206B: POINTS MARKED Z ARE GROUNDED TO CHASSIS.
 206C: POINTS MARKED Z ARE CONNECTED TOGETHER TO FORM B- A 2 MFD. CONDENSER (DIAG. NO. 13) CONNECTS FROM THIS CIRCUIT TO CHASSIS.

Diagram Number	Part Number	Description
1	83539	Condenser—mica, 260 mmfd.
2	83783	Condenser—mica, 110 mmfd.
3	85394	Condenser—mica, 510 mmfd.
4	110552	Resistor—carbon 47,000 ohms 1/4 watt.
5	110553	Resistor—carbon 220,000 ohms 1/4 watt.
6	110559	Resistor—carbon 470,000 ohms 1/4 watt.
7	110570	Resistor—carbon 2.2 meg. 1/4 watt.
8	110578	Resistor—carbon 68,000 ohms 1/4 watt.
9	110580	Resistor—carbon 3.3 meg. 1/4 watt.
10	116068	Resistor—carbon 680 ohms 1/4 watt.
11	116079	Resistor—carbon 1200 ohms, 1/4 watt.
12	116092	Resistor—140 ohms, 1 watt W.W.
13	116706	Condenser—.2 mfd. 600 volt (206C)
14	116752	Resistor—33 ohms 1 watt W.W.
15-17	116819	Condenser—.05 mfd. 600 volt
16	119193	Condenser—.01 mfd. 600 volt
18	116819	Condenser—.05 mfd. 600 volt (206C only)
19	118824	Resistor—carbon 1,500 ohms 1/2 watt.
20	118921	Lamp—dial (Mazda No. 47)
21	119024	Transformer—2nd I.F.
22-23-24	119193	Condenser—.01 mfd. 600 volt
25	119345	Condenser—trimmer (loop)
26	119414	Condenser—.02 mfd. 600 volt
27	119817	Condenser—.004 mfd. 600 volt
28	119875	Condenser—.002 mfd. 600 volt
29	500131	Transformer—1st I.F.
30A-30B	500256	Condenser—Electrolytic { A-40 mfd. 150 volt } { B-20 mfd. 150 volt }
31	500408	Coil—oscillator
32A-32B	500443	Condenser—variable tuning with drum
33A-33B	500480	Volume Control—1 meg. (with switch)

ALIGNMENT PROCEDURE

1. Connect the output meter across the voice coil or from the plate of the 35L6GT output tube to B— through a .25 mfd. condenser.
2. Connect the ground lead from signal generator to B— through a .25 mfd. condenser for all alignment steps.
3. Set volume control in maximum position.
4. Set dial pointer to last marking on dial with gang in full mesh.
5. Connect hot lead from signal generator to stator on rear section of gang using 200 mmfd. in series as dummy.
6. Set generator to 455 KC. and adjust trimmer screws on top of I.F. transformer cans for maximum output.
7. Connect hot lead to antenna terminal on loop through a 200 mmfd. condenser as a dummy. Set dial to 1500 KC. and adjust trimmer on front section of gang for maximum output on a 1500 KC. generator signal.
8. Place chassis in cabinet and using connections in "7," place loop in position and adjust loop trimmer at rear of chassis for maximum output while tuning dial to maximum signal.

SOCKET VOLTAGES



USE A VOLTMETER OF 1000 OHMS PER VOLT

Diagram Number	Part Number	Description
34	500509	Switch—tone (206B only)
	500546	Switch—tone (206C only)
35	R-500597	Cone & Voice Coil for R-500618 speaker
36	R-500617	Transformer—output for R-500618 speaker
37	R-500618	Speaker—P.M. dynamic (5")
	500580	Loop Antenna & Cabinet Back (206BA & 206CA)
38	500581	Loop Antenna & Cabinet Back (206BB & 206CB)
	500678	Loop Antenna & Cabinet Back (206BC & 206CC)
39	83783	Condenser—mica, 110 mmfd.
40	119193	Condenser—.01 mfd. 600 volt (206B only)

MISCELLANEOUS PARTS

Part Number	Description
116467	Base for mounting Electrolytic Condenser (206C)
160026	Base for mounting Electrolytic Condenser (206B)
114955	Clamp—for dial cord
112745	Clip—coil mounting
117057	Cord—Drive, supplied in 3' lengths
500563	Dial Scale
500422	Knob—(walnut)
500428	Knob—(ivory)
500527	Pointer
81145	Retaining ring for tuning shaft
116690	Socket—octal base
160392	Socket—octal (rectifier)
160294	Socket—8 prong for 14H7
500499	Socket—pilot lamp (with leads)
161384	Spring—dial cord tension
500497	Stud—dial scale retaining
500289	Tuning Shaft

I.F. 455 KC.

STEWART-WARNER 206D & 206E CHASSIS

RECEIVER MODELS 206DA to 206DZ and 206EA to 206EZ

THIS MANUAL APPLIES ONLY TO RECEIVERS WITH P.M. SPEAKERS

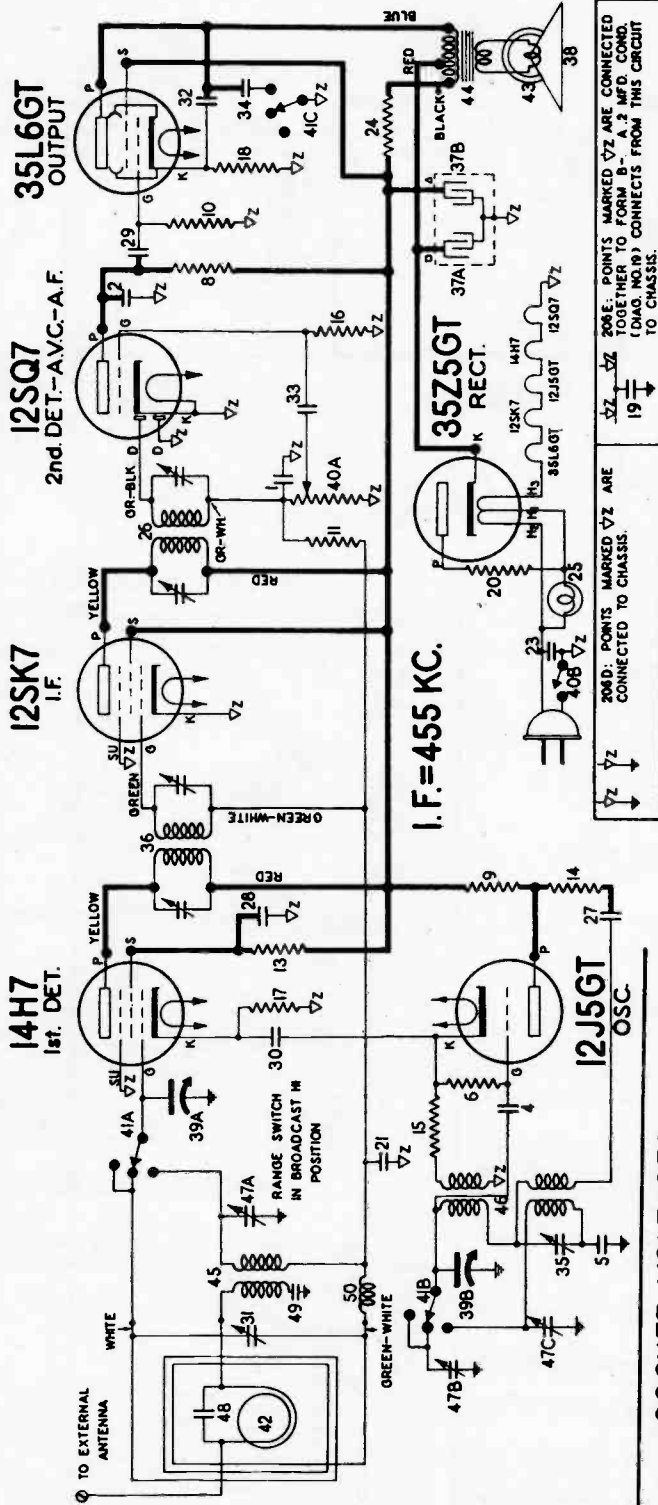
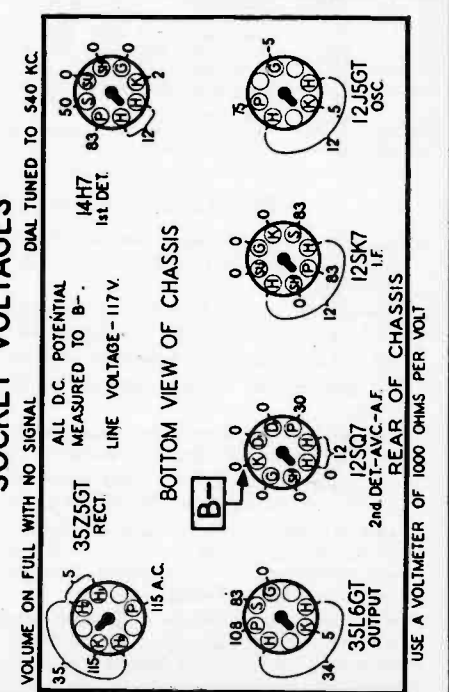


Diagram No.	Part No.	Description
1-2	83539	Condenser, Mica 260 Mmfd.
3	83783	Condenser, Mica 110 Mmfd.
4	88587	Condenser, Mica .0042 Mfd.
5	110552	Resistor, Carbon—47,000 Ohms 1/4 Watt.
6	110553	Resistor, Carbon—220,000 Ohms 1/4 Watt.
7	110554	Resistor, Carbon—470,000 Ohms 1/4 Watt.
8	110555	Resistor, Carbon—470,000 Ohms 1/4 Watt.
9	110556	Resistor, Carbon—2.2 Meg. 1/4 Watt.
10	110557	Resistor, Carbon—68,000 Ohms 1/4 Watt.
11	110558	Resistor, Carbon—180 Ohms 1/4 Watt.
12	110559	Resistor, Carbon—3.3 Meg. 1/4 Watt.
13	110560	Resistor, Insulated 1200 Ohms 1/4 Watt.
14-15	116079	Resistor, 140 Ohms 1 Watt—W.W.
16	116706	Condenser, .2 Mfd. 600 Volt (206E only)
17	116707	Resistor, 33 Ohms, 1 Watt—W.W.
18	116708	Resistor, .05 Mfd. 600 Volt
19	116819	Lamp, Dial (Marzda No. 47)
20	116820	Transformer, 2nd I.F.
21	119024	Condenser, .01 Mfd. 600 Volt.
22	119193	Condenser, Trimmer (Loop)
23	119345	Condenser, .02 Mfd. 600 Volt.
24	119414	Condenser, .004 Mfd. 600 Volt.
25	119817	Condenser, .004 Mfd. 600 Volt.
26	119817	Condenser, .004 Mfd. 600 Volt.
27	119817	Condenser, .004 Mfd. 600 Volt.
28	119817	Condenser, .004 Mfd. 600 Volt.
29	119817	Condenser, .004 Mfd. 600 Volt.
30	119817	Condenser, .004 Mfd. 600 Volt.
31	119817	Condenser, .004 Mfd. 600 Volt.
32	119817	Condenser, .004 Mfd. 600 Volt.
33	119817	Condenser, .004 Mfd. 600 Volt.
34	34	Condenser, .04 Mfd. 600 Volt.
35	35	Condenser, Padder
36	36	Transformer, 1st I.F.
37A-37B	37A-37B	Condenser, A—40 Mfd. 150 Volt Electrolytic B—20 Mfd. 150 Volt

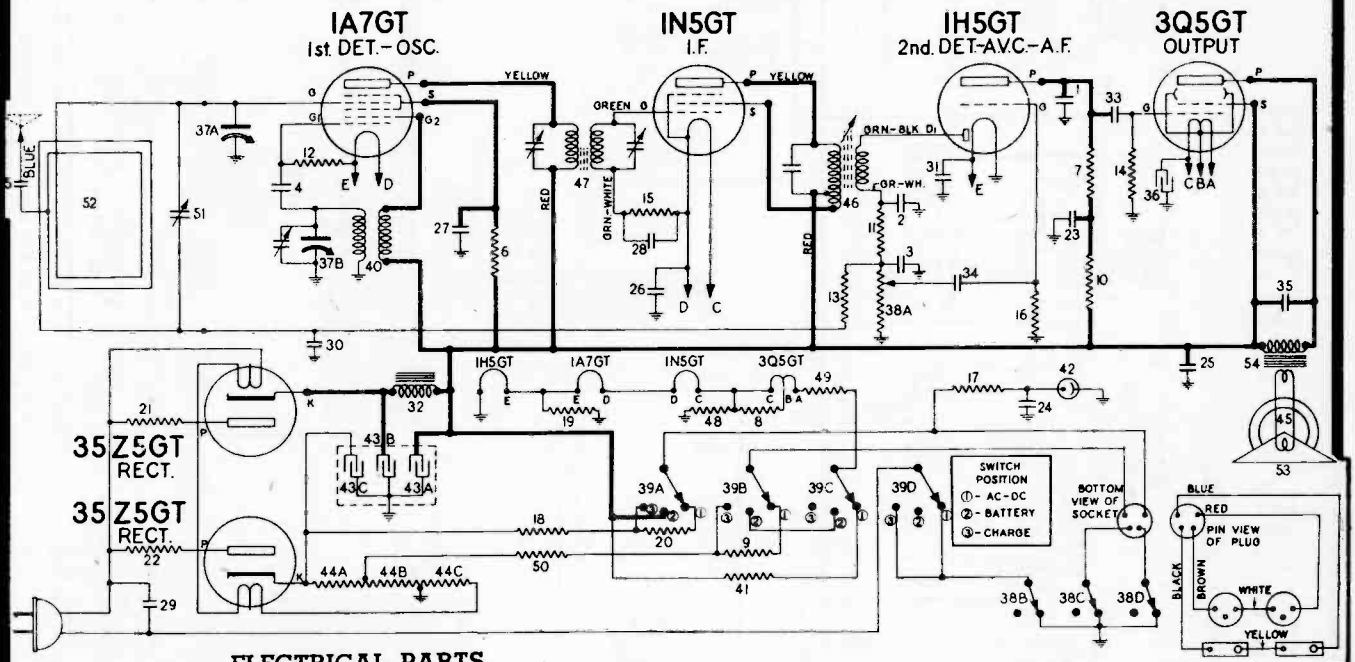


USE A VOLTMETER OF 1000 OHMS PER VOLT

MANUAL OF 1942 MOST POPULAR SERVICE DIAGRAMS

STEWART-WARNER 206G CHASSIS

RECEIVER MODELS 206GA TO 206GZ



ELECTRICAL PARTS

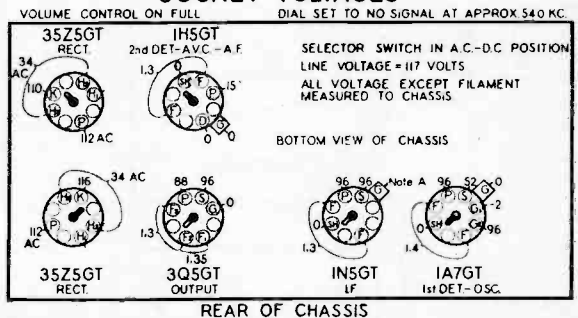
Diagram Number	Part Number	Description
1	83783	Condenser, Mica. 110 Mmfd.
2-3-4	85061	Condenser, Mica. 51 Mmfd.
5	85563	Condenser, Mica. 26 Mmfd.
6	110552	Resistor, Carbon—47,000 Ohms 1/4 Watt
7	110554	Resistor, Carbon—1 Megohm 1/4 Watt
8-9	110556	Resistor, Carbon—330 Ohm 1/4 Watt
10	110559	Resistor, Carbon—470,000 Ohms 1/4 Watt
11	110564	Resistor, Carbon—100,000 Ohms 1/4 Watt
12-13-14	110570	Resistor, Carbon—2.2 Meg. 1/4 Watt
15-16-17	110580	Resistor, Carbon—3.3 Meg. 1/4 Watt
18	110588	Resistor, Carbon—6800 Ohms 1/4 Watt
19	112974	Resistor, Carbon—220 Ohm 1/4 Watt
20	112995	Resistor, Carbon—15,000 Ohm 1/4 Watt
21-22	116013	Resistor, 50 Ohm 1 Watt
23 to 26	116625	Condenser, .1 Mfd. 600 Volts
27 to 31	116819	Condenser, .05 Mfd. 600 Volts
32	117888	Filter Choke
33	119193	Condenser, .01 Mfd. 600 Volts
34	119817	Condenser, .004 Mfd. 600 Volts
35	119875	Condenser, .002 Mfd. 600 Volts
36	161273	Condenser, Electrolytic 50 Mfd. 25 Volt
37A-37B	500443	Condenser, Variable Tuning—with drum
38A to 38D	500481	Volume Control, 1 Meg. (with switch)
39A to 39D	500507	Switch, AC-DC & Battery
40	500689	Coil, Oscillator
41	500712	Resistor, 1830 Ohms 5 Watt, Wire Wound
42	500713	Neon Glow Lamp
43A to 43C	500714	Condenser, Electrolytic— A—20 Mfd. 200 Volt B—20 Mfd. 200 Volt C—20 Mfd. 150 Volt
44A to 44C	500715	Resistor, Load— A—1460 Ohms 10 Watt B—155 Ohms 1 Watt C—310 Ohms 10 Watt

This receiver is equipped with a neon lamp on the dial scale which indicates the condition of the batteries. The neon lamp is included in an oscillating (R-C) circuit which has been designed to oscillate at approximately 3 pulses per second when the batteries are in a fully charged condition. As the battery voltage decreases with use the number of pulses per second decreases.

When the battery voltage is low (approximately 72 volts) the light flickers more slowly (approximately 1 a second). The set should not be operated from battery power after this point is reached. The batteries should be charged for at least twice the time they were used—as soon as possible after they have been run down.

COMPILED BY M. N. BEITMAN, SUPREME PUBLICATIONS

SOCKET VOLTAGES



REAR OF CHASSIS

NOTE A: Voltage on the grid of the IN5GT intermediate amplifier tube cannot be measured with a standard voltmeter because of the high resistance of resistor No. 15.

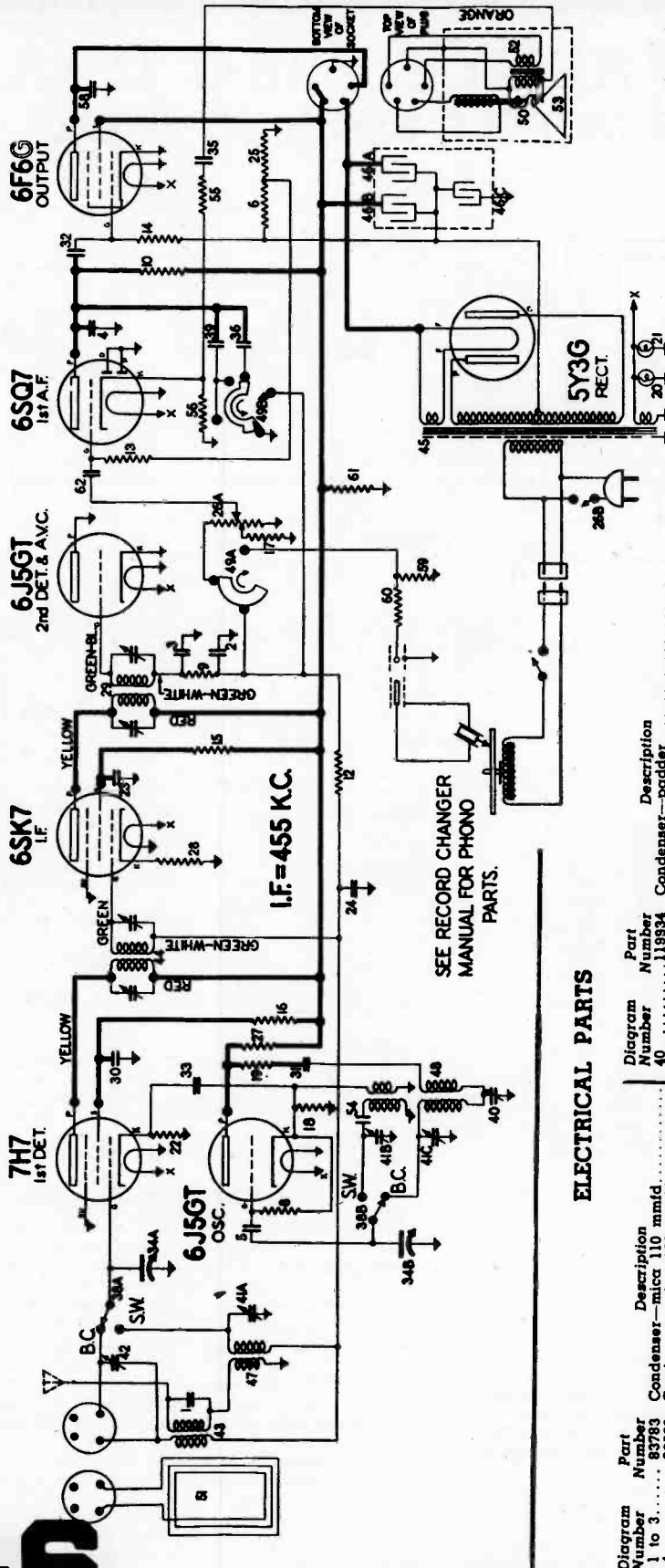
Use A Voltmeter of 1000 Ohms Per Volt.

CHARGING BATTERIES

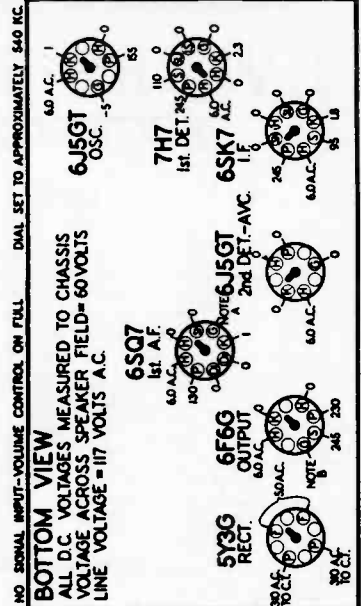
A separate charging system consisting of a 35Z5GT rectifier and a suitable resistor voltage dividing network and filter is incorporated in this receiver. The circuit is arranged to provide a very light charging current when the receiver is operated from either AC or DC. This is just enough to maintain the batteries but will not charge up used batteries. A separate charging position is provided for rapid recharging of the batteries. The resistance voltage divider is designed to give a charging rate of approximately one third the discharge rate, this having been found to give best results. It is recommended that the batteries be left on charge at least twice the time they were used. As the batteries age it is necessary to charge for a longer period.

STEWART-WARNER 207D CHASSIS (RECEIVER MODEL 207DK)

MANUAL OF 1942 MOST POPULAR SERVICE DIAGRAMS



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MANUAL FOR PHONO
PARTS.



NOTE A: Voltage on the grid of the 6SQ7 1st A.F. is -1 volt measured across resistor No. 25.
NOTE B: Voltage on the grid of the 6F6G Output Tube is -8 volts measured across resistors No. 25 and 6.

Diagram Number	Part Number	Description
40	119934	Condenser—padder
41A to 41C	160415	Condenser—trimmer, 3 section
42	160449	Condenser—trimmer (Loop)
43	500255	Coil—B.C. antenna loading
44	500801	Transformer—1st I.F.
45	501044	Transformer—power, 60 cycle
46A to 46C	501060	Condenser—Electrolytic— A—20 Mfd. 400 V. B—15 Mfd. 25 V. C—20 Mfd. 25 V.
47	501159	Coil—short wave antenna
48	501160	Coil—oscillator (B.C. & S.W.)
49A-49B	501180	Switch—tone
50	M.501225	Speaker—Dynamic (12")
51	501226	Loop Antenna Complete
52	M.501280	Transformer—output for M.501225 Spkr.
53	M.501281	Cone & Voice Coil for M.501225 Spkr.
54	88587	Condenser—mica .0042 mfd.
55	118816	Resistor—680 ohms 1/4 watt
56	116078	Resistor—560 ohms 1/4 watt
57	119875	Resistor—330,000 ohms 1/4 watt
58	110584	Resistor—330,000 ohms 1/4 watt
59	112962	Resistor—150,000 ohms—1/4 watt
60	116076	Resistor—33,000 ohms—1/4 watt
61	119193	Condenser—.01 mfd. 600 volt
62	501386	Crystal Cartridge

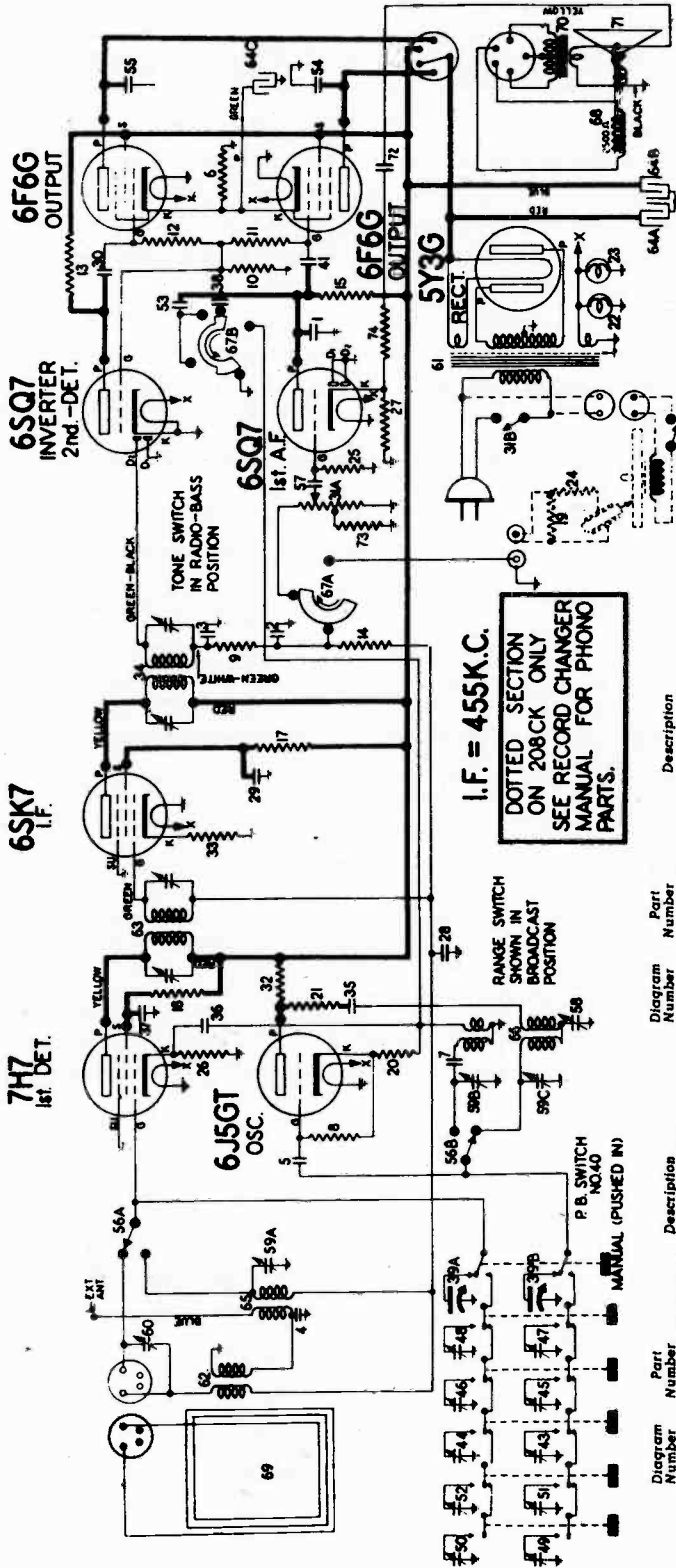
ELECTRICAL PARTS

Diagram Number	Part Number	Description
1 to 3	83783	Condenser—mica 110 mmfd.
4	85098	Condenser—mica 280 mmfd.
5	85081	Condenser—mica 51 mmfd.
6	89762	Resistor—220 ohms, wire wound, 1 watt
8,9	110532	Resistor—carbon 47,000 ohms 1/4 watt
10,11	110533	Resistor—carbon 210,000 ohms 1/4 watt
12,13	110534	Resistor—carbon 1 megohm 1/4 watt
14	110535	Resistor—carbon 470,000 ohms 1/4 watt
15,16	110536	Resistor—carbon 100,000 ohms 1/4 watt
17	110569	Resistor—carbon 10,000 ohms 1/4 watt
18,19	110590	Resistor—carbon 180 ohms 1/4 watt
20-21	110678	Resistor—560 ohms 1/4 watt
22	116819	Resistor—.05 mfd. 600 volt
23-24	117385	Resistor—20 ohm 1 watt
25	118869	Volume Control—1 meg. (with switch)
26A-26B	118865	Resistor—carbon 10,000 ohm 1 watt
27	118827	Resistor—carbon 270 ohm 1/4 watt
28	119024	Transformer, 2nd I.F.
29	119193	Condenser—.01 mfd. 600 volt
30 to 33	119291	Condenser—variable tuning
34A-34B	116625	Condenser—1 mf 500 volt
35	119416	Condenser—.008 mfd. 600 volt
36	160430	Condenser—.001 mfd. 600 volt
37	119859	Switch—band
38A-38B	119875	Condenser—.002 mfd. 600 volt

STEWART-WARNER 208B & 208C CHASSIS

(RECEIVER MODELS
208BK AND 208CK)

MANUAL OF 1942 MOST POPULAR SERVICE DIAGRAMS



I.F. = 455K.C.
 DOTTED SECTION
 ON 208CK ONLY
 SEE RECORD CHANGER
 MANUAL FOR PHONO
 PARTS.

SOCKET VOLTAGES

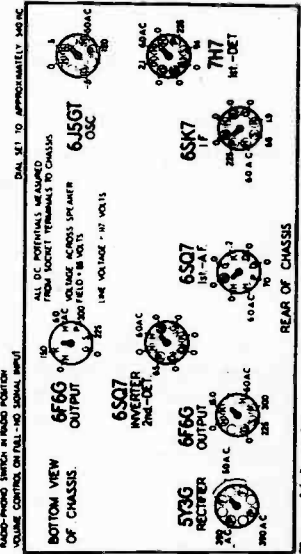


Diagram Number	Part Number	Description
1 to 4	83783	Condenser mica 110 mmfd.
5	83081	Condenser mica 3000 ohms 1/2 watt
6	84462	Resistor wire wound 270 ohms 1/2 watt
7	85387	Condenser mica .0042 mid.
8-9	110552	Resistor carbon 47,000 ohms 1/2 watt
10 to 13	110553	Resistor carbon 220,000 ohms 1/2 watt
14	110554	Resistor carbon 470,000 ohms 1/2 watt
15	110555	Resistor carbon 100,000 ohms 1/2 watt
17-18	110556	Resistor carbon 22,000 ohms 1/2 watt
19	110557	Resistor carbon 680,000 ohms 1/2 watt
20-21	110590	Resistor carbon 180 ohms 1/2 watt
22-23	110625	Dial Light Bulb 6.3 volt (Mazda No. 44)
24	110591	Resistor carbon 10,000 ohms 1/2 watt
25	110592	Resistor carbon 560 ohms 1/2 watt
26-27	110578	Resistor .560 ohms 1/2 watt
28 to 30	116625	Condenser .05 mid. 600 volt
31A-31B	116619	Volume Control 1 meg. (with switch)
32	118605	Resistor carbon 10,000 ohm 1 watt
33	118277	Resistor carbon 270 ohms 1/2 watt
34 to 38	119153	Condenser .01 mid. 600 volt
39A-39B	119231	Condenser variable tuning
40	119246	Switch push button
41	119414	Condenser .02 mid. 600 volt
43 to 46	119663	Condenser - push button trimmer (Med. Freq.)
47-48	119664	Condenser push button trimmer (High Freq.)
49 to 52	119753	Condenser push button trimmer (Low Freq.)
53 to 55	119817	Condenser .004 mid. 600 volt
56A-56B	119819	Condenser .002 mid. 600 volt
57	119824	Condenser .002 mid. 600 volt
58	119825	Condenser .002 mid. 600 volt
59A to 59C	160415	Condenser trimmer: 3 section
60	160449	Condenser trimmer: for loop
61	500116	Transformer power (80 cycles)
62	500255	Coil B. C. antenna
63	500355	Transformer electrolytic
64A to 64C	501060	Coil .20 mid. 400 volt
65	501159	Coil .15 mid. 400 volt
66	501180	Coil .20 mid. 400 volt
67A-67B	501180	Coil-oscillator (B.C. & S.W.)
68	M-501283	Switch-tone
69	M-501283	Loop Antenna
70	M-501304	Transformer output for M-501245 Spkr.
71	M-501305	Cone & Voice Coil for M-501245 Spkr.
72	116625	Condenser .02 mid. 600 volt
73	110585	Resistor carbon 22,000 ohms 1/2 watt
74	110588	Resistor carbon 10,000 ohms 1/2 watt

MANUAL OF 1942 MOST POPULAR SERVICE DIAGRAMS

SERVICE DATA for 208B & 208C CHASSIS

ALIGNMENT EQUIPMENT & PROCEDURE

1. Connect the output meter across the voice coil or from the plate of one 6F6G output tube to chassis through a .1 mfd. condenser.
2. Connect the ground lead of the signal generator to the receiver chassis.
3. Check the pointer to see that it is correctly set to the low freq. end of the dial scale with gang in full mesh.
4. Push in the "manual" button and keep it pushed in.
5. Turn the volume control to the maximum volume position, and the tone control to the "Radio-Speech" position.
6. FOLLOW THE ORDER OF ALIGNMENT INDICATED BELOW.

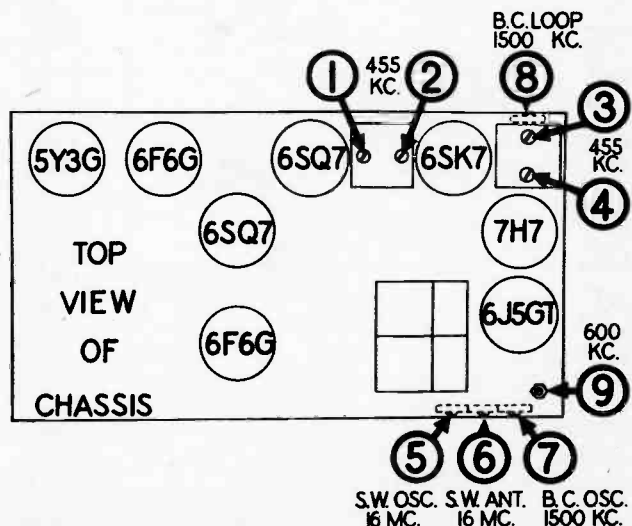
Dummy Ant. in Series with Sig. Gen.	Connection of Sig. Generator Output to Receiver	Signal Generator Frequency	Band Switch Position	Receiver Dial Setting	Trimmer Number	Trimmer Description	Type of Adjustment
.1 MFD Condenser	Lug on Rear Section of Gang Cond.	455 KC	Broadcast	Any Point Where It Does Not Affect the Signal	1-2	2nd I.F.	Adjust for Maximum Output. Then repeat Adjustment.
					3-4	1st I.F.	
400 OHM Carbon Resistor	Blue Lead from Chassis	16 MC	Foreign	16 MC	5	Foreign Oscillator	Adjust for Maximum Output. Check to see if Proper Peak was Obtained by Tuning in Image at Approx. 15.1 MC. If Image does not appear, Realign at 16 MC, with Trimmer Screw farther out. Recheck Image.
400 OHM Carbon Resistor	Blue Lead from Chassis	16 MC	Foreign	Tune to 16 MC Generator Signal	6	Foreign Antenna	Adjust for Maximum Output. Try to Increase Output by Detuning Trimmer and Retuning Receiver Dial until Maximum Output is Obtained.
No Connection	Place Lead from Signal Gen. Near Loop	1500 KC	Broadcast	1500 KC	7	Broadcast Oscillator (Shunt)	Adjust for Maximum Output.

NOW PLACE THE CHASSIS AND LOOP ANTENNA INTO POSITION IN THE CABINET.

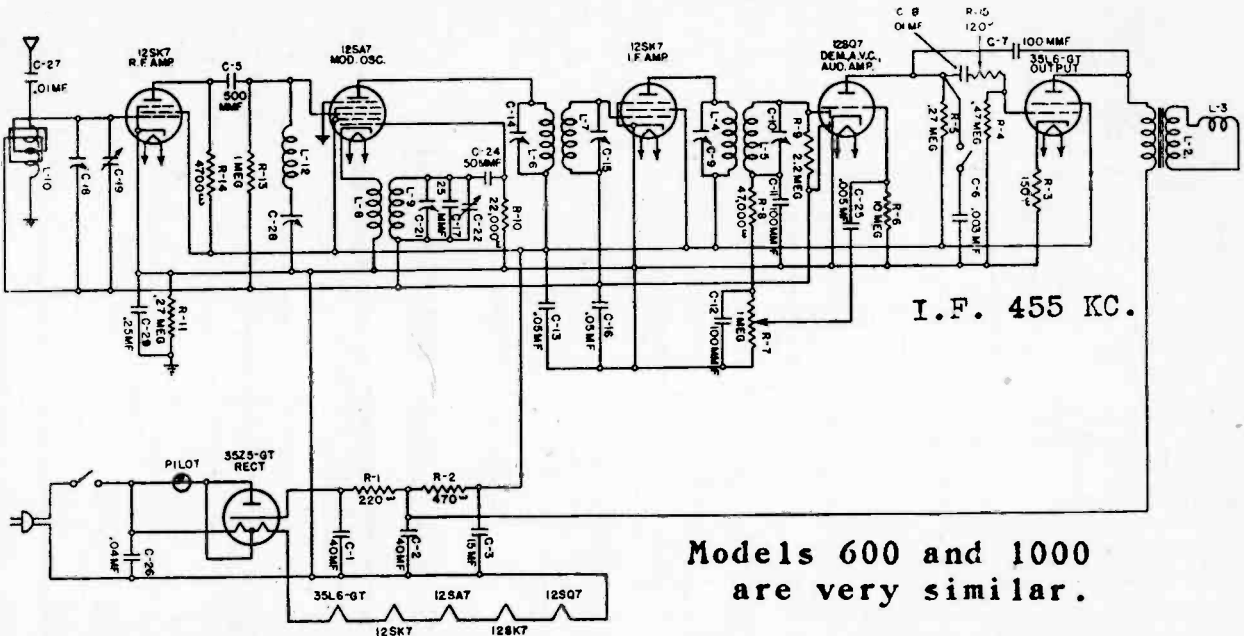
No Connection	Place Lead from Signal Gen. Near Loop	1500 KC	Broadcast	Tune to 1500 KC Generator Signal	8	Broadcast Antenna	Adjust for Maximum Output.
No Connection	Place Lead from Signal Gen. Near Loop	600 KC	Broadcast	Tune to 600 KC Generator Signal	9	Broadcast Oscillator (Series)	Adjust for Maximum Output. Try to Increase Output by Detuning Trimmer and Retuning Receiver Dial until Maximum Output is Obtained.

MISCELLANEOUS PARTS

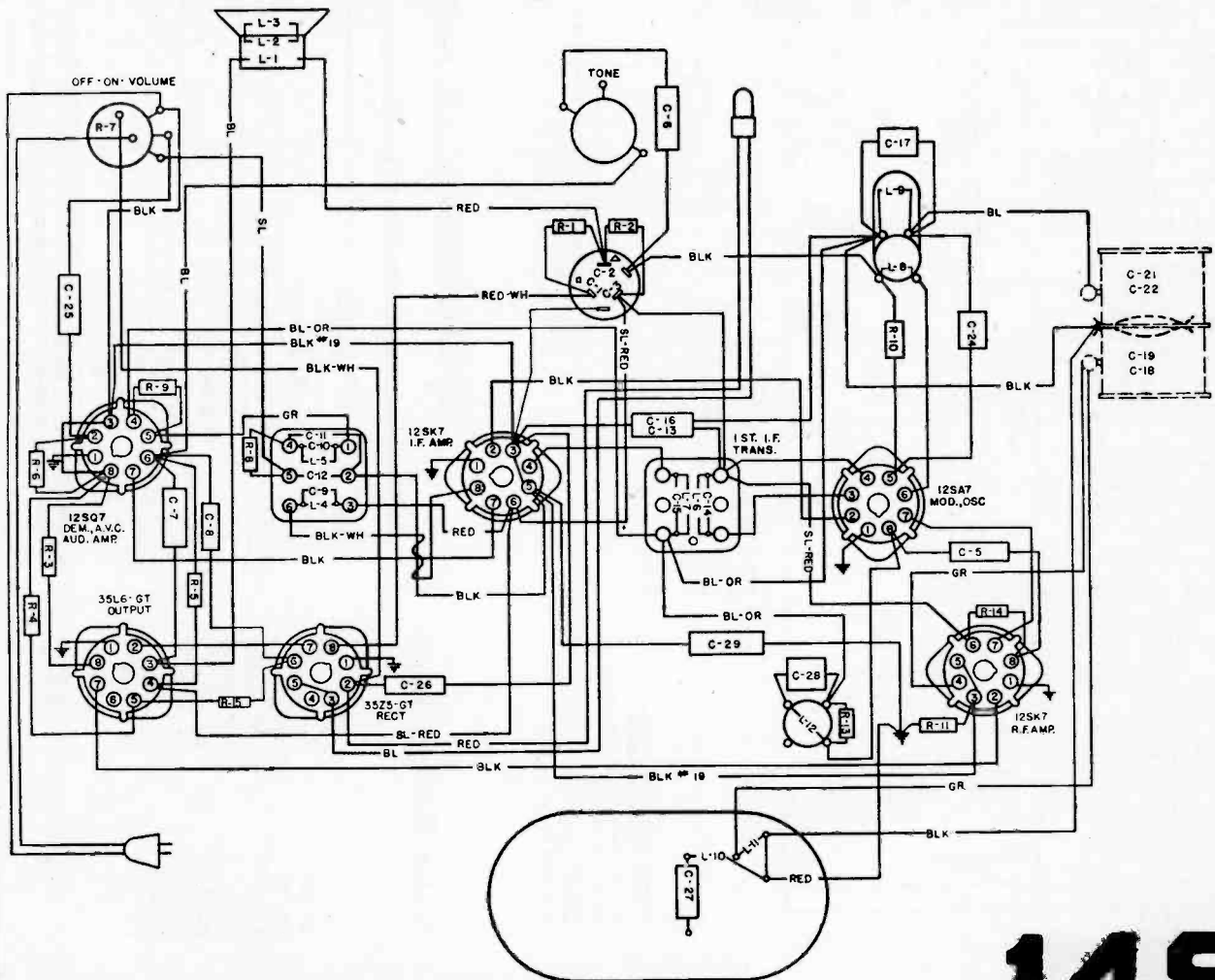
Part Number	Description
501182	Cable--motor (with receptacle).....
117493	Cable--pickup.....
114355	Clamp--for dial cord.....
112745	Clip--coil mounting.....
117057	Cord--drive (specify 6 ft. lengths).....
501199	Dial Scale.....
113402	Drum--dial cord drive.....
160182	Escutcheon--dial with glass.....
160634	Escutcheon--push button (complete).....
88348	Eyelet--for pointer cord.....
160219	Knob.....
12349	Nut--8-32 for mounting.....
116952	Pin for push buttons.....
119451	Pointer.....
160185	Push button.....
81145	Retaining ring for tuning shaft.....
113463	Rubber Bushing--chassis mounting.....
118606	Shaft--tuning.....
112874	Screw--No. 10 x 1 1/2 chassis mounting.....
114314	Screw--special head for mounting escutcheon.....
85827	Set Screw--8-32 Sq. Hd. for drive drum.....
119791	Socket--octal.....
114978	Socket--octal, with special ground.....
114876	Socket--octal (rectifier).....
160294	Socket for 7H7 8 prong.....
500051	Socket for loop antenna.....



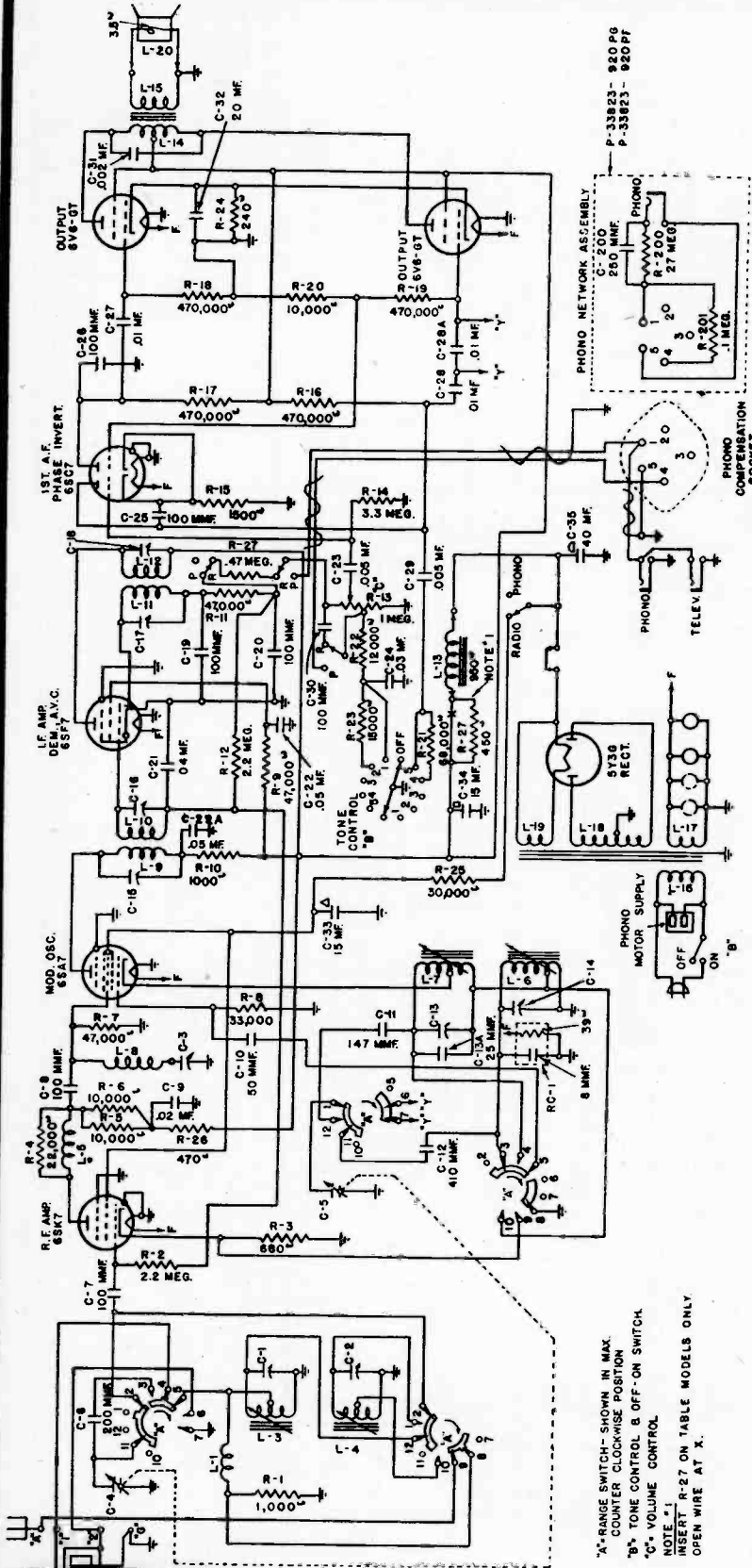
MANUAL OF 1942 MOST POPULAR SERVICE DIAGRAMS



STROMBERG-CARLSON NO. 900 AC-DC RADIO RECEIVERS



MANUAL OF 1942 MOST POPULAR SERVICE DIAGRAMS



"A"-RANGE SWITCH - SHOWN IN MAX. COUNTER CLOCKWISE POSITION
 "B"-TONE CONTROL & OFF-ON SWITCH
 "C"-VOLUME CONTROL
 NOTE: "1" INSERT R-27 ON TABLE MODELS ONLY OPEN WIRE AT X.

STROMBERG-CARLSON NO. 920 RADIO RECEIVERS

TERMINALS OF SOCKETS

Tube	Circuit	1	2	3	4	5	6	7	8
6SK7	R. F. Amp.	0	6.3	0	0	0	+85	0	+178
6SA7	Osc. and Mod.	0	0	+240	+85	0	0	0	6.3
6SF7	I. F. Amp. Demod. and A. V. C.	0	0	0	+95	0	+240	0	6.3
6SC7	Audio Amp. and Inverter	0	+65	0	0	+65	4*	0	6.3
6V6GT	Output	0	0	+235	+240	0	0	0	6.3
6V6GT	Output	0	6.3	+235	+240	0	0	0	13*
6Y3G	Rectifier	0	+380	—	380	—	380	—	+380

*Read on lowest possible scale of voltmeter

Also Model 1020

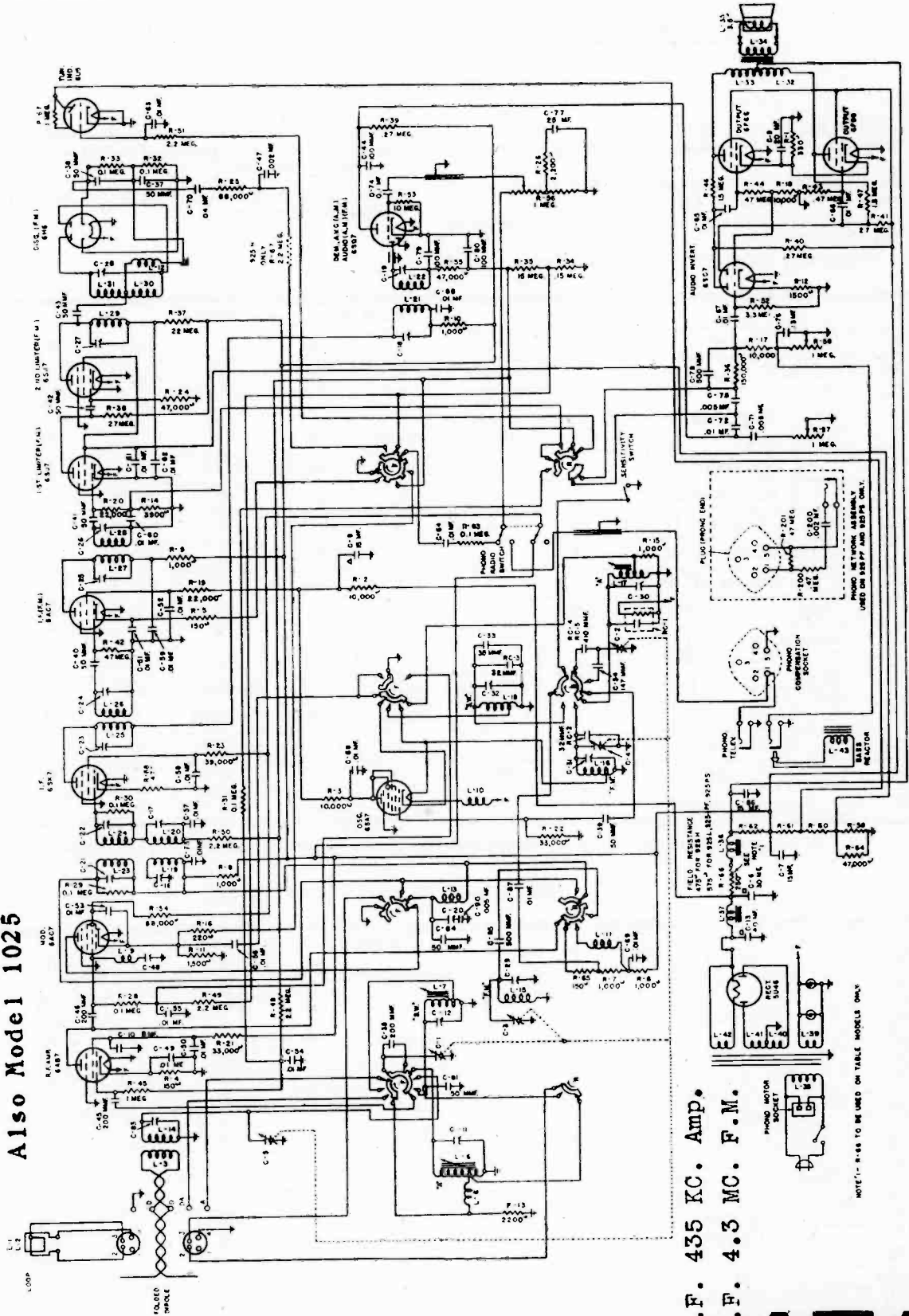
Input Power Frequency
 920-H 50-60 Cycles
 920-HB 25-60 Cycles
 920-L 50-60 Cycles
 920-LB 25-60 Cycles
 920-PF 60 Cycle
 920-PFB 25 Cycle
 920-PG 60 Cycle
 920-PGB 25 Cycle

I. F. 455 KC.

MANUAL OF 1942 MOST POPULAR SERVICE DIAGRAMS

STROMBERG-CARLSON NO. 925 RADIO RECEIVERS STROMBERG-CARLSON TELEPHONE MANUFACTURING COMPANY ROCHESTER, NEW YORK

Also Model 1025



I. F. 435 KC. Amp.

I. F. 4.3 MC. F. M.

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MANUAL OF 1942 MOST POPULAR SERVICE DIAGRAMS

Stromberg-Carlson Models 925 and 1025

CONTINUITY TEST

NOTE: These receivers use either a 6AC7 or 7V7 tube in the modulator stage. (See wiring diagram)

Remove all tubes and disconnect all plugs from the chassis before checking continuity.

Use a good meter capable of measuring accurately up to several megohms.

The resistances given are often approximate, owing

to electrolytic capacitors in the circuit. When this is the case, be sure to reverse the test leads and read the highest resistance.

Read from indicated terminals to chassis base unless otherwise specified.

Tube	Circuit	TERMINALS OF SOCKETS							
		1	2	3	4	5	6	7	8
6AB7	R. F. Amplifier	S	S	S	A	150 Ω	50000 Ω	S	21000 Ω
6AC7 or 7V7	Modulator	S	S	S	B	C	80000 Ω	S	18000 Ω
6SA7	Oscillator	S	18000 Ω	80000 Ω	S	S	S	C	S
6SK7	I. F. Amplifier	S	S	S	2M	S	70000 Ω	S	18000 Ω
6AC7	2nd I. F. Amplifier (F. M.)	S	S	S	450000 Ω	D	45000 Ω	S	18000 Ω
6SJ7	1st Limiter (F. M.)	S	S	S	22000 Ω	S	3500 Ω	S	280000
6SJ7	2nd Limiter (F. M.)	S	S	S	40000 Ω	S	4000 Ω	S	240000
6H6	Discriminator (F. M.)	S	S	100000	S	100000 Ω	100000 Ω	S	180000
6SQ7	Demod., A. V. C. (A. M.), Audio Amplifier	S	10M	S	E	S	250000	S	S
6SC7	Audio Amp. and Inverter	S	220000	9000 Ω	3M	200000 Ω	1200 Ω	S	S
6F6G	Output	S	S	17000 Ω	17000 Ω	400000 Ω	O	S	290 Ω
6F6G	Output	S	S	17000 Ω	170000 Ω	400000 Ω	O	S	290 Ω
5U4G	Rectifier	O	20000 Ω	O	50 Ω	O	60 Ω	O	20000 Ω
6U5	Tuning Indicator	S	1M	2M	14000 Ω	S	S	—	—

Symbols shown on chart are as follows: Ω —ohms; M—megohms; S—short; O—open.

NORMAL VOLTAGE READINGS

Tube	Circuit	TERMINALS OF SOCKETS							
		1	2	3	4	5	6	7	8
6AB7	R. F. Amplifier	0	0	0	0	+2.4	+182	6.3	+275
6AC7 or 7V7	Modulator	0	0	0	0	+6	+218	6.3	+300
6SA7	Oscillator	0	+300	+218	0	0	0	+6	6.3
6SK7	I. F. Amplifier	0	0	+120	+120	-5	0	6.3	+120
6AC7	2nd I. F. Amplifier (F. M.)	0	0	0	0	0	+110	6.3	+290
6SJ7	1st Limiter (F. M.)	0	0	0	0	+8	+265	6.3	+300
6SJ7	2nd Limiter (F. M.)	0	0	0	0	0	+54	6.3	+2
6H6	Discriminator (F. M.)	0	0	0	0	0	+54	6.3	+3
6SQ7	Demod., A. V. C. (A. M.), Audio Amplifier	0	0	0	0	0	0	6.3	0
6SC7	Audio Amp. and Inverter	0	0	0	0	0	+100*	0	6.3
6F6G	Output	0	+140*	0	0	+130*	+2	6.3	0
6F6G	Output	0	0	+340	+300	0	0	6.3	+22
5U4G	Rectifier	0	0	+340	+300	0	0	6.3	+22
6U5	Tuning Indicator	6.3	+450	0	415	0	415	0	+450
			+80	0	+250	0	0	—	—

*Read on 1000 volt scale of voltmeter.

Between terminals 2 and 8 of rectifier socket—5 volts A. C.

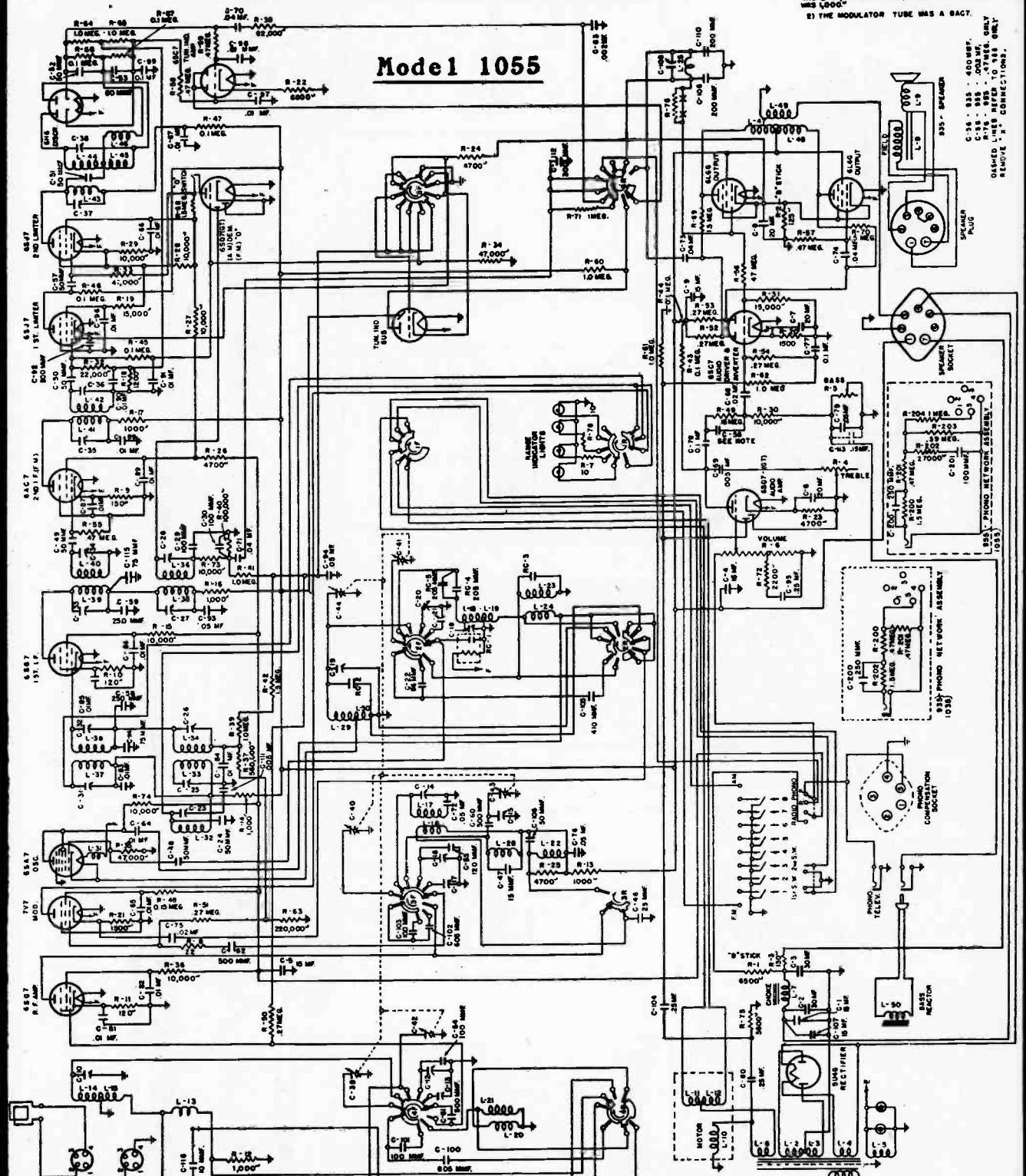
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MANUAL OF 1942 MOST POPULAR SERVICE DIAGRAMS

STROMBERG-CARLSON NO. 955 RADIO

1- ALTERNATIVE CIRCUITS WITH OTHER TYPES OF TUBES INVOLVES THE FOLLOWING DIFFERENCES:
 13 R.F. & 1 ST. LF. AMPLIFIER TUBES WERE 6AB7'S WITH SUPPRESSORS CONNECTED TO GROUND. R-11 HAS 570 Ω , R-28 WAS 60,000 Ω , R-10 WAS 220 Ω & R-15 WAS 1,000 Ω .
 2) THE MODULATOR TUBE WAS A 6AC7.

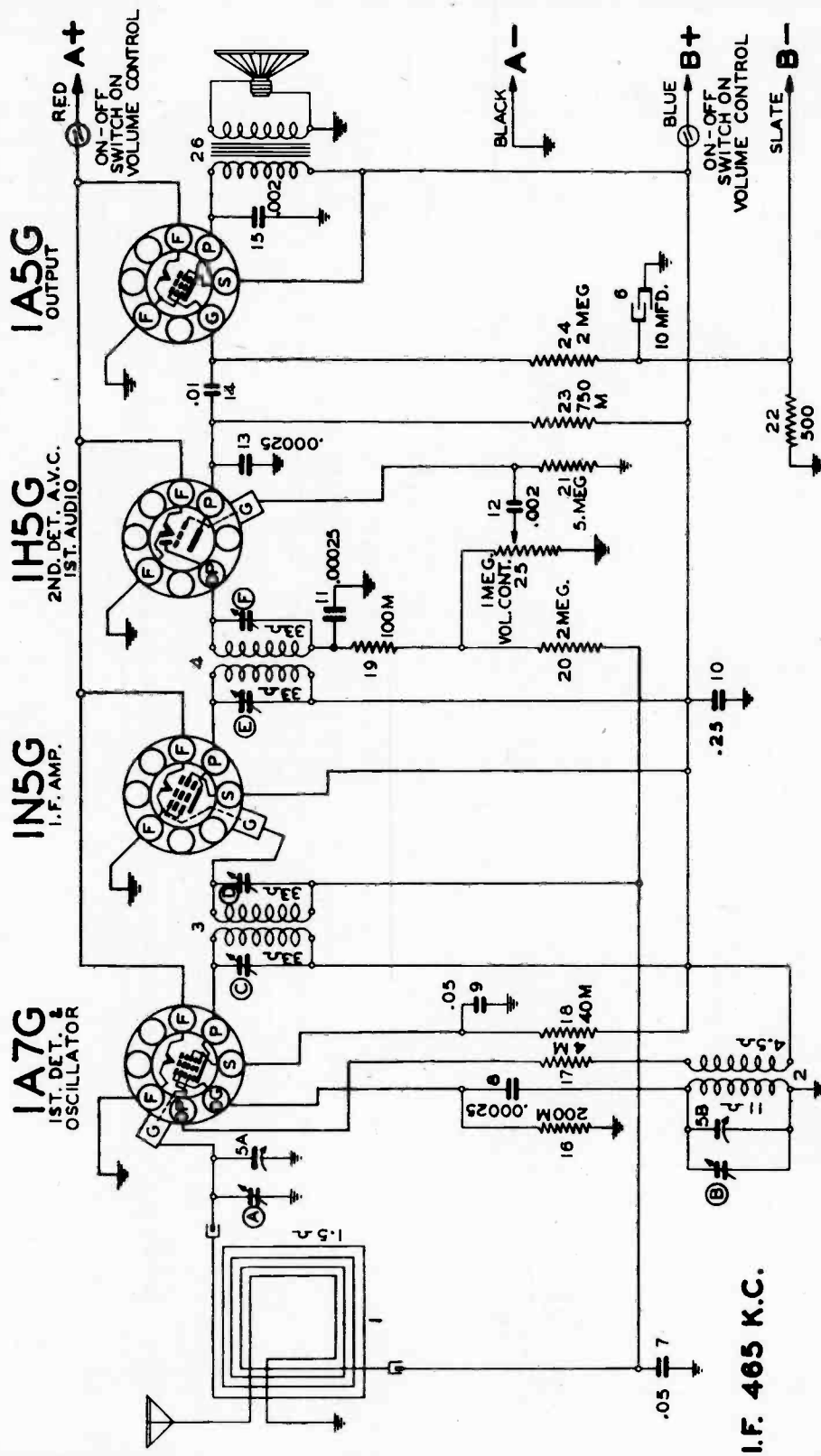
Model 1055



AM I.F. 455 KC.
 FM I.F. 4.3 MC.

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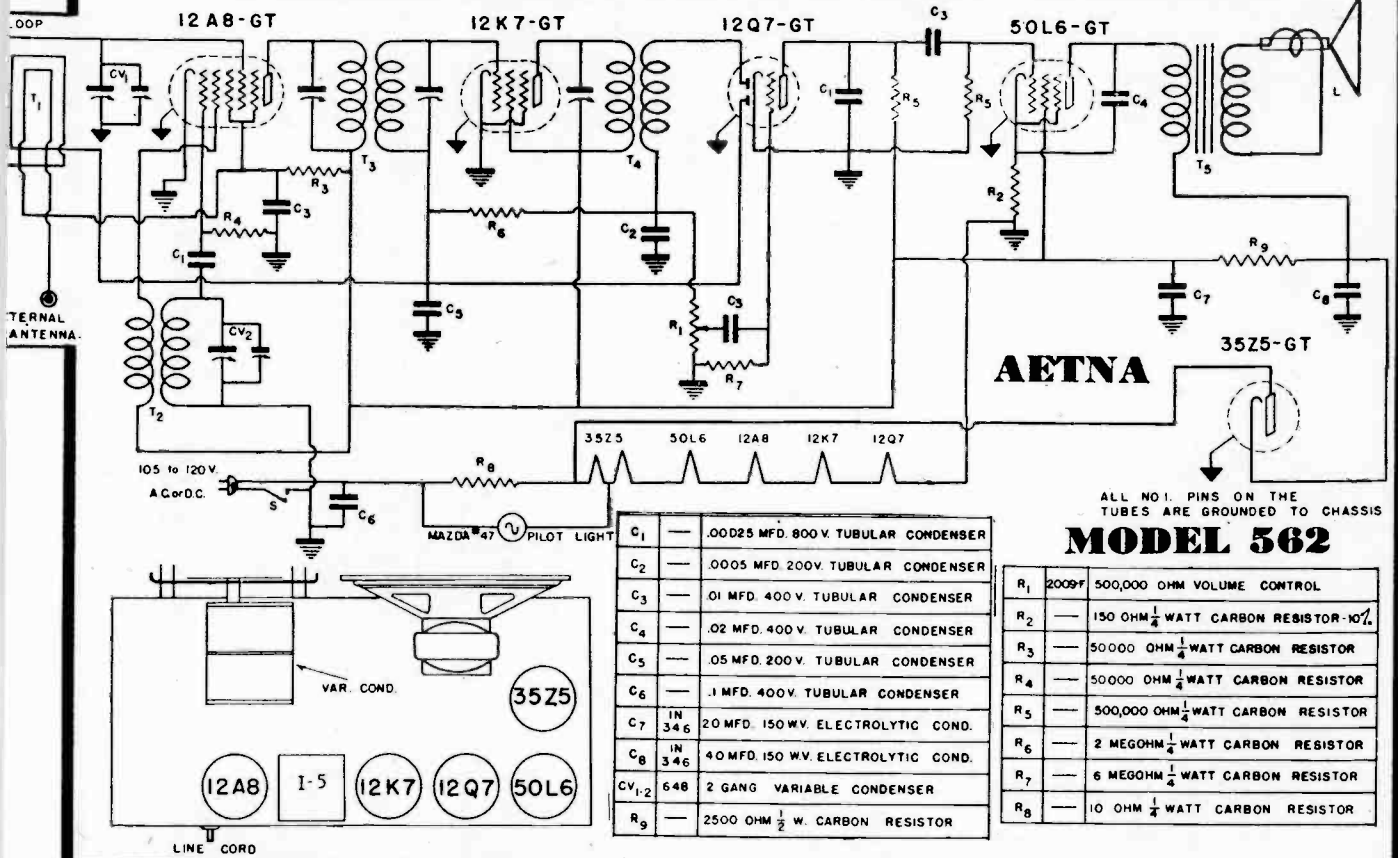
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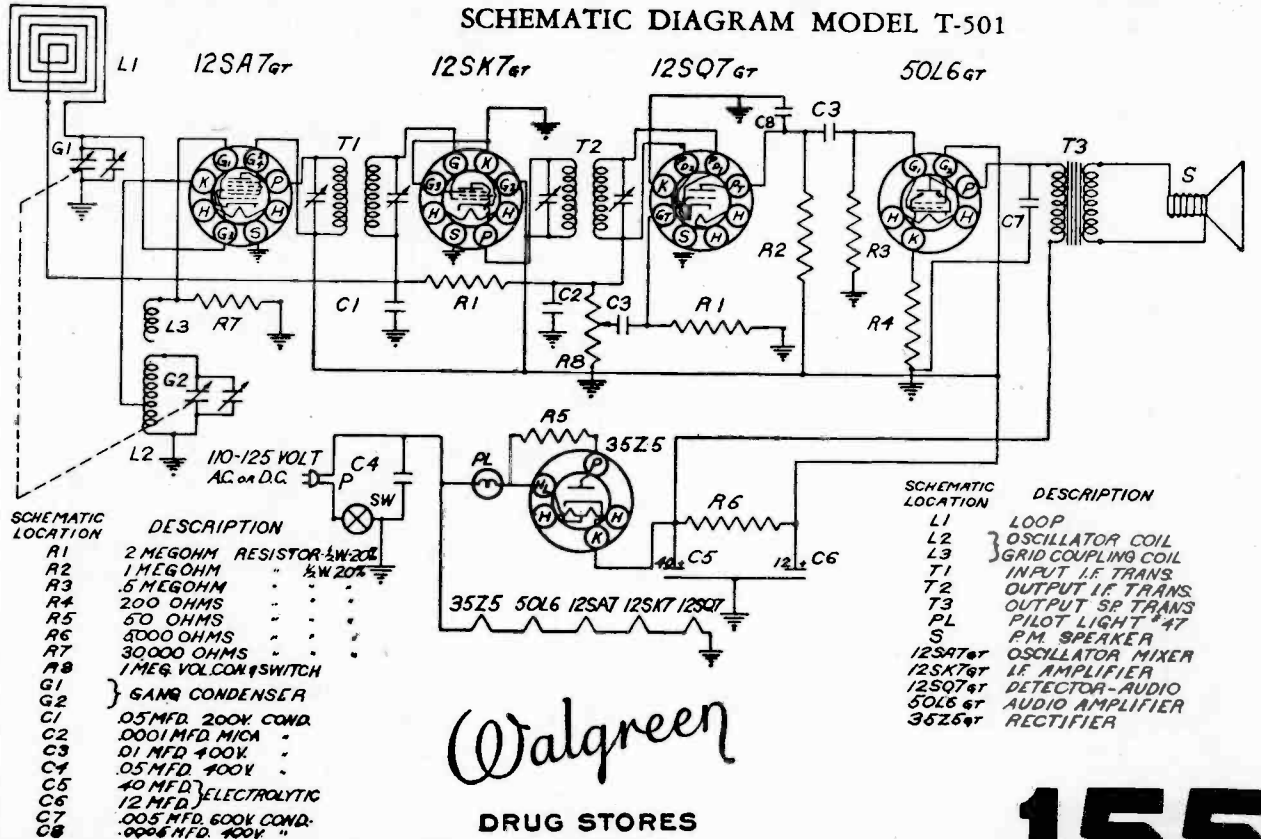
DELCO MODELS R-1401 AND R-1402 CIRCUIT DIAGRAM

UNITED MOTORS SERVICE
INCORPORATED

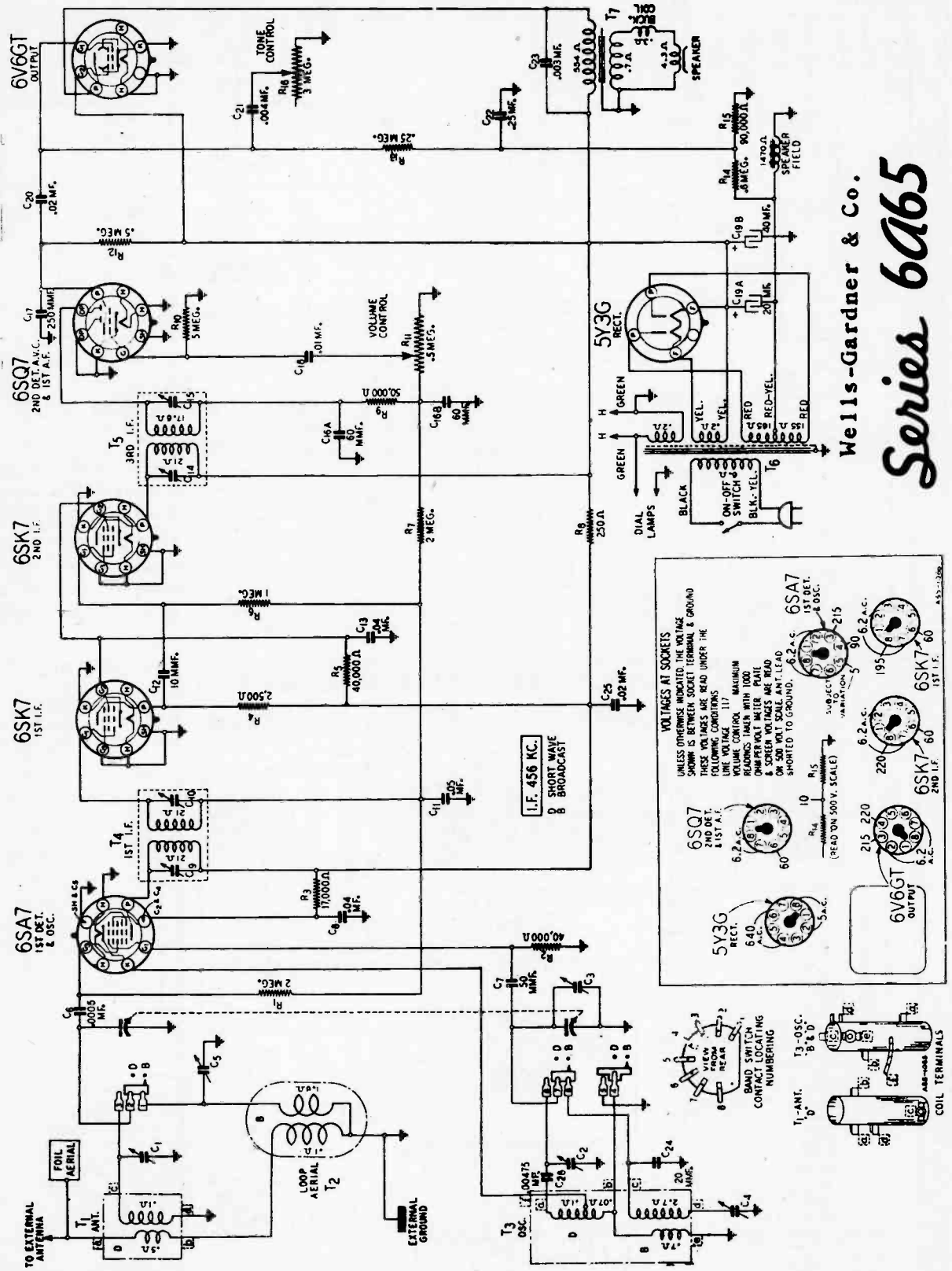
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SCHEMATIC DIAGRAM MODEL T-501

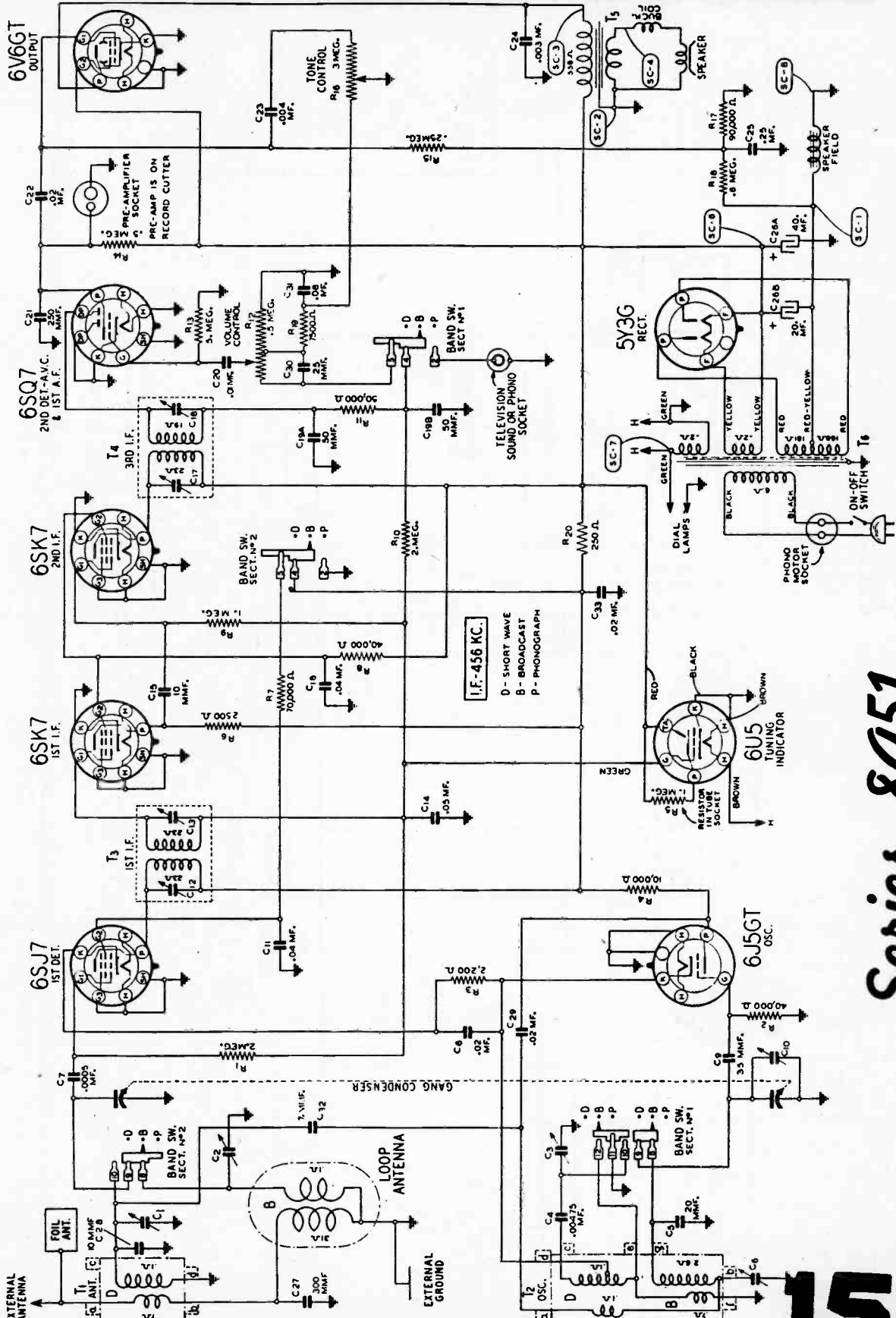


MANUAL OF 1942 MOST POPULAR SERVICE DIAGRAMS



Wells-Gardner & Co.
Series 6A65

MANUAL OF 1942 MOST POPULAR SERVICE DIAGRAMS



Wells-Gardner & Co.

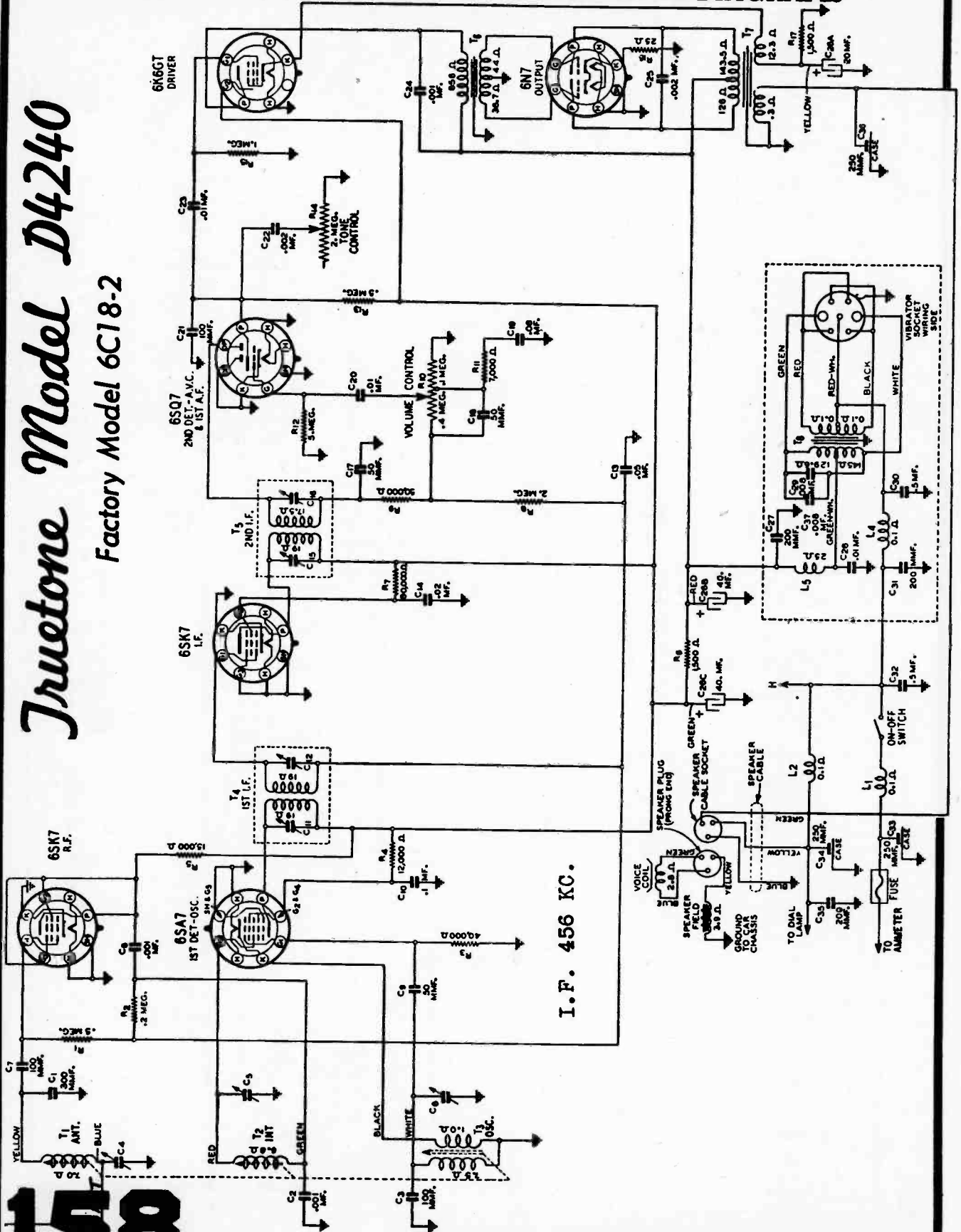
Series 8A51

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Jruetone Model D4240

Factory Model 6C18-2



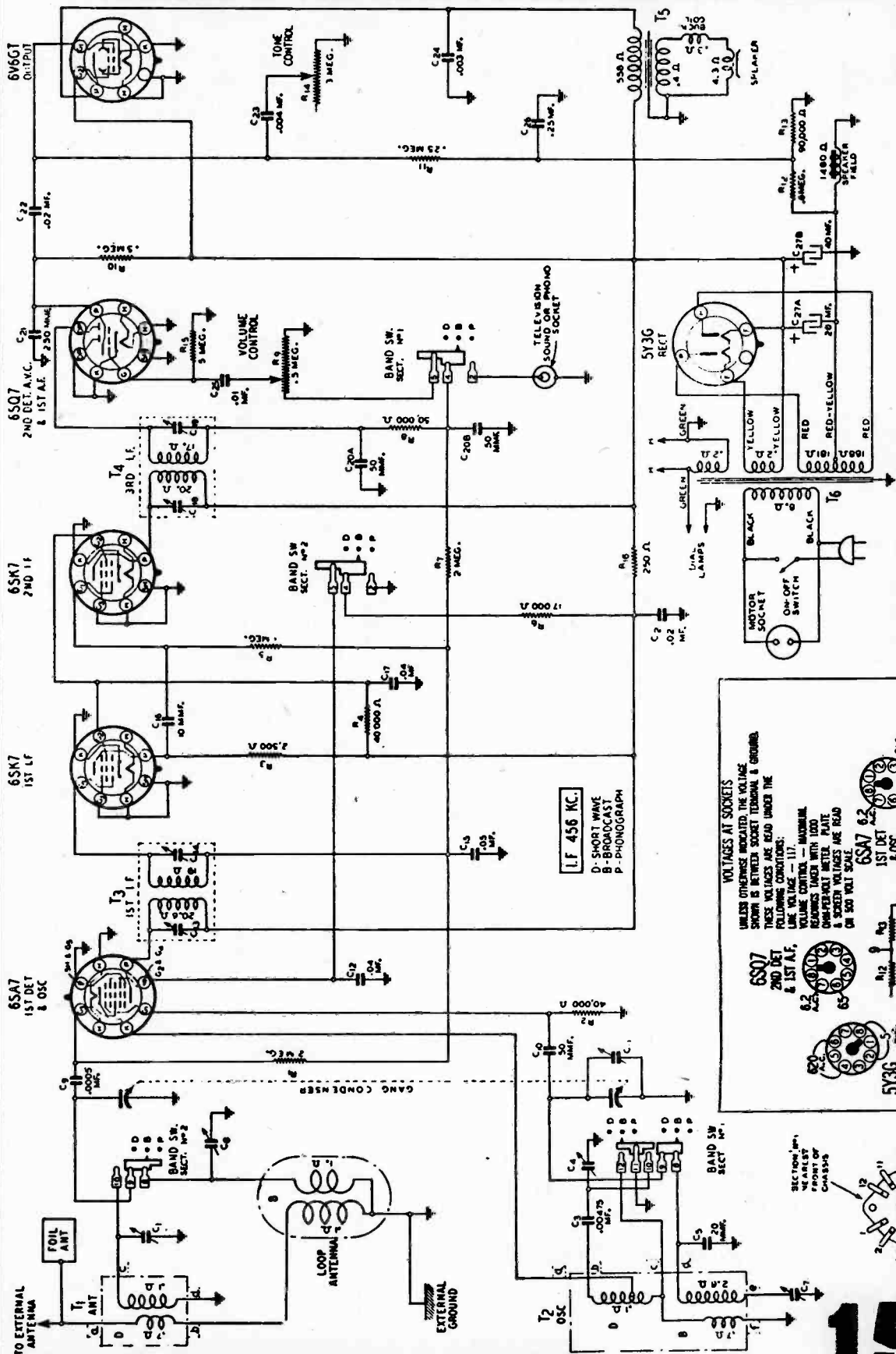
I.F. 456 KC.

158

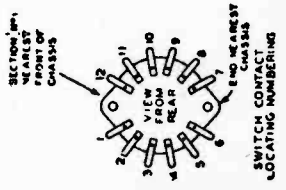
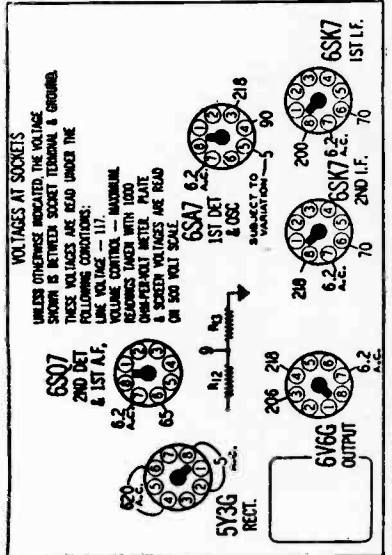
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Truetone Model D1145 (Former D1176)

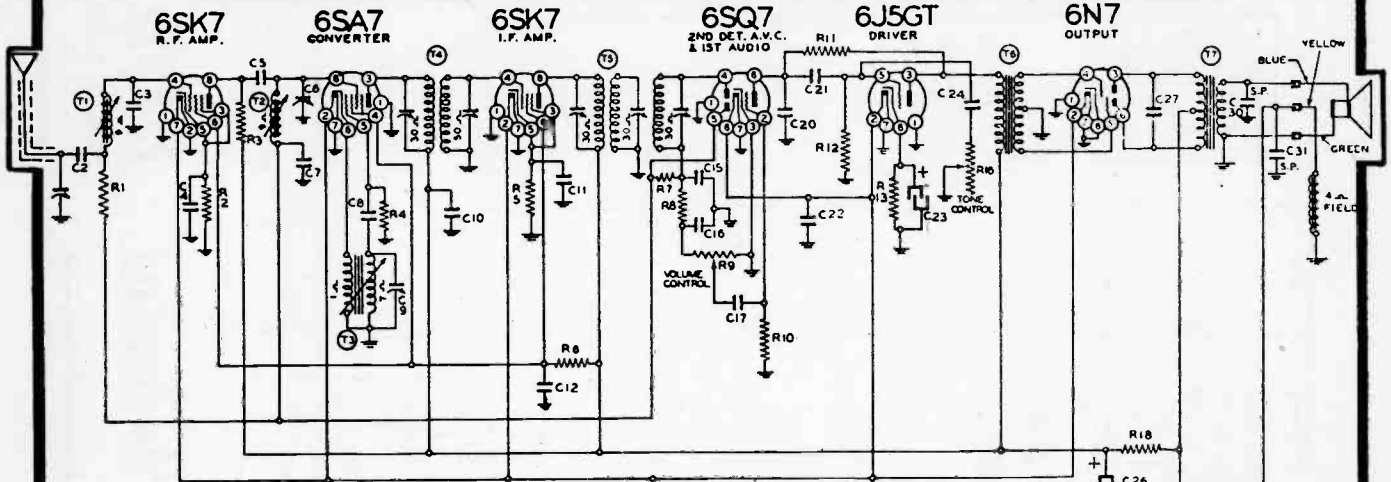
Factory Model 6A50-2



LF 456 KC.
 D - SHORT WAVE
 B - BROADCAST
 P - PHONOGRAPH



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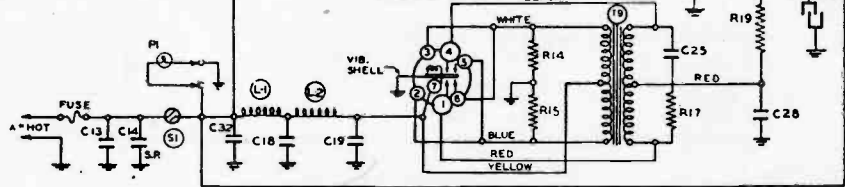
RESISTORS

- R1 130330 220M ohm— $\frac{1}{2}$ w.
- R2 130332 250 ohm— $\frac{1}{2}$ w.
- R3 130331 15M ohm— $\frac{1}{2}$ w.
- R4 130329 47M ohm— $\frac{1}{2}$ w.
- R5 13016 900 ohm— $\frac{1}{2}$ w.
- R6 130196 30M ohm—1 w.
- R7 13019 1 megohm— $\frac{1}{2}$ w.
- R8 130329 47M ohm— $\frac{1}{2}$ w.
- R9 101242 500M ohm volume control
- R10 130257 5 megohm— $\frac{1}{2}$ w.
- R11 130102 500M ohm— $\frac{1}{2}$ w.
- R12 130102 500M ohm— $\frac{1}{2}$ w.
- R13 13092 1M ohm— $\frac{1}{2}$ w.
- R14 130168 100 ohm— $\frac{1}{2}$ w.
- R15 130168 100 ohm— $\frac{1}{2}$ w.
- R16 101245 1 megohm tone control
- R17 13092 1M ohm— $\frac{1}{2}$ w.
- R18 130199 1500 ohm—1 w.
- R19 130328 75 ohm— $\frac{1}{2}$ w.

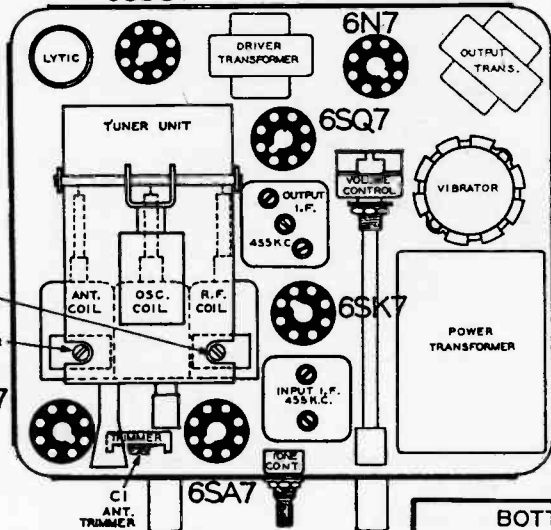
CONDENSERS

- C1 124157 Antenna trimmer
 - C2 100127 .01 x 120 v.
 - C3 129172 .0001 ceramicon
 - C4 100128 .05 x 120 v.
 - C5 129145 .00001 ceramicon
 - C6 124159 R.F. trimmer
 - C7 100129 .02 x 120 v.
 - C8 129172 .0001 ceramicon
 - C9 124158 Oscillator trimmer
 - C10 1001 .1 x 400 v.
 - C11 100128 .05 x 120 v.
 - C12 10053 .25 x 400 v.
 - C13 10031 .5 x 120 v.
 - C14 115687 Spark plate
 - C15 129165B .00005 mica
 - C16 129165B .00005 mica
 - C17 100127 .01 x 120 v.
 - C18 10031 .5 x 120 v.
 - C19 10031 .5 x 120 v.
 - C20 12912 .00025 mica
 - C21 10026 .02 x 400 v.
 - C22 1292 .0005 mica
 - C23 119118 20.0 mfd. x 25 v. lytic
 - C24 10011 .01 x 400 v.
 - C25 10098 .005 x 1600 v.
 - C26 119118 20 mfd. x 400 v. lytic
 - C27 100126 .006 x 800 v.
 - C28 1001 .1 x 400 v.
 - C29 119118 20 mfd. x 400 v. lytic
 - C30 115710 Spark plate
 - C31 115710 Spark plate
 - C32 12912 .00025 mica
- C15 and C16 are in same unit
C20 and C21 are in same unit
C23, C26 and C29 are in same unit

VIBRATOR



6J5GT INTERMEDIATE FREQUENCY 455 K.C.



NOTE: CHECK VIBRATOR POLARITY THRU OPENING ON THIS SIDE OF CASE.

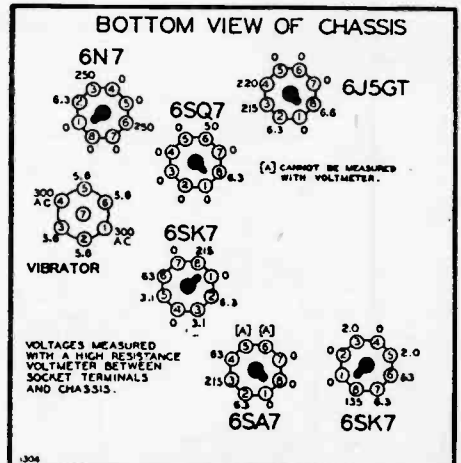
Western Auto

Truetone

MODEL D4255

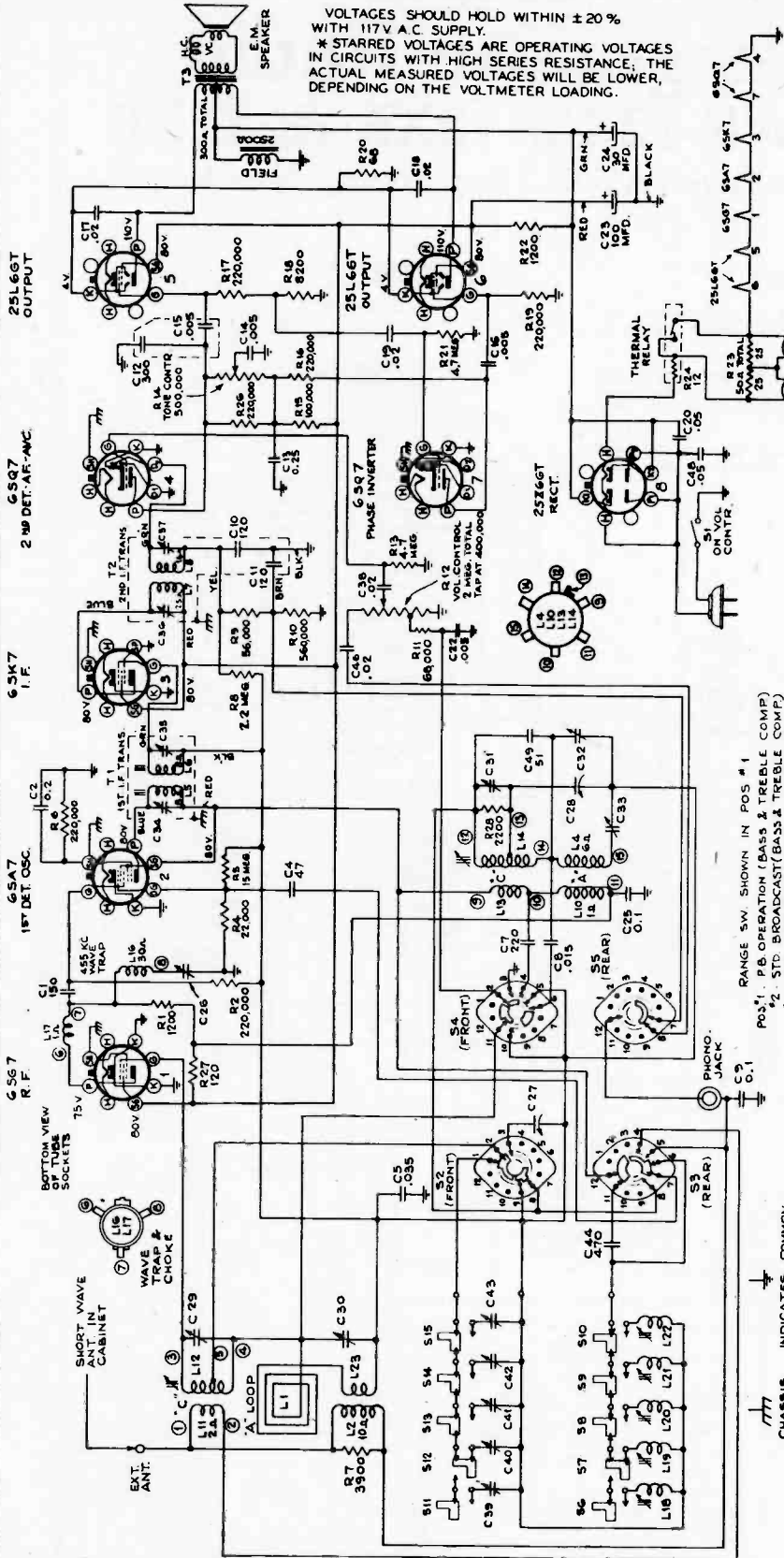
(Former No. D1294)

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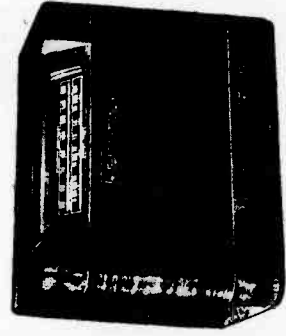


VOLTAGES SHOULD HOLD WITHIN $\pm 20\%$ WITH 117V A.C. SUPPLY.
 * STARRED VOLTAGES ARE OPERATING VOLTAGES IN CIRCUITS WITH HIGH SERIES RESISTANCE; THE ACTUAL MEASURED VOLTAGES WILL BE LOWER, DEPENDING ON THE VOLTMETER LOADING.

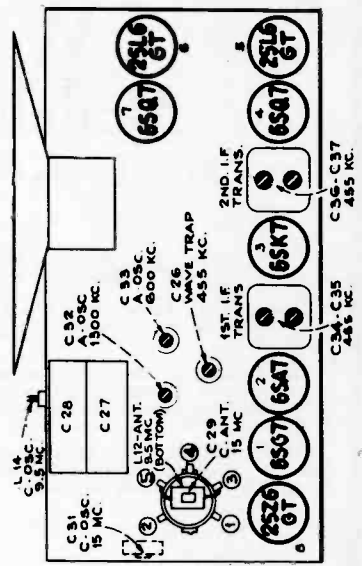
- RANGE SW SHOWN IN POS #1
- POS. 1. PB OPERATION (BASS & TREBLE COMP)
 - POS. 2. STD. BROADCAST (BASS & TREBLE COMP)
 - POS. 3. STD. BROADCAST (TREBLE COMP)
 - POS. 4. STD. BROADCAST (BASS COMP)
 - POS. 5. PHONO (BASS & TREBLE COMP)

Westinghouse Radio

Model WR-12X16



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Westinghouse Radio

Models WR-12X3, 12X5 & 12X6

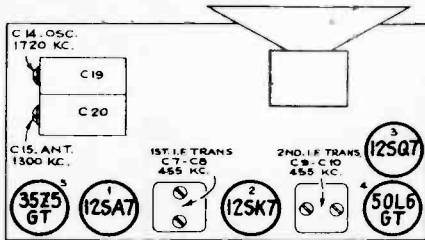
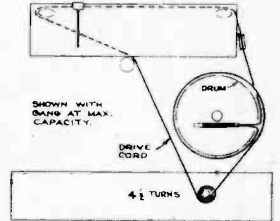
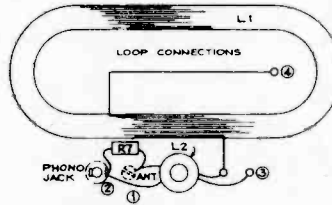
Five-Tube, Single-Band, AC-DC, Superheterodyne Receiver

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.

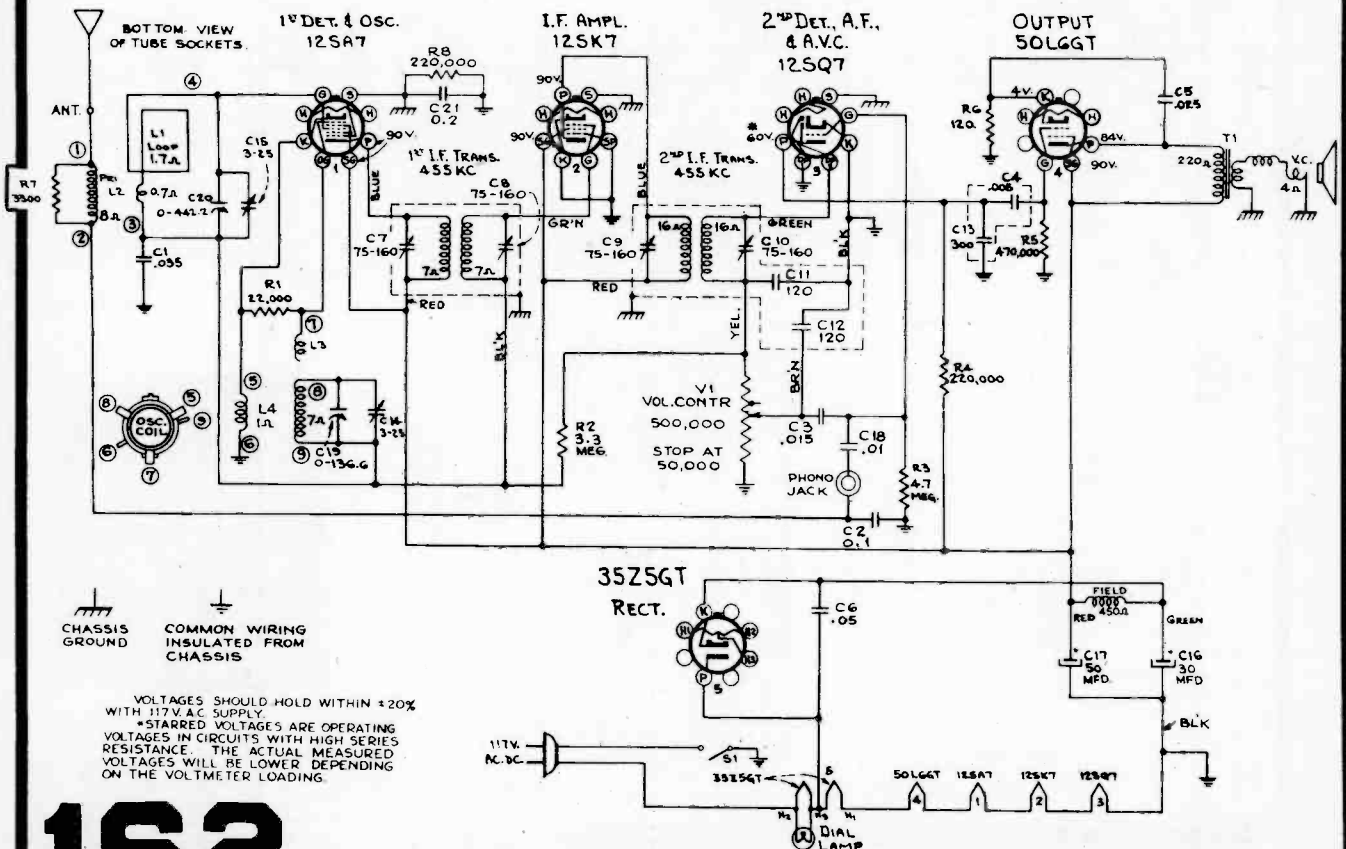
Test Oscillator.—Connect the low side of the test oscillator to the receiver chassis through a .01 mfd. capacitor. With the output meter alignment method the test oscillator output should be kept as low as possible.

Calibration Scale.—The glass tuning dial may be easily removed from the cabinet and temporarily attached to the dial backing plate for quick reference during alignment.



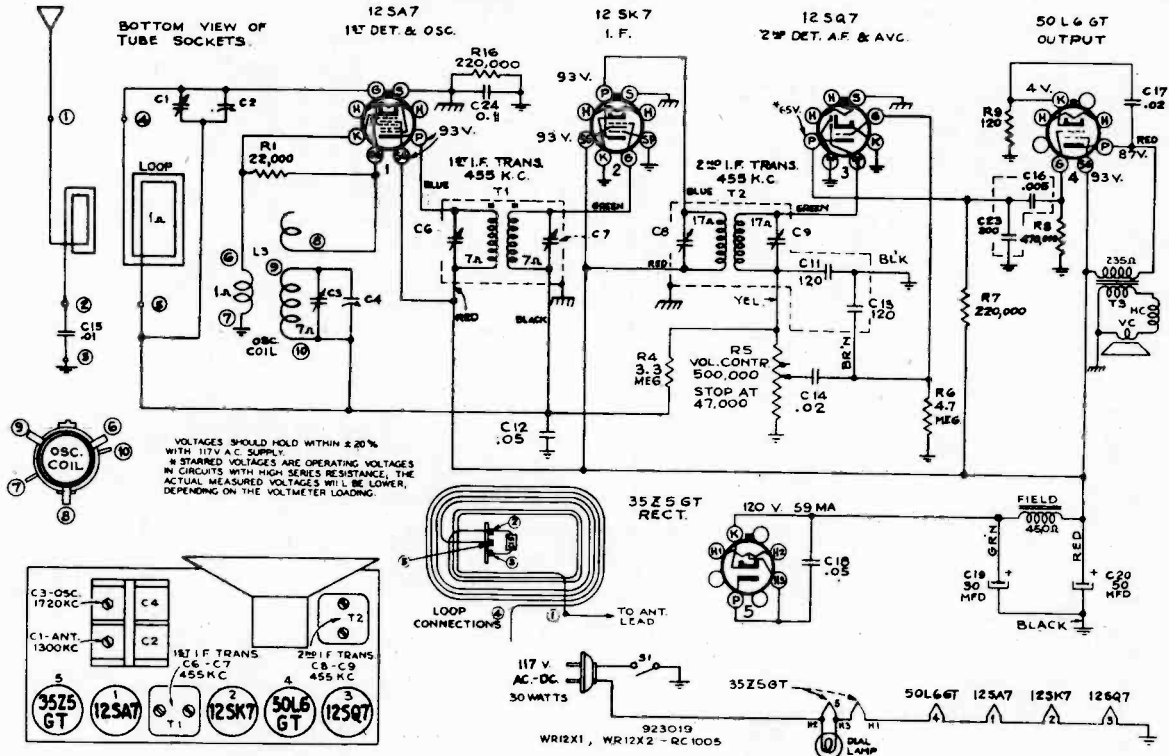
Tube and Trimmer Locations

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	I-F grid, in series with .01 mfd.	455 kc	Quiet point 1,800 kc end of dial	C10, C9 2nd I-F Transformer
2	1st Det. grid in series with .01 mfd.			C8, C7 1st I-F Transformer
3	Ant. terminal in series with 100 mmfd.	1,720 kc	Gang at minimum	C14 (osc.)
4	Radiated signal 1,300 kc		Signal frequency	C15 (ant.)
5	Repeat steps 3 and 4.			

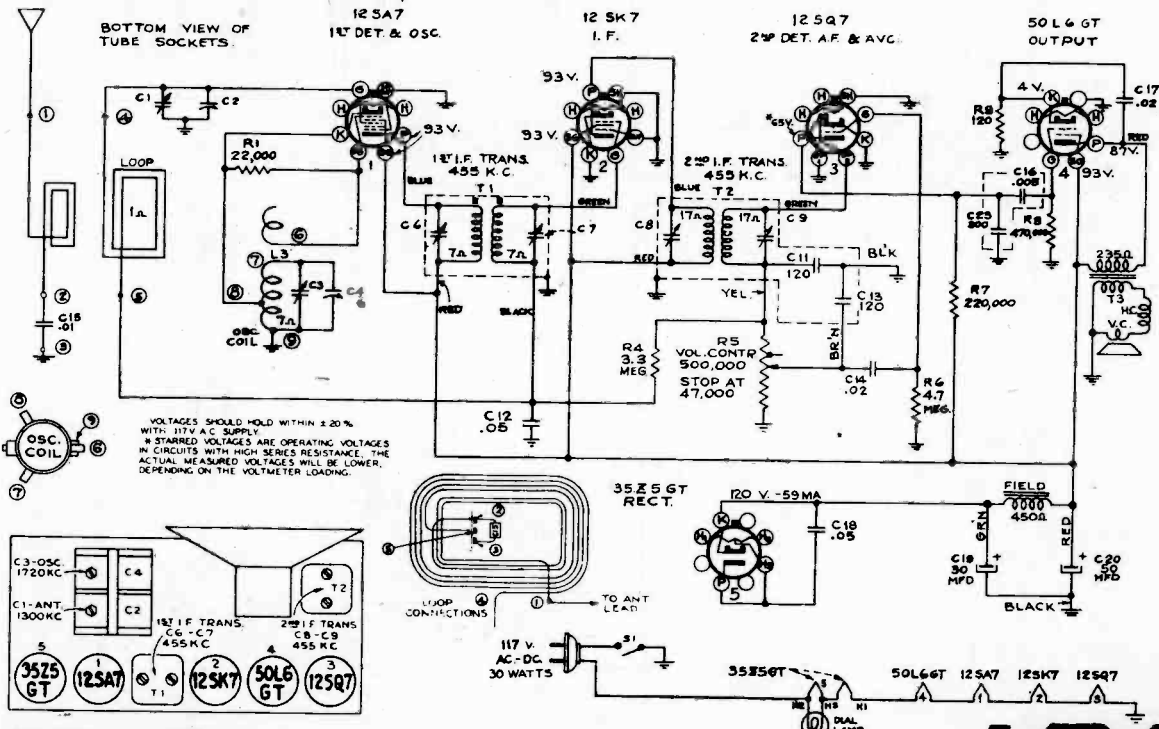


VOLTAGES SHOULD HOLD WITHIN ±20% WITH 117V. A.C. SUPPLY.
 *STARRED VOLTAGES ARE OPERATING VOLTAGES IN CIRCUITS WITH HIGH SERIES RESISTANCE. THE ACTUAL MEASURED VOLTAGES WILL BE LOWER, DEPENDING ON THE VOLTMETER LOADING.

Westinghouse Radio



Schematic Circuit Diagram Model WR-12X1 & WR-12X2



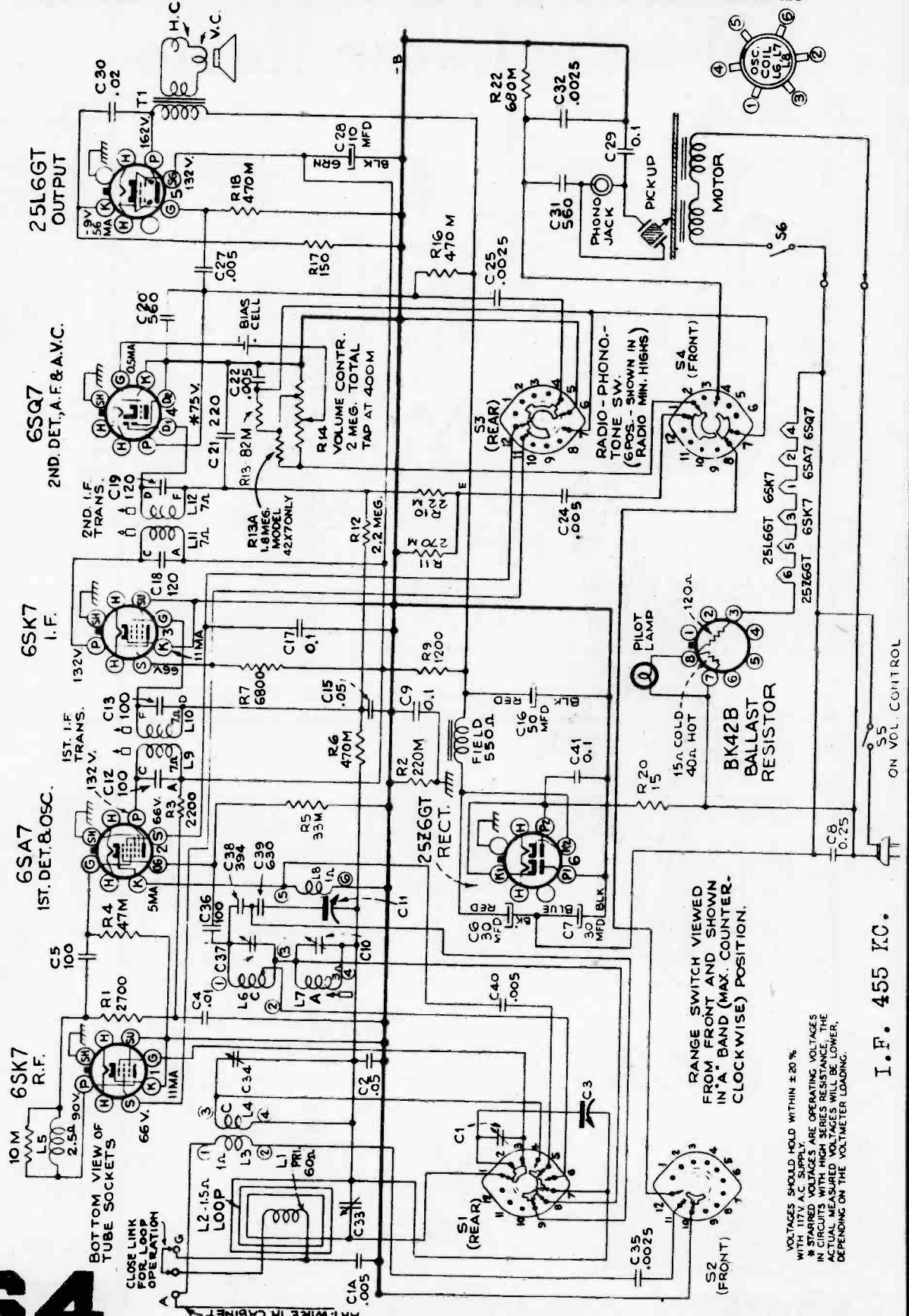
WR-12K1

Schematic Circuit Diagram Model WR-12K1

Westinghouse Models WR-42X3 & WR-42X7

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MANUAL OF 1942 MOST POPULAR SERVICE DIAGRAMS



RANGE SWITCH VIEWED FROM FRONT AND SHOWN IN "A" BAND (MAX. COUNTER-CLOCKWISE) POSITION.

VOLTAGES SHOULD HOLD WITHIN ± 20% WITH 117V A.C. SUPPLY.
* STARRED VOLTAGES ARE OPERATING VOLTAGES IN CIRCUITS WITH HIGH SERIES RESISTANCE, THE VOLTAGES WILL BE LOWER, DEPENDING ON THE VOLTMETER LOADING.

I.F. 455 KC.

MANUAL OF 1942 MOST POPULAR SERVICE DIAGRAMS

Models WR-62K1 & WR-62K2

Alignment Procedure

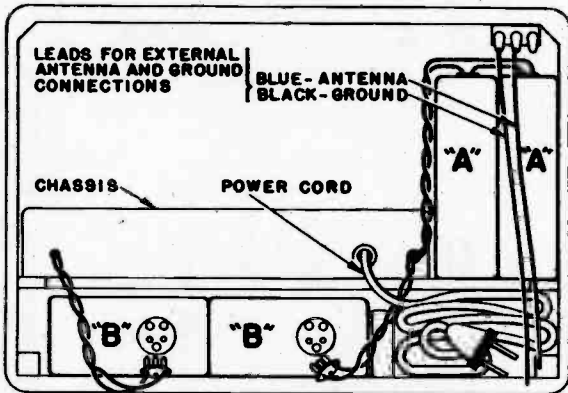
Output Meter Alignment.—If this method is used, connect the meter across the voice coil, and turn the receiver volume control to maximum.

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

Precautionary Lead Dress.—

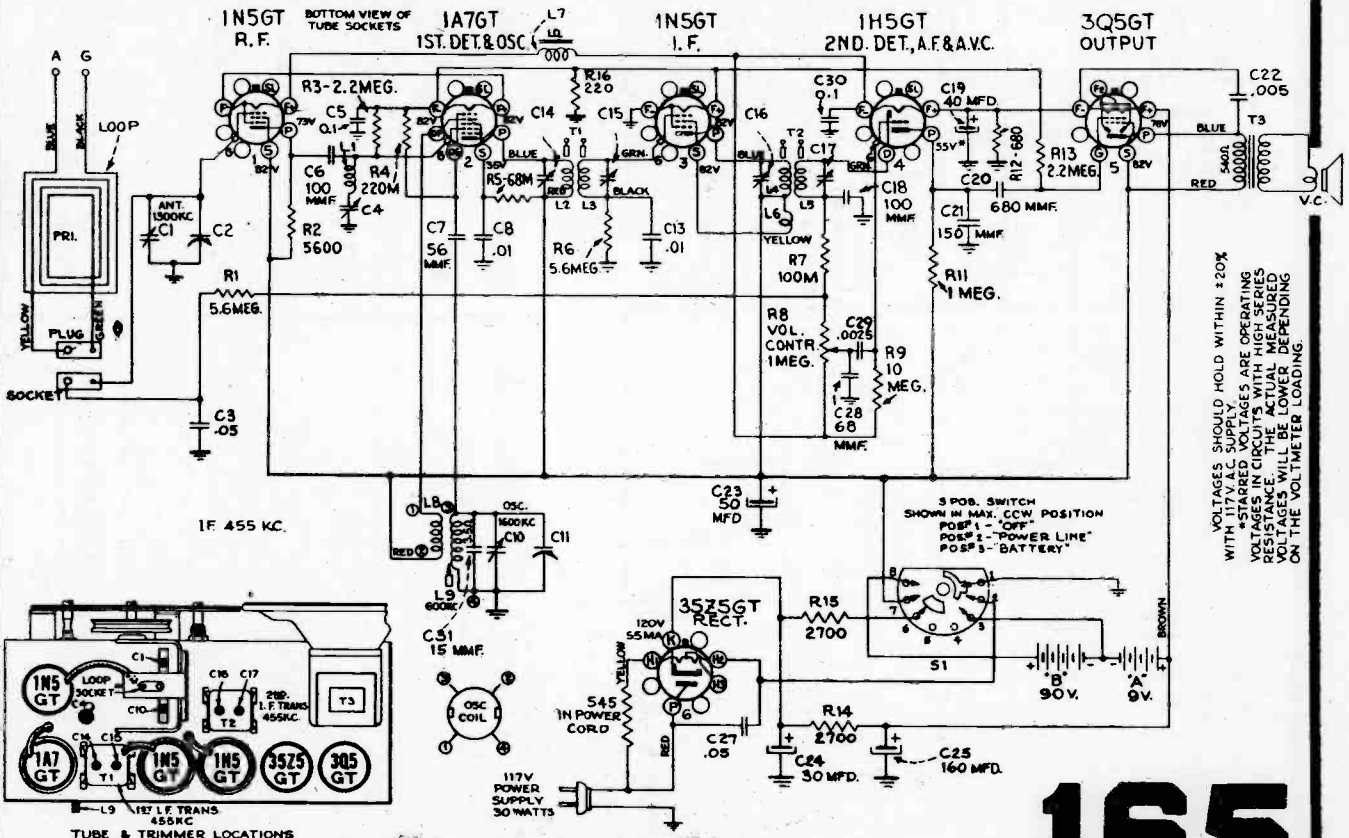
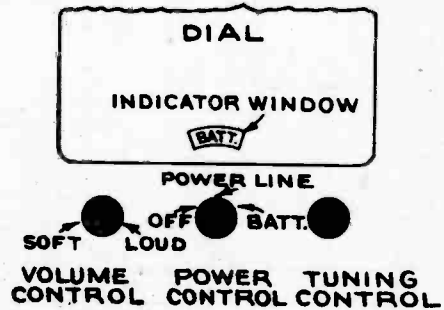
1. Keep green grid leads above chassis away from each other.
2. All filament wires should be dressed close to chassis.
3. Keep blue leads from I-F transformers close to chassis.

BATTERY INSTALLATION



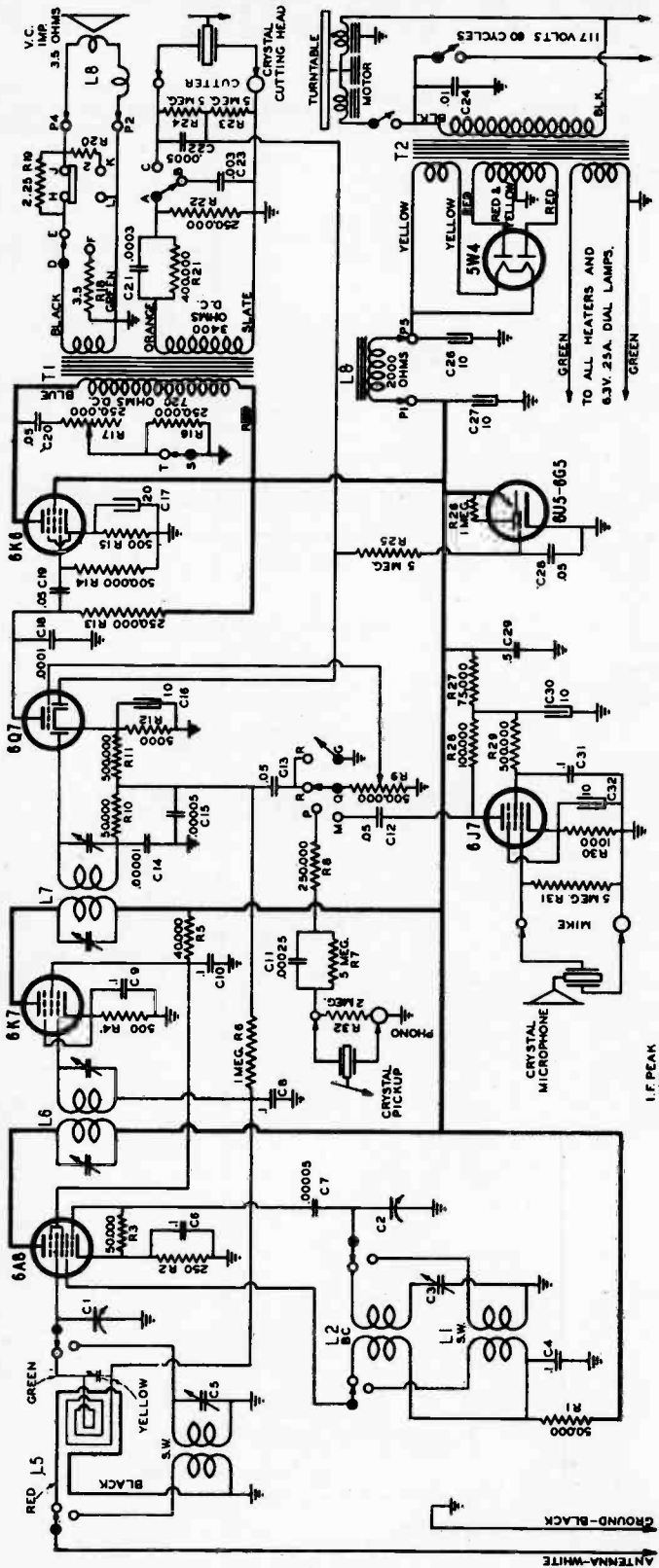
- "A"—TWO 4.5-VOLT EVEREADY NO. 746, BURGESS NO. G-3, RAY-O-VAC NO. P-83-A, OR EQUIVALENT.
 "B"—TWO 45-VOLT EVEREADY NO. 482, BURGESS NO. M-30, RAY-O-VAC NO. P-7830, OR EQUIVALENT.

Steps	Connect the high side of test-osc. to—	Tune test osc. to—	Turn radio dial to—	Adjust the following for max. peak output
1	1N5GT I-F grid cap, in series with .01 mfd.	455 kc	Quiet point at 1,600 kc end of dial	C16, C17 (2nd I-F transformer)
2	1A7GT 1st Det. grid cap, in series with .01 mfd.			C14, C15 (1st I-F transformer)
3	Antenna terminal in series with 200 mmfd.			C4 Wave trap for minimum output
4		600 kc	600 kc	L9 (osc.) (Rock in)
5		1,600 kc	1,600 kc	C10 (osc.)
6		1,300 kc	1,300 kc	C1 (ant.)
7	Repeat steps 4, 5 and 6 until aligned			
8	With chassis in cabinet and batteries connected repeat step 6			



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MANUAL OF 1942 MOST POPULAR SERVICE DIAGRAMS



Tube	Position	Plate	Screen	Cathode
6A8	1st. Det. Osc.	230	75	2.2
6K7	I.F.	230	75	3.0
6Q7	2nd. Det.	90*		1.5
6J7	Mike Amp.	45 to 65*	30*	.8
6K6	Output	215	235	13.5

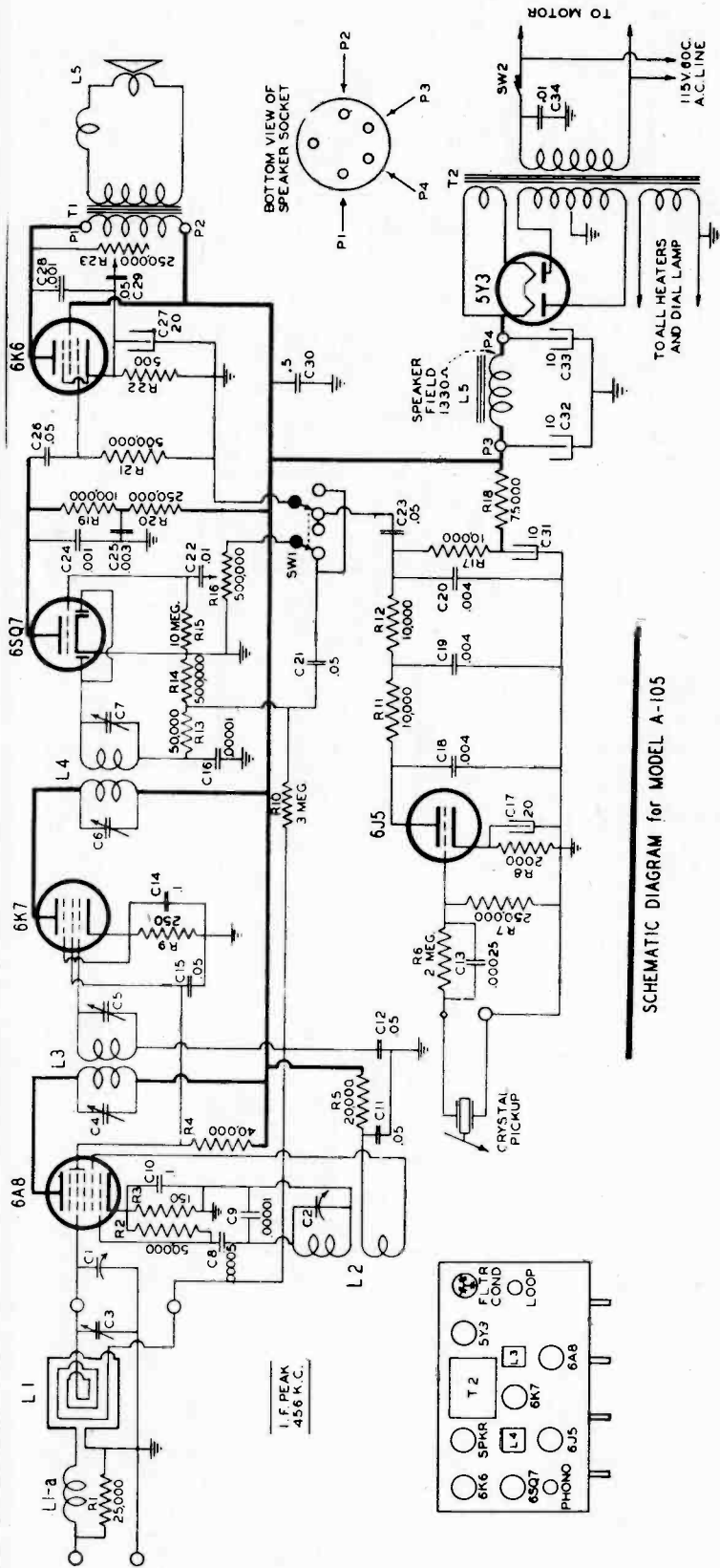
NOTE: This is a typical voltage analysis made by use of standard 1000 ohm per volt voltmeter, using the 300 volt scale for plate and screen voltage readings.

WILCOX-GAY CORPORATION
Charlotte, Michigan

Models
A-104 A-107

Line Voltage-----118
P5 or C26 to GND.-----350
P1 or C27 to GND.-----240
P5 to P1 (sp'kr field)---110
C30 to GND.-----150

MANUAL OF 1942 MOST POPULAR SERVICE DIAGRAMS



- (1) Connect signal generator to control grid of 6A8 tube.
- (2) Peak all trimmers for maximum reading on meter.

WILCOX-GAY CORPORATION
Charlotte, Michigan

Model A-105

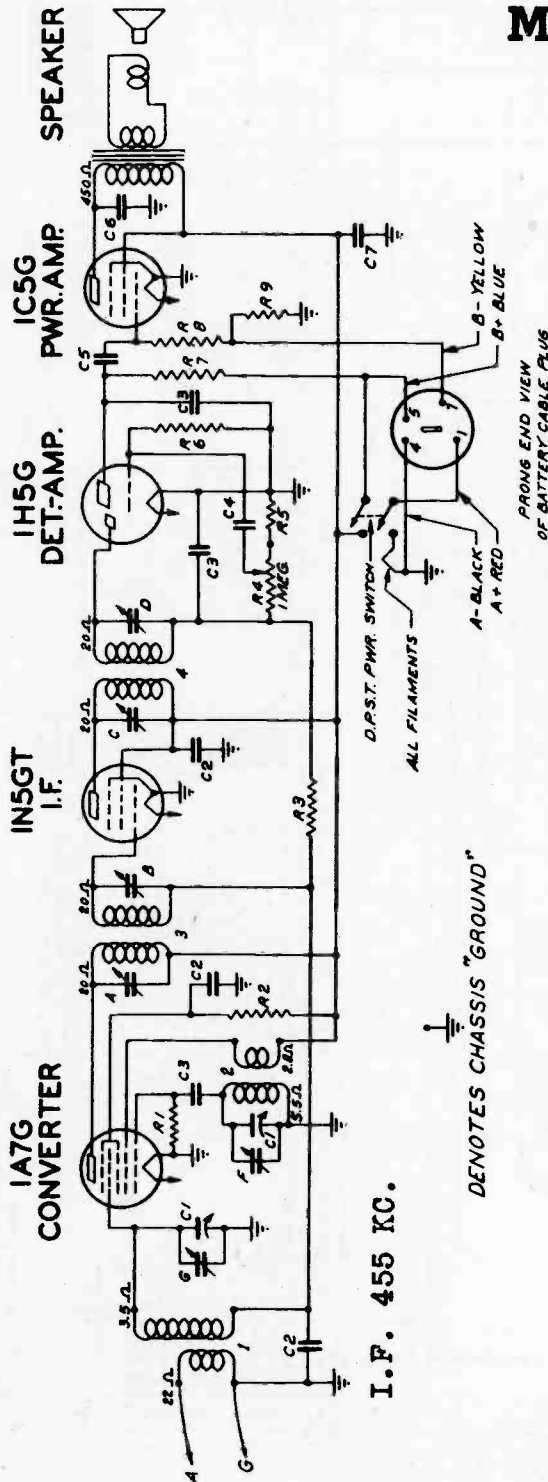
SIGNAL GENERATOR FREQUENCY	DIAL POSITION	TRIMMER
456 K.C.	1700 K.C.	I.F. - C4*
" "	" "	I.F. - C5*
" "	" "	I.F. - C6*
" "	" "	I.F. - C7*
Connect signal generator to ANT. and GND. terminals.		
1400 K.C.	1400 K.C.	C2-Oso.
" "	" "	Trimmer on Loop - R.F.

ZENITH RADIO CORPORATION

CHICAGO • ILLINOIS

Models 4K616-4K635-4K658

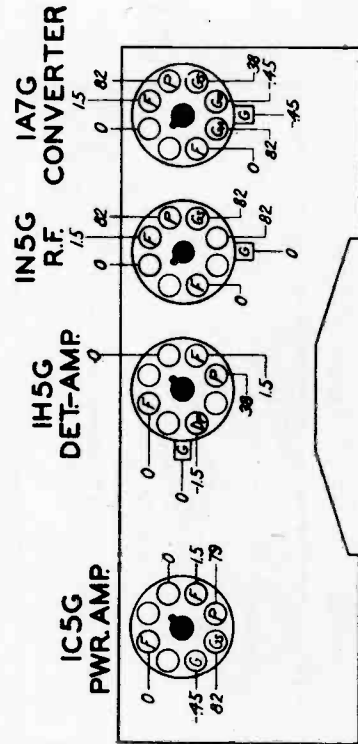
Chassis No. 4B02-4B03



DIAG. NO.	PART NO.	DESCRIPTION	DIAG. NO.	PART NO.	DESCRIPTION
C1	22-1209	TWO GANG VARIABLE -4B02	R4	63-1235	VOLUME CONTROL-4B03
C2	22-1213	TWO GANG VARIABLE -4B02	R5	63-1240	VOLUME CONTROL-4B02
C3	22-879	.05 MFD.	A5	63-587	4700 OHM
C4	22-162	.0001 MFD.	A6	63-976	15 MEGOHM
C5	22-258	.01 MFD.	A7	63-271	1 MEGOHM
C6	22-443	.01 MFD.	A8	63-600	2.2 MEGOHM
C7	22-684	.004 MFD. ELECTROLYTIC/150V	A9	63-634	820 OHM
R1	63-654	180 M OHM	1	20-237	ANTENNA COIL
R2	63-594	68 M OHM	2	39584	OSC. COIL ASSEMBLY
R3	63-669	3.9 MEGOHM	3	95-814	1ET I.F. TRANSFORMER
			4	95-815	2SB I.F.
			5		
			6		
					1ET I.F. TRANS. PRI.
					1ET I.F. SEC.
					2SB I.F. PRI.
					2SB I.F. SEC.
					BROADCAST OSC. (BY GANG)
					BROADCAST ANT. (BY GANG)

CHASSIS MODEL SPEAKER
 4B02 4K616 49-449 5"
 4B03 4K635 49-450 6"
 4B03 4K658 49-461 8"

BATTERY PACK NO Z-28



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.
 Battery Z28

Power consumption—1.3 watts.

Power output—.28 watts.

Tuning Range—540 Kc.—1740 Kc.

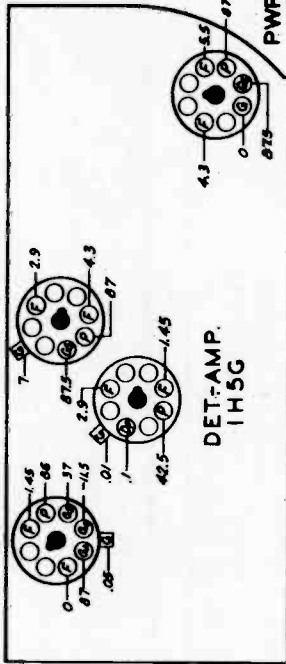
MANUAL OF 1942 MOST POPULAR SERVICE DIAGRAMS

Zenith Radio

I.F. FREQUENCY 455 KC

CONVERTER
1A7G

I.F.
1N5G



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.
Antenna disconnected volume control full on.
Battery voltage 6 volt.
Battery consumption—.5 ampere.
Power Output—.37 watts.

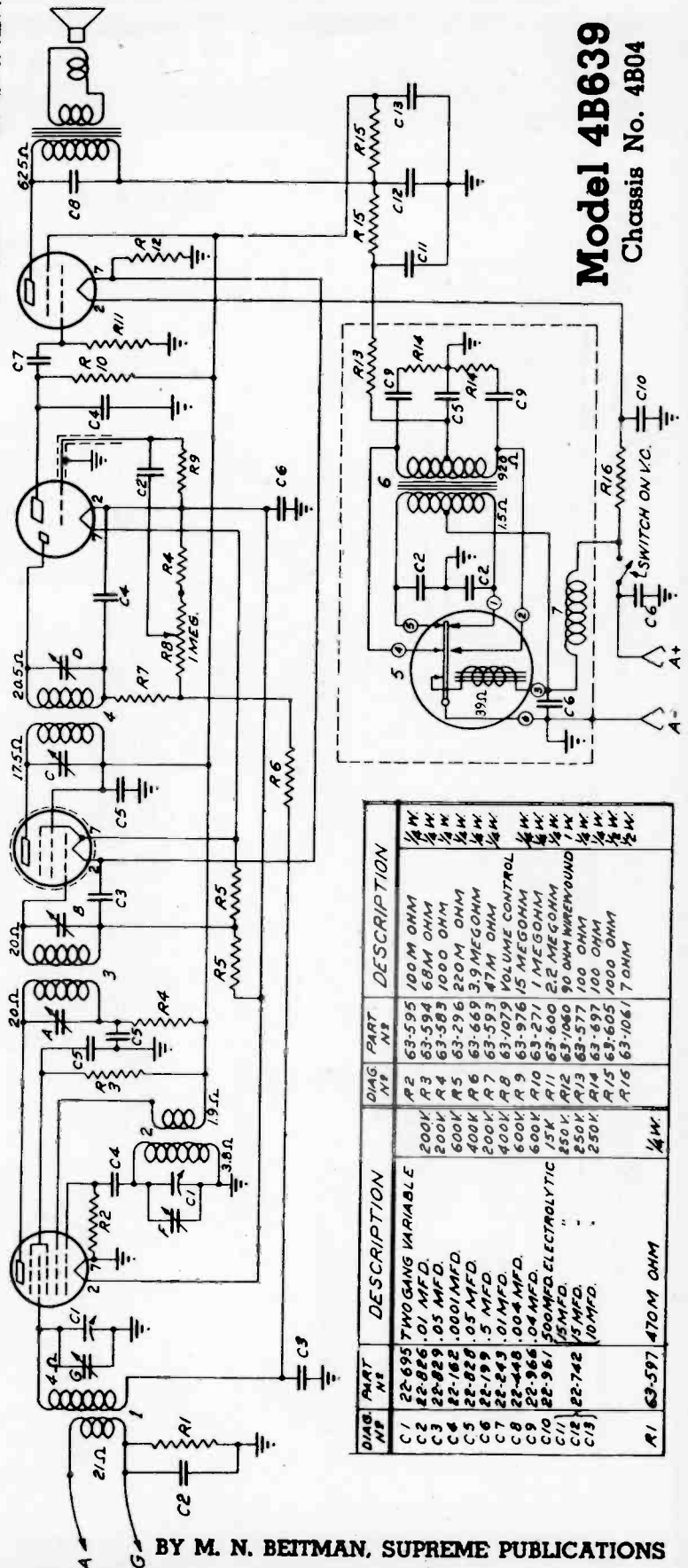
1A7G
CONVERTER

1N5G
I.F.

1H5G
DET.-AMP.

1Q5G
PWR. AMP.

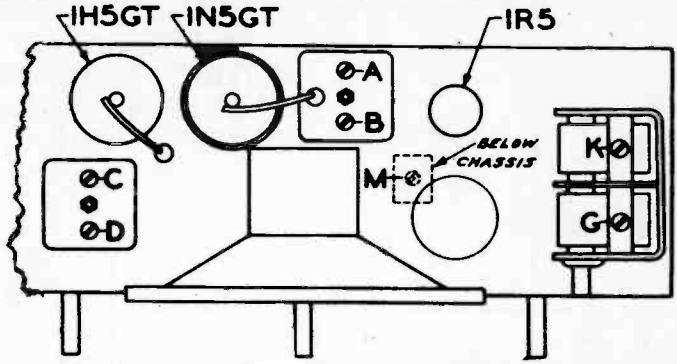
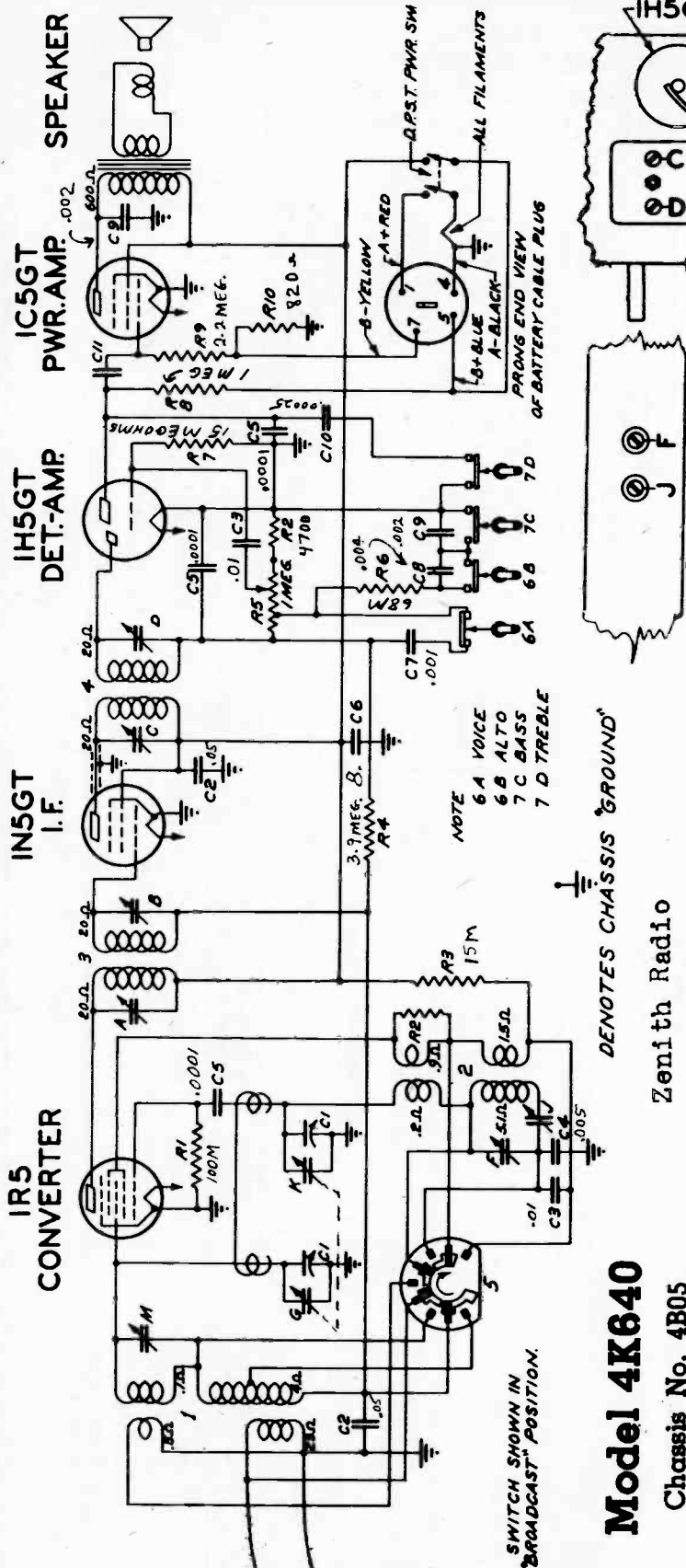
SPEAKER



Model 4B639
Chassis No. 4B04

DIAG. NO.	DESCRIPTION	DIAG. NO.	PART NO.	DESCRIPTION
C1	22-695 TWO GANG VARIABLE	R2	63-595	100M OHM
C2	22-826 .01 MFD.	R3	63-594	68M OHM
C3	22-829 .05 MFD.	R4	63-583	1000 OHM
C4	22-162 .0001 MFD.	R5	63-296	250M OHM
C5	22-828 .05 MFD.	R6	63-669	3.9 MEG OHM
C6	22-199 .5 MFD.	R7	63-593	47M OHM
C7	22-543 .01 MFD.	R8	63-7079	VOLUME CONTROL
C8	22-448 .004 MFD.	R9	63-976	15 MEG OHM
C9	22-966 .04 MFD.	R10	63-271	1 MEG OHM
C10	22-961 .500 MFD. ELECTROLYTIC	R11	63-600	90 OHM WIREWOUND
C11	22-742 .15 MFD.	R12	63-1080	22 MEG OHM
C12	22-742 .15 MFD.	R13	63-577	100 OHM
C13	22-742 .15 MFD.	R14	63-597	100 OHM
		R15	63-605	1000 OHM
		R16	63-1061	70 OHM
R1	63-597			470M OHM

MANUAL OF 1942 MOST POPULAR SERVICE DIAGRAMS

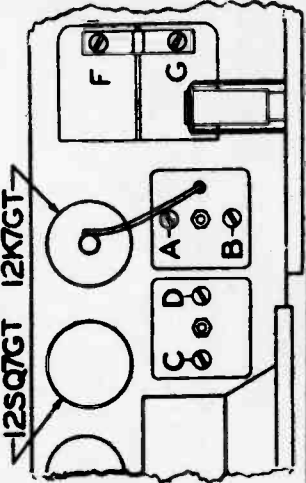
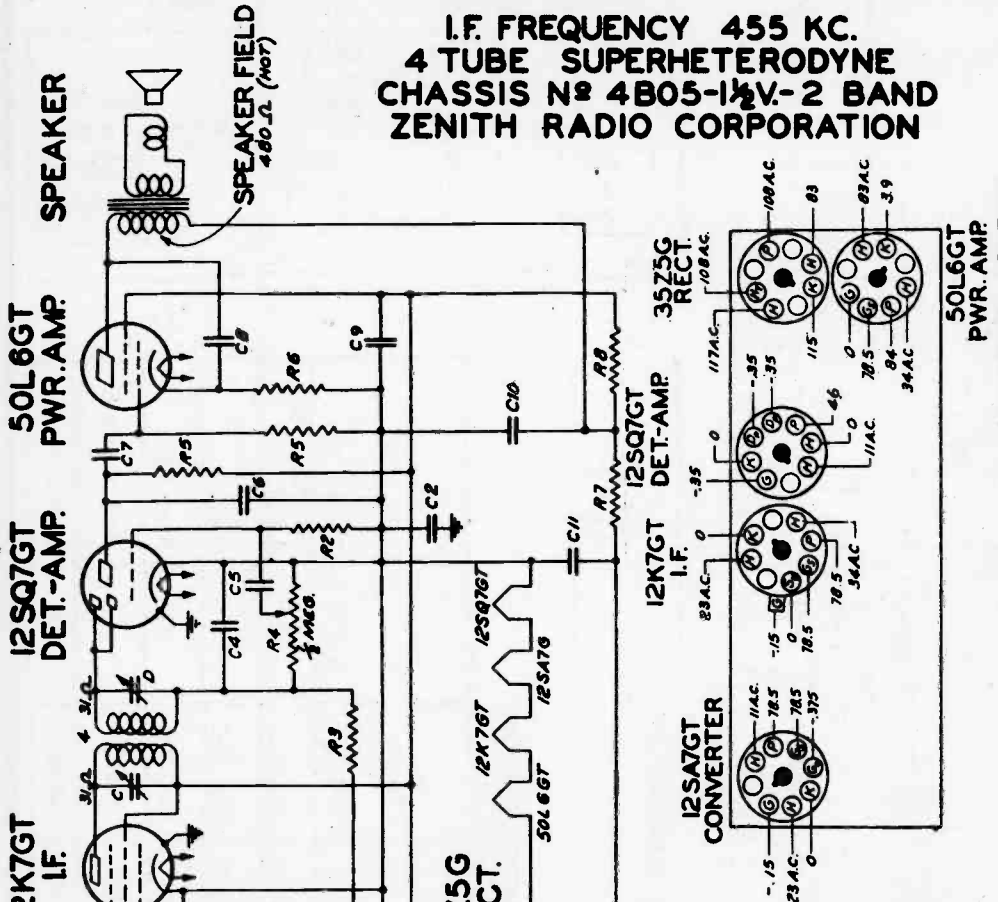


ALIGNMENT PROCEDURE

Oper-ation	Conn. Test Osc. to	Dummy Ant.	Input Sig. Freq.	Band	Set Dial At	Trimmers	Purpose
1	Converter Grid	.5 Mid.	455 Kc.	Broadcast	600 Kc.	A B C D	Align I. F.
2	Ant.—Gnd.	400 Ohms	18 Mc.	Short Wave	18 Mc.	K	Set Osc. to Scale
3	Ant.—Gnd.	200 Mmf.	1600 Kc.	Broadcast	1600 Kc.	F	Set Osc. to Scale
4	Ant.—Gnd.	200 Mmf.	1400 Kc.	Broadcast	1400 Kc.	G	Align Ant.
5	Ant.—Gnd.	200 Mmf.	600 Kc.	Broadcast	600 Kc.	J	Rock Gang & Adj. to Max.
6	Ant.—Gnd.	400 Ohms	18 Mc.	Short Wave	18 Mc.	M	Rock Gang

MANUAL OF 1942 MOST POPULAR SERVICE DIAGRAMS

I.F. FREQUENCY 455 KC.
 4 TUBE SUPERHETERODYNE
 CHASSIS No 4B05-1½V.-2 BAND
 ZENITH RADIO CORPORATION



Models 5D611-5D627
 Chassis No. 5B02
 Zenith Radio

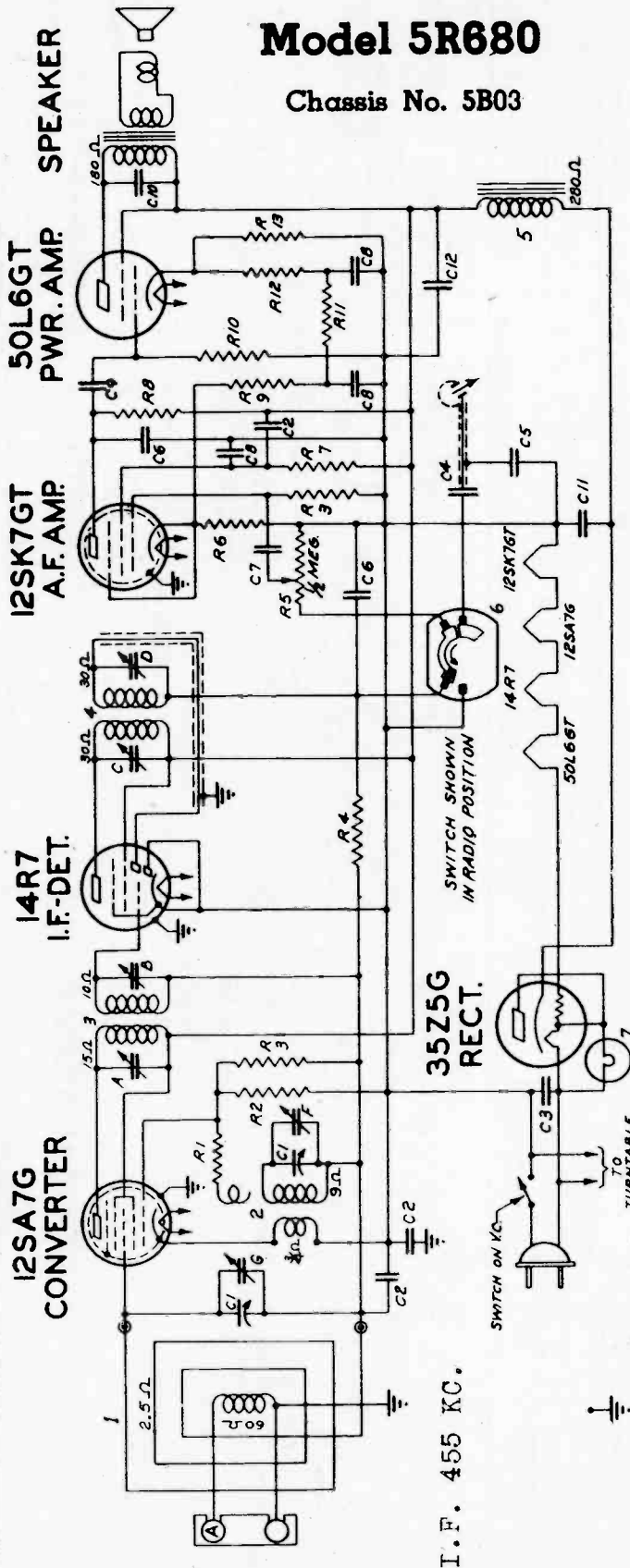
DIA. PART NO.	DESCRIPTION	DIA. PART NO.	DESCRIPTION
C1	22-1006 TWP. GANG VARIABLE	R1	63-589 10 M OHM
C2	22-889 .05 MFD.	R2	63-376 15 MEG OHM
C3	22-1017 .05 MFD.	R3	63-600 2.2 MEG OHM
C4	22-993 .002 MFD.	R4	63-112 VOLUME CONTROL
C5	22-492 .002 MFD.	R5	63-597 470 M OHM
C6	22-854 .0005 MFD.	R6	63-171 75 OHM WIREWOUND
C7	22-223 .01 MFD.	R7	63-172 100 OHM WIREWOUND
C8	22-1182 .01 MFD.	R8	63-173 1500 OHM
C9	20 MFD. ELECTROLYTIC	R9	63-579 220 OHM
C10	22-1186 .01 MFD.		
C11	20 MFD.		
		1	S 9619 MINI-MAGNET ASSEMBLY

Operation	Connect Test Oscillator to	Dummy Antenna	Input Signal Frequency	Band	Set Dial At	Trimmers	Purpose
1	Converter Grid	.1 mfd.	455 Kc.	—	600 Kc.	A, B, C, D	Align I. F.
2	Single Turn Loop coupled loosely to Wave Magnet	—	1500 Kc.	—	1500 Kc.	F	Set Oscillator to Scale
3		—	1500 Kc.	—	1500 Kc.	G	Adjust for Maximum

MANUAL OF 1942 MOST POPULAR SERVICE DIAGRAMS

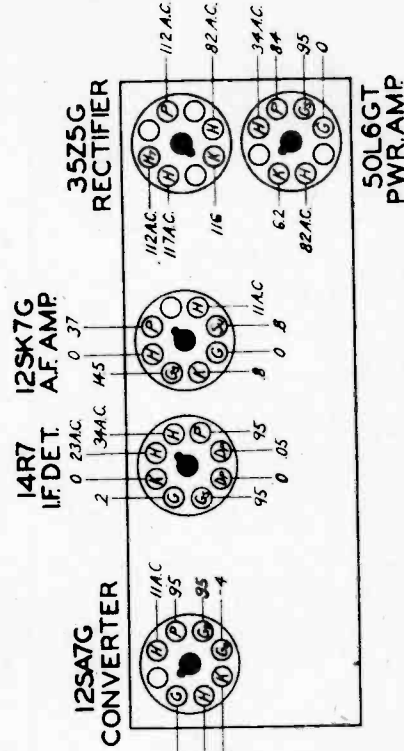
Model 5R680

Chassis No. 5B03



Zenith Radio

PART NO.	DESCRIPTION	DIAG. PART NO.	DESCRIPTION	W. W.
C1	22-1026 TWO-GANG VARIABLE	R3	63-976 15 MEGOHM	1/4 W.
C2	22-889 .05 MFD.	R4	63-600 2.2 MEGOHM	1/4 W.
C3	22-1017 .05 MFD.	R5	63-1112 VOLUME CONTROL	1/4 W.
C4	22-987 .001 MFD.	R6	63-634 250 OHM	1/4 W.
C5	22-923 .002 MFD.	R7	63-778 470M OHM	1/4 W.
C6	22-492 .002 MFD.	R8	63-445 100M OHM	1/4 W.
C7	22-887 .1 MFD.	R9	63-439 270 OHM	1/4 W.
C8	22-887 .1 MFD.	R10	63-437 470 M OHM	1/4 W.
C9	22-188 .02 MFD.	R11	63-637 470 OHM	1/4 W.
C10	22-182 .01 MFD.	R12	63-639 6000 OHM	1/4 W.
C11	22-1026 20 MFD. ELECTROLYTIC	R13	63-1015 40 OHM WIREWOUND	1/4 W.
C12	22-1026 40 MFD.			
R1	63-579 220 OHM			
R2	63-589 10M OHM			
		S9599	WAVEMAGNET OSCILLATOR COIL ASSEMBLY	
		S9450		

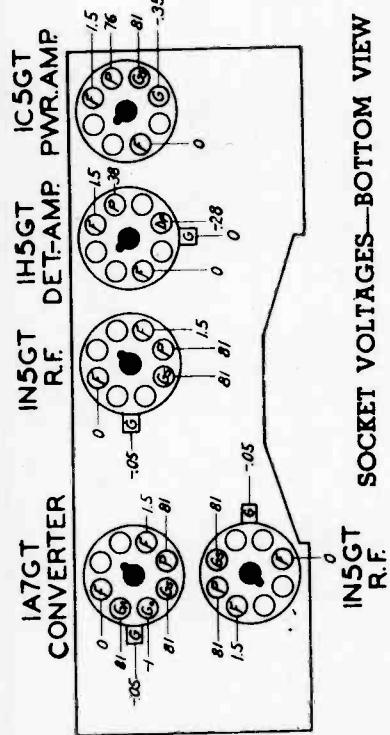
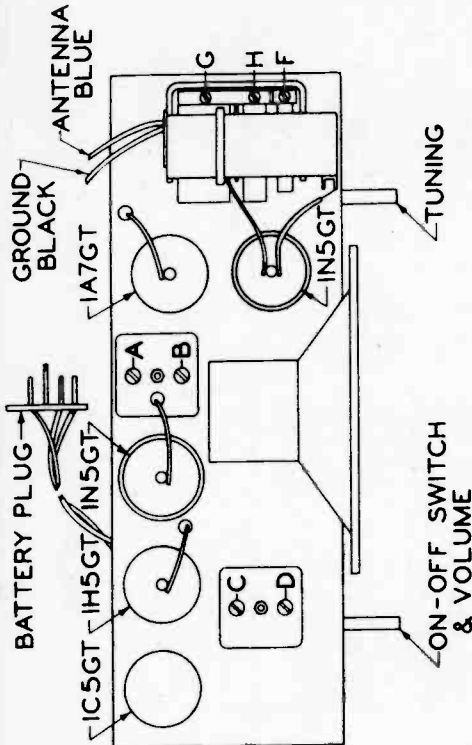


Model 5R680

Chassis No. 5B03

SOCKET VOLTAGES—BOTTOM VIEW

MANUAL OF 1942 MOST POPULAR SERVICE DIAGRAMS

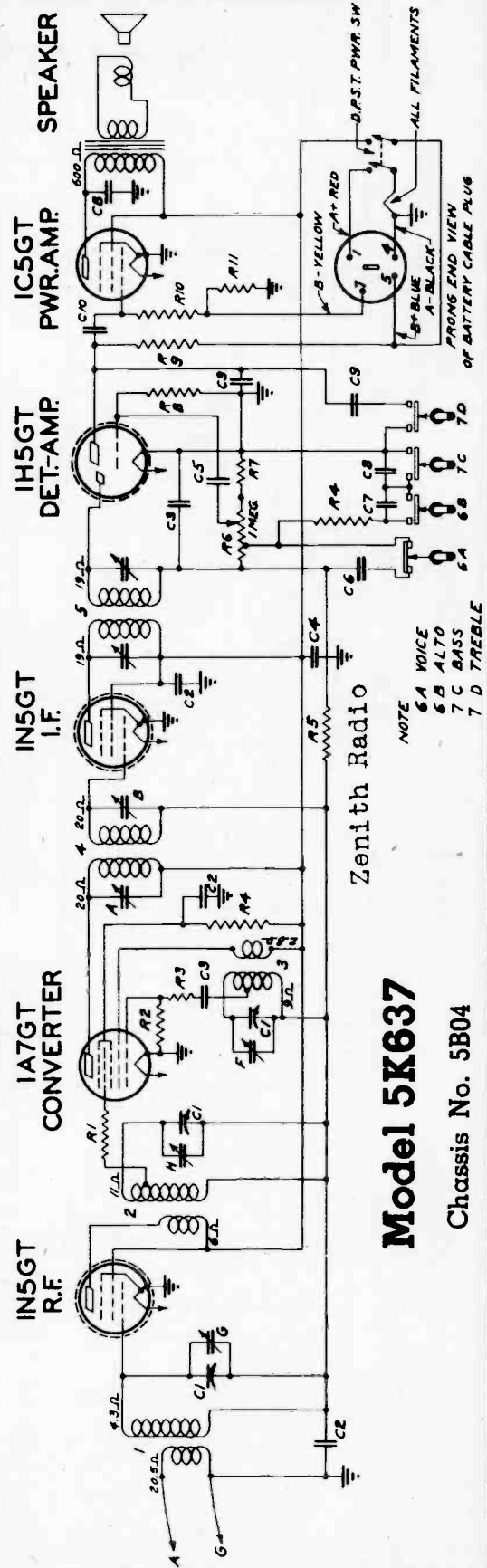


SOCKET VOLTAGES—BOTTOM VIEW

Model 5K637 Chassis No. 5B04

DIAG. NO.	DESCRIPTION	DIAG. NO.	DESCRIPTION
C1	THREE GANG VARIABLE	R5	3.5 MEGOHM
C2	.05 MFD.	R6	VOLUME CONTROL
C3	200V	R7	4700 OHM
C4	8 MFD. ELECTROLYTIC	R8	15 MEGOHM
C5	.01 MFD.	R9	1 MEGOHM
C6	.01 MFD.	R10	2 MEGOHM
C7	.004 MFD.	R11	820 OHM
C8	.002 MFD.		
C9	.0025 MFD.		
C10	.01 MFD.		
R1	5600 OHM		ANTENNA COIL
R2	180M OHM		DETECTOR COIL ASSEM.
R3	470 OHM		OSCILLATOR
R4	68M OHM		180 I.F. TRANSFORMER
			200 I.F.
			T.C. SW. ASSEM. (LEFT)
			T.C. SW. ASSEM. (RIGHT)

Operation	Connect Test Oscillator to	Dummy Antenna	Input Signal Frequency	Band	Set Dial At	Adjust Trimmers	Purpose
1	Converter Grid	1/2 Mid.	455 Kc.	Broadcast	600 Kc.	A, B, C, D	I. F. Alignment
2	Ant.—Gnd.	200 Mmf.	1500 Kc.	Broadcast	1500 Kc.	F	Set Oscillator to Scale
3	"	200 Mmf.	1400 Kc.	Broadcast	1400 Kc.	H, G	Align R.F. & Ant.



Zenith Radio

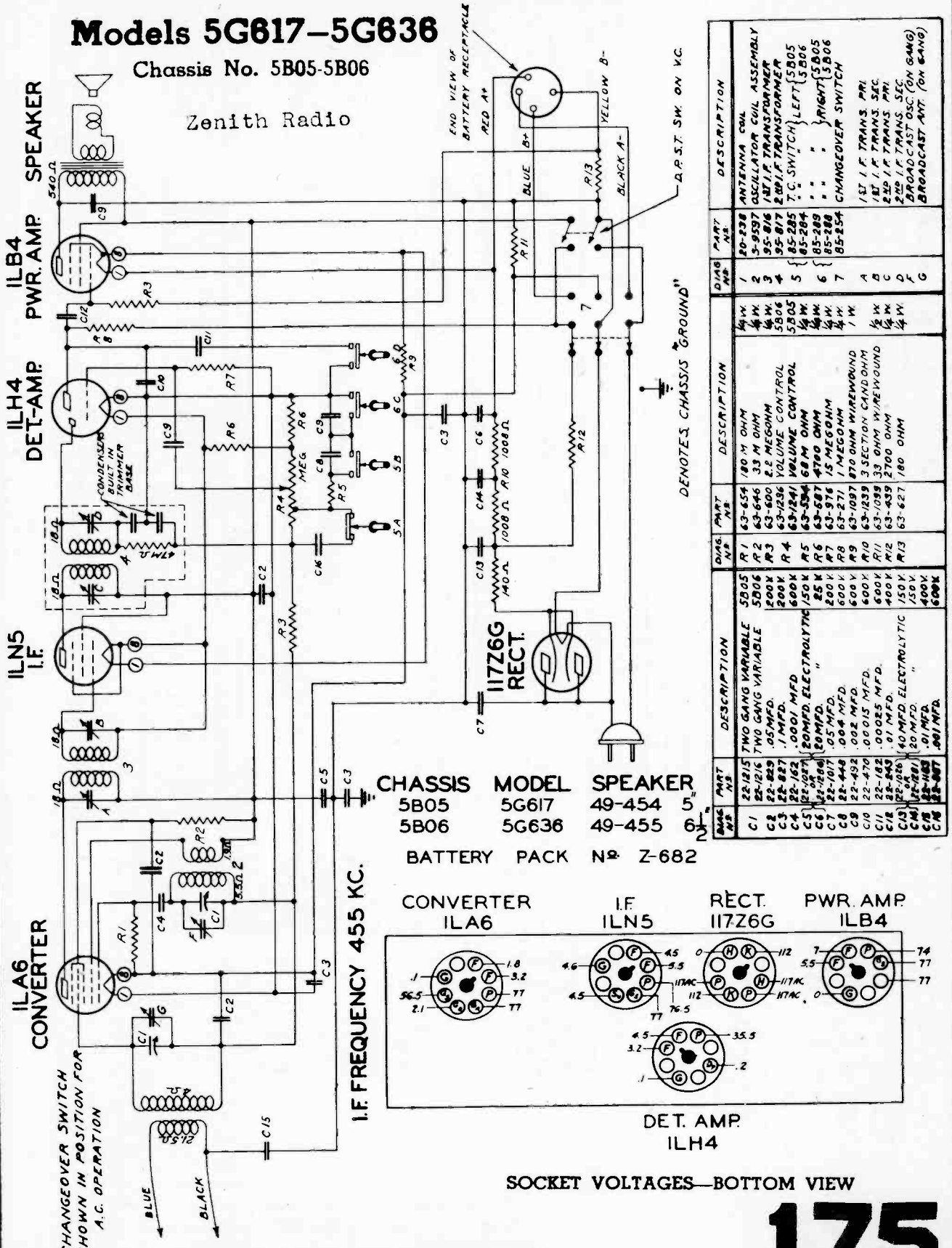
Model 5K637 Chassis No. 5B04

MANUAL OF 1942 MOST POPULAR SERVICE DIAGRAMS

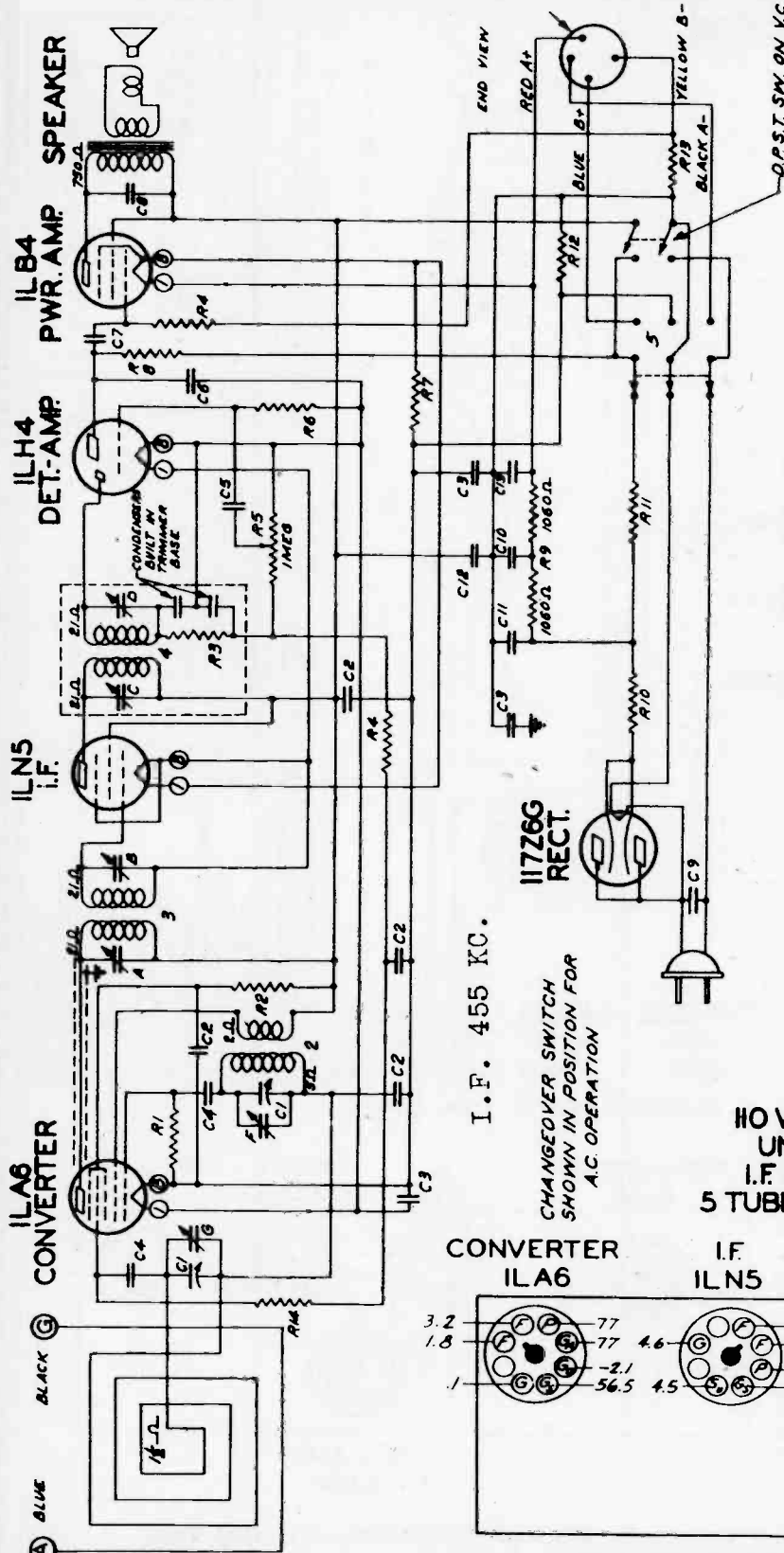
Models 5G617-5G636

Chassis No. 5B05-5B06

Zenith Radio



MANUAL OF 1942 MOST POPULAR SERVICE DIAGRAMS



Zenith Radio

Model 5G603

Chassis No. 5B07

I. F. 455 KC.

CHANGEOVER SWITCH SHOWN IN POSITION FOR A.C. OPERATION

110 VOLT A.C.-BATTERY PACK
UNIVERSAL PORTABLE
I.F. FREQUENCY 455 KC.
5 TUBE SUPERHETERODYNE

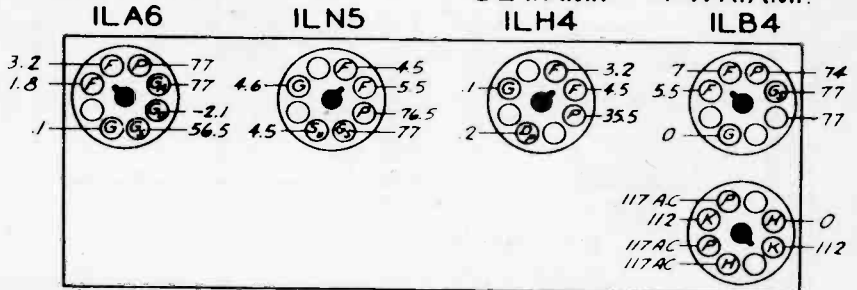
DIAG. PART NO.	DESCRIPTION	DIAG. PART NO.	DESCRIPTION	DIAG. PART NO.	DESCRIPTION
C1	2R-1022 TWO GANG VARIABLE	R1	63-773 180 M OHM	1	5B742 MAGNET ASSEMBLY
C2	2R-829 .05 MFD.	R2	63-646 33 M OHM	2	5B750 OSC COIL ASSEMBLY
C3	2R-827 .1 MFD.	R3	63-713 47 M OHM	3	95-750 1ST I.F. TRANSFORMER
C4	2R-762 .0001 MFD.	R4	63-600 2.2 MEG OHM	4	95-721 2ND I.F. TRANSFORMER
C5	2R-492 .002 MFD.	R5	63-1126 VOLUME CONTROL	5	85-242 CHANGEOVER SWITCH
C6	2R-470 .00015 MFD.	R6	63-976 15 MEG OHM		
C7	2R-243 .01 MFD.	R7	63-1087 870 OHM WIREWOUND		
C8	2R-326 .003 MFD.	R8	63-1197 1 MEG OHM WIREWOUND	A	1E1 I.F. TRANS. PRI.
C9	2R-1028 .50 MFD. ELECTROLYTIC	R9	63-1094 140 OHM WIREWOUND	B	1E1 I.F. TRANS. SEC.
C10	2R-1028 .50 MFD. ELECTROLYTIC	R10	63-1094 140 OHM WIREWOUND	C	2E2 I.F. TRANS. PRI.
C11	2R-1028 .50 MFD. ELECTROLYTIC	R11	63-439 2700 OHM	D	2E2 I.F. TRANS. SEC.
C12	2R-1027 .50 MFD. ELECTROLYTIC	R12	63-1028 53 OHM WIREWOUND	E	1E1 I.F. TRANS. SEC.
C13	2R-1027 .50 MFD. ELECTROLYTIC	R13	63-748 180 OHM WIREWOUND	F	BROADCAST OSC. (ON GANG)
		R14	63-276 220 M OHM	G	BROADCAST ANT. (ON GANG)

CONVERTER

I.F.

DET. AMP.

PWR. AMP.

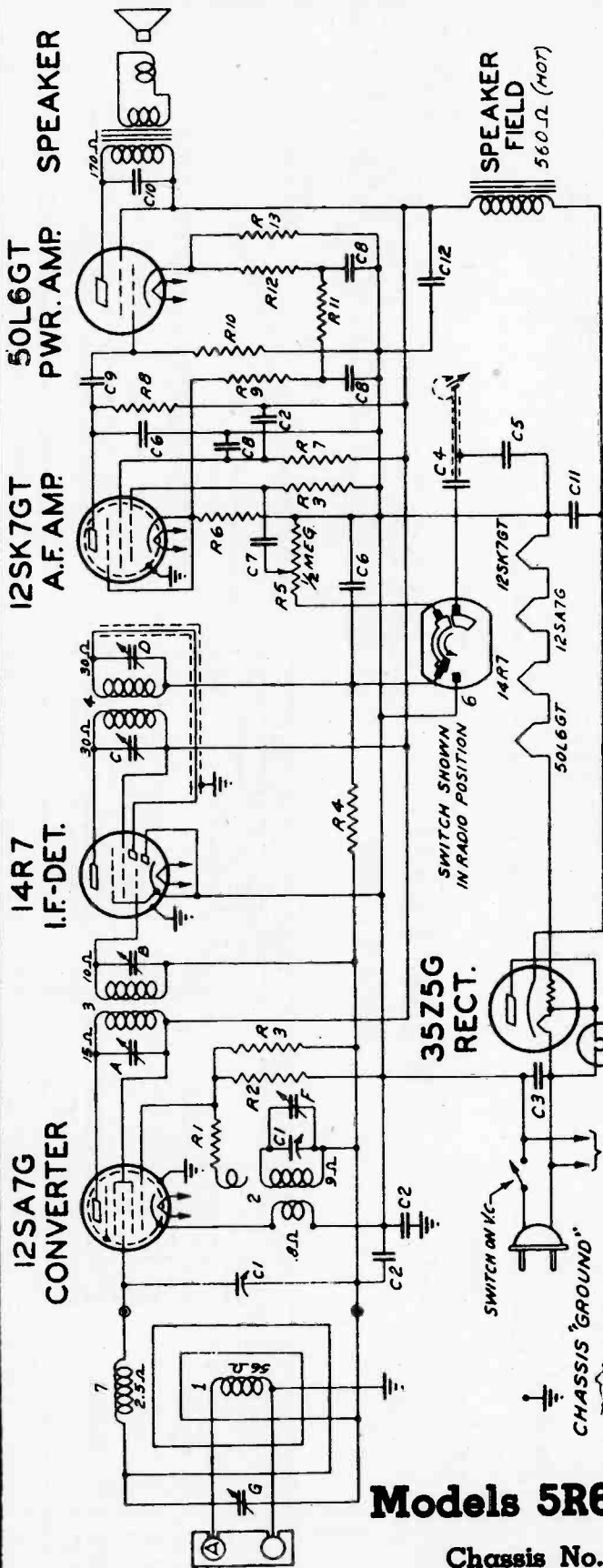


All voltages measured from point indicated to Neg. B. using 20000 ohm per volt meter.

RECT. 117Z6G

COMPILED BY M. N. BEITMAN, SUPREME PUBLICATIONS

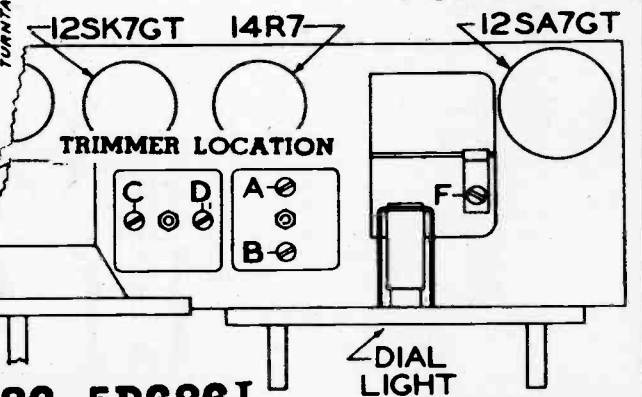
MANUAL OF 1942 MOST POPULAR SERVICE DIAGRAMS



DIAG. NO.	PART NO.	DESCRIPTION	DIAG. NO.	PART NO.	DESCRIPTION
C1	22-1842	TWO-GANG VARIABLE	R3	63-976	15 MEGOHM
C2	22-829	.05 MFD.	R4	63-600	2.2 MEGOHM
C3	22-1017	.05 MFD.	R5	63-112	VOLUME CONTROL
C4	22-189	.00075 MFD.	R6	63-634	820 OHM
C5	22-327	.02 MFD.	R7	63-778	470M OHM
C6	22-953	.0002 MFD.	R8	63-445	100M OHM
C7	22-492	.002 MFD.	R9	63-439	2700 OHM
C8	22-827	.1 MFD.	R10	63-597	470 M OHM
C9	22-188	.02 MFD.	R11	63-637	4700 OHM
C10	22-182	.01 MFD.	R12	63-639	6800 OHM
C11	22-1026	(20MFD. ELECTROLYTIC) 150V	R13	63-105	40 OHM WIREWOUND
C12		40MFD.			
R1	63-579	220 OHM	S9879		WAVEMAGNET
R2	63-589	10M OHM	S9470		OSCILLATOR COIL ASSEMBLY

DIAG. NO.	PART NO.	DESCRIPTION
3	95-811	1E1 I.F. TRANSFORMER
4	95-812	2A2 I.F. TRANSFORMER
5	100-67	DIAL LIGHT 6.3V .15A.
6	85-282	PHONO-RADIO SWITCH
7	370072	LOOP LOADING COIL
A		1E1 I.F. TRANS. PRI
B		1E1 I.F. - SEC
C		2E1 I.F. - PRI
D		2E1 I.F. - SEC
F		BROADCAST OSC. (ON GANG)
G	28-1226	BROADCAST ANTENNA

Operator	Connect Oscillator to	Dummy Antenna	Input Signal Frequency	Band	Set Dial At	Trimmers	Purpose
1	Converter Grid	.5 mfd.	455 Kc.	BC	1600 Kc.	A, B, C, D	Align I.F.
2	One Turn Loop Coupled Loosely to Wave Magnet	—	1600 Kc.	"	1600 Kc.	F	Set to Scale
3	"	—	1400 Kc.	"	1400 Kc.	G. Located at Back of Wave Magnet	Align Ant.

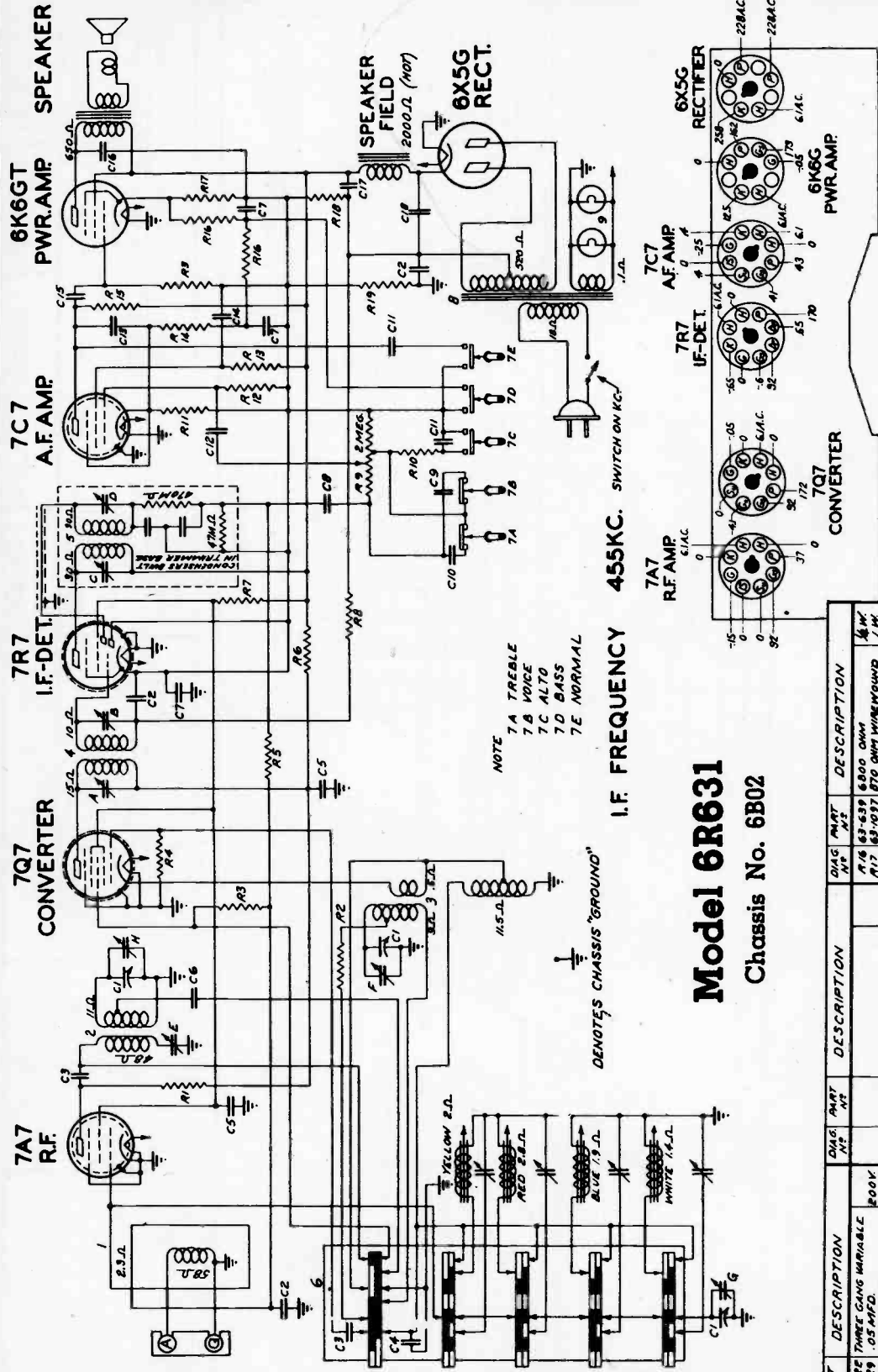


Models 5R686-5R686J

Chassis No. 5B13 Phono.

COMPILED BY M. N. BEITMAN, SUPREME PUBLICATIONS

MANUAL OF 1942 MOST POPULAR SERVICE DIAGRAMS

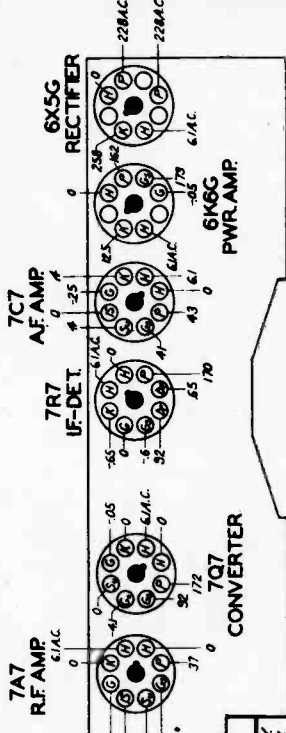


NOTE
7A TREBLE
7B VOICE
7C ALTO
7D BASS
7E NORMAL

I.F. FREQUENCY 455KC.

DENOTES CHASSIS "GROUND"

SOCKET VOLTAGES—BOTTOM VIEW
All voltages measured with a 20,000 ohm per volt meter from Neg. B to socket contact indicated.
All voltages are positive D.C. unless marked otherwise.



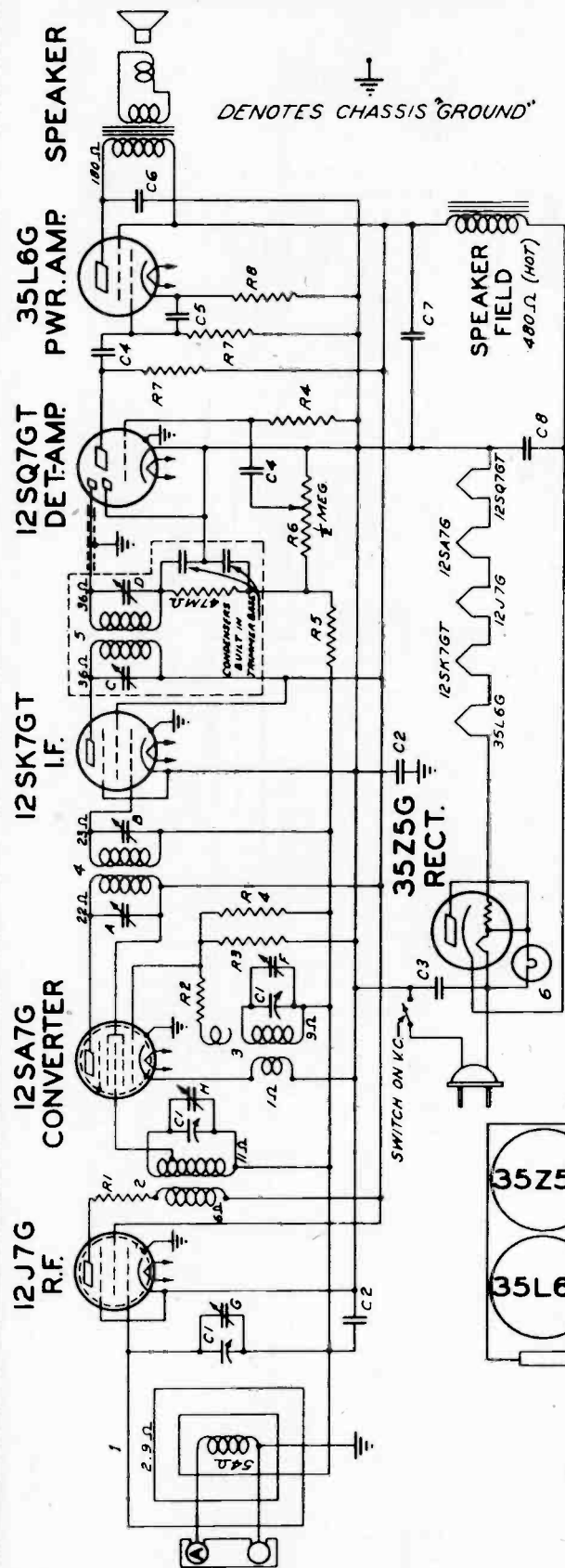
Model 6R631 Chassis No. 6B02

Model 6R631

Chassis No. 6B02
COMPILED BY M. N. BEITMAN, SUPREME PUBLICATIONS

DIAG. NO.	PART NO.	DESCRIPTION	DIAG. NO.	PART NO.	DESCRIPTION
R1	63-51	5M OHM	1	5R65	5R65 MAGNET ASSEMBLY
R2	63-579	470 M OHM	2	3960	OSCILLATOR COIL
R3	63-591	22 M OHM	3	3961	OSCILLATOR COIL
R4	63-600	2.2 MEG OHM	4	95-823	1B7 I.F. TRANSFORMER
R5	63-605	1000 OHM	5	95-825	12Z I.F.
R6	63-1193	560 OHM	6	85-280	AUTOMATIC TUNING SWITCH
R7	63-601	3.3 MEG OHM	7	85-277	10K 50-60V TONE CONTROL SWITCH
R8	63-1245	VOLUME CONTROL	8	95-824	PWR. TRANS. 171K 50-60V
R9	63-375	150M OHM	9	100-56	6.3K 25A DIAL LIGHT
R10	63-632	560 OHM			
R11	63-976	15 MEG OHM			
R12	63-981	50 M OHM			
R13	63-981	50 M OHM			
R14	63-240	100 M OHM			
R15	63-240	100 M OHM			
C1	2R5	TUNING GANG VARIABLE			
C2	65 MFD.	65 MFD.			
C3	0.001 MFD.	COMPENSATING COND.			
C4	0.001 MFD.	COMPENSATING COND.			
C5	0.05 MFD.	0.05 MFD.			
C6	0.02 MFD.	0.02 MFD.			
C7	0.01 MFD.	0.01 MFD.			
C8	0.005 MFD.	0.005 MFD.			
C9	0.005 MFD.	0.005 MFD.			
C10	0.005 MFD.	0.005 MFD.			
C11	0.005 MFD.	0.005 MFD.			
C12	0.005 MFD.	0.005 MFD.			
C13	0.005 MFD.	0.005 MFD.			
C14	0.005 MFD.	0.005 MFD.			
C15	0.005 MFD.	0.005 MFD.			
C16	0.005 MFD.	0.005 MFD.			
C17	0.005 MFD.	0.005 MFD.			
C18	0.005 MFD.	0.005 MFD.			
C19	0.005 MFD.	0.005 MFD.			
C20	0.005 MFD.	0.005 MFD.			

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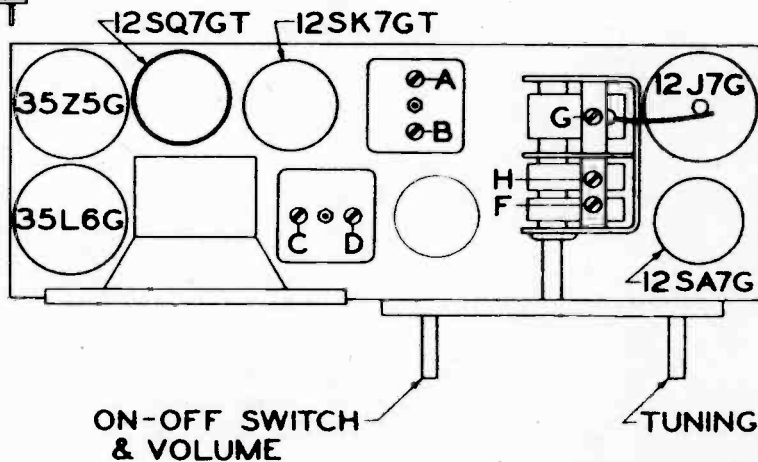


DIAG. NO.	PART NO.	DESCRIPTION	DIAG. NO.	PART NO.	DESCRIPTION
C1	22-1201	THREE-GANG VARIABLE	R3	63-389	10M OHM
C2	22-859	.05 MFD.	R4	63-376	15 MEGOHM
C3	22-1017	.05 MFD.	R5	63-600	2.2 MEGOHM
C4	22-843	.01 MFD.	R6	63-1112	VOLUME CONTROL
C5	22-854	.0005 MFD.	R7	63-597	470 OHM OHM
C6	22-1049	.09 MFD.	R8	63-686	150 OHM WIREWOUND
C7	22-1014	20 MFD. ELECTROLYTIC			
C8	22-1014	10 MFD. ELECTROLYTIC			
A1	63-590	15M OHM	1	59576	MAVEMAGNET ASSEMBLY
A2	63-579	220 OHM	5	59570	DETECTOR COIL ASSEMBLY
			5	59571	OSCILLATOR COIL ASSEMBLY
			4	95-808	1 ET. I.F. TRANS.
			5	95-809	25B I.F. TRANS.
			6	100-67	PILOT LIGHT 6.3 V. .15A.
			A		1 ET. I.F. TRANS. PRI.
			B		1 ET. I.F. TRANS. SEC.
			C		25B I.F. TRANS. PRI.
			D		25B I.F. TRANS. SEC.
			F		BROADCAST OSC. (ON GANG)
			G		BROADCAST ANT. (ON GANG)
			H		BROADCAST DET. (ON GANG)

Models 6D612-6D612W-6D622-6D628

Zenith Radio Chassis No. 6B04

Operation	Connect Oscillator to	Dummy Antenna	Input Signal Frequency	Band	Set Dial A1	Trimmers
1	Converter Grid	.5 mfd.	455 Kc.	BC	1600 Kc.	A, B, C, D
2	Single Turn Loop Coupled Loosely to Wave Magnet	.5 mfd.	1600 Kc.	"	1600 Kc.	F
3		.5 mfd.	1400 Kc.	"	1400 Kc.	H, G



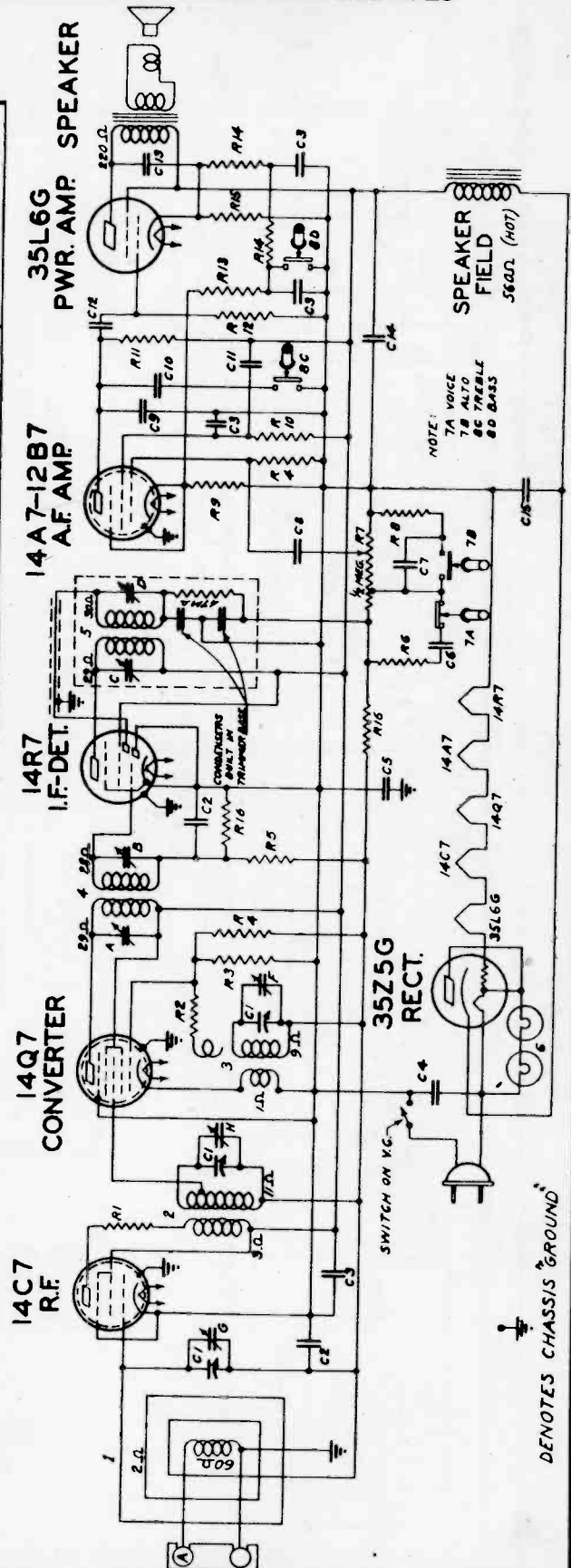
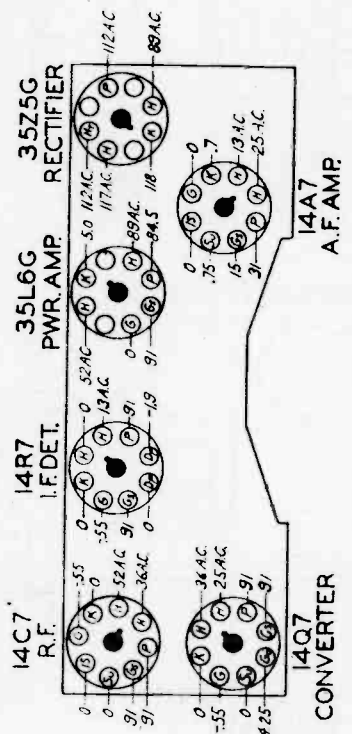
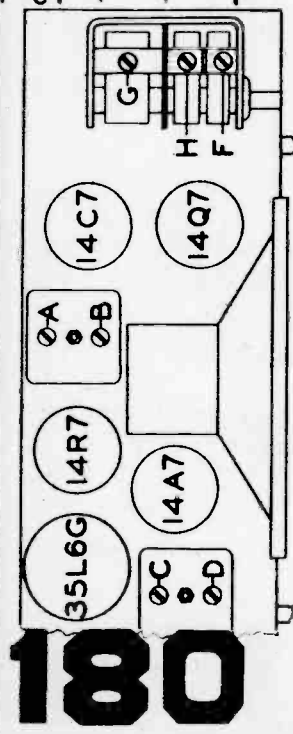
MANUAL OF 1942 MOST POPULAR SERVICE DIAGRAMS

Operation	Connect Oscillator to	Dummy Antenna	Input Signal Frequency	Band	Set Dial At	Trimmers
1	Converter Grid	.5 mfd.	455 Kc.	BC	600 Kc.	A, B, C, D
2	1 turn loop made from generator or Radex Loop	—	1600 Kc.	BC	1600 Kc.	F
3	—	—	1400 Kc.	BC	1400 Kc.	H, G

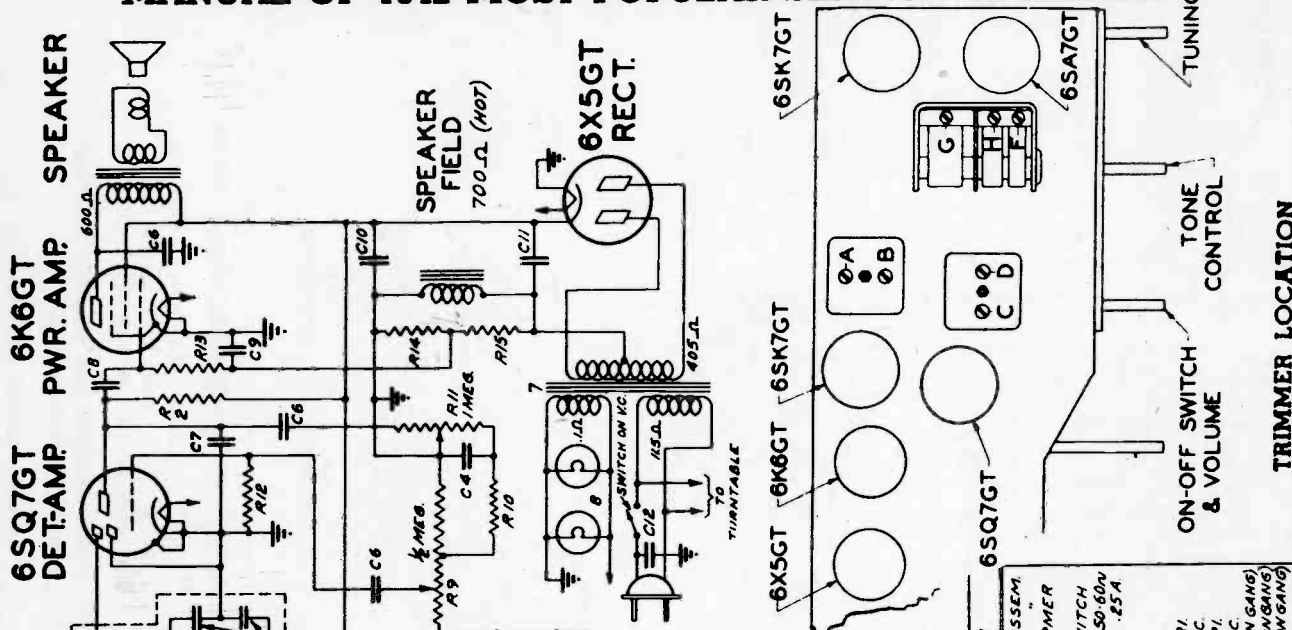
Models 6D615-6D615W - 6D623-6D630

Chassis No. 6B05

NAME	PART NO.	DESCRIPTION	QTY.	DESCRIPTION	QTY.
C1	12-1201	THREE-GANG VARIABLE	1	R1	63-590 15M OHM
C2	12-229	.02 MFD.	1	R2	63-578 250 OHM
C3	12-227	.1 MFD.	1	R3	63-598 10M OHM
C4	12-1917	.05 MFD.	1	R4	63-493 15 MEGOHM
C5	12-127	.01 MFD.	1	R5	63-722 2.2 MEGOHM
C6	12-326	.03 MFD.	1	R6	63-325 150M OHM
C7	12-327	.02 MFD.	1	R7	63-1233 VOLUME CONTROL
C8	12-243	.01 MFD.	1	R8	63-591 22M OHM
C9	12-254	.0005 MFD.	1	R9	63-634 220 OHM
C10	12-267	.001 MFD.	1	R10	63-639 470M OHM
C11	12-1218	.05 MFD.	1	R11	63-260 180M OHM
C12	12-119	.05 MFD.	1	R12	63-439 270M OHM
C13	12-184	150 MFD. ELECTROLYTIC	1	R13	63-1271 150 OHM
				R14	63-400 5.2 MEGOHM



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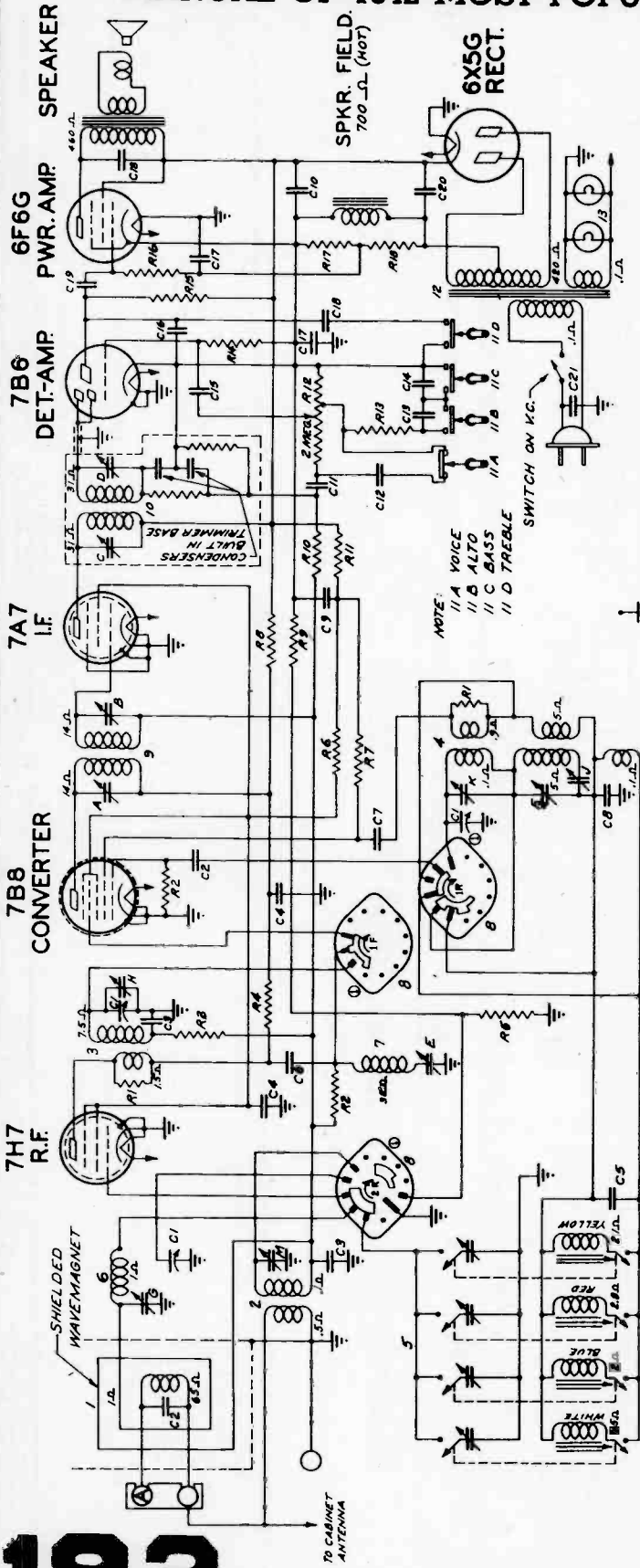
Operation	Connect Oscillator to	Dummy Antenna	Input Signal Frequency	Band	Set Dial At	Trimmers
1	Converter Grid	.5 mid.	455 Kc.	BC	600 Kc.	A, B, C, D
2	Single Turn Loop Coupled Loosely	.5 mid.	1600 Kc.	"	1600 Kc.	F
3	Wave Magnet	.5 mid.	1400 Kc.	"	1400 Kc.	H, G

Models 6R683-6R684-6R687R* -6R688

Chassis No. 6B06 Phono.

DIAG. PART No.	DESCRIPTION	DIAG. PART No.	DESCRIPTION	DIAG. PART No.	DESCRIPTION
C1	22-1241 THREE GANG VARIABLE	R3	63-579 220 OHM	2	59834 DETECTOR COIL ASSEM.
C2	22-828 .05 MFD.	R4	63-673 82 MEGOHM	3	59835 OSCILLATOR "
C3	22-829 .05 MFD.	R5	63-589 10M OHM	4	95-841 I.F. TRANSFORMER
C4	22-327 .02 MFD.	R6	63-605 1000 OHM	5	95-842 259 I.F.
C5	22-887 .001 MFD.	R7	63-600 2.2 MEGOHM	6	95-297 PHONO-RADIO SWITCH
C6	22-448 .004 MFD.	R8	63-1058 22M OHM	7	95-840 PHONO TRANS. 117V. 50-60W
C7	22-854 .0005 MFD.	R9	63-1246 VOLUME CONTROL	8	100-36 DIAL LIGHT 6.3 V. .25A
C8	22-830 .02 MFD.	R10	63-591 22 M OHM		
C9	22-138 .2 MFD.	R11	63-1247 TONE CONTROL		
C10	22-719 .16 MFD. ELECTROLYTIC	R12	63-976 15 MEGOHM	A	1ST I.F. TRANS. PRI
C11	22-1036 14 MFD.	R13	63-597 470M OHM	B	1ST I.F. " SEC.
C12	22-171 .005 MFD.	R14	63-655 280 M OHM	C	2ND I.F. " PRI
		R15	63-656 270 M OHM	D	2ND I.F. " SEC.
R1	63-1071 10M OHM			E	BROADCAST OSC. (ON GANG)
R2	63-296 220M OHM			F	BROADCAST ANT. (ON GANG)
				G	BROADCAST DET. (ON GANG)
				H	

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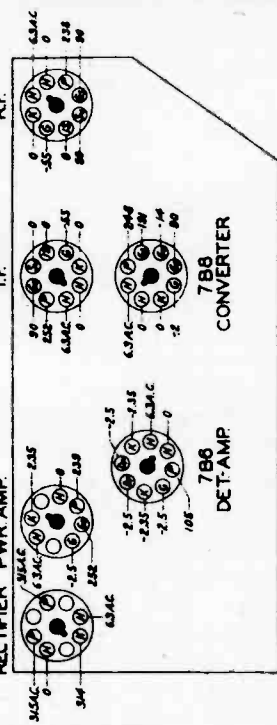
NOTE:
 11 A VOICE
 11 B ALTO
 11 C BASS
 11 D TREBLE

BAND SWITCH SHOWN IN AUTOMATIC POSITION

I.F. FREQUENCY 455KC.

DENOTES CHASSIS "GROUND"

DIAG. NO.	PART NO.	DESCRIPTION	DIAG. NO.	PART NO.	DESCRIPTION	DIAG. NO.	PART NO.	DESCRIPTION
C1	22-1205	TRIPLE GANG VARIABLE	R 16	63-597	470M OHM	1	1	WAVEMAGNET ASSEMBLY
C2	22-489	50 MFD	R 17	63-658	390M OHM	2	2	ANTENNA COIL ASSEMBLY
C3	22-858	.05 MFD	R 18	63-660	360M OHM	3	3	OSCILLATOR
C4	22-558	COMPENSATING COND.	4	4	4	4	4	OSCILLATOR
C5	22-162	.0001 MFD	5	5	5	5	5	AUTOMATIC TUNING
C6	22-162	.0001 MFD	6	6	6	6	6	LOOP LOADING COIL
C7	22-162	.00025 MFD	7	7	7	7	7	WAVE TRAP COIL ASSEMBLY
C8	22-162	.0005 MFD	8	8	8	8	8	50-270 BAND SELECTOR SWITCH
C9	22-162	.0005 MFD	9	9	9	9	9	95-700 1/2 I.F. TRANSFORMER
C10	22-162	.0005 MFD	10	10	10	10	10	95-709 2 1/2 I.F.
C11	22-188	.02 MFD	11	11	11	11	11	95-743 TONE CONTROL SM. ASSEM.
C12	22-470	.00015 MFD	12	12	12	12	12	95-770 PWR TRANS. 1/2K 50-60 W
C13	22-482	.002 MFD	13	13	13	13	13	100-36 DML LIGHT 6.3 K .25A
C14	22-492	.005 MFD						
C15	22-654	.0005 MFD						
C16	22-654	.0005 MFD						
C17	22-448	.004 MFD						
C18	22-448	.004 MFD						
C19	22-480	.02 MFD						



SOCKET VOLTAGES—BOTTOM VIEW

All voltages measured with a 20,000 ohm per volt meter from chassis to socket contact indicated.

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

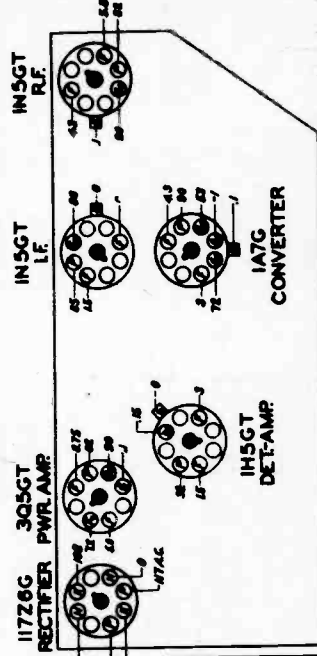
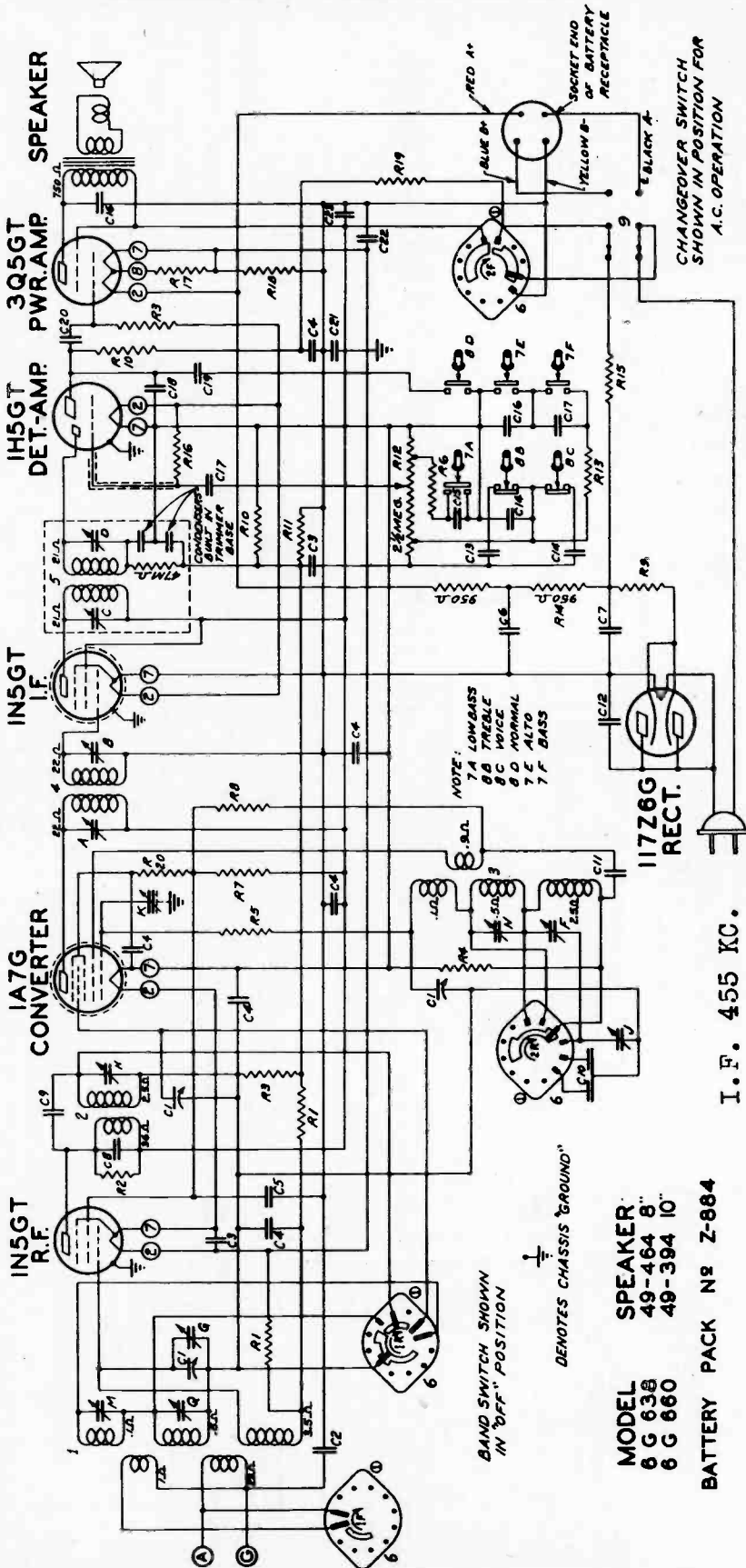
Volume control full on.

Models 6S632-6S646-6S656

Chassis No. 6B08

Zenith Radio

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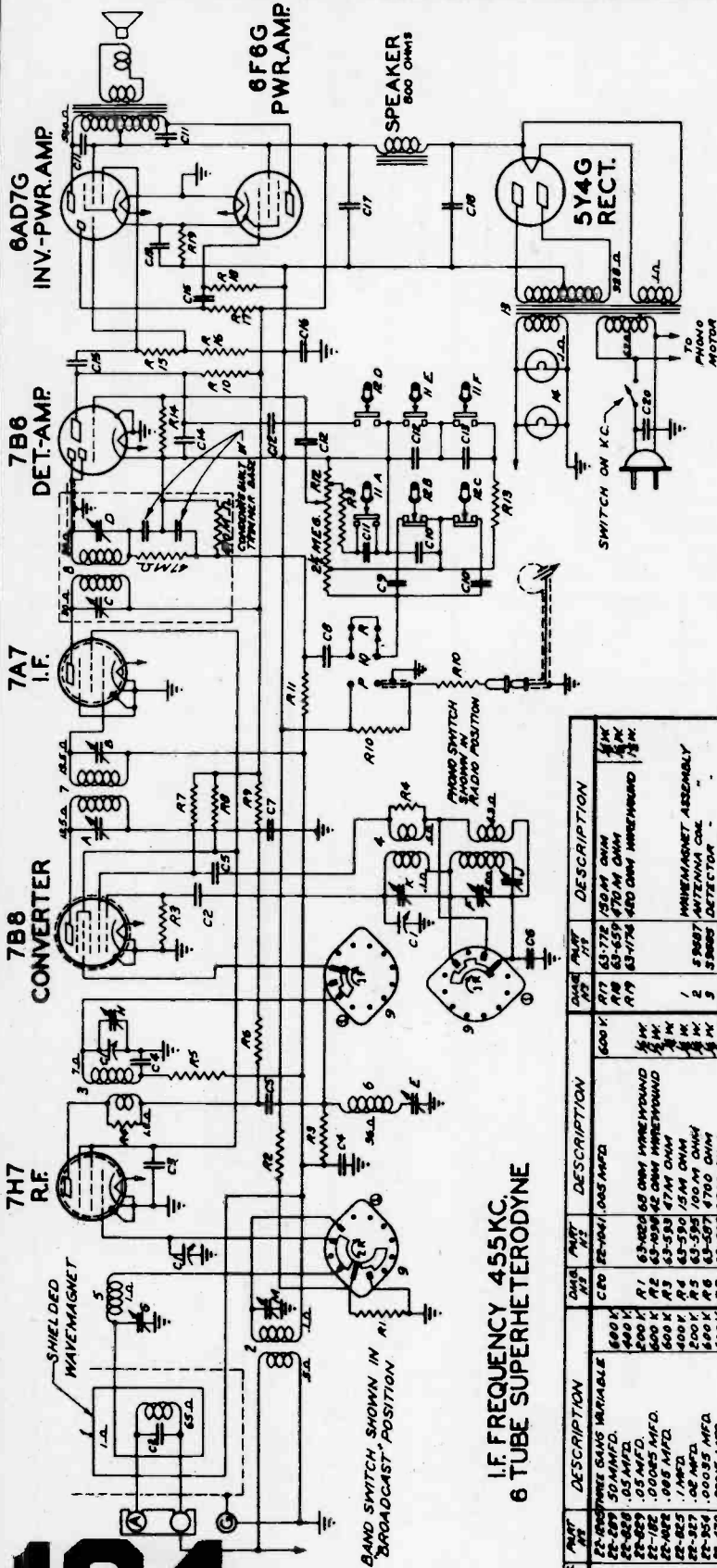


Models 6G638-6G660

Zenith Radio Chassis No. 6B09

QWG NO.	QWZ NO.	DESCRIPTION	QWG PART NO.	DESCRIPTION	QWZ PART NO.	DESCRIPTION
C1	R2-17	THREE GANG VARIABLE	600 K	.01 MFD.	R19	68 M OHM
C2	R2-18	.01 MFD.	100 Y	100 Y	R20	22 M OHM
C3	R2-19	.01 MFD.	100 Y	100 Y	R21	1000 OHM
C4	R2-20	.05 MFD.	150 K	150 K	R22	15 MEG OHM
C5	R2-21	50 MFD. ELECTROLYTIC	150 K	150 K	R23	330 OHM
C6	R2-22	50 MFD. ELECTROLYTIC	150 K	150 K	R24	870 OHM WIREWOUND
C7	R2-23	50 MFD.	150 K	150 K	R25	470 M OHM
C8	R2-24	50 MFD.	150 K	150 K	R26	22 M OHM
C9	R2-25	50 MFD.	150 K	150 K	R27	22 M OHM
C10	R2-26	50 MFD.	150 K	150 K	R28	22 M OHM
C11	R2-27	50 MFD.	150 K	150 K	R29	22 M OHM
C12	R2-28	50 MFD.	150 K	150 K	R30	22 M OHM
C13	R2-29	50 MFD.	150 K	150 K	R31	22 M OHM
C14	R2-30	50 MFD.	150 K	150 K	R32	22 M OHM
C15	R2-31	50 MFD.	150 K	150 K	R33	22 M OHM
C16	R2-32	50 MFD.	150 K	150 K	R34	22 M OHM
C17	R2-33	50 MFD.	150 K	150 K	R35	22 M OHM
C18	R2-34	50 MFD.	150 K	150 K	R36	22 M OHM
C19	R2-35	50 MFD.	150 K	150 K	R37	22 M OHM
C20	R2-36	50 MFD.	150 K	150 K	R38	22 M OHM
C21	R2-37	50 MFD.	150 K	150 K	R39	22 M OHM
C22	R2-38	50 MFD.	150 K	150 K	R40	22 M OHM
C23	R2-39	50 MFD.	150 K	150 K	R41	22 M OHM
C24	R2-40	50 MFD.	150 K	150 K	R42	22 M OHM
C25	R2-41	50 MFD.	150 K	150 K	R43	22 M OHM
C26	R2-42	50 MFD.	150 K	150 K	R44	22 M OHM
C27	R2-43	50 MFD.	150 K	150 K	R45	22 M OHM
C28	R2-44	50 MFD.	150 K	150 K	R46	22 M OHM
C29	R2-45	50 MFD.	150 K	150 K	R47	22 M OHM
C30	R2-46	50 MFD.	150 K	150 K	R48	22 M OHM
C31	R2-47	50 MFD.	150 K	150 K	R49	22 M OHM
C32	R2-48	50 MFD.	150 K	150 K	R50	22 M OHM
C33	R2-49	50 MFD.	150 K	150 K	R51	22 M OHM
C34	R2-50	50 MFD.	150 K	150 K	R52	22 M OHM
C35	R2-51	50 MFD.	150 K	150 K	R53	22 M OHM
C36	R2-52	50 MFD.	150 K	150 K	R54	22 M OHM
C37	R2-53	50 MFD.	150 K	150 K	R55	22 M OHM
C38	R2-54	50 MFD.	150 K	150 K	R56	22 M OHM
C39	R2-55	50 MFD.	150 K	150 K	R57	22 M OHM
C40	R2-56	50 MFD.	150 K	150 K	R58	22 M OHM
C41	R2-57	50 MFD.	150 K	150 K	R59	22 M OHM
C42	R2-58	50 MFD.	150 K	150 K	R60	22 M OHM
C43	R2-59	50 MFD.	150 K	150 K	R61	22 M OHM
C44	R2-60	50 MFD.	150 K	150 K	R62	22 M OHM
C45	R2-61	50 MFD.	150 K	150 K	R63	22 M OHM
C46	R2-62	50 MFD.	150 K	150 K	R64	22 M OHM
C47	R2-63	50 MFD.	150 K	150 K	R65	22 M OHM
C48	R2-64	50 MFD.	150 K	150 K	R66	22 M OHM
C49	R2-65	50 MFD.	150 K	150 K	R67	22 M OHM
C50	R2-66	50 MFD.	150 K	150 K	R68	22 M OHM
C51	R2-67	50 MFD.	150 K	150 K	R69	22 M OHM
C52	R2-68	50 MFD.	150 K	150 K	R70	22 M OHM
C53	R2-69	50 MFD.	150 K	150 K	R71	22 M OHM
C54	R2-70	50 MFD.	150 K	150 K	R72	22 M OHM
C55	R2-71	50 MFD.	150 K	150 K	R73	22 M OHM
C56	R2-72	50 MFD.	150 K	150 K	R74	22 M OHM
C57	R2-73	50 MFD.	150 K	150 K	R75	22 M OHM
C58	R2-74	50 MFD.	150 K	150 K	R76	22 M OHM
C59	R2-75	50 MFD.	150 K	150 K	R77	22 M OHM
C60	R2-76	50 MFD.	150 K	150 K	R78	22 M OHM
C61	R2-77	50 MFD.	150 K	150 K	R79	22 M OHM
C62	R2-78	50 MFD.	150 K	150 K	R80	22 M OHM
C63	R2-79	50 MFD.	150 K	150 K	R81	22 M OHM
C64	R2-80	50 MFD.	150 K	150 K	R82	22 M OHM
C65	R2-81	50 MFD.	150 K	150 K	R83	22 M OHM
C66	R2-82	50 MFD.	150 K	150 K	R84	22 M OHM
C67	R2-83	50 MFD.	150 K	150 K	R85	22 M OHM
C68	R2-84	50 MFD.	150 K	150 K	R86	22 M OHM
C69	R2-85	50 MFD.	150 K	150 K	R87	22 M OHM
C70	R2-86	50 MFD.	150 K	150 K	R88	22 M OHM
C71	R2-87	50 MFD.	150 K	150 K	R89	22 M OHM
C72	R2-88	50 MFD.	150 K	150 K	R90	22 M OHM
C73	R2-89	50 MFD.	150 K	150 K	R91	22 M OHM
C74	R2-90	50 MFD.	150 K	150 K	R92	22 M OHM
C75	R2-91	50 MFD.	150 K	150 K	R93	22 M OHM
C76	R2-92	50 MFD.	150 K	150 K	R94	22 M OHM
C77	R2-93	50 MFD.	150 K	150 K	R95	22 M OHM
C78	R2-94	50 MFD.	150 K	150 K	R96	22 M OHM
C79	R2-95	50 MFD.	150 K	150 K	R97	22 M OHM
C80	R2-96	50 MFD.	150 K	150 K	R98	22 M OHM
C81	R2-97	50 MFD.	150 K	150 K	R99	22 M OHM
C82	R2-98	50 MFD.	150 K	150 K	R100	22 M OHM

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I.F. FREQUENCY 455 Kc.
6 TUBE SUPERHETERODYNE

Models 7S681-7S682-7S685

Chassis No. 7B02 Phono.

PART NO.	QTY.	DESCRIPTION	QTY.	DESCRIPTION	QTY.	DESCRIPTION
C1	22-500MRE GANG VARIABLE	600 V.	R17	63-170 450 M OHM	1	ANTENNA COIL
C2	RE-289 50 MFD.	500 V.	R18	63-459 470 M OHM	1	MINI-MAGNET ASSEMBLY
C3	RE-289 .05 MFD.	500 V.	R19	63-176 450 M OHM WIREWOUND	1	OSCILLATOR
C4	RE-289 .05 MFD.	500 V.	1	53887	1	53887 ANTENNA COIL
C5	RE-182 .00045 MFD.	600 V.	2	53888	2	53888 LOOP LOADING COIL
C6	RE-182 .0008 MFD.	600 V.	3	53889	3	53889 MINIP TRAP COIL ASSEMBLY
C7	RE-182 .0016 MFD.	600 V.	4	53890	4	53890 I.F. TRANSFORMER
C8	RE-182 .0032 MFD.	600 V.	5	53891	5	53891 BAND SELECTOR SWITCH
C9	RE-354 .00055 MFD.	600 V.	6	53892	6	53892 PHONO-ALONG SWITCH
C10	RE-254 .0008 MFD.	600 V.	7	53893	7	53893 I.C. SWITCH ASSEMBLY (LEFT)
C11	RE-254 .0016 MFD.	600 V.	8	53894	8	53894 I.C. SWITCH ASSEMBLY (RIGHT)
C12	RE-448 .004 MFD.	600 V.	9	53895	9	53895 PHONO-ALONG SWITCH
C13	RE-498 .008 MFD.	600 V.	10	53896	10	53896 I.C. SWITCH ASSEMBLY
C14	RE-284 .0085 MFD.	600 V.	11	53897	11	53897 PHONO-ALONG SWITCH
C15	RE-284 .017 MFD.	600 V.	12	53898	12	53898 I.C. SWITCH ASSEMBLY
C16	RE-284 .034 MFD.	600 V.	13	53899	13	53899 PHONO-ALONG SWITCH
C17	RE-187 .00017 MFD.	480 V.				
C18	RE-187 .00034 MFD.	480 V.				
C19	RE-187 .00068 MFD.	480 V.				
C20	RE-187 .00136 MFD.	480 V.				
C21	RE-187 .00272 MFD.	480 V.				
C22	RE-187 .00544 MFD.	480 V.				
C23	RE-187 .01088 MFD.	480 V.				
C24	RE-187 .02176 MFD.	480 V.				
C25	RE-187 .04352 MFD.	480 V.				
C26	RE-187 .08704 MFD.	480 V.				
C27	RE-187 .17408 MFD.	480 V.				
C28	RE-187 .34816 MFD.	480 V.				
C29	RE-187 .69632 MFD.	480 V.				
C30	RE-187 1.39264 MFD.	480 V.				
C31	RE-187 2.78528 MFD.	480 V.				
C32	RE-187 5.57056 MFD.	480 V.				
C33	RE-187 11.14112 MFD.	480 V.				
C34	RE-187 22.28224 MFD.	480 V.				
C35	RE-187 44.56448 MFD.	480 V.				
C36	RE-187 89.12896 MFD.	480 V.				
C37	RE-187 178.25792 MFD.	480 V.				
C38	RE-187 356.51584 MFD.	480 V.				
C39	RE-187 713.03168 MFD.	480 V.				
C40	RE-187 1426.06336 MFD.	480 V.				
C41	RE-187 2852.12672 MFD.	480 V.				
C42	RE-187 5704.25344 MFD.	480 V.				
C43	RE-187 11408.50688 MFD.	480 V.				
C44	RE-187 22817.01376 MFD.	480 V.				
C45	RE-187 45634.02752 MFD.	480 V.				
C46	RE-187 91268.05504 MFD.	480 V.				
C47	RE-187 182536.11008 MFD.	480 V.				
C48	RE-187 365072.22016 MFD.	480 V.				
C49	RE-187 730144.44032 MFD.	480 V.				
C50	RE-187 1460288.88064 MFD.	480 V.				
C51	RE-187 2920577.76128 MFD.	480 V.				
C52	RE-187 5841155.52256 MFD.	480 V.				
C53	RE-187 11682311.04512 MFD.	480 V.				
C54	RE-187 23364622.09024 MFD.	480 V.				
C55	RE-187 46729244.18048 MFD.	480 V.				
C56	RE-187 93458488.36096 MFD.	480 V.				
C57	RE-187 186916976.72192 MFD.	480 V.				
C58	RE-187 373833953.44384 MFD.	480 V.				
C59	RE-187 747667906.88768 MFD.	480 V.				
C60	RE-187 1495335813.77536 MFD.	480 V.				
C61	RE-187 2990671627.55072 MFD.	480 V.				
C62	RE-187 5981343255.10144 MFD.	480 V.				
C63	RE-187 11962686509.20288 MFD.	480 V.				
C64	RE-187 23925373018.40576 MFD.	480 V.				
C65	RE-187 47850746036.81152 MFD.	480 V.				
C66	RE-187 95701492073.62304 MFD.	480 V.				
C67	RE-187 191402984147.24608 MFD.	480 V.				
C68	RE-187 382805968294.49216 MFD.	480 V.				
C69	RE-187 765611936588.98432 MFD.	480 V.				
C70	RE-187 1531223873177.96864 MFD.	480 V.				
C71	RE-187 3062447746355.93728 MFD.	480 V.				
C72	RE-187 6124895492711.87456 MFD.	480 V.				
C73	RE-187 12249790985423.74912 MFD.	480 V.				
C74	RE-187 24499581970847.49824 MFD.	480 V.				
C75	RE-187 48999163941694.99648 MFD.	480 V.				
C76	RE-187 97998327883389.99296 MFD.	480 V.				
C77	RE-187 195996657766779.98592 MFD.	480 V.				
C78	RE-187 391993315533559.97184 MFD.	480 V.				
C79	RE-187 783986631067119.94368 MFD.	480 V.				
C80	RE-187 1567973262134239.88736 MFD.	480 V.				
C81	RE-187 3135946524268479.77472 MFD.	480 V.				
C82	RE-187 6271893048536959.54944 MFD.	480 V.				
C83	RE-187 12543786097073919.09888 MFD.	480 V.				
C84	RE-187 25087572194147838.19776 MFD.	480 V.				
C85	RE-187 50175144388295676.39552 MFD.	480 V.				
C86	RE-187 100350288776591352.79104 MFD.	480 V.				
C87	RE-187 200700577553182705.58208 MFD.	480 V.				
C88	RE-187 401401155106365411.16416 MFD.	480 V.				
C89	RE-187 802802310212730822.32832 MFD.	480 V.				
C90	RE-187 1605604620425461644.65664 MFD.	480 V.				
C91	RE-187 3211209240850923289.31328 MFD.	480 V.				
C92	RE-187 6422418481701846578.62656 MFD.	480 V.				
C93	RE-187 12844836963403693157.25312 MFD.	480 V.				
C94	RE-187 25689673926807386314.50624 MFD.	480 V.				
C95	RE-187 51379347853614772629.01248 MFD.	480 V.				
C96	RE-187 102758695707229545258.02496 MFD.	480 V.				
C97	RE-187 205517391414459090516.04992 MFD.	480 V.				
C98	RE-187 411034782828918181032.09984 MFD.	480 V.				
C99	RE-187 822069565657836362064.19968 MFD.	480 V.				
C100	RE-187 1644139111315672744128.39936 MFD.	480 V.				

All voltages measured with a 20,000 ohm per volt meter from chassis to socket contact indicated.

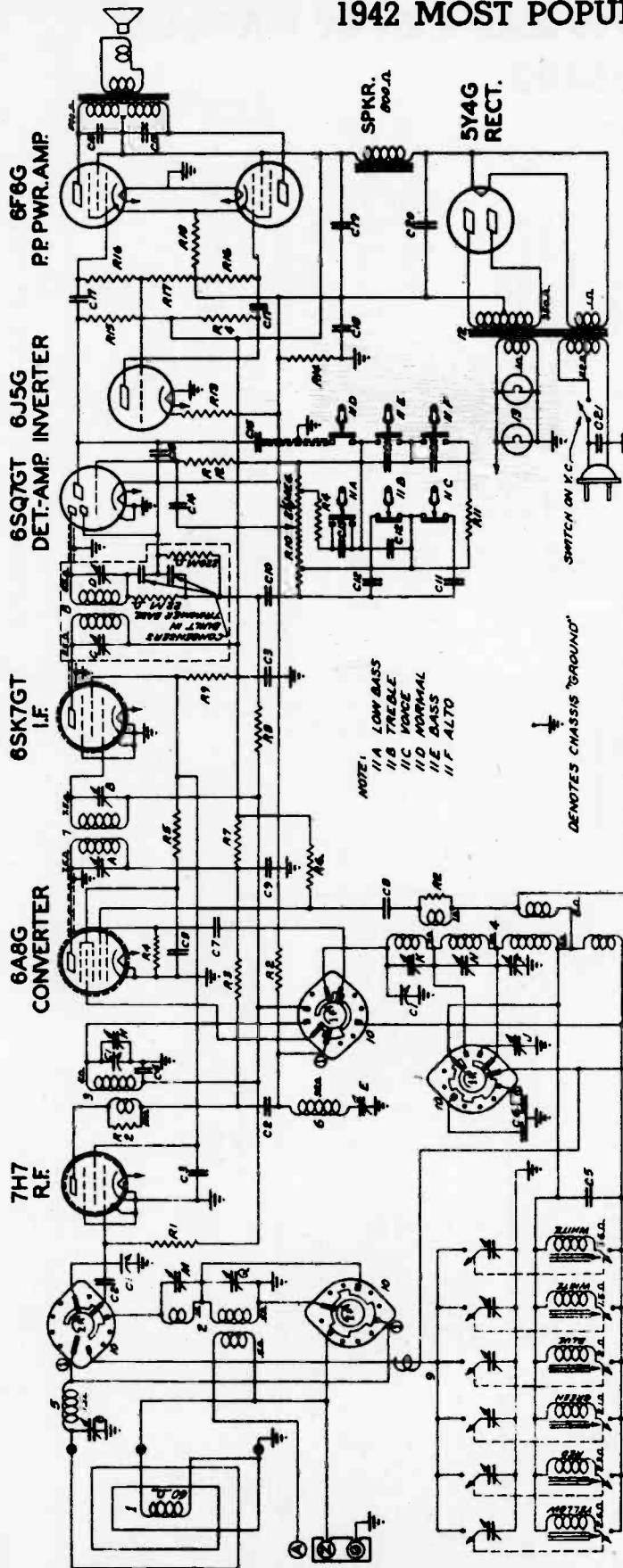
All voltages are positive D.C. unless marked otherwise.

Volume control full on.
Line voltage 117 A.C.
Power consumption 80+30 watts.
Power output 8.4 watts.
Tuning Range
540 Kc. to 1620 Kc.
5400 Kc.—18300 Kc.

Stage Gains
Bc. and I.F.
Ant. to R.F. grid 7.1× at 1000 Kc.
R.F. grid to conv. grid 5.6× at 1000 Kc.
Conv. grid to I.F. grid 73× at 455 Kc.
Overall audio 1600× at 1 watt 400 cycles.

Zenith Radio

1942 MOST POPULAR SERVICE DIAGRAMS



Zenith Radio

I.F. FREQUENCY 455KC.
8 TUBE SUPERHETERODYNE

BAND SWITCH SHOWN IN "POLICE" POSITION

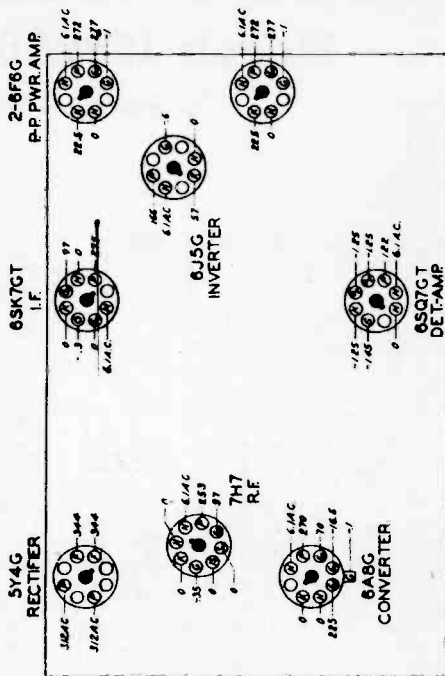
DATE	PART NO.	DESCRIPTION	DATE	PART NO.	DESCRIPTION
C1	62-718	THREE GANG VARIABLE	CE1	22-MH.	.005 MFD.
C2	62-719	500K	A1	63-600	2.2 MEG OHM
C3	62-823	.05 MFD.	A2	63-570	15 M OHM
C4	62-823	.05 MFD.	A3	63-581	6700 OHM
C5	62-823	.05 MFD.	A4	63-593	6700 OHM
C6	62-930	DUAL PADDER	A5	63-601	6700 OHM
C7	62-87	.05 MFD.	A6	63-602	6700 OHM
C8	62-182	.0005 MFD.	A7	63-605	1000 OHM
C9	62-357	.02 MFD.	A8	63-671	1 MEG OHM
C10	62-259	.0005 MFD.	A9	63-1059	3900 OHM
C11	62-470	.0005 MFD.	A10	63-1053	VOLUME CONTROL
C12	62-259	.0005 MFD.	A11	63-716	68M OHM
C13	62-495	.004 MFD.	A12	63-578	68M OHM
C14	62-495	.004 MFD.	A13	63-578	68M OHM
C15	62-71	.02 MFD.	A14	63-1000	52 OHM WIREWOUND
C16	62-627	.1 MFD.	A15	63-236	220 OHM OHM
C17	62-1108	10 MFD. ELECTROLYTIC	A16	63-637	330 M OHM
C18	62-1108	10 MFD. ELECTROLYTIC	A17	63-648	47 M OHM
C19	62-1108	10 MFD. ELECTROLYTIC	A18	63-1126	470 OHM WIREWOUND
R1	600K	600K	1	4M	4M
R2	600K	600K	2	4M	4M
R3	600K	600K	3	4M	4M
R4	600K	600K	4	4M	4M
R5	600K	600K	5	4M	4M
R6	600K	600K	6	4M	4M
R7	600K	600K	7	4M	4M
R8	600K	600K	8	4M	4M
R9	600K	600K	9	4M	4M
R10	600K	600K	10	4M	4M
R11	600K	600K	11	4M	4M
R12	600K	600K	12	4M	4M
R13	600K	600K	13	4M	4M
R14	600K	600K	14	4M	4M
R15	600K	600K	15	4M	4M
R16	600K	600K	16	4M	4M
R17	600K	600K	17	4M	4M
R18	600K	600K	18	4M	4M
R19	600K	600K	19	4M	4M
R20	600K	600K	20	4M	4M

Models 8S647-8S661

Chassis No. 8B01

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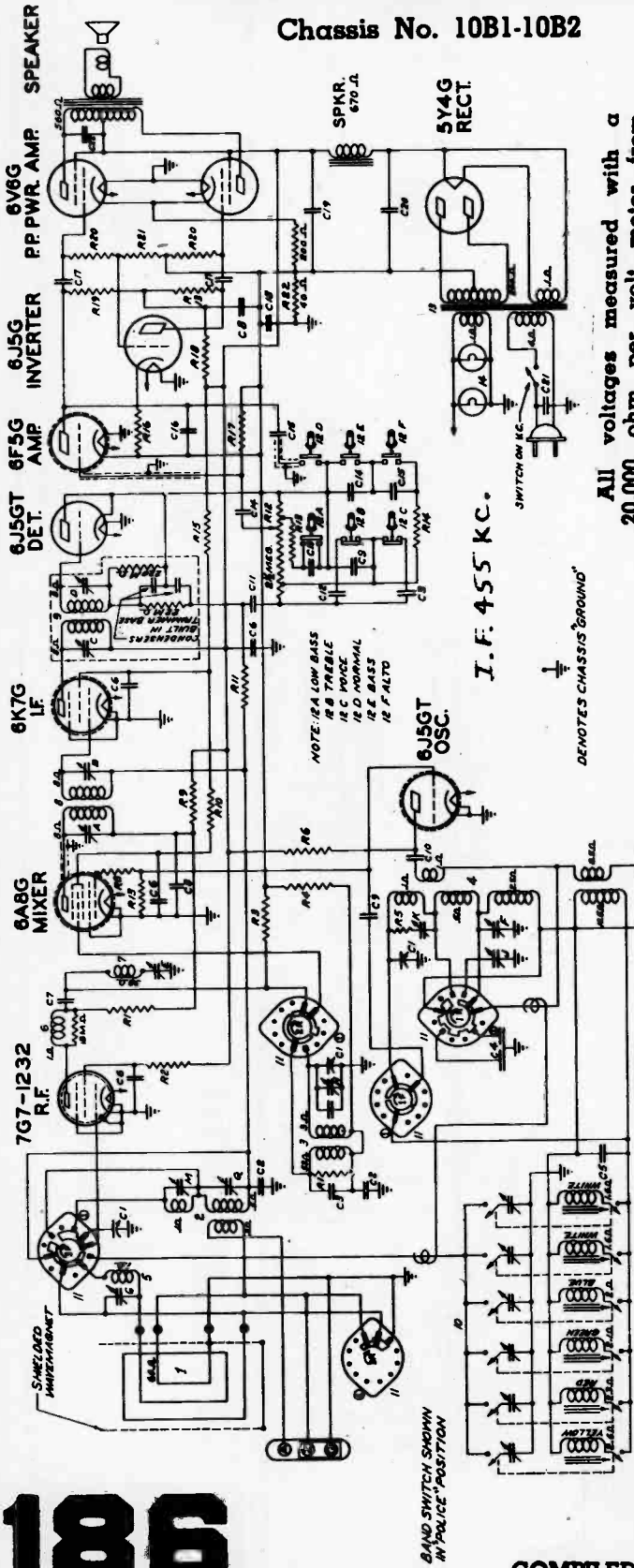
SOCKET VOLTAGES—BOTTOM VIEW

MANUAL OF 1942 MOST POPULAR SERVICE DIAGRAMS

Models 10S669-10S690

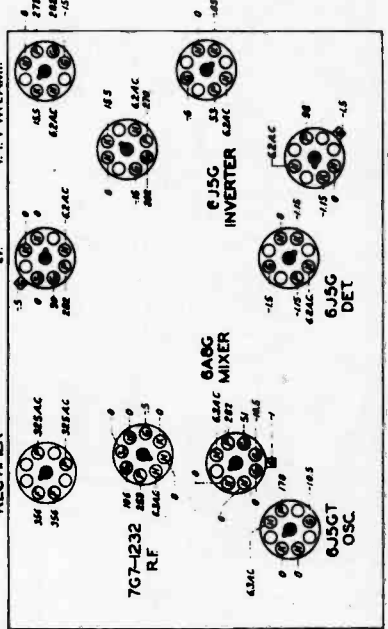
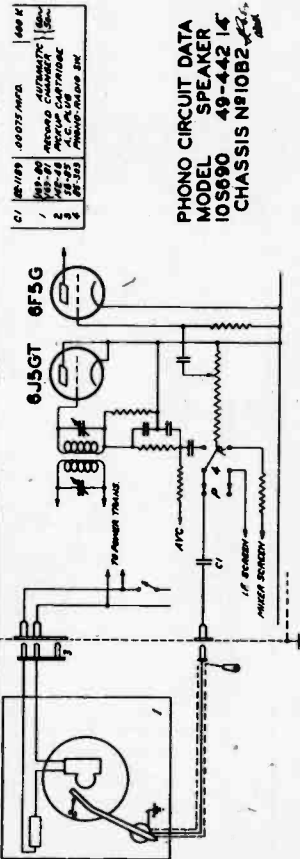
Zenith Radio

Chassis No. 10B1-10B2



All voltages measured with a 20,000 ohm per volt meter from chassis to socket contact indicated. All voltages are positive D.C. unless marked otherwise. Volume control full on.

NO.	VAL.	UNIT	DESCRIPTION	NO.	VAL.	UNIT	DESCRIPTION
C1	15-100	TRIPLE GANG VARIABLE	500V	R10	15-400	47M OHM	500K
C2	15-100	.05 MFD.	500V	R12	15-400	2ND SECTION CROWN	500K
C3	15-100	.001 MFD.	500V	1	15-274	ANTENNA COIL	15K
C4	15-100	.001 MFD.	500V	2	15-274	ANTENNA COIL	15K
C5	15-100	COMPENSATING COND.	500V	3	15-274	ANTENNA COIL	15K
C6	15-100	.05 MFD.	500V	4	15-274	ANTENNA COIL	15K
C7	15-100	.05 MFD.	500V	5	15-274	ANTENNA COIL	15K
C8	15-100	.05 MFD.	500V	6	15-274	ANTENNA COIL	15K
C9	15-100	.05 MFD.	500V	7	15-274	ANTENNA COIL	15K
C10	15-100	.05 MFD.	500V	8	15-274	ANTENNA COIL	15K
C11	15-100	.05 MFD.	500V	9	15-274	ANTENNA COIL	15K
C12	15-100	.05 MFD.	500V	10	15-274	ANTENNA COIL	15K
C13	15-100	.05 MFD.	500V	11	15-274	ANTENNA COIL	15K
C14	15-100	.05 MFD.	500V	12	15-274	ANTENNA COIL	15K
C15	15-100	.05 MFD.	500V	13	15-274	ANTENNA COIL	15K
C16	15-100	.05 MFD.	500V	14	15-274	ANTENNA COIL	15K
C17	15-100	.05 MFD.	500V	15	15-274	ANTENNA COIL	15K
C18	15-100	.05 MFD.	500V	16	15-274	ANTENNA COIL	15K
C19	15-100	.05 MFD.	500V	17	15-274	ANTENNA COIL	15K
C20	15-100	.05 MFD.	500V	18	15-274	ANTENNA COIL	15K
C21	15-100	.05 MFD.	500V	19	15-274	ANTENNA COIL	15K
C22	15-100	.05 MFD.	500V	20	15-274	ANTENNA COIL	15K
C23	15-100	.05 MFD.	500V	21	15-274	ANTENNA COIL	15K
C24	15-100	.05 MFD.	500V	22	15-274	ANTENNA COIL	15K
C25	15-100	.05 MFD.	500V	23	15-274	ANTENNA COIL	15K
C26	15-100	.05 MFD.	500V	24	15-274	ANTENNA COIL	15K
C27	15-100	.05 MFD.	500V	25	15-274	ANTENNA COIL	15K
C28	15-100	.05 MFD.	500V	26	15-274	ANTENNA COIL	15K
C29	15-100	.05 MFD.	500V	27	15-274	ANTENNA COIL	15K
C30	15-100	.05 MFD.	500V	28	15-274	ANTENNA COIL	15K
C31	15-100	.05 MFD.	500V	29	15-274	ANTENNA COIL	15K
C32	15-100	.05 MFD.	500V	30	15-274	ANTENNA COIL	15K
C33	15-100	.05 MFD.	500V	31	15-274	ANTENNA COIL	15K
C34	15-100	.05 MFD.	500V	32	15-274	ANTENNA COIL	15K
C35	15-100	.05 MFD.	500V	33	15-274	ANTENNA COIL	15K
C36	15-100	.05 MFD.	500V	34	15-274	ANTENNA COIL	15K
C37	15-100	.05 MFD.	500V	35	15-274	ANTENNA COIL	15K
C38	15-100	.05 MFD.	500V	36	15-274	ANTENNA COIL	15K
C39	15-100	.05 MFD.	500V	37	15-274	ANTENNA COIL	15K
C40	15-100	.05 MFD.	500V	38	15-274	ANTENNA COIL	15K
C41	15-100	.05 MFD.	500V	39	15-274	ANTENNA COIL	15K
C42	15-100	.05 MFD.	500V	40	15-274	ANTENNA COIL	15K
C43	15-100	.05 MFD.	500V	41	15-274	ANTENNA COIL	15K
C44	15-100	.05 MFD.	500V	42	15-274	ANTENNA COIL	15K
C45	15-100	.05 MFD.	500V	43	15-274	ANTENNA COIL	15K
C46	15-100	.05 MFD.	500V	44	15-274	ANTENNA COIL	15K
C47	15-100	.05 MFD.	500V	45	15-274	ANTENNA COIL	15K
C48	15-100	.05 MFD.	500V	46	15-274	ANTENNA COIL	15K
C49	15-100	.05 MFD.	500V	47	15-274	ANTENNA COIL	15K
C50	15-100	.05 MFD.	500V	48	15-274	ANTENNA COIL	15K
C51	15-100	.05 MFD.	500V	49	15-274	ANTENNA COIL	15K
C52	15-100	.05 MFD.	500V	50	15-274	ANTENNA COIL	15K
C53	15-100	.05 MFD.	500V	51	15-274	ANTENNA COIL	15K
C54	15-100	.05 MFD.	500V	52	15-274	ANTENNA COIL	15K
C55	15-100	.05 MFD.	500V	53	15-274	ANTENNA COIL	15K
C56	15-100	.05 MFD.	500V	54	15-274	ANTENNA COIL	15K
C57	15-100	.05 MFD.	500V	55	15-274	ANTENNA COIL	15K
C58	15-100	.05 MFD.	500V	56	15-274	ANTENNA COIL	15K
C59	15-100	.05 MFD.	500V	57	15-274	ANTENNA COIL	15K
C60	15-100	.05 MFD.	500V	58	15-274	ANTENNA COIL	15K
C61	15-100	.05 MFD.	500V	59	15-274	ANTENNA COIL	15K
C62	15-100	.05 MFD.	500V	60	15-274	ANTENNA COIL	15K
C63	15-100	.05 MFD.	500V	61	15-274	ANTENNA COIL	15K
C64	15-100	.05 MFD.	500V	62	15-274	ANTENNA COIL	15K
C65	15-100	.05 MFD.	500V	63	15-274	ANTENNA COIL	15K
C66	15-100	.05 MFD.	500V	64	15-274	ANTENNA COIL	15K
C67	15-100	.05 MFD.	500V	65	15-274	ANTENNA COIL	15K
C68	15-100	.05 MFD.	500V	66	15-274	ANTENNA COIL	15K
C69	15-100	.05 MFD.	500V	67	15-274	ANTENNA COIL	15K
C70	15-100	.05 MFD.	500V	68	15-274	ANTENNA COIL	15K
C71	15-100	.05 MFD.	500V	69	15-274	ANTENNA COIL	15K
C72	15-100	.05 MFD.	500V	70	15-274	ANTENNA COIL	15K
C73	15-100	.05 MFD.	500V	71	15-274	ANTENNA COIL	15K
C74	15-100	.05 MFD.	500V	72	15-274	ANTENNA COIL	15K
C75	15-100	.05 MFD.	500V	73	15-274	ANTENNA COIL	15K
C76	15-100	.05 MFD.	500V	74	15-274	ANTENNA COIL	15K
C77	15-100	.05 MFD.	500V	75	15-274	ANTENNA COIL	15K
C78	15-100	.05 MFD.	500V	76	15-274	ANTENNA COIL	15K
C79	15-100	.05 MFD.	500V	77	15-274	ANTENNA COIL	15K
C80	15-100	.05 MFD.	500V	78	15-274	ANTENNA COIL	15K
C81	15-100	.05 MFD.	500V	79	15-274	ANTENNA COIL	15K
C82	15-100	.05 MFD.	500V	80	15-274	ANTENNA COIL	15K
C83	15-100	.05 MFD.	500V	81	15-274	ANTENNA COIL	15K
C84	15-100	.05 MFD.	500V	82	15-274	ANTENNA COIL	15K
C85	15-100	.05 MFD.	500V	83	15-274	ANTENNA COIL	15K
C86	15-100	.05 MFD.	500V	84	15-274	ANTENNA COIL	15K
C87	15-100	.05 MFD.	500V	85	15-274	ANTENNA COIL	15K
C88	15-100	.05 MFD.	500V	86	15-274	ANTENNA COIL	15K
C89	15-100	.05 MFD.	500V	87	15-274	ANTENNA COIL	15K
C90	15-100	.05 MFD.	500V	88	15-274	ANTENNA COIL	15K
C91	15-100	.05 MFD.	500V	89	15-274	ANTENNA COIL	15K
C92	15-100	.05 MFD.	500V	90	15-274	ANTENNA COIL	15K
C93	15-100	.05 MFD.	500V	91	15-274	ANTENNA COIL	15K
C94	15-100	.05 MFD.	500V	92	15-274	ANTENNA COIL	15K
C95	15-100	.05 MFD.	500V	93	15-274	ANTENNA COIL	15K
C96	15-100	.05 MFD.	500V	94	15-274	ANTENNA COIL	15K
C97	15-100	.05 MFD.	500V	95	15-274	ANTENNA COIL	15K
C98	15-100	.05 MFD.	500V	96	15-274	ANTENNA COIL	15K
C99	15-100	.05 MFD.	500V	97	15-274	ANTENNA COIL	15K
C100	15-100	.05 MFD.	500V	98	15-274	ANTENNA COIL	15K
C101	15-100	.05 MFD.	500V	99	15-274	ANTENNA COIL	15K
C102	15-100	.05 MFD.	500V	100	15-274	ANTENNA COIL	15K



SOCKET VOLTAGES—BOTTOM VIEW

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ALIGNMENT PROCEDURE

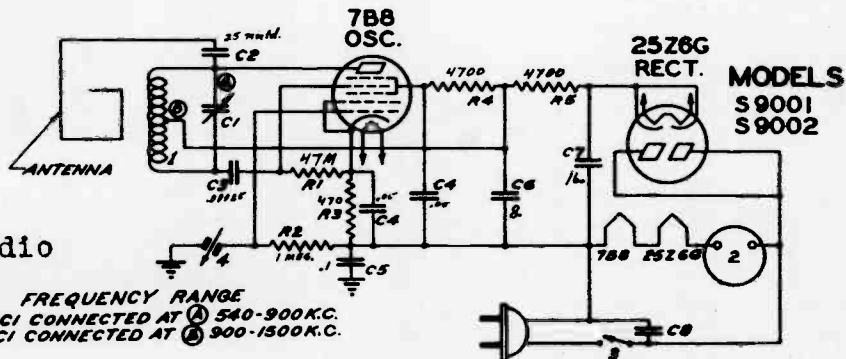
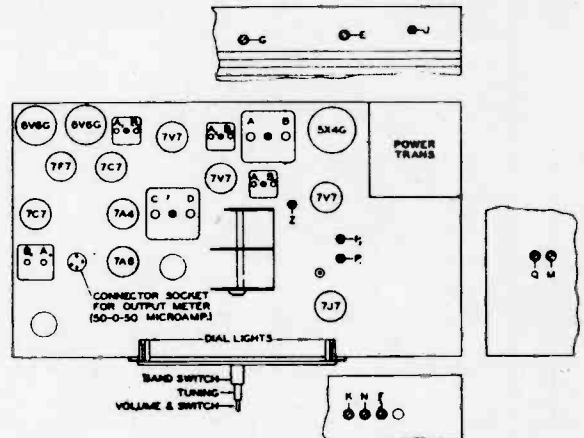
Operation	Connect Oscillator to	Dummy Antenna	Input Signal Frequency	Band	Set Dial At	Trimmers	Purpose
1	Con. Grid	0.5 mid.	455 Kc.	BC	600 Kc.	A, B, C, D	Align I.F.
2	R.F. Grid	0.5 mid.	455 Kc.	BC	600 Kc.	E	Adjust for minimum 455 Kc. signal
3	Ant. Z and G	400 ohm	18 Mc.	SW	18 Mc.	E	Scale SW Osc. at 18 meg.
4	"	"	18 Mc.	SW	16 Mc.	M	Align SW antenna
5	"	"	5 Mc.	Med.	5.0 Mc.	N	Scale med. band osc. at 5. meg.
6	"	"	4.5 Mc.	Med.	4.5 Mc.	Q	Align med. band antenna
7	One turn loop made with generator lead or Hadex loop	---	1600 Kc.	BC	1600 Kc.	F	Set BC Osc. to scale at 1600 Kc.
8		---	1400 Kc.	BC	1400 Kc.	G	Align broadcast loop
9		---	600 Kc.	BC	600 Kc.	J	Rock gang to track BC padder
10	7V7 2nd I.F. Grid	0.5 mid.	8.3 Mc.	Man. F.M.	42.5 Mc.	A ₁	Align for max. deflection across 1/2 discrim. load
11	"	"	"	"	"	B ₁	Align for zero deflection across full discrim. load
12	"	"	"	"	"	A ₂ - B ₂	Align for max. deflection across 1/2 discrim. load
13	7V7 1st I.F. Grid	"	"	"	"	A ₂ - B ₂	"
14	Converter Grid	"	"	"	"	A ₁ - B ₁	"
15	F.M. Ant. Terminal	100 ohm	46 Mc.	"	46 Mc.	Adj. cam on gang to scale osc.	Align for zero deflection across full discrim. load
16	"	"	42.5 Mc.	"	42.5 Mc.	P ₁	Align for max. deflection across 1/2 discrim. load
17	"	"	49 Mc.	"	49 Mc.	P ₂	"
18	"	"	46 Mc.	"	46 Mc.	Z	"

Models 12H678-12H679

Chassis No. 12A6

Stage Gains
Bc. and I.F.

Ant. to R.F. grid $6.5\times$ at 1000 Kc.
R.F. grid to conv. grid $28.1\times$ at 1000 Kc.
Conv. grid to I.F. grid $265\times$ at 455 Kc.
Overall audio $807\times$ at 1 watt, 400 cycles.

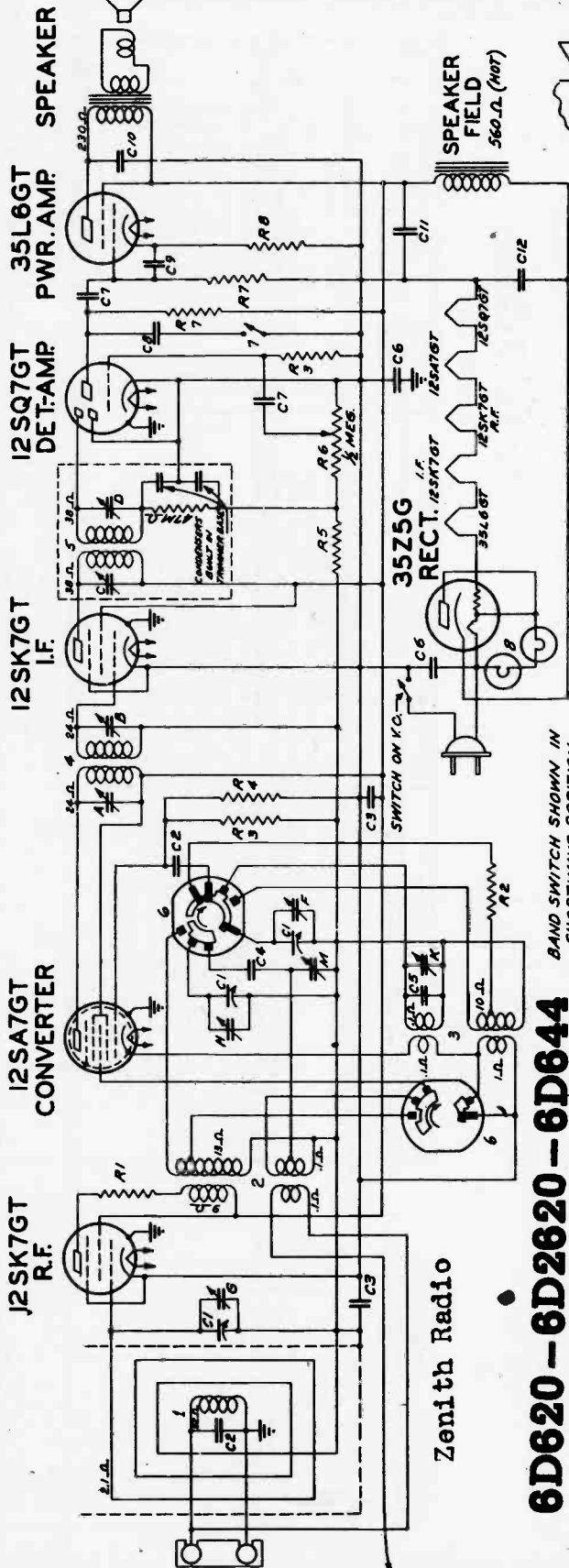


Zenith Radio

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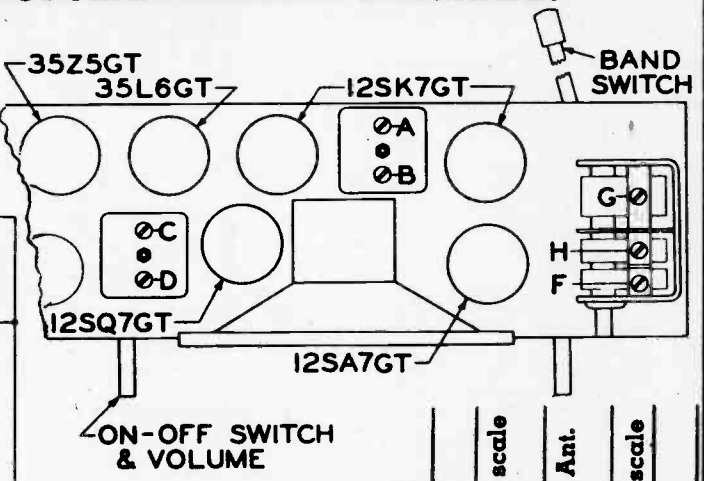
MANUAL OF 1942 MOST POPULAR SERVICE DIAGRAMS



Zenith Radio

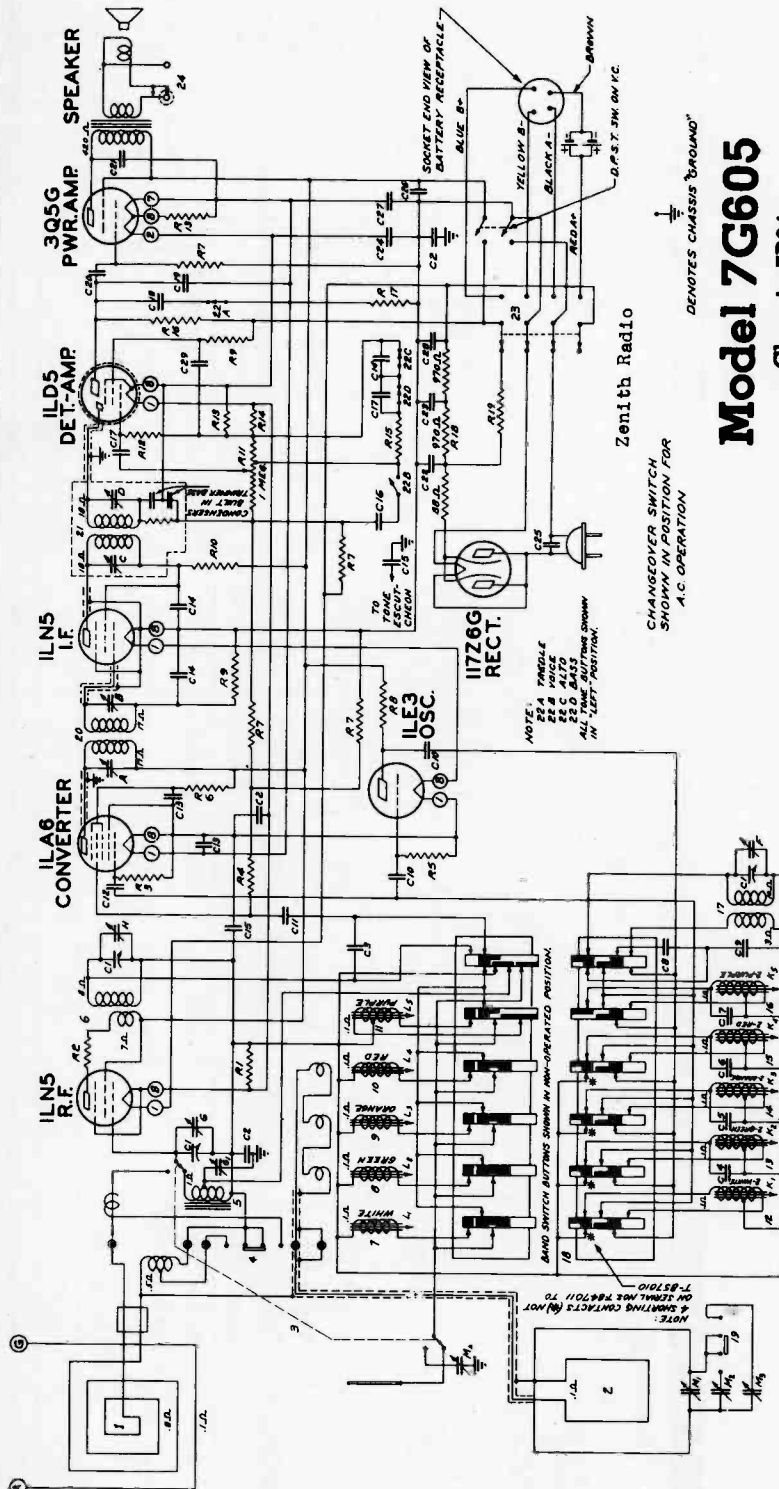
6D620 - 6D2620 - 6D644 Chassis No. 6B14

BAND SWITCH SHOWN IN SHORTWAVE POSITION.



PART NO.	PART NAME	DESCRIPTION	PART NO.	PART NAME	DESCRIPTION
C1	22-1250	THREE GANG VARIABLE	7	85-257	80-90 TONE CONTROL SWITCH
C2	22-289	50 MFD.	8	100-90	DUAL LAMP 3.2 K. 17A
C3	22-869	.05 MFD.	A	1E1 I/F	TRANS. PRI.
C4	22-1259	50 MFD.	B	1E1 I/F	SEC.
C5	22-1259	50 MFD. COMP.	C	250 I/F	PRI.
C6	22-1017	.05 MFD.	D	250 I/F	SEC.
C7	22-243	.01 MFD.	E	BROADCAST OSC.	(ON GANG)
C8	22-492	.005 MFD.	F	BROADCAST ANT.	(ON GANG)
C9	22-716	.005 MFD.	G	BROADCAST DET.	(ON GANG)
C10	22-1049	.03 MFD.	H	SHORTWAVE OSC.	(200 MFD)
C11	22-1280	20 MFD. ELECTROLYTIC	K	SHORTWAVE ANT.	(200 MFD)
C12	22-1280	20 MFD.	M	TRIMMERS	K & M ARE MOUNTED ON STRIP 22-1273
R1	63-200	200 OHM			

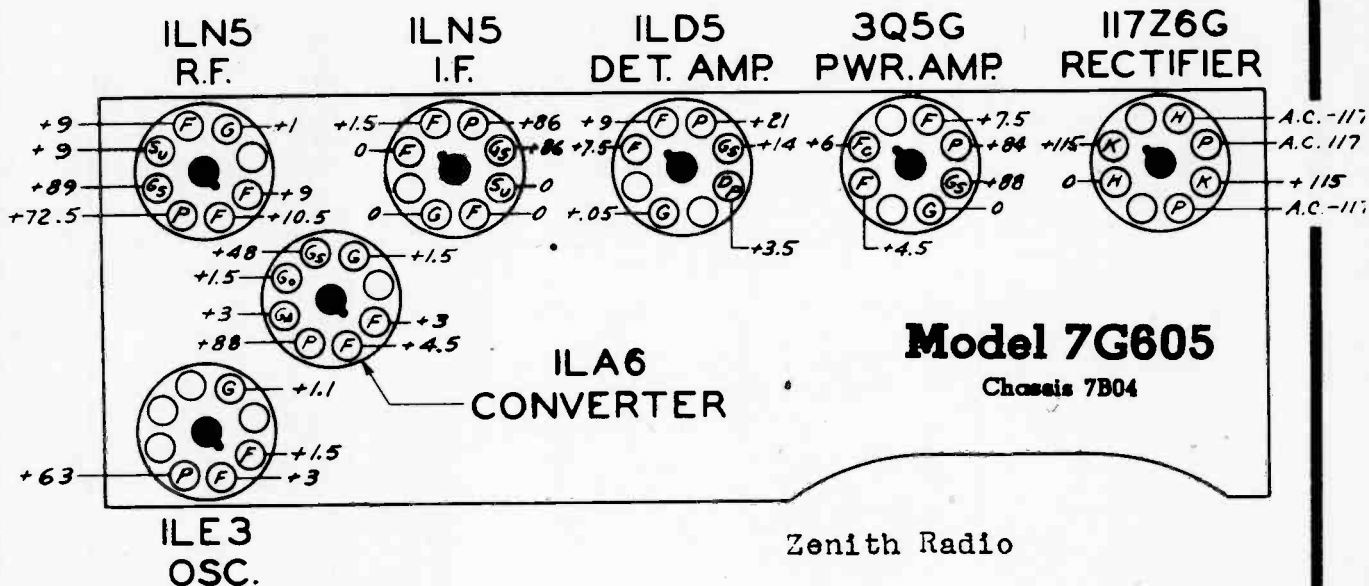
Operation	Connect Oscillator to	Dummy Antenna	Signal Frequency	Band	Set Dial at	Trimmers	Purpose
1	Conv. Grid	.5 mfd.	455 Kc.	B.C.	600 Kc.	A, B, C, D	Align I.F.
2	Single Turn Loop Loosely Coupled to Wavemagnet	—	1400 Kc.	B.C.	1400 Kc.	F	Set oscillator to scale
3	—	—	1400 Kc.	B.C.	1400 Kc.	H & G	Align R.F. and Ant.
4	Ant.-Gnd.	400 ohms	12 Mc.	S.W.	12 Mc.	K	Set oscillator to scale
5	Ant.-Gnd.	400 ohms	12 Mc.	S.W.	12 Mc.	M	Align Ant.



Model 7G605
Chassis 7B04

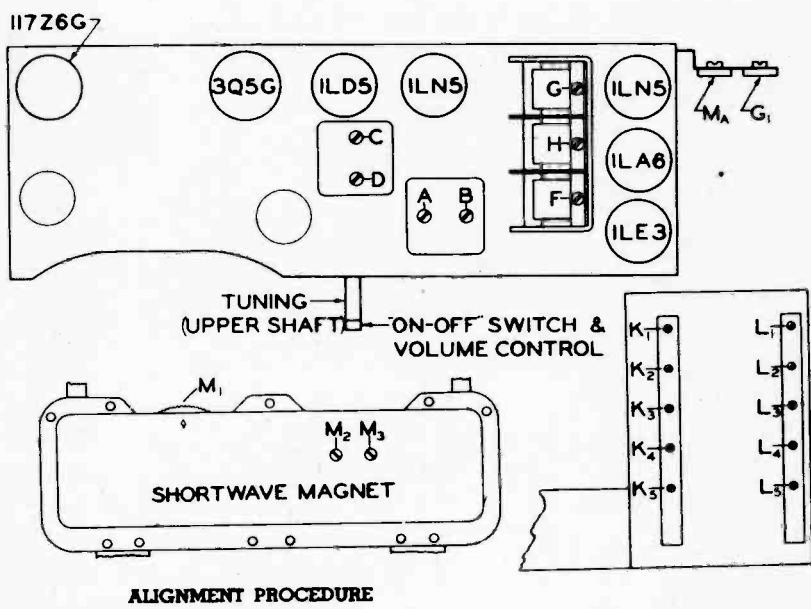
DIAG. No.	PART No.	DESCRIPTION	DIAG. No.	PART No.	DESCRIPTION	DIAG. No.	PART No.	DESCRIPTION
C1	22-1308	THREE GANG VARIABLE	1	S10680	BROADCAST WAVE MAGNET	24	44-17	HEADPHONE JACK
C2	22-827	.1 MFD.	2	S10682	SHORTWAVE WAVE MAGNET	A		1ET I.F. TRANS. PRI.
C3	22-1130	15 MMFD.	3	85-314	ANTENNA POLE SWITCH	B		1ET I.F. TRANS. SEC.
C4	22-1312	100 MMFD. COMP	4	85-225	WAVE MAGNET SWITCH	C		22B I.F. TRANS. PRI.
C5	22-1312	100 MMFD. COMP	5	S10298	ANTENNA COIL ASSEM.	D		22B I.F. TRANS. SEC.
C6	22-705	150 MMFD. COMP	6	S10284	6MC. ANTENNA COIL ASSEM.	F		BROADCAST OSC. (ON GANG)
C7	22-702	250 MMFD. COMP	7	S10229	9 MC.	G		BROADCAST ANT. (ON GANG)
C8	22-1311	75 MMFD. COMP	8	S10288	12 MC.	H		BROADCAST DET. (ON GANG)
C9	22-1310	50 MMFD. COMP	9	S10296	15 MC.	I		SHORTWAVE OSC. 6 MC.
C10	22-162	.0001 MFD.	10	S10297	18 MC.	K1		SHORTWAVE OSC. 9 MC.
C11	22-327	.02 MFD.	11	S10281	6MC. OSCILLATOR COIL ASSEM.	K2		SHORTWAVE OSC. 12 MC.
C12	22-289	.50 MMFD.	12	S10290	9 MC.	K3		SHORTWAVE OSC. 15 MC.
C13	22-829	.05 MFD.	13	S10290	9 MC.	K4		SHORTWAVE OSC. 18 MC.
C14	22-826	.01 MFD.	14	S10285	12 MC.	L1		SHORTWAVE DET. 6 MC.
C15	22-1207	.07 MFD.	15	S10285	12 MC.	L2		SHORTWAVE DET. 9 MC.
C16	22-887	.01 MFD.	16	S10294	18 MC.	L3		SHORTWAVE DET. 12 MC.
C17	22-482	.0003 MFD.	17	S10295	DC.	L4		SHORTWAVE DET. 15 MC.
C18	22-953	.0003 MFD.	18	85-312	AUTOMATIC BAND SWITCH	L5		SHORTWAVE DET. 18 MC.
C19	22-470	.00015 MFD.	19	85-322	SHORTWAVE LOOP SWITCH	M1		WAVEFORM COMPENSATOR (SEE NOTE)
C20	22-196	.004 MFD.	20	95-861	1ET I.F. TRANSFORMER	G1		WAVEFORM COMPENSATOR (SEE NOTE)
C21	22-448	.004 MFD.	21	95-863	22B I.F. TRANSFORMER	M2		SHORTWAVE ANT. 19 M.
C22	22-1307	40 MFD. ELECTROLYTIC	22	85-313	100 OHM WIREWOUND	M3		SHORTWAVE ANT. 25 M.
C23	22-1307	150 V. 150 OHM WIREWOUND	23	85-311	POWER CHANGE-OVER SWITCH	M4		SHORTWAVE ANT. 31 M.
C24	22-1330	25 V. 40 MFD.						NOTE: TRIMMERS R1, R2, ARE MOUNTED ON STRIP 2B-230
C25	22-263	.05 MFD.						

MANUAL OF 1942 MOST POPULAR SERVICE DIAGRAMS



All voltages measured with a 20,000 ohm per volt meter from B minus to socket contact indicated.
 All voltages are positive D.C. unless marked otherwise.
 Volume control full on.
 Line voltage 117 A.C. or D.C. 25 to 80 cycle or Battery Pack Z-985 and two flashlight cells.
 Power consumption 25 watts.
 Power output .35 watts.
 Tuning ranges:
 540 to 1820 Kc.
 8.0 to 6.5 Mc.
 9.4 to 9.8 Mc.
 11.7 to 11.9 Mc.
 15.1 to 15.3 Mc.
 17.8 to 18.0 Mc.

Stage Gains
 Bc. and I.F.
 Ant. to R.F. grid 5X at 1000 Kc.
 R.F. grid to conv. grid 9X at 1000 Kc.
 Conv. grid to I.F. grid 88X at 455 Kc.
 Overall audio 900X at .05 watt. 400 cycles.



Operation	Connect Oscillator to	Dummy Antenna	Input Signal Frequency	Band	Set Dial At	Trimmers	Purpose
1	Conv. grid	.1 mid.	455 Kc.	BC	600 Kc.	A, B, C, D	Align I.F.
2	One Turn Loop Coupled Loosely to Broadcast Wavemagnet		1600 Kc.	BC	1600 Kc.	F	Set oscillator to scale
3			1400 Kc.	BC	1400 Kc.	H	Alignment of detector section
4	3 Feet of Wire Approximately 1 Foot from Extended Waverod		1400 Kc.	BC	1400 Kc.	G	Alignment of B.C. Wavemagnet
5			1400 Kc.	BC	1400 Kc.	G ₁	B.C. waverod alignment
6			6.2 Mc.	49 Met.	6.2 Mc.	K ₁ , L ₁	Alignment of S.W. Oscillators and Antenna Trimmers
7	9.6 Mc.	31 Met.	9.6 Mc.	K ₂ , L ₂			
8	11.8 Mc.	25 Met.	11.8 Mc.	K ₃ , L ₃			
9	15.2 Mc.	19 Met.	15.2 Mc.	K ₄ , L ₄			
10	17.8 Mc.	16 Met.	17.8 Mc.	K ₅ , L ₅			
11	One Turn Loop Coupled Loosely to Shortwave Magnet Waverod Collapsed		15.2 Mc.	19 Met.	15.2 Mc.	M ₁ , M ₂	
12			11.8 Mc.	25 Met.	11.8 Mc.	M ₂	
13			9.6 Mc.	31 Met.	9.6 Mc.	M ₁	

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