

Most - Often - Needed

1942

RADIO
DIAGRAMS
and Servicing Information

PREPARED UNDER THE DIRECTION OF

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SUPREME PUBLICATIONS

CHICAGO

MANUAL OF 1942 MOST POPULAR SERVICE DIAGRAMS

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Repair radios in minutes instead of hours. Revolutionary different COMPARISON technique permits you to do expert work on all radio sets. Most repairs can be made without test equipment or with only a volt-ohmmeter. Many simple, point-to-point, cross-reference, circuit suggestions locate the faults instantly. Plan copyrighted. Covers every radio set—new and old models. This new servicing technique presented in handy manual form, size 8½x11 inches, 72 pages. Over 1,000 practical service hints. 26 large, trouble-shooting blueprints. Charts for circuit analysis. 114 tests using a 5c resistor. Developed by M. N. Beitman. New 1945 edition. Net Price **\$1.50**

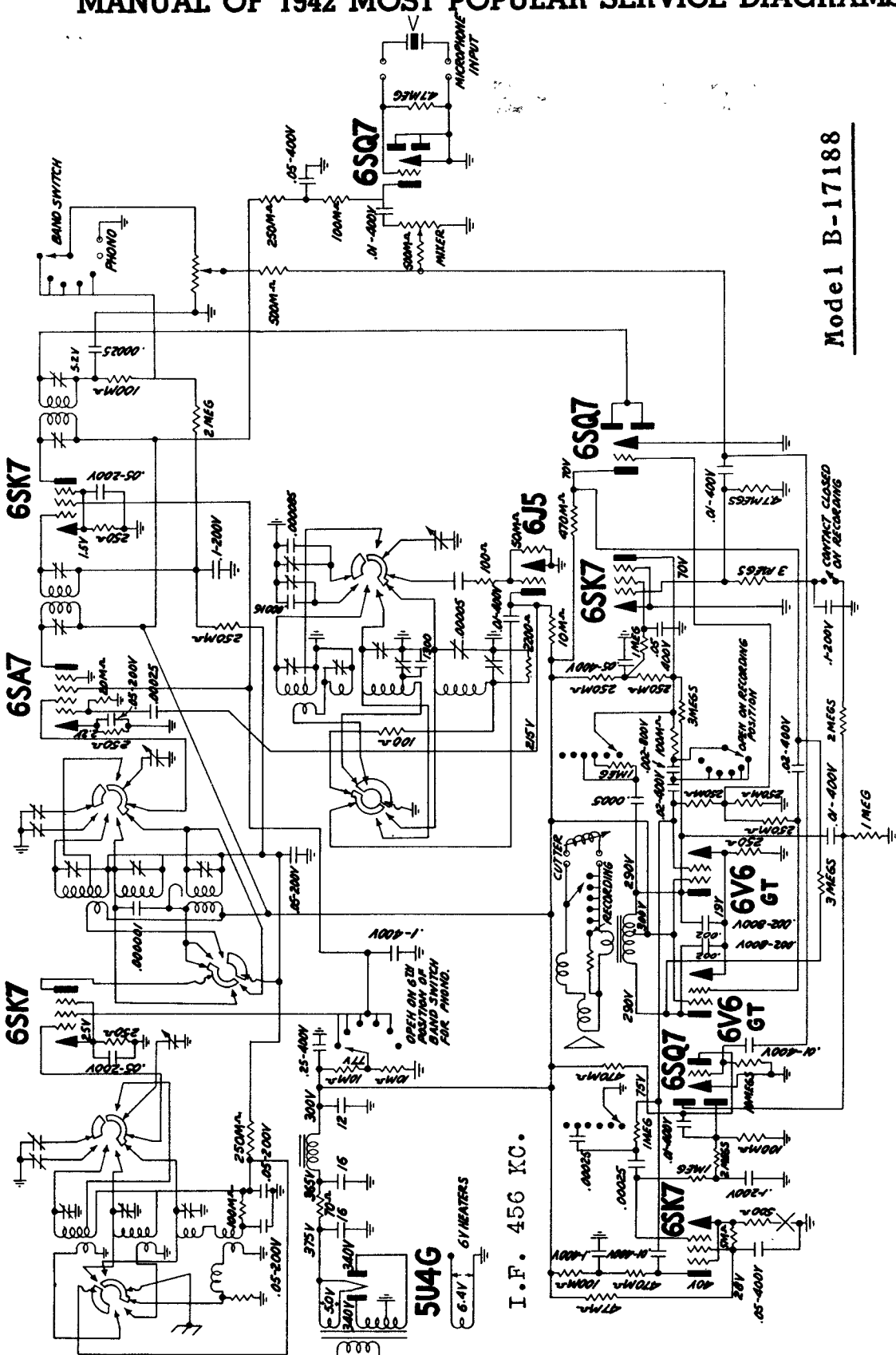
RADIO SERVICING COURSE-BOOK

Let this 22-lesson course help you fix and adjust any radio set. Easy-to-understand explanations; hundreds of simplified diagrams, pictures, practical hints. Quickly learn how to make needed tests, locate faults, complete the repair. Includes many lessons for beginners.

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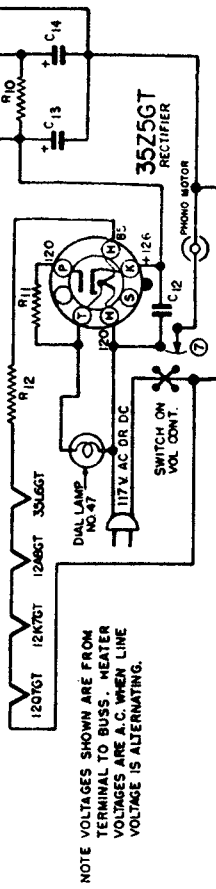
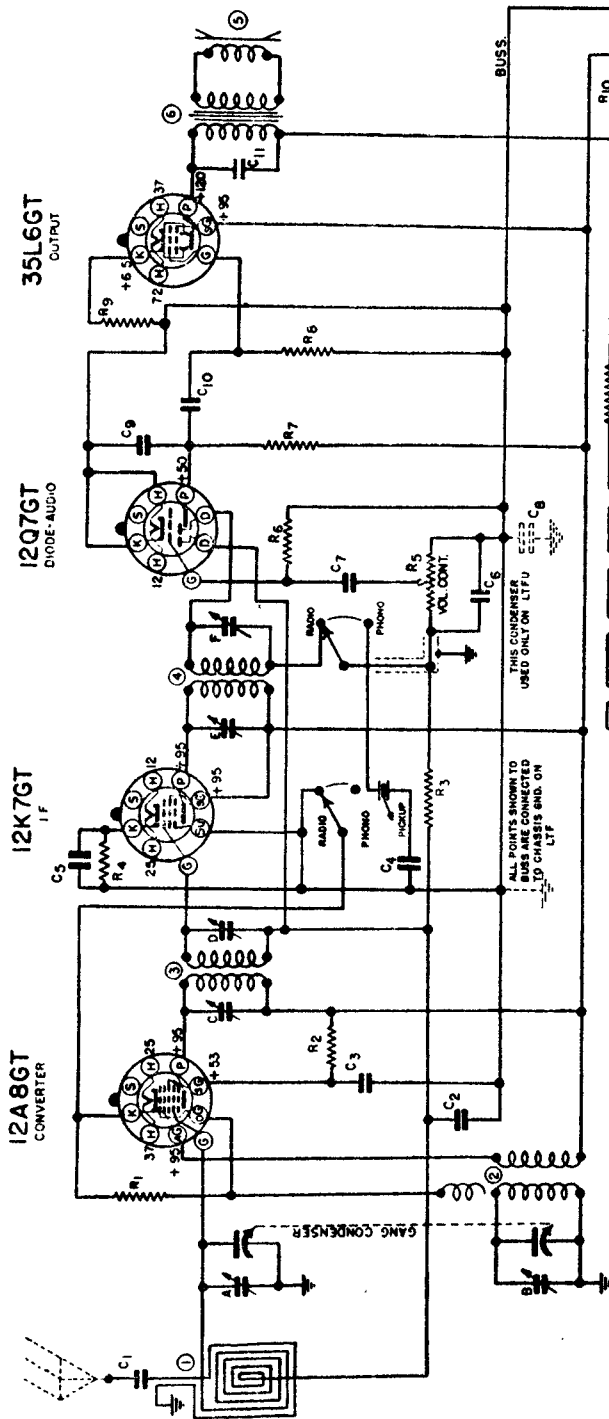


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ALLIED RADIO CORPORATION

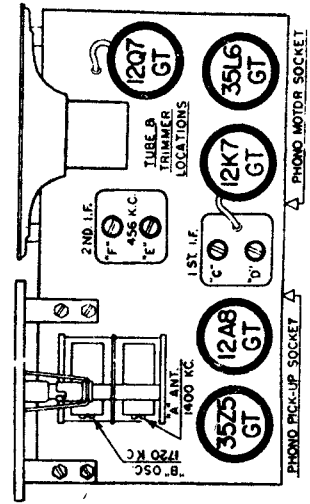


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I.F. 456 KC.

D-170
5 TUBE AC-DC
SUPERMETEPODTYPE
SINGLE BAND
PHONO COMBINATION



Allied Radio Corp.
(Sonora Radio make)

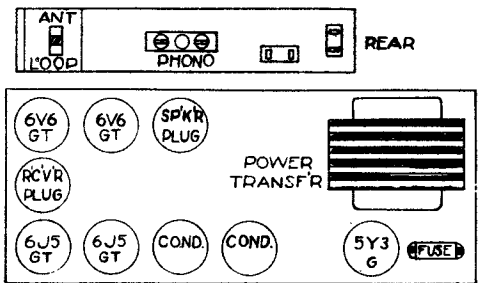
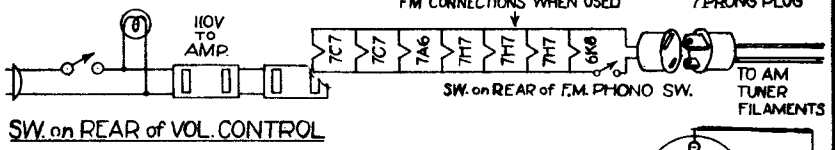
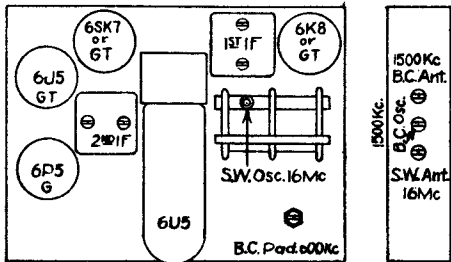
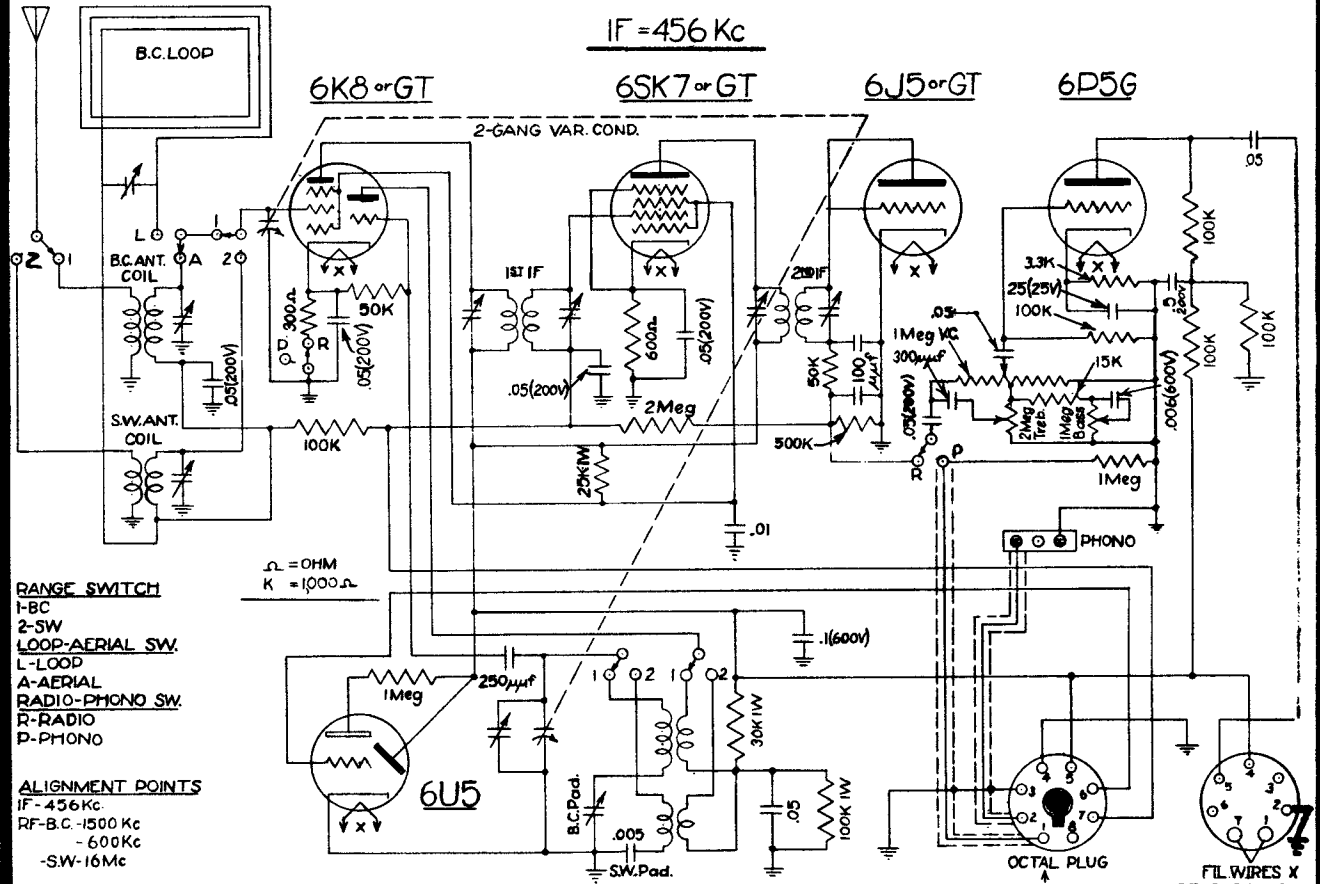
Allied Radio Corp.
Chicago, Ill.

| DIAG. NO. | PART NO. | DESCRIPTION | DIAG. PART NO. | DESCRIPTION |
|-----------|----------|---------------------|----------------|-----------------------------|
| R1 | N-1260 | 50000 OHM .5W. 20% | N-1344 | .01 MFD. 400V. |
| R2 | N-1259 | 15000 OHM .5W. 20% | N-1376 | .02 MFD. 400 V |
| R3 | N-1262 | 1 MEGOHM .5W. 20% | N-1346 | .05 MFD. 400 V. |
| R4 | N-2487 | 200 OHM .5W. 20% | N-3114 | 40 MFD. 150V. ELECTRO. |
| R5 | N-3045 | 25 MEGOHM VOL. CON. | | 25 MFD. 150 V. |
| R6 | N-1263 | 10 MEGOHM .5W. 20% | | |
| R7 | N-1377 | 200000 OHM .5W. 20% | 1 | N-3041 LOOP ANTENNA COIL |
| R8 | N-1264 | 500000 OHM .5W. 20% | 2 | N-1452 OSCILLATOR COIL |
| R9 | N-1616 | 250 OHM .5W. 10% | 3 | N-3043 1ST I.F. TRANSFORMER |
| R10 | N-1257 | 2000 OHM .5W. 20% | 4 | N-3044 2ND I.F. TRANSFORMER |
| R11 | N-1742 | 25 OHM .5W. 20% | 5 | N-2624 5 PH. SPEAKER |
| R12 | N-1618 | 80 OHM 2W. 10% | 6 | N-3568 OUTPUT TRANSFORMER |
| | | | 7 | N-4136 PHONO MOTOR SWITCH |
| C1 | N-1344 | .01 MFD. 400 V. | N-3046 | 2 GANG CONDENSER |
| C2 | N-1345 | .05 MFD. 200 V. | N-3550 | RADIO-PHONO SWITCH |
| C3 | N-1345 | .05 MFD. 200 V. | N-4888 | CRYSTAL PICK-UP |
| C4 | N-2642 | .08 MFD. 200 V. | N-3143 | PHONO MOTOR & TURNABLE |
| C5 | N-1351 | .1 MFD. 200 V. | | |
| C6 | N-1374 | .0001 MFD. MICA | | |
| C7 | N-1344 | .01 MFD. 400 V. | | |
| C8 | N-3080 | .22 MFD. 200 V. | | |
| C9 | N-1447 | .0005 MFD. 400 V. | | |

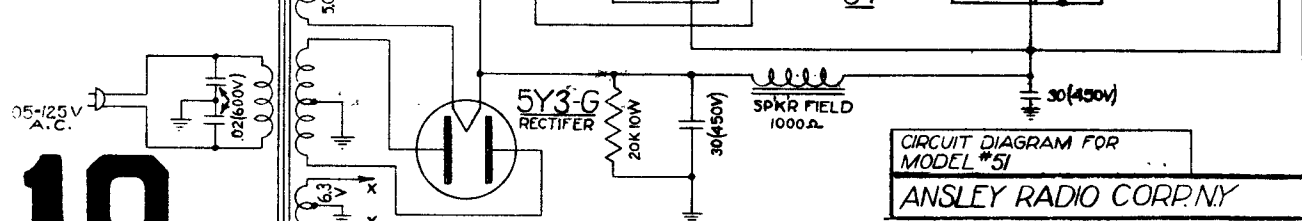


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IF = 456 Kc

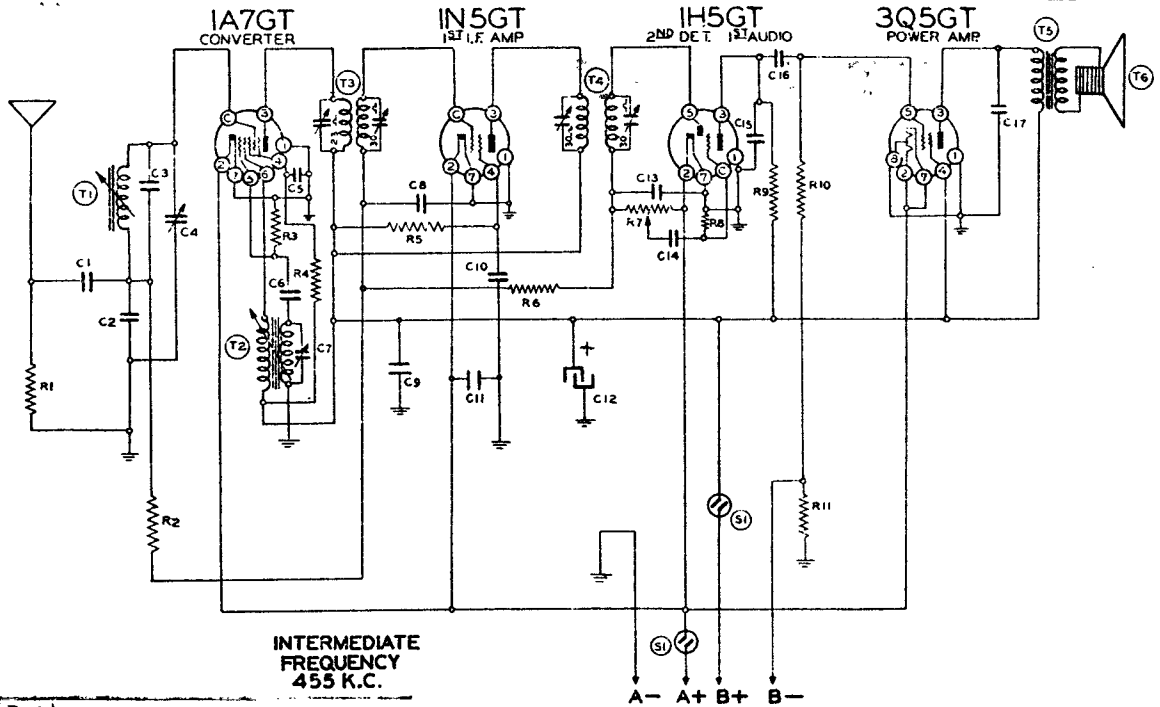


AMPLIFIER LAYOUT



CIRCUIT DIAGRAM FOR MODEL #51
 ANSLEY RADIO CORP. N.Y.

MANUAL OF 1942 MOST POPULAR SERVICE DIAGRAMS



Belmont Radio Corp.

Model 4B16 Radio

| 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. |

CONDENSERS

| | | |
|-----|---------|-------------------------|
| C1 | 12936 | .0003 mica |
| C2 | 100112 | .001 x 200 v. |
| C3 | 129177 | .000645—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 mid. 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. |

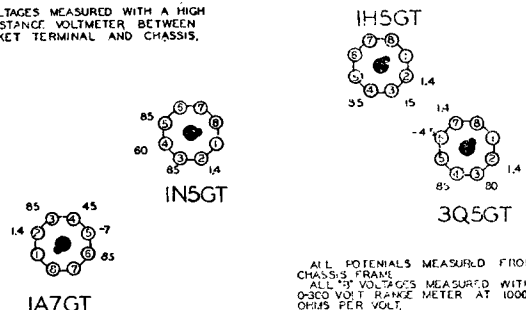
C4 and C7 are in same unit.

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 |

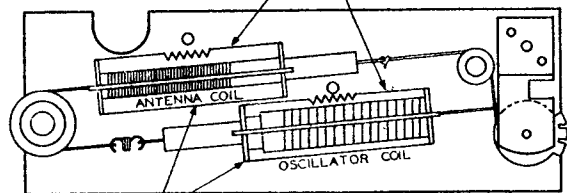
BOTTOM VIEW OF CHASSIS

VOLTAGES MEASURED WITH A HIGH RESISTANCE VOLT-METER BETWEEN SOCKET TERMINAL AND CHASSIS.



ALL POTENTIALS MEASURED FROM CHASSIS FRAME
ALL "V" VOLTAGES MEASURED WITH 0-300 VOLT RANGE METER AT 1000 OHMS PER VOLT.

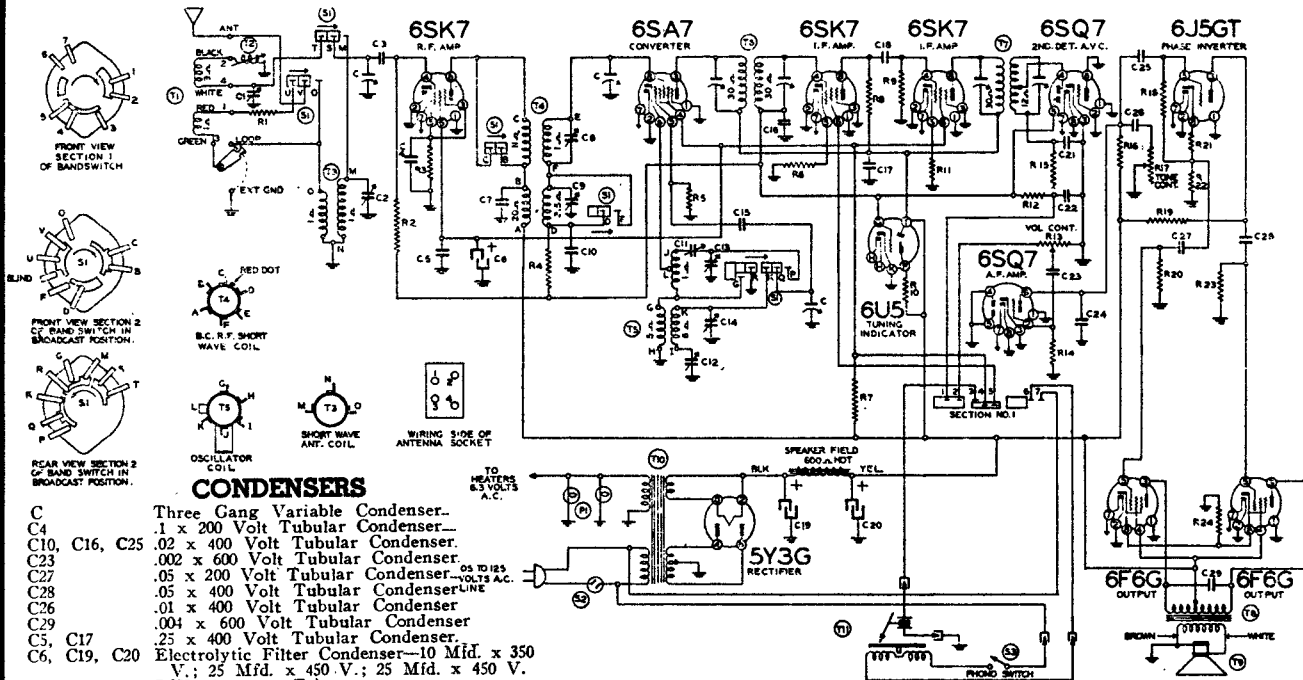
TO ADJUST COIL ASSEMBLY MOVE LEFT OR RIGHT.



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

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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—
- C28 .05 x 400 Volt Tubular Condenser—
- 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%—

**Belmont
Radio**

RESISTORS

- R13, S2 Volume Control and Switch (500M Ohms) Less Shaft
- R17 Tone Control (1 Megohm) Less Shaft— Shaft Only for Volume and Tone Controls
- R2, R18 1 Megohm— $\frac{1}{2}$ Watt Resistor—20%—
- R4 300M Ohm— $\frac{1}{2}$ Watt Resistor—20%—
- R5 40M Ohm— $\frac{1}{2}$ Watt Resistor—20%—
- R6, R11 500 Ohm— $\frac{1}{2}$ Watt Resistor—20%—
- R8 12M Ohm— $\frac{1}{2}$ Watt Resistor—20%—
- R9, R19, R22 100M Ohm— $\frac{1}{2}$ Watt Resistor—20%—
- R7 12M Ohm—2 Watt Resistor—10%—
- R15 50M Ohm— $\frac{1}{2}$ Watt Resistor—20%—
- R12 5 Megohm— $\frac{1}{2}$ Watt Resistor—25%—
- R14 3 Megohm— $\frac{1}{2}$ Watt Resistor—30%—
- R21 2500 Ohm— $\frac{1}{2}$ Watt Resistor—20%—
- R20, R23 500M Ohm— $\frac{1}{2}$ Watt Resistor—20%—
- R16 250M Ohm— $\frac{1}{2}$ Watt Resistor—20%—
- R24 300 Ohm—1 Watt Resistor—20%—
- R3 300 Ohm— $\frac{1}{2}$ 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 | Frequency Setting | Dummy Antenna | Connect on to Radio | Position of Band Switch | Variable Condenser Setting | Trimmers Adjusted to Maximum (in Order Shown) |
|-----------------|-------------------|---------------|-----------------------------|-------------------------|--------------------------------------|-----------------------------------------------|
| 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" |
| BROADCAST 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. |

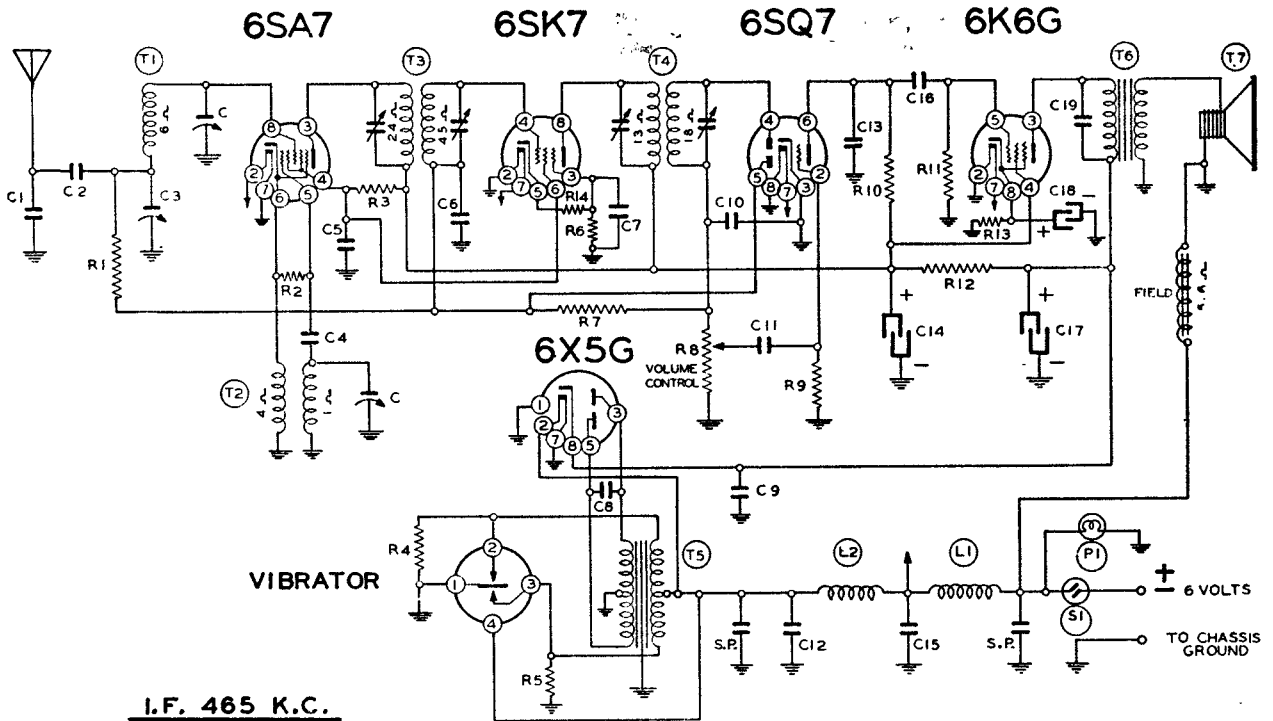
NOTE "A"—Turn the dial back and forth slightly (rock) and adjust trimmer until the peak of greatest intensity is obtained.

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

| | | |
|-----|--------|----------------------------|
| 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

| | | |
|----|--------|---------------------------|
| C | 10269 | 2 gang variable condenser |
| C1 | 1293 | .0002 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

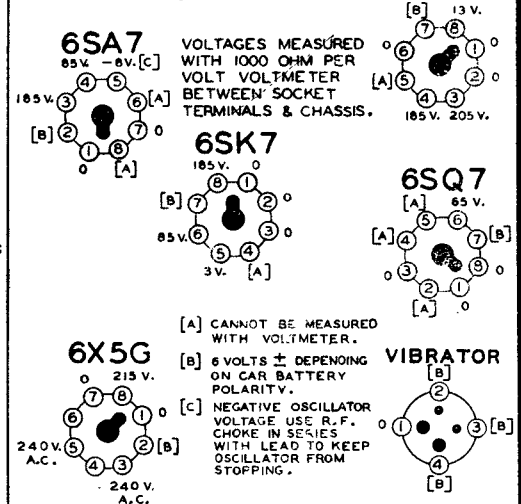
| | | |
|-----|--------|---------------------------|
| C9 | 12912 | .00025 mica |
| C10 | 1295 | .0001 mica |
| C11 | 10025 | .002 x 600 v. |
| C12 | 10031 | .5 x 120 v. |
| C13 | 1292 | .0005 mica |
| C14 | 119105 | 15 ufd. lytic x 350 w. v. |
| C15 | 10031 | .5 x 120 v. |
| C16 | 10078 | .01 x 200 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

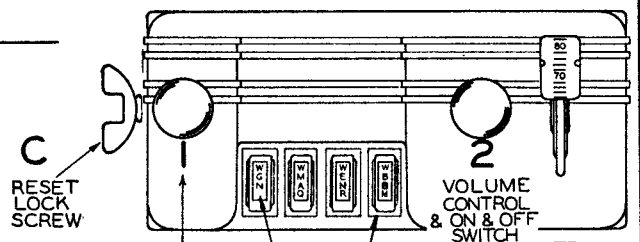
PARTS

| | | |
|------|----------|------------------------------|
| 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 | 10297 | Pilot light (T5) 6-8 volts |
| S.P. | 11749 | (2) Spark Plates |

BOTTOM VIEW OF CHASSIS

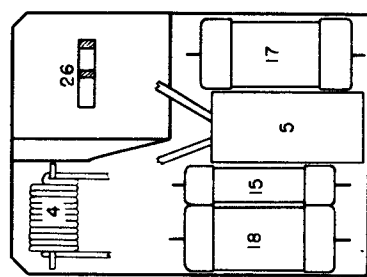
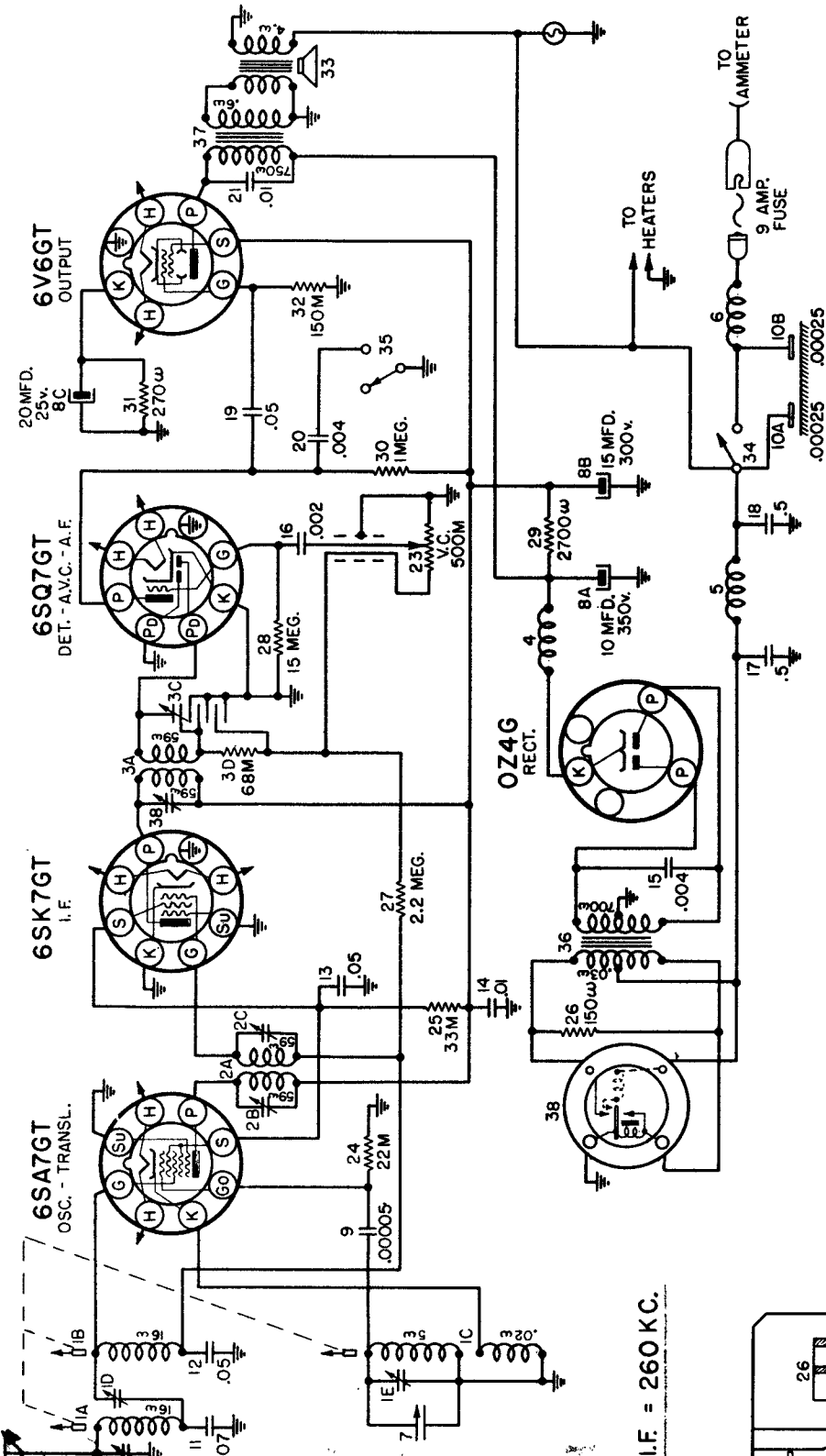


REAR OF CHASSIS



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.

MANUAL OF 1942 MOST POPULAR SERVICE DIAGRAMS



I.F. = 260 KC.

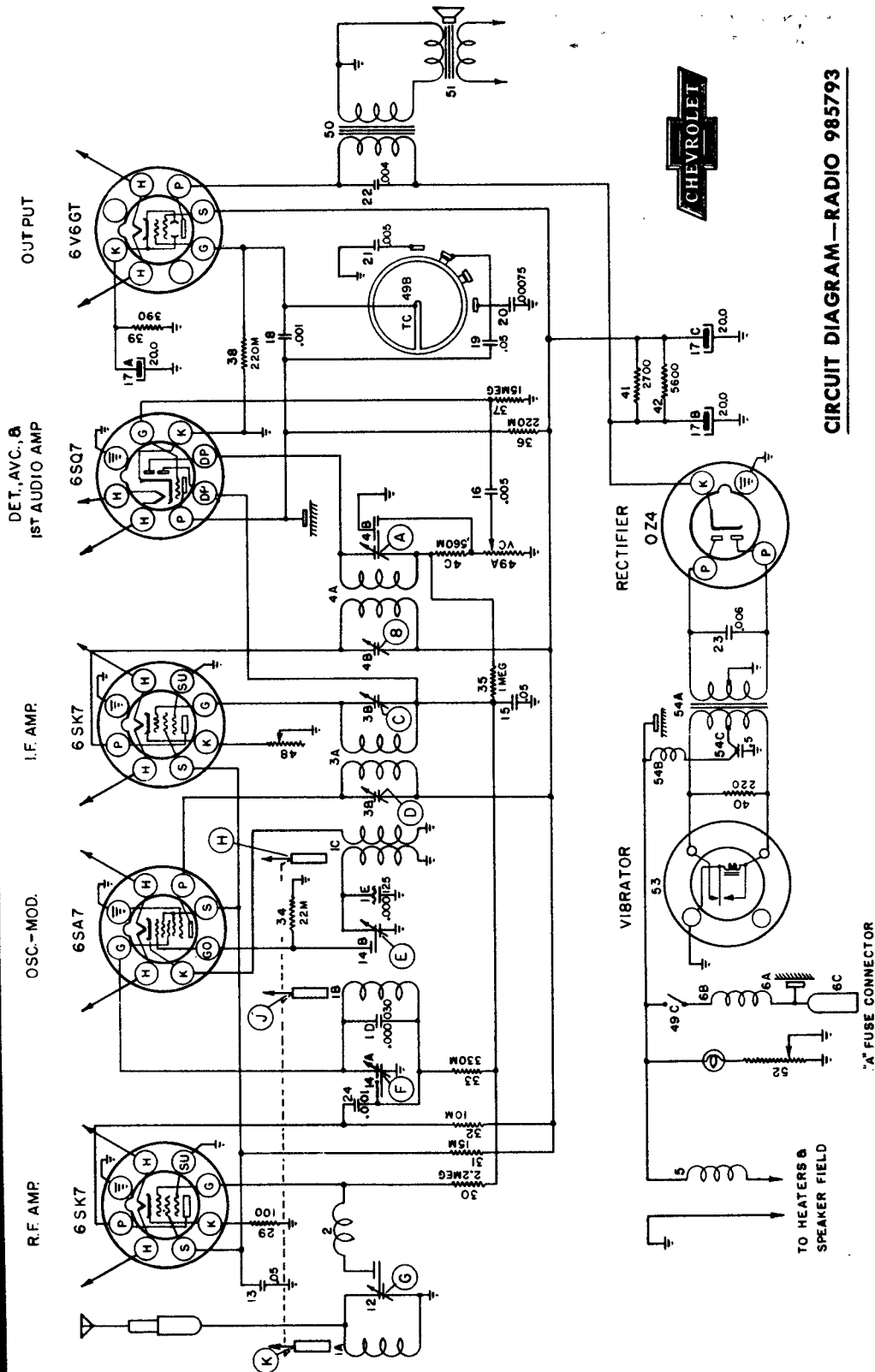
The circuit used in this receiver is the superheterodyne type, employing the permeability method of tuning. An adjustable condenser is provided for matching the antenna circuit to the antenna. This adjustment is made near the high frequency end of the band (1400 kilocycles).



CIRCUIT DIAGRAM—RADIO 985792

POWER PACK PARTS LAYOUT

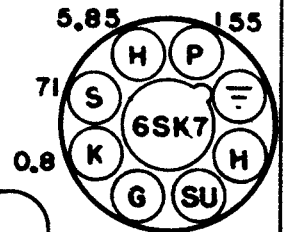
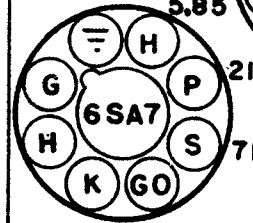
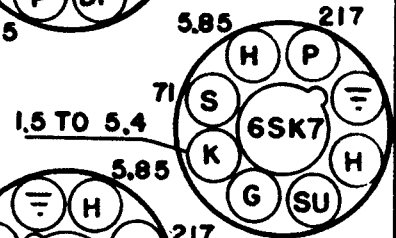
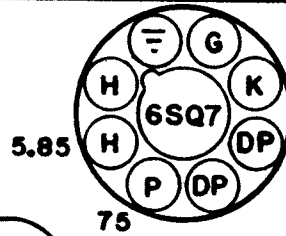
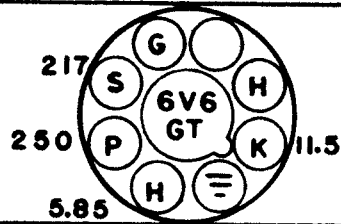
MANUAL OF 1942 MOST POPULAR SERVICE DIAGRAMS



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.

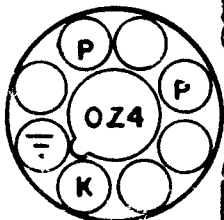
MANUAL OF 1942 MOST POPULAR SERVICE DIAGRAMS



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 7.3AMPS.
"B" DRAIN - 58 MA.
TOLERANCE ON VOLTAGES $\pm 10\%$



VOLTAGE CHART—RADIO 985793

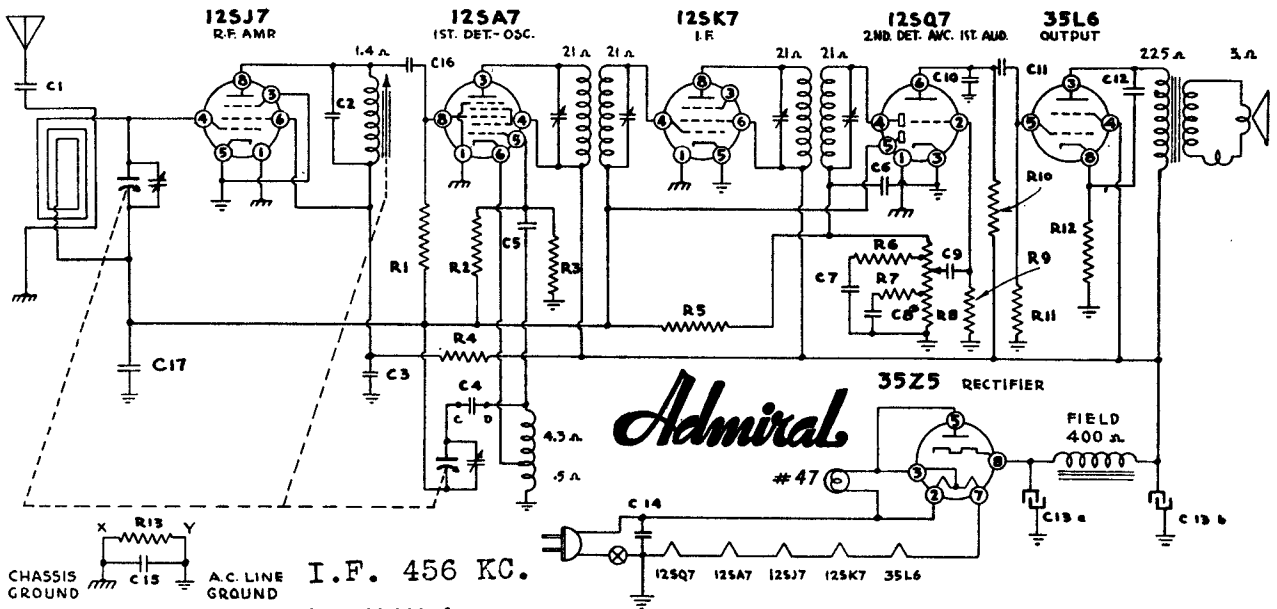


264

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.

MANUAL OF 1942 MOST POPULAR SERVICE DIAGRAMS



Admiral

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

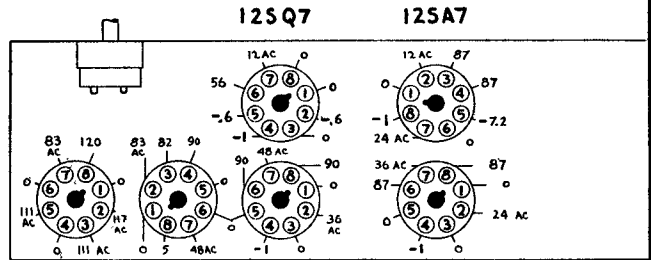
In model B6 only, X and Y are connected together. R13, C15, and C4 are not used. C is connected to D.

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

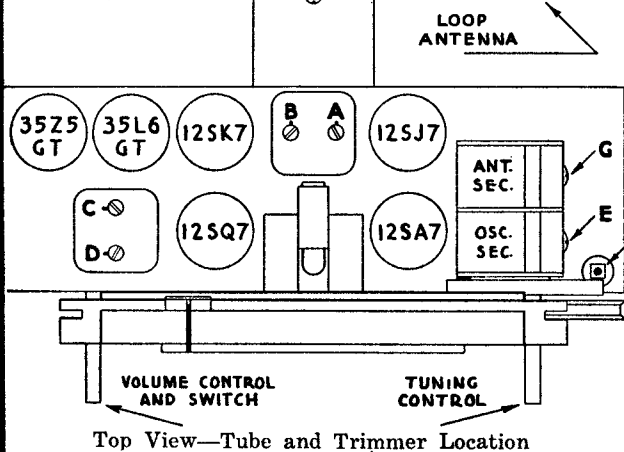
| No. | Capacity (Mfd.) |
|------|-----------------|
| C1 | .005 |
| C2 | .000785 |
| C3 | .05 |
| C4 | .02 |
| C5 | .00005 |
| C6 | .00025 |
| C7 | .01 |
| C8 | .01 |
| C9 | .01 |
| C10 | .0005 |
| C11 | .01 |
| C12 | .02 |
| C13a | 30. Elect. |
| C13b | 50. Elect. |
| C14 | .05 |
| C15 | .2 |
| C16 | .00025 |
| C17 | .1 |



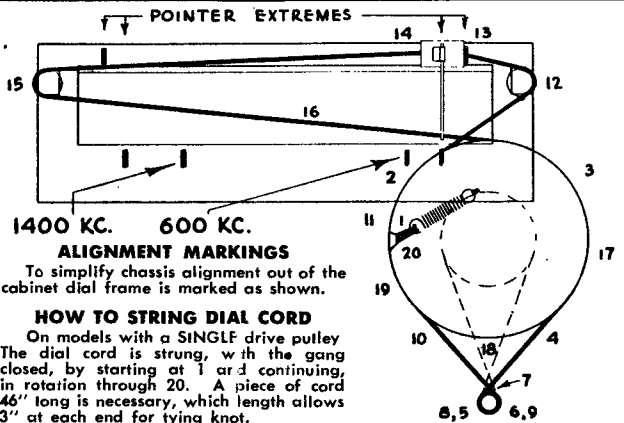
35Z5 35L6 12SK7 12SJ7
Bottom View—Voltage Chart

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



1400 KC. 600 KC.
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 CROSLLEY 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 | 456 Kc. | Antenna | S. B. | Fully open | 2nd I-F (2) | Adjust for maximum output. | Tops of I. F. Trans. |
| 1-A | 456 | Antenna | S. B. | Fully open | 1st I-F (2) Wave trap | Adjust for minimum output. | 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.

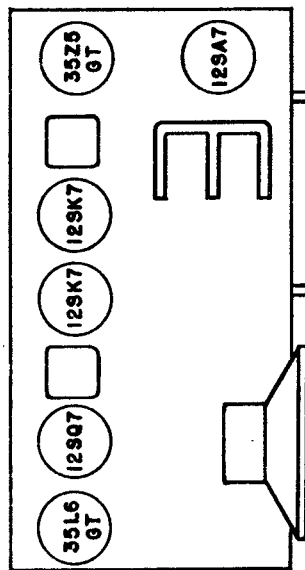
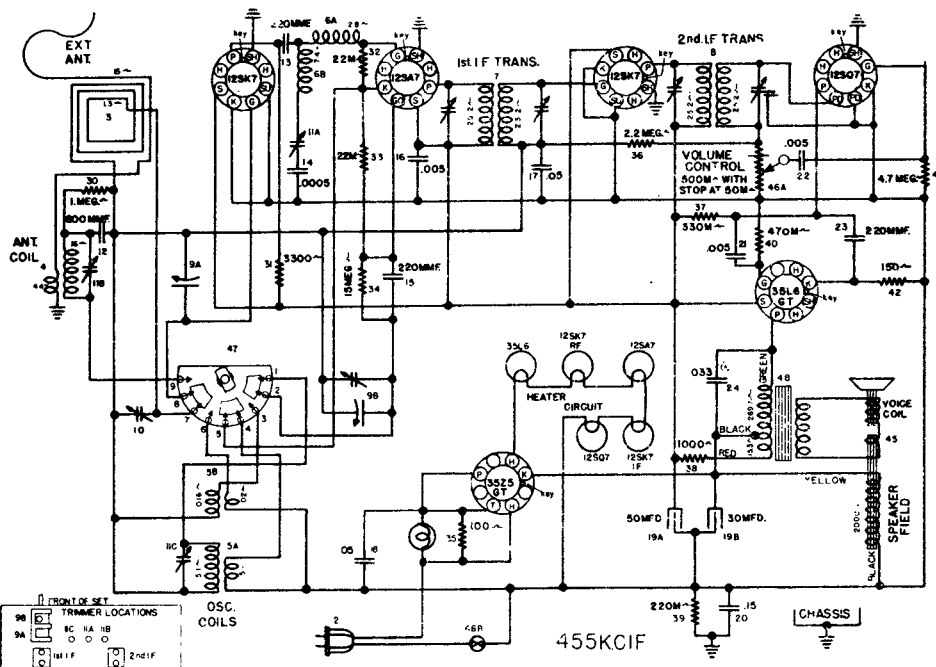
Socket Voltage is measured @ 117.5 V line

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—32 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—1H5GT, 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

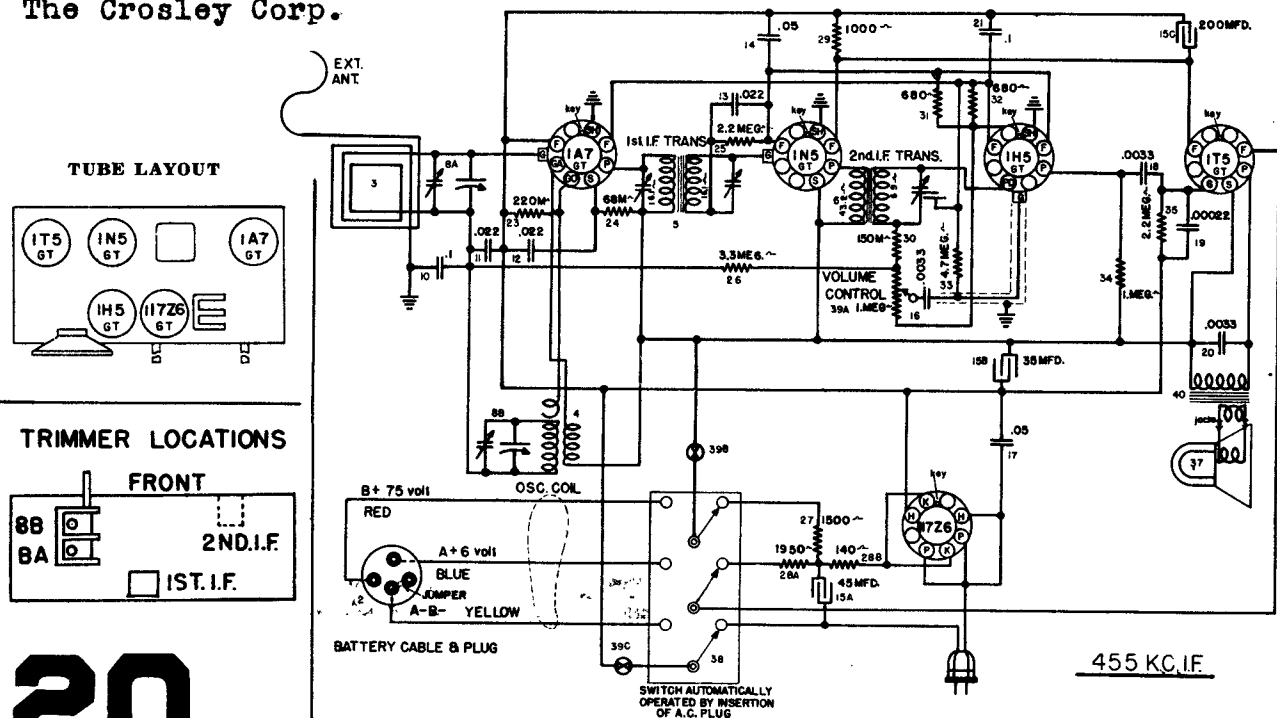
Volume Control on full Output meter connected to Plate and Screen of 1T5GT

| SIGNAL GENERATOR | | 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.

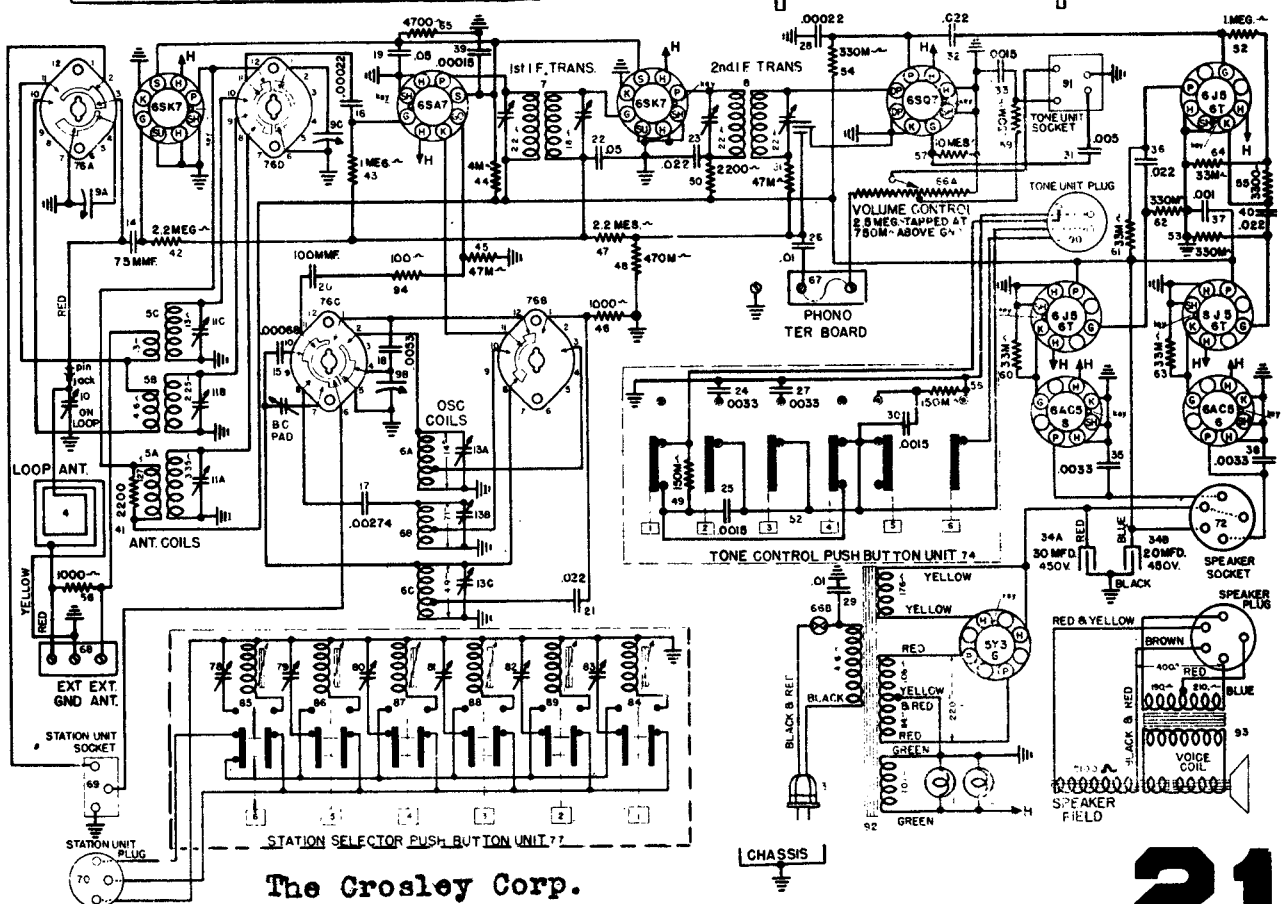
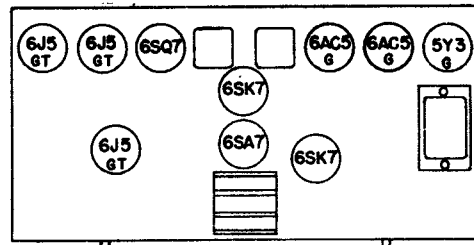
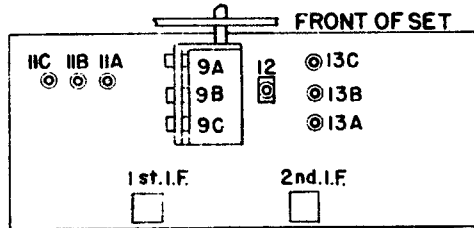


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MANUAL OF 1942 MOST POPULAR SERVICE DIAGRAMS

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. | | | | | | |



MANUAL OF 1942 MOST POPULAR SERVICE DIAGRAMS

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

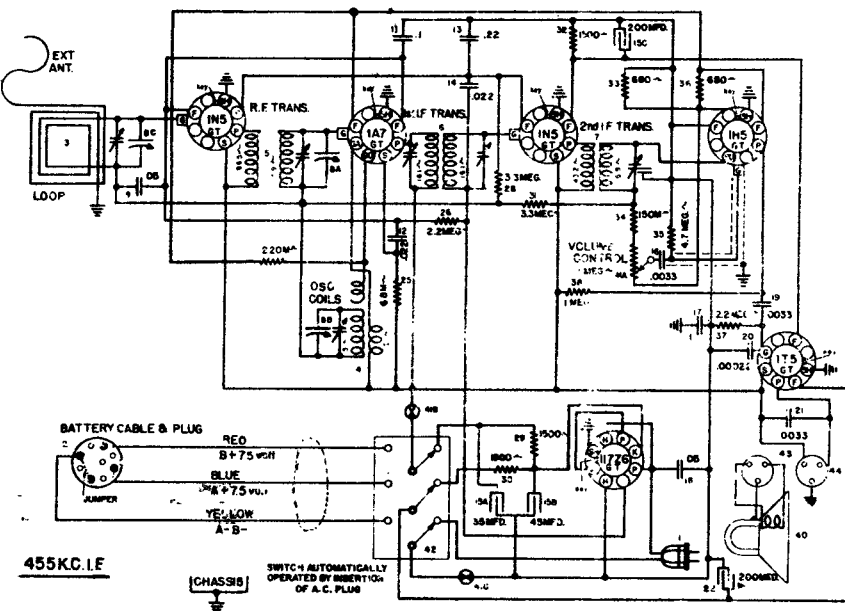
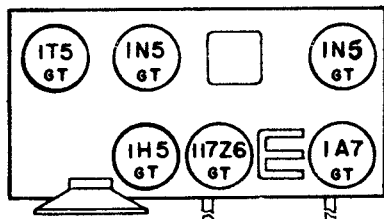
| SIGNAL GENERATOR | | | | | |
|-------------------|---------------------|---------------|----------------------|----------------------------------|-----------------------------------------------------------------------|
| FREQUENCY SETTING | CONNECTION TO RADIO | DUMMY ANTENNA | TUNING COND. SETTING | 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 | —49775 | Power Cable and Plug |
| 2 | —132205-1 | Battery Cable and Plug |
| 3 | GB—132196-1 | 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 |
| 8E | | 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 1/4 W. |
| 26 | G27—39002 | Res. 2.2 Meg. Ohm 1/4 W. |
| 27 | G21—39002 | Res. 220 M Ohm 1/4 W. |
| 28 | G28—39002 | Res. 3.3 Meg. Ohm 1/4 W. |
| 29 | G8—39002 | Res. 1500 Ohm 1/4 W. |
| 30 | —132502-1 | Res. 1900 Ohm Candohm |
| 31 | G26—39002 | Res. 3.3 Meg. Ohm 1/4 W. |
| 32 | G8—39002 | Res. 1500 Ohm 1/4 W. |
| 33 | G8—39002 | Res. 680 Ohm 1/4 W. |
| 34 | G20—39002 | Res. 150 M Ohm 1/4 W. |
| 35 | G29—39002 | Res. 4.7 Meg. Ohm 1/4 W. |
| 36 | G8—39002 | Res. 680 Ohm 1/4 W. |
| 37 | G27—39002 | Res. 2.2 Meg. Ohm 1/4 W. |
| 38 | G25—39002 | Res. 1 Meg. Ohm 1/4 W. |



MANUAL OF 1942 MOST POPULAR SERVICE DIAGRAMS

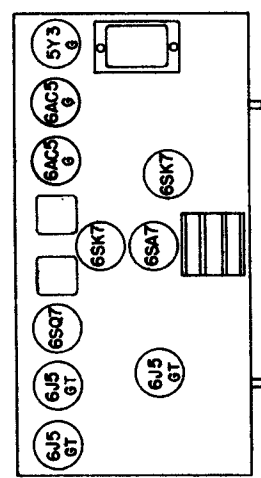
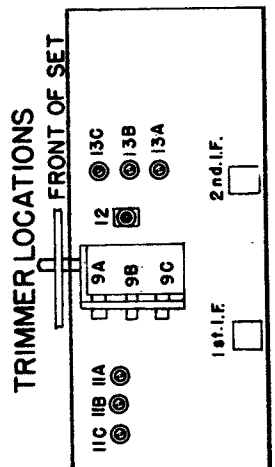
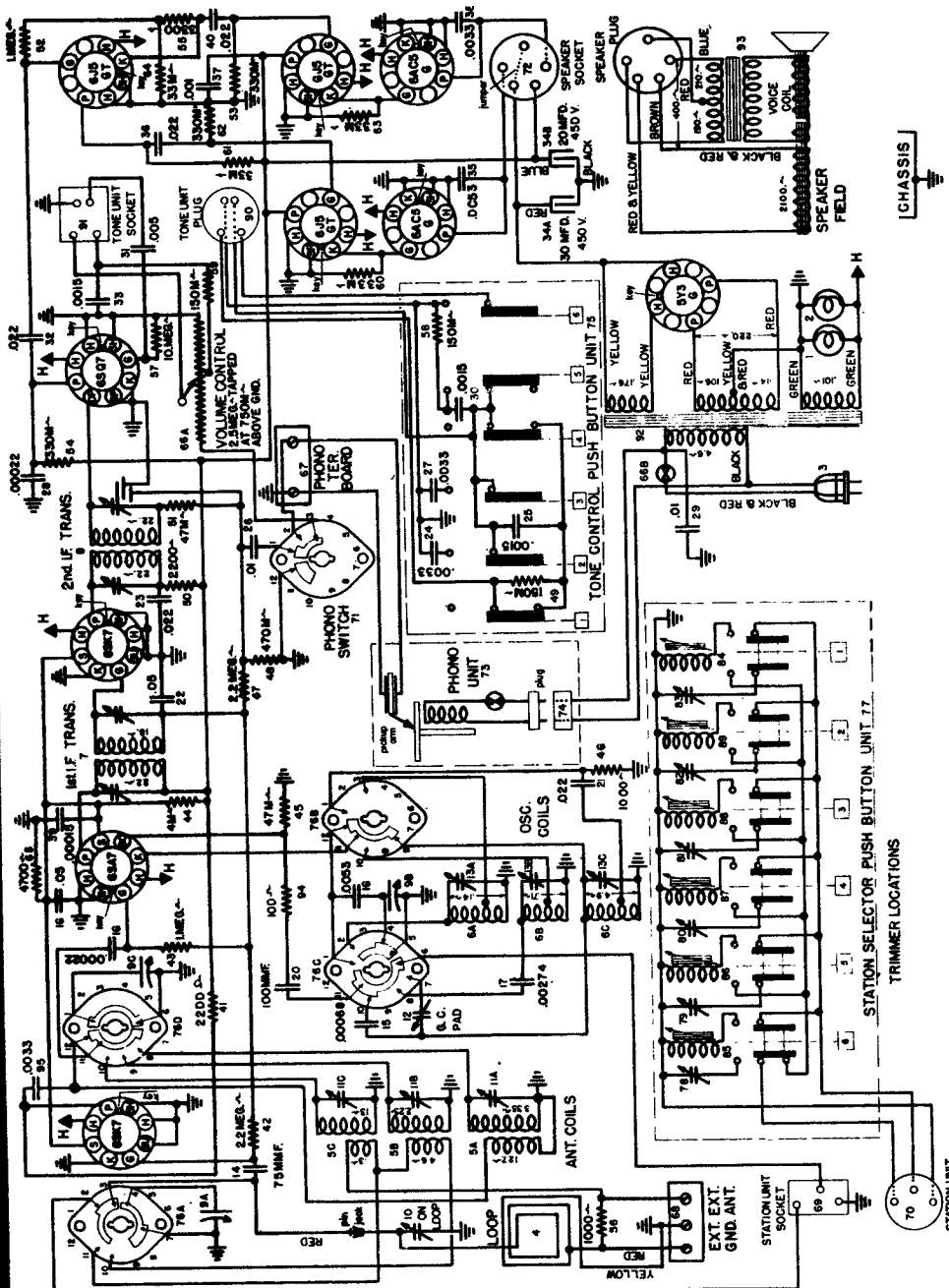
CROSLLEY MODELS 02CP, 02CQ — CHASSIS MODEL No. 70

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. | 6.3 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



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.

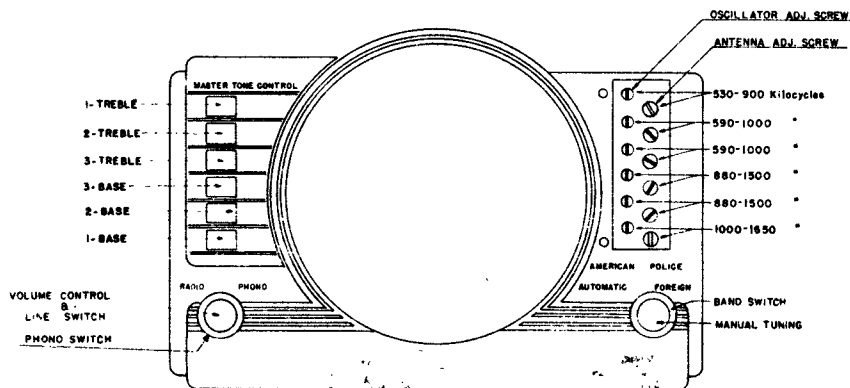
| Alignment Sequence | Dummy Antenna | Frequency Setting | Input Connection to Receiver | Band Switch | Tuning Cond. Setting | Trimmer Adjusted | Remarks |
|--------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------|---------------------------------------|-------------|----------------------|--------------------------------------------------|---------------------------------------------------------------------------------------|
| 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.

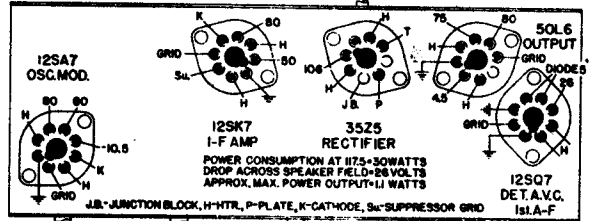
If your receiver fails to operate make sure all tubes are pressed down in their respective sockets and that power cord plug is tight in the house receptacle. Should a visual inspection fail to indicate the trouble, call a competent radio service man—preferably your nearest Crosley dealer.

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 GENUINIE CROSELY PARTS be used should service be required.

ALIGNMENT PROCEDURE

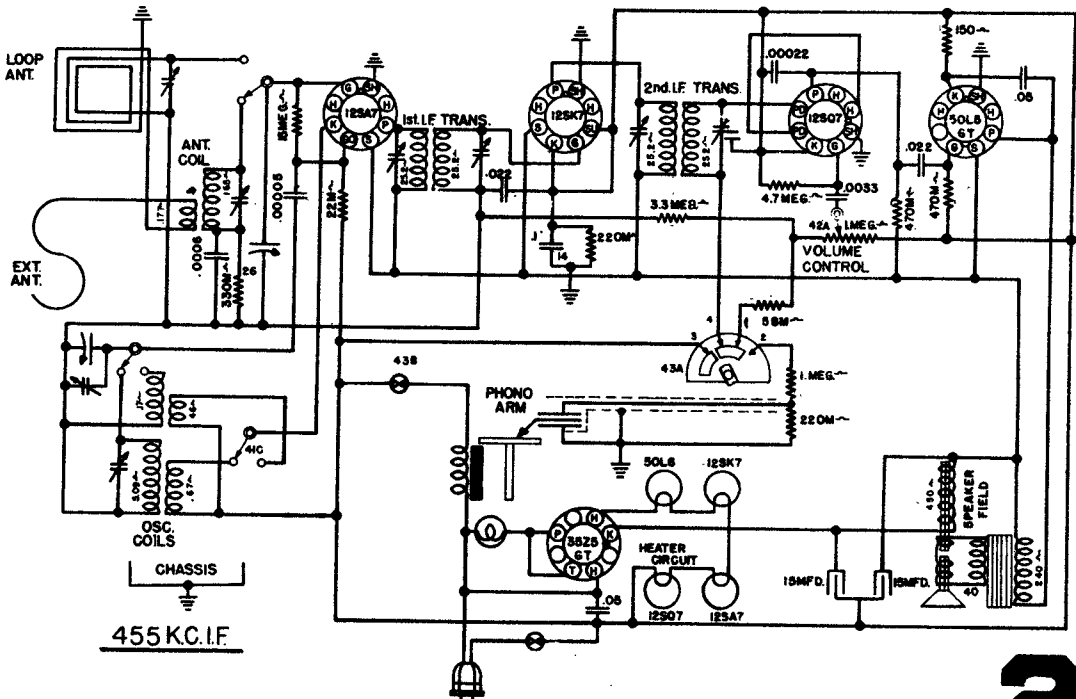
Preliminary

- 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

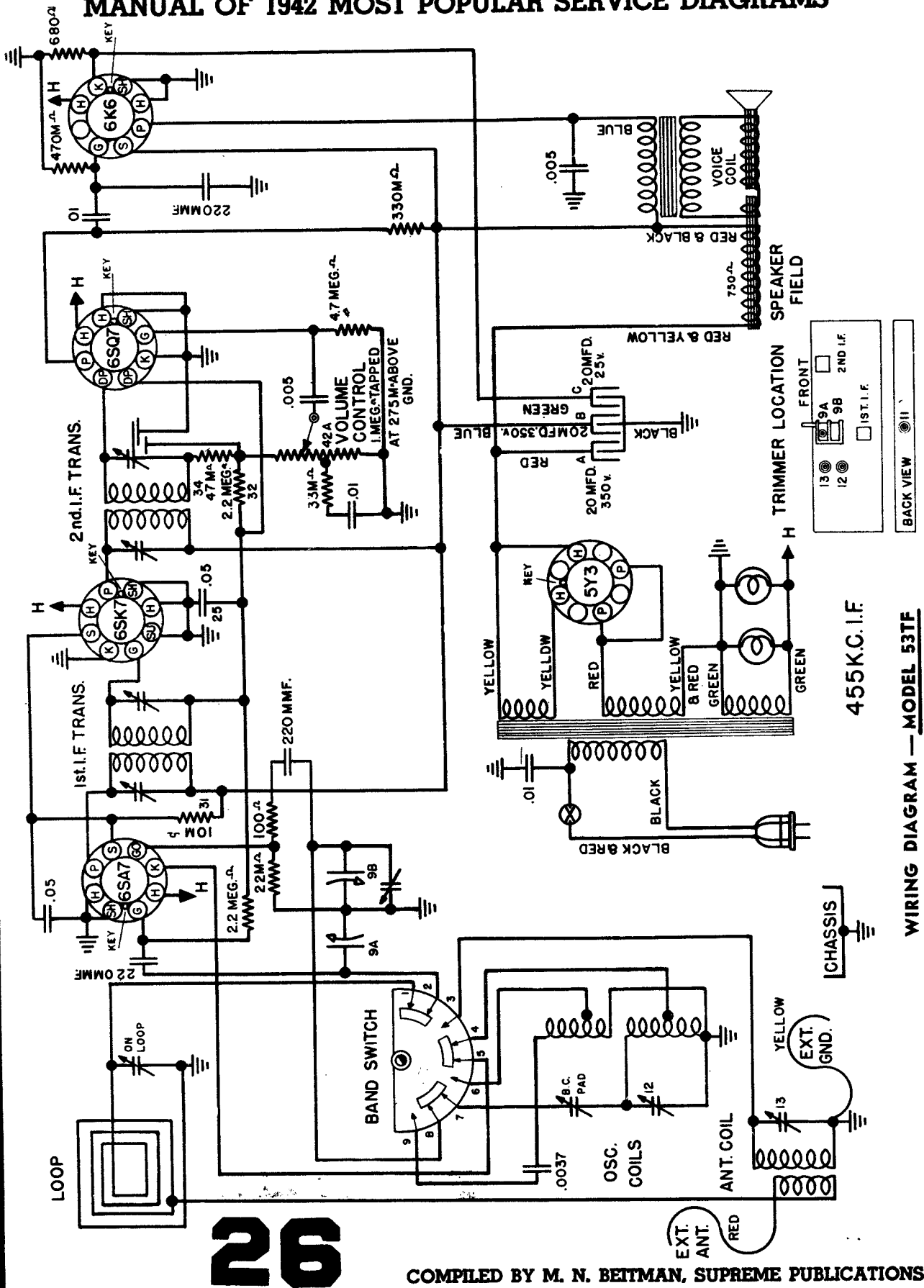


| Alignment Sequence | Dummy Antenna | Frequency Setting | Input Connection to Receiver | Band Switch | Tuning Cond. Setting | Trimmer Adjusted | Remarks |
|--------------------|-------------------------|-------------------|------------------------------|-------------|----------------------|--------------------------|----------------------------------------------------------------------|
| 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

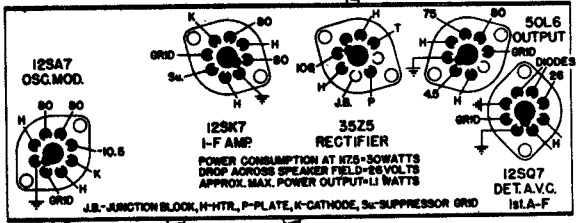


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MANUAL OF 1942 MOST POPULAR SERVICE DIAGRAMS

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

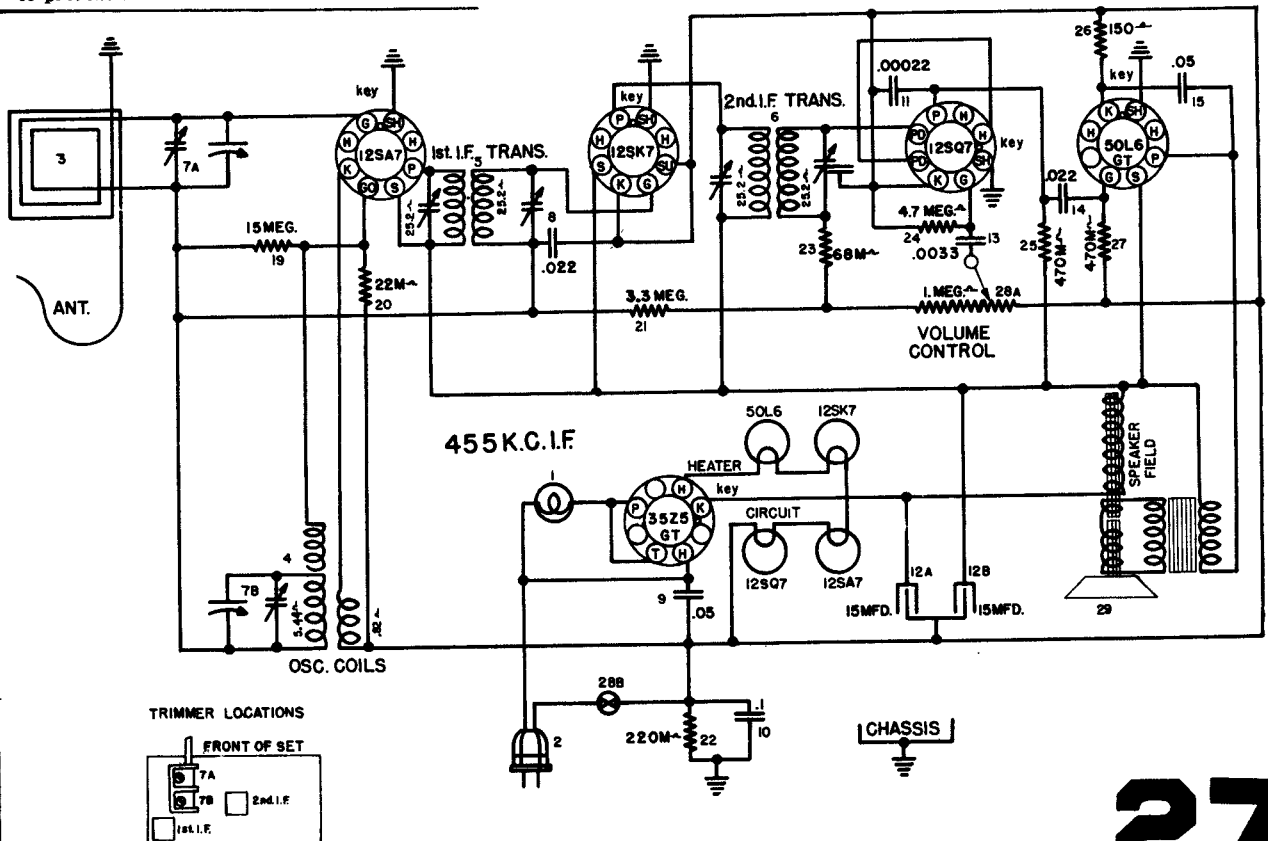
| Item No. | Part No. | Description | Item No. | Part No. | Description |
|----------|------------|----------------------------------------------------------------|----------|-----------|----------------------------------------|
| 1 | —48858 | Bulb Dial Light 6.3V. | 16 | NONE | |
| | L-132109 | Dial Light Socket Assm. | 17 | NONE | |
| | —132099-2 | Dial Face. | 18 | NONE | |
| | —132097-5 | Dial Pointer. | 19 | —50671 | Res. 15 Megohm 1/4 W. |
| | —132117-2 | Celluloid Dial Lens. | 20 | G15—39002 | Res. 22,000 Ohms 1/4 W. |
| | L-132131 | Drive Cord Assm. | 21 | G28—39002 | Res. 3.3 Megohm 1/4 W. |
| | —132119-4 | Drive Shaft. | 22 | G21—39002 | Res. 220,000 Ohms 1/4 W. |
| | —51071 | Retaining Ring—Dr. Shaft. | 23 | G18—39002 | Res. 68,000 Ohm 1/4 W. |
| 2 | —132300-1 | Power Cord & Plug. | 24 | G29—39002 | Res. 4.7 Megohm 1/4 W. |
| | —45738 | Lock Plate Power Cord. | 25 | G23—39002 | Res. 470,000 Ohm 1/4 W. |
| 3 | LB-132110 | Loop Assm. Antenna. | 26 | G33—39002 | Res. 150 Ohm 1/2 W. |
| | —132102 | Spacer—Loop Mtg. (2) | 27 | G23—39002 | Res. 470,000 Ohm 1/4 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

| Align-ment 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

WIRING DIAGRAM, MODELS B2CP AND B2CQ — CHASSIS MODEL No. 75

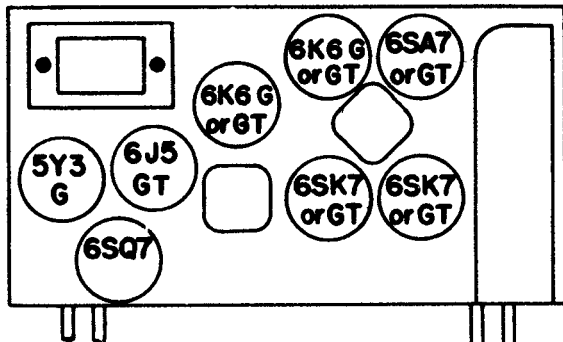
THE AUTOMATIC RECORD CHANGER—This record changer will automatically play a series of twelve 10" or ten 12" records of the standard 78 R. P. M. type. The records must be all one size when loading, and may consist of less records than listed above. Records of any size up to 12" may be played manually.

CAUTIONS—1. Never use force to start or stop the motor or any part of the record changing mechanism or pick-up arm. 2. The use of records which have become warped or damaged through improper care may cause the mechanism to jam and damage the instrument. 3. Do not leave records on the supports, as they may warp, particularly in warmer climates. 4. Never leave the pickup arm with the needle resting on a record or the turntable.

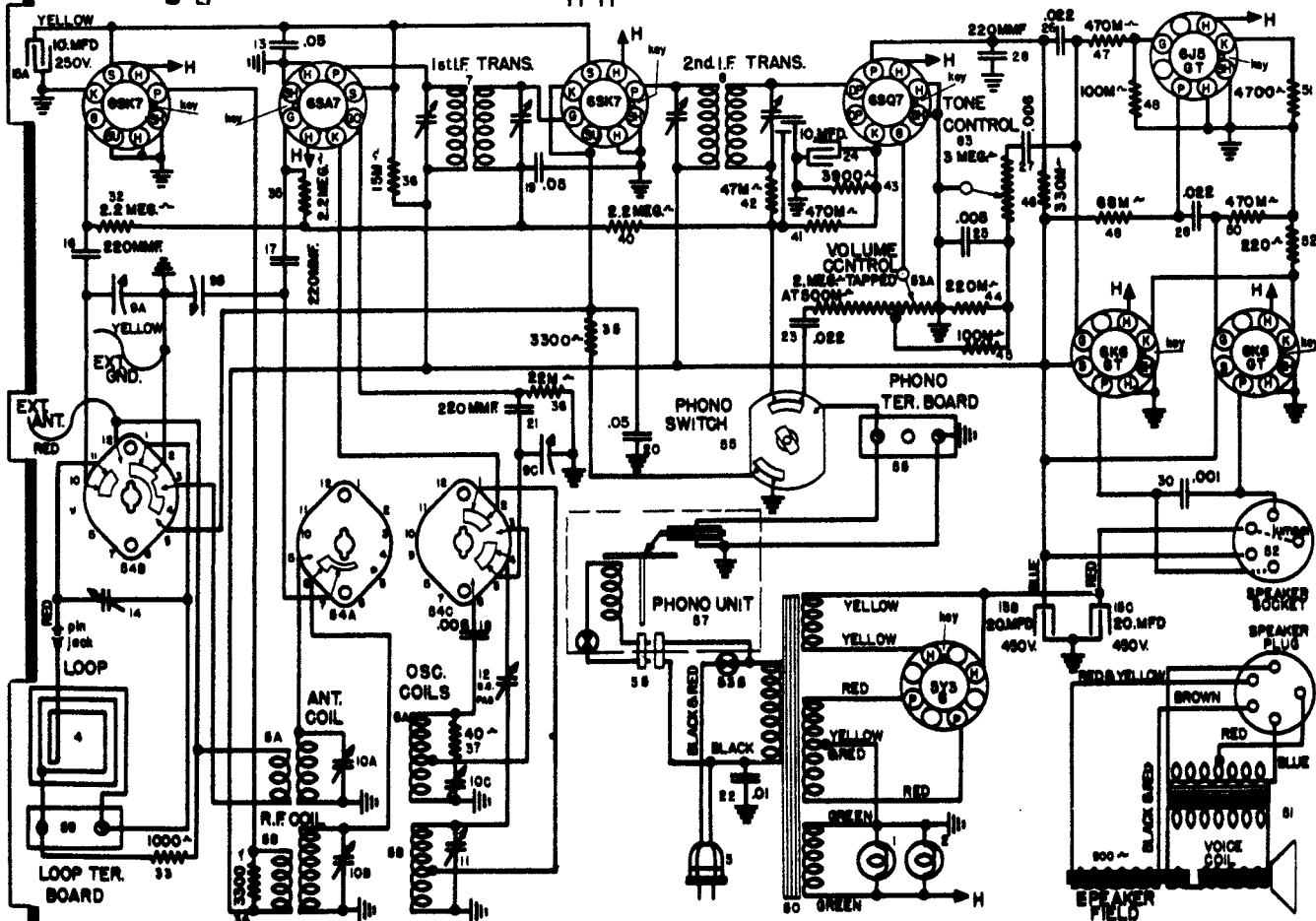
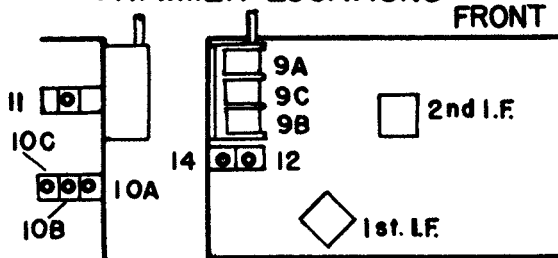
THE FLOATING JEWEL TONE SYSTEM—The "Floating Jewel Tone System" is a Crosley invention and an exclusive feature on your Crosley phono-combination. Its sapphire point literally floats across the surface of the record, reducing record wear and assuring maximum tonal fidelity. Needle noise is virtually eliminated. The "Floating Jewel Tone System" supplied with the phono-combination you have purchased is good for years of normal service.

CAUTION: Avoid dropping the tone arm on a record or the turntable. Use only the Crosley "Floating Jewel Tone System" with your set.

SETTING FOR SIZE OF RECORD—The shelf on the record holder post or the side support for the records may be turned and snaps into place in two points, one for the ten inch records, and the other for the twelve inch records. When the record holder clip (on top of the record holder post) is toward the center spindle, the number showing on the record holder clip is the size record the changer is set to automatically operate.



TRIMMER LOCATIONS

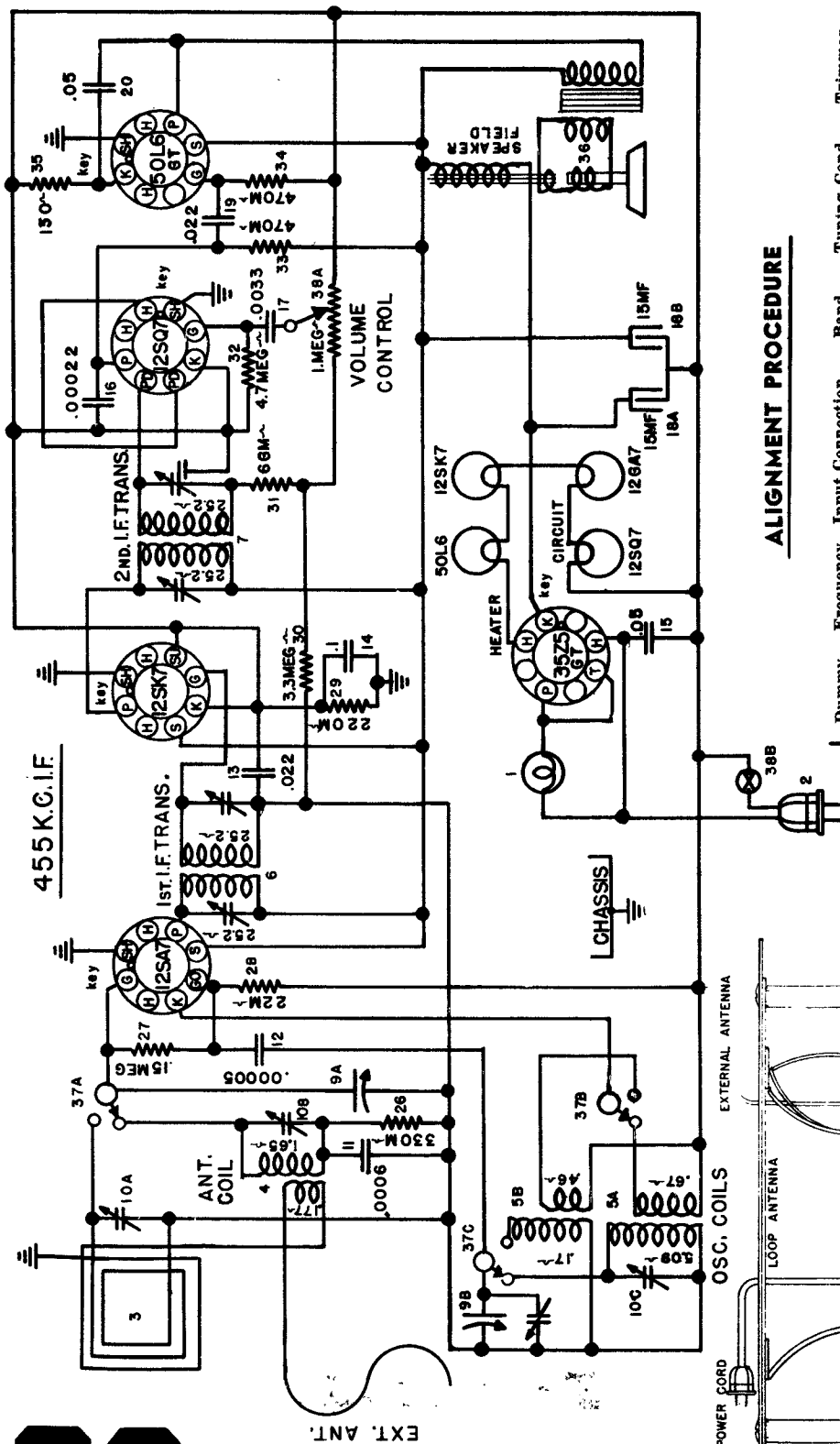


455K.C.I.F

MANUAL OF 1942 MOST POPULAR SERVICE DIAGRAMS

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

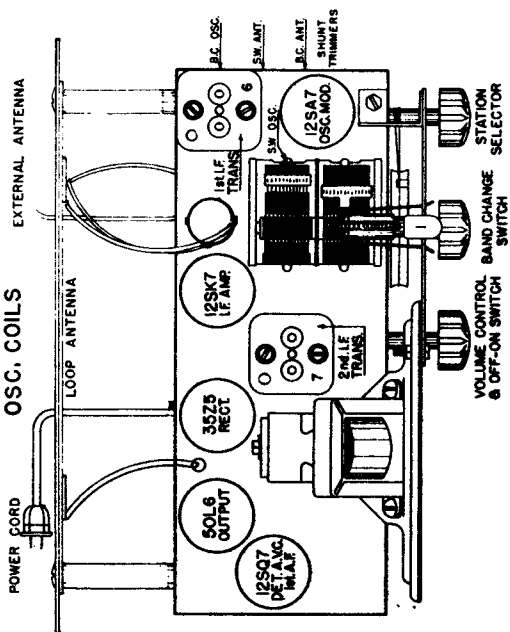
52TF, 52TF-U — CHASSIS No. 76



ALIGNMENT PROCEDURE

| Dummy Antenna | Frequency Setting | Input Connection to Receiver | Band Switch | Tuning Cond. Setting | Trimmer Adjusted |
|-------------------------|-------------------|------------------------------|-------------|----------------------|--------------------------|
| Generator .0001 MF. | 455 KC. | Antenna Lead | BC | Fully Open | 2nd I-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 MF. | 1680 KC. | Antenna Lead (red) | BC | Fully Open | B.C. 'Osc.' |
| .0001 MF. | 1400 KC. | Antenna Lead (red) | BC | 140 Dial | B.C. 'Ant.' |

CROSLLEY



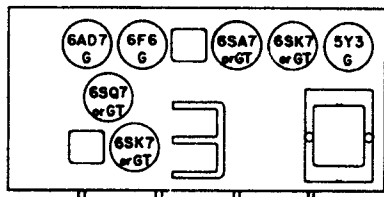
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MANUAL OF 1942 MOST POPULAR SERVICE DIAGRAMS

INSTALLATION, OPERATING AND SERVICE INSTRUCTIONS

for Crosley Model 72CA — Chassis Model No. 80

Model 72CA is a seven tube, two band, superheterodyne 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

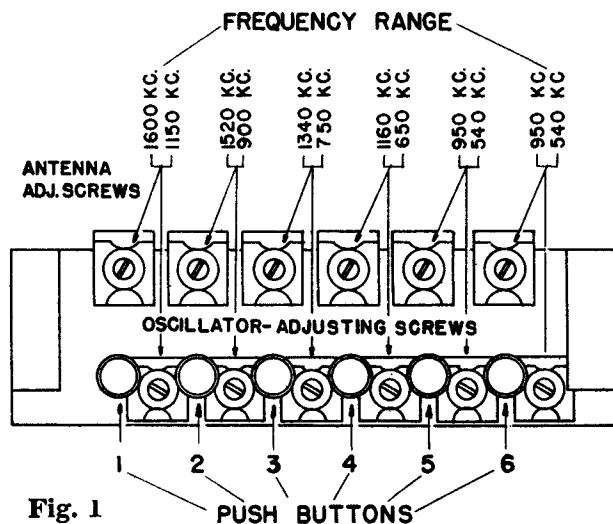
Note: When placing call tabs in the window be sure to arrange them according to their frequency (kilocycles) that is: the station whose frequency is well within the range covered by the No. 1 button, should be placed above that button and so on with the rest of the buttons to be set.

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 | 260 | 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

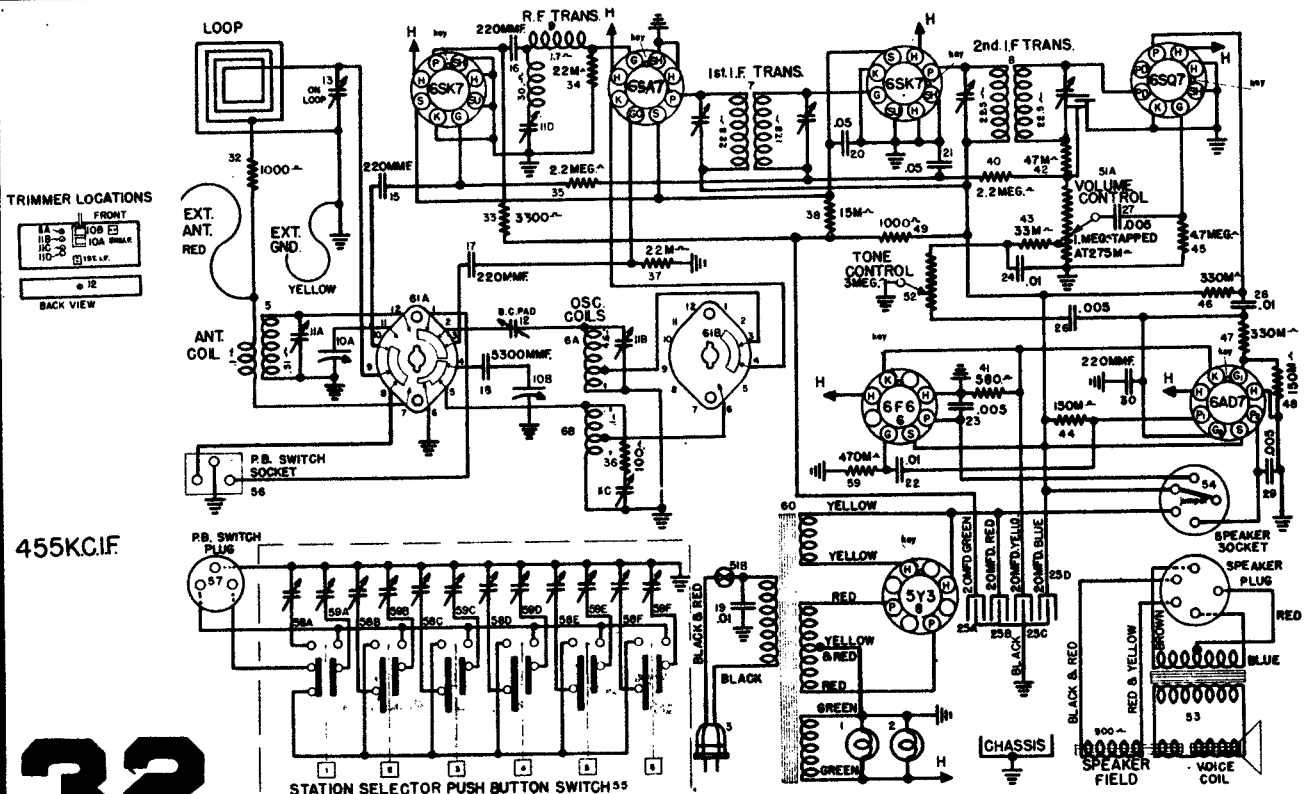
Crosley Model 72CA — Chassis Model No. 80

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 | Tune/nd 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. 60 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 the closed position.)



MANUAL OF 1942 MOST POPULAR SERVICE DIAGRAMS

INSTALLATION, OPERATION AND SERVICE INSTRUCTIONS FOR CROSLY RADIO MODEL 52-TQ — CHASSIS No. 83

THE RADIO-PHONO SWITCH (center knob) when turned to the right is for radio broadcast reception and when turned to the left cuts off the radio signals and switches in changer. The Volume Control and Line Switch of the receiver must be turned on before the motor will operate. This volume control also controls the output level of the phonograph.
THE AUTOMATIC RECORD CHANGER—The record changer built in this combination 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.

ALIGNMENT PROCEDURE CHART

| Alignment Sequence | Dummy Antenna | Frequency Setting | Input Connection to Receiver | Phono. Radio Switch | Tuning Cond. Setting | Trimmer Adjusted | Remarks |
|--------------------|---------------|-------------------|------------------------------|---------------------|----------------------|--------------------------|-----------------------------------------------------------------------|
| 1. | .0001 MF. | 455 KC. | Antenna Lead | Radio | 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 (red) | Radio | Fully Open | B.C."Osc." | Adjust for maximum output. Gang does not have to tune through signal. |
| 3. | .0001 MF. | 1400 KC. | Antenna Lead (red) | Radio | 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.

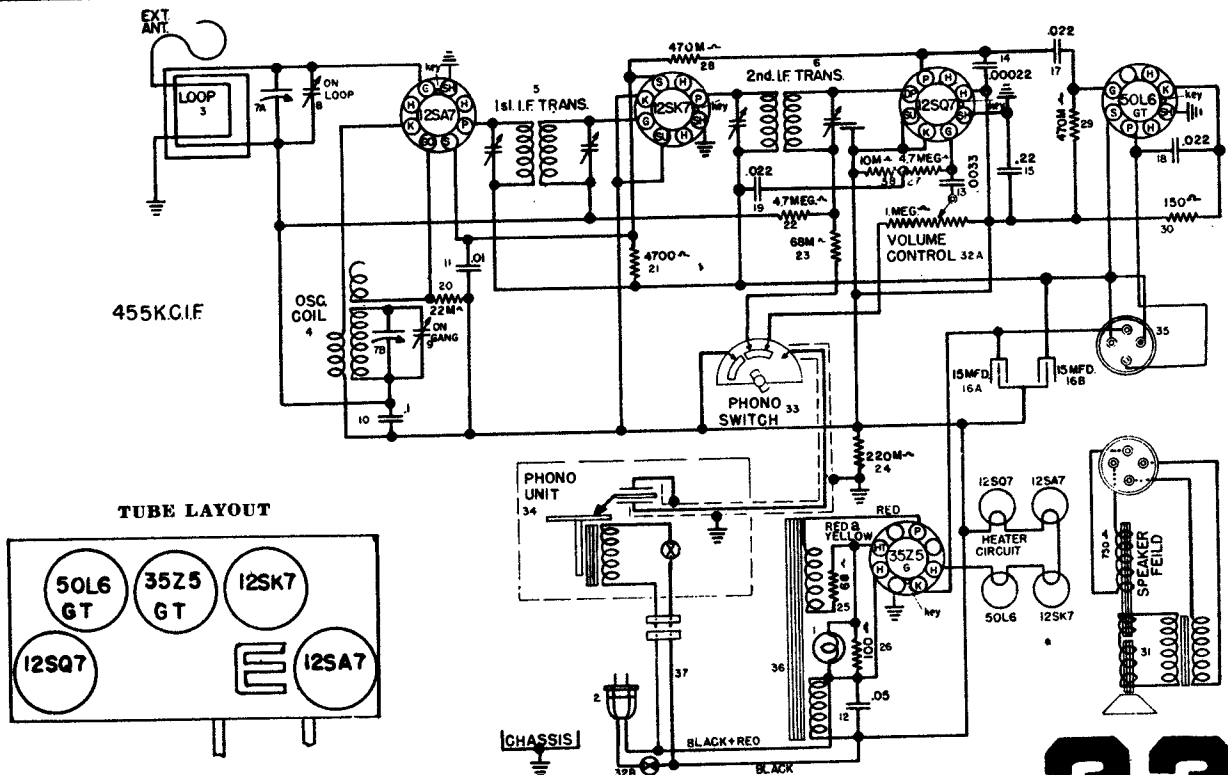
Socket Voltage is measured @ 117.5 V line

TUBE VOLTAGE CHART

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

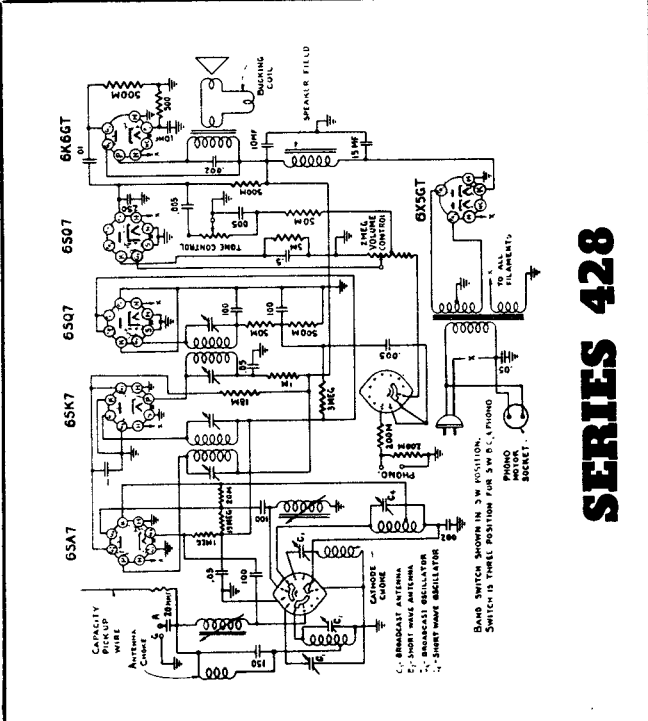
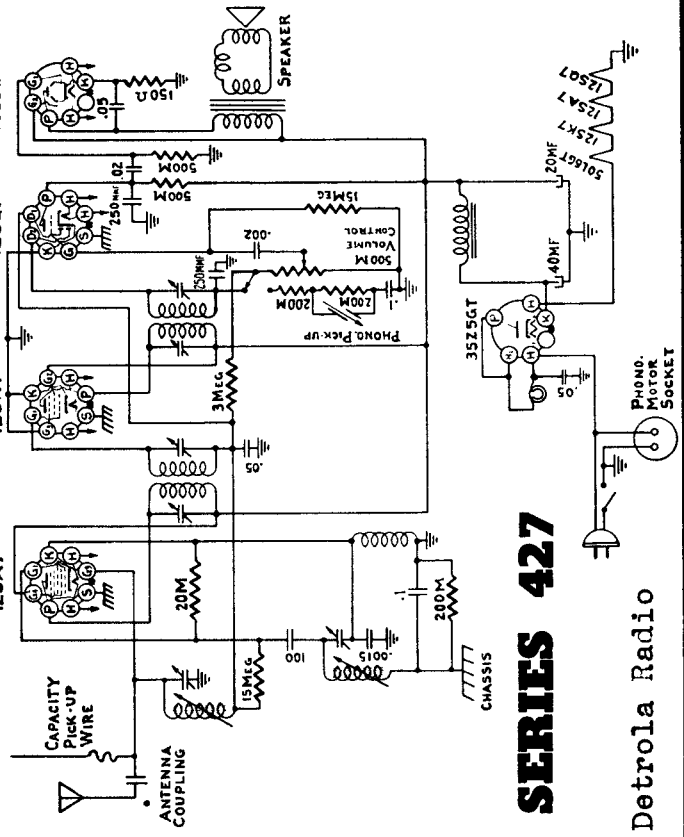
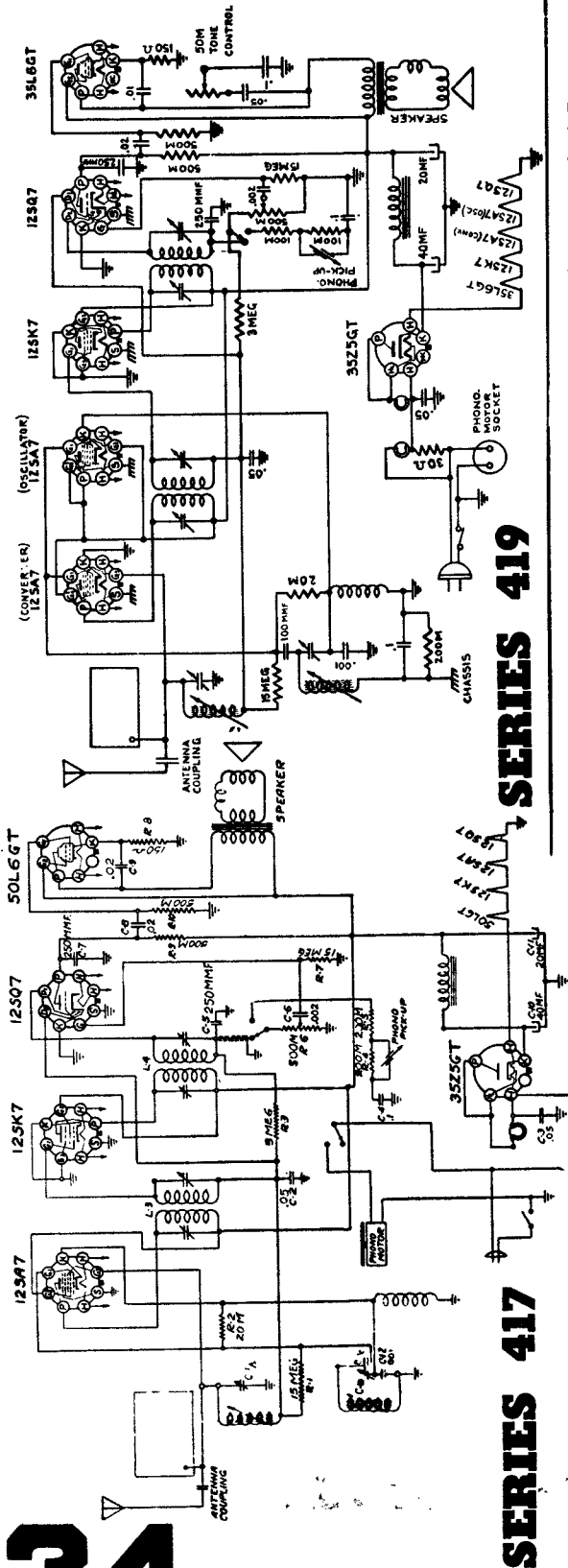
| TUBE | FUNCTION | PIN NUMBER | | | | | | | |
|-------|------------|------------|------|------|------|-------|-------|------|------|
| | | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 |
| 12SA7 | Osc. Mod. | .... | .... | 123 | 78 | Neg. | 0 | .... | Neg. |
| 12SK7 | I. F. Amp. | .... | .... | 0 | Neg. | 0 | 78 | .... | 123 |
| 12SQ7 | Det., Etc. | .... | 0 | 0 | 0 | Neg. | 18.5* | .... | 0 |
| 50L6 | B. P. O. | .... | .... | 112 | 123 | 0 | .... | .... | 8.5 |
| 35Z5 | Rect. | .... | .... | .... | .... | 208AC | .... | .... | 188 |

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, 60 watts. Phono Motor 20 watts additional. Drop across Speaker Field—65 V.
 Current thru Speaker Field—90 M. A.



MANUAL OF 1942 MOST POPULAR SERVICE DIAGRAMS

DETROLA CORPORATION



DETROLA

Automatic Record Changer

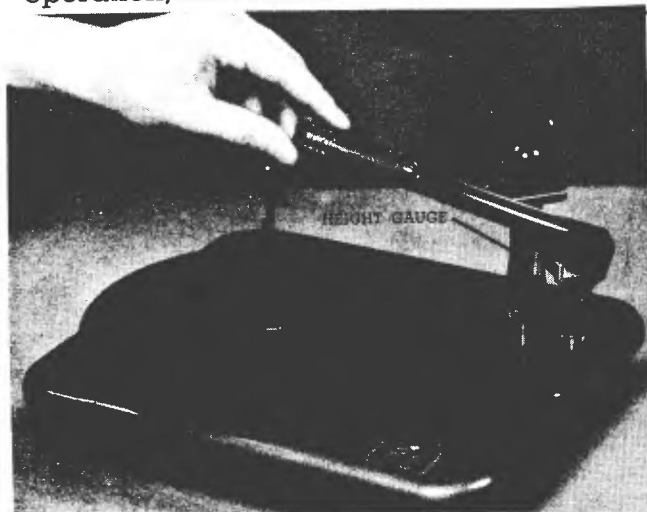
Model N-100 and N-200

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 ½ 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:

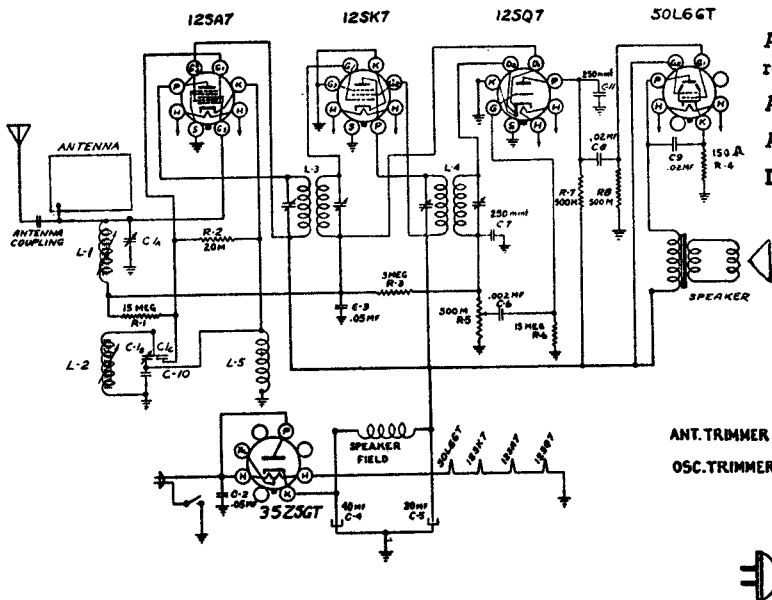
1. Turn **automatic record support** for a 12-inch record.
2. Tonearm should be moved to engage notch marked "H" (home recording) on base of tonearm (See Fig. 2).
3. Move **control lever** to "ON" position and allow **tonearm** to go through its record changing cycle. If the home recording disc is 10" 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

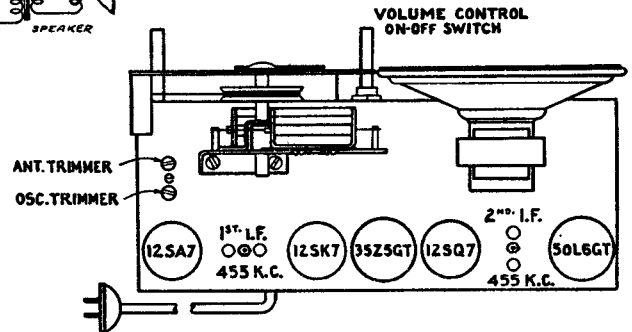


A signal generator which will provide an accurately calibrated signal at the frequencies listed.

An output meter.

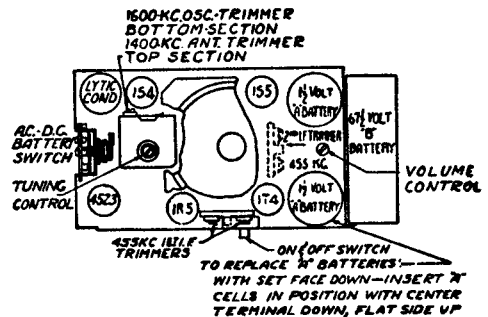
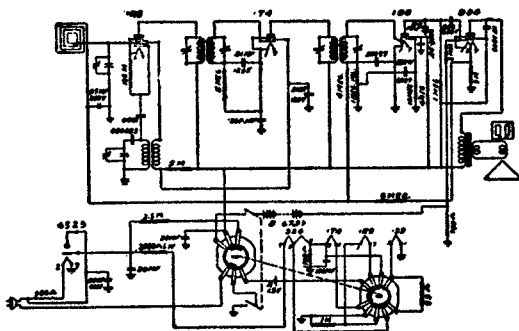
A non-metallic screw driver.

Dummy antennae—.1 mfd., 200 mmf.

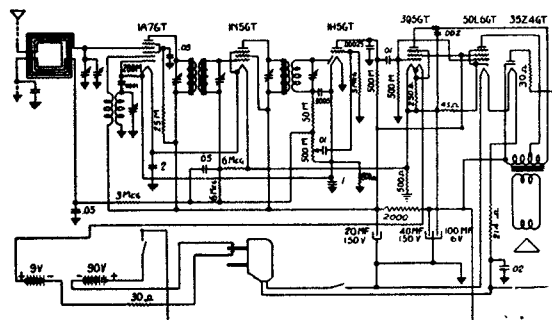
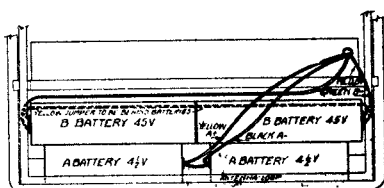


| GENERATOR | CONNECTION AT RADIO | DUMMY ANTENNA | DIAL | TRIMMER TO TUNE | REMARKS |
|--------------|---------------------|---------------|-----------|--------------------|-------------------|
| I.F. 455 kc. | 12SA7 Grid | .1 mfd. | H. F. end | I.F. Transformers | Tune to Max. |
| 1720 kc | Ext. Ant.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

MODEL 3782 AC-DC AND BATTERY PERSONAL RADIO



MODELS 389 SERIES



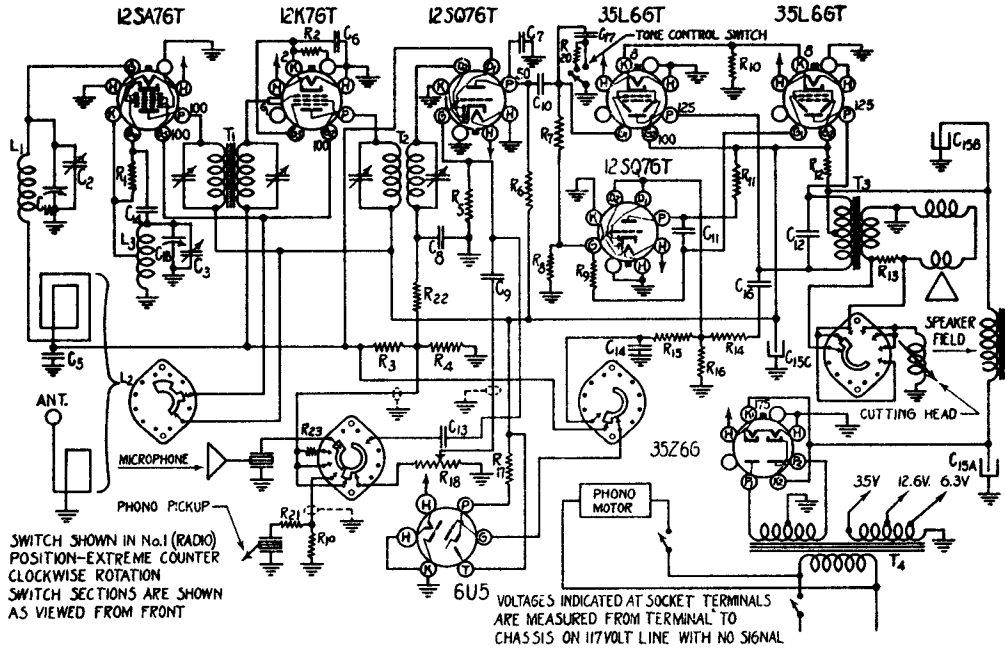
36

Detrola Radio
I.F. 455 KC.

MANUAL OF 1942 MOST POPULAR SERVICE DIAGRAMS

DETROLA CORPORATION

MODEL 390



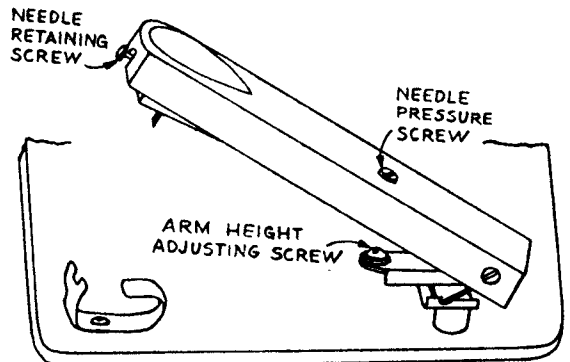
SWITCH SHOWN IN No.1 (RADIO) POSITION—EXTREME COUNTER CLOCKWISE ROTATION
SWITCH SECTIONS ARE SHOWN AS VIEWED FROM FRONT

VOLTAGES INDICATED AT SOCKET TERMINALS ARE MEASURED FROM TERMINAL TO CHASSIS ON 117VOLT LINE WITH NO SIGNAL

| Schematic Location | Part Number | Description |
|--------------------|----------------------|----------------------------------------------------|
| | CHASSIS PARTS | |
| | 4417 | Button, Snap (Dial Mounting) |
| | 8931 | Cable, Tuning Tube |
| | 2163 | Cable, drive |
| | 3227 | Cap, Grid |
| R18 | 8910 | Control, Volume and Switch |
| | 1732 | Cord, Line |
| | 6424 | Clamp, Linecord |
| | 4314 | Clamp, Tapped—For Tuning Tube |
| | 4315 | Clamp, Plain—For Tuning Tube |
| 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 |

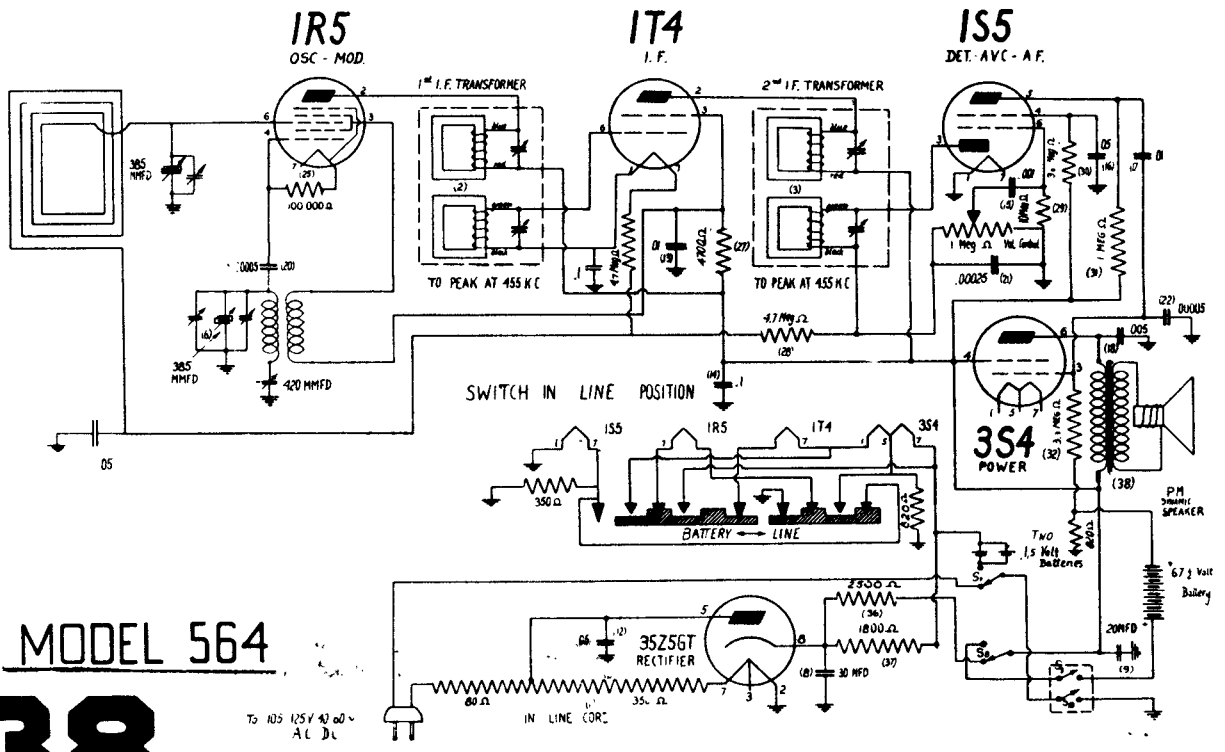
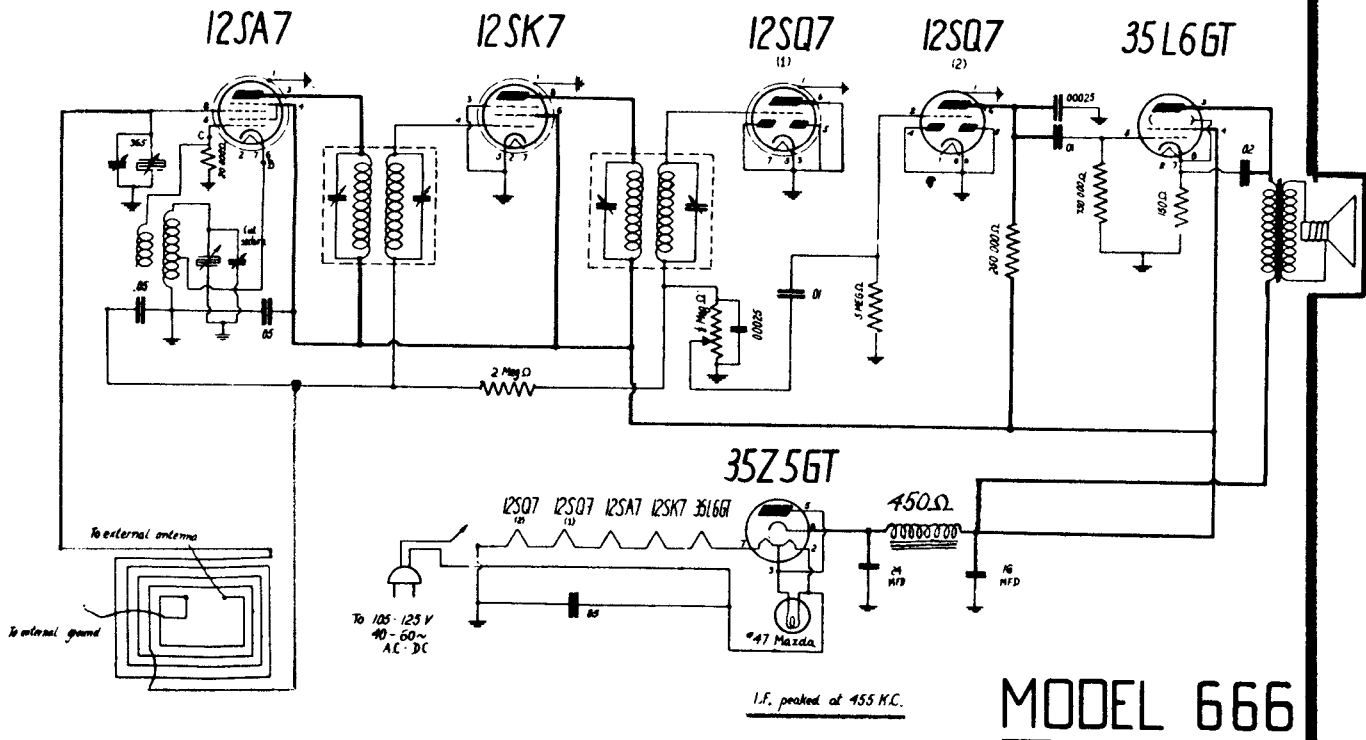
| Schematic Location | Part Number | Description |
|--------------------|-------------|-----------------------------------------|
| R3,4,14,16 | | Resistor, 1 Meg. 1/3 Watt |
| R5 | | Resistor, 10 Meg. 1/3 Watt |
| R6,7,8,9,11 | | Resistor, 200M. 1/3 Watt |
| R10 | | Resistor, 120 Ohm, 1/2 Watt |
| R12 | | Resistor, 1000 Ohm, 1 Watt |
| R13 | | Resistor, 35 Ohm, 1/2 Watt |
| R15 | | Resistor, 2 Meg. 1/3 Watt |
| R17 | | Resistor, 1 Meg (in Tuning Tube Socket) |
| R19,20,21,22 | | Resistor, 50M, 1/3 Watt |
| R23 | | Resistor, 4 Meg. 1/3 Watt |

RECORDING ARM ADJUSTMENTS



MANUAL OF 1942 MOST POPULAR SERVICE DIAGRAMS

De Wald Radio Mfg. Corp. New York



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.

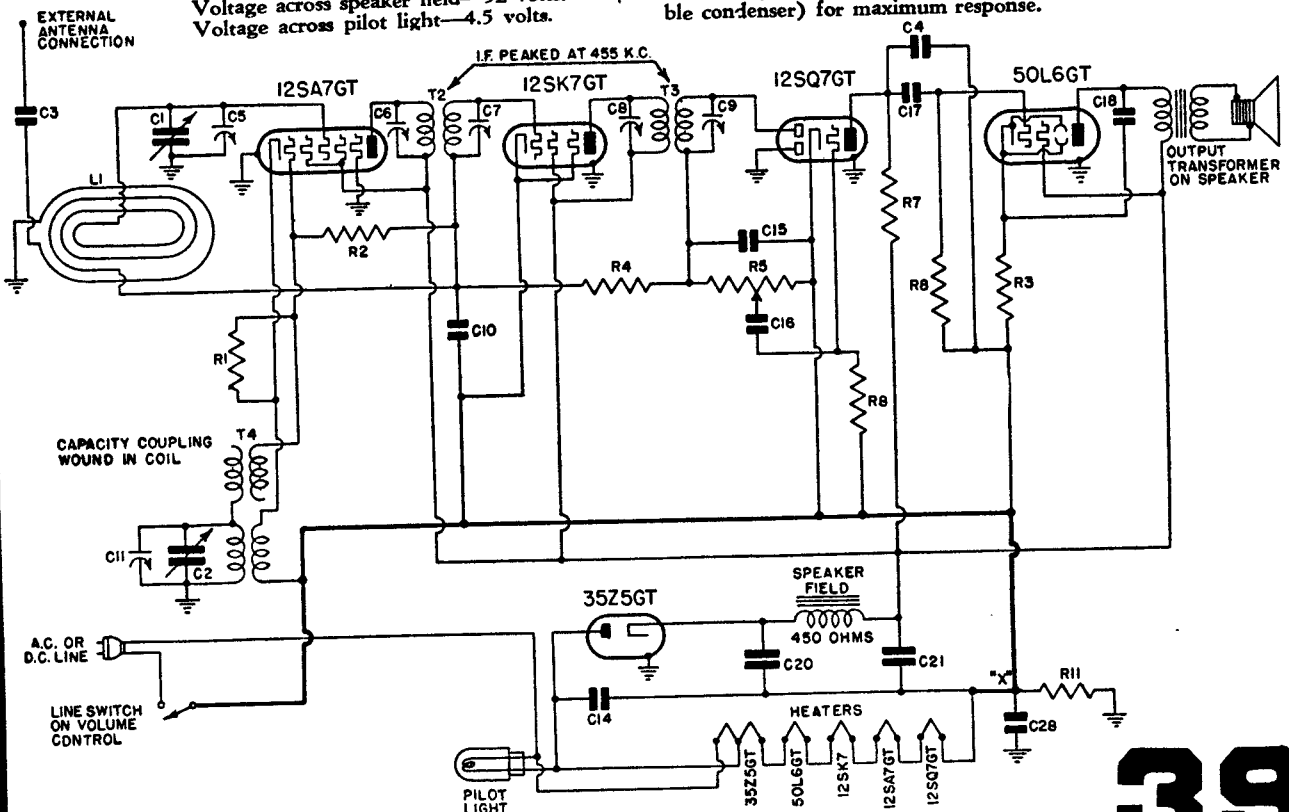
VOLTAGE ANALYSIS

| 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

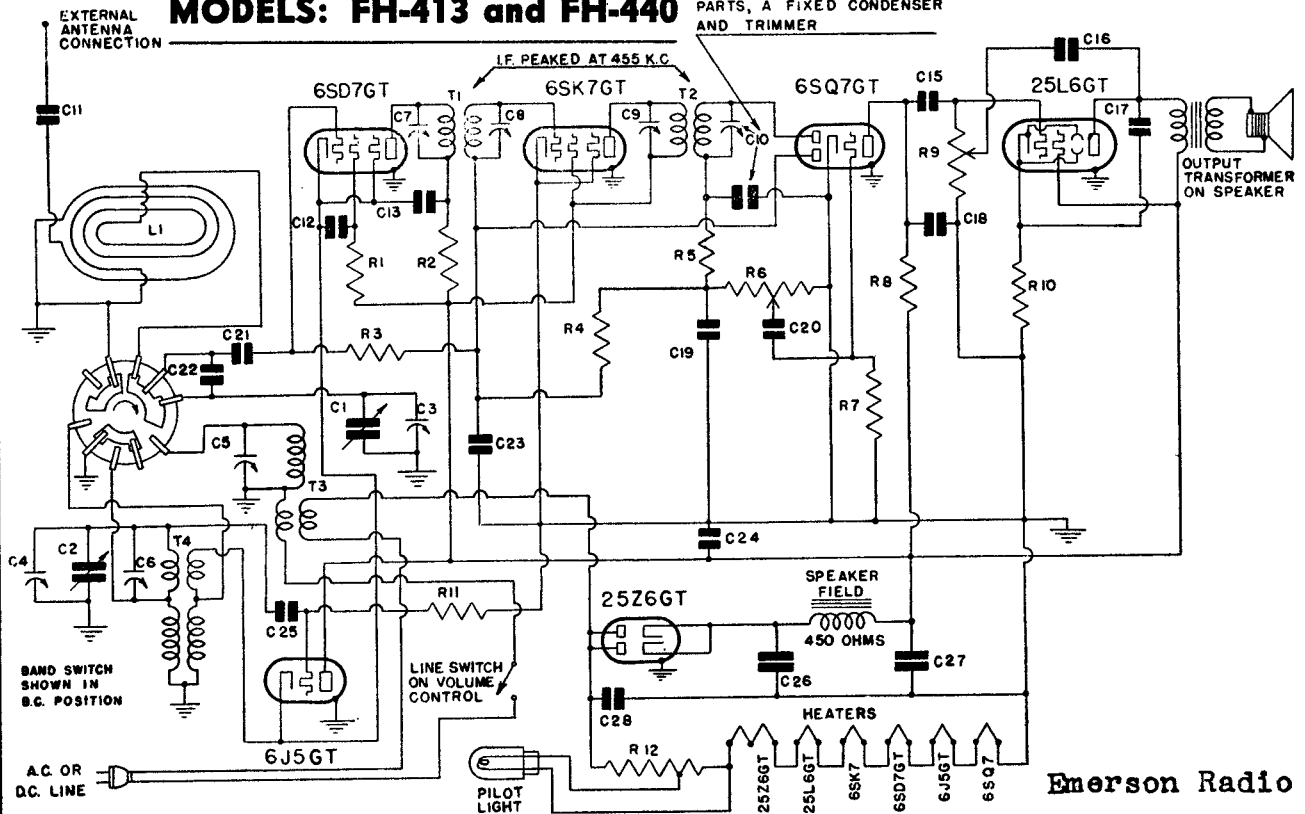
Set the dial pointer at 140. Set the signal generator at 1400 kc and feed its output into a loop of wire about 12 inches in diameter. Hold this radiating loop about 12 inches from and parallel to the receiver loop antenna. Advance the output of the signal generator until deflection is obtained on the 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



| 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.

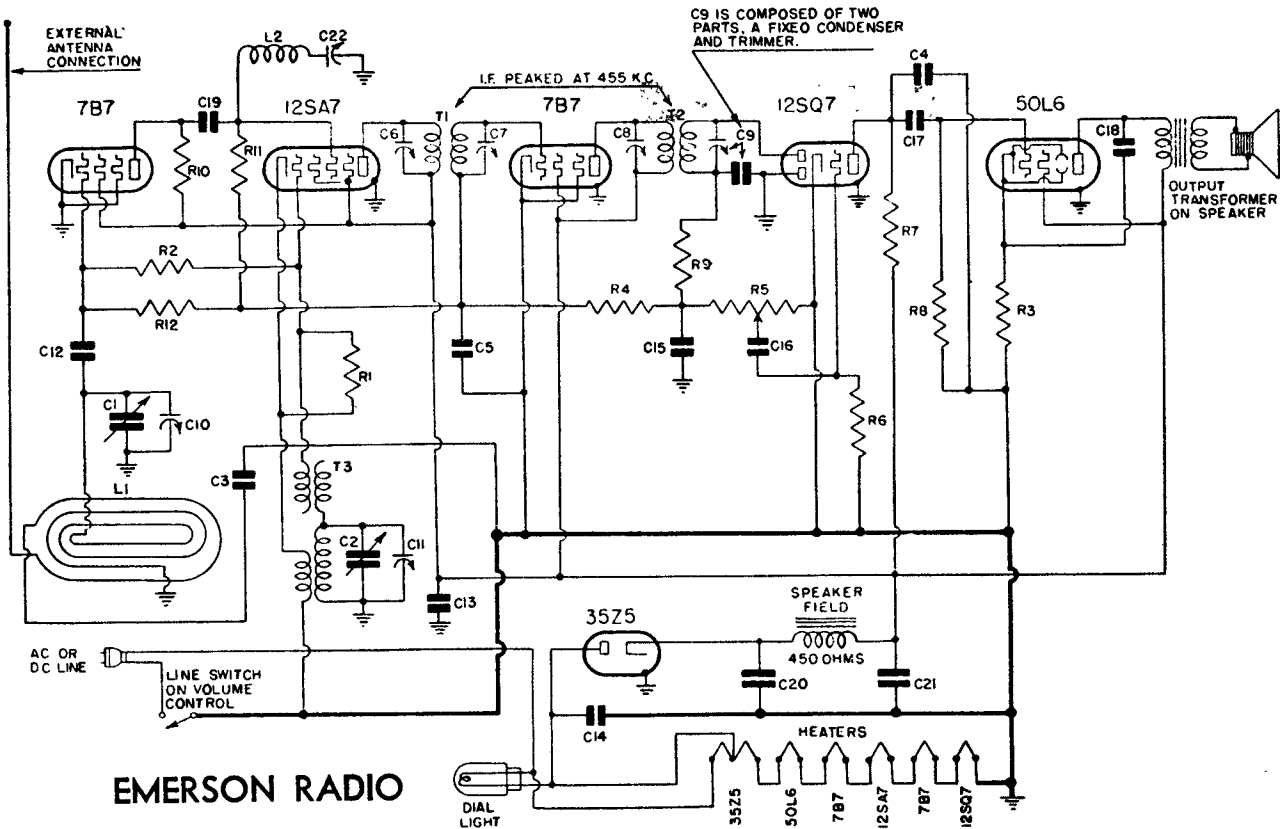
Note: The grid of the 6SD7 tube is the No. 4 pin.

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 |

MANUAL OF 1942 MOST POPULAR SERVICE DIAGRAMS



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 ½ 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 |
| 12SA7 | 88 | 88 | 0 |
| 7B7 | 88 | 85 | 0 |
| 12SQ7 | 30 | — | 0 |
| 50L6GT | 82 | 88 | 5.6 |

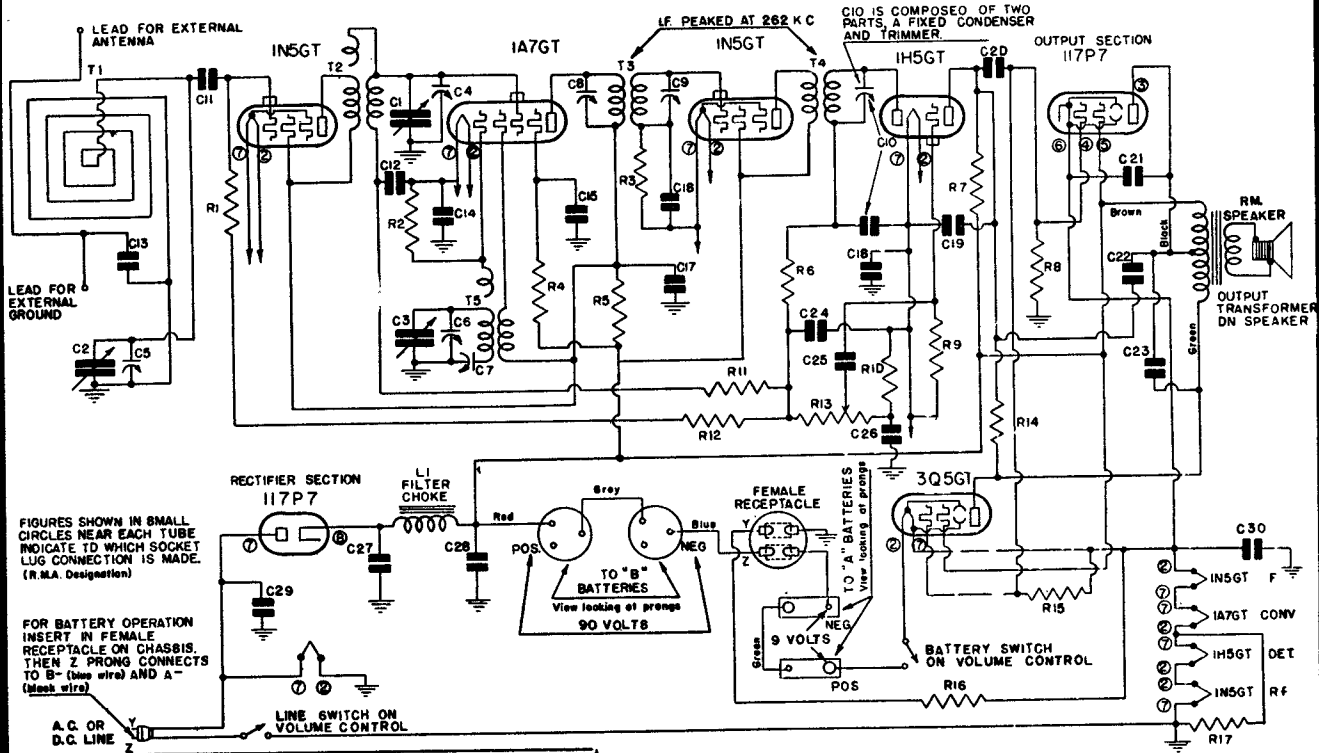
Voltage at 35Z5GT cathode—120 volts.

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 Z PRONG CONNECTS TO B- (blue wire) AND A- (black wire)

A.C. OR D.C. LINE LINE SWITCH ON VOLUME CONTROL

| | |
|--------------------|-------------------------------------------|
| R1 | 2 megohm ¼ watt carbon resistor |
| R2 | 200,000 ohm ¼ watt carbon resistor |
| R3 | 5 megohm ¼ watt carbon resistor..... |
| R4 | 30,000 ohm ¼ watt carbon resistor |
| R5 | 1,000 ohm ¼ watt carbon resistor.... |
| R6 | 47,000 ohm ¼ watt carbon resistor |
| R7, R8 | 500,000 ohm ¼ watt carbon resistor |
| R9 | 10 megohm ¼ watt carbon resistor |
| R10 | 4,000 ohm ¼ watt carbon resistor |
| R11, R12, R14, R15 | 3 megohm ¼ watt carbon resistor |
| R13 | Volume control .5 megohm |
| R16 | 1,200 ohm ¼ watt carbon resistor |
| R17 | 860 ohm ½ 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 |

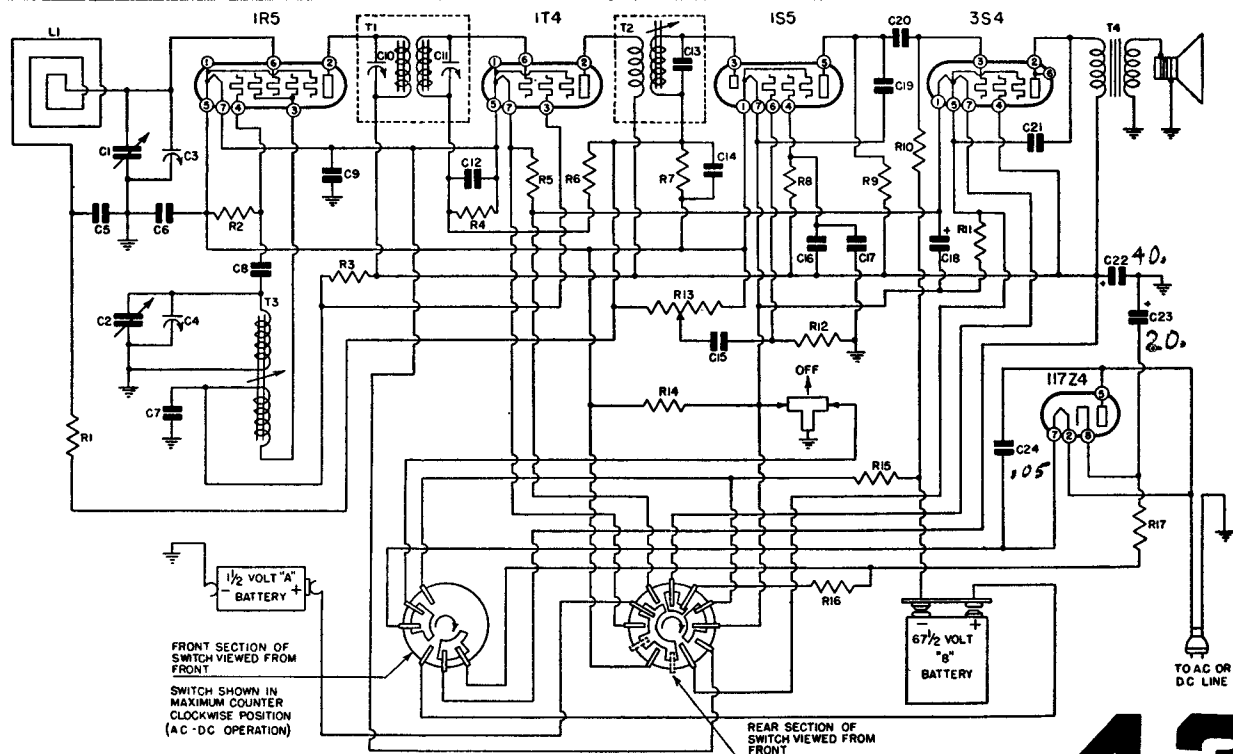
I-f Alignment

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

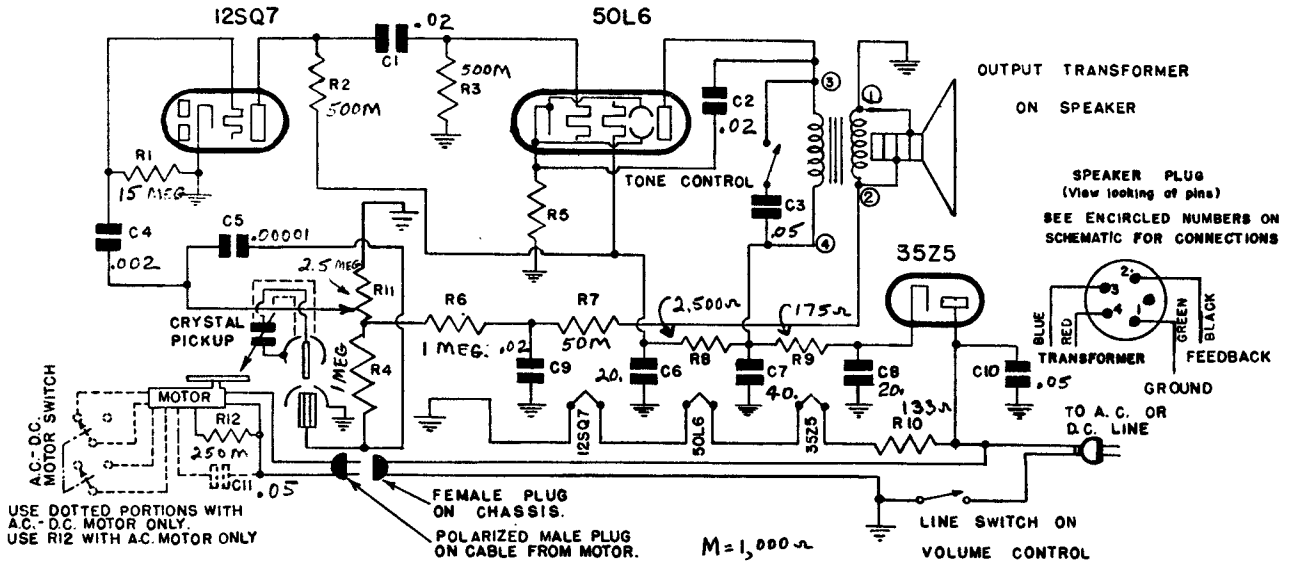
Emerson Radio

MODEL: FY-434

CHASSIS MODEL: FY

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

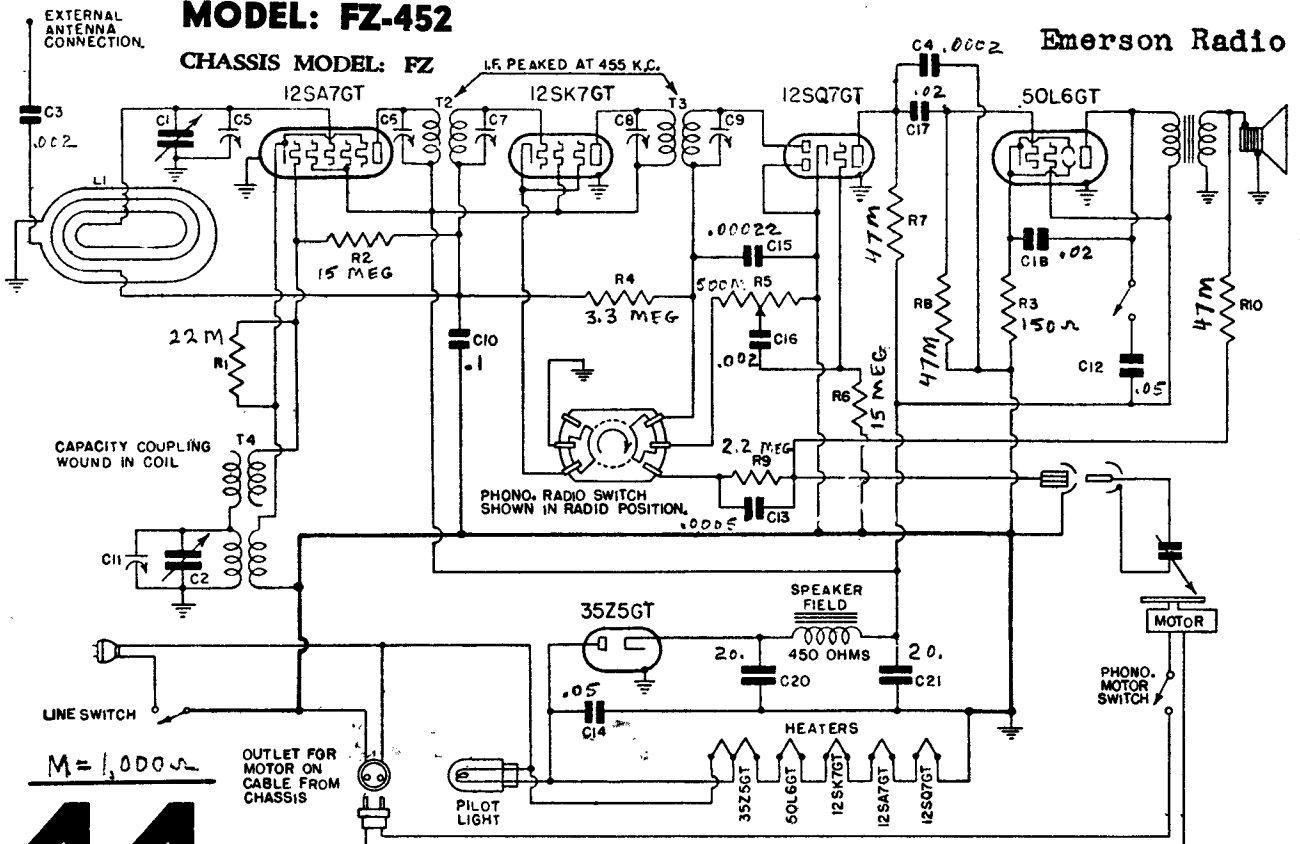
CHASSIS MODEL: FY2



MODEL: FZ-452

CHASSIS MODEL: FZ

Emerson Radio



MANUAL OF 1942 MOST POPULAR SERVICE DIAGRAMS

Emerson Radio

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.

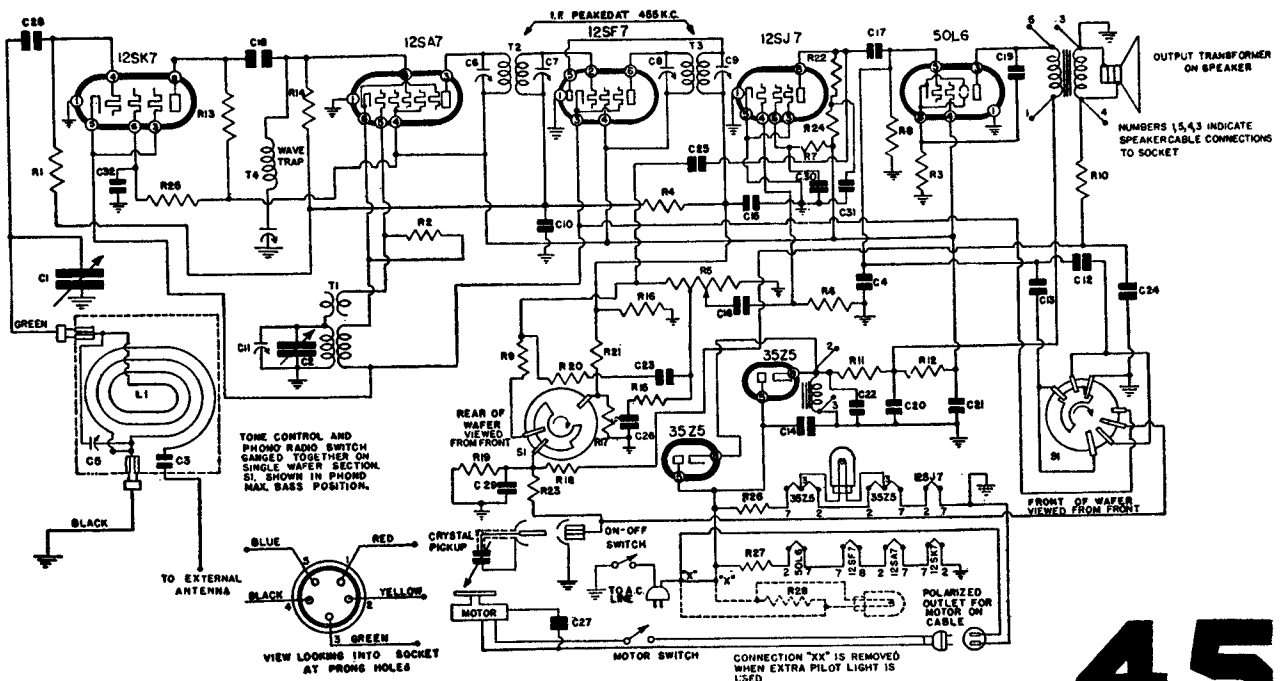
Note: The grid of the 12SA7 tube is the No. 8 pin.

| | |
|-------------------|----------------------------------------------------------------------------------|
| R1, R7, R18, R19 | } 1 megohm ¼ watt carbon resistor..... |
| R2 | |
| R3 | 20,000 ohm ¼ watt carbon resistor..... |
| R4 | 140 ohm ½ watt wire wound resistor |
| R5 | 3 megohm ¼ watt carbon resistor..... |
| R6 | Volume control 2.5 meg..... |
| R8, R16, R17, R20 | } 500,000 ohm ¼ watt carbon resistor.. |
| R9, R10, R24 | |
| R11 | 50,000 ohm ¼ watt carbon resistor.... |
| R12 | 175 ohm 1 watt carbon resistor..... |
| R13 | 750 ohm 1 watt wire-wound resistor. |
| R14 | 10,000 ohm ¼ watt carbon resistor.... |
| R15, R23 | } 25,000 ohm ¼ watt carbon resistor.... |
| R21, R22 | |
| R25 | 100,000 ohm ¼ watt carbon resistor. |
| R26, R27, R28 | } 100,000 ohm ¼ watt carbon resistor. |
| C1, C2 | |
| C3, C16 | 30,000 ohm ¼ watt carbon resistor.... |
| C4 | Ballast resistor: R26—233 ohm, 6 watt; R27—190 ohm, 5 watt; R28—250 ohm, 3 watt |
| C5 | Two-gang variable condenser..... |
| C6, C7, C8, C9 | } 0.002 mf, 600 volt tubular condenser.. |
| C11 | |
| C10 | 0.0004 mf, 600 volt tubular condenser.. |
| C12 | Trimmer, part of loop assembly. |
| C13 | Trimmers, part of variable condenser. |
| C14 | Trimmer, part of variable condenser. |
| C15 | 0.1 mf, 200 volt tubular condenser..... |
| C17 | 0.0006 mf, 600 volt tubular condenser. |
| C18 | 0.0015 mf, 600 volt tubular condenser |
| C19 | 0.05 mf, 400 volt tubular condenser..... |
| C20, C21, C22 | } 0.0002 mf, 600 volt tubular condenser |
| C23 | |
| C24, C27, C30 | } Multiple dry electrolytic condenser: 150 volt; C20—20 mf; C21—80 mf; C22—40 mf |
| C31, C32 | |
| C25 | 0.00025 mf, mica condenser..... |
| C26 | 0.05 mf, 200 volt tubular condenser.. |
| C28 | 0.000026 mf, mica condenser..... |
| C29 | 0.001 mf, 600 volt tubular condenser |
| | 0.00022 mf, mica condenser..... |
| | 0.0003 mf, mica condenser..... |

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



Emerson Radio

MODELS: GA-439 and GA-441

CHASSIS MODEL: GA

MODELS: GA1-439 and GA1-441

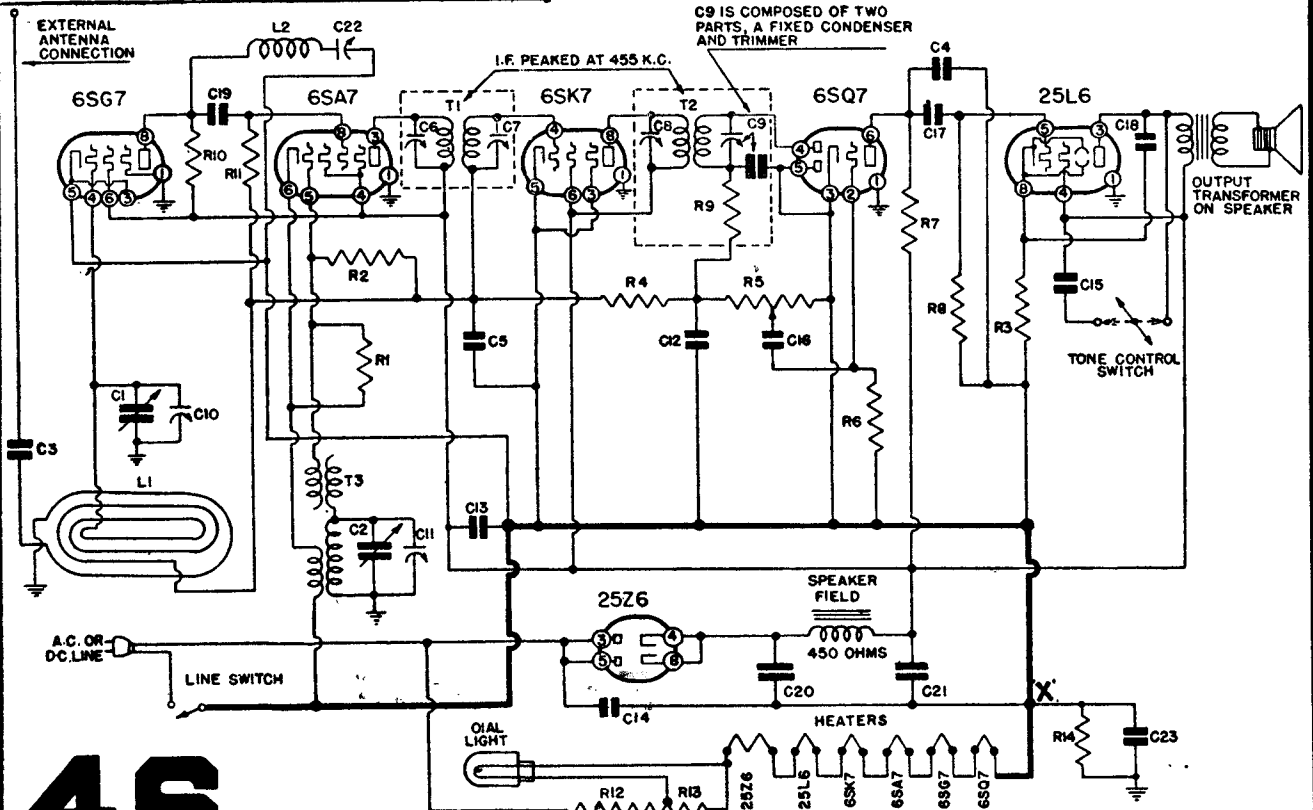
CHASSIS MODEL: GA1

- 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

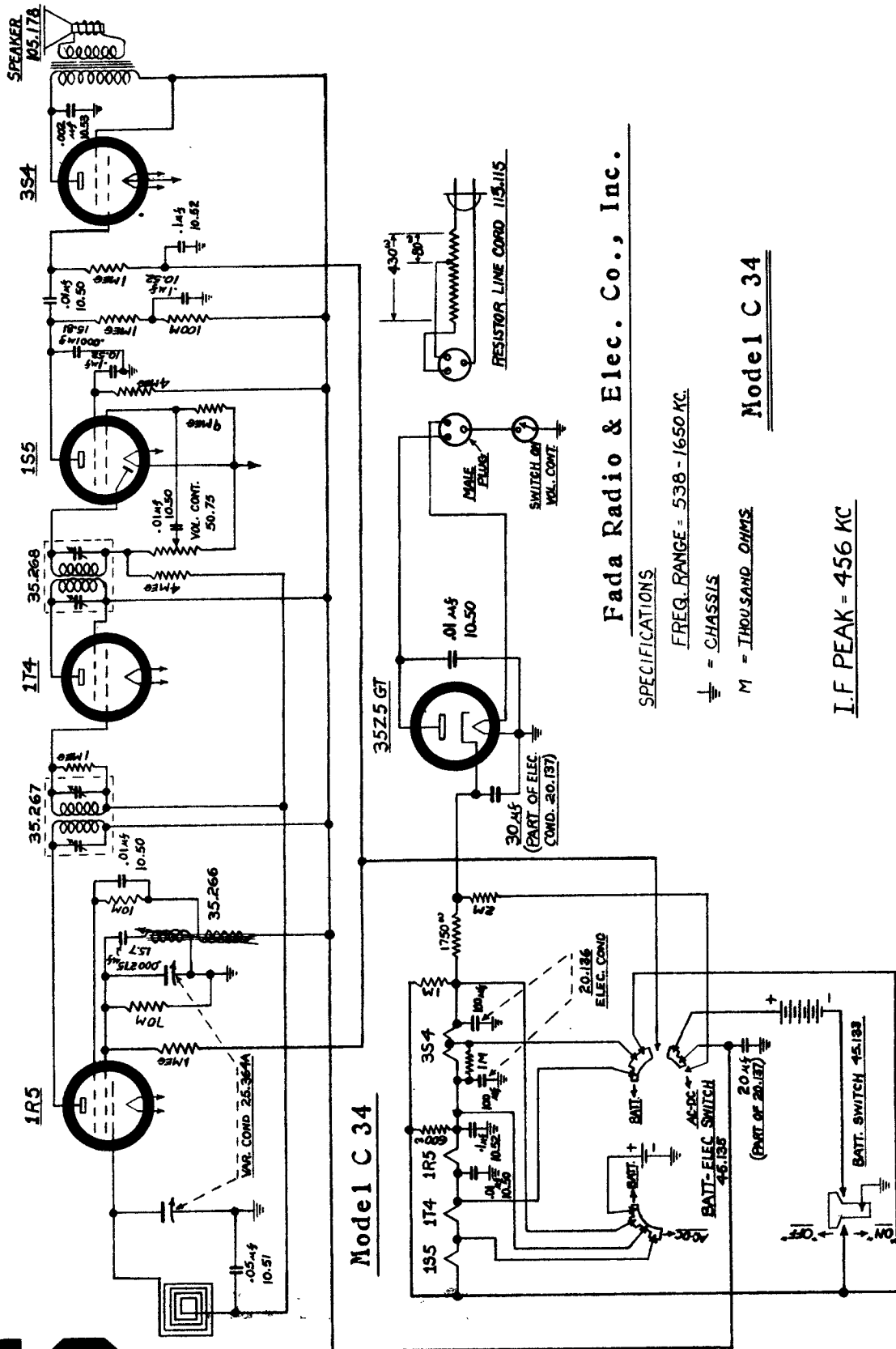
R-f Alignment

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.

| 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 |



MANUAL OF 1942 MOST POPULAR SERVICE DIAGRAMS



Model C 34

Fada Radio & Elec. Co., Inc.

SPECIFICATIONS

FREQ. RANGE = 538 - 1650 KC.

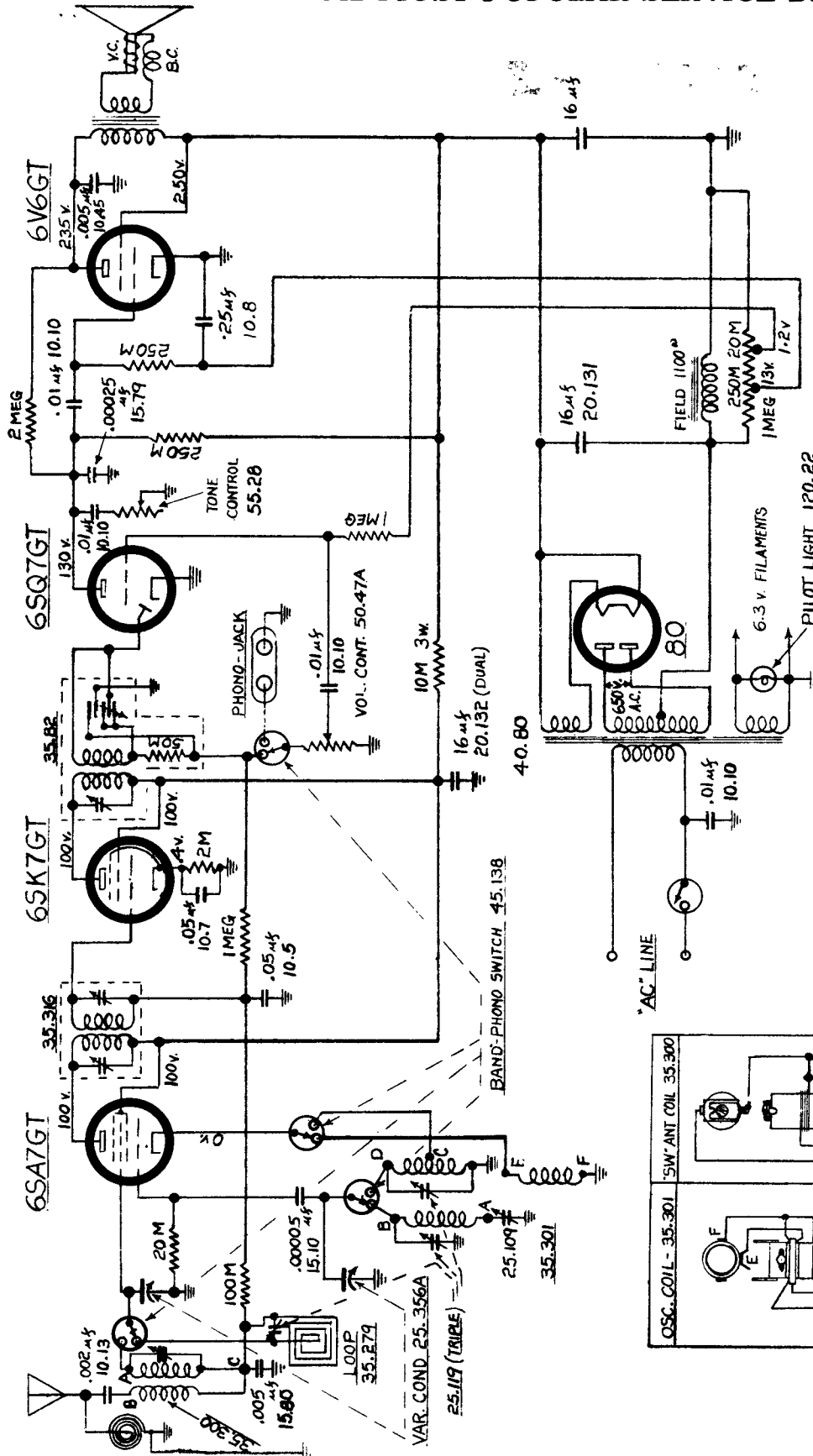
⊥ = CHASSIS

M = THOUSAND OHMS

Model C 34

I.F. PEAK = 456 KC

MANUAL OF 1942 MOST POPULAR SERVICE DIAGRAMS

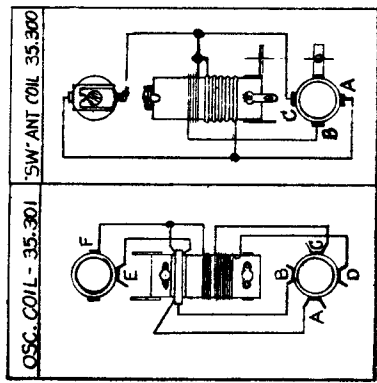
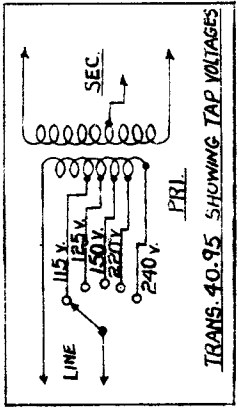


I. F. 456 KC.

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

M = THOUSAND OHMS
⊥ = CHASSIS

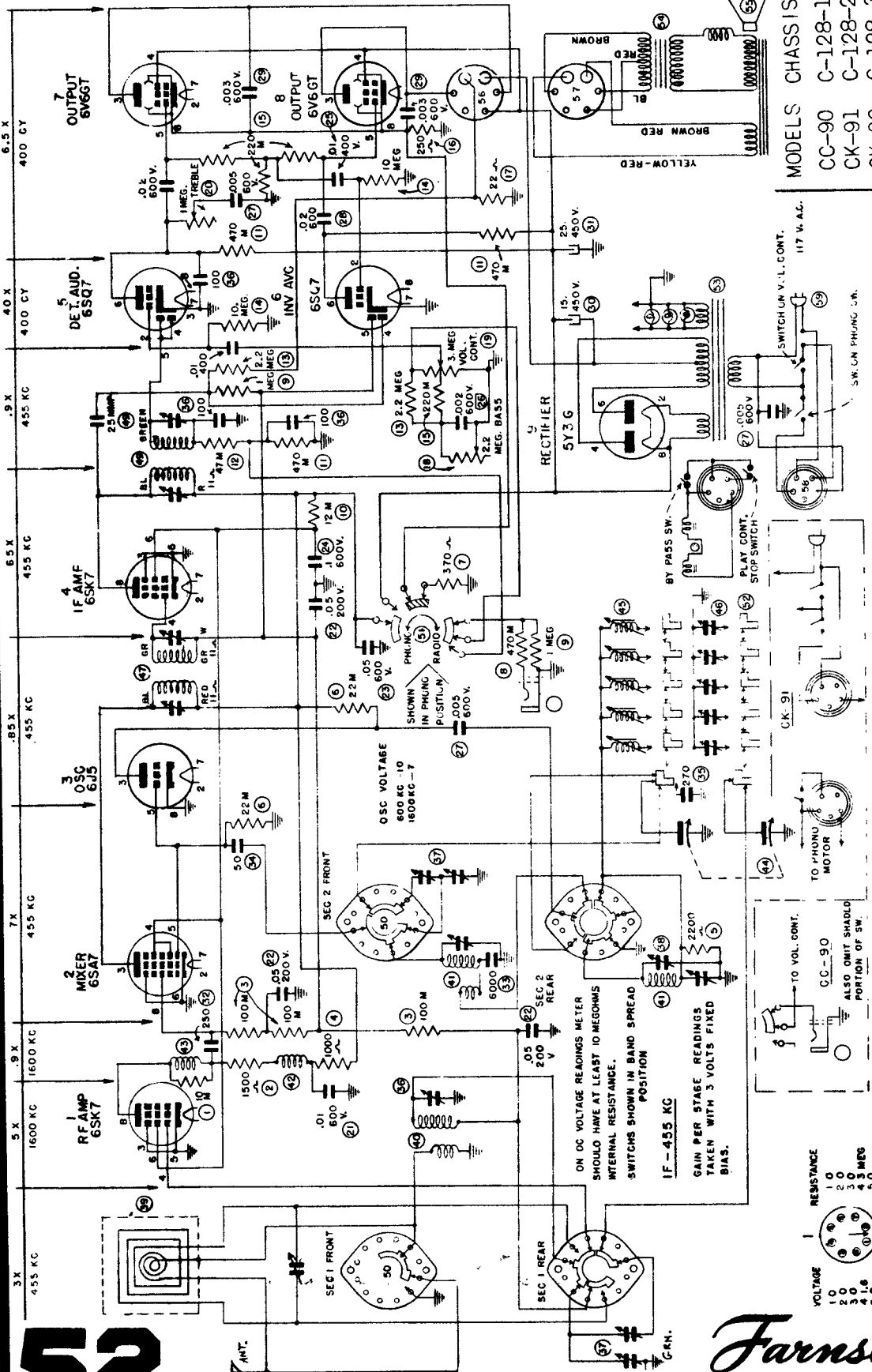
SWITCH 45.136 SHOWN IN 'BC' POSITION



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

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

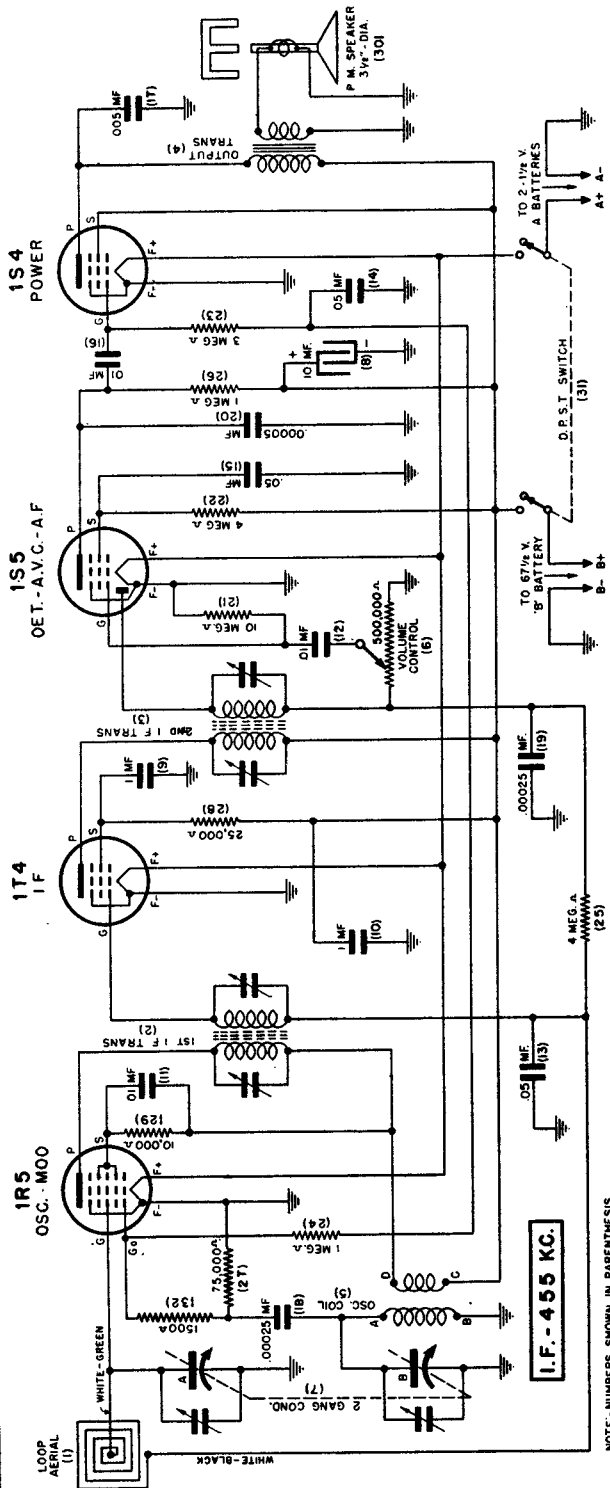
| RESISTANCE | VOLTAGE | RESISTANCE | VOLTAGE | RESISTANCE | VOLTAGE | RESISTANCE | VOLTAGE | RESISTANCE | VOLTAGE |
|------------|---------|------------|---------|------------|---------|------------|---------|------------|---------|
| 1 0 | 1.0 | 1 0 | 1.0 | 1 0 | 1.0 | 1 0 | 1.0 | 1 0 | 1.0 |
| 2 0 | 2.0 | 2 0 | 2.0 | 2 0 | 2.0 | 2 0 | 2.0 | 2 0 | 2.0 |
| 3 0 | 3.0 | 3 0 | 3.0 | 3 0 | 3.0 | 3 0 | 3.0 | 3 0 | 3.0 |
| 4 0 | 4.0 | 4 0 | 4.0 | 4 0 | 4.0 | 4 0 | 4.0 | 4 0 | 4.0 |
| 5 0 | 5.0 | 5 0 | 5.0 | 5 0 | 5.0 | 5 0 | 5.0 | 5 0 | 5.0 |
| 6 0 | 6.0 | 6 0 | 6.0 | 6 0 | 6.0 | 6 0 | 6.0 | 6 0 | 6.0 |
| 7 0 | 7.0 | 7 0 | 7.0 | 7 0 | 7.0 | 7 0 | 7.0 | 7 0 | 7.0 |
| 8 0 | 8.0 | 8 0 | 8.0 | 8 0 | 8.0 | 8 0 | 8.0 | 8 0 | 8.0 |
| 1 INF | 1.0 | 1 INF | 1.0 | 1 INF | 1.0 | 1 INF | 1.0 | 1 INF | 1.0 |
| 2 INF | 2.0 | 2 INF | 2.0 | 2 INF | 2.0 | 2 INF | 2.0 | 2 INF | 2.0 |
| 3 INF | 3.0 | 3 INF | 3.0 | 3 INF | 3.0 | 3 INF | 3.0 | 3 INF | 3.0 |
| 4 INF | 4.0 | 4 INF | 4.0 | 4 INF | 4.0 | 4 INF | 4.0 | 4 INF | 4.0 |
| 5 INF | 5.0 | 5 INF | 5.0 | 5 INF | 5.0 | 5 INF | 5.0 | 5 INF | 5.0 |
| 6 INF | 6.0 | 6 INF | 6.0 | 6 INF | 6.0 | 6 INF | 6.0 | 6 INF | 6.0 |
| 7 INF | 7.0 | 7 INF | 7.0 | 7 INF | 7.0 | 7 INF | 7.0 | 7 INF | 7.0 |
| 8 INF | 8.0 | 8 INF | 8.0 | 8 INF | 8.0 | 8 INF | 8.0 | 8 INF | 8.0 |
| 1 OPEN | 1.0 | 1 OPEN | 1.0 | 1 OPEN | 1.0 | 1 OPEN | 1.0 | 1 OPEN | 1.0 |
| 2 OPEN | 2.0 | 2 OPEN | 2.0 | 2 OPEN | 2.0 | 2 OPEN | 2.0 | 2 OPEN | 2.0 |
| 3 OPEN | 3.0 | 3 OPEN | 3.0 | 3 OPEN | 3.0 | 3 OPEN | 3.0 | 3 OPEN | 3.0 |
| 4 OPEN | 4.0 | 4 OPEN | 4.0 | 4 OPEN | 4.0 | 4 OPEN | 4.0 | 4 OPEN | 4.0 |
| 5 OPEN | 5.0 | 5 OPEN | 5.0 | 5 OPEN | 5.0 | 5 OPEN | 5.0 | 5 OPEN | 5.0 |
| 6 OPEN | 6.0 | 6 OPEN | 6.0 | 6 OPEN | 6.0 | 6 OPEN | 6.0 | 6 OPEN | 6.0 |
| 7 OPEN | 7.0 | 7 OPEN | 7.0 | 7 OPEN | 7.0 | 7 OPEN | 7.0 | 7 OPEN | 7.0 |
| 8 INF | 8.0 | 8 INF | 8.0 | 8 INF | 8.0 | 8 INF | 8.0 | 8 INF | 8.0 |

52

Farnsworth

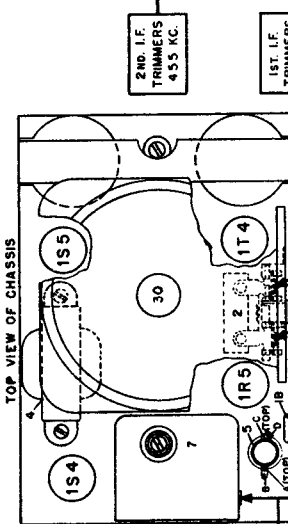
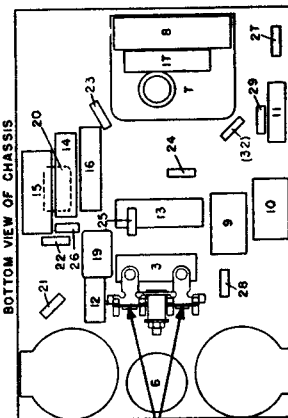
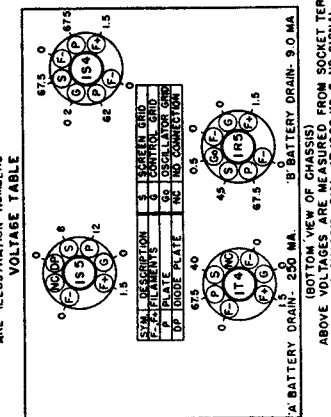
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MANUAL OF 1942 MOST POPULAR SERVICE DIAGRAMS



NOTE: NUMBERS SHOWN IN PARENTHESIS ARE ILLUSTRATION NUMBERS

VOLTAGE TABLE



Battery Specification..... 2-1/2 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

I.F. 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 output as low as a readable meter reading, will permit.

R.F. Alignment Couple test oscillator output to loop in case cover. Adjust test oscillator and 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 from 1400 K.C. antenna trimmer for maximum output.

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

GENERAL ELECTRIC

BATTERY OPERATED PORTABLE

MODEL LB-412

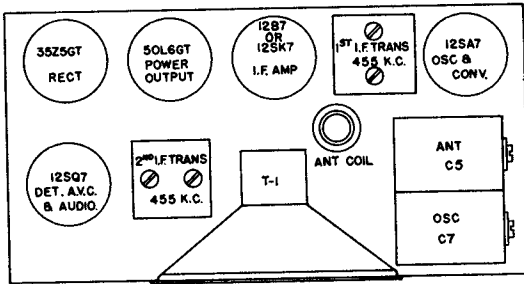
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MANUAL OF 1942 MOST POPULAR SERVICE DIAGRAMS

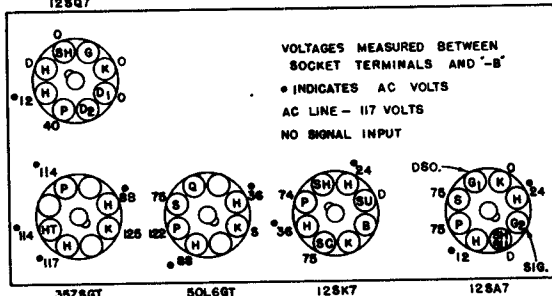
GENERAL ELECTRIC Alignment Frequencies

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, 1/2 W. carbon... |
| R2 | RESISTOR—22,000 ohms, 1/2 W. carbon... |
| R3 | RESISTOR—2.2 megohms, 1/2 W. carbon... |
| R4 | VOL. CONTROL—0.5 megohm control..... |
| R5 | RESISTOR—4.7 megohms, 1/2 W. carbon... |
| R6 | RESISTOR—270,000 ohms, 1/2 W. carbon... |
| R7 | RESISTOR—470,000 ohms, 1/2 W. carbon... |
| R8 | RESISTOR—150 ohms, 1/2 W. carbon..... |
| R9 | RESISTOR—2,700 ohms, 1 W. carbon..... |
| R11 | RESISTOR—13 ohms, 1/2 W. carbon. (2B7) |

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

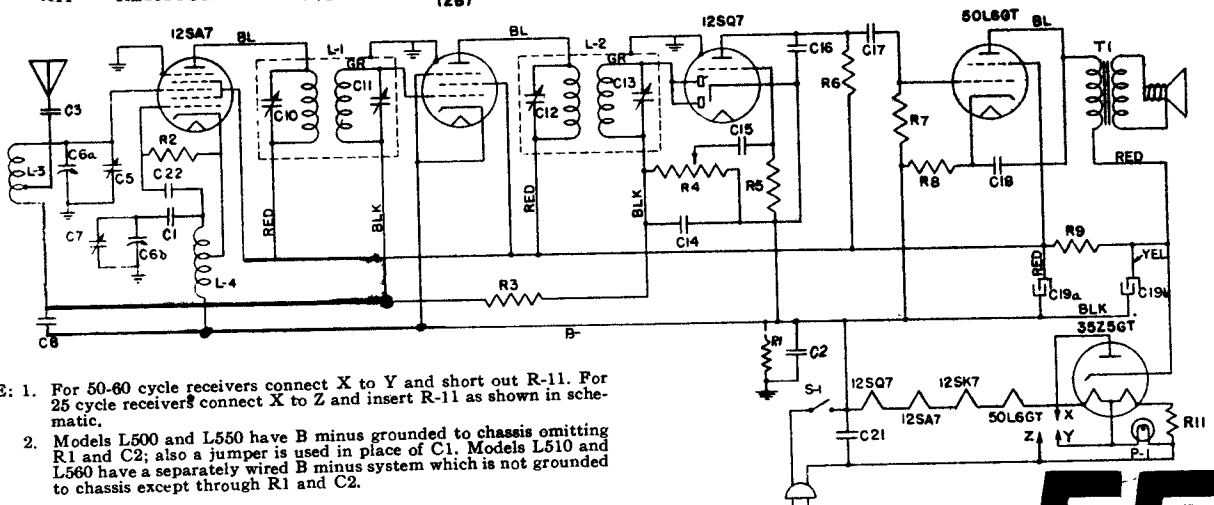
If the signal generator is AC operated, use an isolating transformer between the power supply and the radio receiver power input. The use of an isolating capacitor is not recommended as AC current through the capacitor will introduce hum modulation and/or create the possibility of a burned-out signal 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 50-60 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 |
|----------|------------|----------------------------------------------------------|
| RC-7068 | C1A, 1B | CONDENSER—Tuning Condenser (with trimmer 2A, 2B movable) |
| RC-336 | C2 | CAPACITOR—100 Mmf., mica |
| RC-374 | C3 | CAPACITOR—250 Mmf., mica |
| RC-342 | C4 | CAPACITOR—150 Mmf., mica |
| RC-338 | C5 | CAPACITOR—25 Mfd., 500 V. paper |
| RC-475 | C6 | CAPACITOR—25 Mfd., 500 V. paper |
| RC-180 | C7 | CAPACITOR—25 Mfd., 500 V. paper |
| RC-110 | C8 | CAPACITOR—47 Mmf., mica |
| RC-388 | C9 | CAPACITOR—51 Mfd., 500 V. paper |
| RC-385 | C10 | CAPACITOR—50 Mfd., 500 V. paper |
| RC-385 | C17A | CAPACITOR—40 Mfd., 150 V. dry electrolytic |
| RC-4187 | C17 | CAPACITOR—30 Mfd., 150 V. dry electrolytic |
| RT-481 | C18-C21 | TRIMMER STRIP—Station key adjust (see P. 2 section) |
| RT-883 | C22-C25 | TRIMMER STRIP—Station key adjust (see P. 2 section) |
| RC-616 | C26 | CAPACITOR—200 Mfd., 500 V. paper |
| RO-1319 | R1 | RESISTOR—22 ohm, 1/4 W. carbon |
| RO-1381 | R2 | RESISTOR—250 ohm, 1/4 W. carbon |
| RO-1290 | R3 | RESISTOR—47,000 ohm, 1/4 W. carbon |
| RO-1386 | R4 | RESISTOR—25,000 ohm, 1/4 W. carbon |
| RO-1381 | R5 | RESISTOR—50 ohm, 1/4 W. carbon |
| RO-1290 | R6 | RESISTOR—3.3 megohm, 1/4 W. carbon |
| RT-135 | R7, S1 | VOLUME CONTROL—0.5 megohm control and power switch |
| RO-1249 | R8 | RESISTOR—25 megohm, 1/4 W. carbon |
| RO-1333 | R9, 10, 11 | RESISTOR—470,000 ohm, 1/4 W. carbon |
| RO-1290 | R10 | RESISTOR—150 ohm, 1/4 W. carbon |
| RO-491 | R14 | RESISTOR—1,000 ohm, 1/4 W. carbon |
| RS-3100 | S2 | SWITCH—Tone control switch |
| RS-3114 | S3 | SWITCH—Automatic volume switch (see P. 2 section) |
| RL-668 | L1 | PRIMARY |
| RL-9083 | T3 | COIL—Oscillator coil and clip |

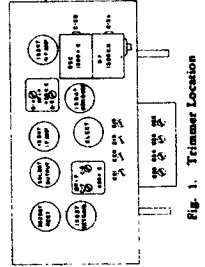
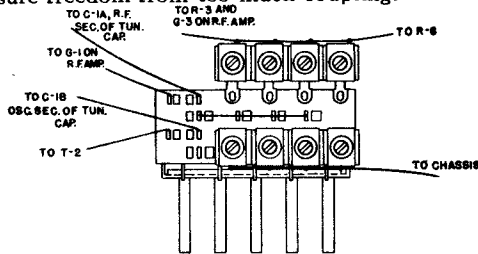
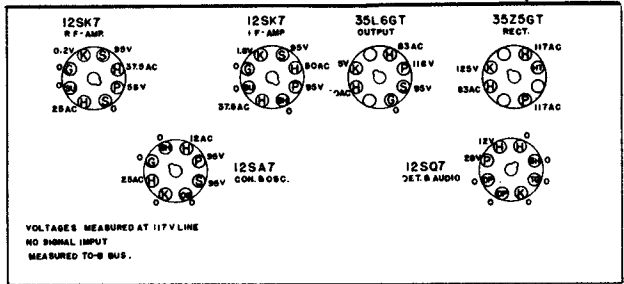


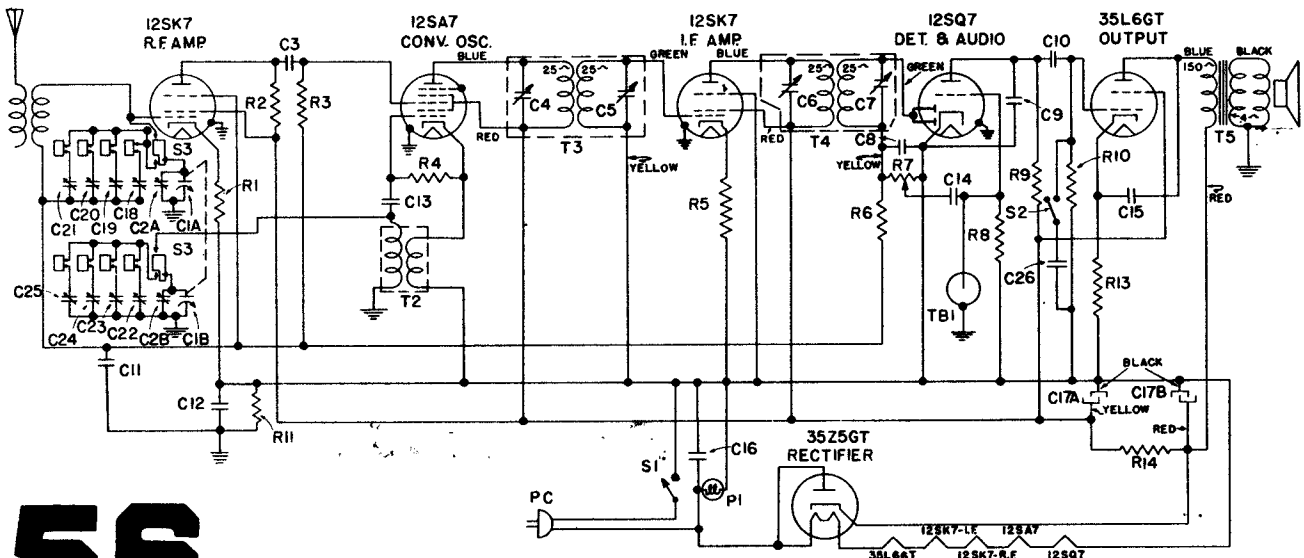
Fig. 1. Trimmer Location



Selector Switch Wiring



FRONT OF CHASSIS
 BOTTOM VIEW OF CHASSIS



MANUAL OF 1942 MOST POPULAR SERVICE DIAGRAMS

IF ALIGNMENT WITH OSCILLOSCOPE—"FM" CHANNEL

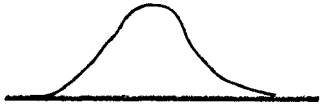
| Step | Input Signal Connected to | Input Frequency | Band and Pointer Setting | Trimmer Adjustment | Comments |
|------|--------------------------------------------|------------------------|--------------------------|--------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 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

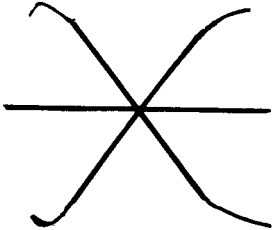
| Step | Input Signal Connected to | Input Frequency | Band and Pointer Setting | Trimmer Adjustment | Comments |
|------|-----------------------------|--------------------------|--------------------------|--------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 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

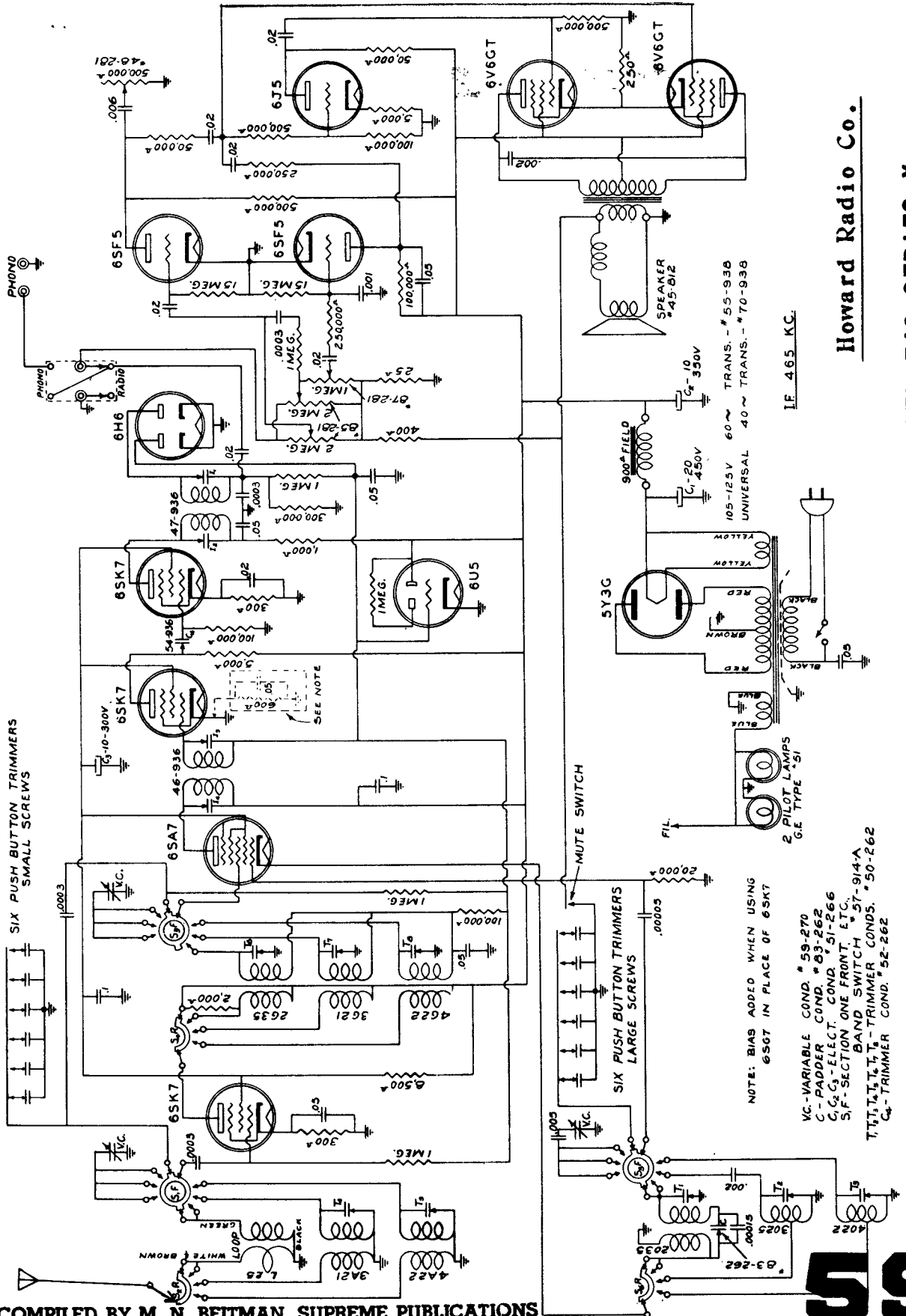
Models LF-115 & LF-116

A-FM PHONOGRAPH COMBINATION RECEIVERS

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

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MANUAL OF 1942 MOST POPULAR SERVICE DIAGRAMS



Howard Radio Co.

RADIO CHASSIS MODEL 718 SERIES X

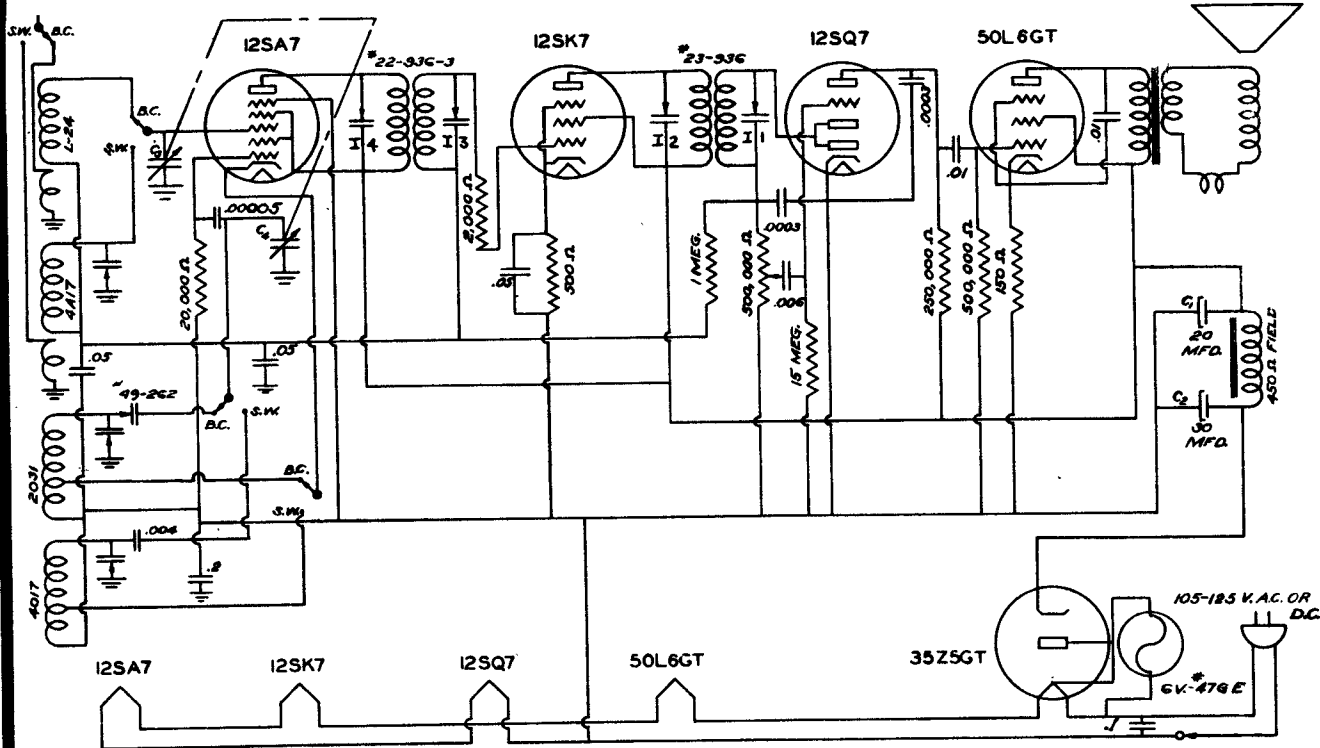
IF 465 KC.

105-125 V 60 ~ TRANS. - # 55-938
UNIVERSAL 40 ~ TRANS. - # 70-938

NOTE: BIAS ADDED WHEN USING
6S6T IN PLACE OF 6SK7

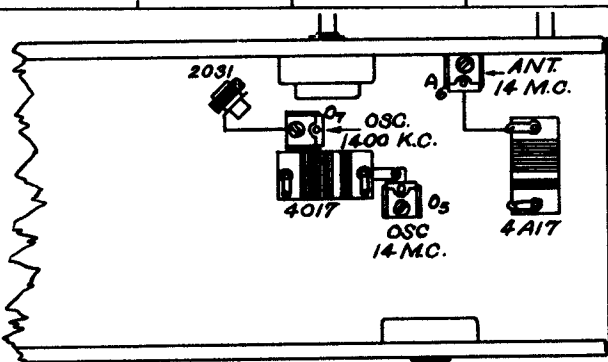
- VC-VARIABLE COND. # 59-270
- C-PADDER COND. # 83-262
- C₁ C₂ G₃-ELECT. COND. # 51-266
- S.F.-SECTION ONE FRONT, ETC.
- BAND SWITCH # 57-914-A
- T₁ T₂ T₃ T₄ T₅-TRIMMER CONDS. # 50-262
- C₄-TRIMMER COND. # 52-262

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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

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.

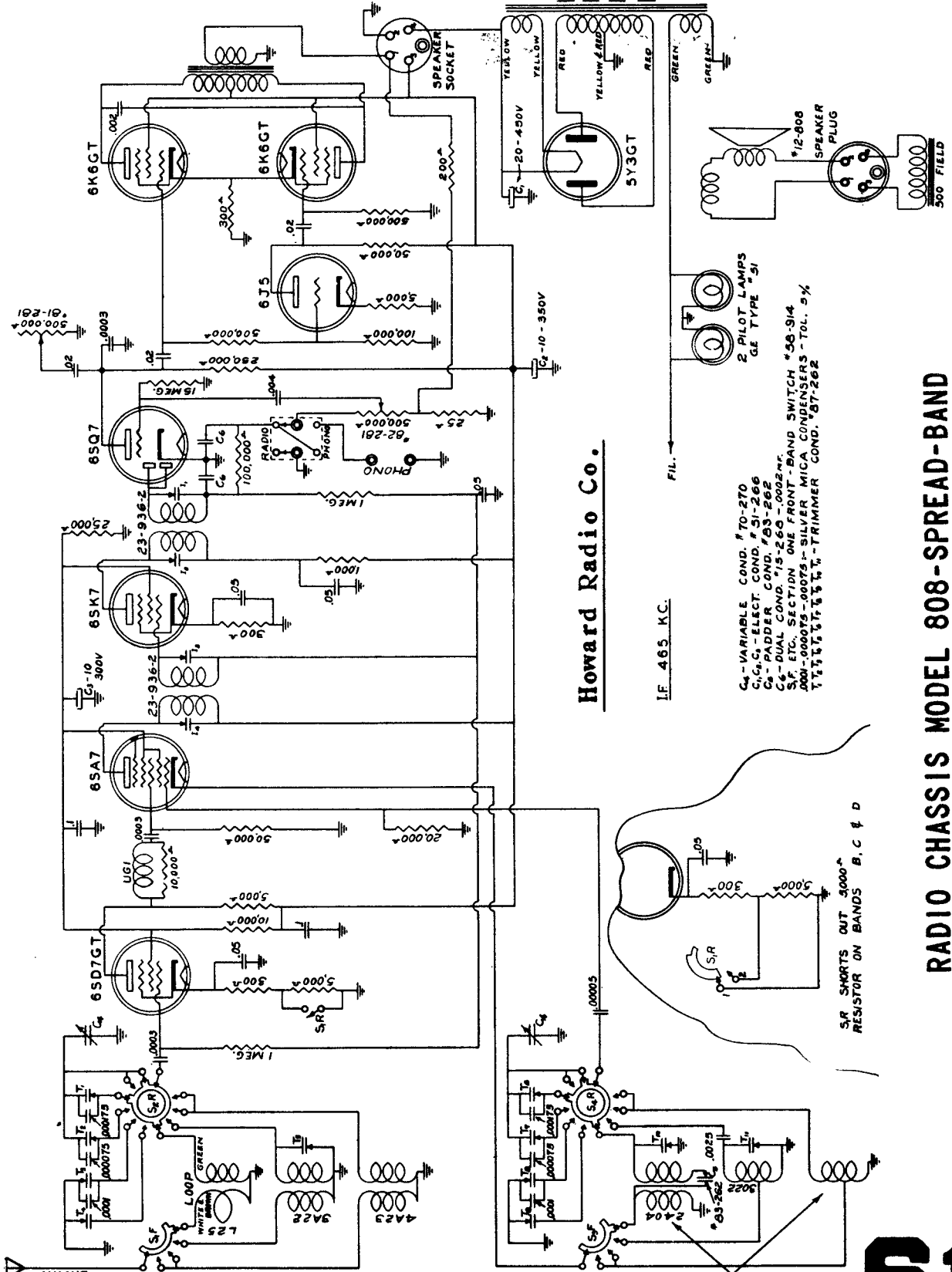
The tubes are connected in series in the order as shown by the schematic diagram.

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.

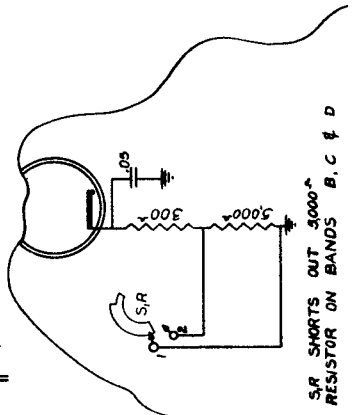
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Howard Radio Co.

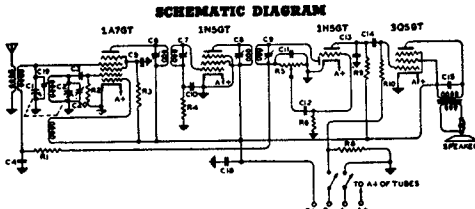
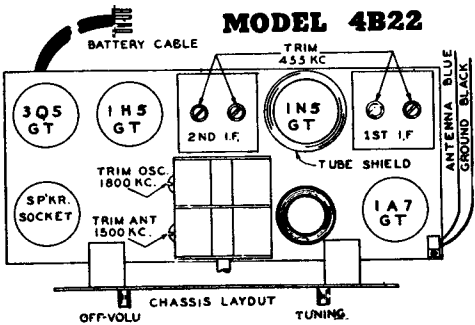
I.F. 465 K.C.

- C₁ - VARIABLE COND. # 70-270
- C₂, C₃ - ELECT. COND. # 51-266
- C₄ - PADDER COND. # 53-262
- C₅ - DUAL COND. # 15-260 - 0002 MF.
- S.F. ETC. SECTION ONE FRONT - BAND SWITCH # 56-914
- 1000-000075 - 00075 - SILVER MICA CONDENSERS - TOL. 5%
- T.T.T.T.T.T.T.T.T.T. - TRIMMER COND. # 57-262



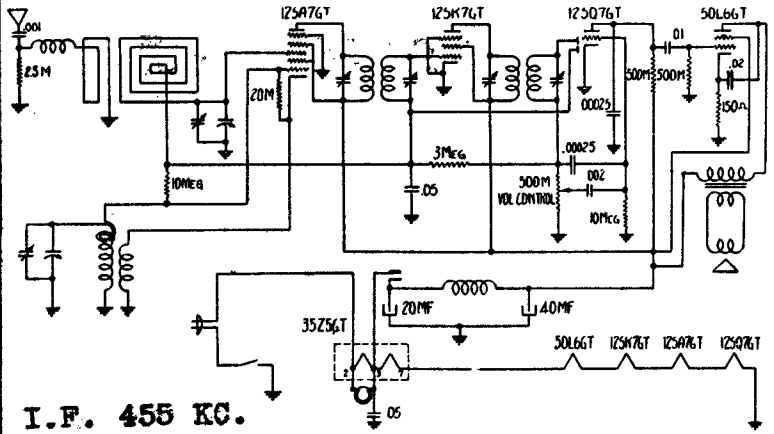
S.F. SHORTS OUT 5000^Ω RESISTOR ON BANDS B, C & D

MANUAL OF 1942 MOST POPULAR SERVICE DIAGRAMS



| Schematic Location | Description | Schematic Location | Description |
|--------------------|--------------------------|--------------------|-----------------------|
| C4, C5 | .02 mfd. 200V | R9 | 500K ohm W Resistor |
| C10, C12 | .01 mfd. 200V | R10 | 1 Megohm W Resistor |
| C14 | .005 mfd. 400V | R11 | 400 ohm W Resistor |
| C15 | .002 mfd. 600V | R12 | 200K ohm W Resistor |
| C16, C17, C18 | 100 mfd. 15Vdc | R13 | 3.3 Megohm W Resistor |
| C19 | 8 mfd. 150V Electrolytic | R14 | 2 Megohm W Resistor |

SCHEMATIC DIAGRAM MODEL STIO & STIOW



I.F. 455 KC.

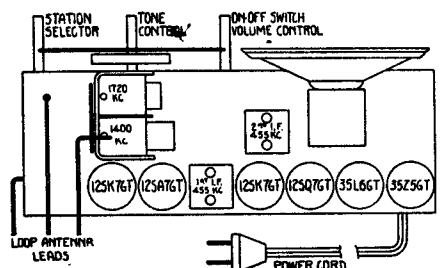


MODEL 6T23

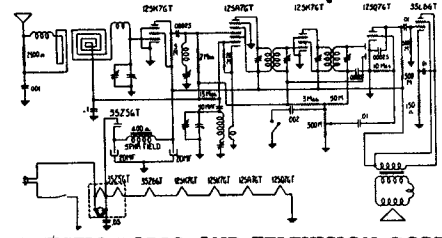
Factory No. 4501X



TUBE LAYOUT

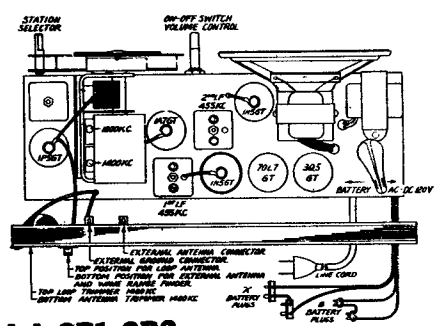


SCHEMATIC DIAGRAM

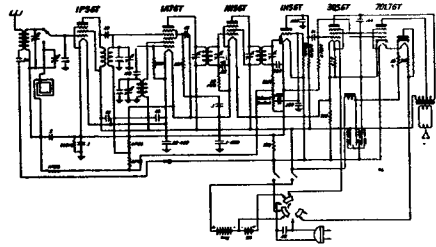


MAJESTIC RADIO AND TELEVISION CORP.
2600 WEST 50TH STREET CHICAGO, ILLINOIS

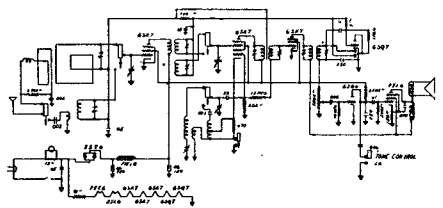
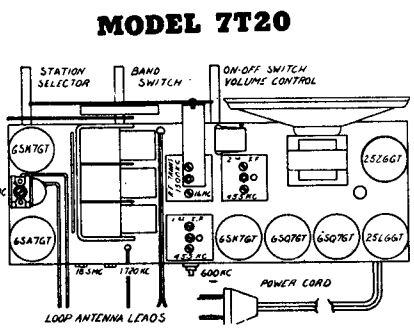
Model 6P1-6P2



SCHEMATIC DIAGRAM

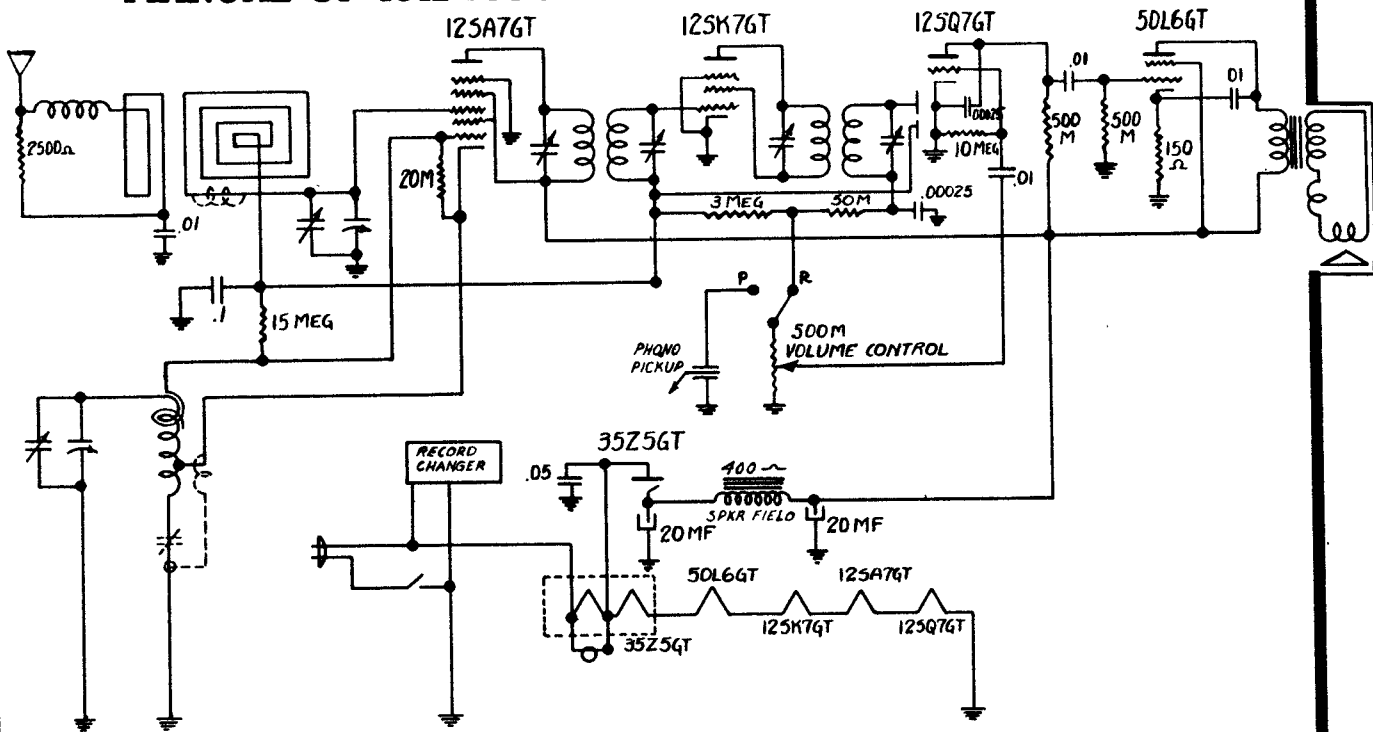


SCHEMATIC DIAGRAM



MAJESTIC RADIO AND TELEVISION CORP.

MANUAL OF 1942 MOST POPULAR SERVICE DIAGRAMS



Majestic Radio & Television Corporation

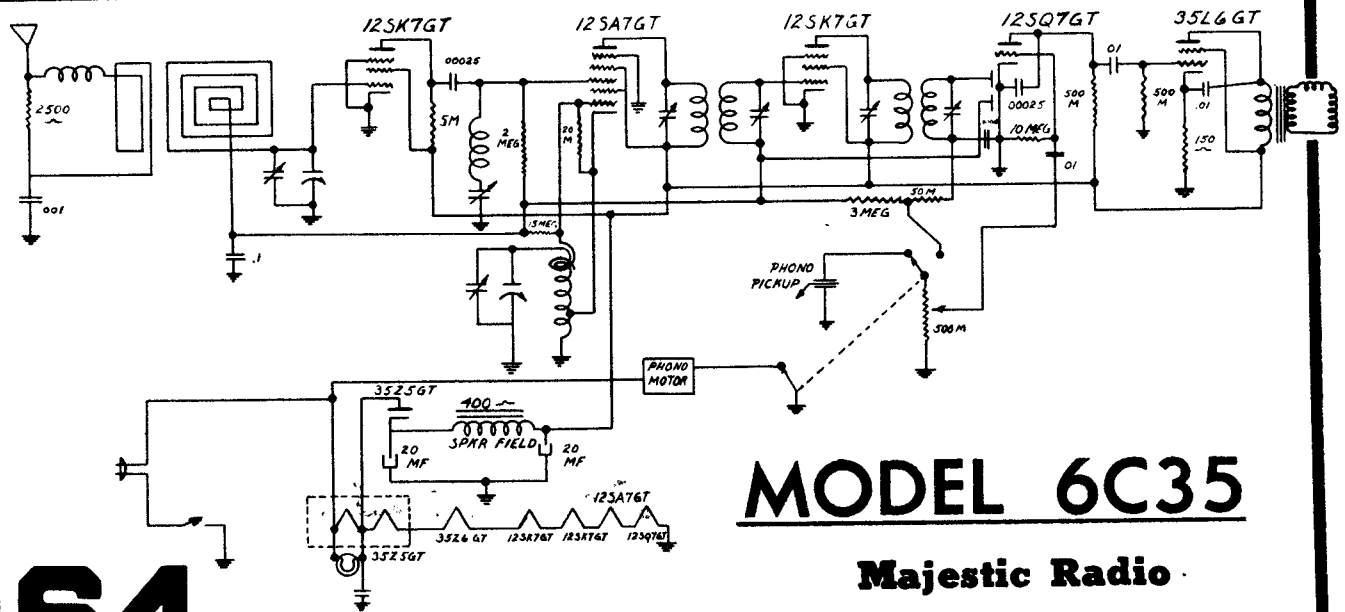
THE RECORD-CHANGER NEEDLE:

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

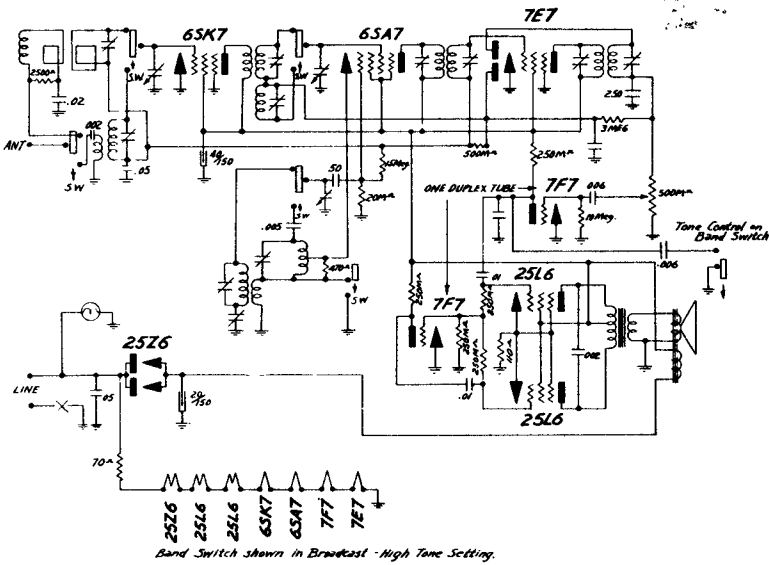
Majestic Radio

64

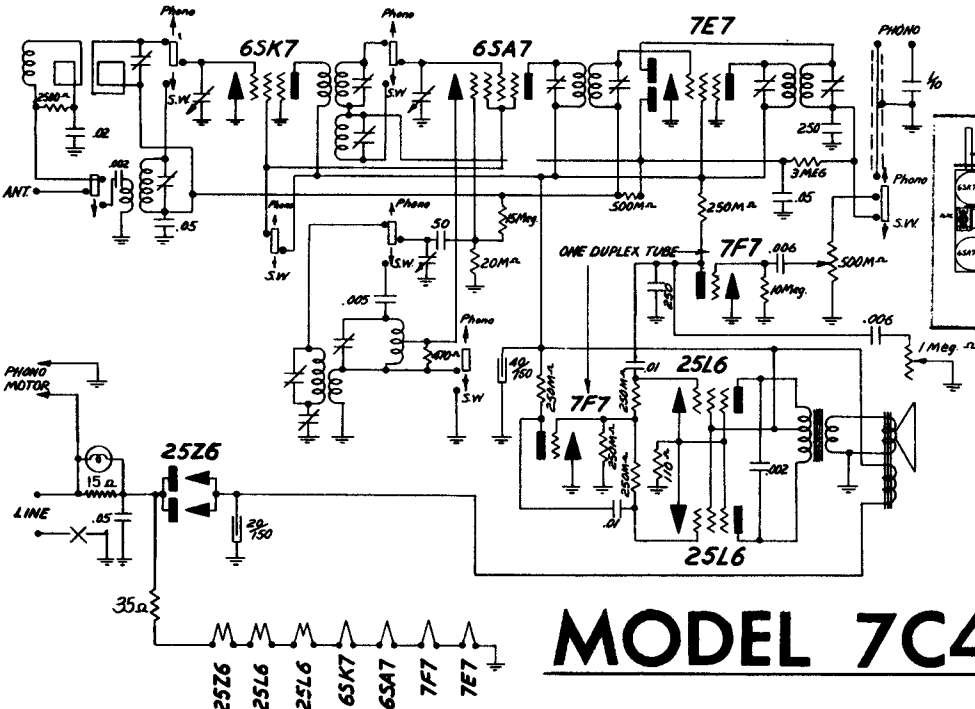
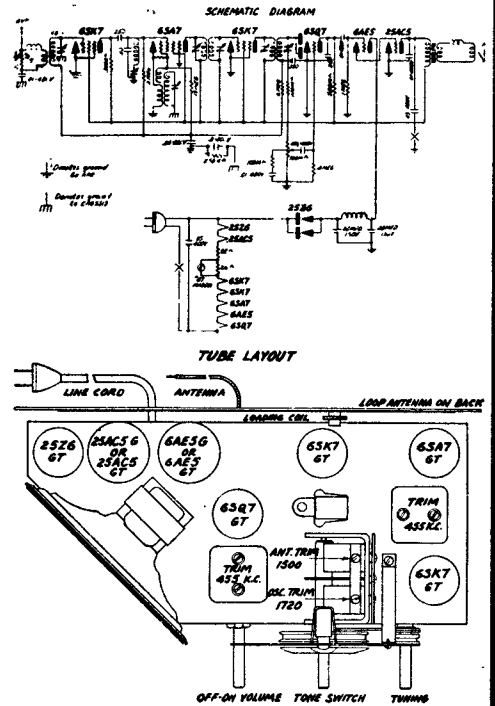
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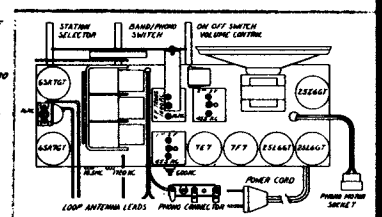
Majestic Radio & Television Corporation



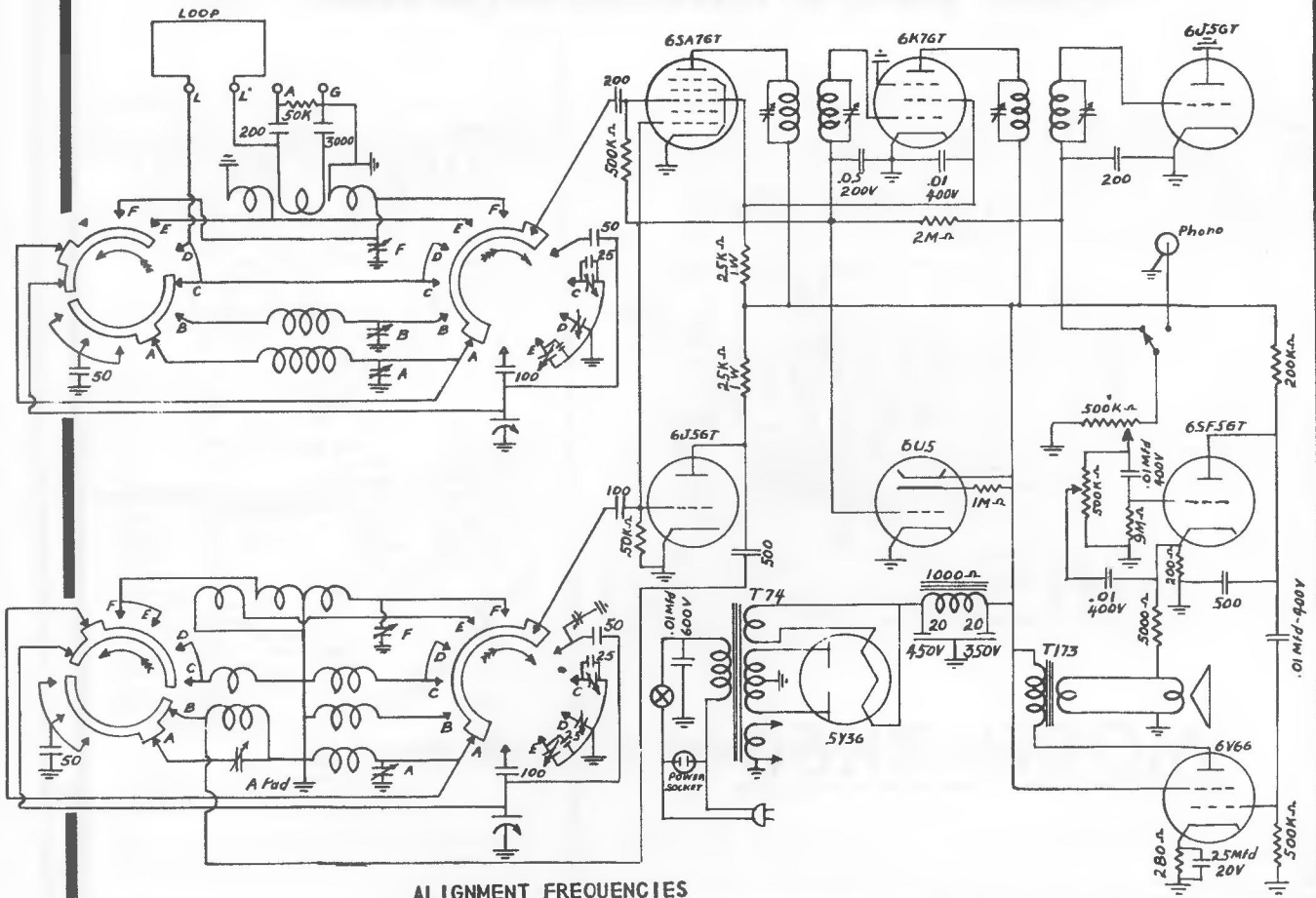
MODEL 7K60



MODEL 7C40



MANUAL OF 1942 MOST POPULAR SERVICE DIAGRAMS



ALIGNMENT FREQUENCIES

IF - 456 KC

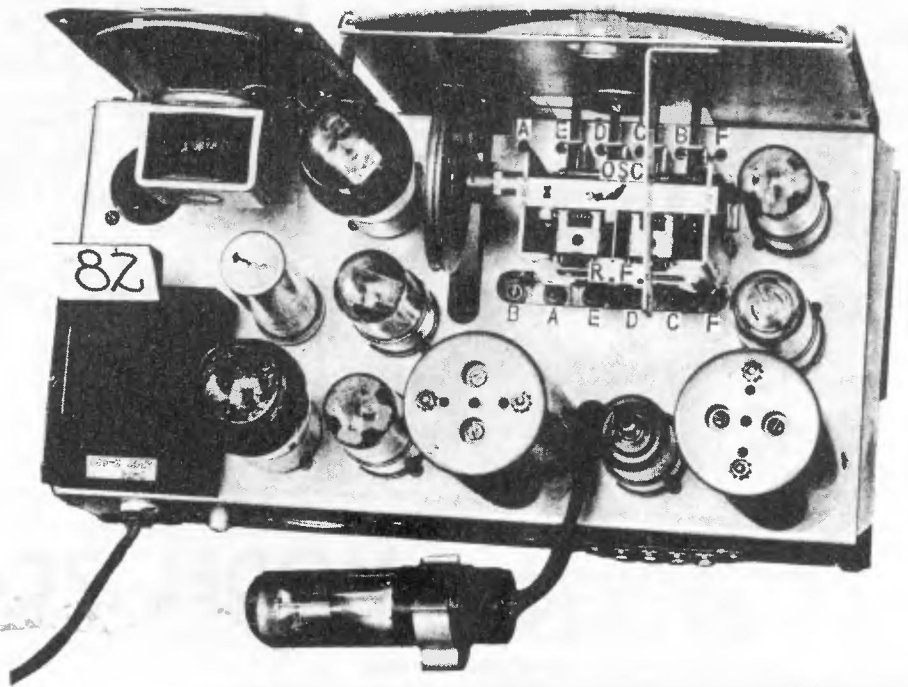
A - 1400 KC
B - 6.6 MC

C - 9.8 MC
D - 11.7 MC

E - 15.7 MC
F - 24 MC

MODEL 82 RECEIVER

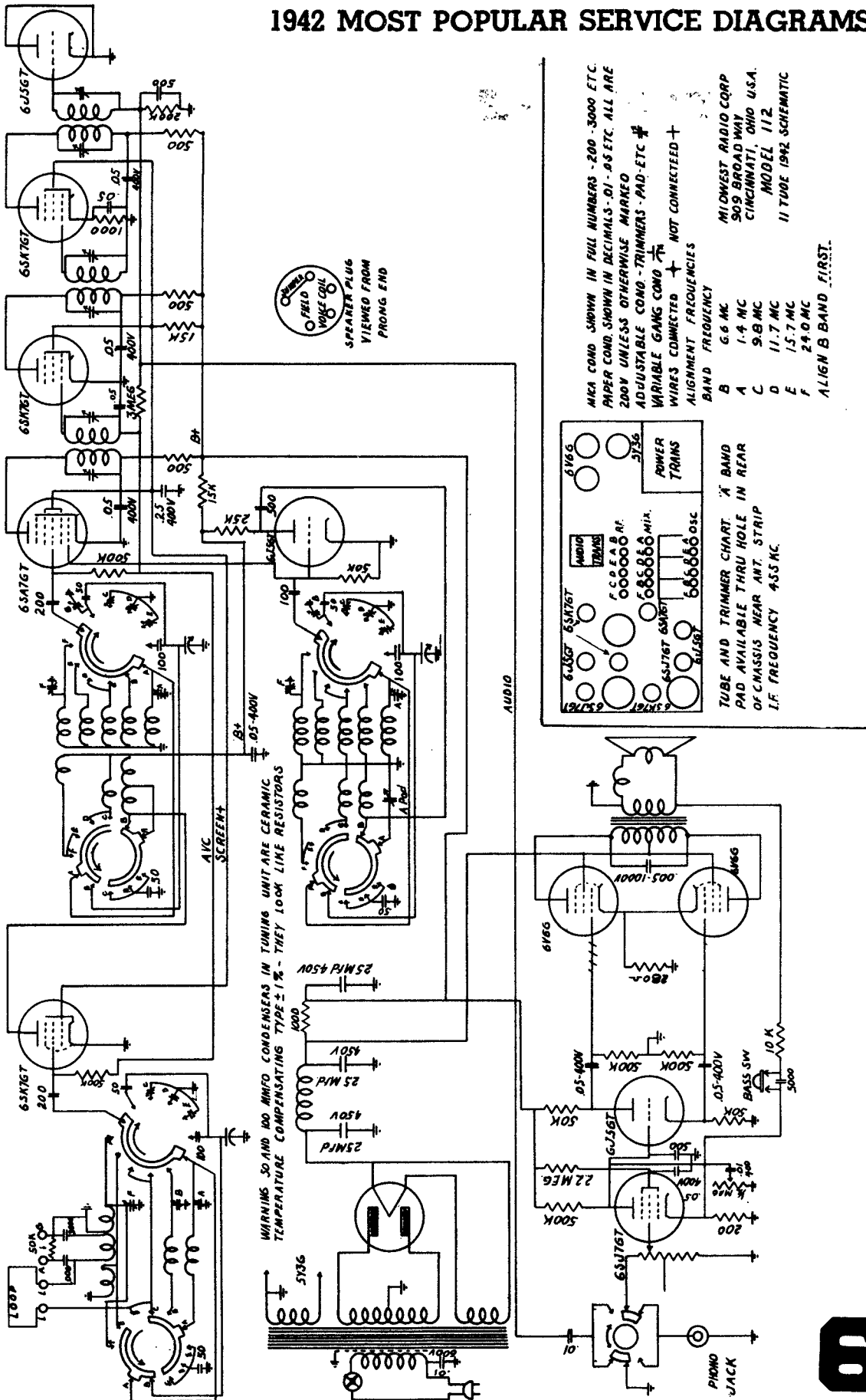
MIDWEST RADIO CORPORATION
909 Broadway
Cincinnati, Ohio



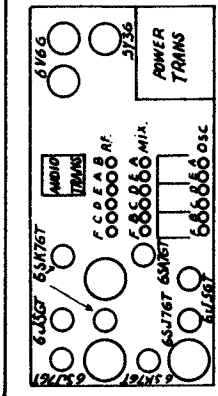
66

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1942 MOST POPULAR SERVICE DIAGRAMS



MICA COND. SHOWN IN FULL NUMBERS - 200 - 3000 ETC.
 PAPER COND. SHOWN IN DECIMALS - .01 - .95 ETC. ALL ARE
 200V UNLESS OTHERWISE MARKED
 ADJUSTABLE CONDO - TRIMMERS - PAD - ETC. #
 VARIABLE GANG CONDO # NOT CONNECTED +
 WIRES CONNECTED + 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 24.0 MC
 ALIGN B BAND FIRST.

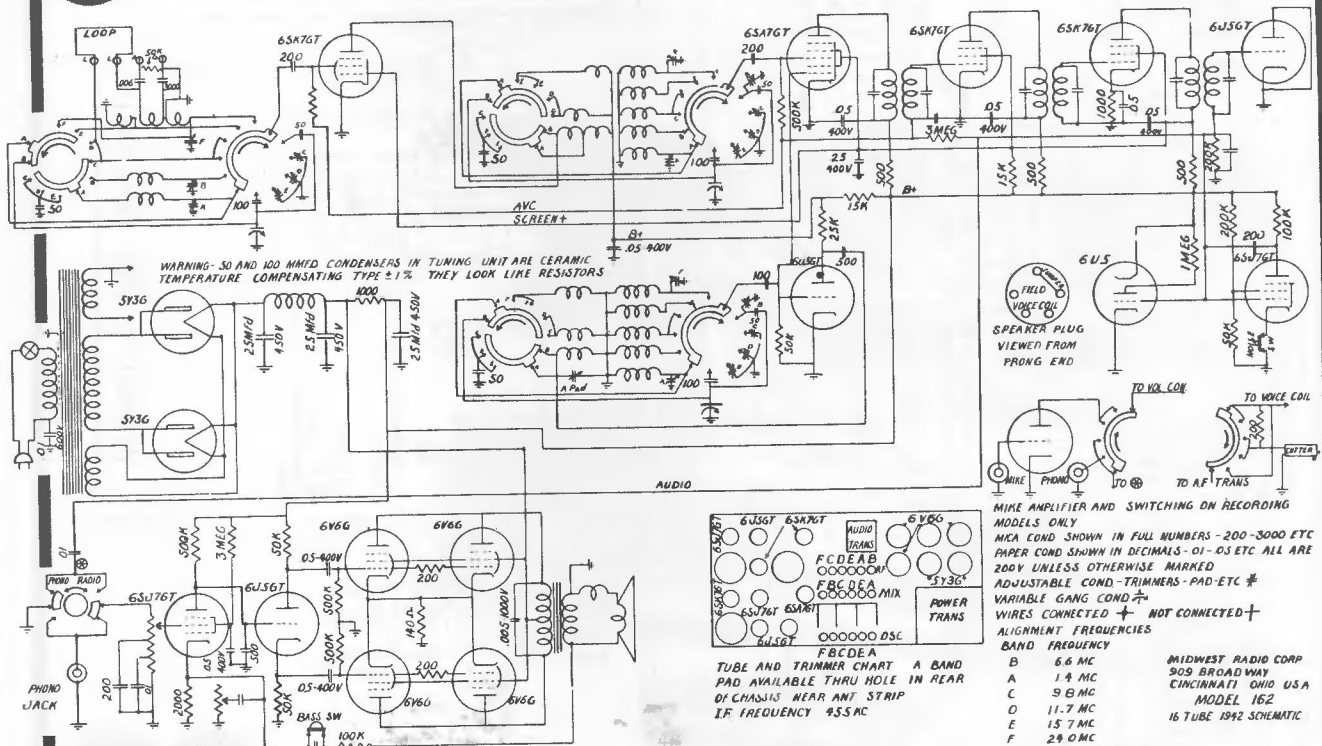
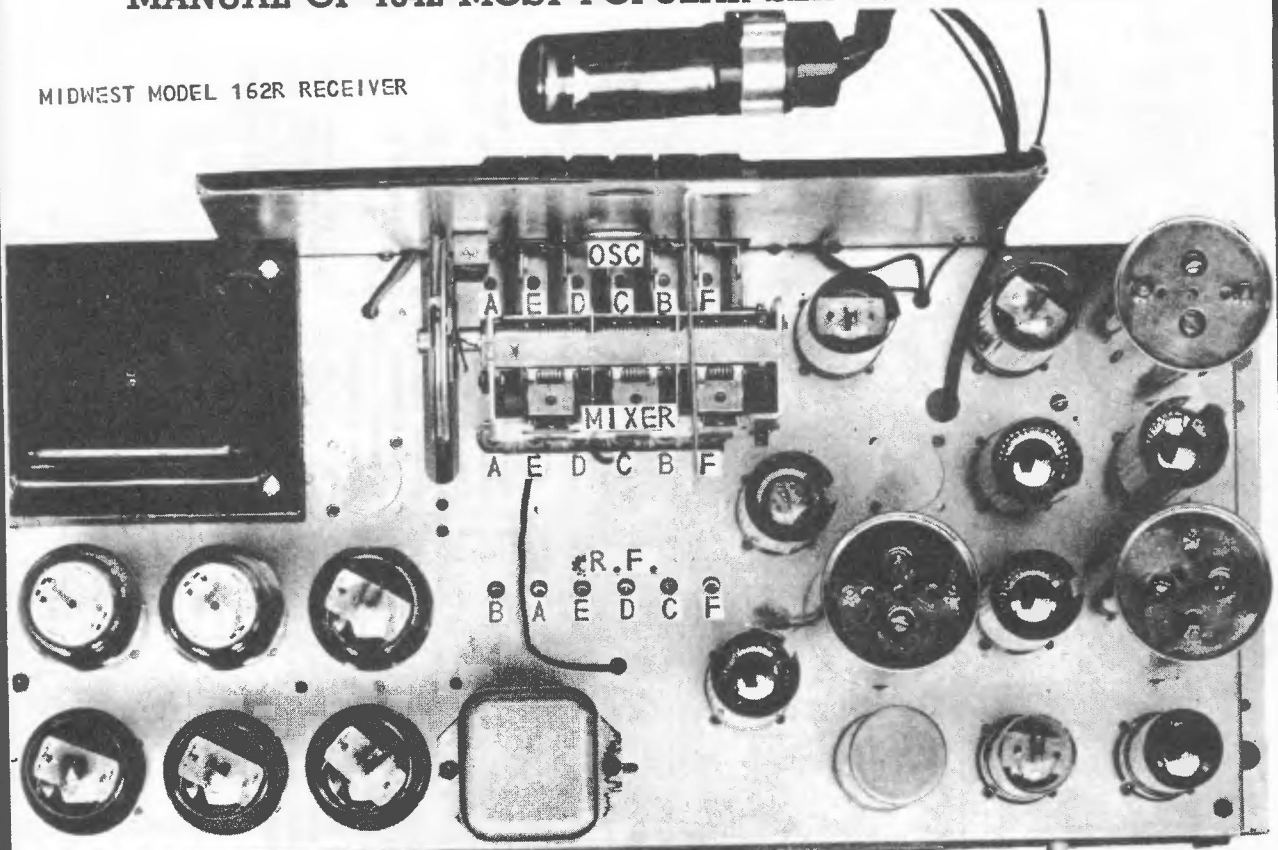


MODEL 112

MIDWEST 11 TUBE 1942 RADIO

MANUAL OF 1942 MOST POPULAR SERVICE DIAGRAMS

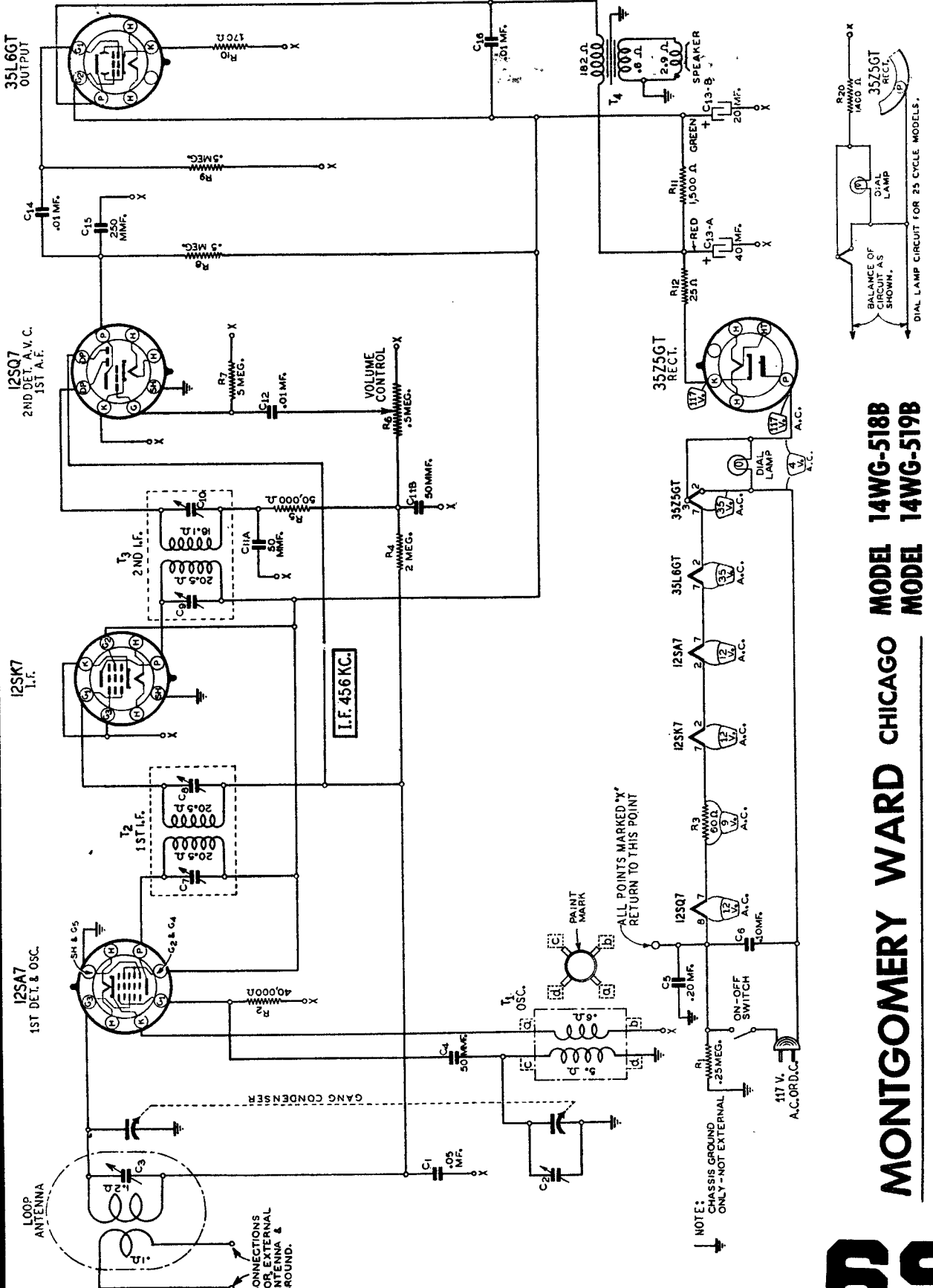
MIDWEST MODEL 162R RECEIVER



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12SA7
1ST DET. & OSC.

12SK7
L.F.

12SQ7
2ND DET. A.V.C.
1ST A.F.

35L6GT
OUTPUT

T₂
1ST L.F.

T₃
2ND L.F.

I.F. 456 KC.

35Z5GT
RECT.

35L6GT

35Z5GT

MONTGOMERY WARD CHICAGO

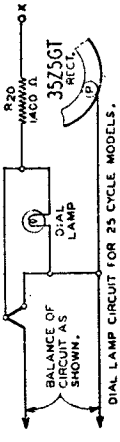
MODEL 14WG-518B

MODEL 14WG-519B



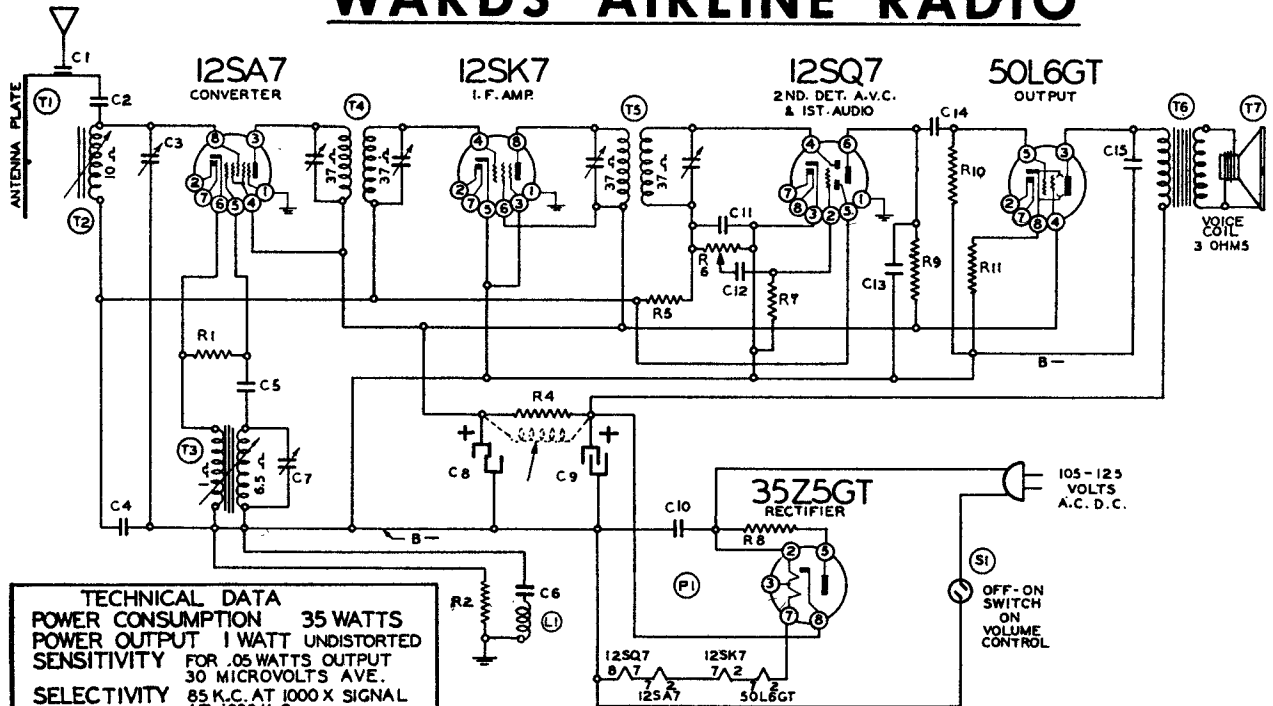
COMPILED BY M. N. BEITMAN, SUPREME PUBLICATIONS

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

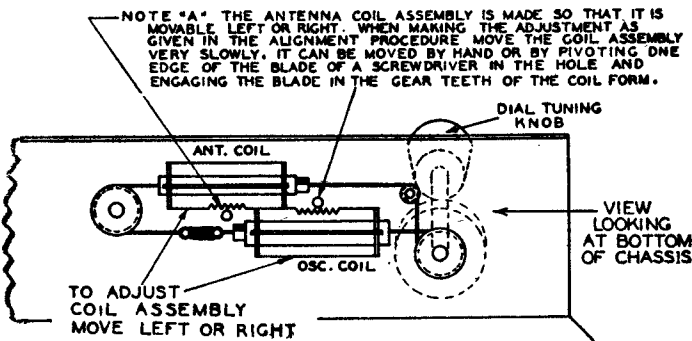
- R1 BE130176 20M ohm— $\frac{1}{2}$ w.
- R2 BE130100 150M ohm— $\frac{1}{2}$ w.
- R4 BE130279 1M ohm—1 w.
- R5 BE1304 3 megohm— $\frac{1}{2}$ w.
- R6 BE101255 500M ohm—Volume control and switch
- R7 BE130257 5 megohm— $\frac{1}{2}$ w.
- R8 BE130240 30 ohm— $\frac{1}{2}$ w.
- R9 BE130100 150M ohm— $\frac{1}{2}$ w.
- R10 BE130111 250M ohm— $\frac{1}{2}$ w.
- R11 BE130166 150 ohm— $\frac{1}{2}$ w.

- ### CONDENSERS
- 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

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 BE114259 4" Electrodynamic speaker
- S1 Switch on Volume control
- L1 BE105138 R.F. choke



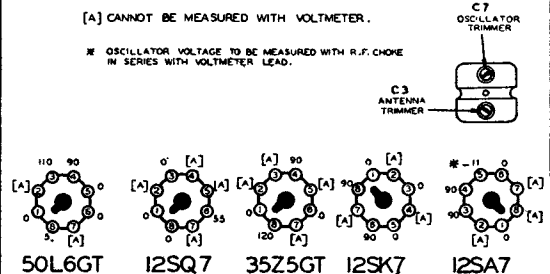
COIL ASSEMBLY VIEW

MODEL 14BR-521A
MODEL 14BR-522A

BOTTOM VIEW OF CHASSIS

VOLTAGES MEASURED WITH A HIGH RESISTANCE VOLT-METER BETWEEN SOCKET TERMINALS & B—
 [A] CANNOT BE MEASURED WITH VOLT-METER.

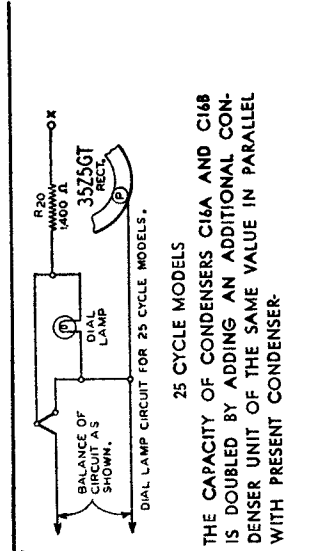
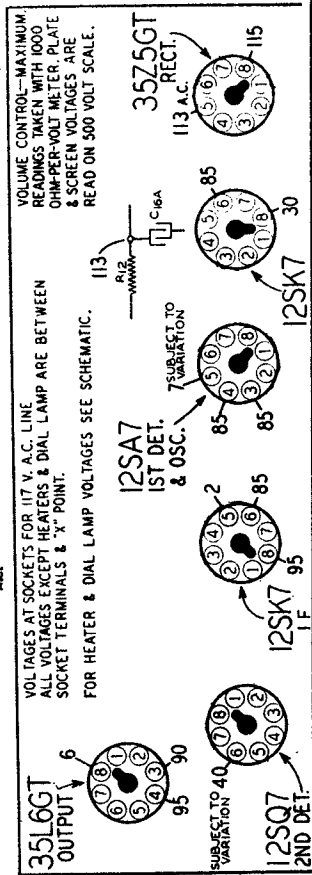
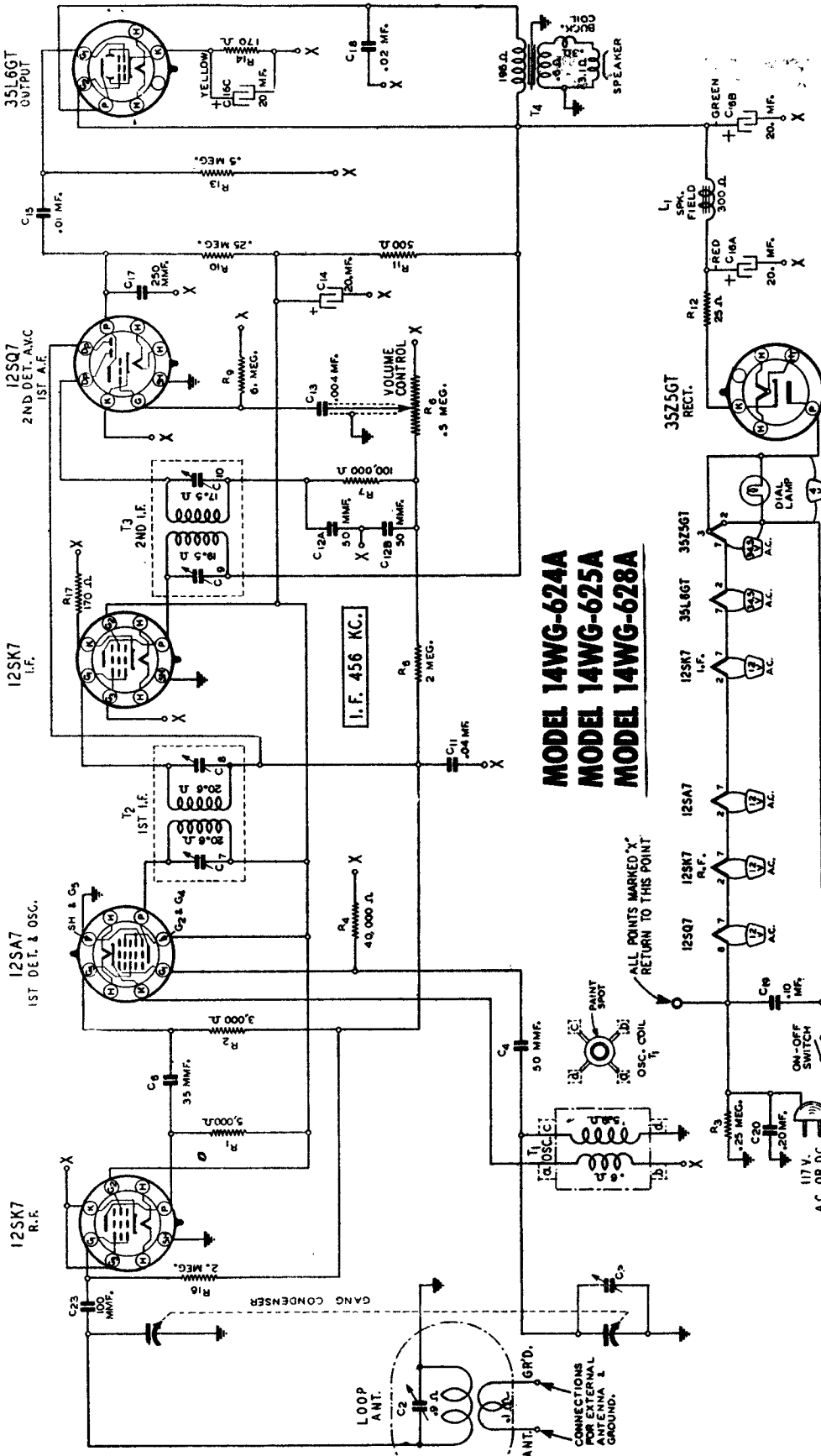
* OSCILLATOR VOLTAGE TO BE MEASURED WITH R.F. CHOKE IN SERIES WITH VOLT-METER LEAD.



REAR OF CHASSIS VOLTAGE CHART

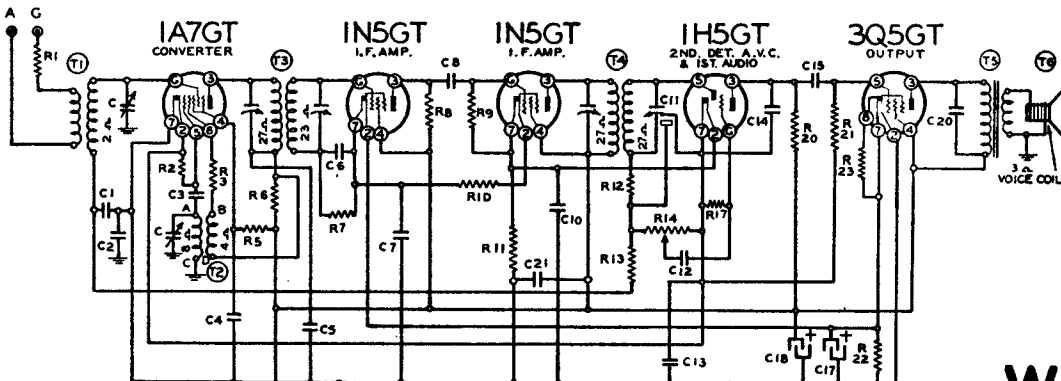
70

MANUAL OF 1942 MOST POPULAR SERVICE DIAGRAMS



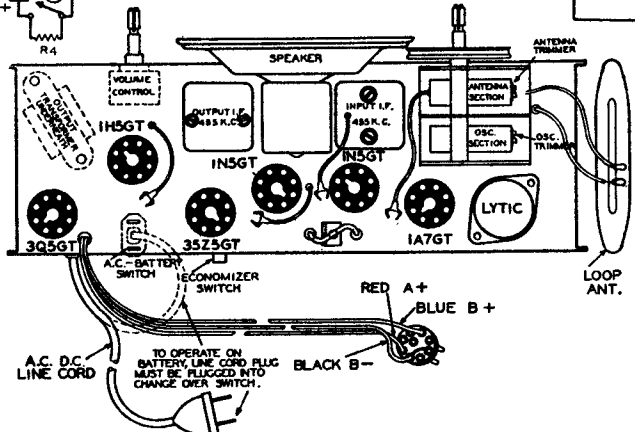
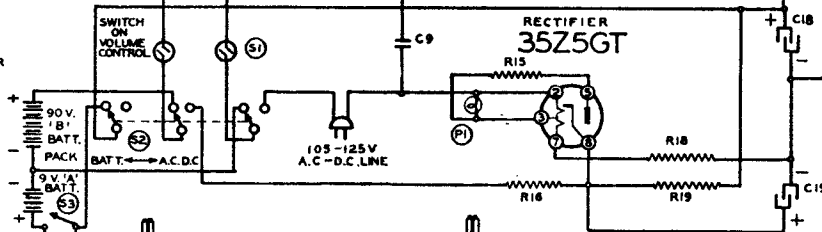
MANUAL OF 1942 MOST POPULAR SERVICE DIAGRAMS

| BAND | SIGNAL GENERATOR Frequency Setting | Dummy Antenna | Connection to Radio | Dial Setting | Trimmers Adjusted (in Order Shown) |
|------------------|---------------------------------------|---------------|-------------------------|--------------------------------------|------------------------------------------------|
| 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 |
| BROAD-CAST 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

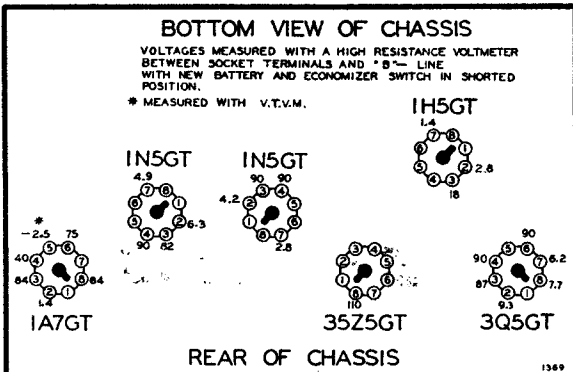


CONDENSERS

- 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%.....



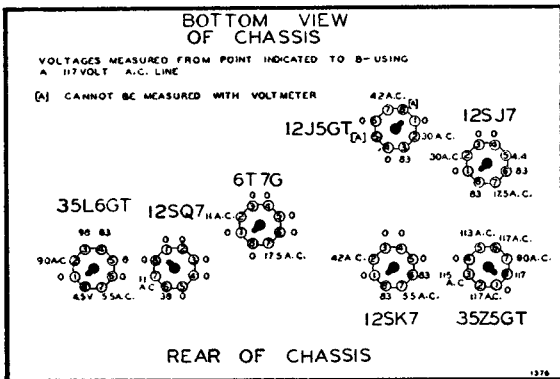
MANUAL OF 1942 MOST POPULAR SERVICE DIAGRAMS

• 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 |

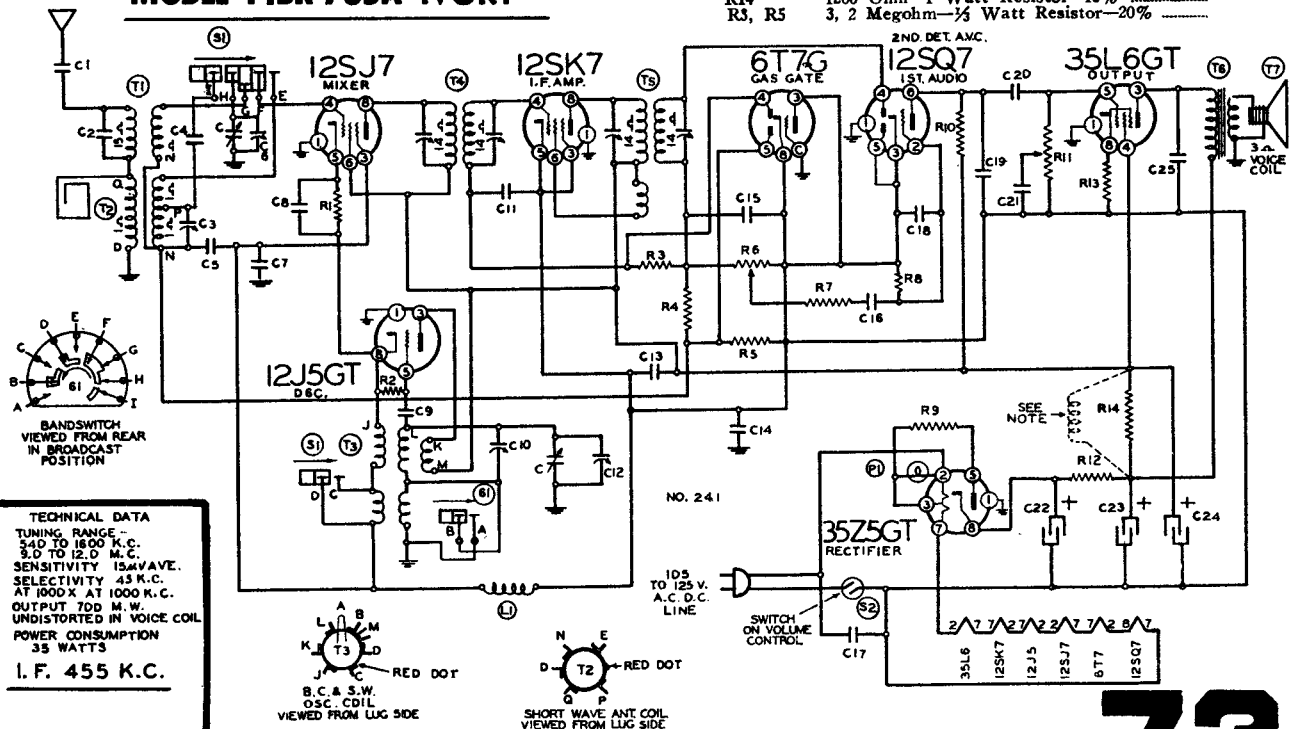
NOTE: The Oscillator Frequency is lower than the signal frequency and should be aligned accordingly.

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 .000445 Mica Type Condenser—3%
- C19 .00025 Mica Type Condenser
- R10 200M ohm— $\frac{1}{2}$ Watt Resistor—20%
- R2, R7 50M ohm— $\frac{1}{2}$ Watt Resistor—20%
- R4 2 Megohm— $\frac{1}{2}$ Watt Resistor—20%
- R12 200 Ohm— $\frac{1}{2}$ Watt Resistor—20%
- R9 20 Ohm— $\frac{1}{2}$ Watt Resistor—20%
- R13 150 Ohm— $\frac{1}{2}$ Watt Resistor—10%
- R1 5M Ohm— $\frac{1}{2}$ Watt Resistor—10%
- R8 5 Megohm— $\frac{1}{2}$ Watt Resistor—25%
- R14 1200 Ohm—1 Watt Resistor—10%
- R3, R5 3, 2 Megohm— $\frac{1}{2}$ Watt Resistor—20%

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

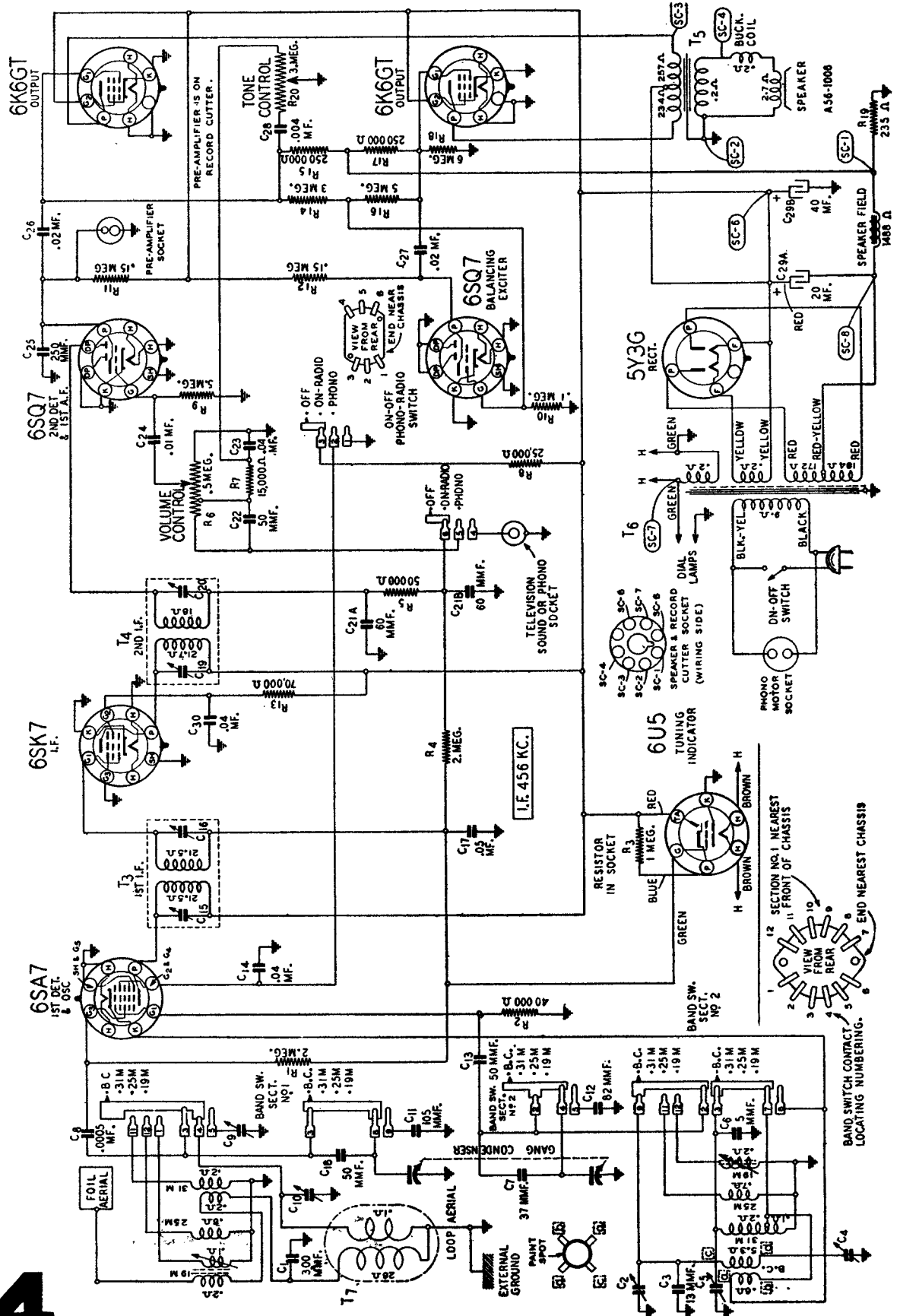


MANUAL OF 1942 MOST POPULAR SERVICE DIAGRAMS

**MODEL 14WG-808W
14WG-808M**

MONTGOMERY WARD CHICAGO

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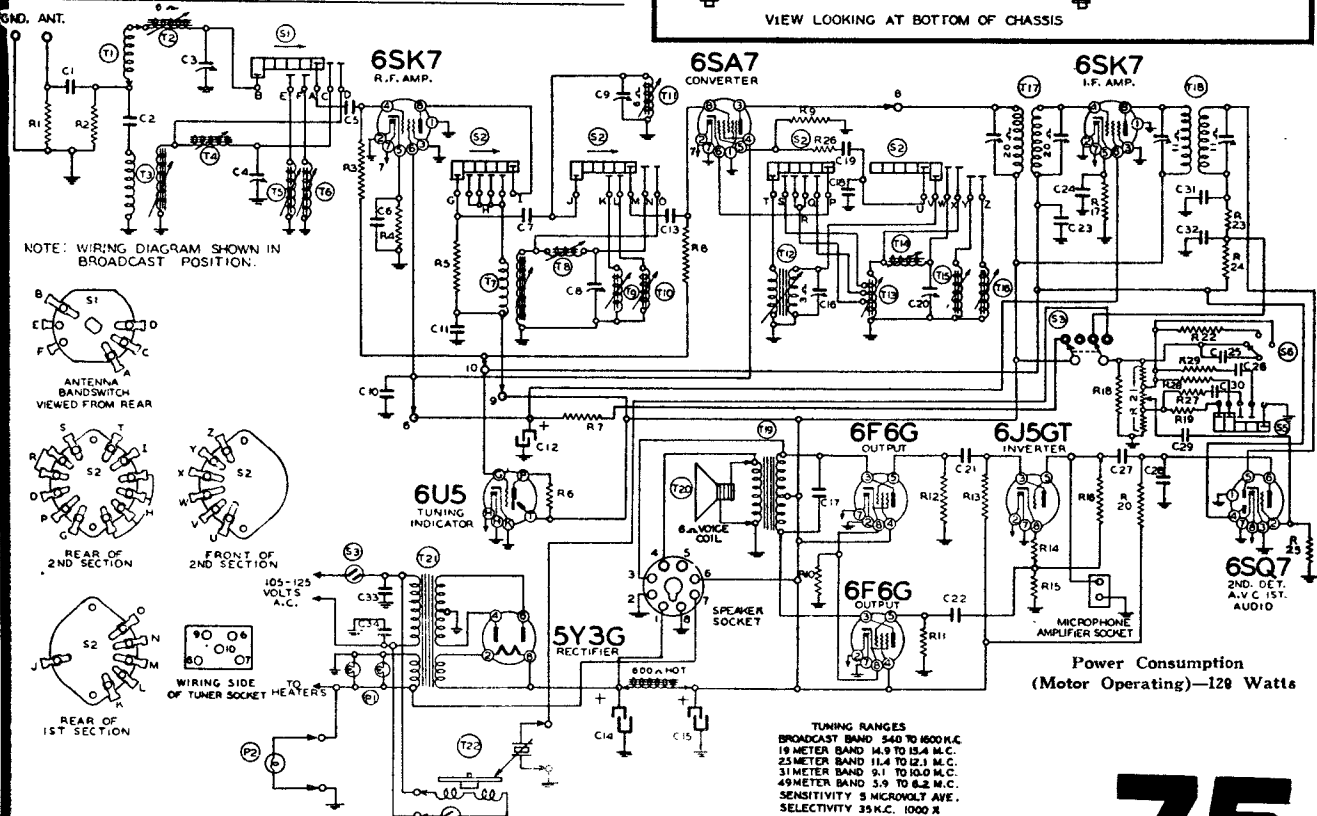
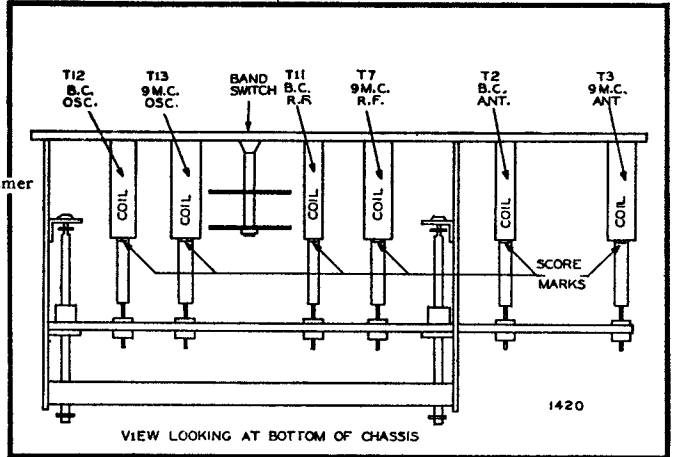
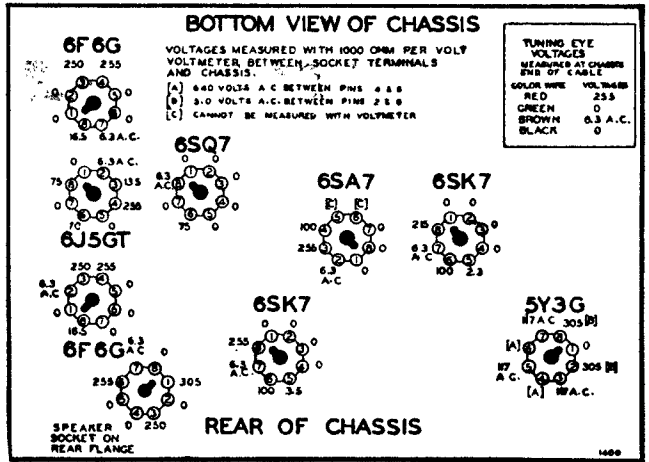
MANUAL OF 1942 MOST POPULAR SERVICE DIAGRAMS

MONTGOMERY WARD

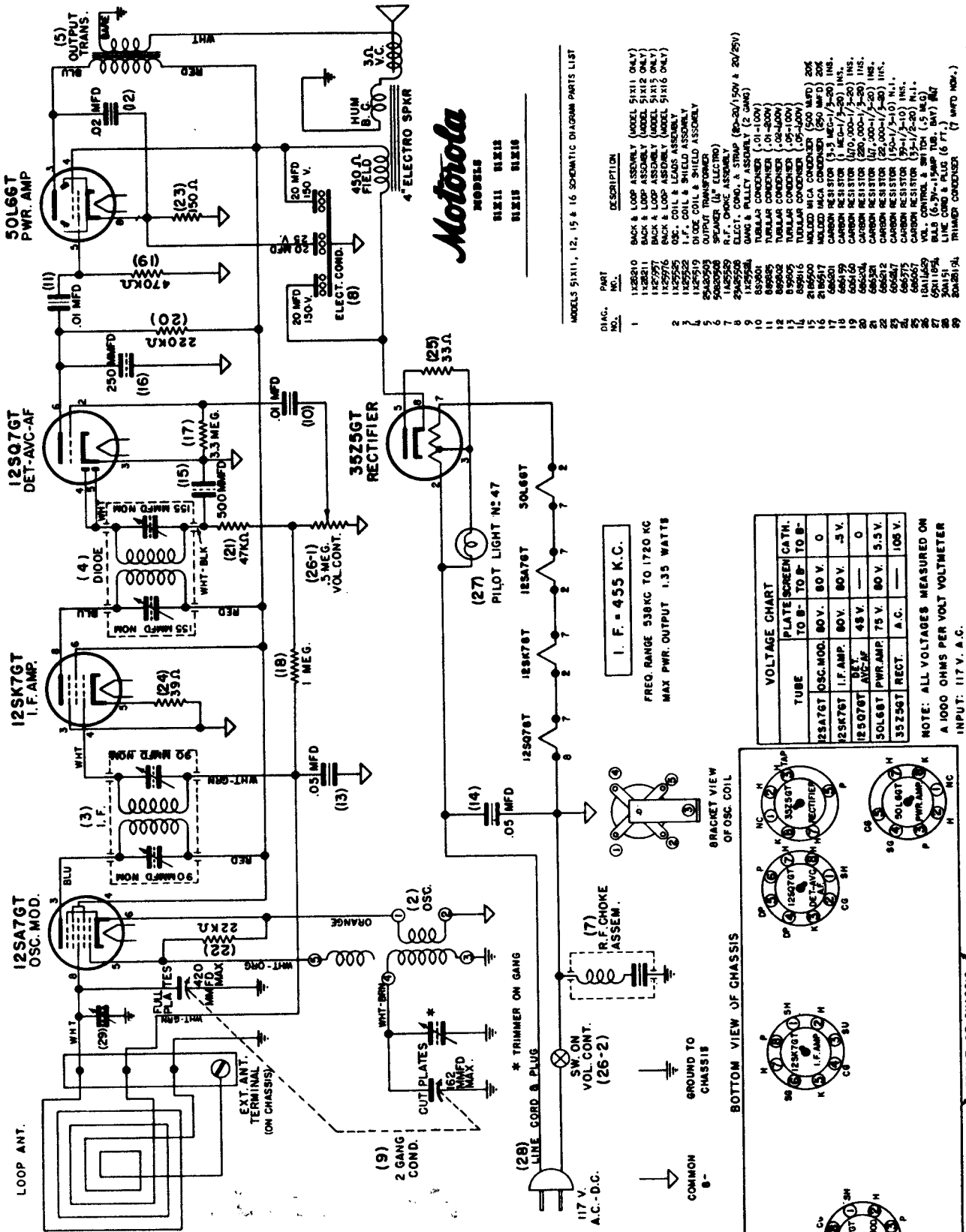
MODEL 14BR-912A

- R1 25M ohm— $\frac{1}{2}$ w.
- R2 25M ohm— $\frac{1}{2}$ w.
- R3 1 megohm— $\frac{1}{2}$ w.
- R4 250 ohm— $\frac{1}{2}$ w.
- R5 5M ohm— $\frac{1}{2}$ w.
- R6 1 megohm in tuning
- R7 12,500 ohm—3 w.
- R8 1 megohm— $\frac{1}{2}$ w.
- R9 25M ohm— $\frac{1}{2}$ w.
- R10 300 ohm—1 w.
- R11 500M ohm— $\frac{1}{2}$ w.
- R12 500M ohm— $\frac{1}{2}$ w.
- R13 100M ohm— $\frac{1}{2}$ w.
- R14 5M ohm— $\frac{1}{2}$ w.
- R15 100M ohm— $\frac{1}{2}$ w.
- R16 1 megohm— $\frac{1}{2}$ w.
- R17 500 ohm— $\frac{1}{2}$ w.
- R18 500M ohm— $\frac{1}{2}$ w.
- R19 500M ohm— $\frac{1}{2}$ w.
- R20 250M ohm— $\frac{1}{2}$ w.
- R21 2.8 megohm—volume control
- R22 1.5 megohm— $\frac{1}{2}$ w.
- R23 50M ohm— $\frac{1}{2}$ w.
- R24 3 megohm— $\frac{1}{2}$ w.
- R25 5 megohm— $\frac{1}{2}$ w.
- R26 50 ohm— $\frac{1}{2}$ w.
- R27 40M ohm— $\frac{1}{2}$ w.
- R28 150M ohm— $\frac{1}{2}$ w.
- R29 80M ohm— $\frac{1}{2}$ w.

- 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 w. v. lytic
- C13 .0005 mica
- C14 15.0 mfd. x 450 w. v. lytic
- C15 15.0 mfd. x 450 w. v. lytic
- C16 B.C. oscillator trimmer
- 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



MANUAL OF 1942 MOST POPULAR SERVICE DIAGRAMS



Motorola
MODELS
 51X11 51X12
 51X13 51X16

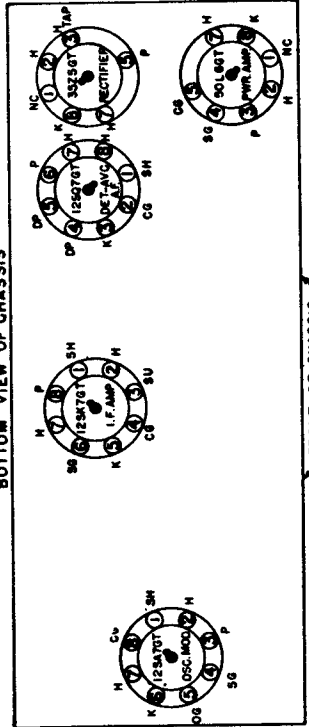
MODELS 51X11, 12, 15 & 16 SCHEMATIC DIAGRAM PARTS LIST

| DIAG. NO. | PART NO. | DESCRIPTION |
|-----------|----------|-----------------------------------------|
| 1 | 12SR10 | BACK & LOOP ASSEMBLY (MODEL 51X11 ONLY) |
| | 12SR11 | BACK & LOOP ASSEMBLY (MODEL 51X12 ONLY) |
| | 12SR77 | BACK & LOOP ASSEMBLY (MODEL 51X13 ONLY) |
| 2 | 12SK75 | OSC. COIL & LEADS ASSEMBLY |
| 3 | 12SK76 | I.F. COIL & SHIELD ASSEMBLY |
| 4 | 12SK77 | I.F. COIL & SHIELD ASSEMBLY |
| 5 | 50L650 | OUTPUT TRANSFORMER |
| 6 | 50L655 | SPEAKER (1" ELECTRO) |
| 7 | 145555 | R.F. CHOKE ASSEMBLY |
| 8 | 35Z55 | RECT. TUBULAR ASSEMBLY (2 GANG) |
| 9 | 51X11 | CHASSIS ASSEMBLY (2 GANG) |
| 10 | 51X12 | TUBULAR CONDENSER (.01-.100) |
| 11 | 51X13 | TUBULAR CONDENSER (.01-.100) |
| 12 | 51X14 | TUBULAR CONDENSER (.05-.100) |
| 13 | 51X15 | TUBULAR CONDENSER (.05-.100) |
| 14 | 51X16 | TUBULAR CONDENSER (.05-.100) |
| 15 | 51X17 | MILLED MICA CONDENSER (500 MFD) 20K |
| 16 | 51X18 | MILLED MICA CONDENSER (500 MFD) 20K |
| 17 | 51X19 | CARBON RESISTOR (1/2 WATT) 500 OHMS |
| 18 | 51X20 | CARBON RESISTOR (1/2 WATT) 500 OHMS |
| 19 | 51X21 | CARBON RESISTOR (1/2 WATT) 500 OHMS |
| 20 | 51X22 | CARBON RESISTOR (1/2 WATT) 500 OHMS |
| 21 | 51X23 | CARBON RESISTOR (1/2 WATT) 500 OHMS |
| 22 | 51X24 | CARBON RESISTOR (1/2 WATT) 500 OHMS |
| 23 | 51X25 | CARBON RESISTOR (1/2 WATT) 500 OHMS |
| 24 | 51X26 | CARBON RESISTOR (1/2 WATT) 500 OHMS |
| 25 | 51X27 | CARBON RESISTOR (1/2 WATT) 500 OHMS |
| 26 | 51X28 | CARBON RESISTOR (1/2 WATT) 500 OHMS |
| 27 | 51X29 | CARBON RESISTOR (1/2 WATT) 500 OHMS |
| 28 | 51X30 | CARBON RESISTOR (1/2 WATT) 500 OHMS |
| 29 | 51X31 | CARBON RESISTOR (1/2 WATT) 500 OHMS |
| 30 | 51X32 | CARBON RESISTOR (1/2 WATT) 500 OHMS |
| 31 | 51X33 | CARBON RESISTOR (1/2 WATT) 500 OHMS |
| 32 | 51X34 | CARBON RESISTOR (1/2 WATT) 500 OHMS |
| 33 | 51X35 | CARBON RESISTOR (1/2 WATT) 500 OHMS |
| 34 | 51X36 | CARBON RESISTOR (1/2 WATT) 500 OHMS |
| 35 | 51X37 | CARBON RESISTOR (1/2 WATT) 500 OHMS |
| 36 | 51X38 | CARBON RESISTOR (1/2 WATT) 500 OHMS |
| 37 | 51X39 | CARBON RESISTOR (1/2 WATT) 500 OHMS |
| 38 | 51X40 | CARBON RESISTOR (1/2 WATT) 500 OHMS |
| 39 | 51X41 | CARBON RESISTOR (1/2 WATT) 500 OHMS |
| 40 | 51X42 | CARBON RESISTOR (1/2 WATT) 500 OHMS |
| 41 | 51X43 | CARBON RESISTOR (1/2 WATT) 500 OHMS |
| 42 | 51X44 | CARBON RESISTOR (1/2 WATT) 500 OHMS |
| 43 | 51X45 | CARBON RESISTOR (1/2 WATT) 500 OHMS |
| 44 | 51X46 | CARBON RESISTOR (1/2 WATT) 500 OHMS |
| 45 | 51X47 | CARBON RESISTOR (1/2 WATT) 500 OHMS |
| 46 | 51X48 | CARBON RESISTOR (1/2 WATT) 500 OHMS |
| 47 | 51X49 | CARBON RESISTOR (1/2 WATT) 500 OHMS |
| 48 | 51X50 | CARBON RESISTOR (1/2 WATT) 500 OHMS |
| 49 | 51X51 | CARBON RESISTOR (1/2 WATT) 500 OHMS |
| 50 | 51X52 | CARBON RESISTOR (1/2 WATT) 500 OHMS |
| 51 | 51X53 | CARBON RESISTOR (1/2 WATT) 500 OHMS |
| 52 | 51X54 | CARBON RESISTOR (1/2 WATT) 500 OHMS |
| 53 | 51X55 | CARBON RESISTOR (1/2 WATT) 500 OHMS |
| 54 | 51X56 | CARBON RESISTOR (1/2 WATT) 500 OHMS |
| 55 | 51X57 | CARBON RESISTOR (1/2 WATT) 500 OHMS |
| 56 | 51X58 | CARBON RESISTOR (1/2 WATT) 500 OHMS |
| 57 | 51X59 | CARBON RESISTOR (1/2 WATT) 500 OHMS |
| 58 | 51X60 | CARBON RESISTOR (1/2 WATT) 500 OHMS |
| 59 | 51X61 | CARBON RESISTOR (1/2 WATT) 500 OHMS |
| 60 | 51X62 | CARBON RESISTOR (1/2 WATT) 500 OHMS |
| 61 | 51X63 | CARBON RESISTOR (1/2 WATT) 500 OHMS |
| 62 | 51X64 | CARBON RESISTOR (1/2 WATT) 500 OHMS |
| 63 | 51X65 | CARBON RESISTOR (1/2 WATT) 500 OHMS |
| 64 | 51X66 | CARBON RESISTOR (1/2 WATT) 500 OHMS |
| 65 | 51X67 | CARBON RESISTOR (1/2 WATT) 500 OHMS |
| 66 | 51X68 | CARBON RESISTOR (1/2 WATT) 500 OHMS |
| 67 | 51X69 | CARBON RESISTOR (1/2 WATT) 500 OHMS |
| 68 | 51X70 | CARBON RESISTOR (1/2 WATT) 500 OHMS |
| 69 | 51X71 | CARBON RESISTOR (1/2 WATT) 500 OHMS |
| 70 | 51X72 | CARBON RESISTOR (1/2 WATT) 500 OHMS |
| 71 | 51X73 | CARBON RESISTOR (1/2 WATT) 500 OHMS |
| 72 | 51X74 | CARBON RESISTOR (1/2 WATT) 500 OHMS |
| 73 | 51X75 | CARBON RESISTOR (1/2 WATT) 500 OHMS |
| 74 | 51X76 | CARBON RESISTOR (1/2 WATT) 500 OHMS |
| 75 | 51X77 | CARBON RESISTOR (1/2 WATT) 500 OHMS |
| 76 | 51X78 | CARBON RESISTOR (1/2 WATT) 500 OHMS |
| 77 | 51X79 | CARBON RESISTOR (1/2 WATT) 500 OHMS |
| 78 | 51X80 | CARBON RESISTOR (1/2 WATT) 500 OHMS |
| 79 | 51X81 | CARBON RESISTOR (1/2 WATT) 500 OHMS |
| 80 | 51X82 | CARBON RESISTOR (1/2 WATT) 500 OHMS |
| 81 | 51X83 | CARBON RESISTOR (1/2 WATT) 500 OHMS |
| 82 | 51X84 | CARBON RESISTOR (1/2 WATT) 500 OHMS |
| 83 | 51X85 | CARBON RESISTOR (1/2 WATT) 500 OHMS |
| 84 | 51X86 | CARBON RESISTOR (1/2 WATT) 500 OHMS |
| 85 | 51X87 | CARBON RESISTOR (1/2 WATT) 500 OHMS |
| 86 | 51X88 | CARBON RESISTOR (1/2 WATT) 500 OHMS |
| 87 | 51X89 | CARBON RESISTOR (1/2 WATT) 500 OHMS |
| 88 | 51X90 | CARBON RESISTOR (1/2 WATT) 500 OHMS |
| 89 | 51X91 | CARBON RESISTOR (1/2 WATT) 500 OHMS |
| 90 | 51X92 | CARBON RESISTOR (1/2 WATT) 500 OHMS |
| 91 | 51X93 | CARBON RESISTOR (1/2 WATT) 500 OHMS |
| 92 | 51X94 | CARBON RESISTOR (1/2 WATT) 500 OHMS |
| 93 | 51X95 | CARBON RESISTOR (1/2 WATT) 500 OHMS |
| 94 | 51X96 | CARBON RESISTOR (1/2 WATT) 500 OHMS |
| 95 | 51X97 | CARBON RESISTOR (1/2 WATT) 500 OHMS |
| 96 | 51X98 | CARBON RESISTOR (1/2 WATT) 500 OHMS |
| 97 | 51X99 | CARBON RESISTOR (1/2 WATT) 500 OHMS |
| 98 | 51X100 | CARBON RESISTOR (1/2 WATT) 500 OHMS |
| 99 | 51X101 | CARBON RESISTOR (1/2 WATT) 500 OHMS |
| 100 | 51X102 | CARBON RESISTOR (1/2 WATT) 500 OHMS |

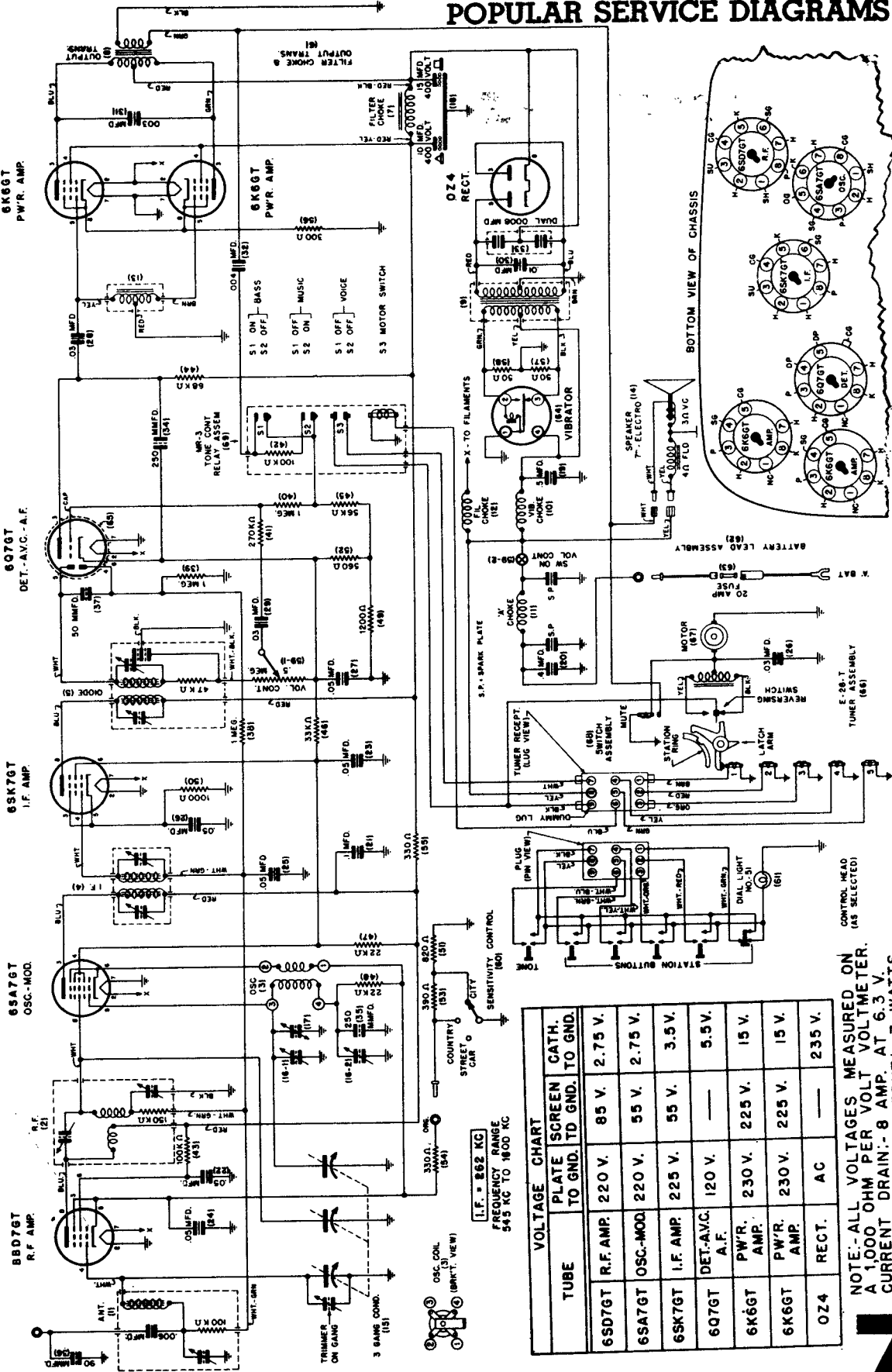
FREQ. RANGE 530 KC TO 1720 KC
 MAX PWR. OUTPUT 1.35 WATTS
 I. F. = 455 K.C.

| TUBE | PLATE | SCREEN | CATH. |
|---------|-------|--------|--------|
| | TO B | TO B | TO B |
| 12SA7GT | 80 V. | 80 V. | 0 |
| 12SK7GT | 80 V. | 80 V. | 0 |
| 12SQ7GT | 80 V. | 80 V. | 0 |
| 50L6GT | 75 V. | 80 V. | 5.5 V. |
| 35Z5GT | RECT. | A.C. | 100 V. |

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



POPULAR SERVICE DIAGRAMS



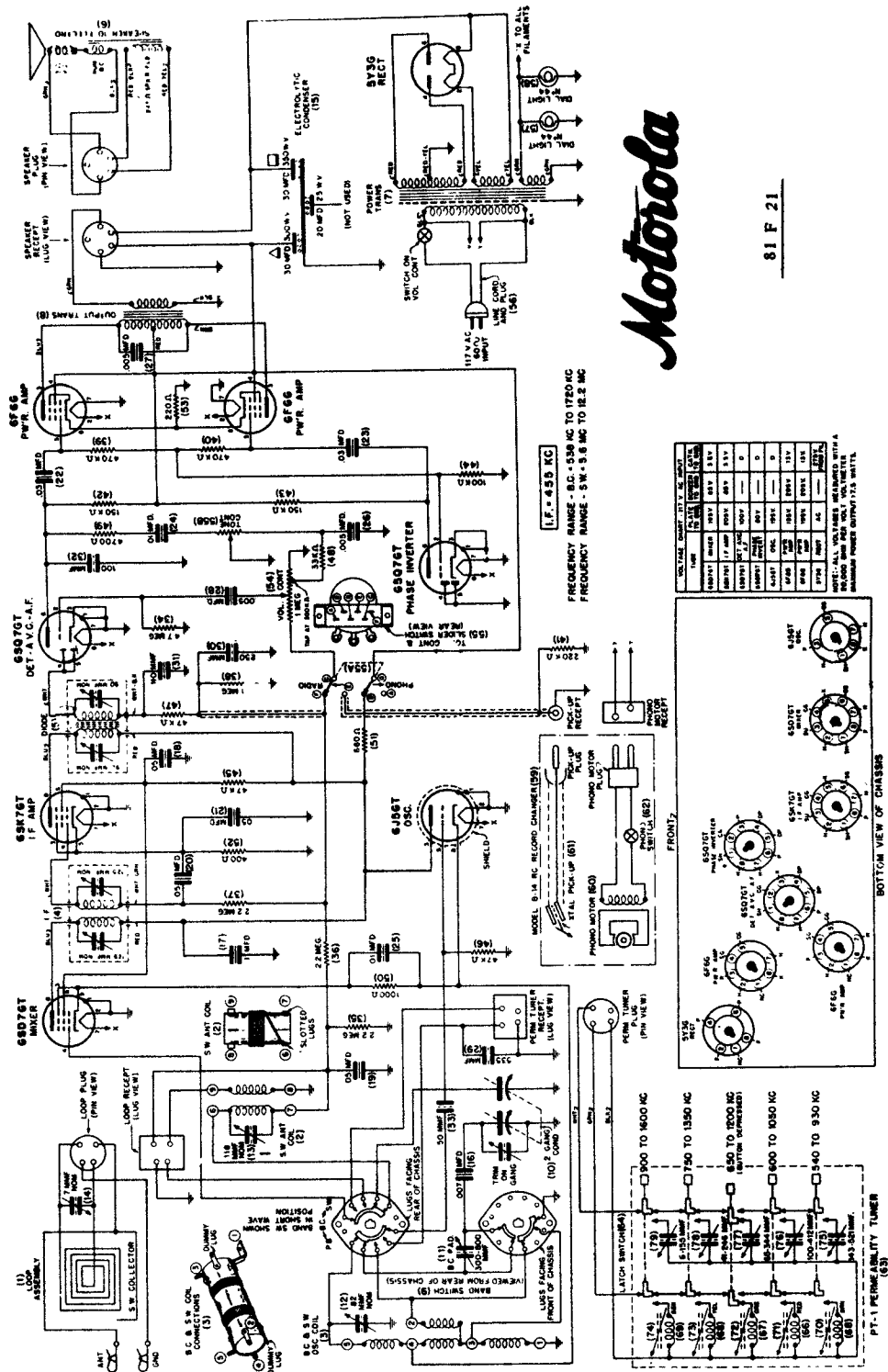
Motorola

| TUBE | PLATE TO GND. | SCREEN TO GND. | CATH. TO GND. |
|----------------------|---------------|----------------|---------------|
| 6D7GT R.F. AMP. | 220 V. | 85 V. | 2.75 V. |
| 6S7GT OSC.-MOD. | 220 V. | 55 V. | 2.75 V. |
| 6K6GT I.F. AMP. | 225 V. | 55 V. | 3.5 V. |
| 6Q7GT 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.



MANUAL OF 1942 MOST POPULAR SERVICE DIAGRAMS



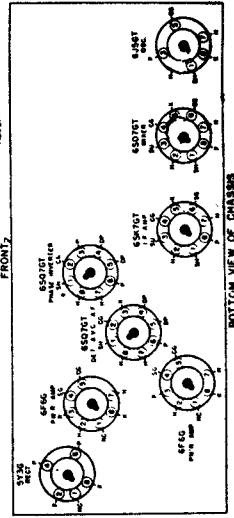
Motorola

81 F 21

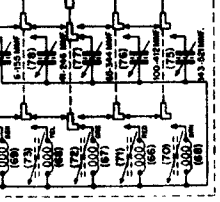
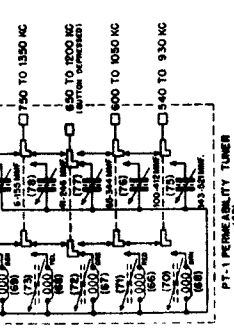
I.F. - 455 KC
 FREQUENCY RANGE - B.C. - 530 MC TO 1750 MC
 FREQUENCY RANGE - S.W. - 5.5 MC TO 16.2 MC

| VOLTAGE | | CURRENT | | TUBE | |
|----------|-------|----------|--------|--------|-------|
| TYPE | VALUE | TYPE | VALUE | TYPE | VALUE |
| ANODE | 250 V | ANODE | 100 MA | 6S07GT | 250 V |
| GRID | 100 V | GRID | 100 MA | 6F66 | 250 V |
| CATHODE | 50 V | CATHODE | 100 MA | 6J56T | 250 V |
| HEATER | 6.3 V | HEATER | 100 MA | 5Y3G | 250 V |
| PHENOLIC | 50 V | PHENOLIC | 100 MA | 6S07GT | 250 V |
| PHENOLIC | 50 V | PHENOLIC | 100 MA | 6F66 | 250 V |
| PHENOLIC | 50 V | PHENOLIC | 100 MA | 6J56T | 250 V |
| PHENOLIC | 50 V | PHENOLIC | 100 MA | 5Y3G | 250 V |
| PHENOLIC | 50 V | PHENOLIC | 100 MA | 6S07GT | 250 V |
| PHENOLIC | 50 V | PHENOLIC | 100 MA | 6F66 | 250 V |
| PHENOLIC | 50 V | PHENOLIC | 100 MA | 6J56T | 250 V |
| PHENOLIC | 50 V | PHENOLIC | 100 MA | 5Y3G | 250 V |

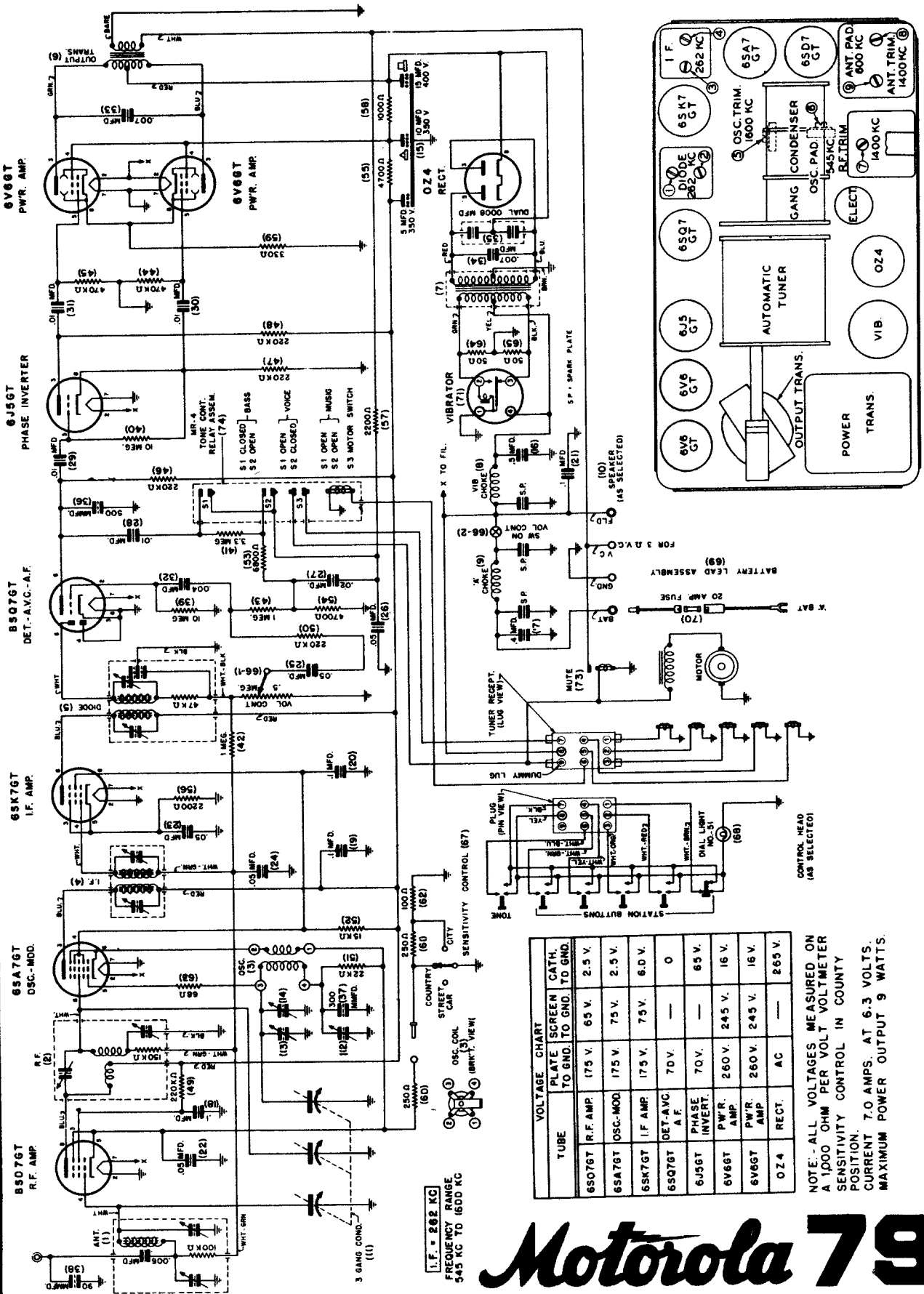
NOTE: ALL VOLTAGES MEASURED WITH A
 MAXIMUM POWER OUTPUT 1.5 WATTS.



BOTTOM VIEW OF CHASSIS



MANUAL OF 1942 MOST POPULAR SERVICE DIAGRAMS



Model 551

Motorola 79

MANUAL OF 1942 MOST POPULAR SERVICE DIAGRAMS

12SA7

12SQ7

50L6GT

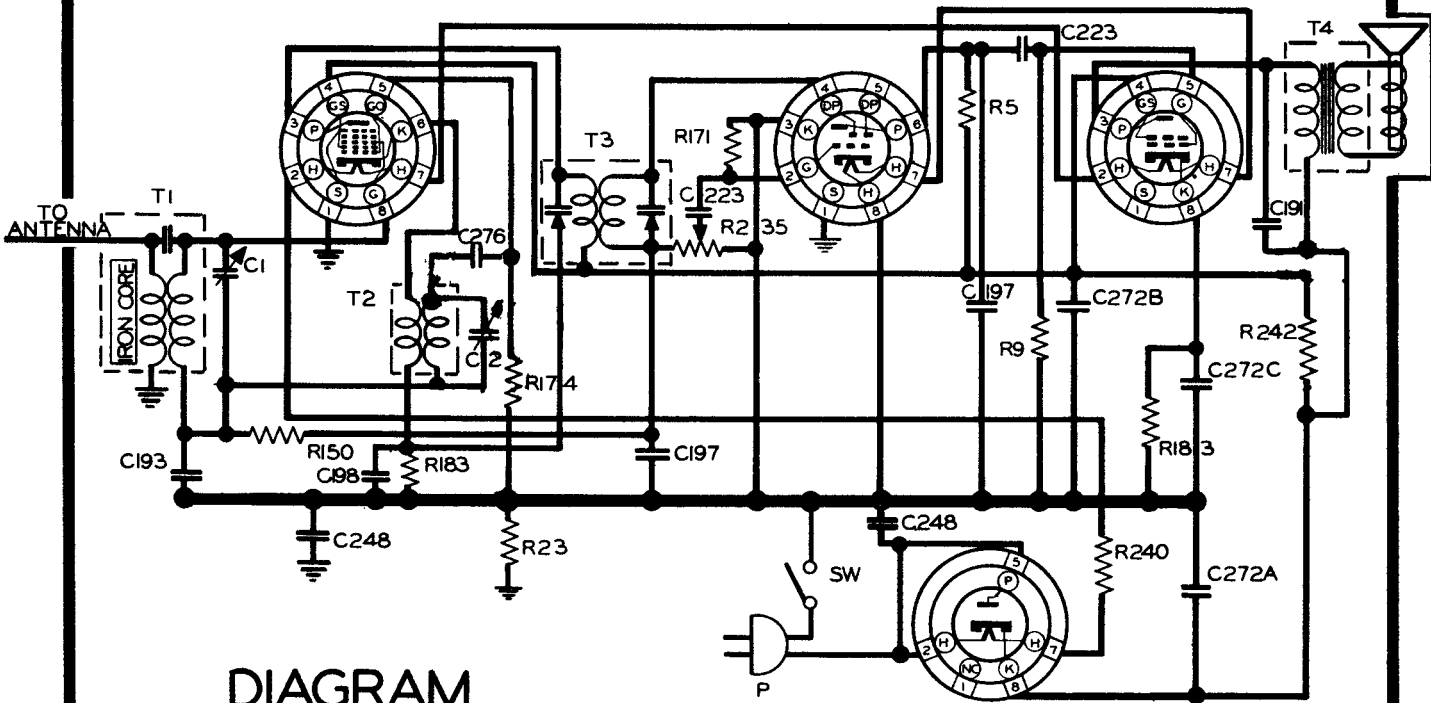


DIAGRAM
CHASSIS RE-91

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 | 00-17131 |
| 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 | 17-17209 |
| 235 | 2 M. | V.C. | 17-17117 | 1 | TWO GANG | | 17-17115 | | | |
| 23 | 250 K. | 1/4 | 17-3011 | 2 | VARIABLE | | | | | |
| 240 | 47 | 1 | 17-14397 | 272A | 40 MFD. | 150 | | | | |
| 150 | 5 M. | 1/4 | 17-14242 | 272B | 20 MFD. | 150 | 17-14398 | | | |
| 242 | 2000 | 1 | 17-14399 | 272C | 20 MFD. | 25 | | | | |
| | | | | 197 | .0001 | 500 | 17-14278 | | | |
| | | | | 276 | .00005 | 500 | 17-14404 | | | |

FREQUENCY RANGE
1750 TO 540 KC.
NOBLITT-SPARKS INDUSTRIES, INC.
COLUMBUS, INDIANA

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

| R | OHM | W | PART NO. | C | CAPACITY | VOLT | PART NO. |
|-----|------|-----|----------|------|----------|------|----------|
| 240 | 1M | 1/2 | 17-1983 | 1 | TWO GANG | | 17-17115 |
| 150 | 5M | 1/4 | 17-14242 | 2 | VARIABLE | | |
| 242 | 2000 | 1 | 17-14399 | 272A | 40 MFD. | 150 | |
| | | | | 272B | 20 MFD. | 150 | 17-14398 |
| | | | | 272C | 20 MFD. | 25 | |
| | | | | 197 | .0001 | 500 | 17-14278 |
| | | | | 276 | .00005 | 500 | 17-14404 |

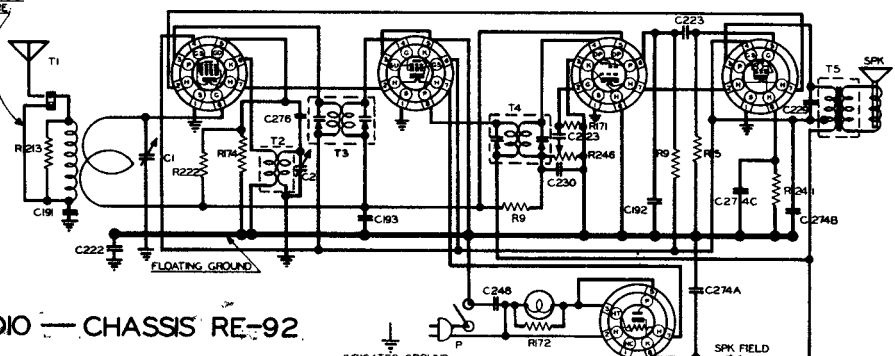
ARVIN HOME RADIO — CHASSIS RE-92

12SA7GT

12SK7GT

12SQ7GT

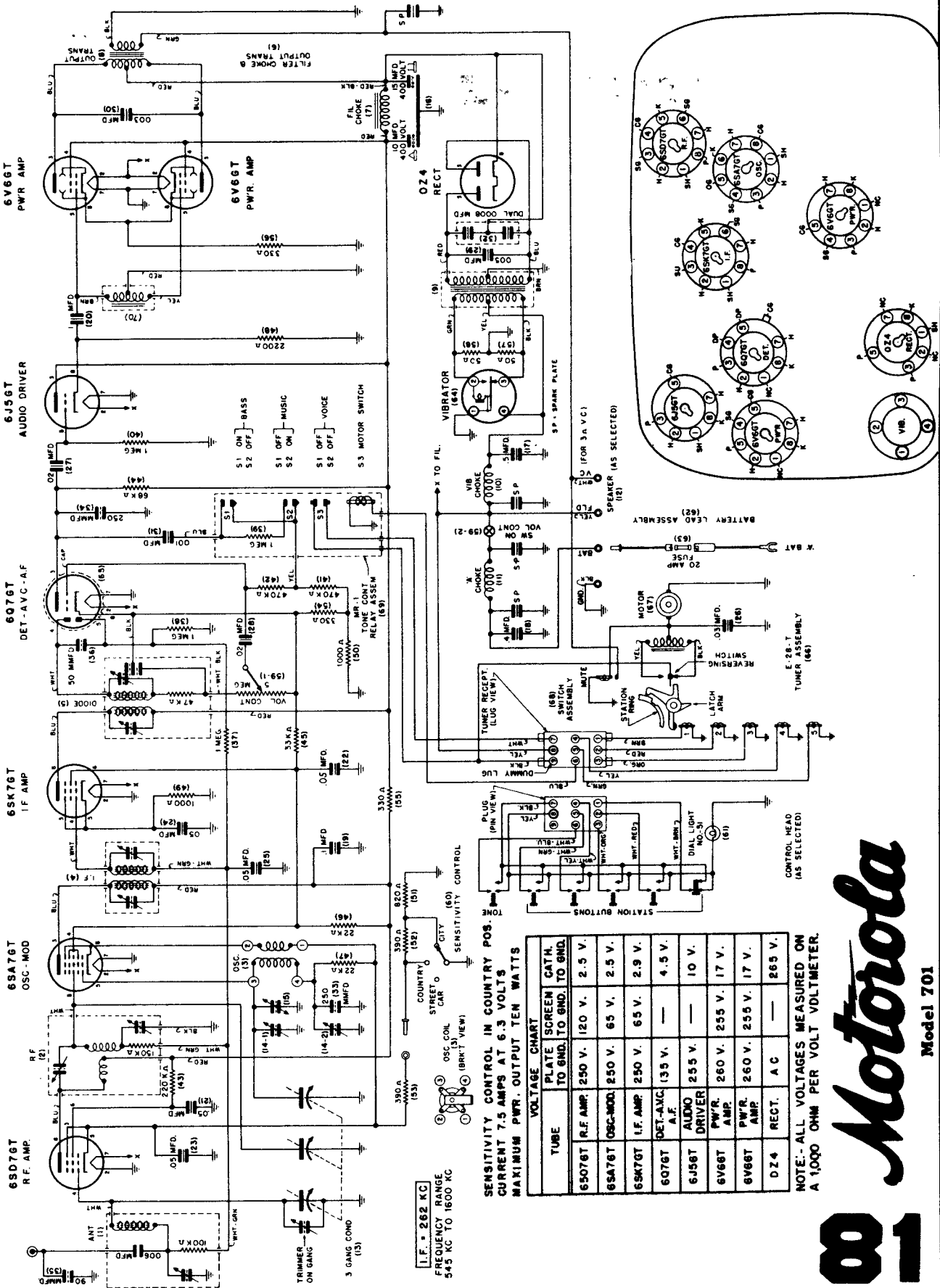
50L6GT



35Z5GT

80

MANUAL OF 1942 MOST POPULAR SERVICE DIAGRAMS



SENSITIVITY CONTROL IN COUNTRY POS.
 CURRENT 7.5 AMPS AT 6.3 VOLTS
 MAXIMUM PWR. OUTPUT TEN WATTS

| TUBE | PLATE | SCREEN | CATH. |
|--------|--------------|--------|------------------------|
| 6S07GT | R.F. AMP. | 250 V. | 120 V. TO GND. TO GND. |
| 6S7GT | OSC-MOD. | 250 V. | 65 V. 2.5 V. |
| 6K7GT | I.F. AMP. | 250 V. | 65 V. 2.5 V. |
| 607GT | DET.-AVC. | 135 V. | — 4.5 V. |
| 6J5GT | ALDGO DRIVER | 255 V. | — 10 V. |
| 6V6GT | PW'R. AMP. | 260 V. | 255 V. 17 V. |
| 6V6GT | PW'R. AMP. | 260 V. | 255 V. 17 V. |
| DZ4 | RECT. | A C | — 265 V. |

NOTE: - ALL VOLTAGES MEASURED ON A 1,000 OHM PER VOLT VOLTMETER.

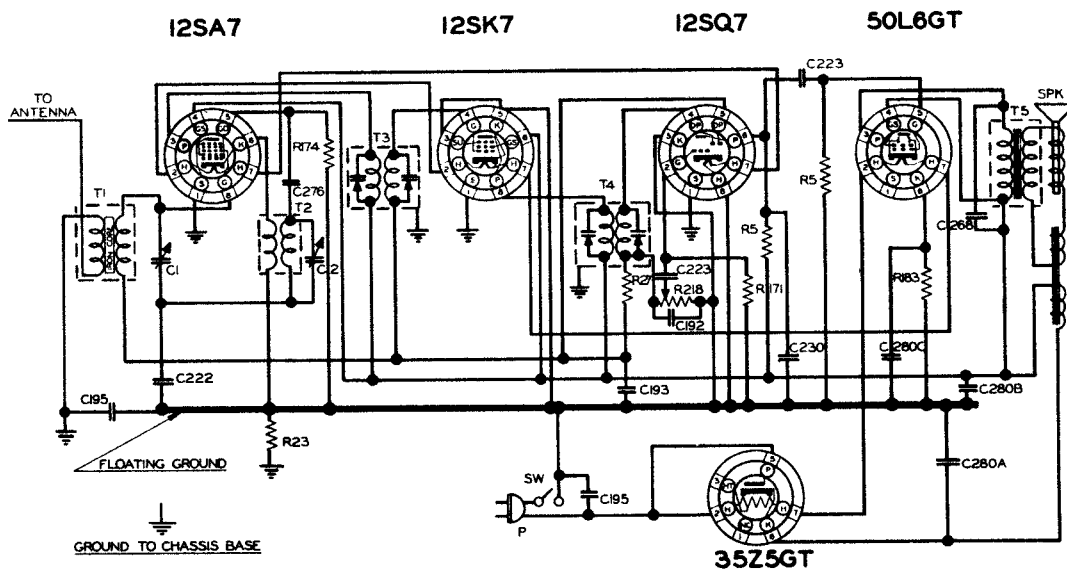
Motorola

Model 701

81

MANUAL OF 1942 MOST POPULAR SERVICE DIAGRAMS

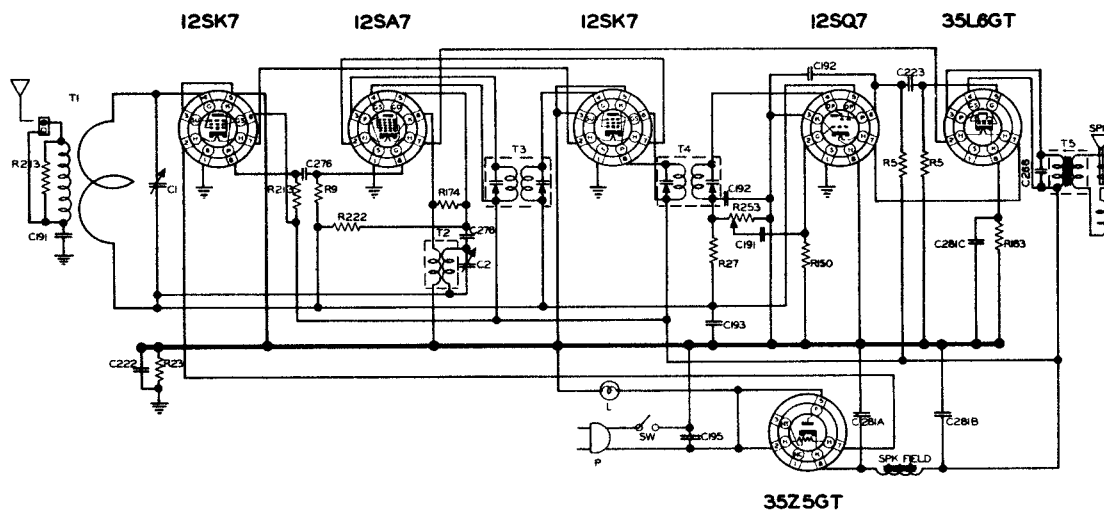
ARVIN HOME RADIO CHASSIS RE-99



| RESISTORS | | CONDENSERS | | TRANSFORMERS | | MISCELLANEOUS UNITS | | | | | | | |
|-----------|------|------------|----------|--------------|----------|---------------------|----------|---|-----------------|----------|--------|---------------------------|----------|
| R | OHM | W | PART NO. | C | CAPACITY | WLT | PART NO. | T | TYPE | PART NO. | SYMBOL | DESCRIPTION | PART NO. |
| 218 | 1M | V/C | 17-18857 | 1 | TWO GANG | | 17-17279 | 1 | ANTENNA COIL | 50-17284 | SW | LINE SWITCH | 17-18857 |
| 13 | 500K | 1/4 | 17-2070 | 3 | VARIABLE | 150 | | 2 | OSCILLATOR COIL | 50-17285 | P | LINE CORD & PLUG ASSEMBLY | 17-18854 |
| 49 | 150 | 1/4 | 17-4436 | 3B0A | 40 MFD. | 150 | 17-14415 | 3 | FIRST IF COIL | 50-18553 | | | 17-18843 |
| 54 | 20K | 1/4 | 17-4429 | 3B0C | 30 MFD. | 150 | | 4 | SECOND IF COIL | 50-18554 | | | |
| 171 | 15M | 1/4 | 17-14285 | 3B0C | 30 MFD. | 25 | 17-14278 | 5 | OUTPUT TRANSF. | 50-18559 | | | |
| 223 | 250K | 1/4 | 17-301 | 152 | .05 | 400 | 17-14317 | | | | | | |
| 227 | 2M | 1/4 | 17-4789 | 152 | .05 | 400 | 17-14317 | | | | | | |
| | | | | 192 | .00025 | 600 | 17-14273 | | | | | | |
| | | | | 223 | .002 | 400 | 17-14308 | | | | | | |
| | | | | 193 | .05 | 200 | 17-14276 | | | | | | |
| | | | | 216 | .03 | 400 | 17-14302 | | | | | | |
| | | | | 230 | .0005 | 400 | 17-14325 | | | | | | |
| | | | | 1216 | .00005 | 600 | 17-14404 | | | | | | |

I.F. PEAK 455 K.C.
BALANCE 1400 K.C. - CHECK AT 600 K.C.
NOBLITT-SPARKS INDUSTRIES, INC.
COLUMBUS, INDIANA

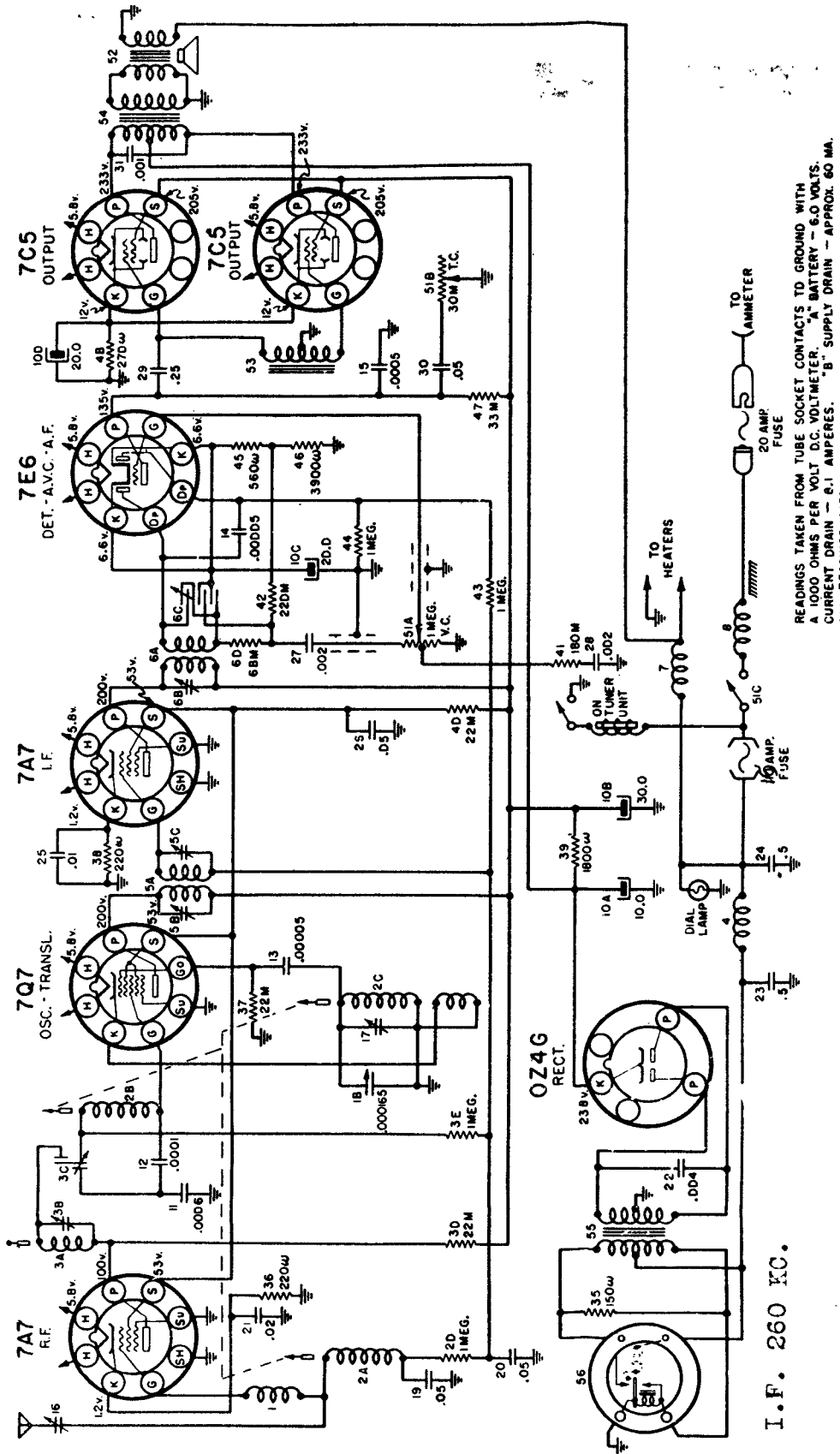
ARVIN HOME RADIO - CHASSIS RE-98



| RESISTORS | | CONDENSERS | | COILS & TRANSFORMERS | | MISCELLANEOUS UNITS | | | | | | | |
|-----------|------|------------|----------|----------------------|----------|---------------------|----------|---|-------------------|----------|--------|---------------------------|----------|
| R | OHM | W | PART NO. | C | CAPACITY | WLT | PART NO. | T | TYPE | PART NO. | SYMBOL | DESCRIPTION | PART NO. |
| 222 | 150K | 1/4 | 17-4437 | 152 | .05 | 400 | 17-4437 | 1 | ANTENNA LOOP ASST | 50-17286 | SW | SWITCH | 17-17251 |
| 227 | 2M | 1/4 | 17-4789 | 192 | .00025 | 600 | 17-4213 | 2 | OSCILLATOR COIL | 50-17287 | P | LINE CORD & PLUG ASSEMBLY | 17-17253 |
| 27 | 100K | 1/4 | 17-4789 | 3B0A | 40 MFD. | 150 | 17-4436 | 3 | FIRST IF COIL | 50-17288 | | | 17-17255 |
| 225 | 150K | 1/4 | 17-4437 | 3B0C | 30 MFD. | 150 | 17-4436 | 4 | SECOND IF COIL | 50-17289 | | | 17-17257 |
| 8 | 500K | 1/4 | 17-2070 | 3B0C | 30 MFD. | 25 | 17-4436 | 5 | OUTPUT TRANSF. | 50-17302 | | | 17-17259 |
| 192 | 150K | 1/4 | 17-4437 | 152 | .05 | 400 | 17-4437 | | | | | | |
| 193 | 150K | 1/4 | 17-4437 | 152 | .05 | 400 | 17-4437 | | | | | | |
| 194 | 150K | 1/4 | 17-4437 | 152 | .05 | 400 | 17-4437 | | | | | | |
| 223 | 250K | 1/4 | 17-301 | 152 | .05 | 400 | 17-4437 | | | | | | |
| 227 | 2M | 1/4 | 17-4789 | 152 | .05 | 400 | 17-4437 | | | | | | |
| 230 | 150K | 1/4 | 17-4437 | 152 | .05 | 400 | 17-4437 | | | | | | |
| 231 | 150K | 1/4 | 17-4437 | 152 | .05 | 400 | 17-4437 | | | | | | |
| 232 | 150K | 1/4 | 17-4437 | 152 | .05 | 400 | 17-4437 | | | | | | |
| 233 | 150K | 1/4 | 17-4437 | 152 | .05 | 400 | 17-4437 | | | | | | |
| 234 | 150K | 1/4 | 17-4437 | 152 | .05 | 400 | 17-4437 | | | | | | |
| 235 | 150K | 1/4 | 17-4437 | 152 | .05 | 400 | 17-4437 | | | | | | |

I.F. PEAK 455 K.C.
BALANCE 1400 K.C. - CHECK AT 600 K.C.
NOBLITT-SPARKS INDUSTRIES, INC.
COLUMBUS, INDIANA

MANUAL OF 1942 MOST POPULAR SERVICE DIAGRAMS



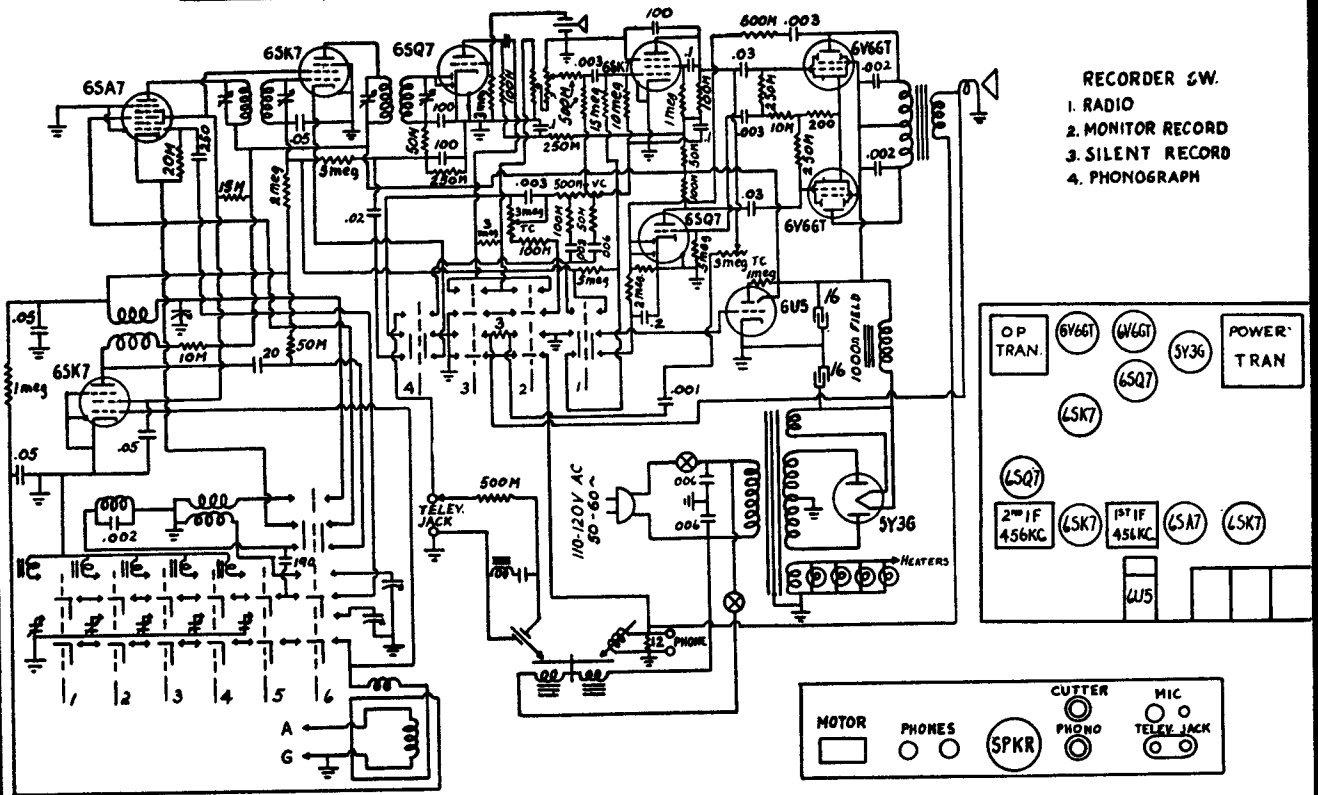
READINGS TAKEN FROM TUBE SOCKET CONTACTS TO GROUND WITH A 1000 OHMS PER VOLT D.C. VOLTMETER. "A" BATTERY - 6.0 VOLTS. CURRENT DRAIN - 6.1 AMPERES. "B" SUPPLY DRAIN - APPROX. 60 MA. ALL READINGS ±10%.

Oldsmobile Models 982282 (similar to Model 982215)

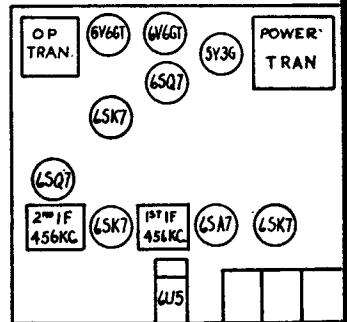
All of the adjustable condensers in this receiver are very accurately adjusted at the factory and will need no further adjustment (excepting antenna condenser "F") unless tampered with or a defective coil has been replaced. If realignment is found to be necessary, the circuits can be properly adjusted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

MANUAL OF 1942 MOST POPULAR SERVICE DIAGRAMS

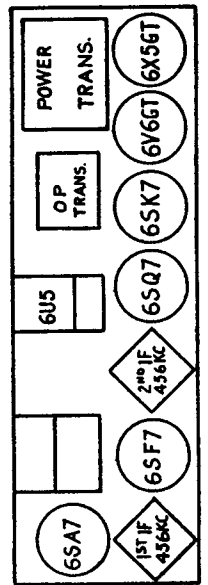
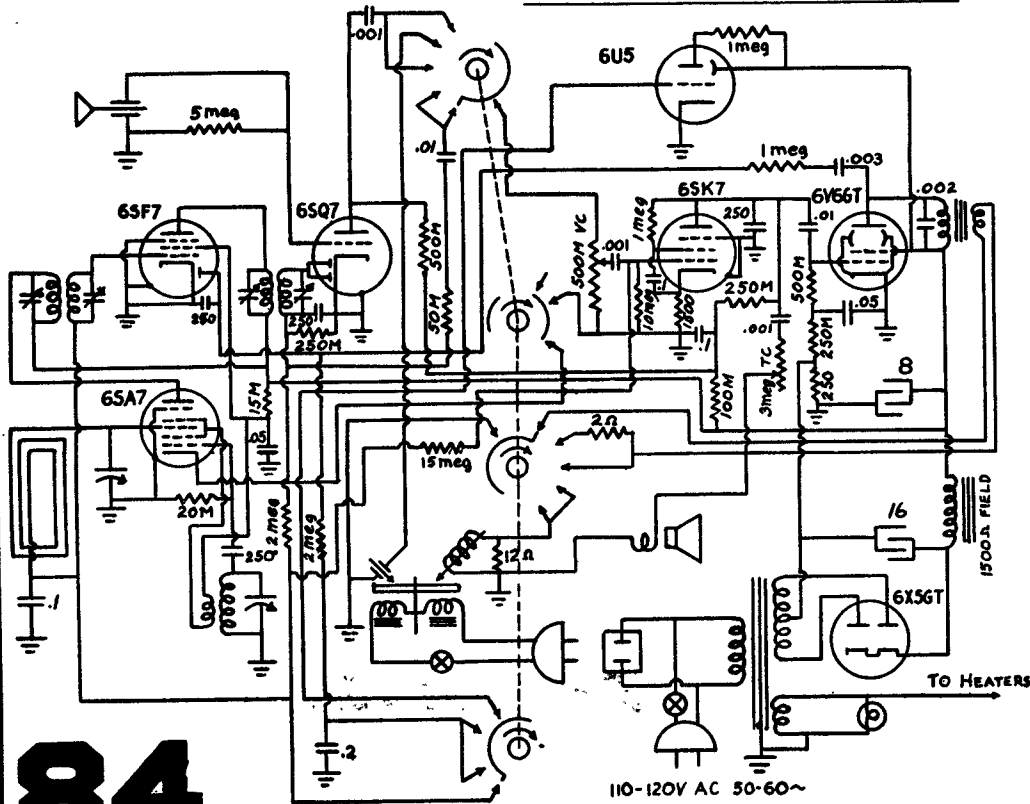
PACKARD BELL MODEL 51BPR



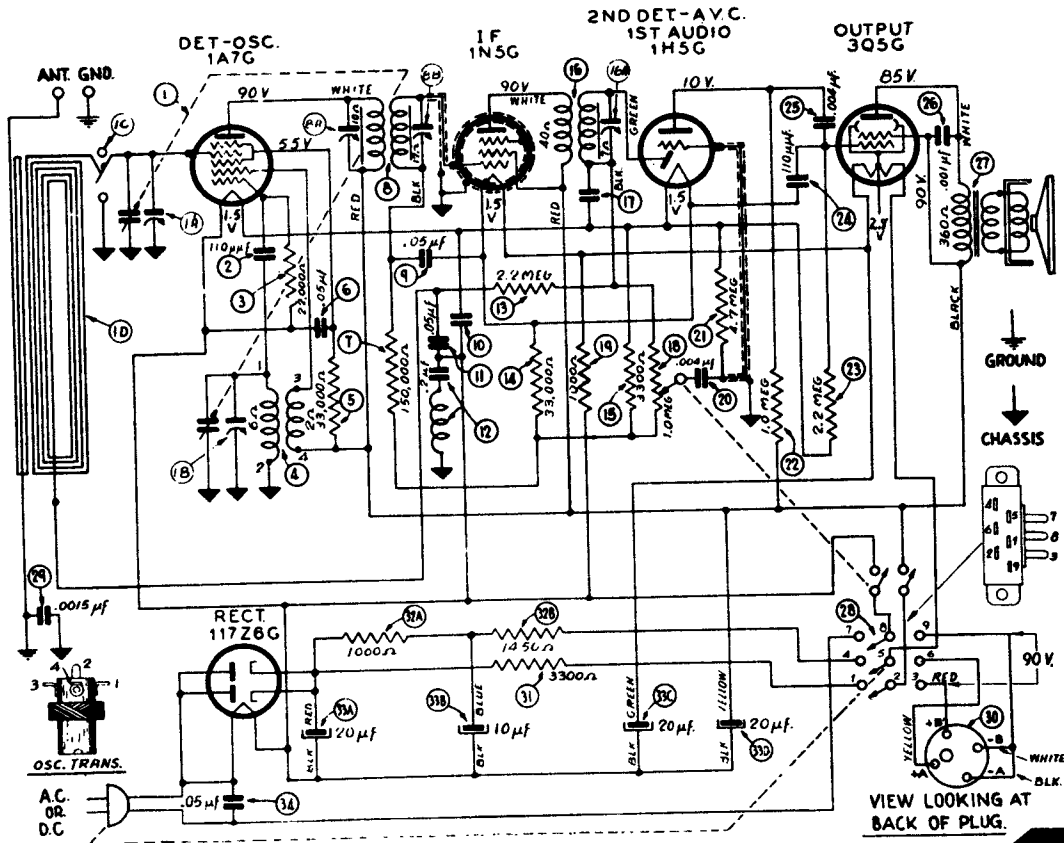
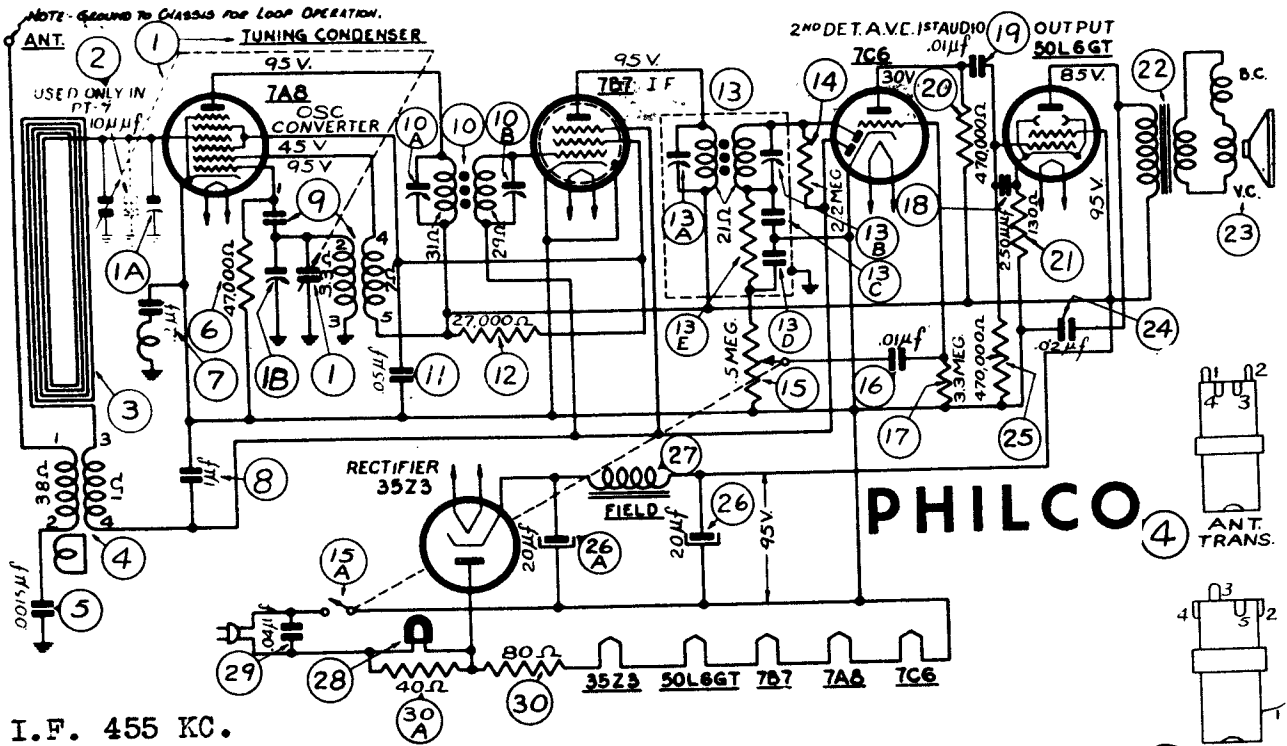
- RECORDER SW.
 1. RADIO
 2. MONITOR RECORD
 3. SILENT RECORD
 4. PHONOGRAPH



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

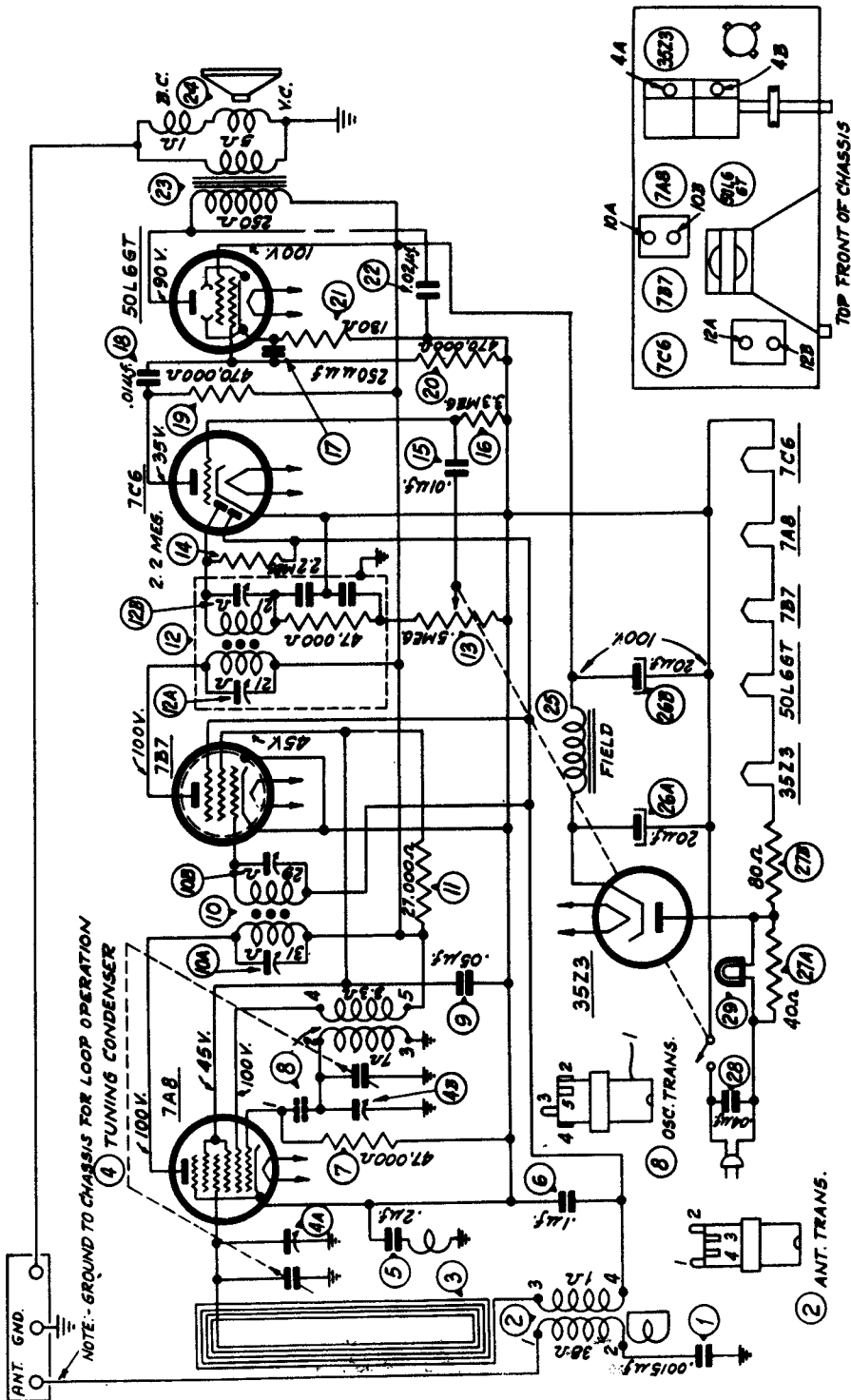


MANUAL OF 1942 MOST POPULAR SERVICE DIAGRAMS



PHILCO

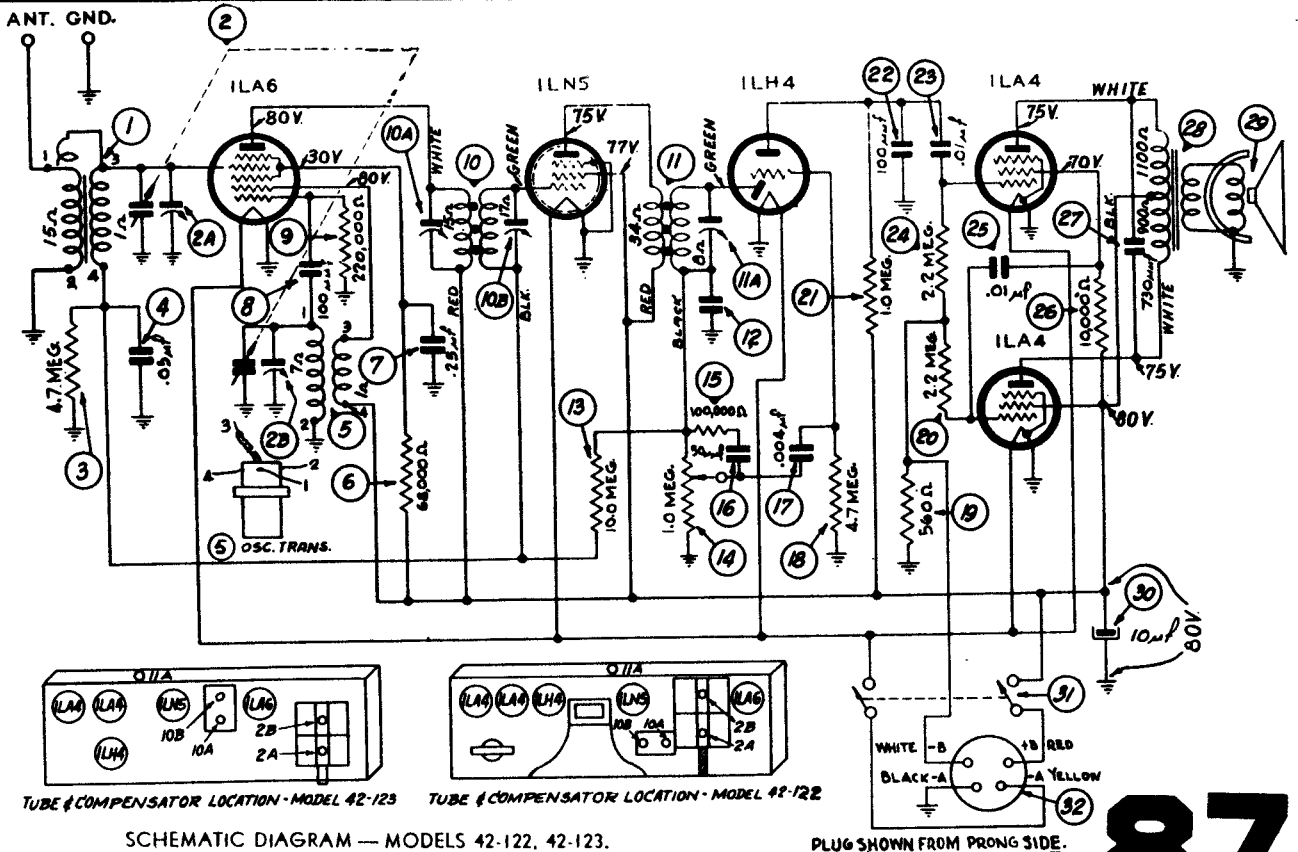
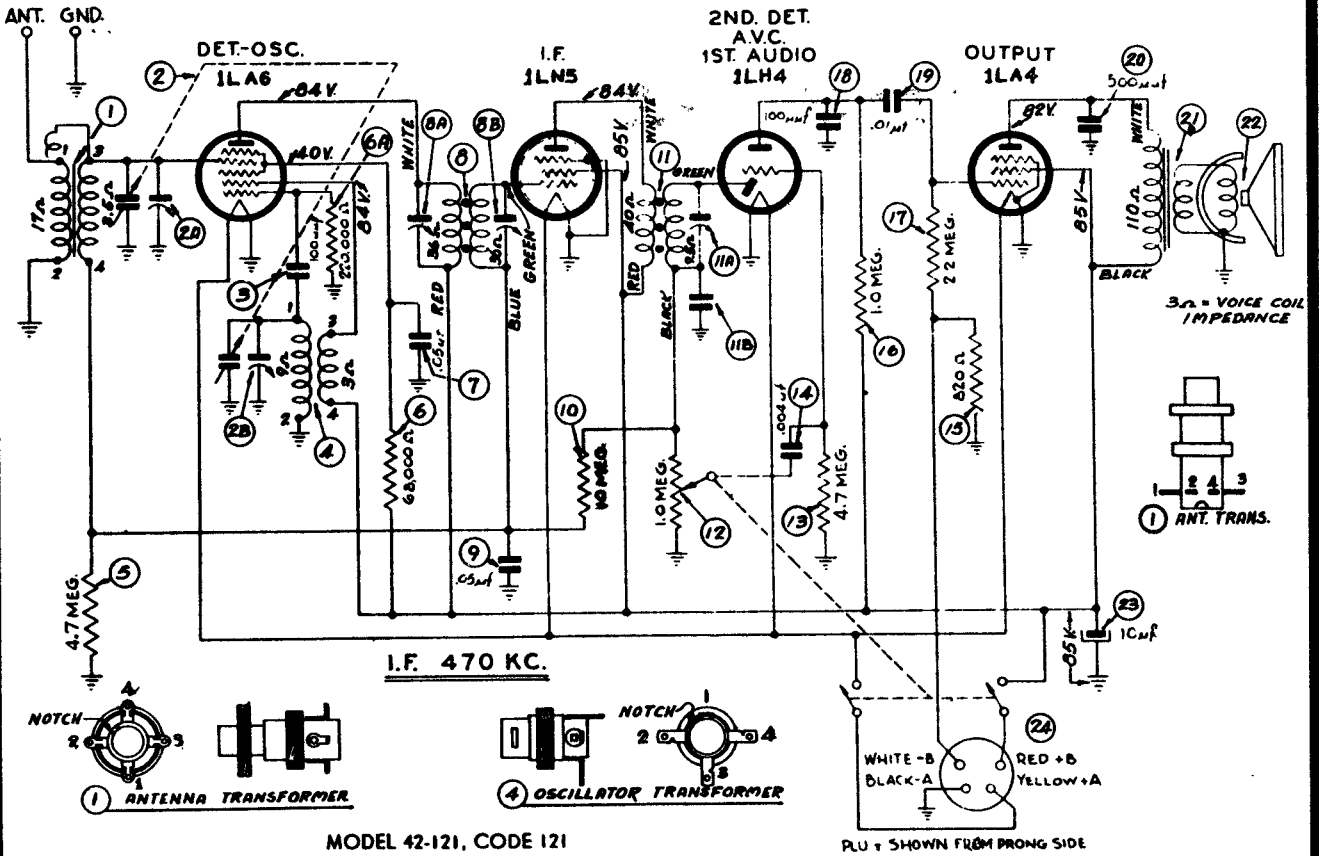
*Models PT-91, PT-92, PT-93,
PT-94, PT-95*



SCHEMATIC 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 Connecthls to Receiver | Dial Setting | Dial Setting | Control Setting |
| 1. | Ant. Section of tuning | 455 K.C. | 540 K.C. Tuning Cond. Closed | Vol. Max. 12A, 12B, 10A, 10B |
| 2. | Loop see above instructions | 1500 K.C. | 1500 K.C. | Vol. Max. 4B |
| 3. | Loop see above instructions | 1500 K.C. | 1500 K.C. | Vol. Max. 4A |

MANUAL OF 1942 MOST POPULAR SERVICE DIAGRAMS

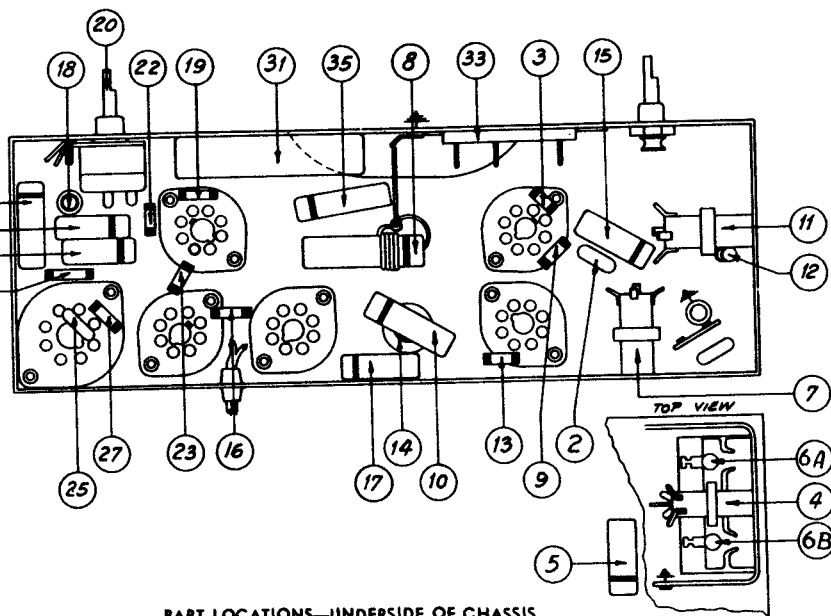
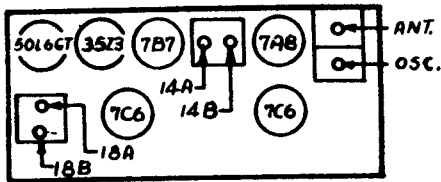
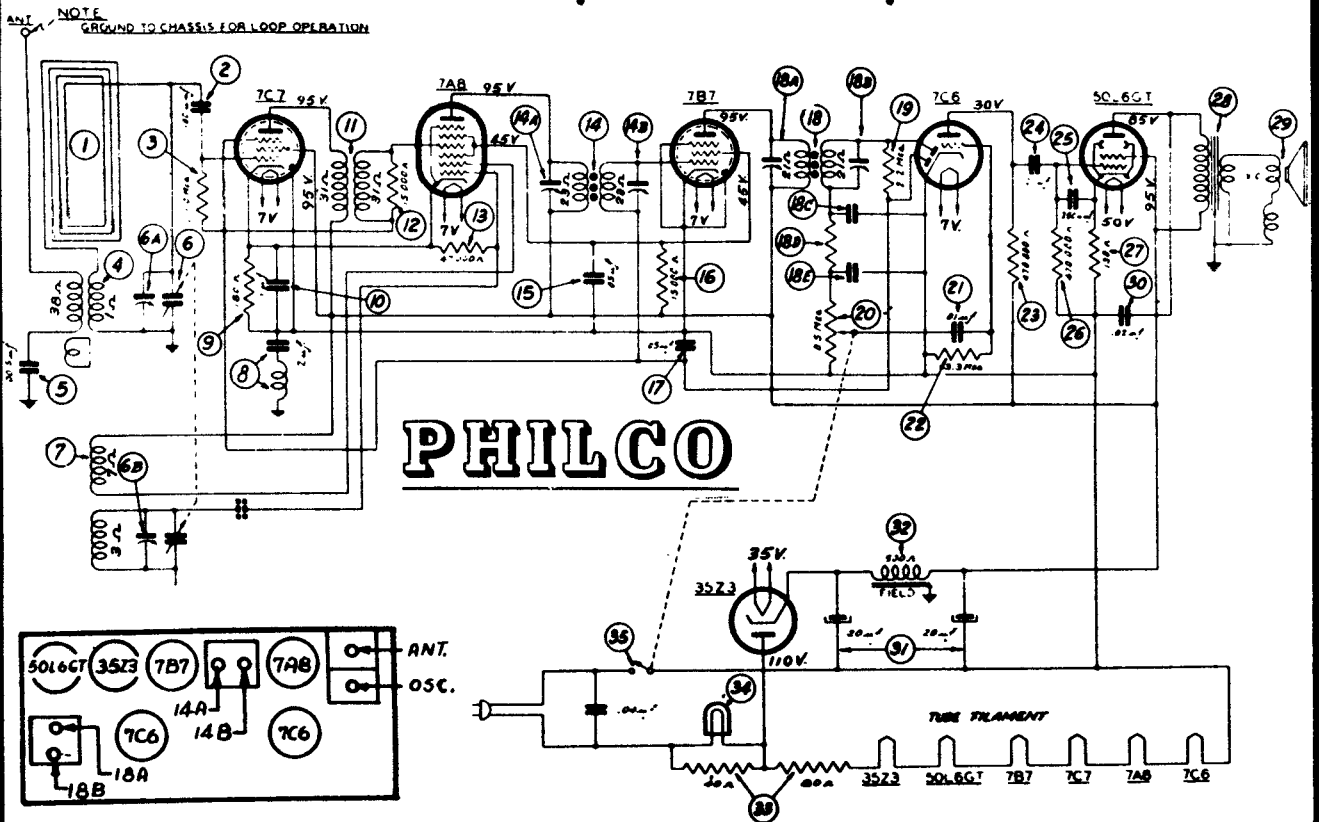


SCHMATIC DIAGRAM — MODELS 42-122, 42-123.

COMPILED BY M. N. BEITMAN, SUPREME PUBLICATIONS

MANUAL OF 1942 MOST POPULAR SERVICE DIAGRAMS

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

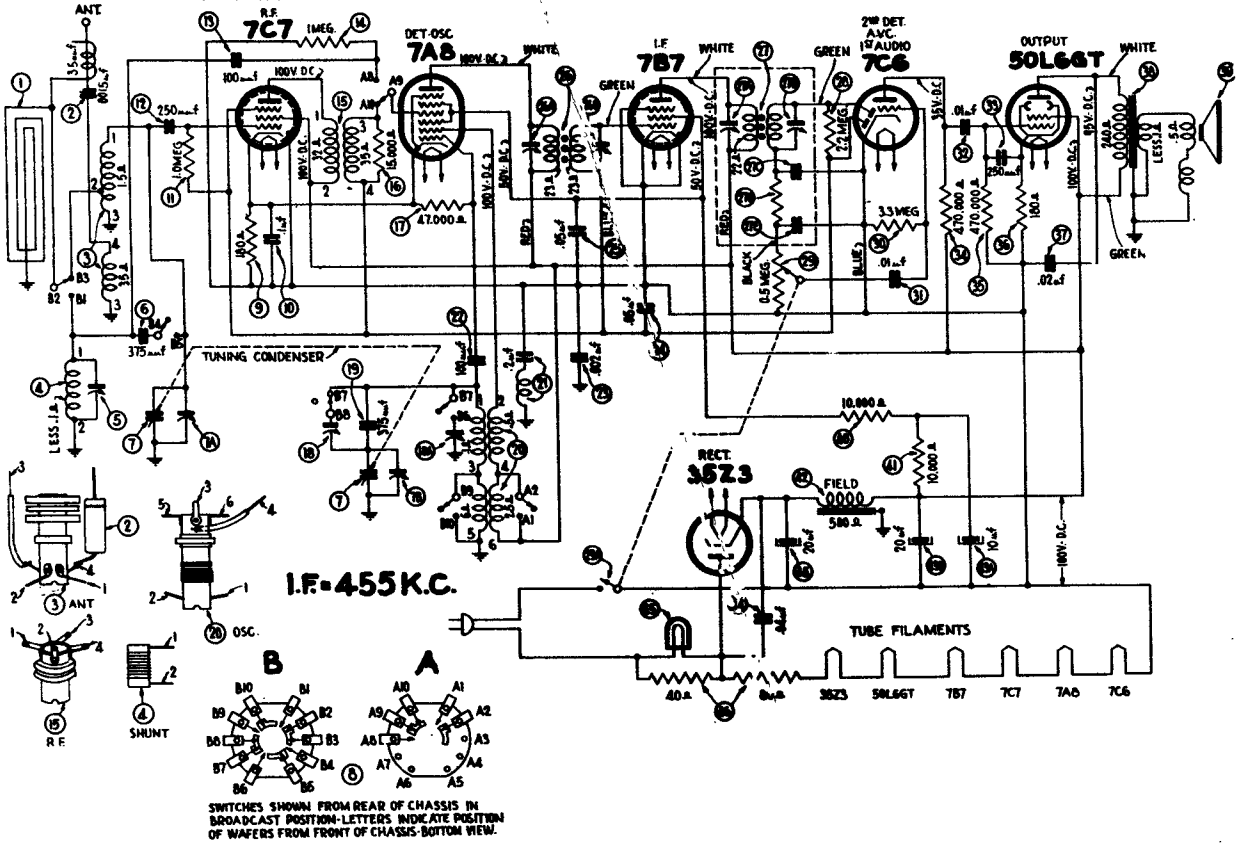


PART LOCATIONS—UNDERSIDE OF CHASSIS

| SCHE. No. | DESCRIPTION | PART No. |
|---------------------|----------------------------------------|-----------|
| 1 | Loop Aerial (42-321T) | 74-1196 |
| 2 | Loop Aerial (PT-10) Part of Cabinet. | 40-110157 |
| 3 | Resistor (1.0 megohms) | 33-510154 |
| 4 | Aerial transformer | 32-3394 |
| 5 | Condenser (.0015 mfd., 400 volts) | 30-4621 |
| 6 | Tuning Condenser | 31-2527 |
| | Pointer | 54-2076 |
| | Spring (Drive Cord) | 28-8964 |
| | 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 | 74-1198 |
| 9 | Resistor (180 ohms) | 33-118336 |
| 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 (.05 mfd., 200 volts) | 30-4519 |
| 18 | 2nd I. F. Transformer | 32-3604 |
| 19 | Resistor (2.2 megohms) | 33-522339 |
| 20 | Volume Control | 33-5449 |
| 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.) | 40-125157 |
| 26 | Resistor (470,000 ohms) | 33-447339 |
| 27 | Resistor (130 ohms) | 33-113336 |
| 28 | Output Trans. (for Speaker 34-1533-9) | 32-8144 |
| 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) | 10568A |
| | Cabinet (42-321T) | 10568B |
| | Cabinet (PT-10) | 74-1195 |
| | Cardboard Back (PT-10) | 27-9817 |

PHILCO MODEL 42-322, CODE 121

NOTE: GROUND TO CHASSIS FOR LOOP OPERATION



I.F. = 455 K.C.

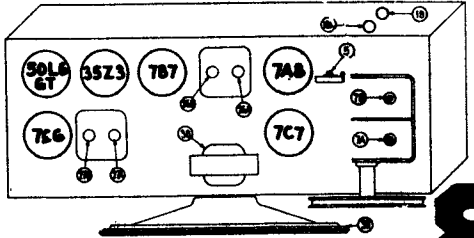
| Operations in Order | SIGNAL GENERATOR | | RECEIVER | | | SPECIAL INSTRUCTIONS |
|---------------------|-----------------------------------|--------------------|------------------------------|--------------------------------|------------------------------|--------------------------------------|
| | 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 Brcdst. | 27A, 27B 26A, 26B | |
| 2 | Loop See Above Instructions | 1500 K.C. | 1500 K.C. | Vol. Max. Band Switch Brcdst. | 7B, 7A | Note A |
| 3 | Loop See Above Instructions | 580 K.C. | 580 K.C. | Vol. Max. Band Switch Brcdst. | (18) | 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.

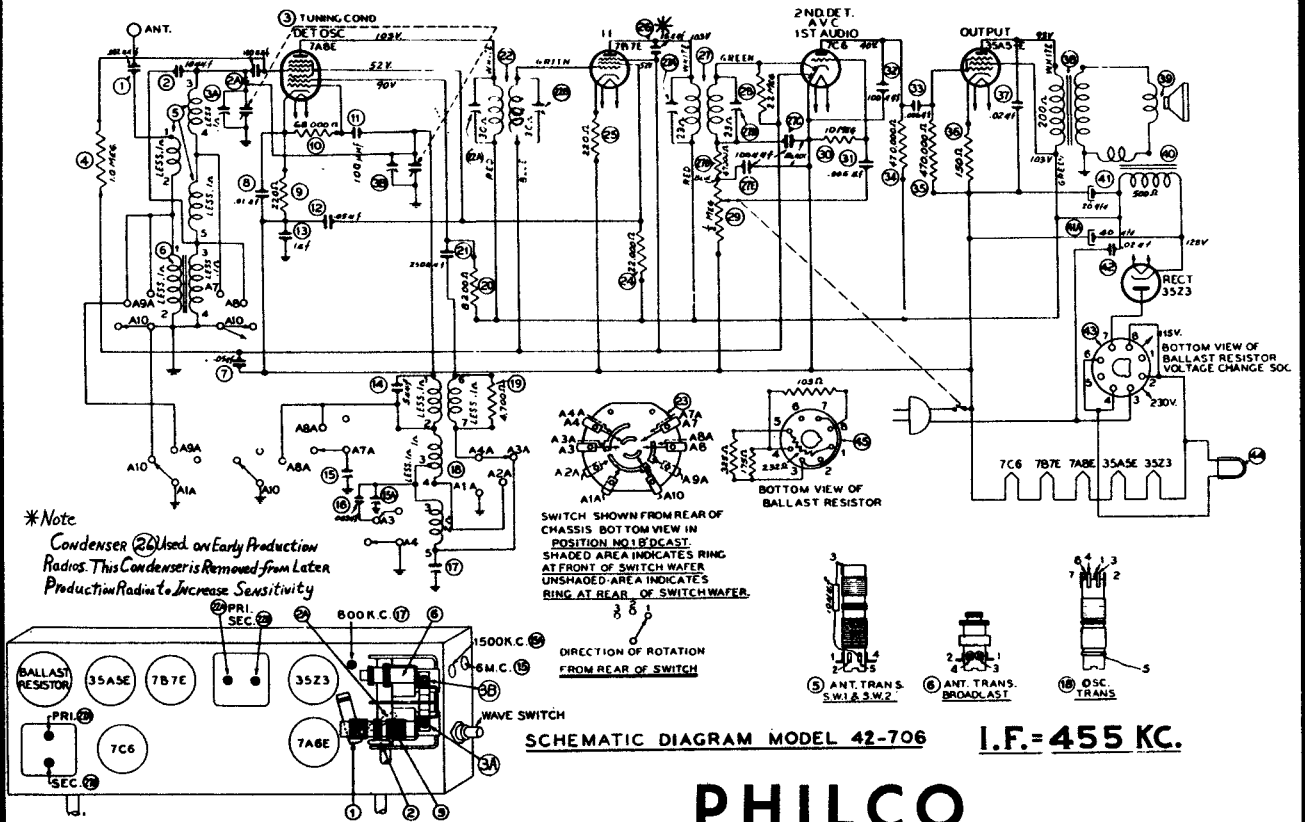
NOTE B—To accurately adjust the high frequency oscillator compensator to the fundamental instead of the image signal, turn the oscillator compensator (18A) to the maximum capacity position (clockwise). From this position slowly turn the compensator counter-clockwise until a second peak is obtained on 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 padder (5) must be adjusted to maximum by rolling the tuning condenser. If two signal peaks occur when turning the padder, adjust to maximum output on the first signal peak from the tight position (screw all the way down) of the padder.

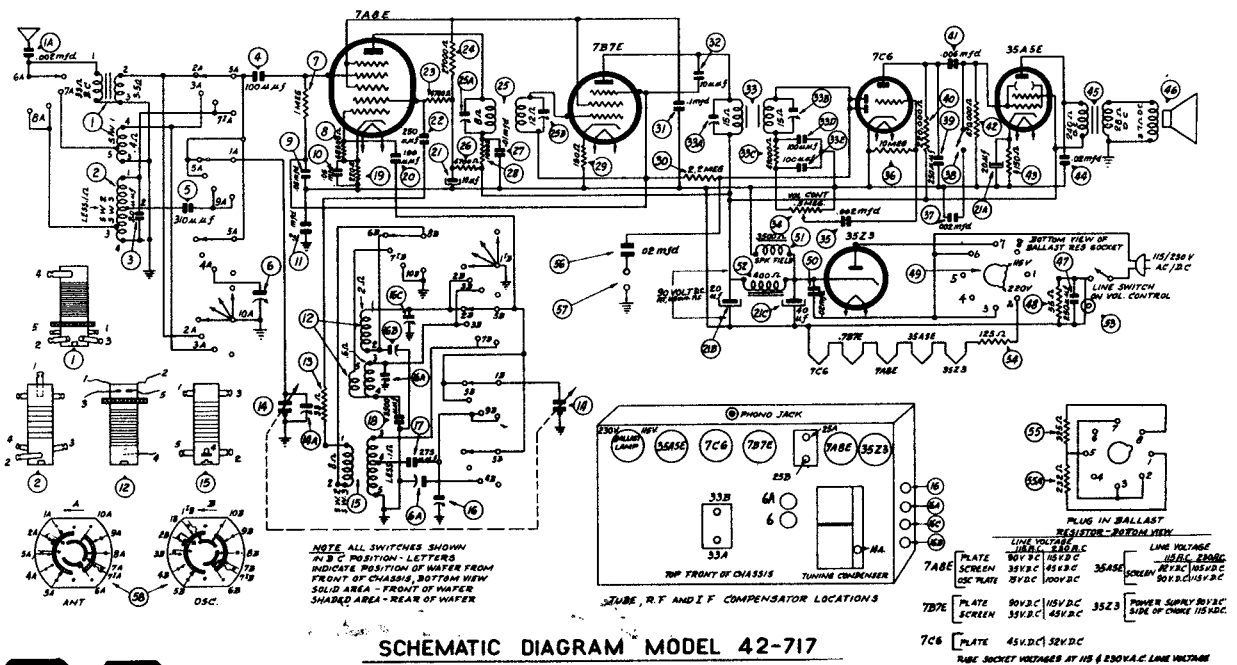


MANUAL OF 1942 MOST POPULAR SERVICE DIAGRAMS



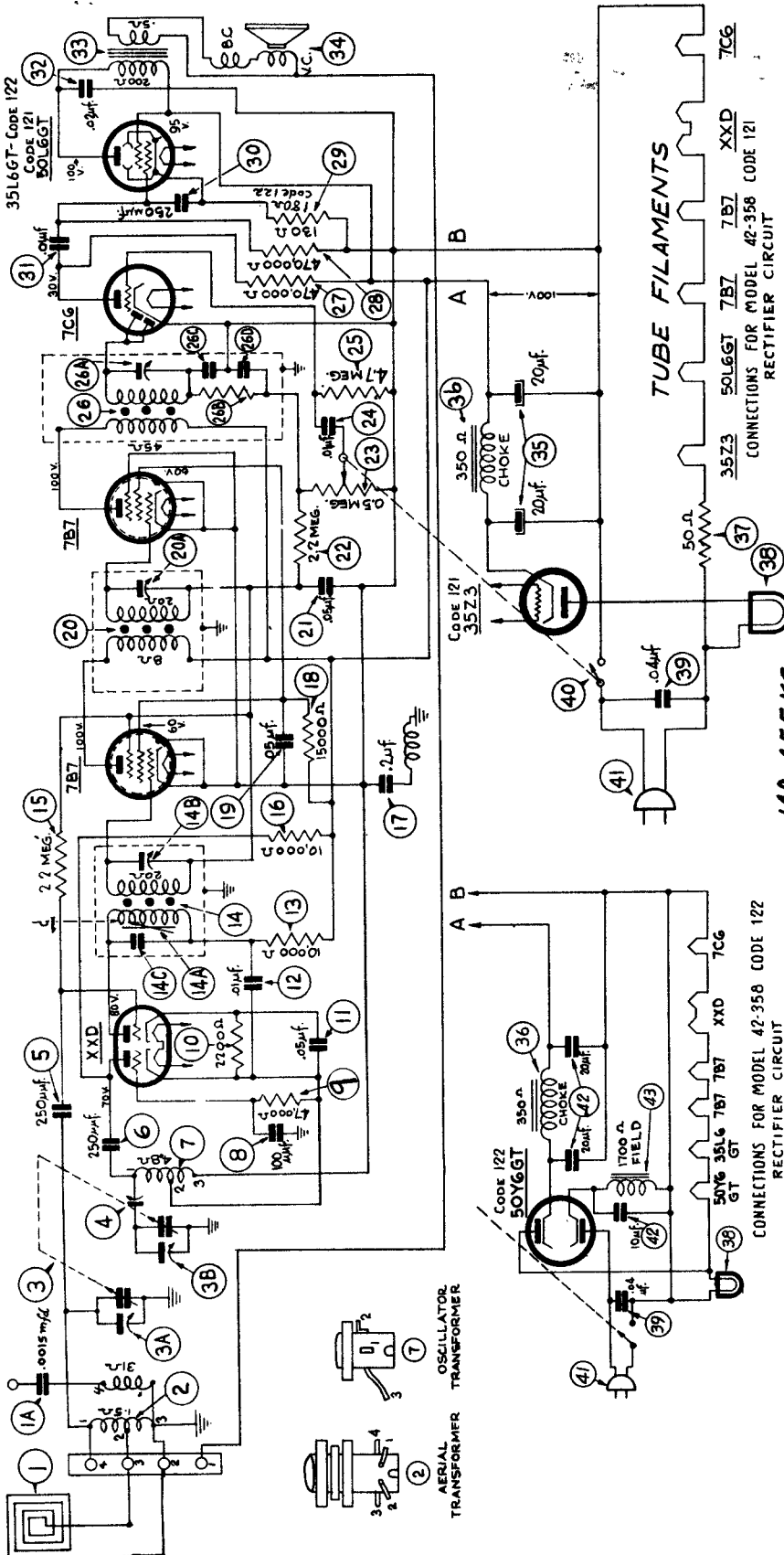
PHILCO

Philco Radio



90

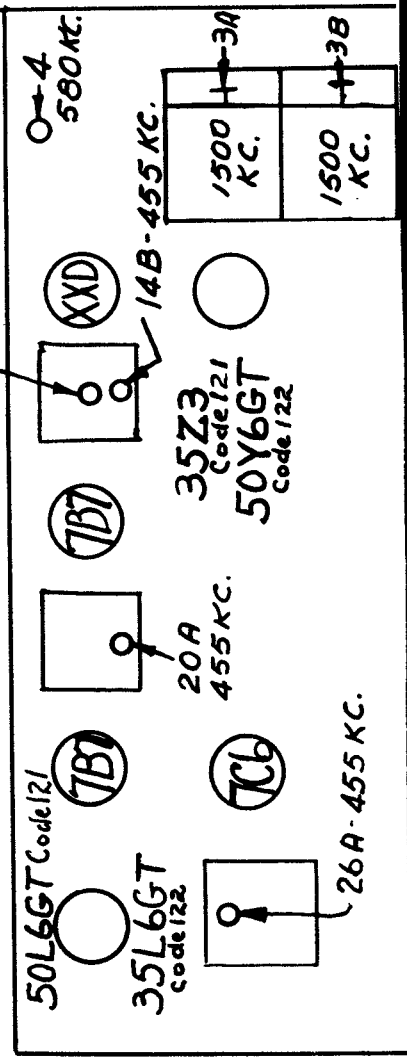
MANUAL OF 1942 MOST POPULAR SERVICE DIAGRAMS



DIAGRAM—Model 42,358, Codes 121-122

PHILCO

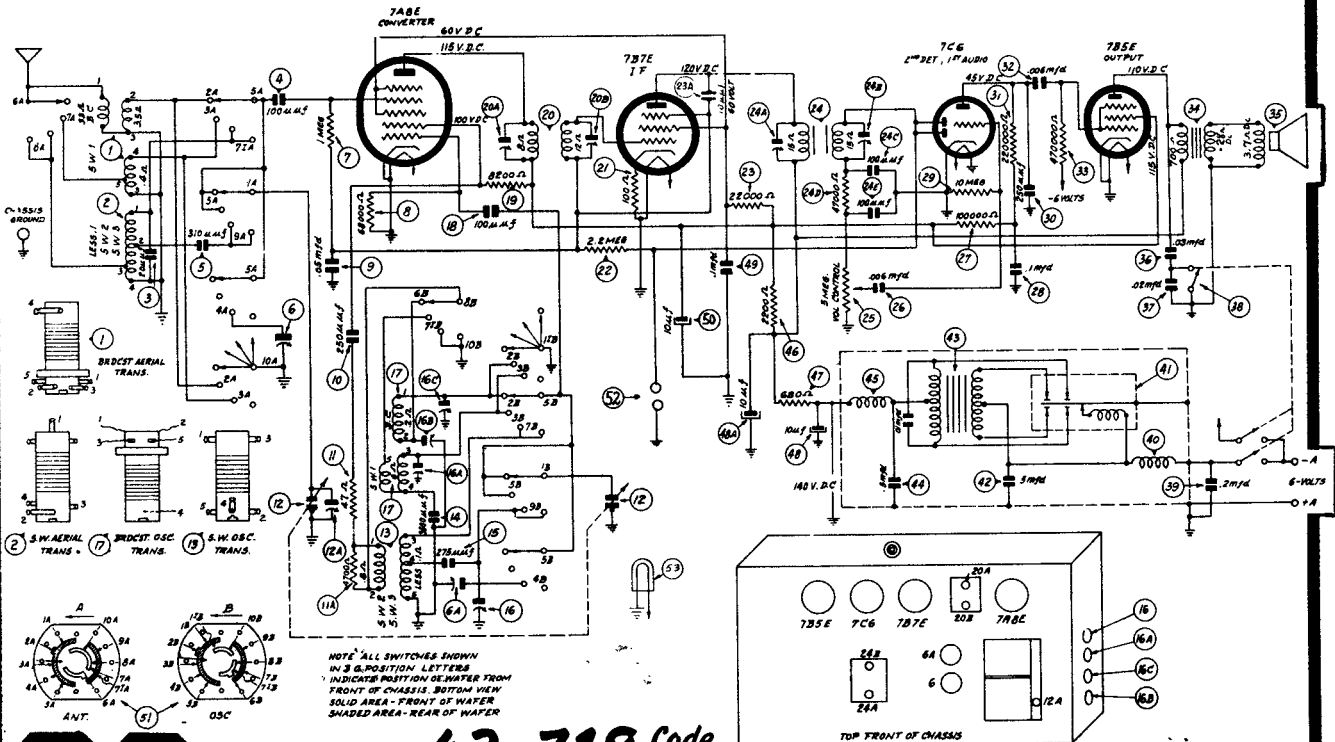
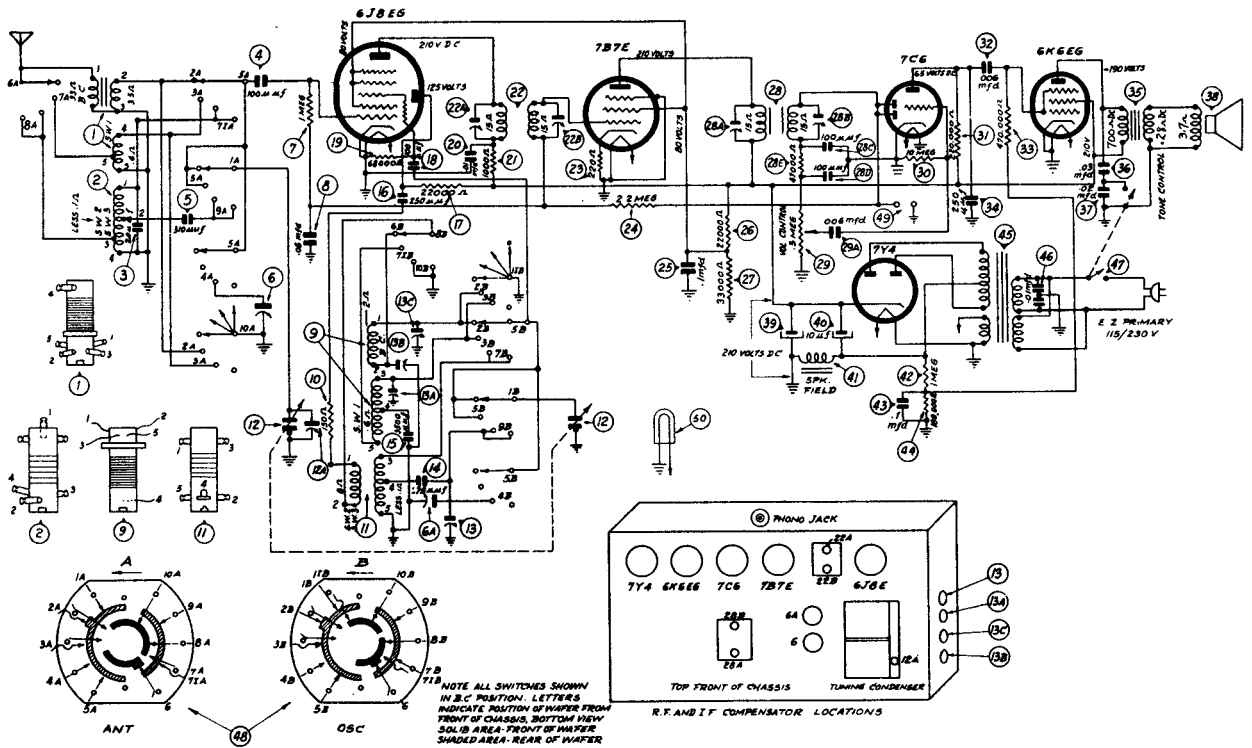
Intermediate Frequency: 455 KC.
 Tuning Bands: 540 to 1620 KC.
 Power Supply: 115 volts, A. C.-D. C.
 Power Consumption: 35 watts (Code 121); 50 watts (Code 122)
 Audio Output: 1 watt.



MANUAL OF 1942 MOST POPULAR SERVICE DIAGRAMS

PHILCO

Models 42-716

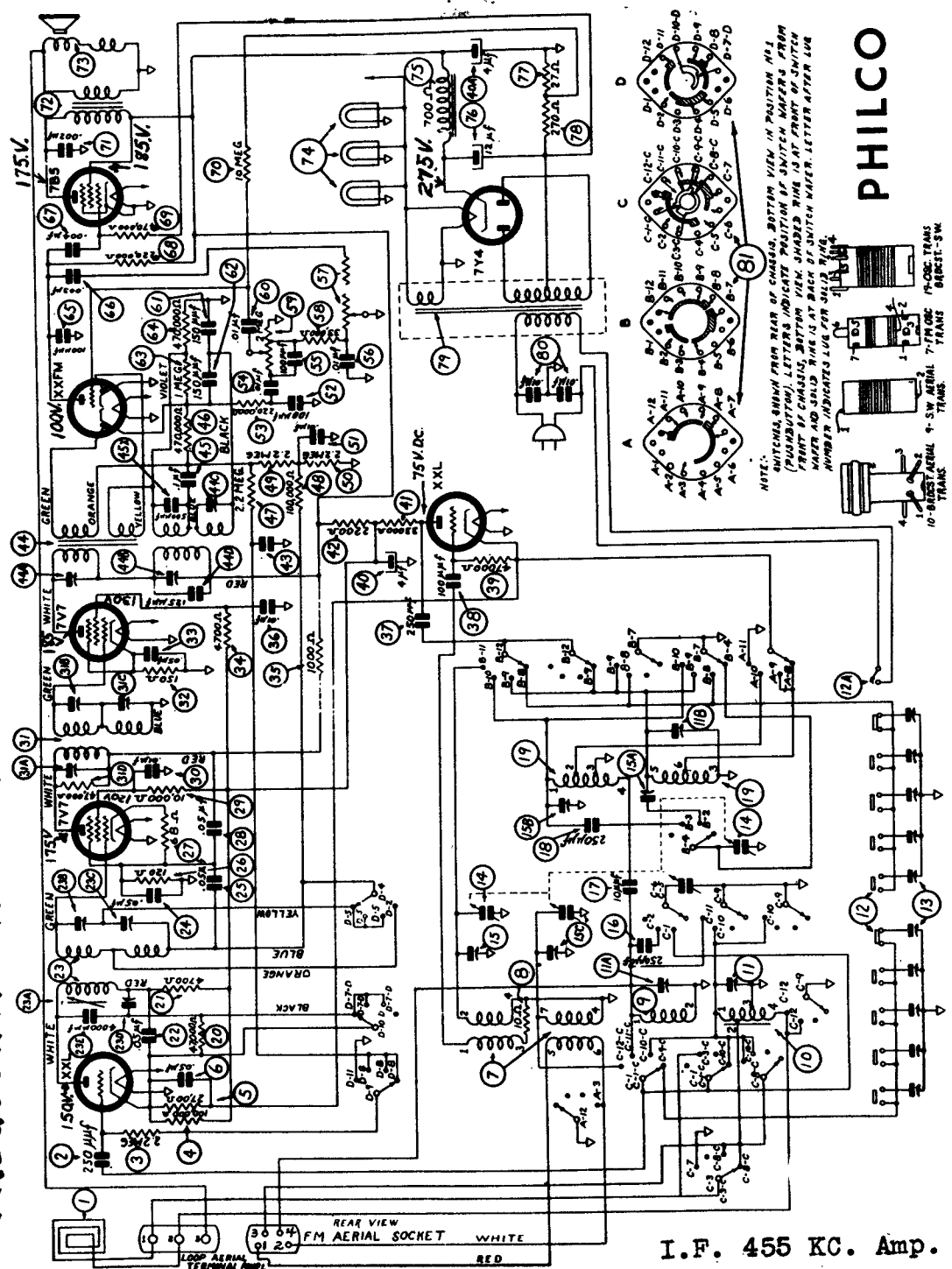


92

42-718 Code 121

COMPILED BY M. N. BEITMAN, SUPREME PUBLICATIONS

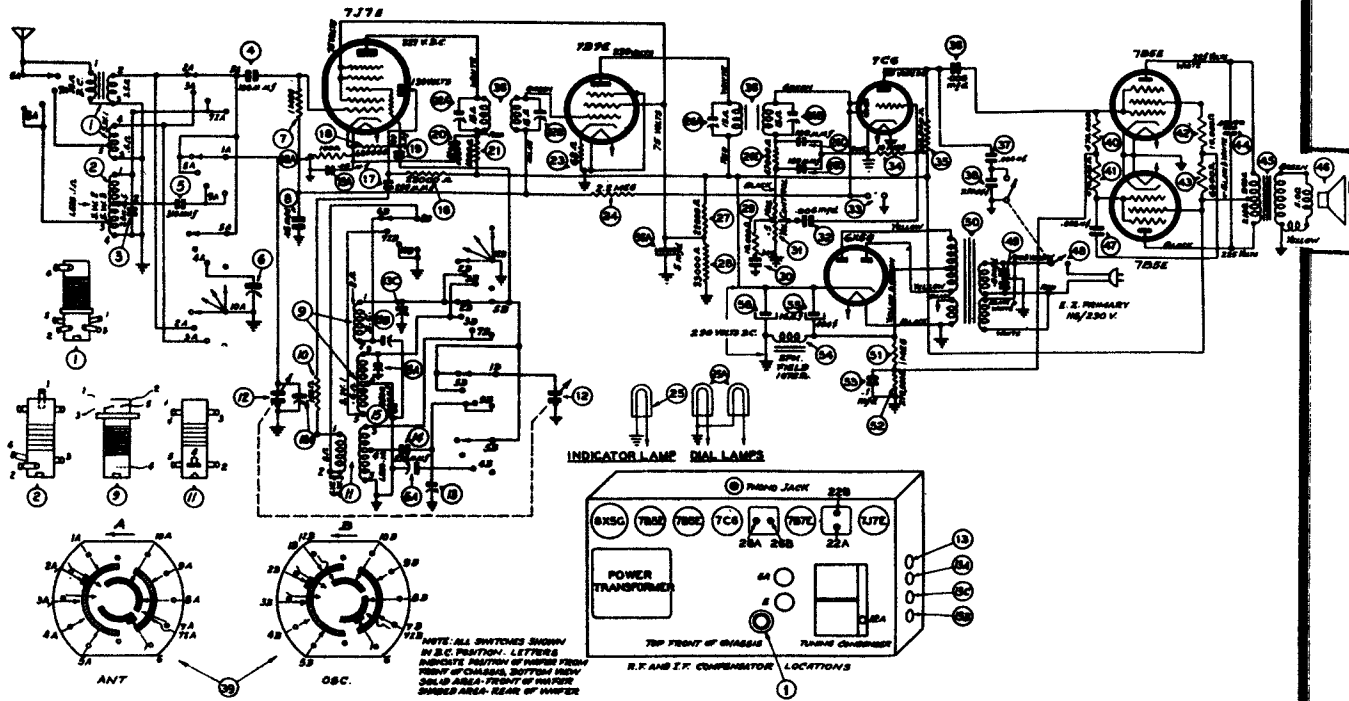
FREQUENCY MODULATION Model 42-350, Code 121



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



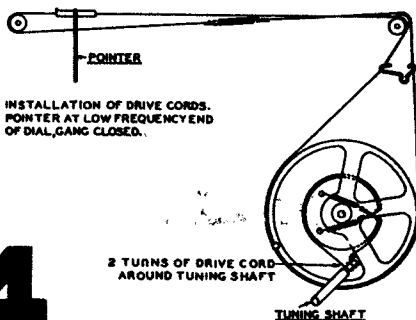
| Operations in Order | SIGNAL GENERATOR | | | RECEIVER | | | SPECIAL |
|------------------------|--------------------------------|---------------------------|-----------------|-----------------|----------------------------------|---------------------|--------------------------|
| | Output Connections 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 "Brdst" 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 "Brdst" | 13C | |
| 6 | Aerial | 200 mmfd. | 580 K.C. | 580 K.C. | Band Switch "Brdst" | 13B | Roll tuning condenser |
| 7 | Aerial | .200 mmf. | 1500 K.C. | 1500 K.C. | Band Switch "Brdst" | 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.



INSTALLATION OF DRIVE CORDS.
POINTER AT LOW FREQUENCY END
OF DIAL GANG CLOSED.

2 TURNS OF DRIVE CORD
AROUND TUNING SHAFT

TUNING SHAFT

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.

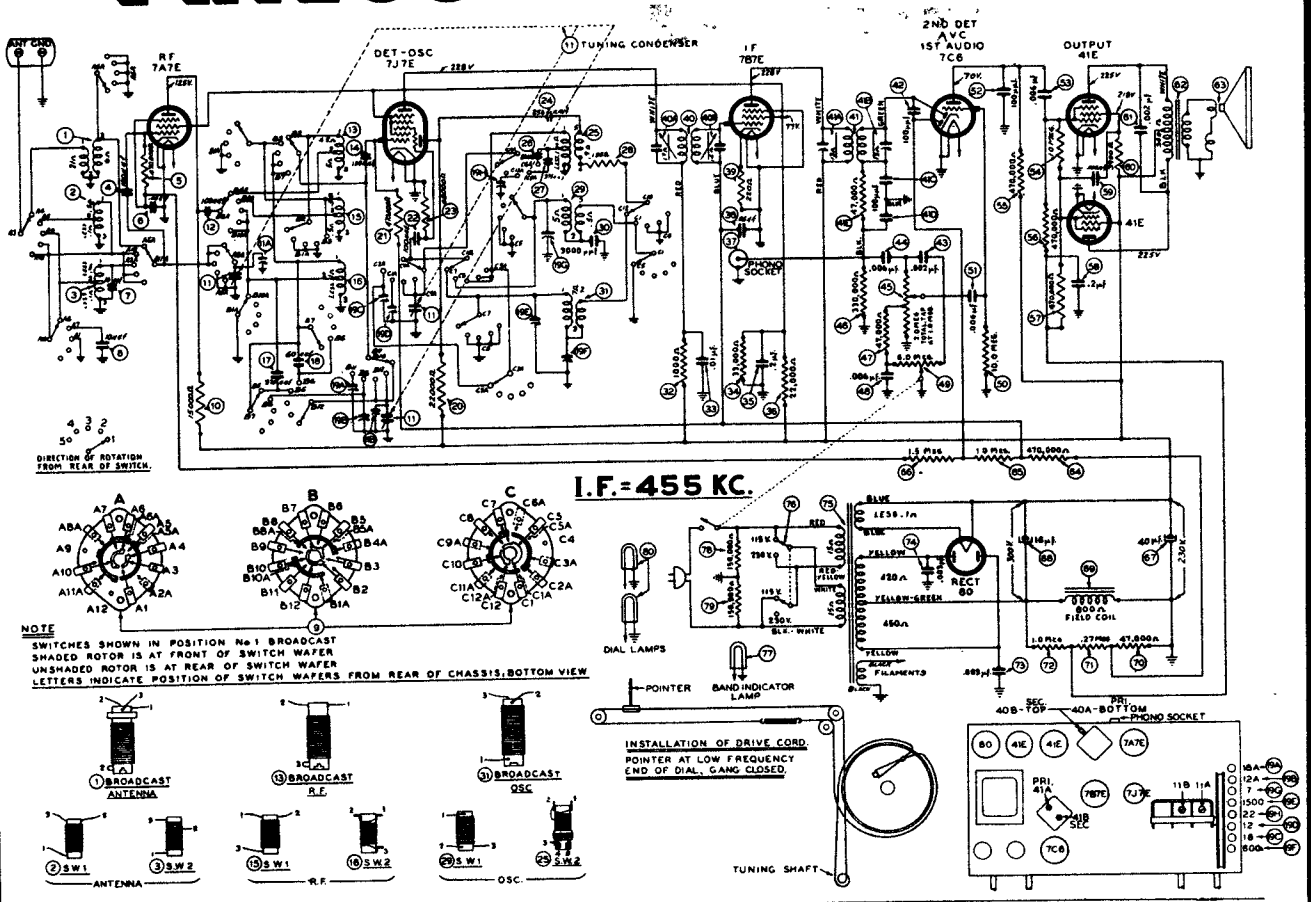
ALIGNING TOOLS: Fibre handle screw driver, Philco Part No. 45-2610. Service Alanina Scale. Part No. 45-2909.

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

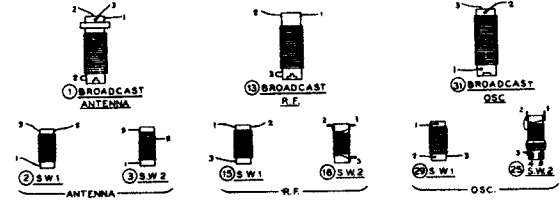
PHILCO

MODEL 42-730, CODE 121



I.F. = 455 KC.

NOTE
SWITCHES SHOWN IN POSITION No. 1 BROADCAST
SHADED ROTOR IS AT FRONT OF SWITCH WAFER
UNSHADED ROTOR IS AT REAR OF SWITCH WAFER
LETTERS INDICATE POSITION OF SWITCH WAFERS FROM REAR OF CHASSIS, BOTTOM VIEW



| 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" Voimax | 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.

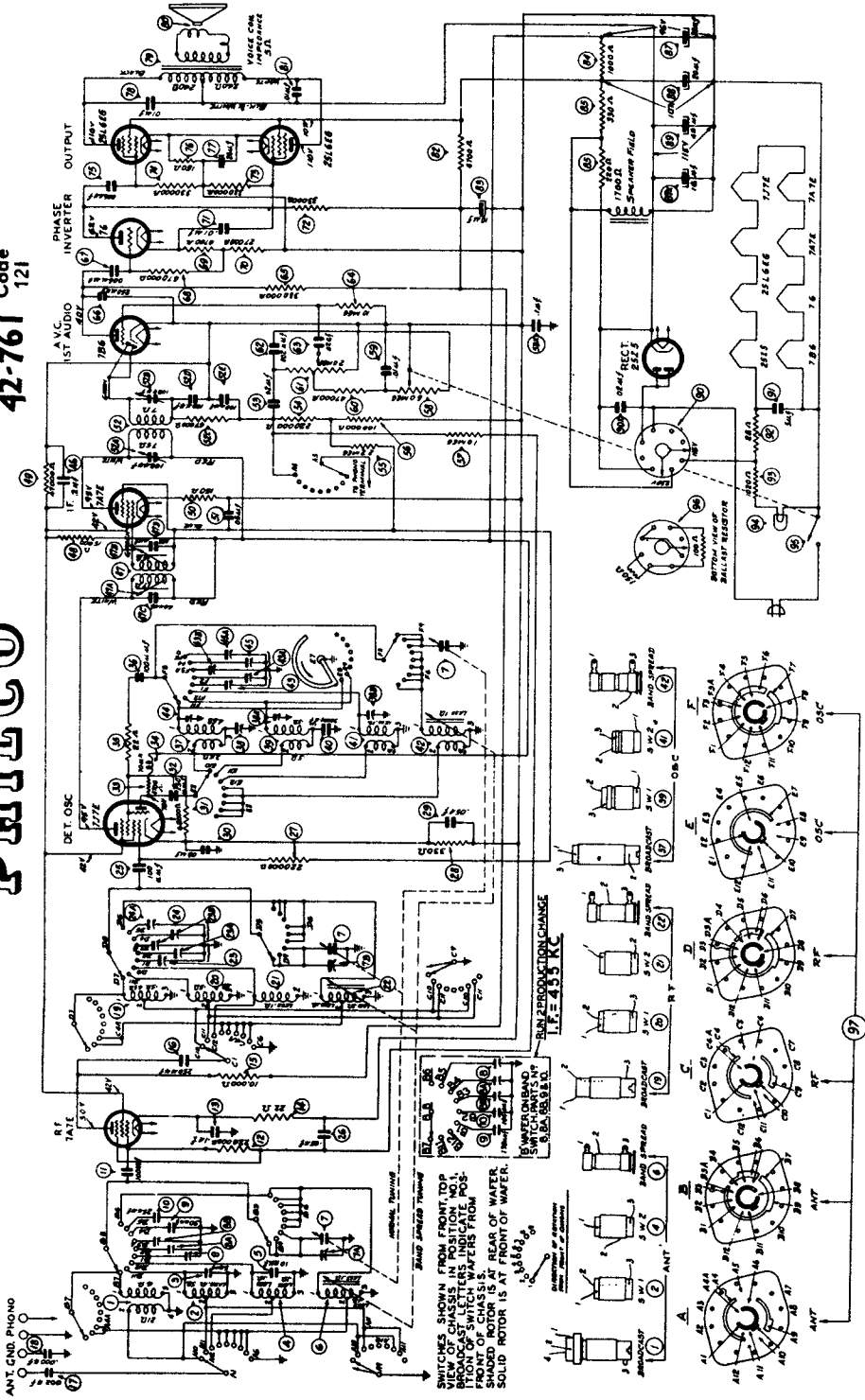
Tuning Band Frequencies:

| | |
|---------------|-----------------|
| 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

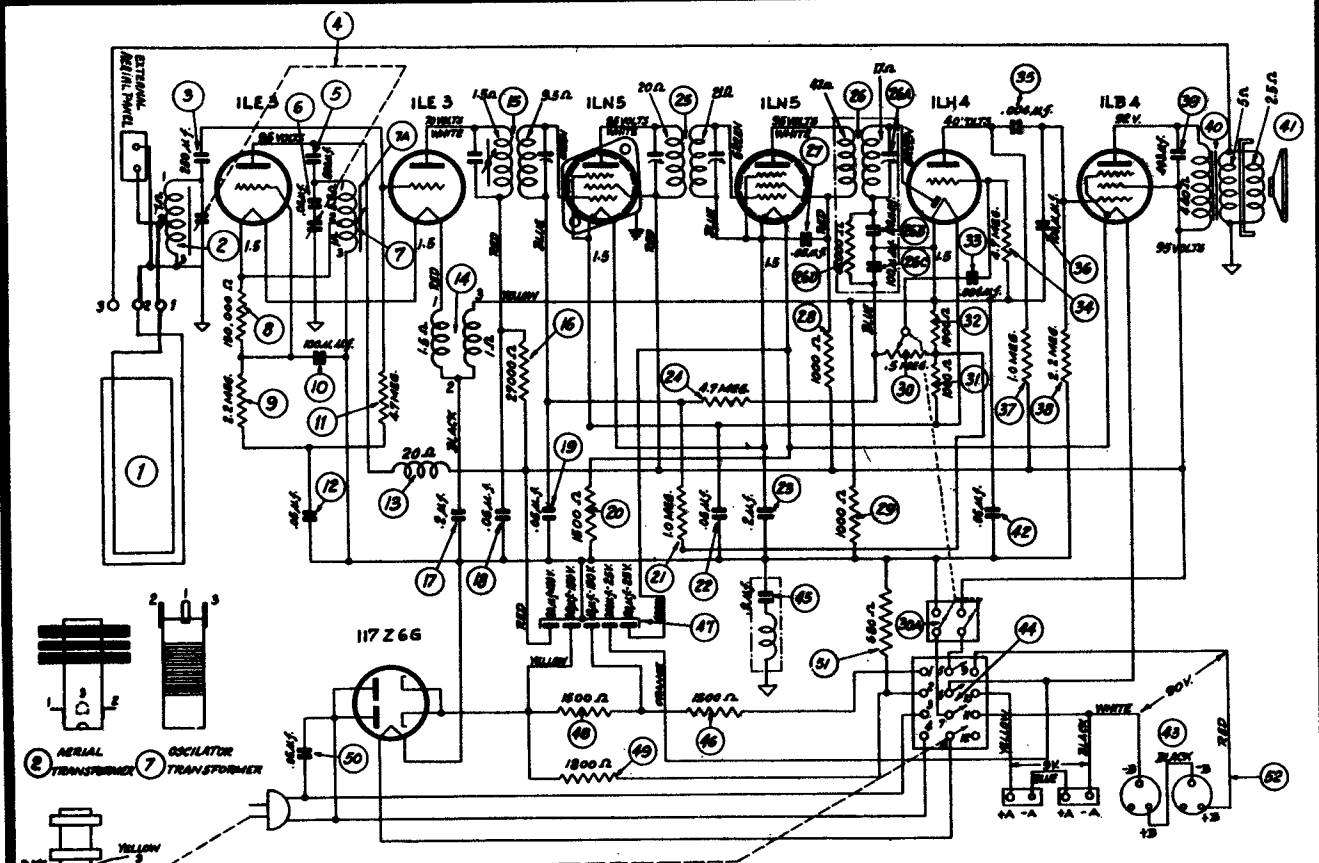
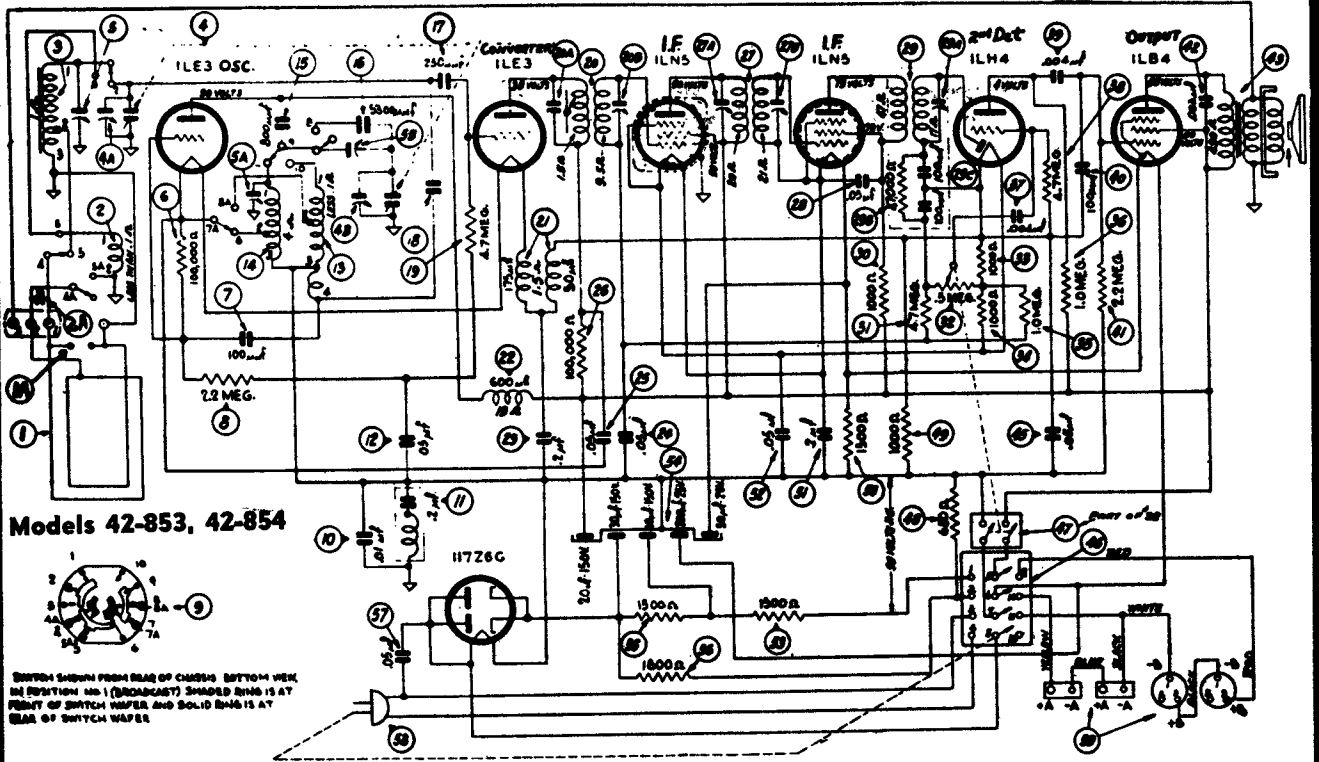
MODEL
42-761 Code 121

PHILCO

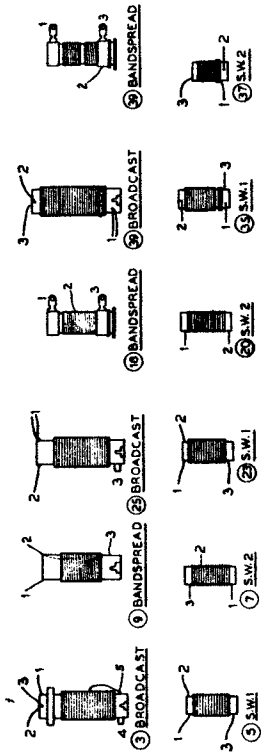
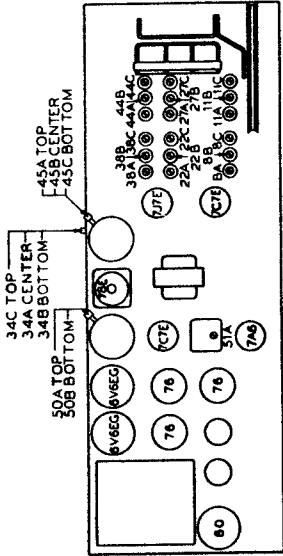


SHARED SECTION IS REAR OF WAFER
The voltages indicated at the tube elements above were measured with a 1000 ohms per volt voltmeter. Philco Model 051. line voltage 117 volts, A. C. band switch (broadcast). No station being received.

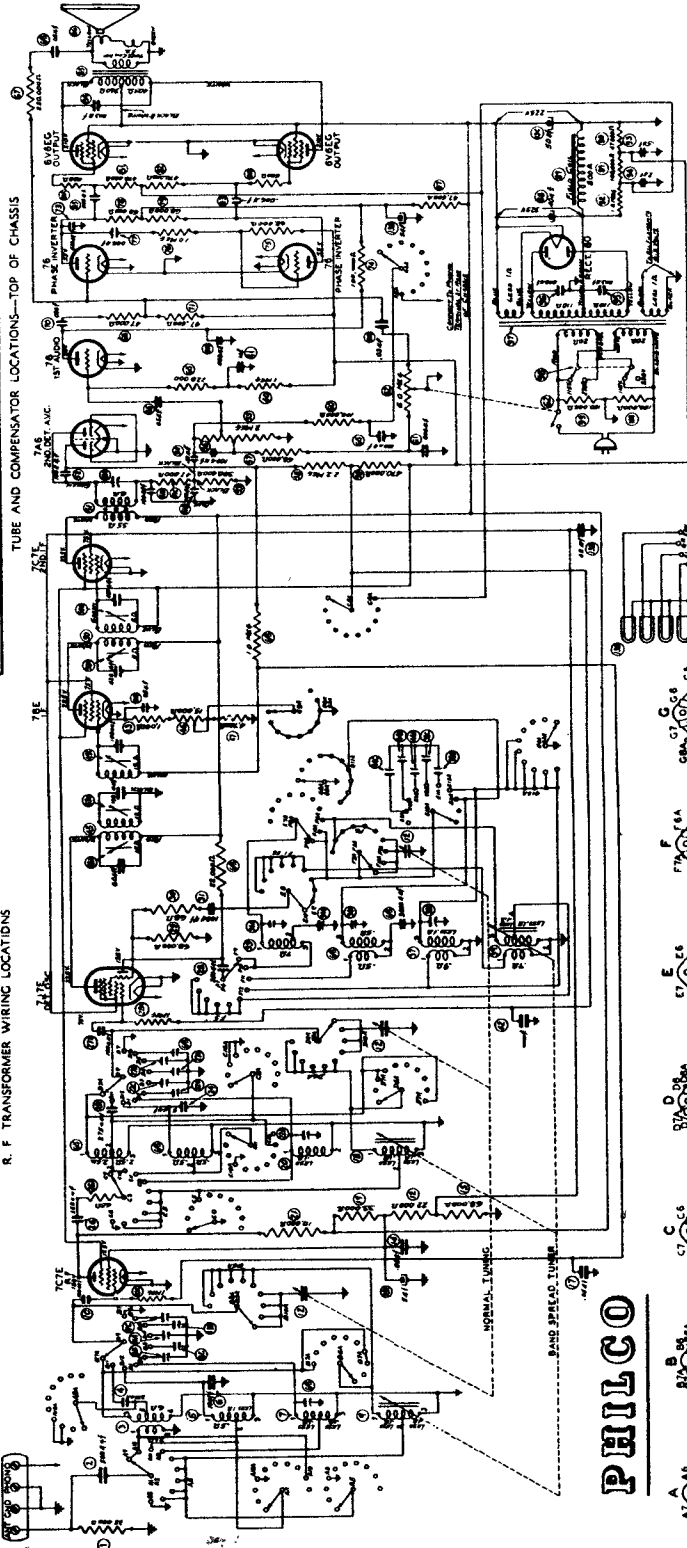
MANUAL OF 1942 MOST POPULAR SERVICE DIAGRAMS



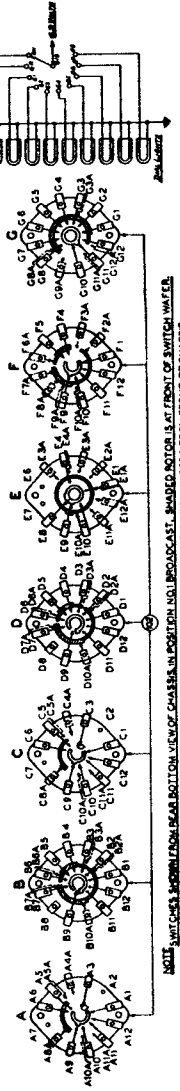
MANUAL OF 1942 MOST POPULAR SERVICE DIAGRAMS



R. F. TRANSFORMER WIRING LOCATIONS



PHILCO

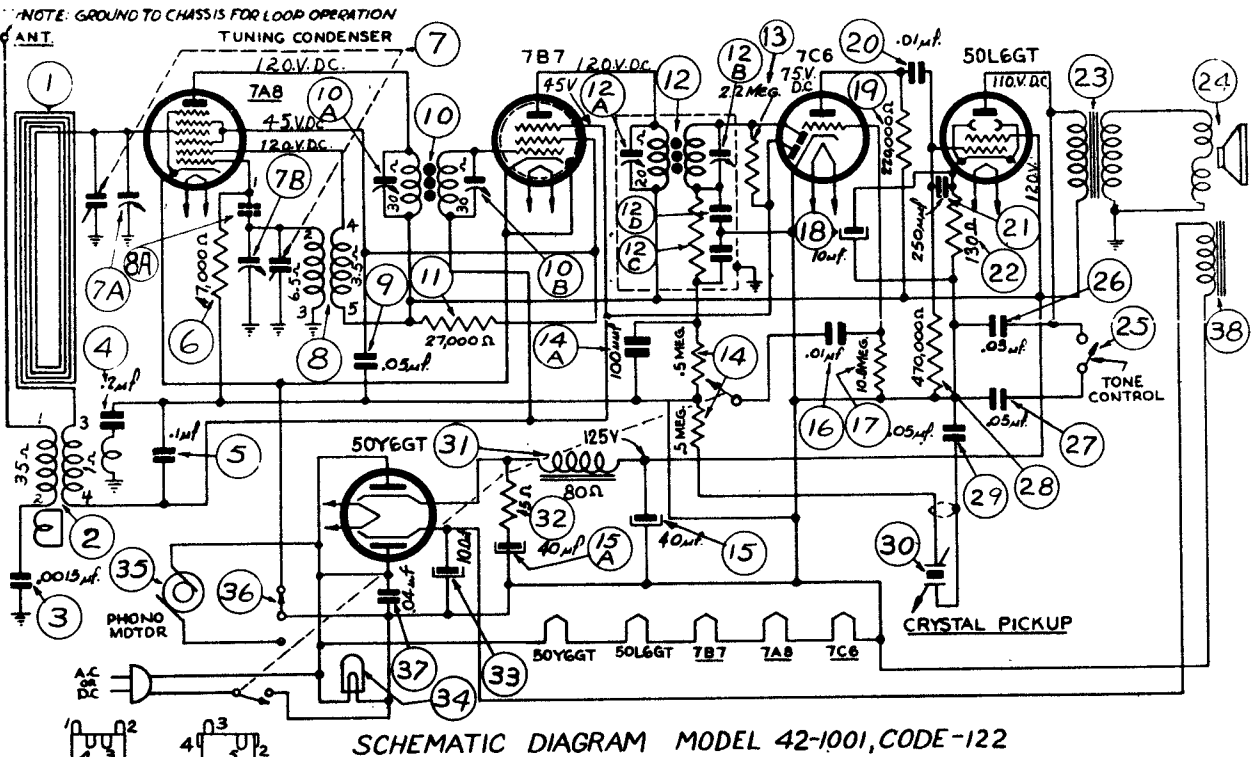
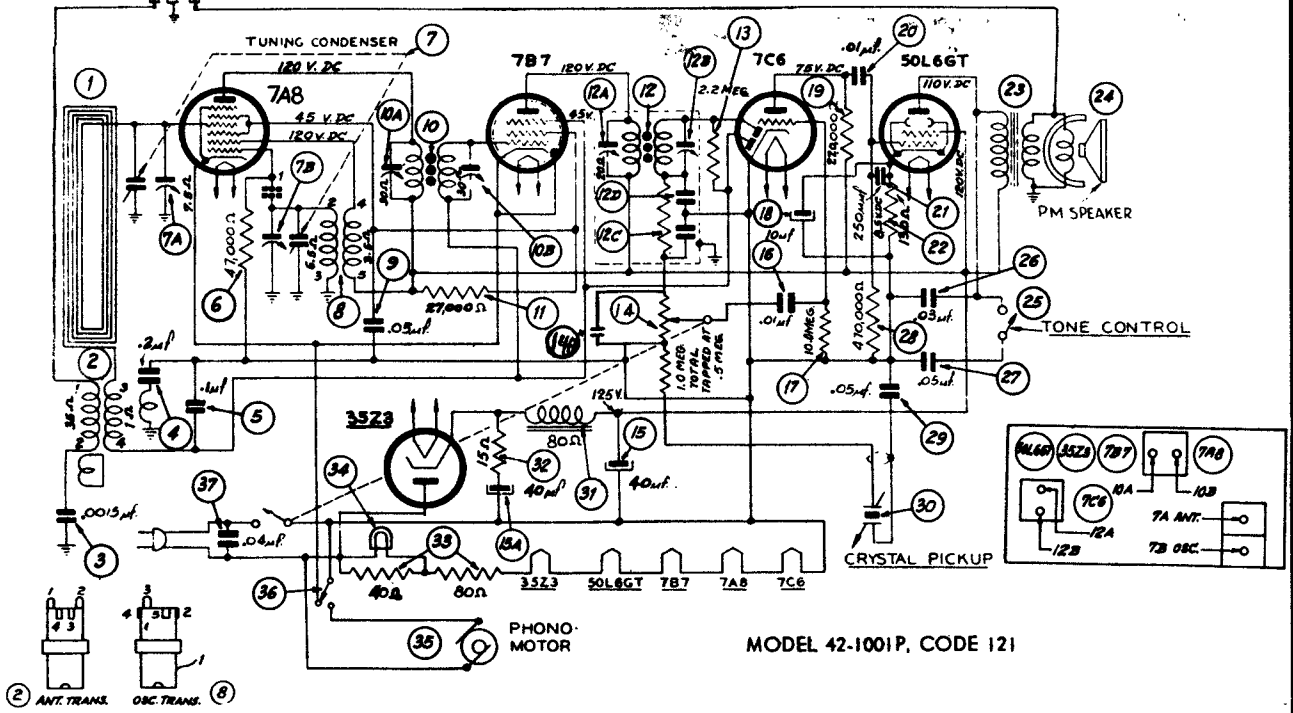


NOTE: SWITCHES SHOWN FROM REAR BOTTOM VIEW OF CHASSIS IN POSITION FOR BROADCAST. SHARDED ROTOR IS AT FRONT OF SWITCH WAFER. UNSHARDED ROTOR IS AT REAR OF SWITCH WAFER. LETTER INDICATES POSITION OF SWITCH WAFERS FROM FRONT OF CHASSIS.

I.F. = 455 KC.
MODEL 42-788, CODE 121-122

MANUAL OF 1942 MOST POPULAR SERVICE DIAGRAMS

EXTERNAL AERIAL NOTE: GROUND TO CHASSIS FOR LOOP OPERATION OUTPUT TEST TERMINAL



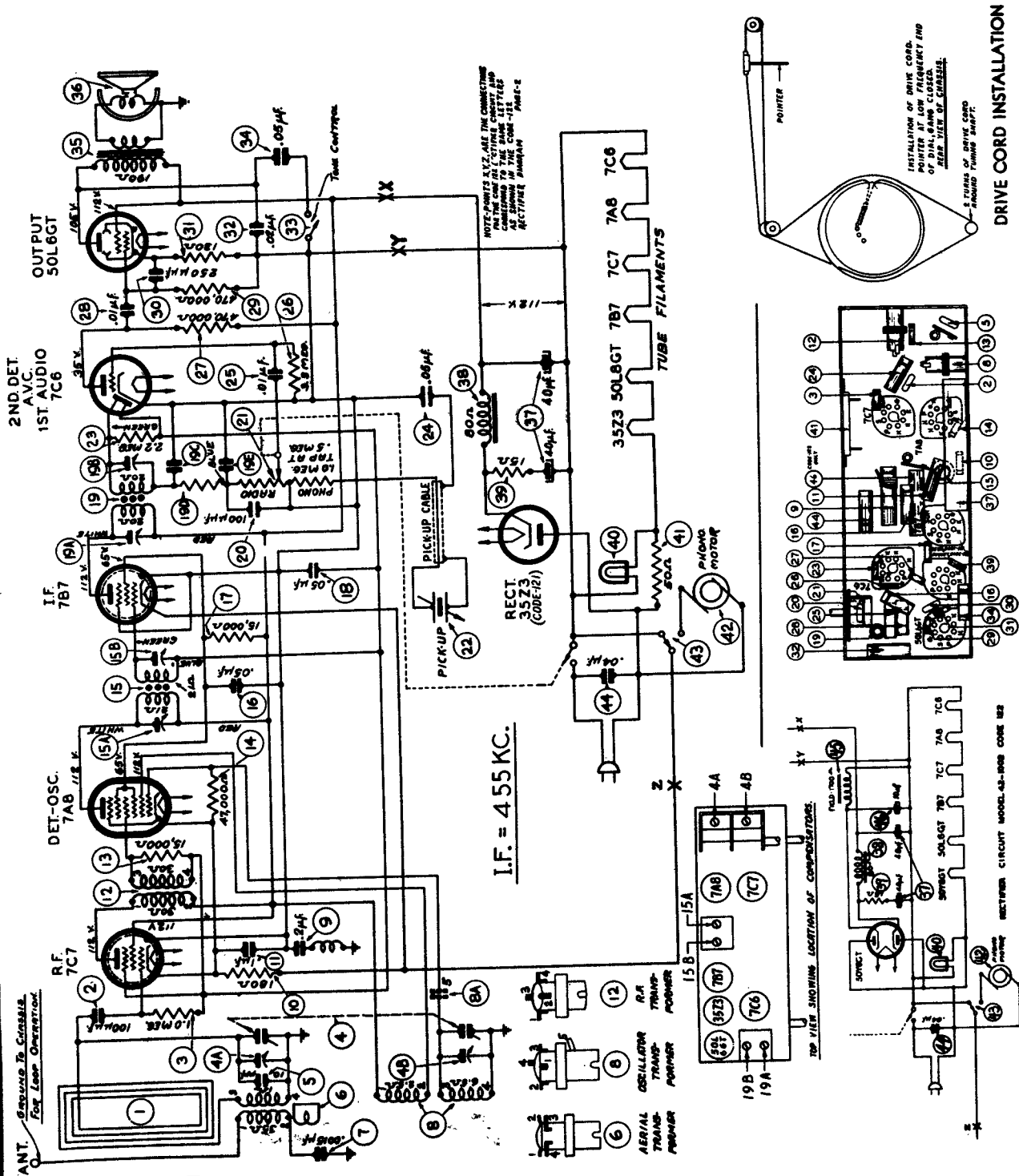
PHILCO

2 ANT. TRANS. 8 OSC. TRANS.

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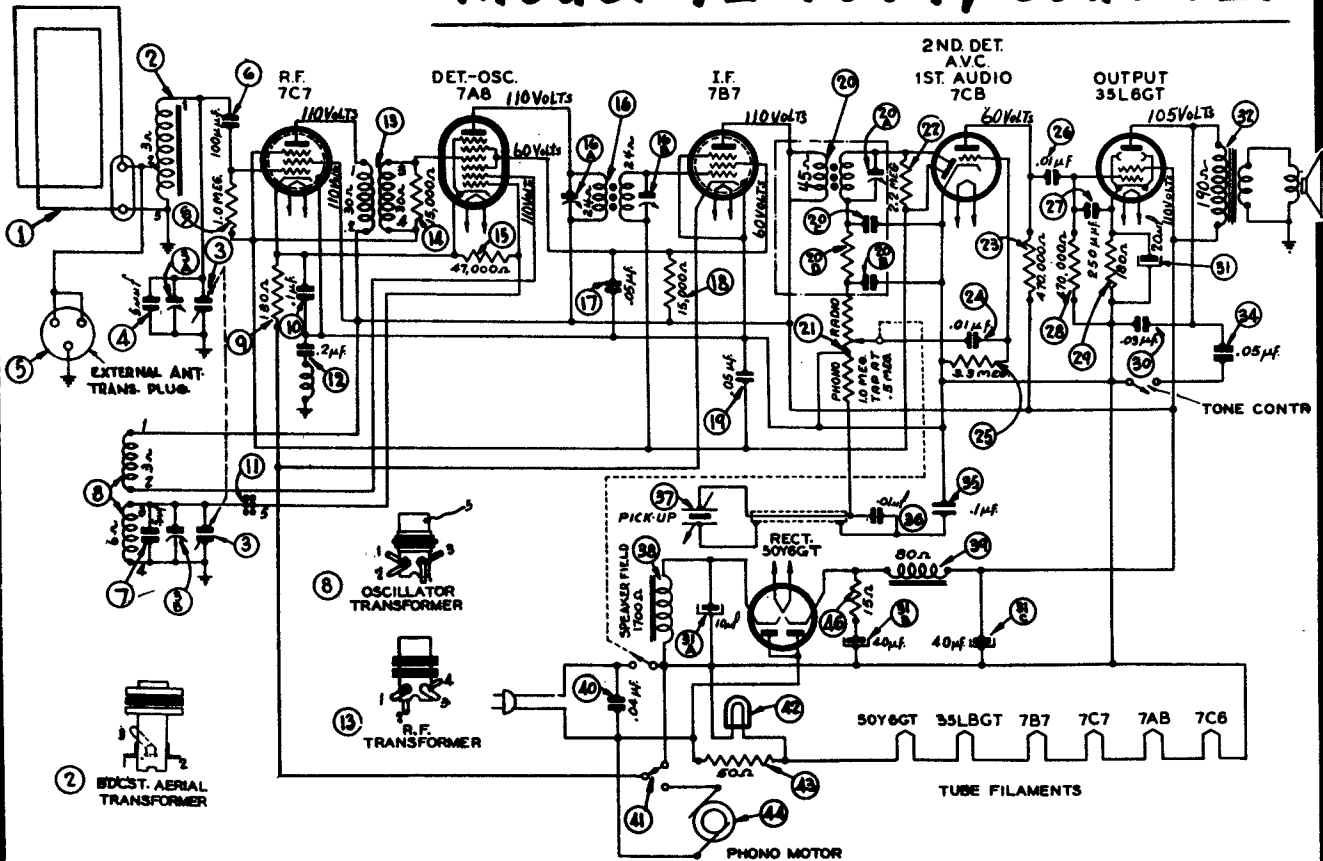
99

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



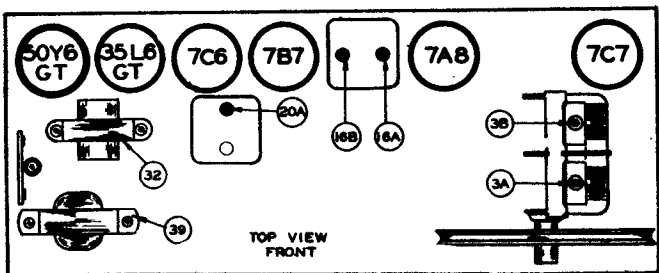
PHILCO

Radio-Phonograph Model 42-1004, Code 121

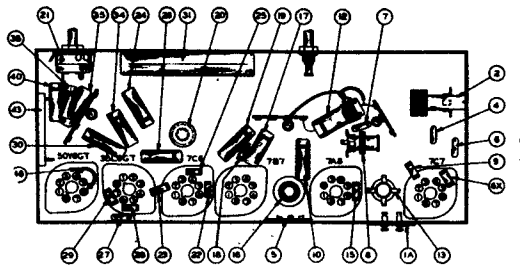


| Operations in Order | SIGNAL GENERATOR | | RECEIVER | | | SPECIAL INSTRUCTIONS |
|---------------------|--------------------------------|--------------|------------------------------|-----------------|------------------------------|----------------------|
| | Output Connections to Receiver | Dial Setting | 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.

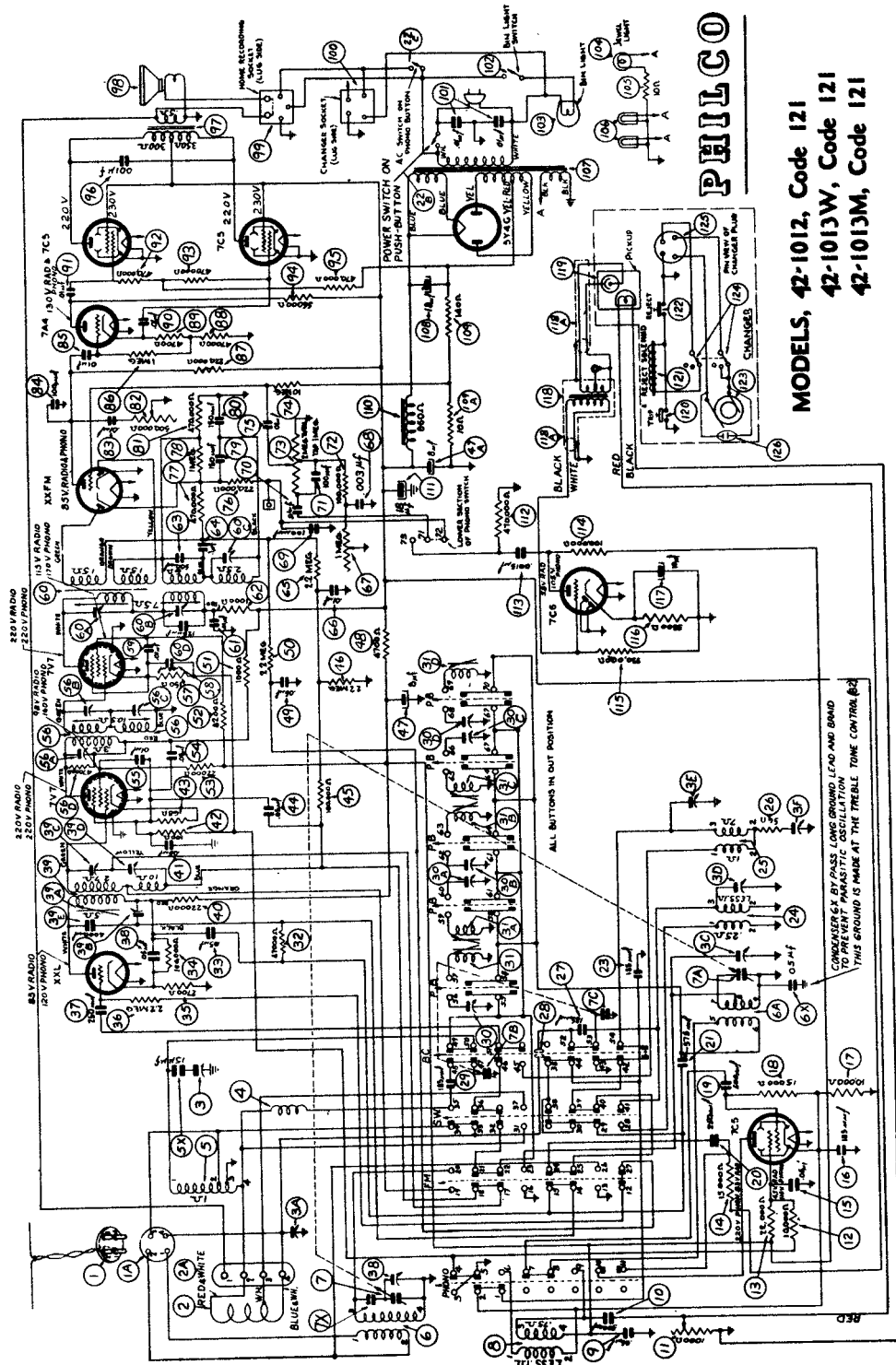


LOCATIONS OF COMPENSATORS



LOCATIONS OF PARTS — UNDER CHASSIS

MANUAL OF 1942 MOST POPULAR SERVICE DIAGRAMS

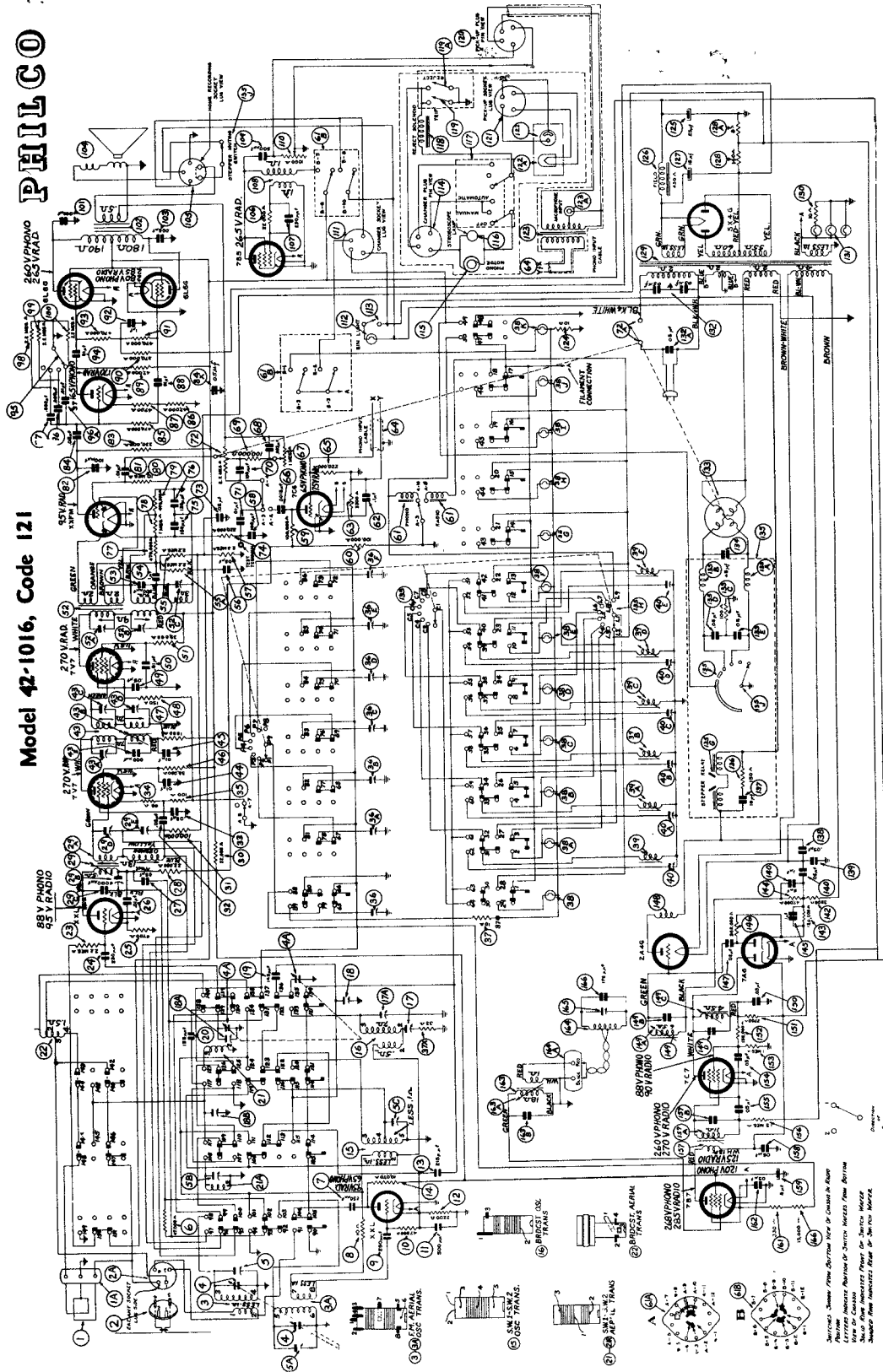


PHILCO
MODELS, 42-1012, Code 121
42-1013W, Code 121
42-1013M, Code 121

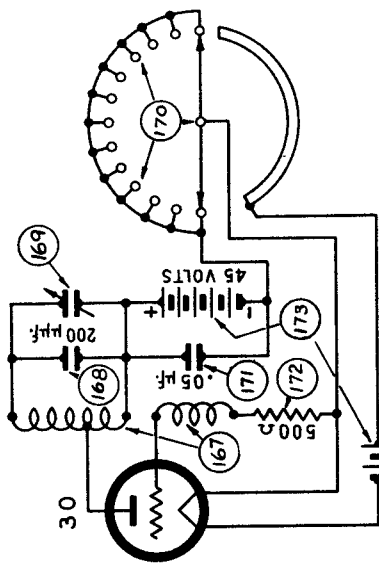
MANUAL OF 1942 MOST POPULAR SERVICE DIAGRAMS

PHILCO

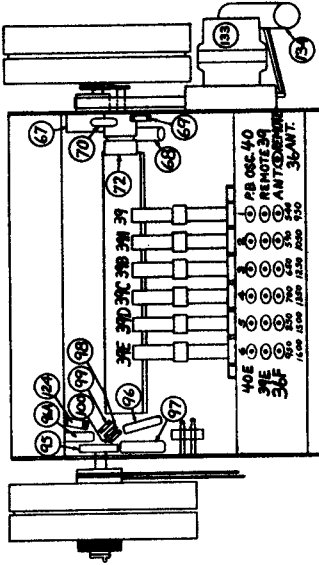
Model 42-1016, Code 121



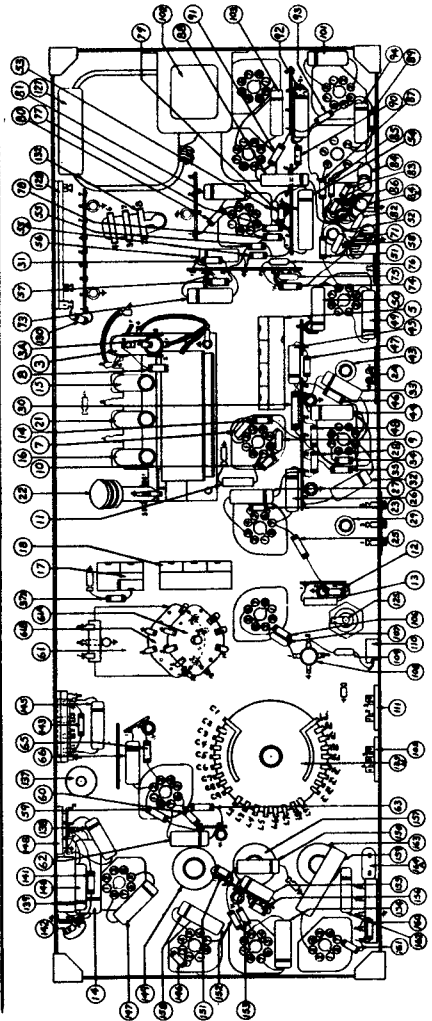
MANUAL OF 1942 MOST POPULAR SERVICE DIAGRAMS



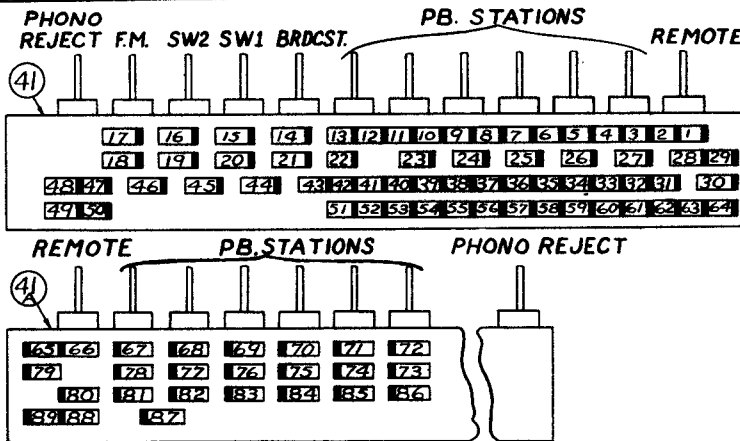
SCHEMATIC DIAGRAM OF WIRELESS REMOTE CONTROL UNIT



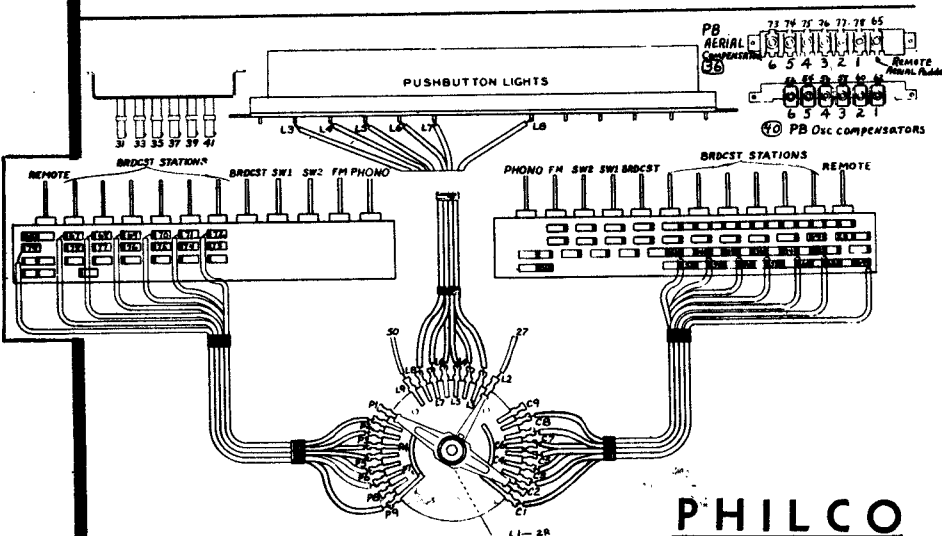
LOCATIONS OF PARTS, TUNING UNIT



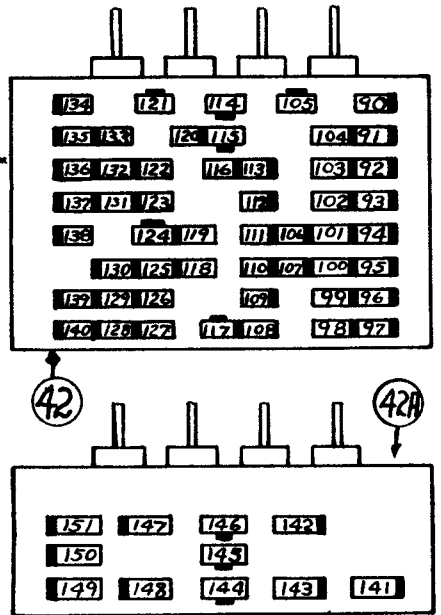
PART LOCATIONS—UNDER CHASSIS, MODEL 42-1016



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



PHILCO



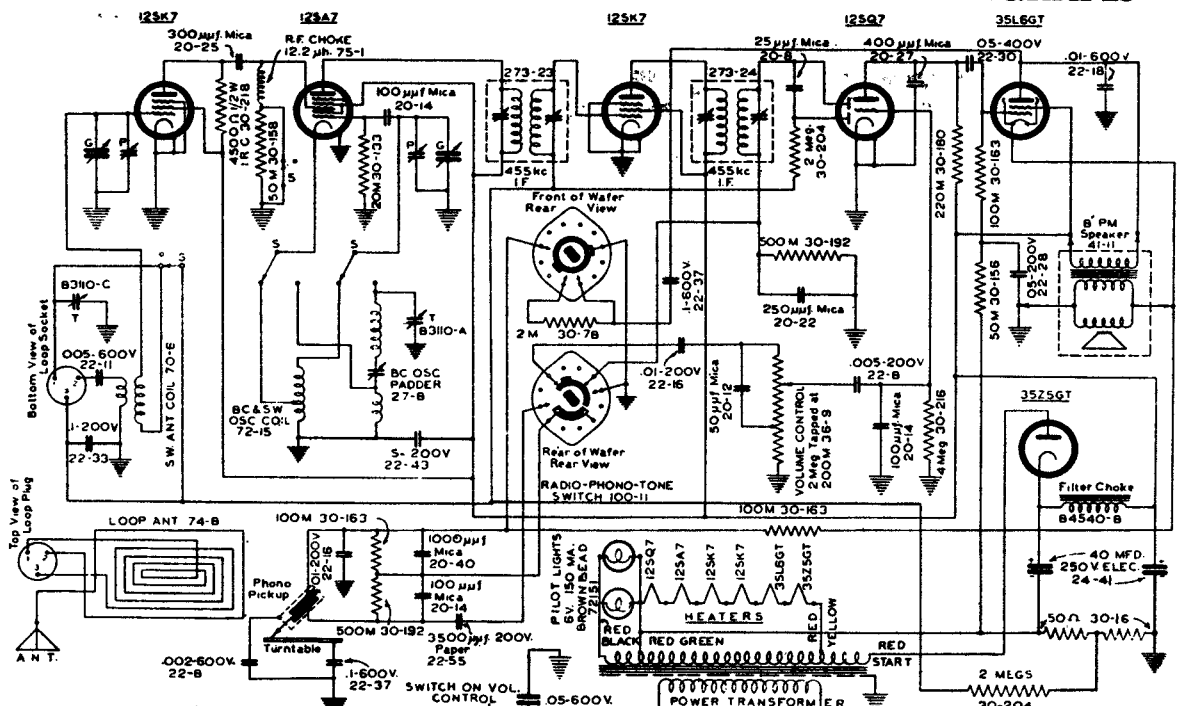
CONTACT LOCATIONS OF TUNING BAND, P. B. SWITCH—42, BOTTOM; 42A, TOP SECTION

104

CABLE WIRING
Model 42-1016, Code 121

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MANUAL OF 1942 MOST POPULAR SERVICE DIAGRAMS



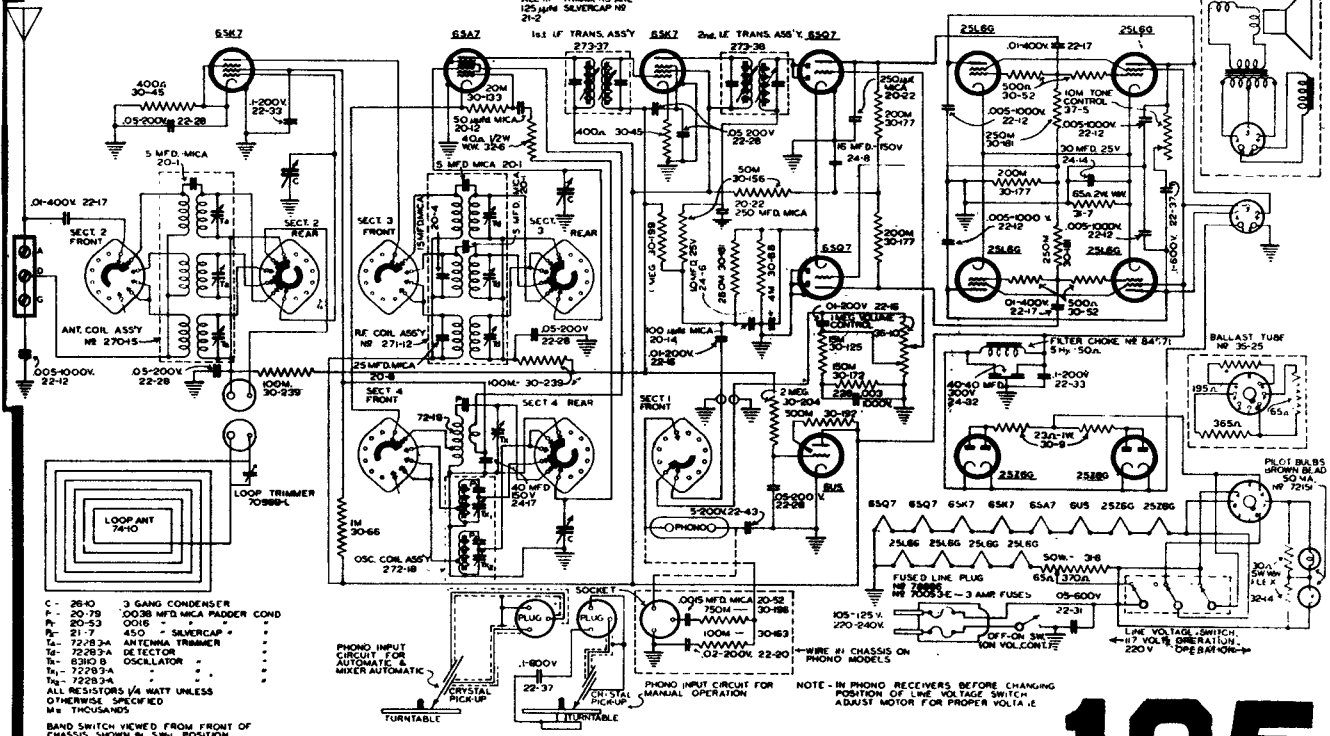
ALL RESISTORS ARE 1/4 WATT UNLESS OTHERWISE SPECIFIED
 G- GANG CONDENSER 26-9
 P- TRIMMERS ON GANG
 T- TRIMMER CONDENSERS
 S- BAND SWITCH (OO-IO SHOWN IN S.W. POSITION)
 RADIO-PHONO-TONE SWITCH SHOWN IN EXTREME COUNTERCLOCKWISE POSITION (No. 1)
 No. 1 - RADIO VOICE
 No. 2 - TREBLE
 No. 3 - BASS
 No.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

Pilot

Model TP-32

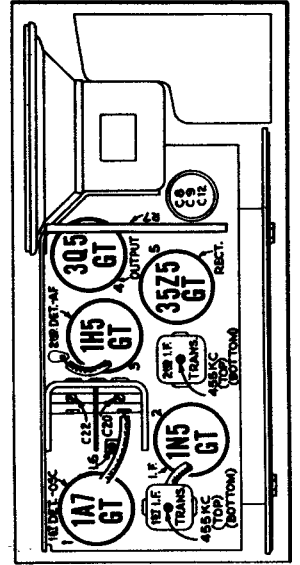
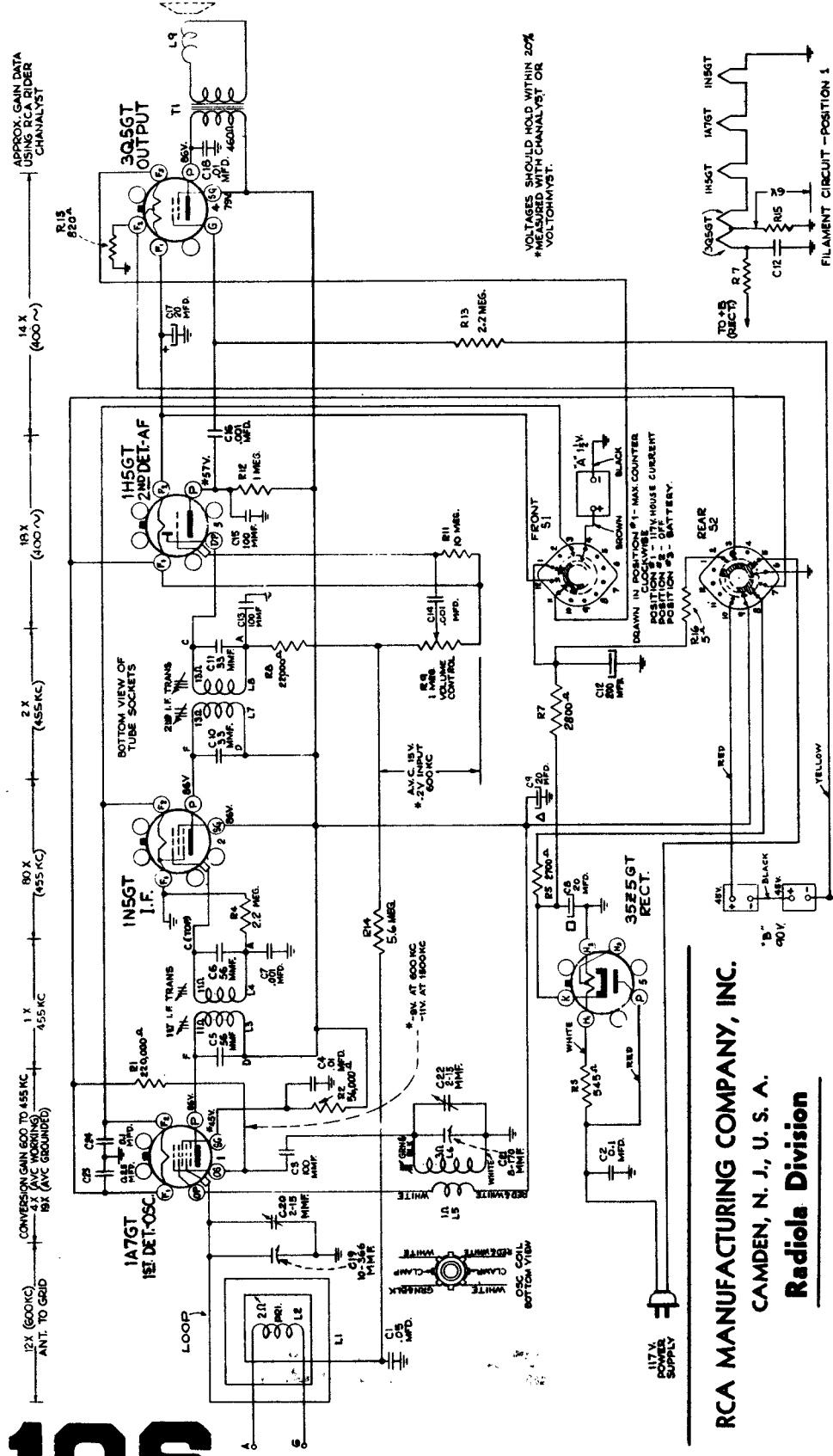
| OPERATION | CONNECT A TO | CONNECT B TO | CONNECT |
|-----------|--------------|--------------|----------------------------|
| 117 VOLTS | BLACK | BLACK | 1 |
| 130 " | RED-BLACK | RED-YELLOW | NO PRIMARY |
| 150 " | RED-GREEN | RED | NO PRIMARY |
| 230 " | RED-GREEN | BLACK | BLACK-YELLOW TO RED-YELLOW |

Model 173

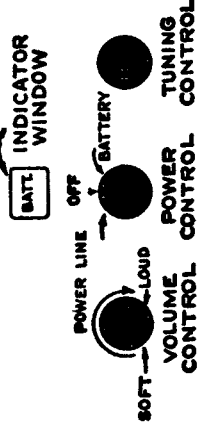


C- 26-0 3 GANG CONDENSER
 P- 20-79 1000 MFD MICA PADDER COND
 R- 20-53 450 SILVERCAP
 T- 21-7 450 SILVERCAP
 T- 722B-34 ANTENNA TRIMMER
 T- 722B-3 A DETECTOR
 T- 8310 B OSCILLATOR
 T- 722B-1 A
 T- 722B-3 A
 T- 722B-3 A
 ALL RESISTORS 1/4 WATT UNLESS OTHERWISE SPECIFIED
 M= THOUSANDS
 BAND SWITCH VIEWED FROM FRONT OF CHASSIS, SHOWN IN S.W. POSITION
 BAND SWITCH NO 100-14 A, LF FREQUENCY IS 455 KC

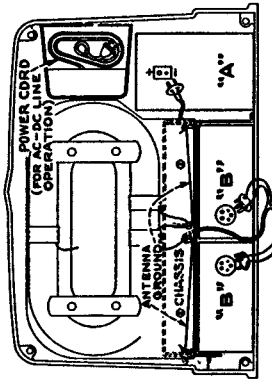
NOTE - IN PHONO RECEIVERS BEFORE CHANGING POSITION OF LINE VOLTAGE SWITCH ADJUST MOTOR FOR PROPER VOLTAGE



Model 1 P-5 Portable



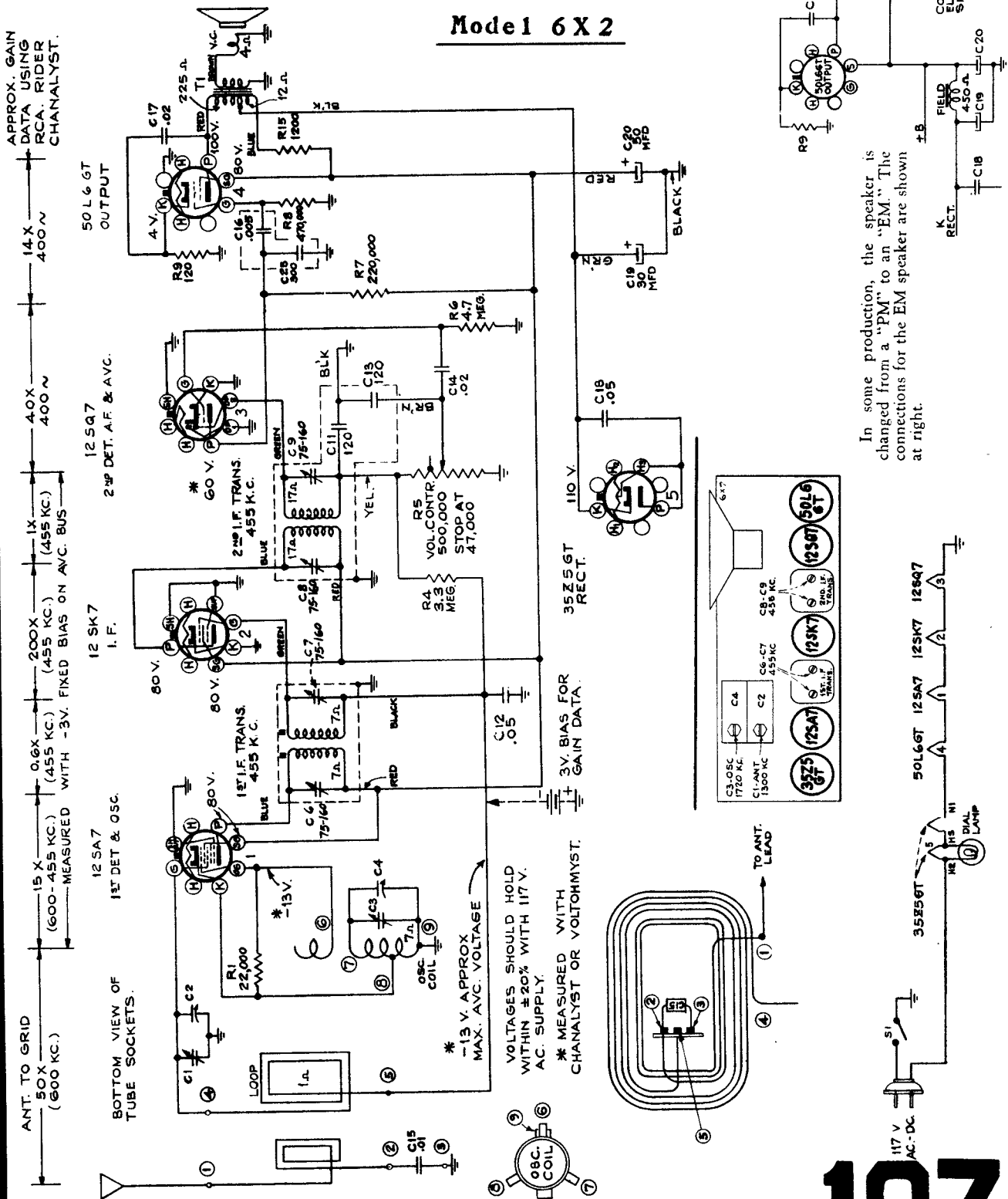
RCA MANUFACTURING COMPANY, INC.
 CAMDEN, N. J., U. S. A.
 Radiola Division



ONE 1.5V "A" - EVEREADY No. 743 OR EQUAL:
 TWO 45V "B" - EVEREADY No. 482 OR EQUAL:

RCA Victor

Model 6 X 2



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

25X

APPROX. GAIN
DATA RIDER
RCA RIDER
CHANALYST

50 L 6 GT
OUTPUT

12 5A7
2ND DET. A.F. & AVC

12 5K7
I. F.

12 5A7
1ST DET & OSC

15 X
(600-455 KC.)
MEASURED WITH
-3V. FIXED BIAS ON AVC. BUS

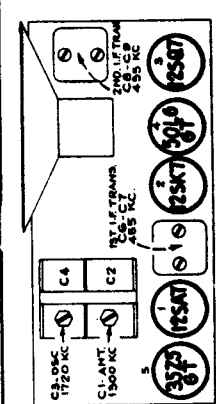
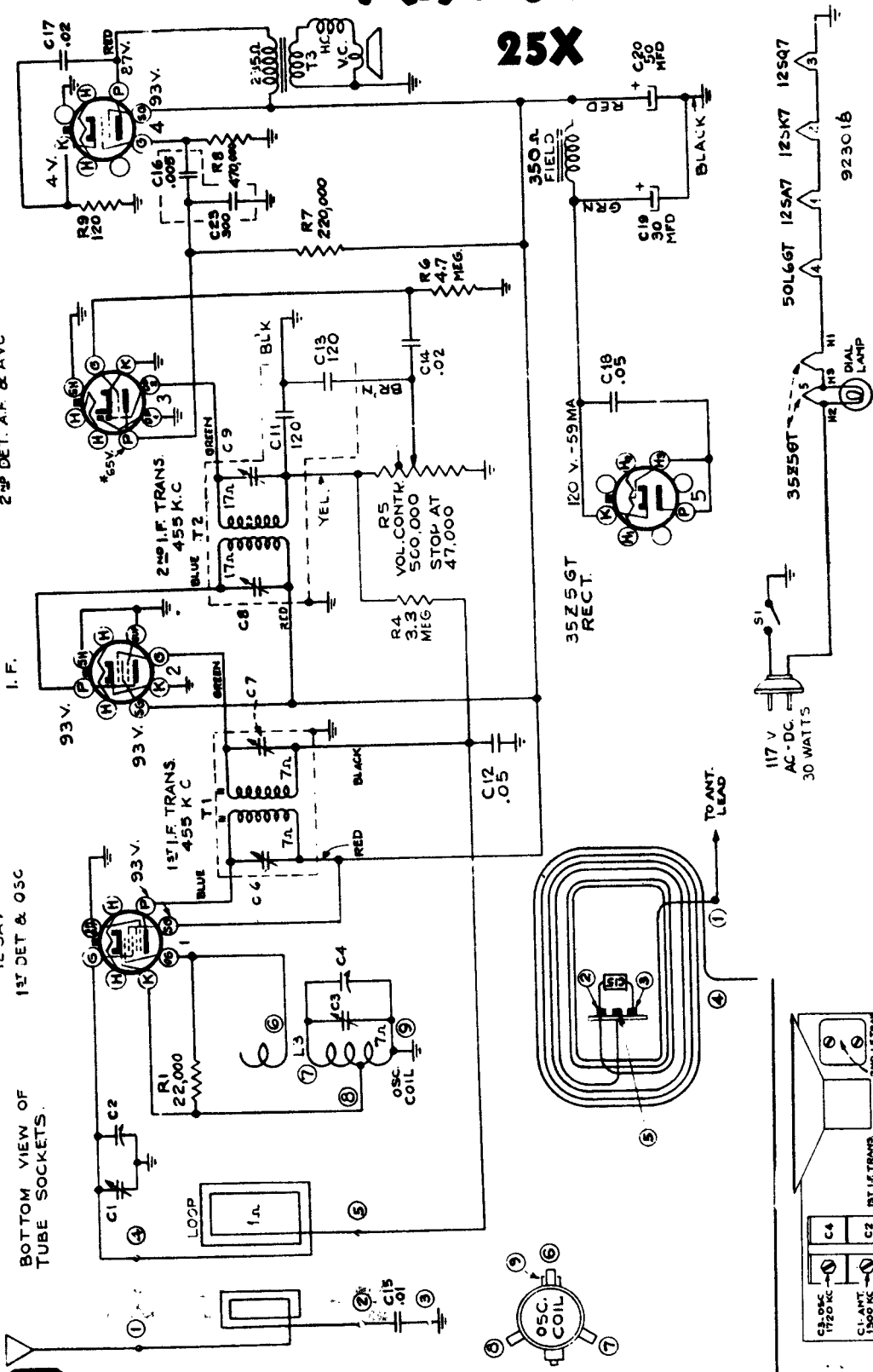
0.6 X
(455 KC.)

1 X
(455 KC.)

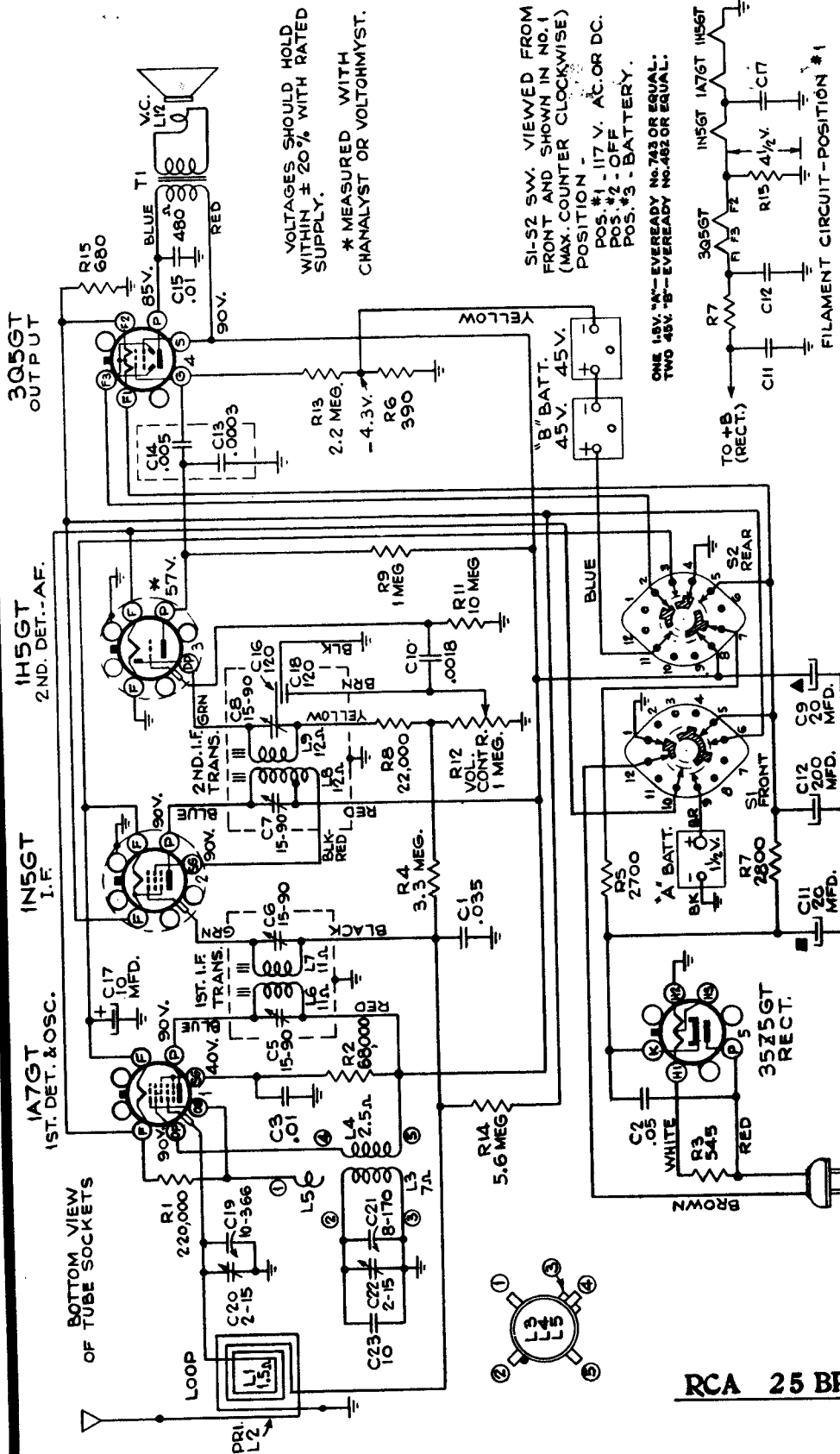
40 X
400 N

14 X
400 N

50 X
600 KC.)



MANUAL OF 1942 MOST POPULAR SERVICE DIAGRAMS

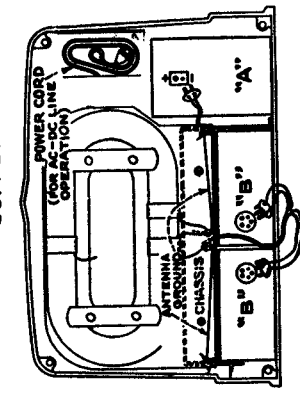
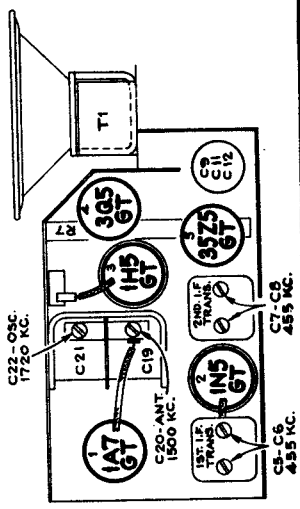


VOLTAGES SHOULD HOLD WITHIN $\pm 20\%$ WITH RATED SUPPLY.
 * MEASURED WITH CHANNELYST OR VOLTOHMYST.

SI-S2 SW. VIEWED FROM FRONT AND SHOWN IN NO.1 POSITION - MAX. COUNTER CLOCKWISE.
 POS. #1 - 117 V. AC. OR DC.
 POS. #2 - OFF
 POS. #3 - BATTERY.

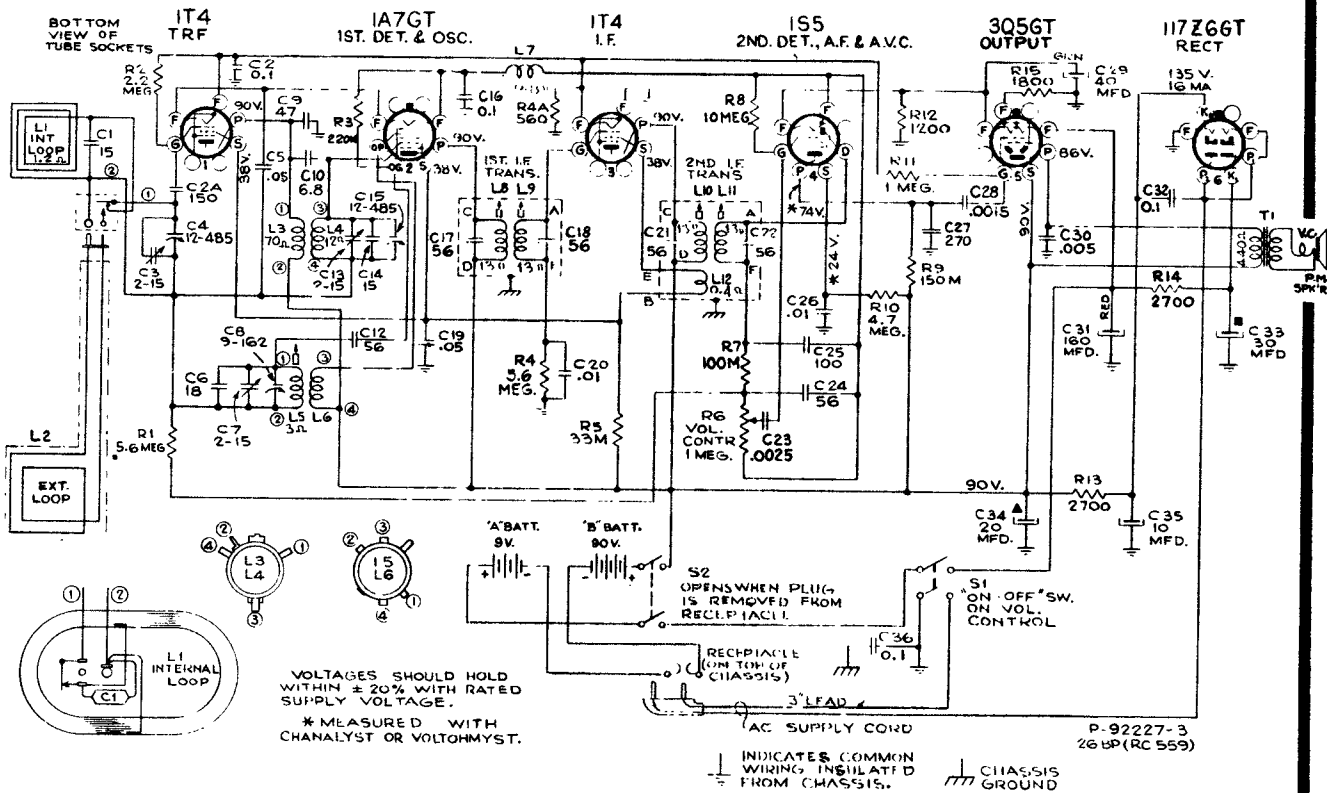
ONE 1.5V. "A" - EVEREADY NO.7413 OR EQUAL.
 TWO 45V. "B" - EVEREADY NO.482 OR EQUAL.

| 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 | C6, C7 (2nd I-F trans.) |
| 2 | 1st-Det. grid cap. in series with .01 mfd. | radiated signal 1,720 kc radiated signal 1,400 kc | Gang at min. capacity | C6, C6 (1st I-F trans.) |
| 3 | | | | C32 (Osc. Trimmer) |
| 4 | | | | C30 (Ant. Trimmer) |



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. | | | L8, L9 (1st I-F trans.) |
| 3 | radiated signal at 1,600 kc | 1,600 kc | 1,600 kc | C7 (osc.) C3 (ant.) C13 (det.) |
| 4 | radiated signal 600 kc | 600 kc | 600 kc | L5 (Rock in) |
| 5 | Repeat steps 3 and 4 | | | |

AC-DC Operation.—

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

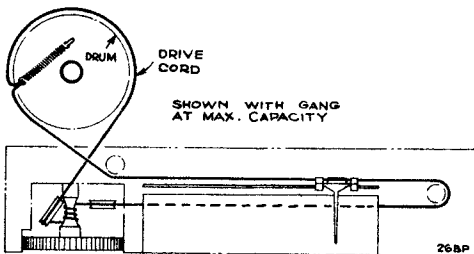
A power cord is housed in the bottom right hand corner looking inside the cabinet as shown in the illustration. Open the cabinet like a suit case, first pushing to one side the little pins under the handle ends to raise the clips. Then pull the power cord plug out of its socket in the top right hand 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.

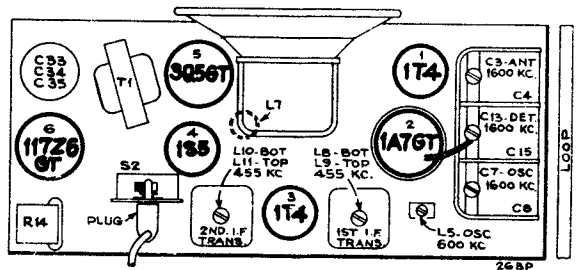
NOTE.—If reception is not obtained on DC, reverse plug in outlet receptacle. This may also reduce hum on AC operation.

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.



RCA 26 BP Portable



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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.

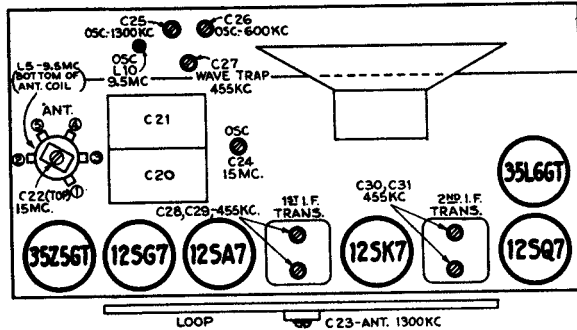
Output Meter Alignment.—If this method is used, connect the meter across the voice coil, and turn the receiver volume control to maximum.

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

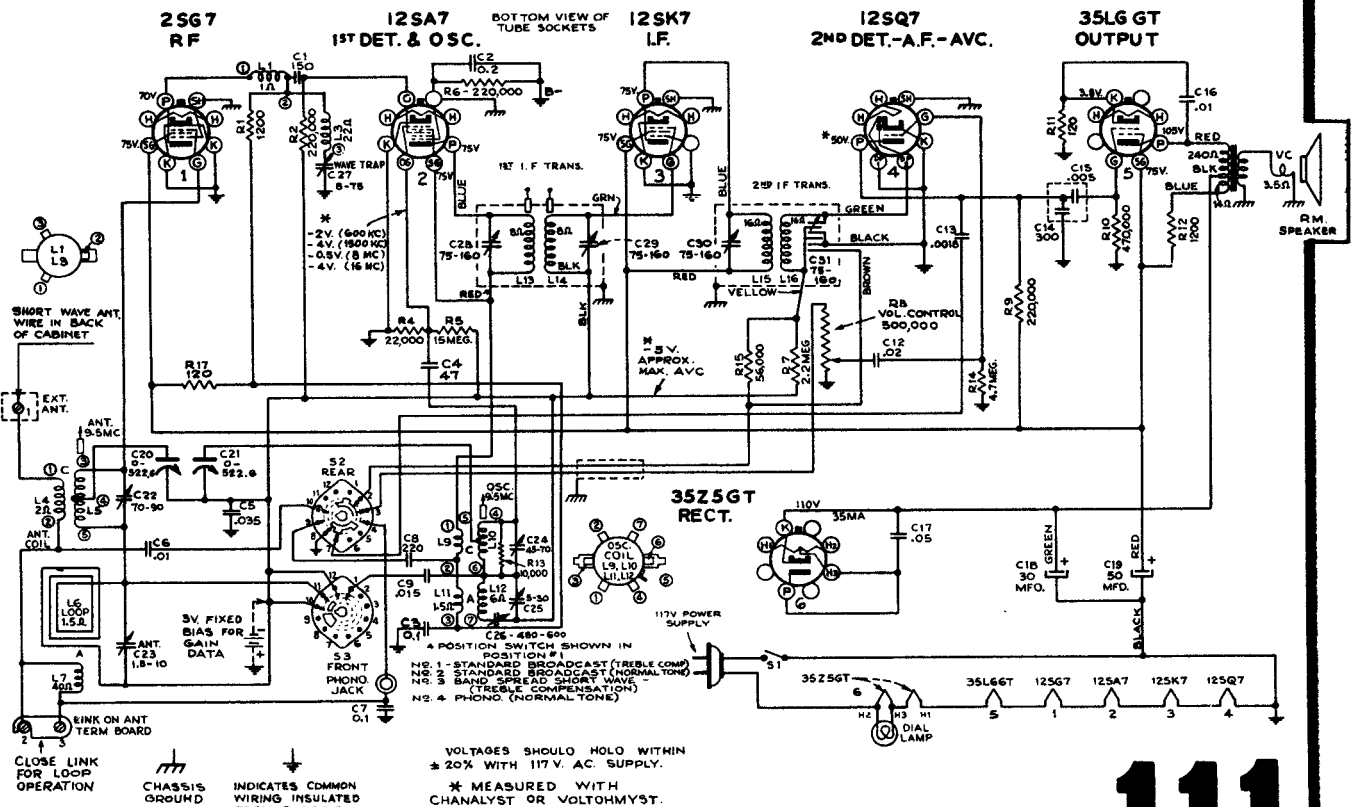
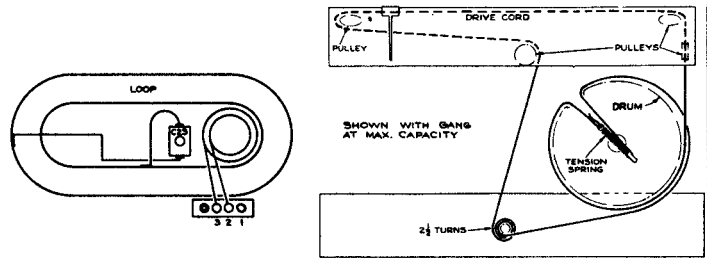
1. Dress output tube plate lead to speaker and output bypass condenser away from terminal board and yellow lead in cable.
2. Dress brown and yellow leads from 2nd I.F. transformer away from output plate and bypass condenser.
3. Dress .02 capacitor C12 away from output capacitor C16.
4. Dress all leads 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.



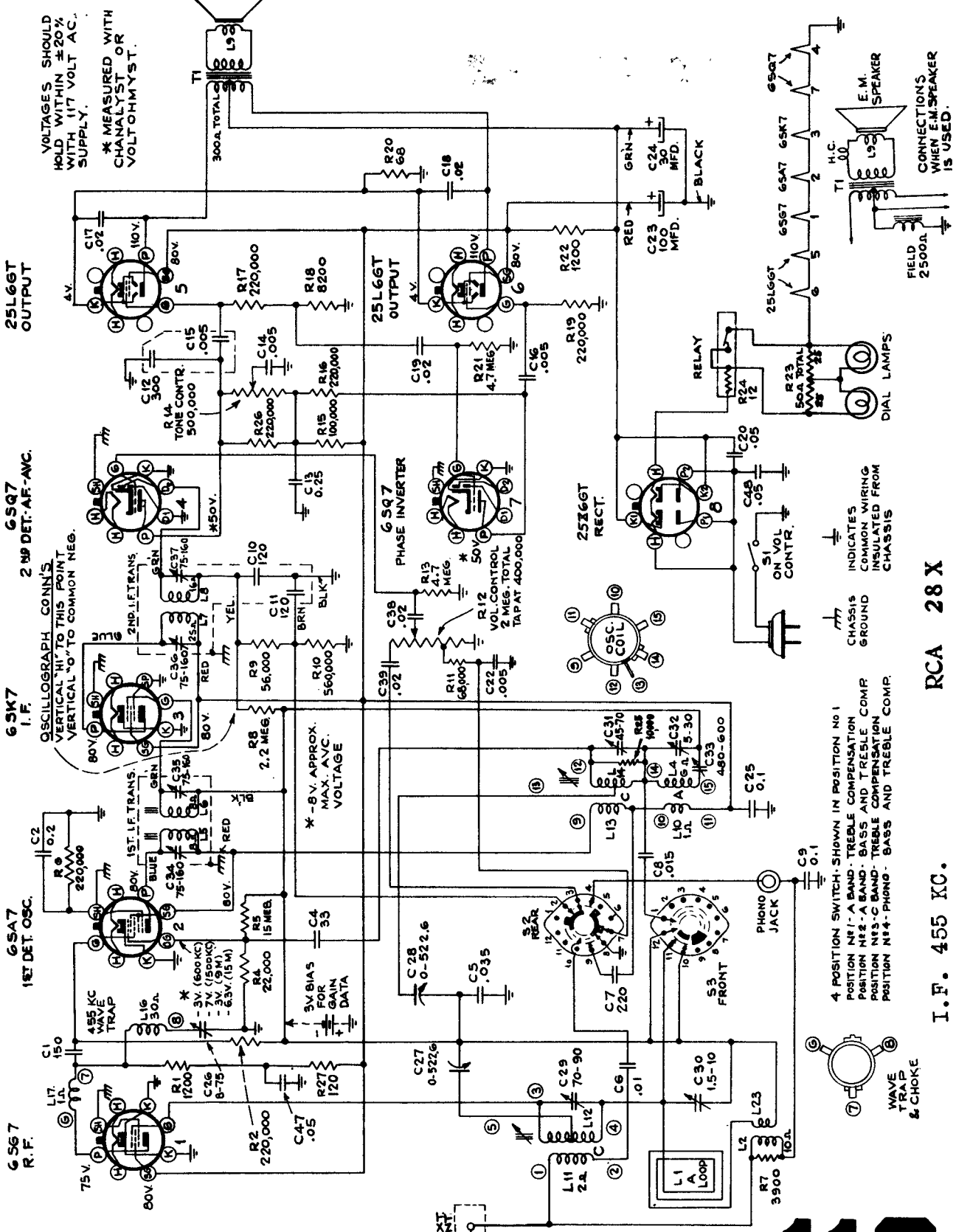
| Steps | Connect high side of the test oscillator to— | Tune test osc. to— | Turn radio dial to— | Adjust the following for maximum peak output |
|-------|---------------------------------------------------|-----------------------|-------------------------------------|----------------------------------------------|
| 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. | | | C-28, C-29 1st I-F trans. |
| 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.) L-5 (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.



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

25L6GT OUTPUT

65Q7 2ND DET.-AF.-AVC.

65A7 1ST I.F.

65A7 1ST DET. OSC.

6567 R.F.

25L6GT OUTPUT

65Q7 PHASE INVERTER

65A7 1ST I.F.

65A7 1ST DET. OSC.

6567 R.F.

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

OSC. COIL

RELAY

ON VOL. CONTR.

INDICATES COMMON WIRING INSULATED FROM CHASSIS

CHASSIS GROUND

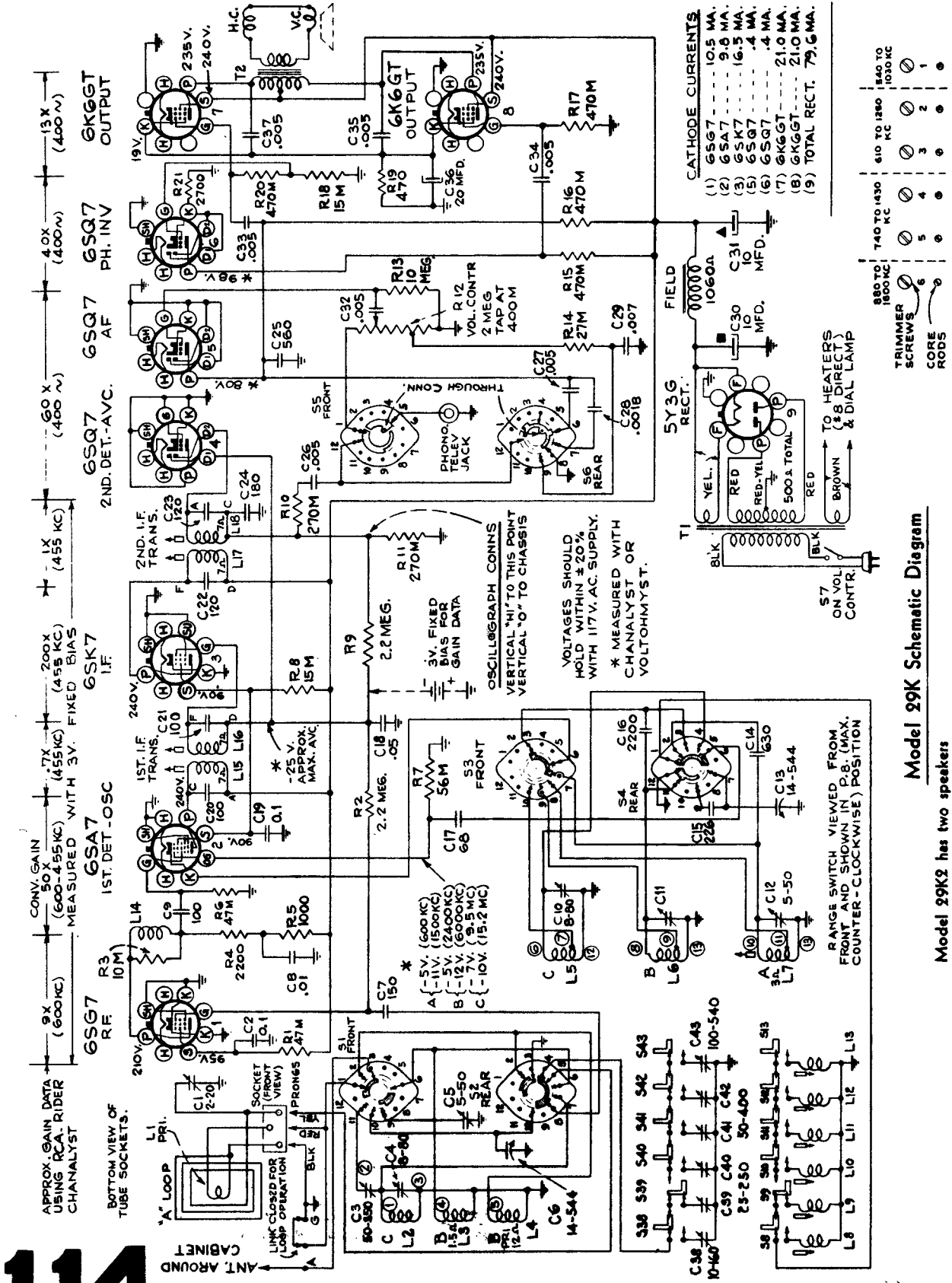
WAVE TRAP & CHOKE

FIELD 2500Ω

E.M. SPEAKER

CONNECTIONS WHEN E.M. SPEAKER IS USED.

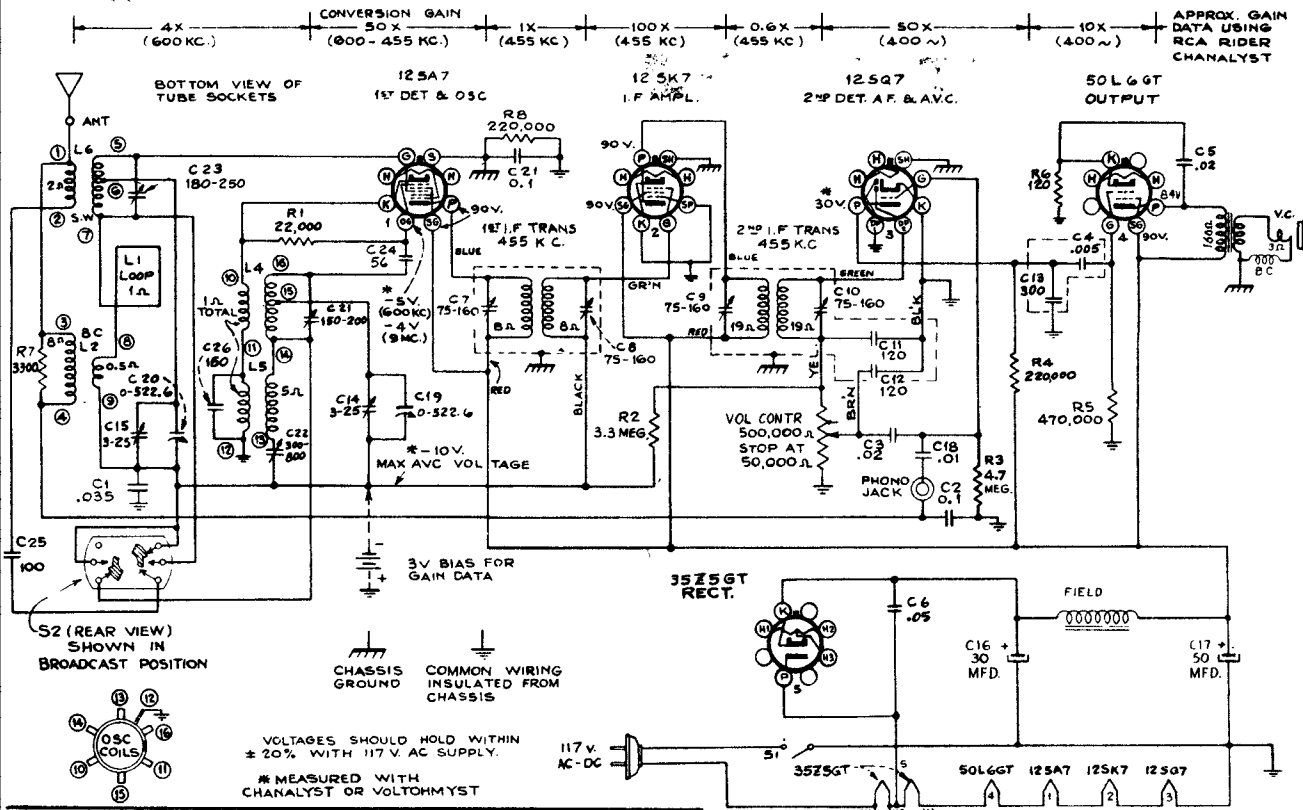
MANUAL OF 1942 MOST POPULAR SERVICE DIAGRAMS



Model 99K Schematic Diagram

Model 99K2 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.

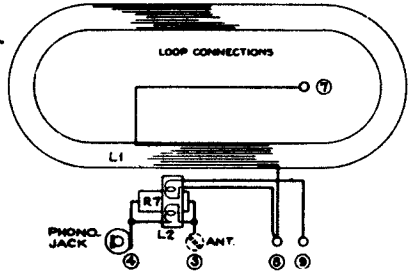
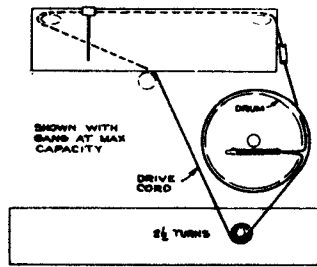
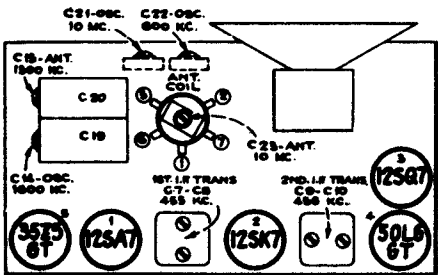
Power-Supply Polarity.—For operation on d-c, the power plug must be inserted in the outlet for correct polarity. If the set does not function, reverse the plug. On a-c, reversal of the plug may reduce hum.

| 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 |

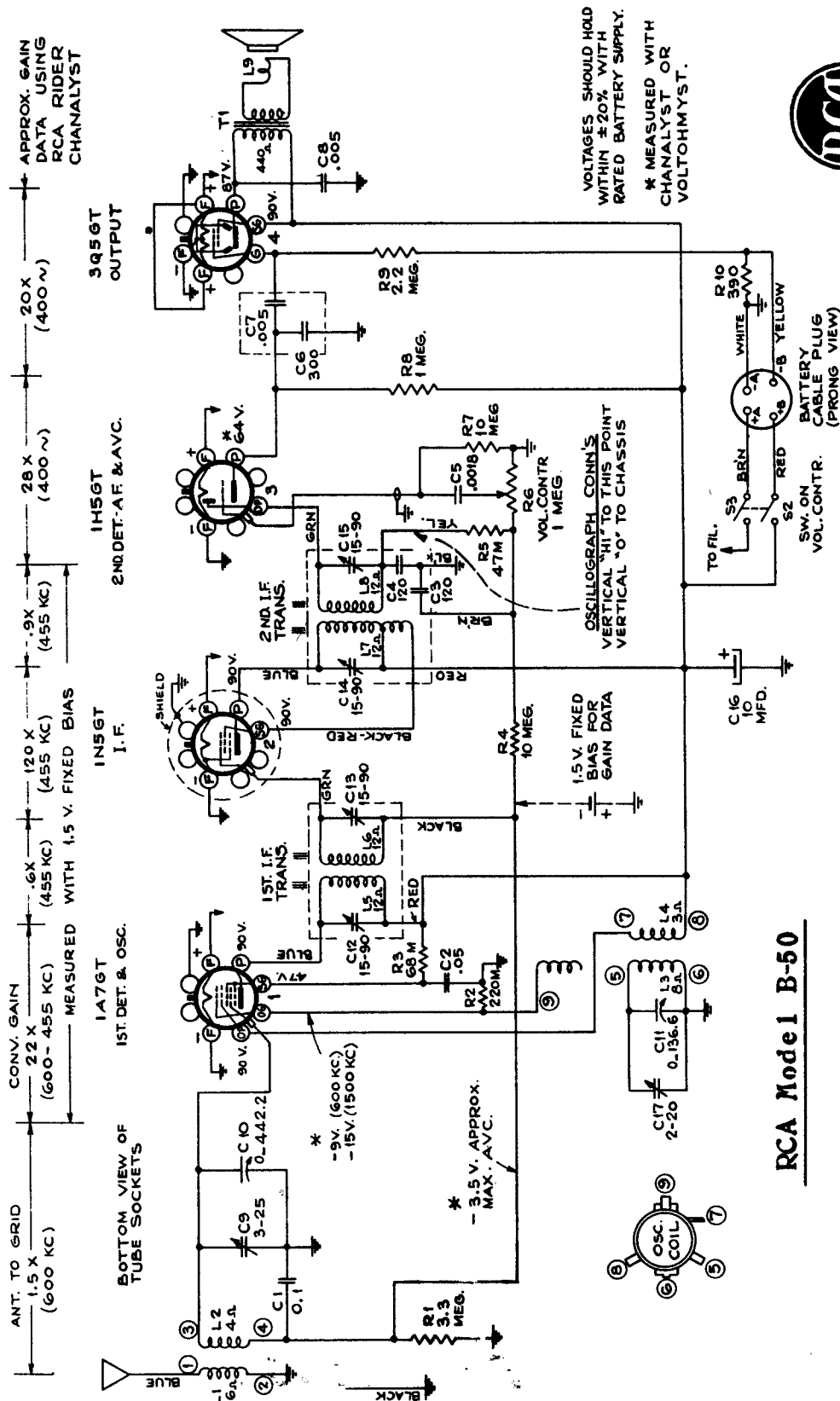
* It is recommended that this step be repeated using a received station of known frequency.

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

RCA 34 X



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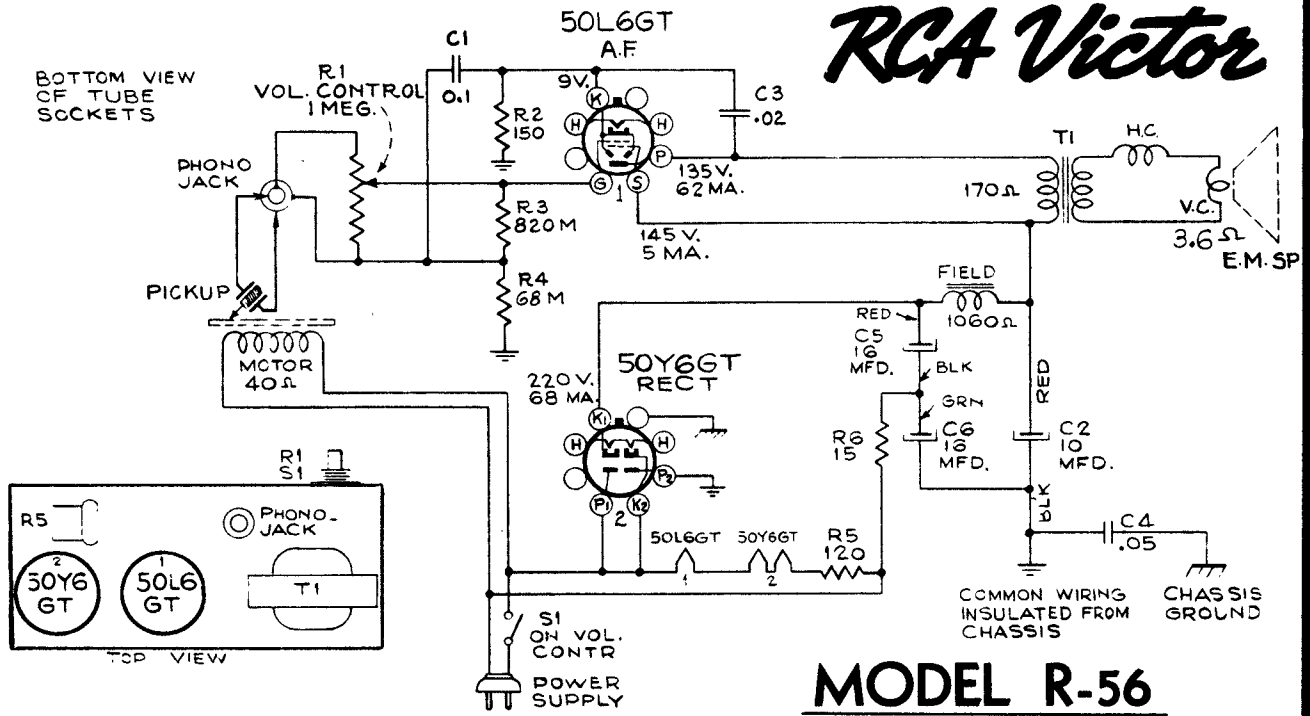


RCA Model 1 B-50

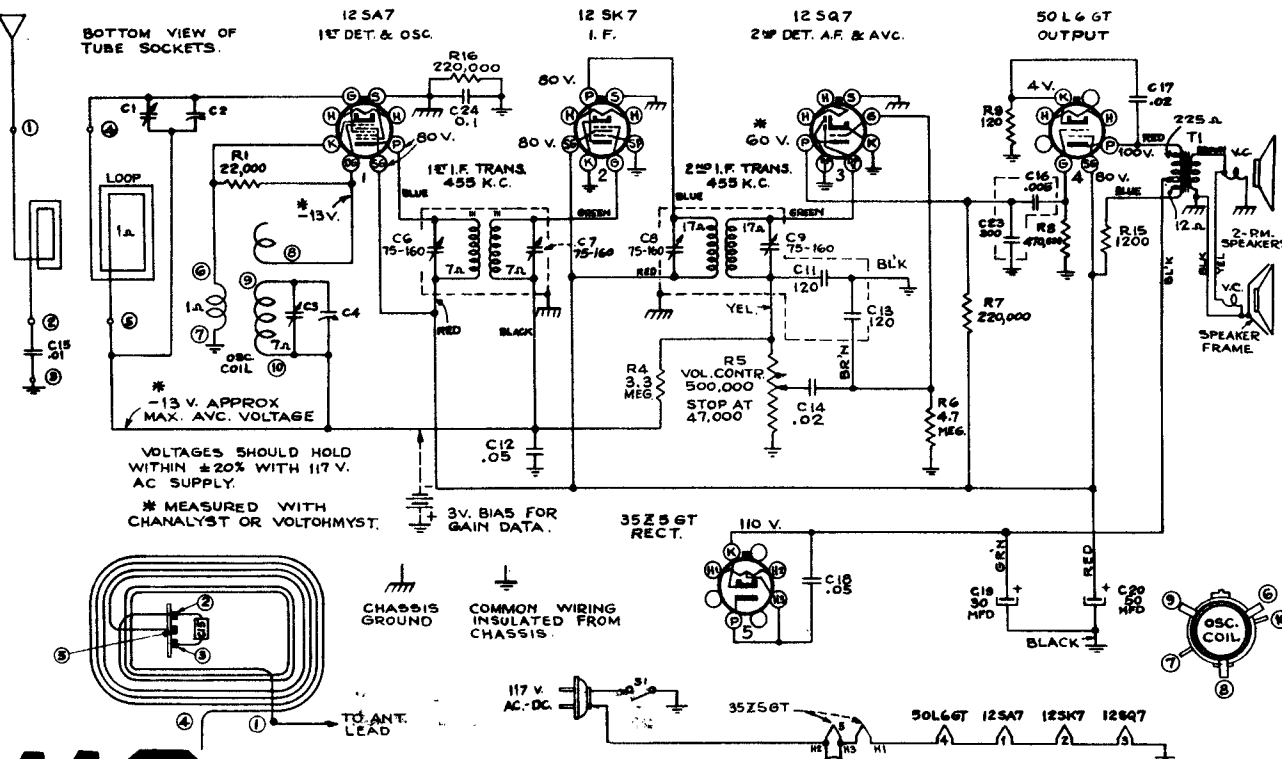
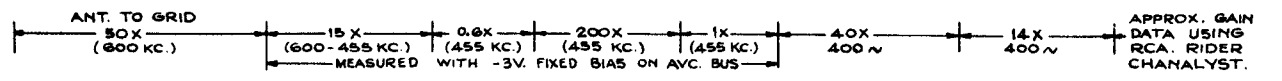
- Precautionary Lead Dress.—**
1. The lead from the 8Q5 plate to output transformer should be dressed under clip and away from audio input leads.
 2. Keep AVC lead connecting C1 away from the 1A7GT plate.
 3. Keep blue plate leads coming from IF transformers short and close to the chassis.
 4. All filament wires should be dressed close to chassis.

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RCA Victor



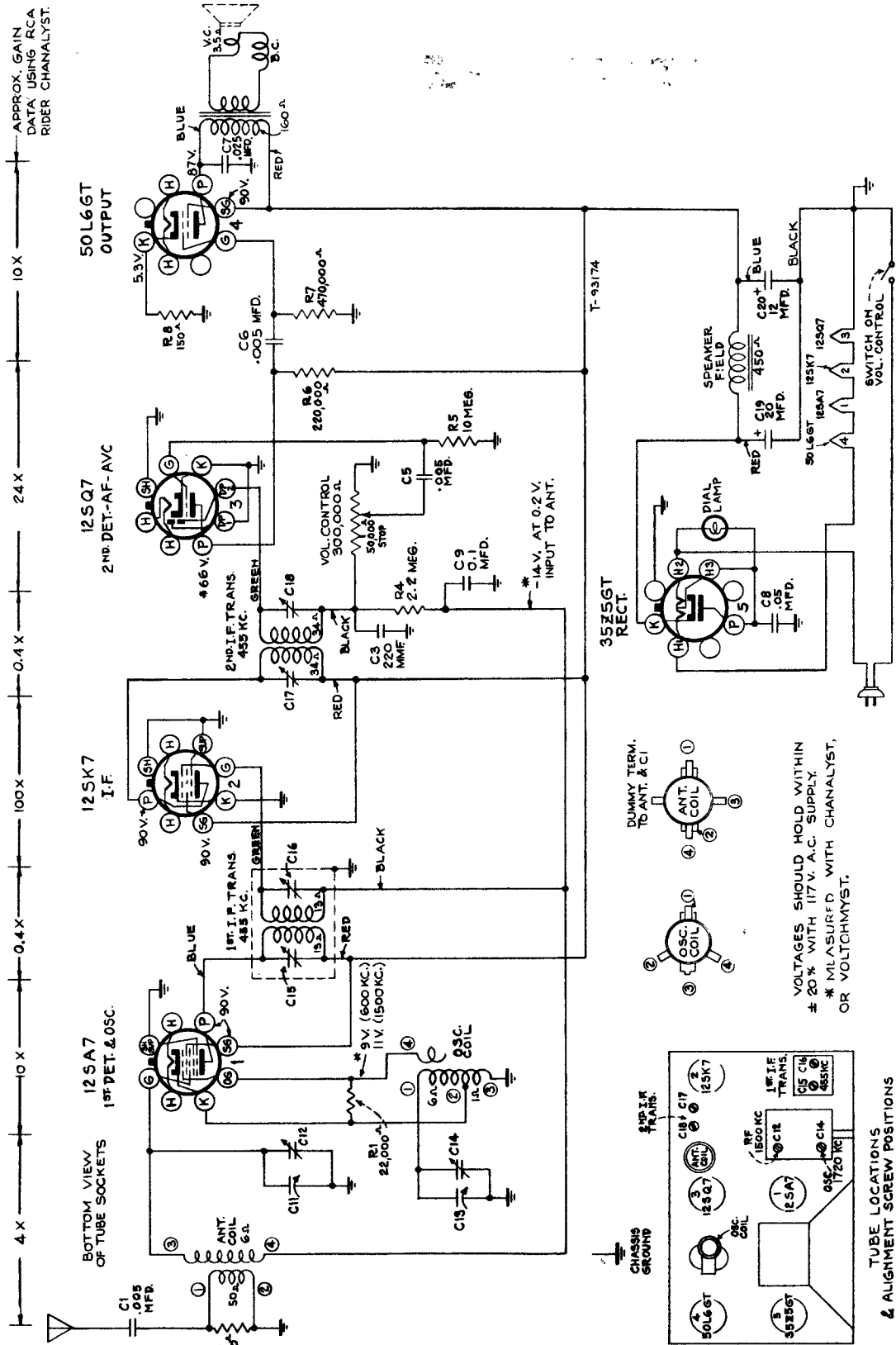
MODEL R-56



RCA Model 155 X

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RCA Models 500, 501



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Alignment Procedure

RCA Model V-105

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

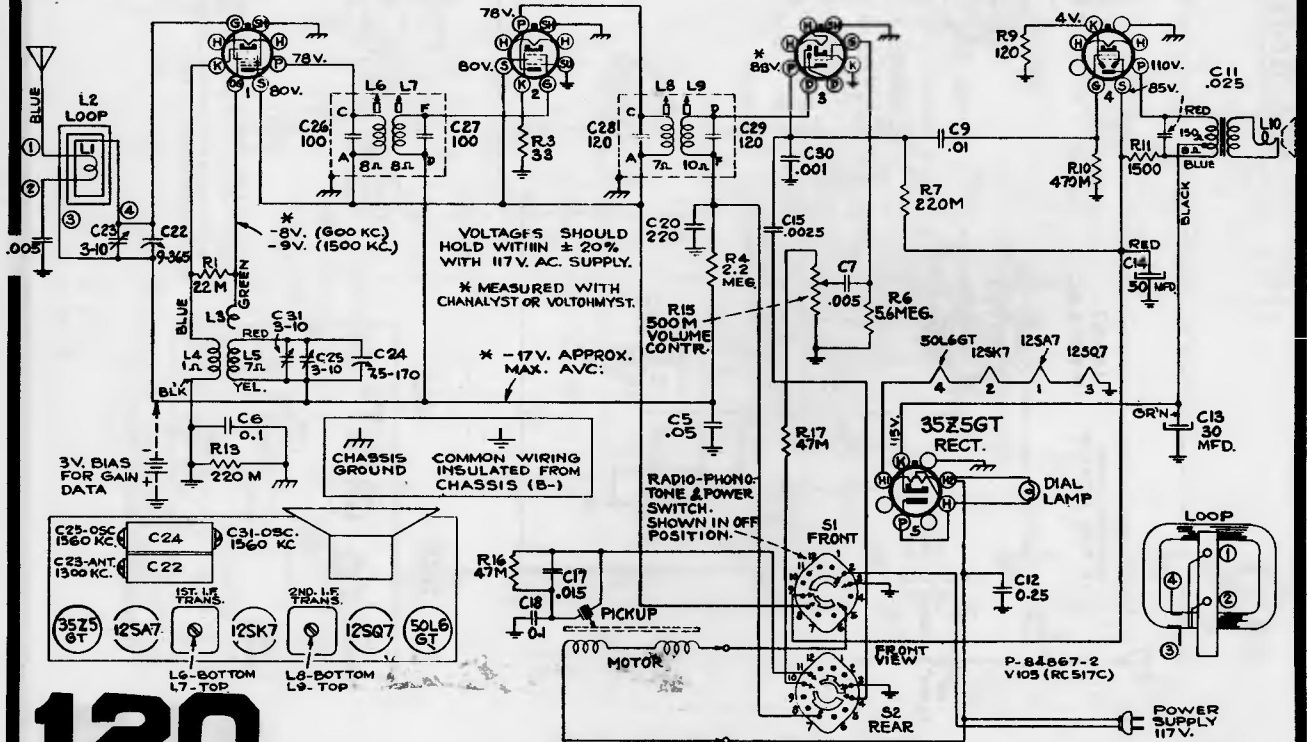
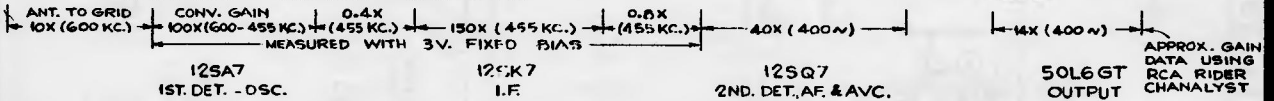
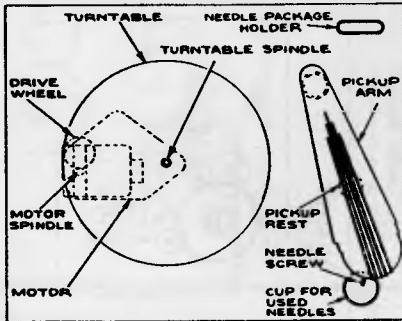
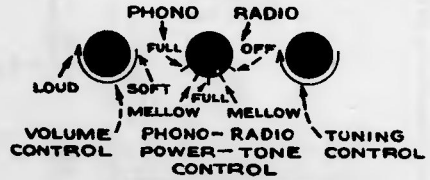
Test-Oscillator.—Connect the low side of the test-oscillator to the receiver chassis, through a .01 mfd. capacitor, and keep the output as low as possible.

| Steps | Connect the high side of test-oscillator to— | Tunc 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. | | | |

Phonograph Motor Service Data:—

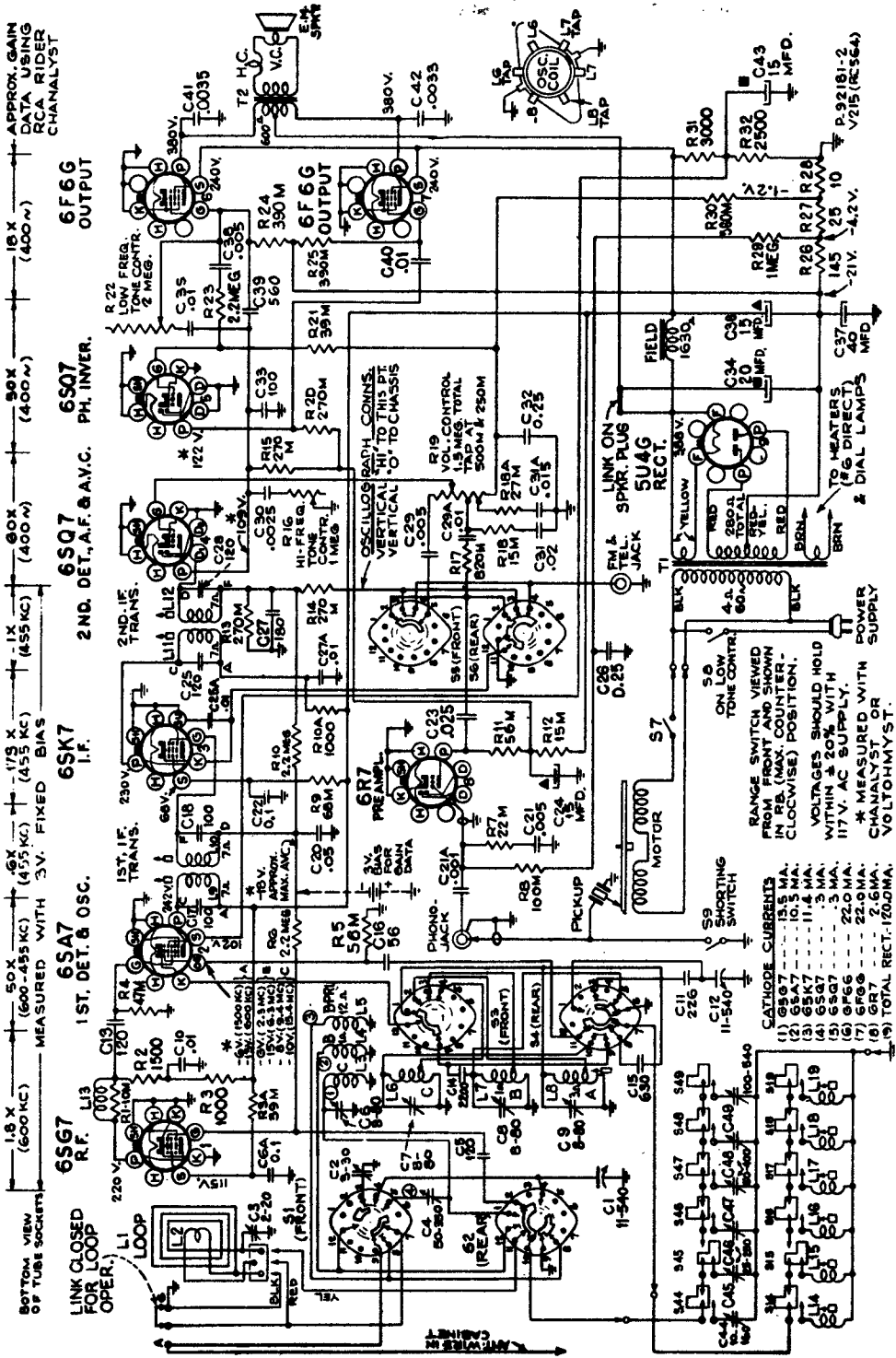
The phonograph motor is of the self starting synchronous type and operates the turntable through friction drive between the motor drive spindle and the rubber tired idler on the rim of the turntable.

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.



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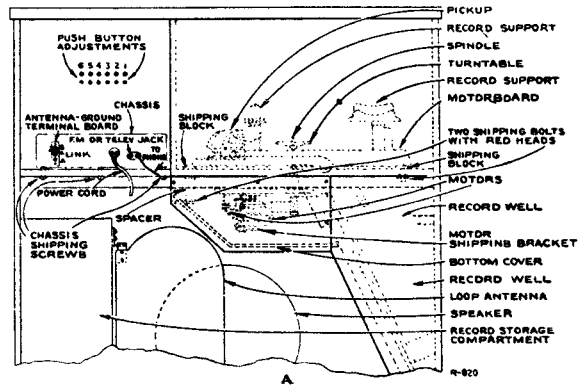
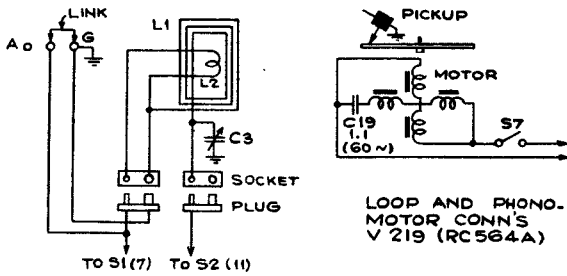
RCA Models V-215, V-219, V-221, V-225



In Model V-219, the loop and phono connections are different, as shown in separate diagram on a following page. In Model V-225, R-8 is 220,000 ohms, R-17 is 1.8 Meg., and C-21 is .0035 mfd.

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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.—

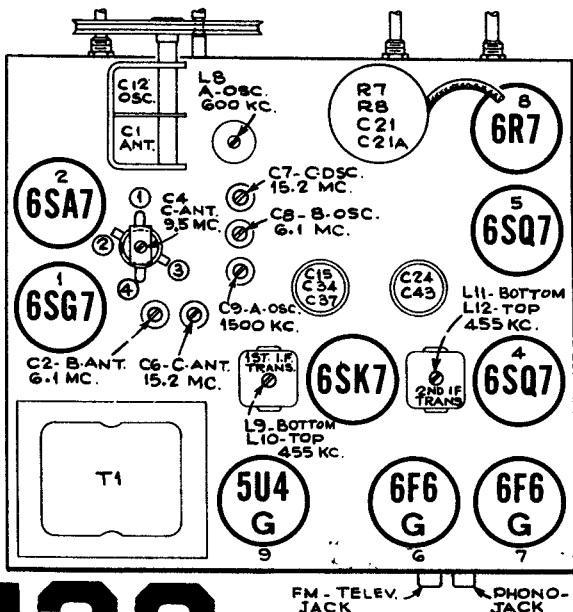
Follow the procedure above, substituting the dial scale printed in this service note for the glass dial in the cabinet.

| 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. | | | |

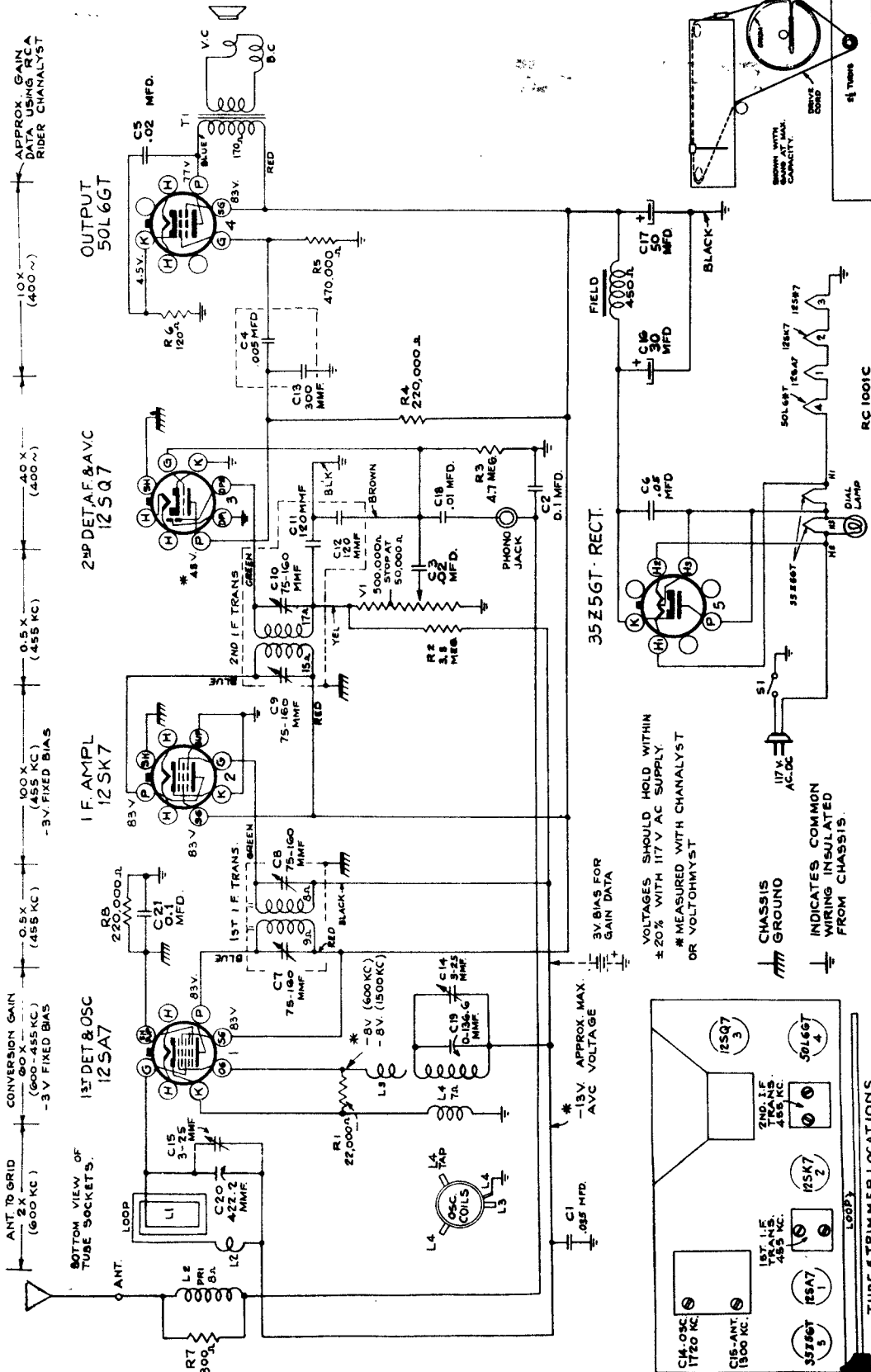
* Use minimum capacity peak if two peaks can be obtained. Oscillator tracks 455 kc above signal on all bands.

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.



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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-GT filament wires should be dressed to rear of chassis and away from the second I-F transformer leads.
- TUBE # TRIMMER LOCATIONS**
1. Dress brown lead from second I-F transformer to 12SQ7 away from power cable.
 2. Dress wire to No. 1 grid of the 12SA7 away from pilot lamp leads.
 3. Dress wire from loop to variable condenser away from chassis.
 4. Dress all capacitors, leads, etc. which come close to oscillator coil rigidly and as far as possible from it.

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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.

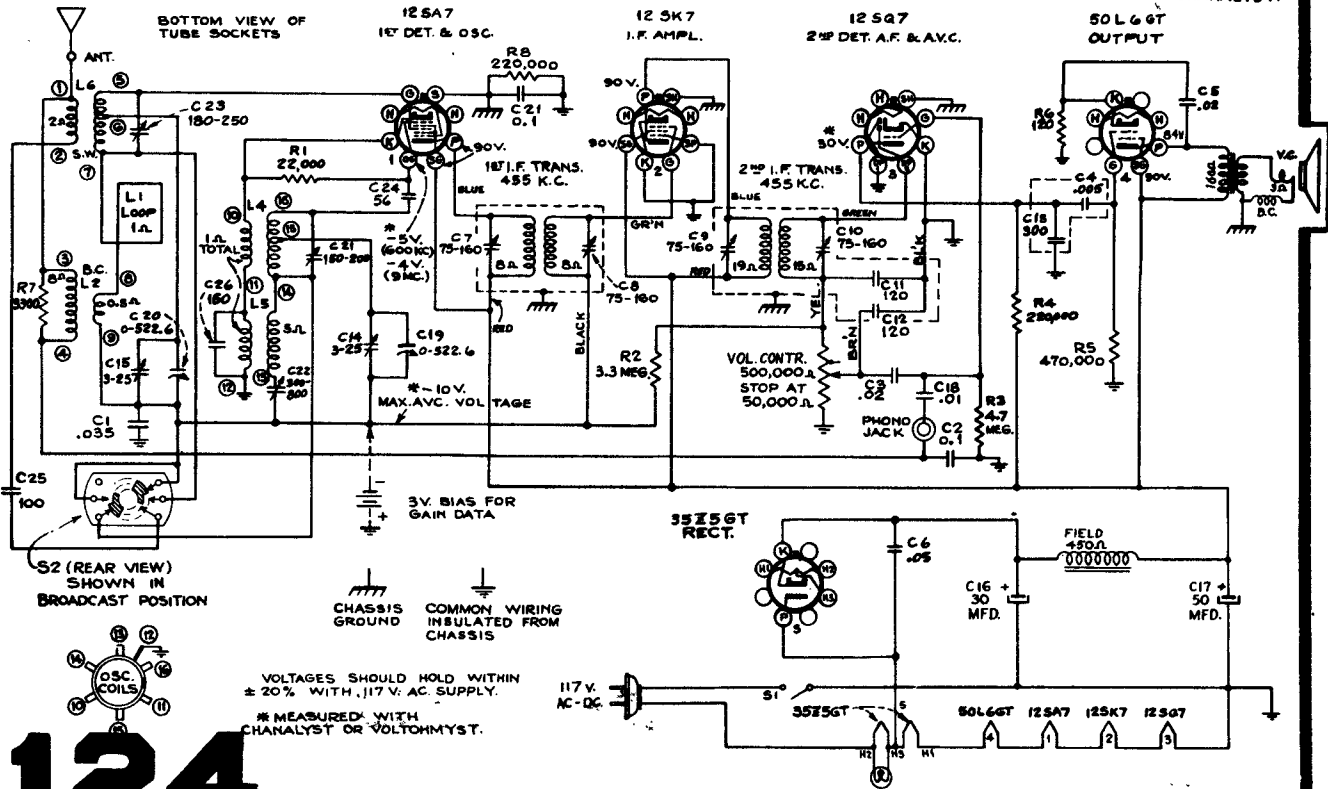
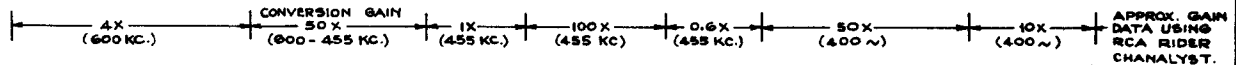
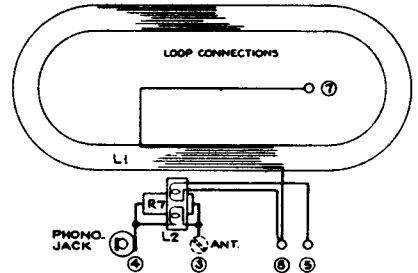
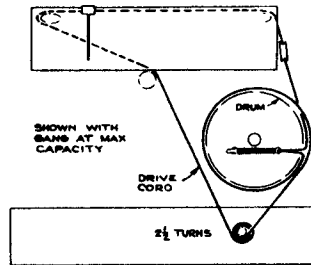
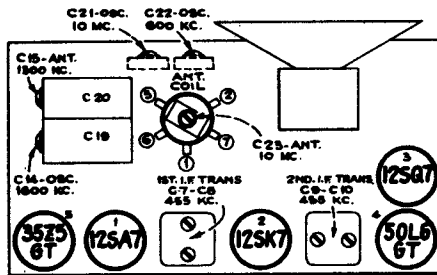
Calibration Scale.—The glass tuning dial may be easily removed from the cabinet and temporarily attached to the dial backing plate for quick reference during alignment.

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 | C28 Osc. Rock in |

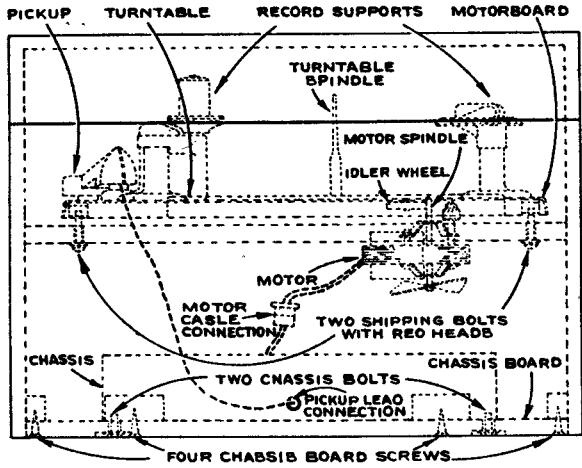
* It is recommended that this step be repeated using a received station of known frequency.

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



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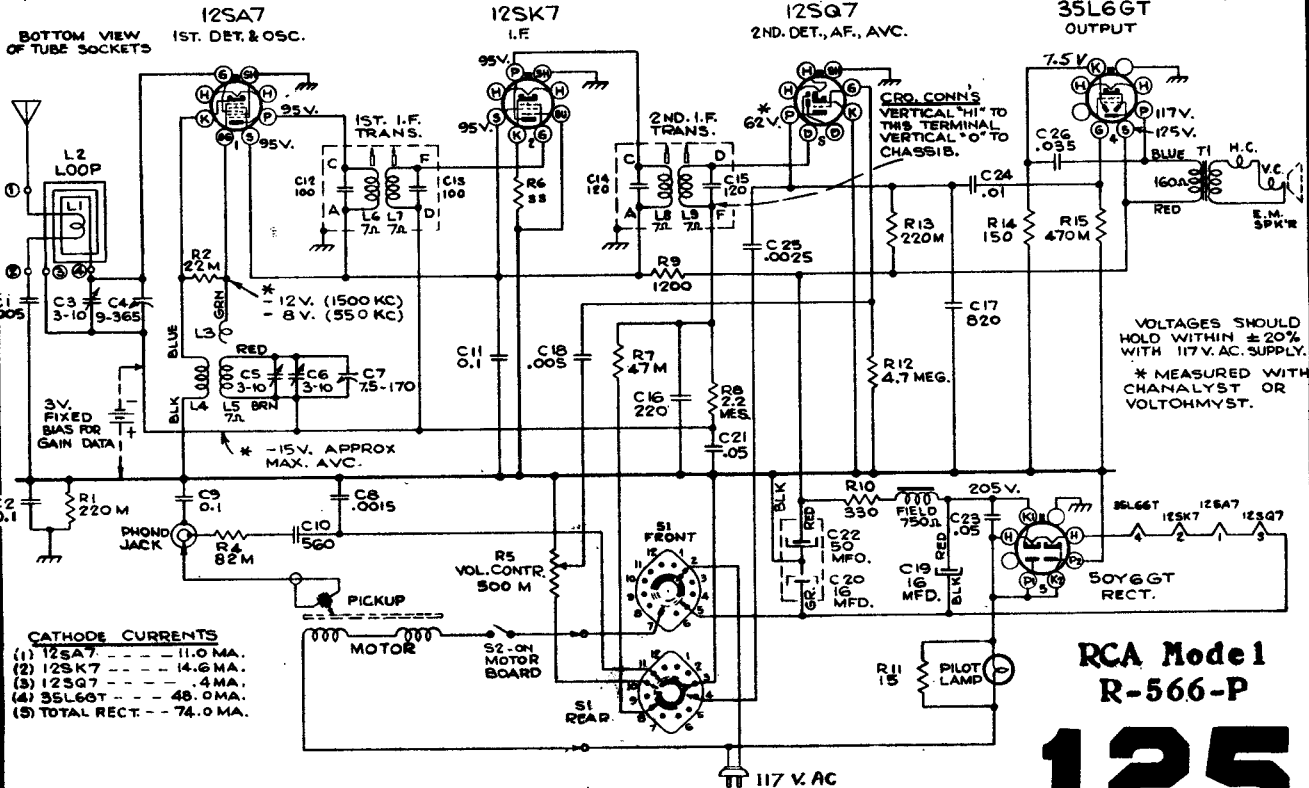
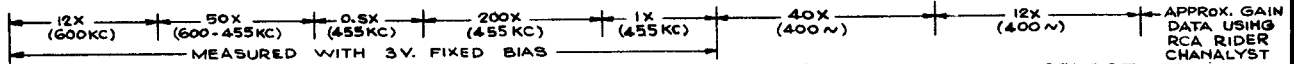
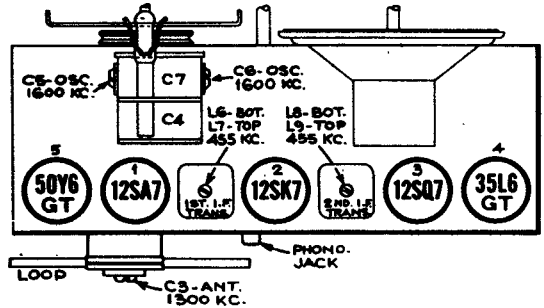
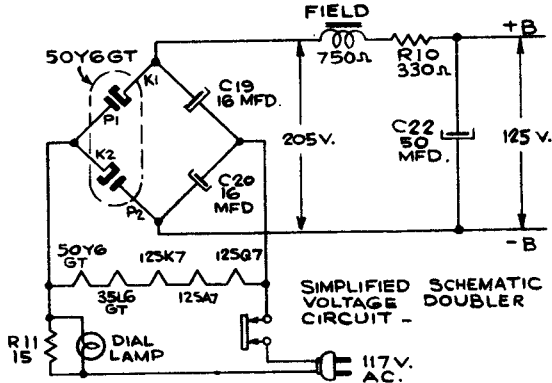


Cathode-Ray Alignment is the preferable method. Connections for the oscillograph are shown in the schematic diagram.

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 1,800 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. | 1,600 kc | Gang at minimum | C5 (osc.) C6 (osc.) |
| 4 | Radiated signal 1,300 kc | | Signal Frequency | C3 (ant.) |
| 5 | Repeat steps 3 and 4. | | | |



CATHODE CURRENTS

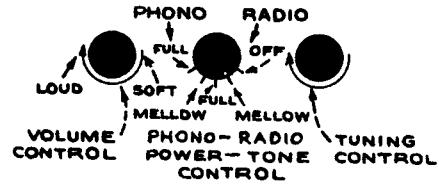
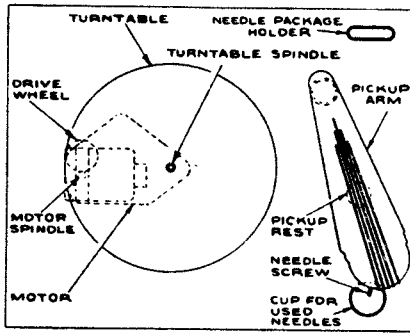
| | |
|-----------------|----------|
| (1) 12SA7 | 11.0 MA. |
| (2) 12SK7 | 14.6 MA. |
| (3) 12SQ7 | 4 MA. |
| (4) 35L6GT | 48.0 MA. |
| (5) TOTAL RECT. | 74.0 MA. |

RCA Model 1
R-566-P

125

MANUAL OF 1942 MOST POPULAR SERVICE DIAGRAMS

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.

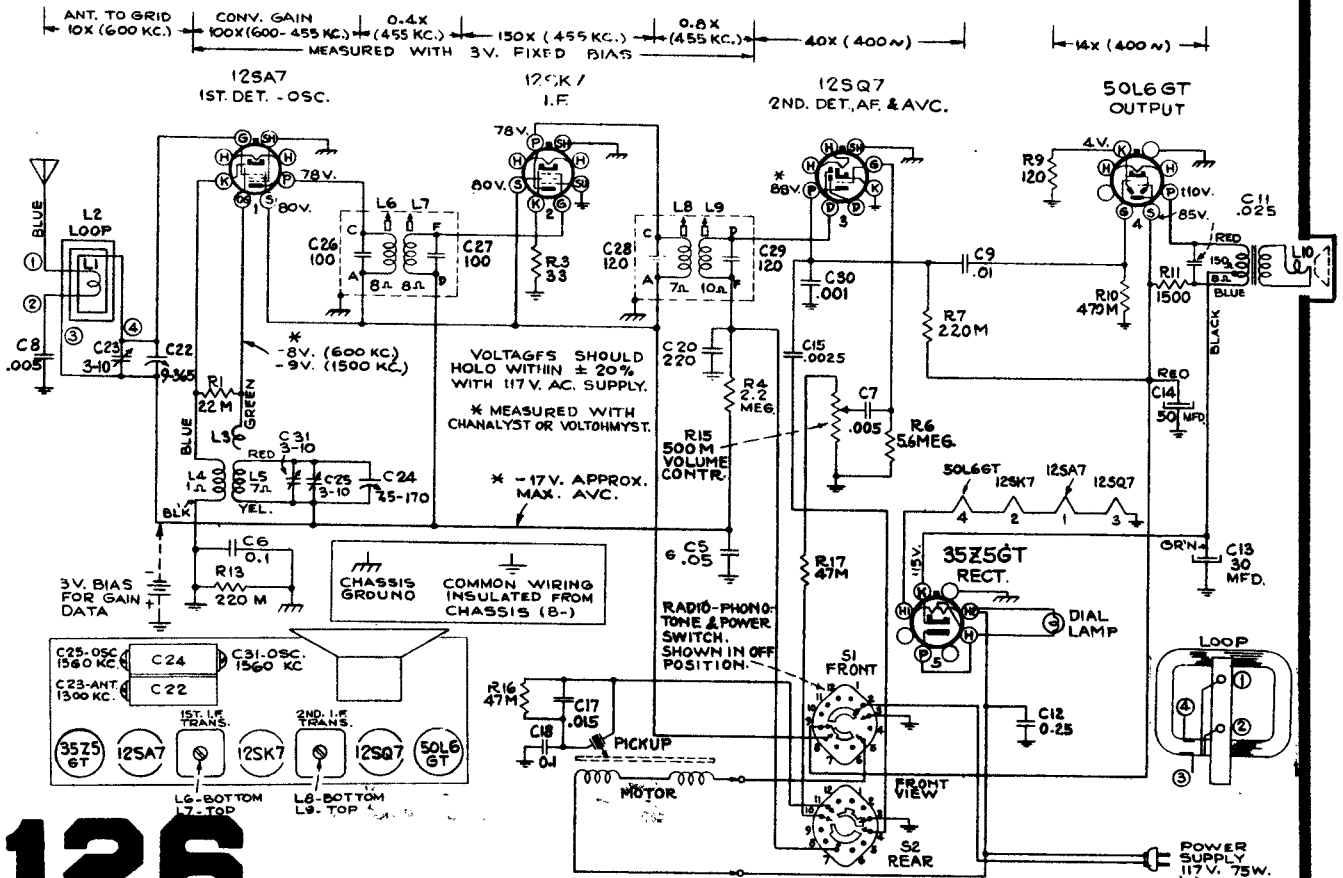
Phonograph Motor Service Data:

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.

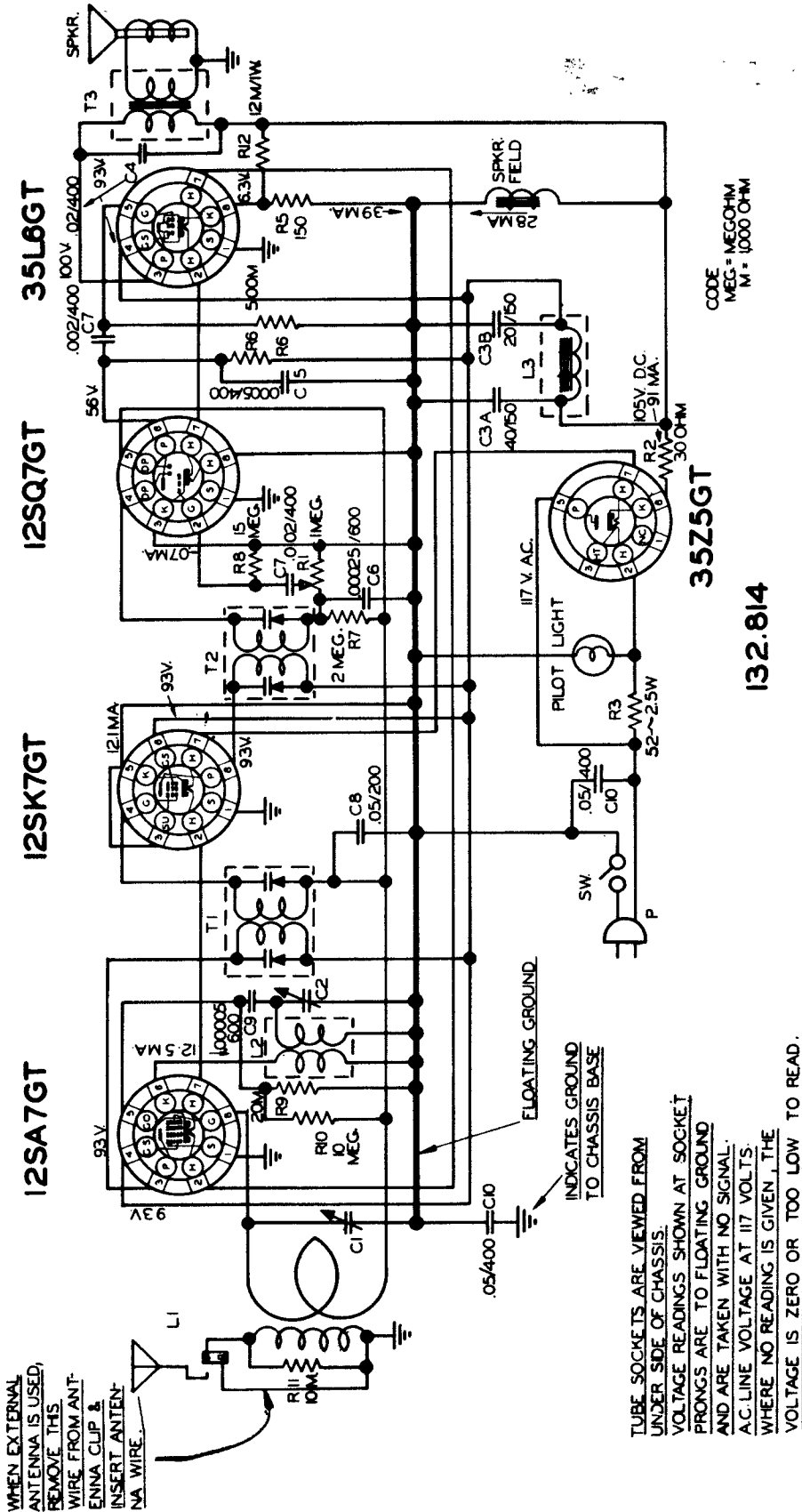
The motor should be lubricated once or twice a year by placing a few drops of S. A. E. 20 (or equivalent) on the turntable spindle and saturating the oil retaining felt pads on the motor shaft with S. A. E. 10 oil. **Caution**—The motor drive spindle and the rubber tire on the idler must be kept clean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



MANUAL OF 1942 MOST POPULAR SERVICE DIAGRAMS



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.

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** |

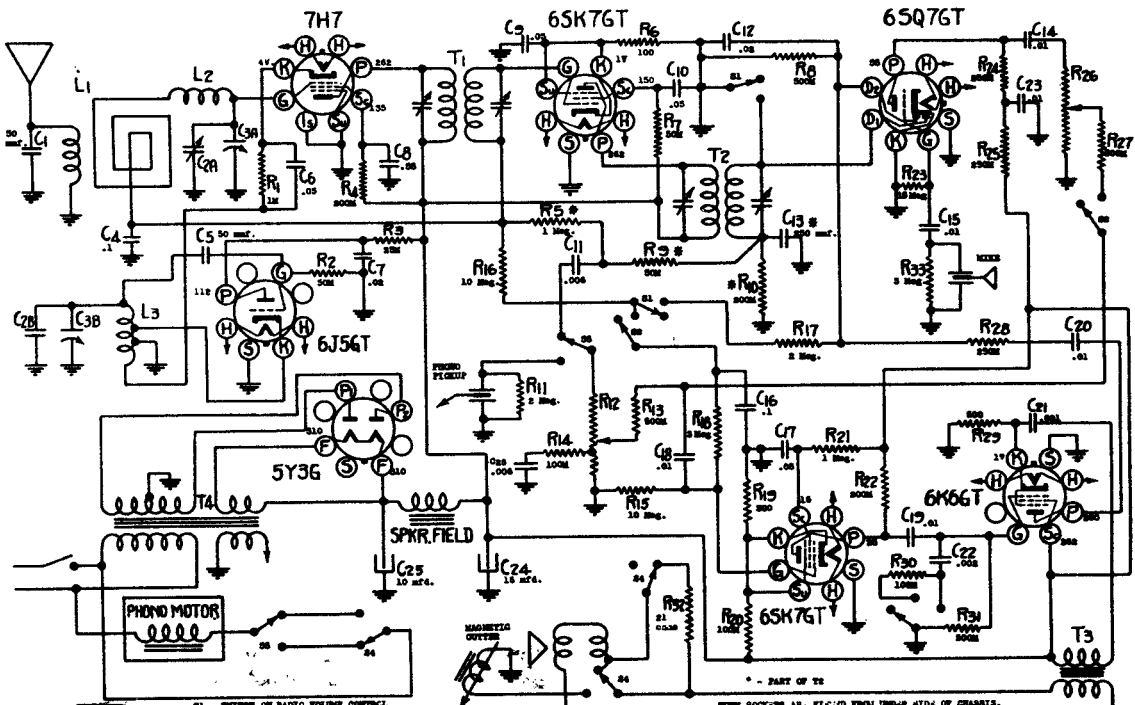
IMPORTANT ALIGNMENT NOTES

* 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.



S1 - SWITCH OF RADIO VOLUME CONTROL
 S2 - SWITCH OF METER VOLUME CONTROL
 S3 - SWITCH OPERATED BY TUNING ARM
 S4 - SWITCH OPERATED BY RESONANCE ARM
 ALL SWITCHES SHOWN IN RADIO POSITION

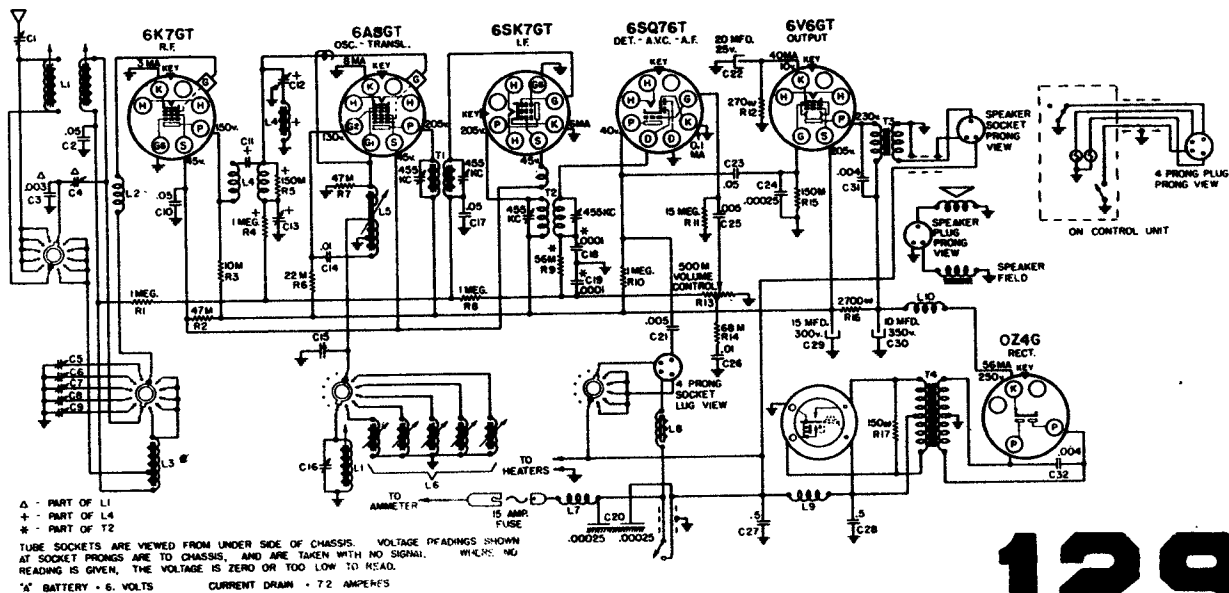
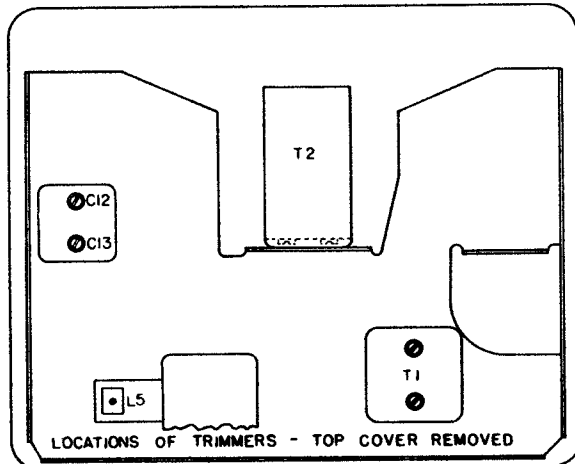
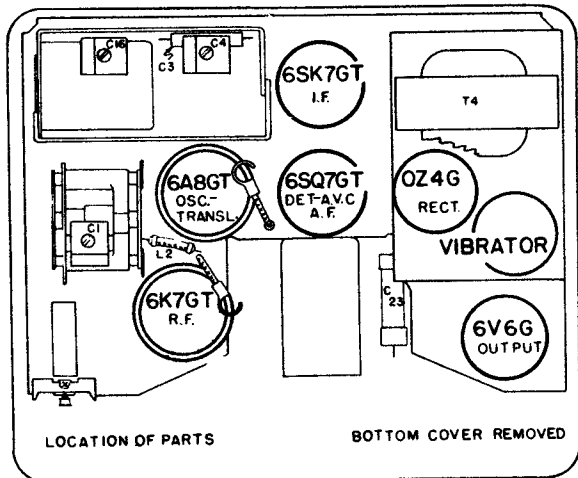
TUBE SOCKETS ARE PLACED FROM UNDER SIDE OF CHASSIS.
 VOLTAGE PLACEMENT SHOWN AT SOCKET PRONGS ARE IN
 CHASSIS LINE UNLESS OTHERWISE INDICATED. CHECK ONE PER
 VOLT FOLLOWING. BEWARE NO ALIGNMENT IS GIVEN, THE
 VOLTAGE IS ZERO OR TOO LOW TO READ

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

Model 7094. Factory No. 101.667

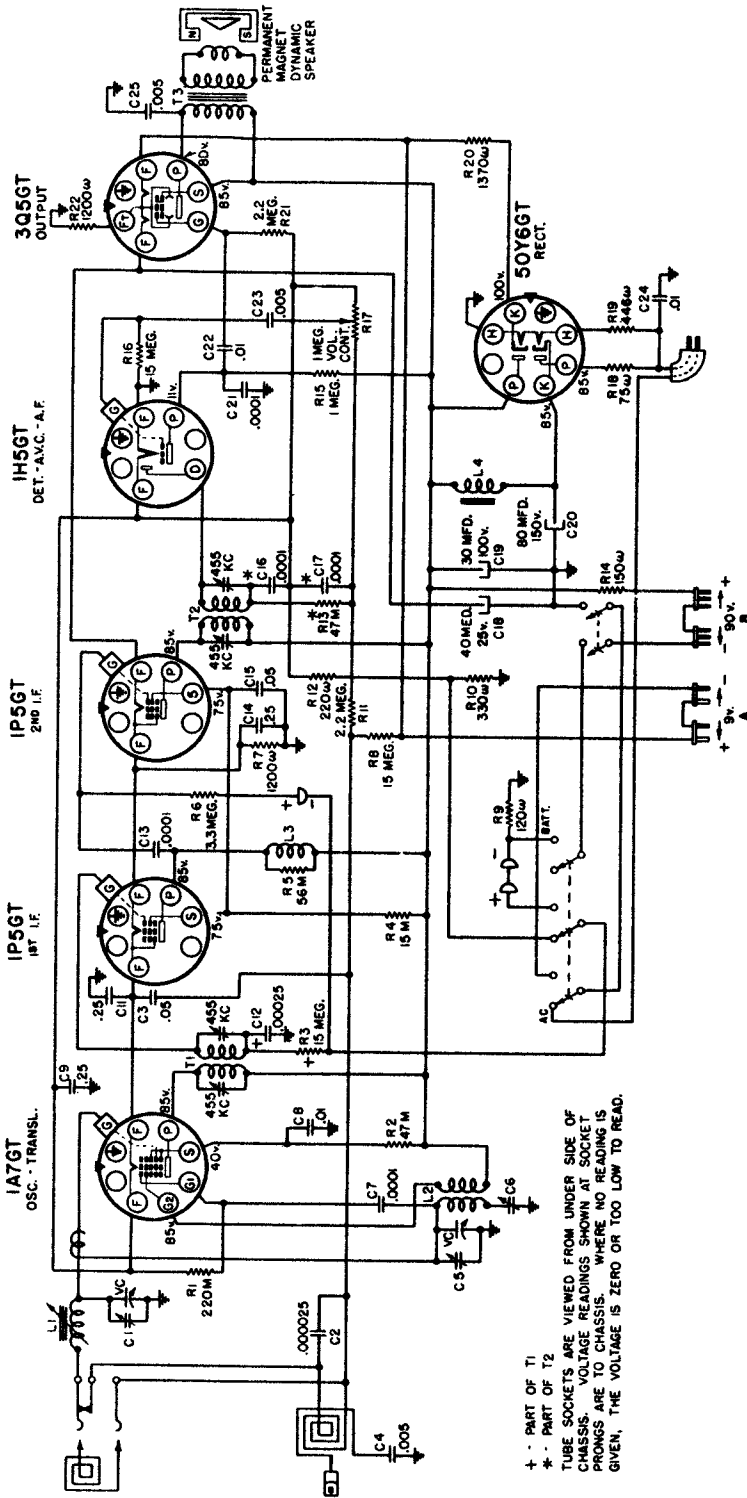
Output meter connections Across loud speaker voice coil
 Connection of signal generator ground lead Receiver Chassis
 Connection of signal generator output lead See chart below
 Dummy antenna value to be in series with generator output. See chart below
 Position of Volume Control Fully on
 Position of 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. Padder |
| 600 kc (rock) | 600 kc | .00005 mfd. | Ant. Conn. | L5 | |



MANUAL OF 1942 MOST POPULAR SERVICE DIAGRAMS

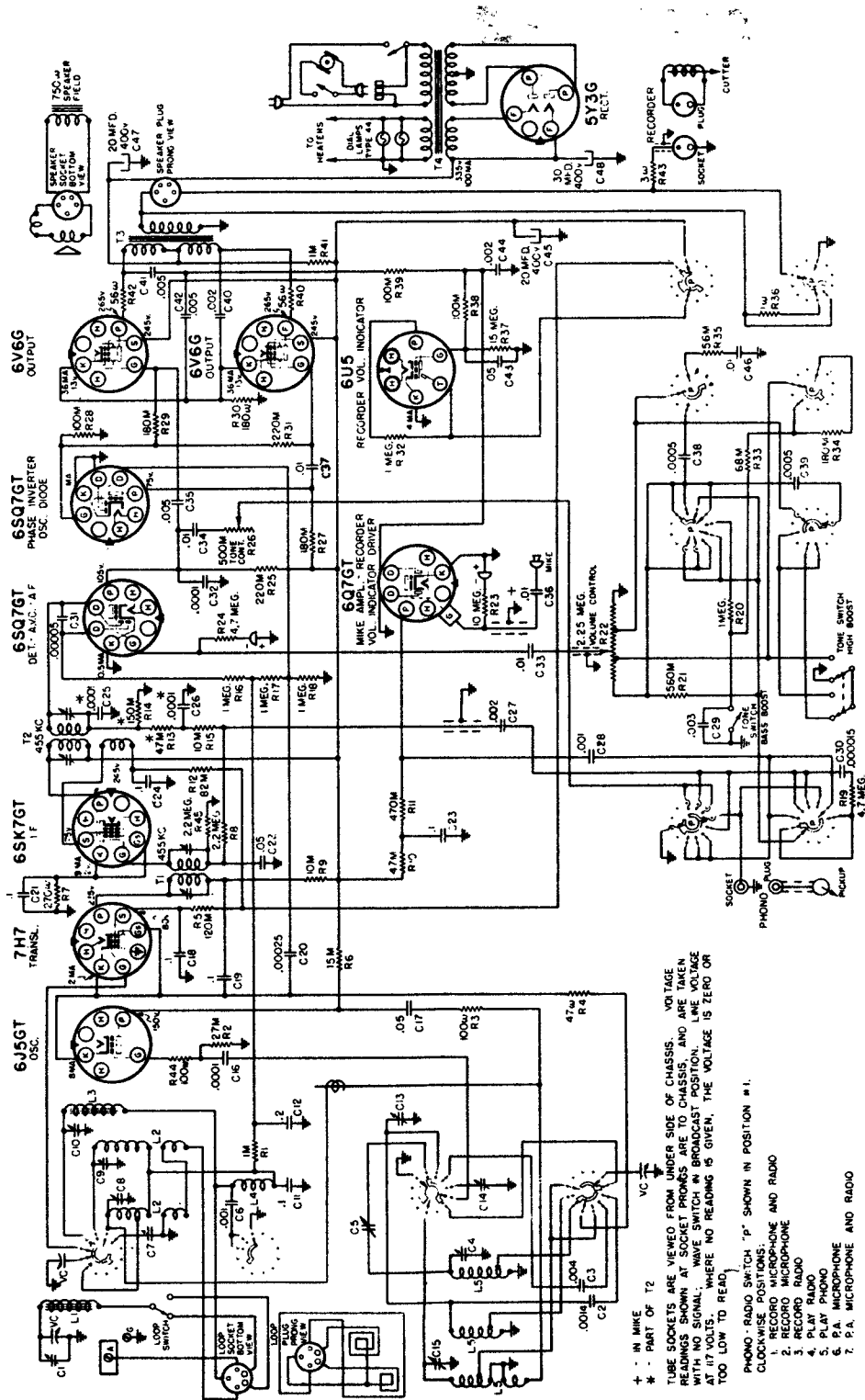
Sears, Roebuck and Co. Model 7083. Factory No. 101.686



+ - 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.

| 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 kc. | 1400 kc | - | Radiating Loop | C1 | Translator |
| 600 kc (rock) | 600 kc | - | Radiating Loop | C6, L1 | Padde: |

MANUAL OF 1942 MOST POPULAR SERVICE DIAGRAMS



* - IN MIKE
 * - PART OF T2
 TUBE SOCKETS ARE VIEWED FROM UNDER SIDE OF CHASSIS. VOLTAGE READINGS SHOWN AT SOCKET PHONES, ARE TO CHASSIS, AND ARE TAKEN WITH NO SIGNAL. WHEN SWITCH IN BRACKET POSITION, VOLTAGE IS ZERO OR TOO LOW TO READ.

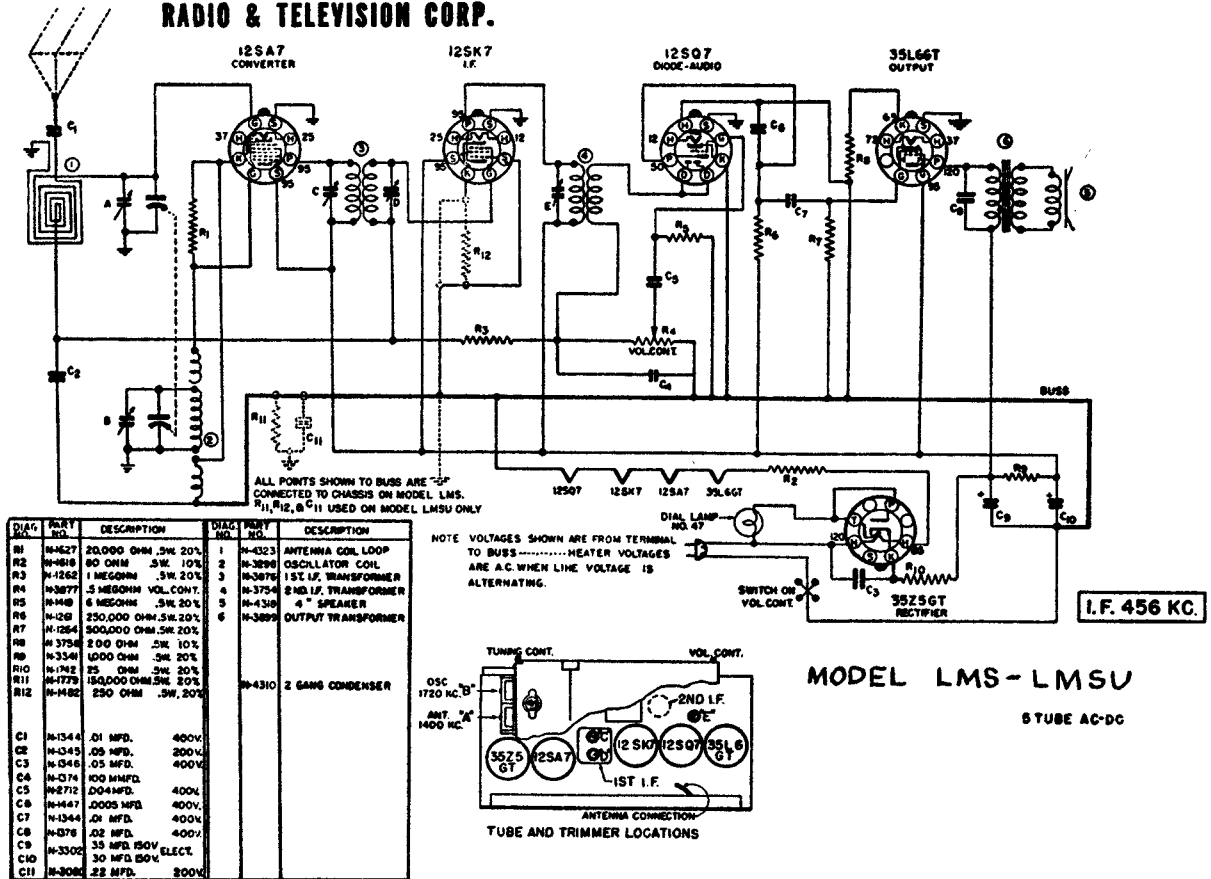
- PHONO - RADIO SWITCH "P" SHOWN IN POSITION #1.
- CLOCKWISE POSITIONS:
1. RECORD MICROPHONE AND RADIO
 2. RECORD MICROPHONE
 3. RECORD RADIO
 4. PLAY PHONO
 5. PLAY RADIO
 6. P.A. MICROPHONE
 7. P.A. MICROPHONE AND RADIO

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

MANUAL OF 1942 MOST POPULAR SERVICE DIAGRAMS

Sonora

Clear as a Bell
RADIO & TELEVISION CORP.



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.

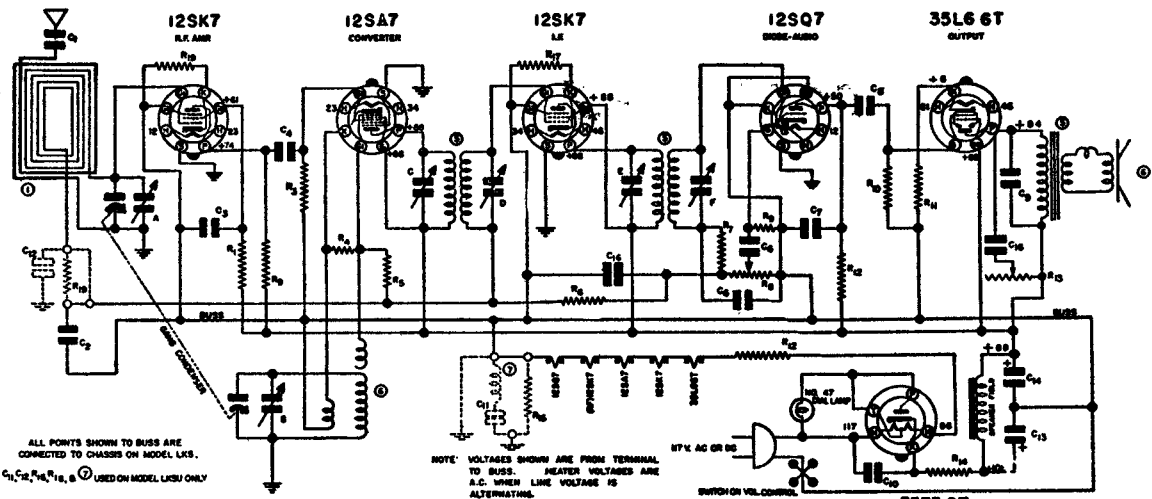
CORRECT ALIGNMENT PROCEDURE. The intermediate frequency (I.F.) stages should be aligned properly as the first step. After the I.F. transformers have been properly adjusted and peaked, the broadcast band should be adjusted.

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 600 KC, and tune in signal on condenser to check alignment of coils.

MANUAL OF 1942 MOST POPULAR SERVICE DIAGRAMS

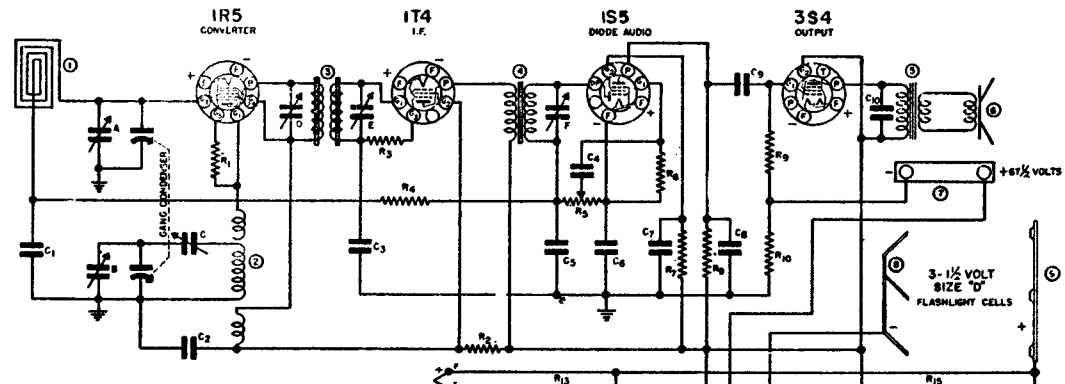
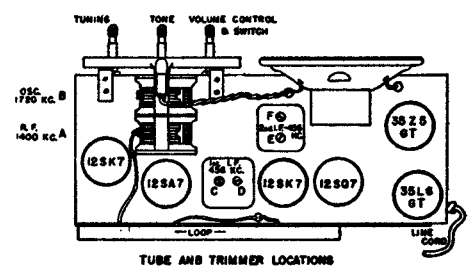


I.F.—456 K.C.

MODEL LKS
6 TUBE AC-DC
SUPERHETERODYNE

Sonora Radio

| DIAG. NO. | PART NO. | DESCRIPTION | DIAG. NO. | PART NO. | DESCRIPTION |
|-----------|----------|--------------------------------|-----------|----------|-------------------------|
| C1 | N-1344 | .01 MFD. 400 V. 20% | R1 | N-4087 | 180 OHM 5 W. 10% |
| C2 | N-1345 | .05 MFD. 200 V. 20% | R12 | N-4088 | 220,000 OHM 5 W. 20% |
| C3 | N-1346 | .05 MFD. 200 V. 20% | R13 | N-4033 | 25,000 OHM TONE CONTROL |
| C4 | N-1373 | 50 MMFD. MICA 20% | R14 | N-4068 | 33 OHM 1.0 W 20% |
| C5 | N-1374 | 100 MFD. MICA 20% | R15 | N-4068 | 33 OHM 1.0 W 20% |
| C6 | N-1024 | 200 MFD. 800 V. 20% | R16 | N-4026 | 220,000 OHM 5 W 20% |
| C7 | N-1647 | 2000 MFD. 400 V. 20% | R17 | N-1481 | 75 OHM 5 W 20% |
| C8 | N-1344 | .01 MFD. 400 V. 20% | R18 | N-1282 | MEGOM 5W 20% |
| C9 | N-1376 | .05 MFD. 400 V. 20% | R19 | N-1481 | 75 OHM 5W 20% |
| C10 | N-1346 | .05 MFD. 400 V. 20% | | | |
| C11 | N-3060 | .22 MFD. 200 V. 10% | 1 | N-4030 | ANTENNA LOOP COIL |
| C12 | N-1345 | .05 MFD. 200 V. 20% | 2 | N-3278 | OSCILLATOR COIL |
| C13 | N-4051 | .55 MFD. 150 W.X. ELECTROLYTIC | 3 | N-4032 | 1ST I.F. TRANSFORMER |
| C14 | N-4051 | .30 MFD. 150 W.X. | 4 | N-4070 | SMB. I.F. TRANSFORMER |
| C15 | N-1346 | .05 MFD. 400 V. 20% | 5 | N-4062 | OUTPUT TRANSFORMER |
| C16 | N-1374 | 100 MFD. MICA 20% | 6 | N-4070 | 6" DYNAMIC SPEAKER |
| | | | 7 | N-4031 | CHOKES (WOUND ON C13) |
| R1 | N-1259 | 15,000 OHM .5 W. 20% | | | |
| R2 | N-4048 | 2500 OHM .5 W. 10% | | | |
| R3 | N-4032 | 47,000 OHM .5 W. 20% | | | |
| R4 | N-4028 | 22,000 OHM .5 W 20% | | | |
| R5 | N-1283 | 10 MEGOHM .5 W. 20% | | | |
| R6 | N-4086 | 3.3 MEGOHM .8 W. 20% | | | |
| R7 | N-4042 | 47,000 OHM .5 W. 20% | | | |
| R8 | N-4071 | 0.5 MEGOHM VOLUME CONTROL | | | |
| R9 | N-4041 | 4.7 MEGOHM .5 W. 20% | | | |
| R10 | N-4042 | 47,000 OHM .5 W. 20% | | | |



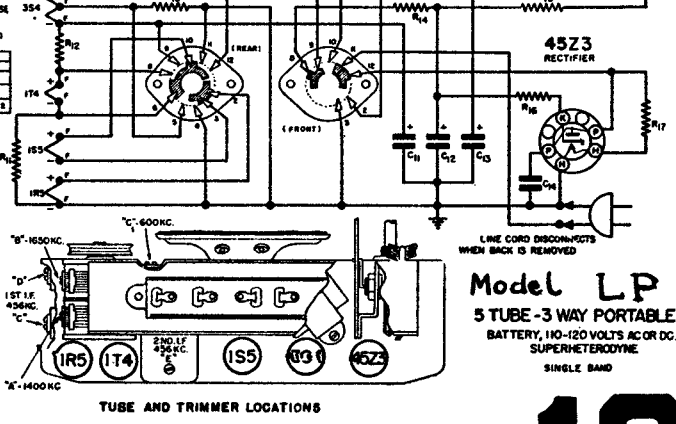
SWITCH SHOWN IN COUNTER CLOCKWISE (AC-DC) POSITION.

(BOTH VIEWS AS SEEN FROM SHAFT END.)

| CONTACTS MADE | FRONT | REAR |
|---------------|-----------|-------------------------|
| COM | 1-3, 4-12 | 2, 3, 9-10 |
| OFF | NONE | 1-3, 4, 8-10-11 |
| BATTERY | 1-3, 9-10 | 2-3, 3-3, 8, 9-10-12-13 |

I.F. 456 KC

| DIAG. NO. | PART NO. | DESCRIPTION | DIAG. NO. | PART NO. | DESCRIPTION |
|-----------|----------|---------------------|-----------|----------|-----------------------------|
| R1 | N-1778 | 100,000 OHM .5W 20% | C1 | N-1345 | .05 MFD. 200 V. |
| R2 | N-4278 | 4,700 OHM .5W 10% | C2 | N-1345 | .05 MFD. 200 V. |
| R3 | N-1283 | 10 MEGOHM .5W 20% | C3 | N-1346 | .01 MFD. 400 V. |
| R4 | N-4277 | 2.2 MEGOHM .5W 20% | C4 | N-2718 | .004 MFD. 400 V. |
| R5 | N-1283 | 10 MEGOHM .5W 20% | C5 | N-1351 | .1 MFD. 200 V. |
| R6 | N-4028 | 22,000 OHM .5W 20% | C7 | N-1344 | .01 MFD. 400 V. |
| R7 | N-4062 | 3.3 MEGOHM .5W 20% | C8 | N-1342 | 50 MMFD. MICA |
| R8 | N-1282 | 1 MEGOHM .5W 20% | C9 | N-1344 | .01 MFD. 400 V. |
| R9 | N-4277 | 2.2 MEGOHM .5W 20% | C10 | N-2712 | .004 MFD. 400 V. |
| R10 | N-4279 | 820 OHM .5W 10% | C11 | N-4280 | 30 MFD. 150 V. ELECTROLYTIC |
| R11 | N-4228 | 680 OHM .5W 10% | C12 | N-4206 | 30 MFD. 150 V. |
| R12 | N-4280 | 56 OHM .5W 10% | C13 | N-1346 | .05 MFD. 400 V. |
| R13 | N-4281 | 1800 OHM .5W 10% | | | |
| R14 | N-4085 | 2200 OHM .5W 10% | | | |
| R15 | N-1870 | 4.8 W. 5% | | | |
| R16 | N-4252 | 82 OHM 1.3 W 10% | | | |
| R17 | N-1000 | 1000 OHM 0.5 W 10% | | | |
| | | | | | |
| | | | | | |
| | | | | | |
| | | | | | |
| | | | | | |

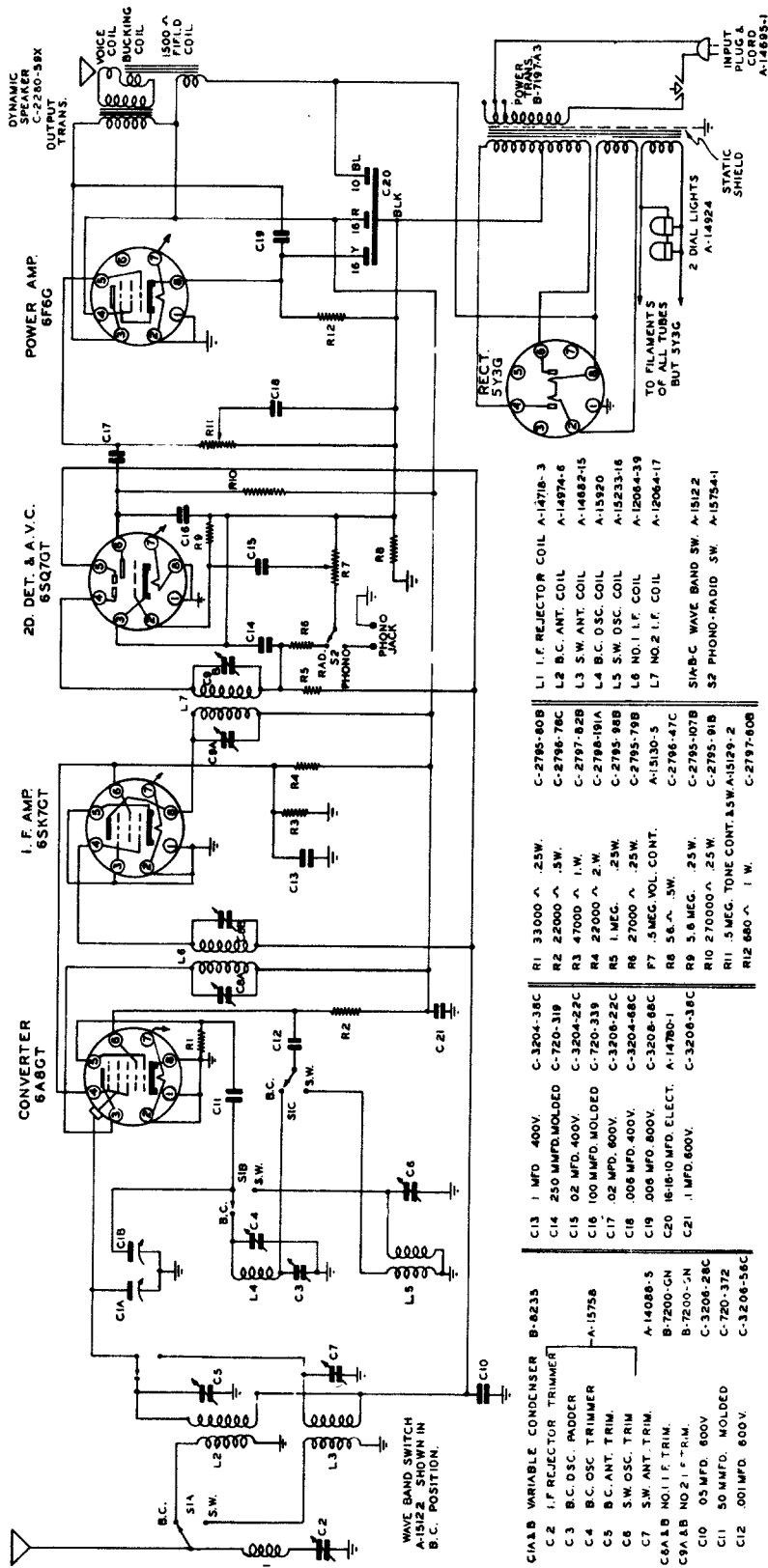


Model LP
5 TUBE - 3 WAY PORTABLE
BATTERY, 110-120 VOLTS AC OR DC.
SUPERHETERODYNE
SINGLE BAND

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

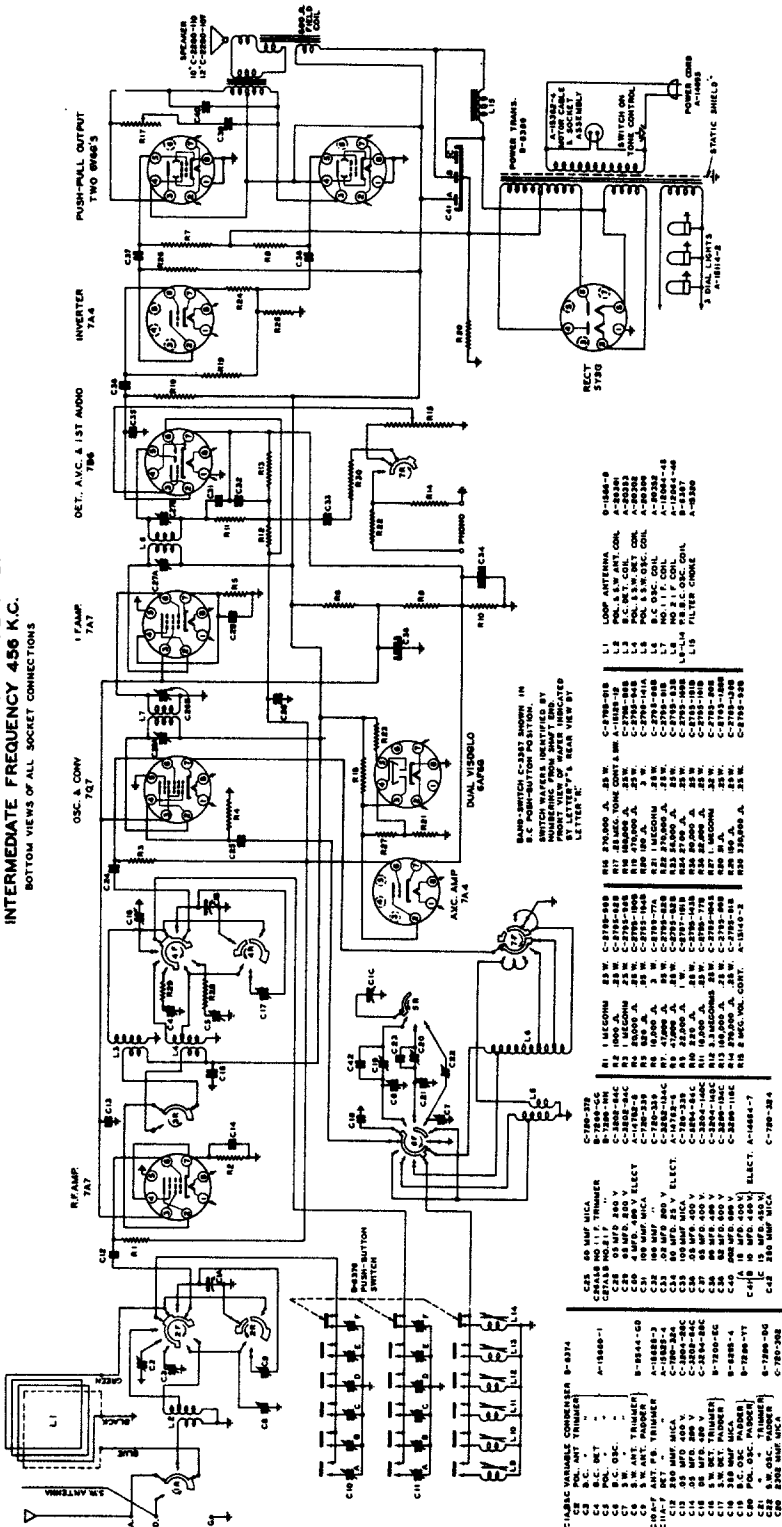


B.C. OSC. CIRCUIT FREQUENCY IS ABOVE
ANTENNA FREQ.
S.W. OSC. CIRCUIT FREQ. IS BELOW
ANTENNA FREQ.

- C1A B. VARIABLE CONDENSER B-8233
- C2 I.F. REFLECTOR TRIMMER
- C3 B.C. OSC. TRIMMER
- C4 B.C. OSC. TRIMMER A-1575B
- C5 B.C. ANT. TRIM
- C6 S.W. OSC. TRIM
- C7 S.W. ANT. TRIM
- C8A B. NO. 1 I.F. TRIM. A-1408B-5
- C9A B. NO. 2 I.F. TRIM. B-7200-5N
- C10 .05 MFD. 600V. C-3206-28C
- C11 .50 MFD. MOLDED C-720-372
- C12 .001 MFD. 600V. C-3206-58C
- C13 1 MFD. 400V. C-3204-38C
- C14 .250 MMFD. MOLDED C-720-319
- C15 .02 MFD. 400V. C-3204-22C
- C16 100 MMFD. MOLDED C-720-339
- C17 .02 MFD. 600V. C-3206-22C
- C18 .005 MFD. 400V. C-3204-68C
- C19 .005 MFD. 600V. C-3206-68C
- C20 1616-10 MFD. ELECT. A-14780-1
- C21 .1 MFD. 600V. C-3206-38C
- R1 33000 Ω . 25W. C-2785-60B
- R2 22000 Ω . 5W. C-2786-78C
- R3 47000 Ω . 1W. C-2787-82B
- R4 22000 Ω . 2W. C-2788-181A
- R5 1 MEG. .25W. C-2785-98B
- R6 27000 Ω . .25W. C-2785-79B
- R7 .5 MEG. VOL. CONT. A-15130-5
- R8 56 Ω . 5W. C-2786-47C
- R9 5.5 MEG. .25W. C-2785-107B
- R10 270000 Ω . .25W. C-2785-91B
- R11 .5 MEG. TONE CONT. 3SW. A-15129-2
- R12 680 Ω . 1W. C-2787-60B
- L1 I.F. REFLECTOR COIL A-14718-3
- L2 B.C. ANT. COIL A-14974-6
- L3 S.W. ANT. COIL A-14882-15
- L4 B.C. OSC. COIL A-15920
- L5 S.W. OSC. COIL A-15233-16
- L6 NO. 1 I.F. COIL A-12064-39
- L7 NO. 2 I.F. COIL A-12064-17
- S1A B.C. WAVE BAND SW. A-15122
- S2 PHONO-RADIO SW. A-15754-1

MANUAL OF 1942 MOST POPULAR SERVICE DIAGRAMS

SPARTAN SUPERHETERODYNE MODEL 10-21 INTERMEDIATE FREQUENCY 455 K.C. BOTTOM VIEWS OF ALL SOCKET CONNECTIONS



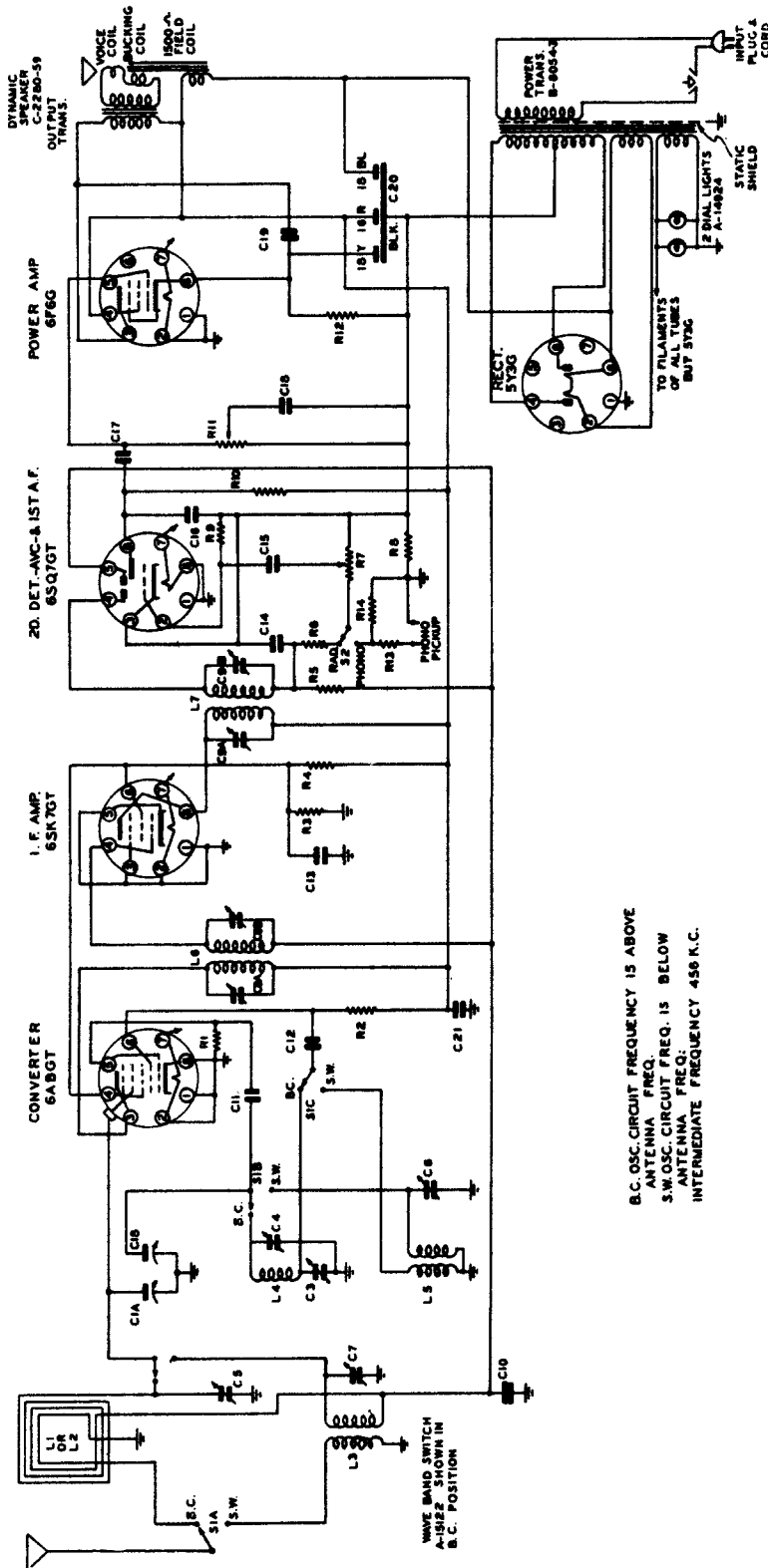
| TUBE | FUNCTION | Voltage of Socket Prongs to Gnd. See Prong Nos. on Schematic Dia. | | | | | | | | |
|-------|---------------------------|-------------------------------------------------------------------|-------|-------|-------|-------|-------|-------|-------|-------|
| | | No. 1 | No. 2 | No. 3 | No. 4 | No. 5 | No. 6 | No. 7 | No. 8 | No. 9 |
| 7A7 | R-F Amplifier | 0 | 260 | 75 | 1.8 | 0 | 0 | 3.8 | 6.2* | - |
| 7A7 | Osc - Converter | 0 | 260 | 75 | -2.3 | 0 | 0 | 0 | 6.2* | - |
| 7A7 | I.F. Amplifier | 0 | 260 | 75 | 3 | 0 | 0 | 3 | 6.2* | - |
| 7B6 | 2nd Det - AVC - 1st Audio | 0 | 140 | 0 | 1.1 | 0 | 0 | .5 | 6.2* | - |
| 7A4 | Inverter | 0 | 223 | 50 | 0 | 0 | 17 | 60 | 6.2* | - |
| 7A4 | Viso-Glo Amplifier | 0 | 40 | 160 | 0 | 275 | 0 | 1.2 | 6.2* | - |
| 6Y6G | Power Amplifier | 0 | 0 | 260 | 265 | -17 | -17.5 | 6.3* | 0 | - |
| 6Y6G | Power Amplifier | 0 | 0 | 260 | 265 | -17 | 265 | 6.3* | 0 | - |
| 5Y3G | Rectifier | 0 | 390 | 0 | 355* | 0 | 355* | 0 | 390 | - |
| 6AF6G | Viso-Glo | 0 | 0 | 40 | 17 | 260 | 0 | 6.2* | 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. Unless designated otherwise, voltages in table are + DC volts.
*AC volts.

MANUAL OF 1942 MOST POPULAR SERVICE DIAGRAMS

SPARTON SUPERHETERODYNE MODELS 5321 & 5521

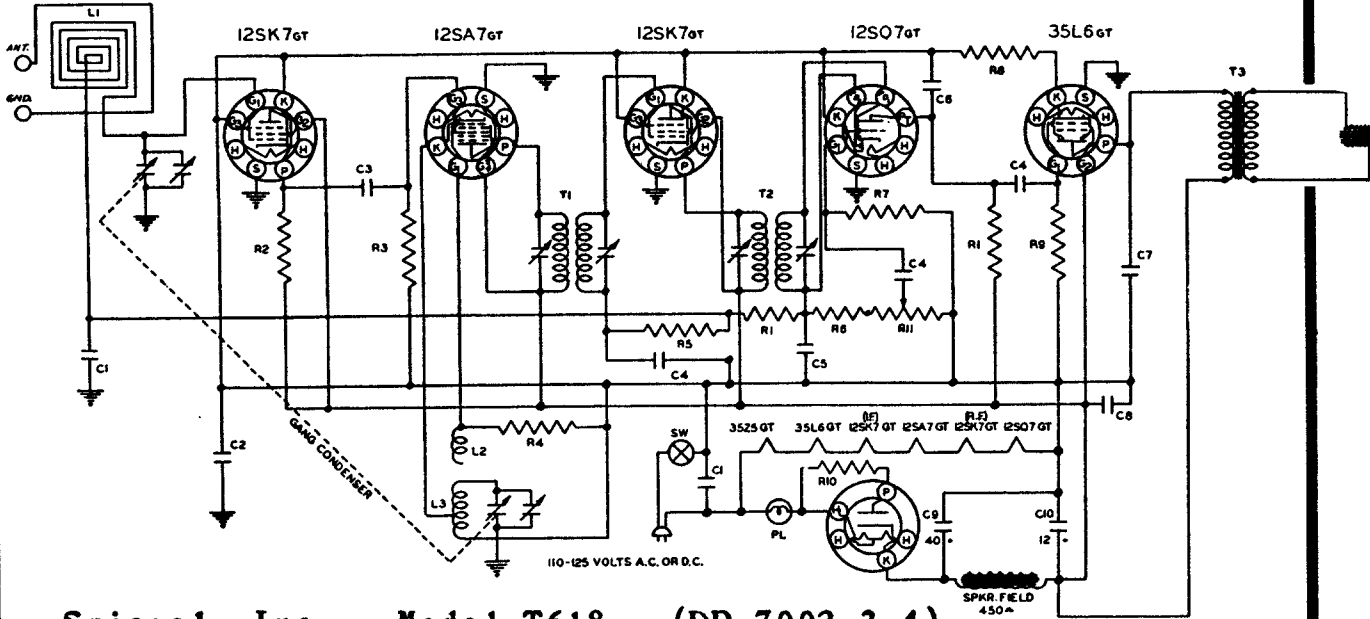
BOTTOM VIEW OF ALL SOCKET CONNECTIONS.



B.C. OSC. CIRCUIT FREQUENCY IS ABOVE
ANTENNA FREQ.
S.W. OSC. CIRCUIT FREQ. IS BELOW
ANTENNA FREQ.
INTERMEDIATE FREQUENCY 456 K.C.

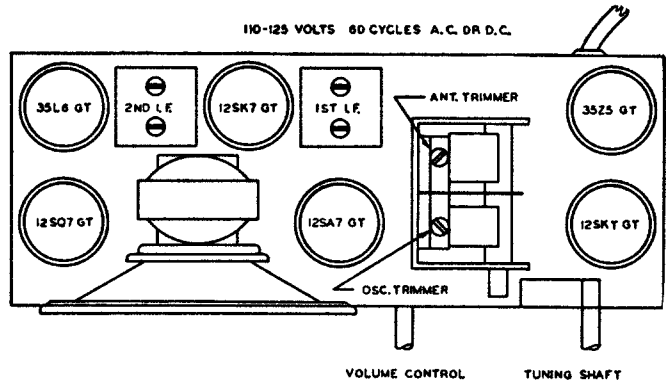
- C1A/B VARIABLE CONDENSER B-8235
- C-3 B.C. OSC. PADDER
- C-4 B.C. OSC. TRIMMER
- C-5 B.C. ANT. TRIMMER
- C-6 S.W. OSC. TRIMMER
- C-7 S.W. ANT. TRIMMER
- CPA/B NO. 1 I.F. TRIMMER
- CPAB NO. 2 I.F. TRIMMER
- C10 .05 MFD. 600V.
- C11 50 MFD. MOLDED
- C12 .001 MFD. 600V.
- C13 .1 MFD. 400V.
- C14 250 MFD. MOLDED
- C15 .02 MFD. 400V.
- C16 100 MFD. MOLDED
- C17 .02 MFD. 600V.
- C18 100 MFD. 600V.
- C19 .006 MFD. 600V.
- C20 18-18-10 MFD. ELECT.
- C21 .1 MFD. 600V.
- C-3204-38C
- C-720-39
- C-3204-28C
- C-720-39
- C-3208-22C
- C-3208-25C
- C-3208-68C
- C-3208-86C
- C-3208-39C
- R1 33,000 Ω . 25W.
- R2 2,000 Ω . 1W.
- R3 47,000 Ω . 1W.
- R4 2,000 Ω . 25W.
- R5 27,000 Ω . 25W.
- R6 5 MEG. Ω . VOL. CONT.
- R7 50 Ω .
- R8 50 Ω .
- R9 5.6 MEG. 25W.
- R10 270,000 Ω . 25W.
- R11 5 MEG. TONE CONT. & S.W.A. 529-2
- R12 680 Ω . 1W.
- R13 270,000 Ω . 25W.
- R14 270,000 Ω . 25W.
- L1 B.C. ANT. COIL-5521- C-3290-9
- L2 B.C. ANT. COIL-5321- C-3290-9
- L3 S.W. ANT. COIL A-1482-15
- L4 S.W. OSC. COIL A-1520-1
- L5 S.W. OSC. COIL A-1523-18
- L6 NO. 1 I.F. COIL A-12064-39
- L7 NO. 2 I.F. COIL A-12064-49
- S1A-B-C WAVE BAND SW. A-1522
- S2 PHONO-RADIO SW. A-1575-1
- C-2795-80B
- C-2795-74C
- C-5795-42B
- C-2795-90A
- C-2795-104B
- C-2795-79B
- A-15130-5
- C-2798-47C
- C-2795-107B
- C-2795-91B
- C-2795-80B
- C-2795-91B
- C-2795-91B
- C-2795-91B
- C-2795-91B
- C-2795-91B

MANUAL OF 1942 MOST POPULAR SERVICE DIAGRAMS

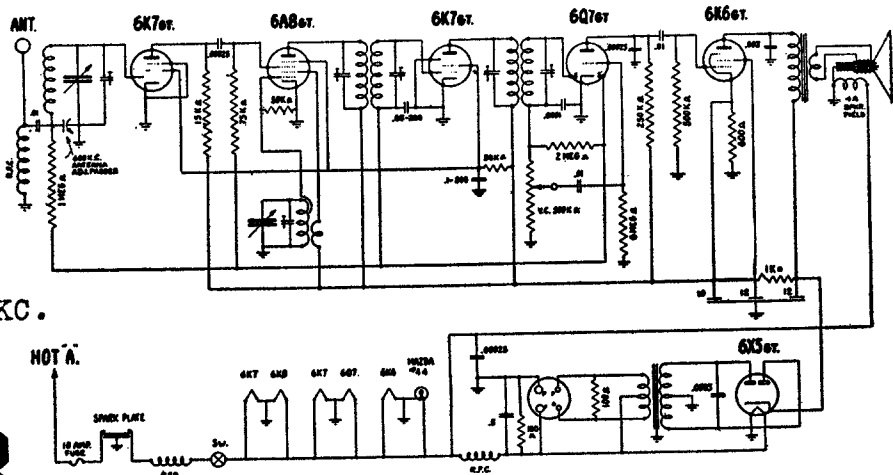


Spiegel, Inc. Model T618. (DP-7002-3-4)

| PART NO. | SCHEMATIC LOCATION | DESCRIPTION |
|----------|--------------------|----------------------------------------|
| 3-8 | R1 | 1 MEG. $\frac{1}{2}$ WATT 20K RESISTOR |
| 3-36 | R2 | 1500 Ω " " " " |
| 3-17 | R3 | 100000 Ω " " " " |
| 3-26 | R4 | 30000 Ω " " " " |
| 3-141 | R5 | 6 MEG. " " " " |
| 3-4 | R6 | 50000 Ω " " " " |
| 3-2 | R7 | 2 MEG. " " " " |
| 3-34 | R8 | 100 Ω " " " " |
| 3-1 | R9 | 500000 Ω " " " " |
| 3-33 | R10 | 50 Ω " " " " |
| 5-301 | R11 | 1 MEGOHM VOLUME CONTROL |
| 6-14 | SW | SWITCH |
| 6-30 | 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 " " " |
| 6-305 | C6 | .0005 " 600 VOLTS " " " |
| 6-306 | C7 | .005 " " " " " |
| 6-28 | C8 | .1 " 400 " " " |
| 7-301 | C9 | 40 " 150 " " " |
| | C10 | 12 " 150 " " " |



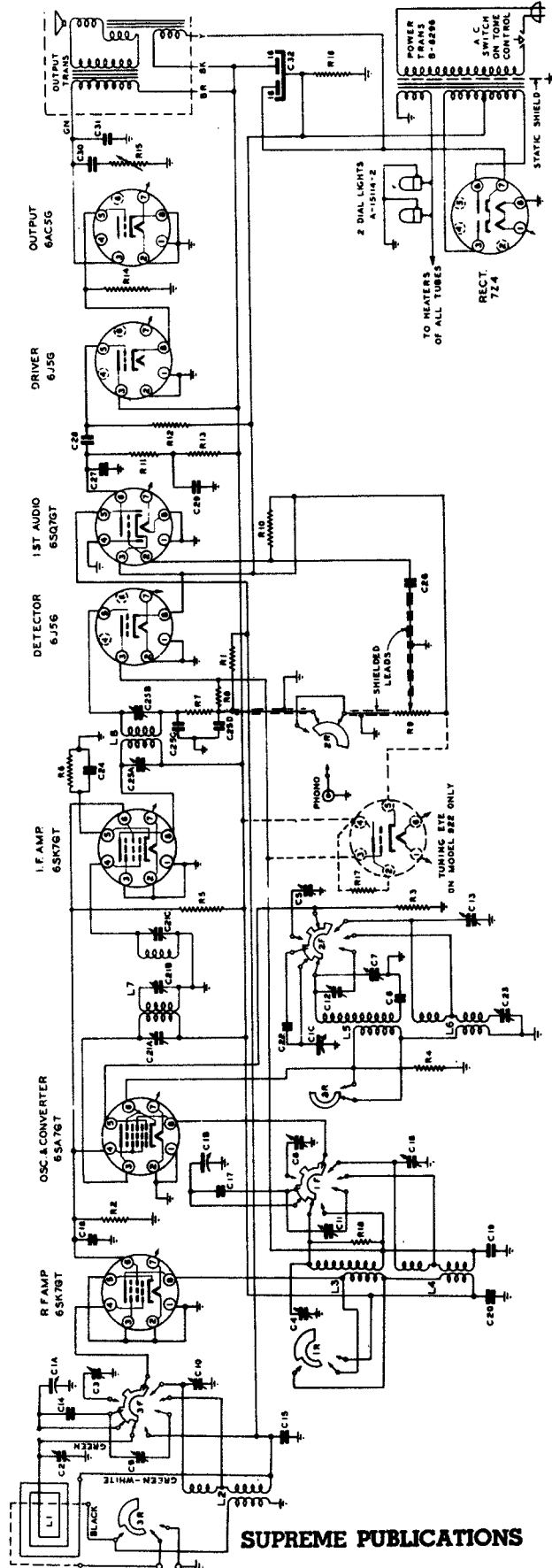
Spiegel, Inc. Model TA616. (DP-7450 and EP-2450)



I.F. 456 KC.

MANUAL OF 1942 MOST POPULAR SERVICE DIAGRAMS

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



BAND-SWITCH B-2337 SHOWN IN B.C. POSITION.
"F" - FRONT, "R." - REAR.

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

- C1A B.C. 3-GANG VARIABLE CONDENSER
- C2 B.C. ANT. TRIMMER
- C3 57-78.874-100 MC ANT. TRIMMER
- C4 B.C. DET. TRIMMER OSC
- C5 57-78.874-100 MC DET.
- C6 57-78.874-100 MC DET.
- C7 B.C. OSC TRIMMER
- C8 " " PADDER
- C9 57-78.874-100 MC ANT. TRIMMER
- C10 57-78.874-100 MC ANT. TRIMMER
- C11 57-78.874-100 MC DET. TRIMMER
- C12 57-78.874-100 MC DET.
- C13 57-78.874-100 MC DET.
- C14 57-78.874-100 MC ANT. TRIMMER
- C15 57-78.874-100 MC ANT. TRIMMER
- C16 1 MFD. 400 V

- B-20343
- B-20343-1
- B-20343-2
- B-20343-3
- B-20343-4
- B-20343-5
- B-20343-6
- B-20343-7
- B-20343-8
- B-20343-9
- B-20343-10
- B-20343-11
- B-20343-12
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- B-20343-100

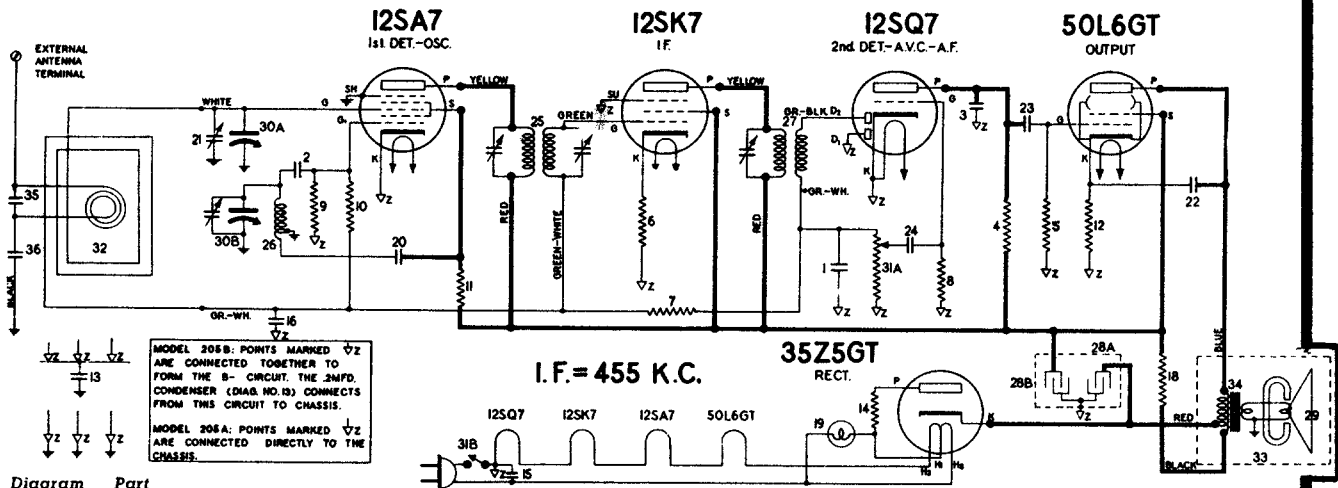
- R1 2.2 MEC.
- R2 27,000 Ω
- R3 15,000 Ω
- R4 470 Ω
- R5 9,100 Ω
- R6 300 Ω
- R7 56,000 Ω
- R8 2.2 MEC.
- R9 VOL. CONTROL .5 MEC.
- R10 4.7 MEC.
- R11 70,000 Ω
- R12 100,000 Ω
- R13 100,000 Ω
- R14 22,000 Ω
- R15 TONE CONTROL 2.2 MEC.
- R16 22,000 Ω
- R17 22,000 Ω
- R18 22,000 Ω
- R19 22,000 Ω
- R20 22,000 Ω
- R21 22,000 Ω
- R22 22,000 Ω
- R23 22,000 Ω
- R24 22,000 Ω
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- R95 22,000 Ω
- R96 22,000 Ω
- R97 22,000 Ω
- R98 22,000 Ω
- R99 22,000 Ω
- R100 22,000 Ω

- L1 LOOP ANTENNA
- L2 157-78.874-100 0.89-13A
- L3 157-78.874-100 0.89-13A
- L4 157-78.874-100 0.89-13A
- L5 B.C. OSC. COIL
- L6 157-78.874-100 0.89-13A
- L7 NO. 2 I.F. COIL
- L8 NO. 2 I.F. COIL

- C-2795-1028
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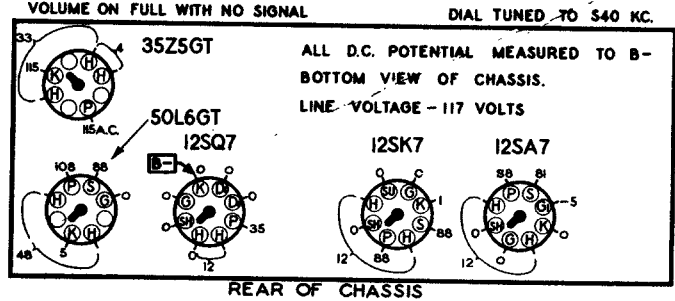
MANUAL OF 1942 MOST POPULAR SERVICE DIAGRAMS

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 | 110553 | 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 | 119193 | 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. |

SOCKET VOLTAGES



Use a voltmeter of 1000 ohms per volt.

ALIGNMENT PROCEDURE

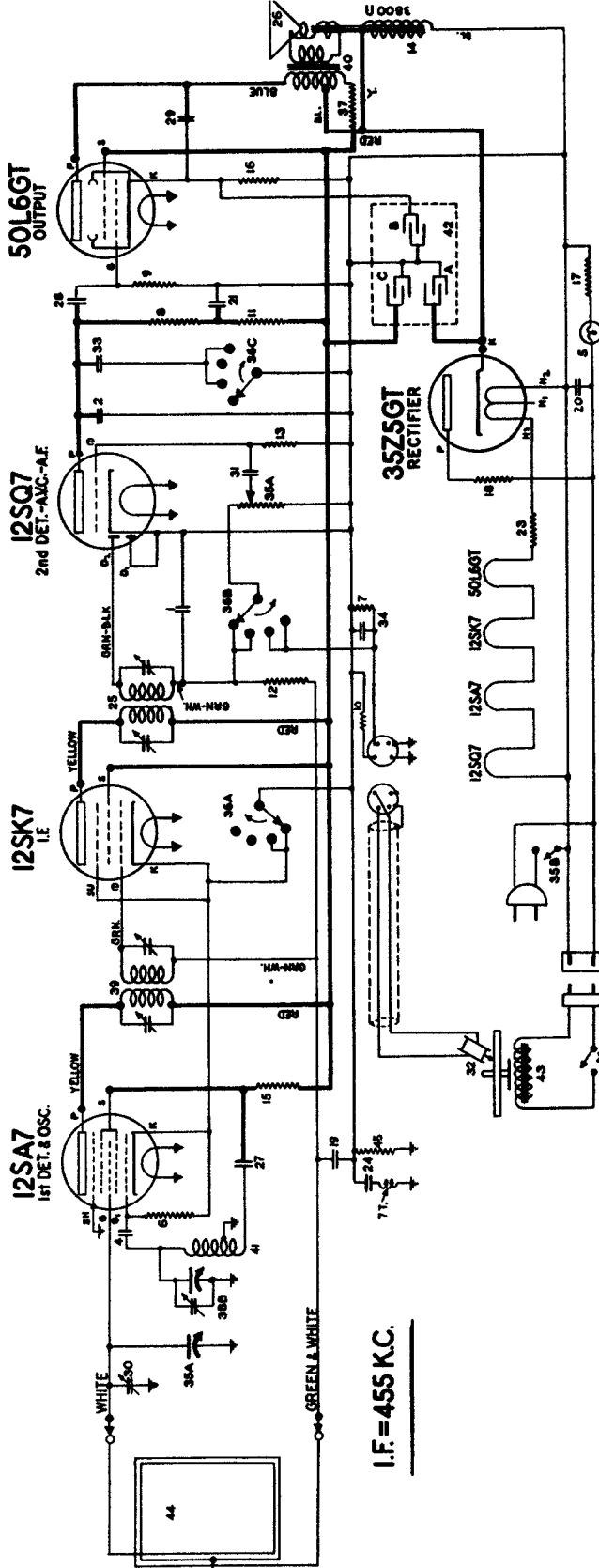
1. Connect output meter across the voice coil; or from 50L6GT plate to B— as shown on voltage chart.
2. Connect the ground lead of the signal generator to the chassis through a .25 mfd. condenser.
3. Set the volume control to the maximum volume position.
4. Set dial pointer to lowest frequency point 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 | 119193 | Condenser—.01 mfd. 600 volt (205A only) |

MISCELLANEOUS PARTS

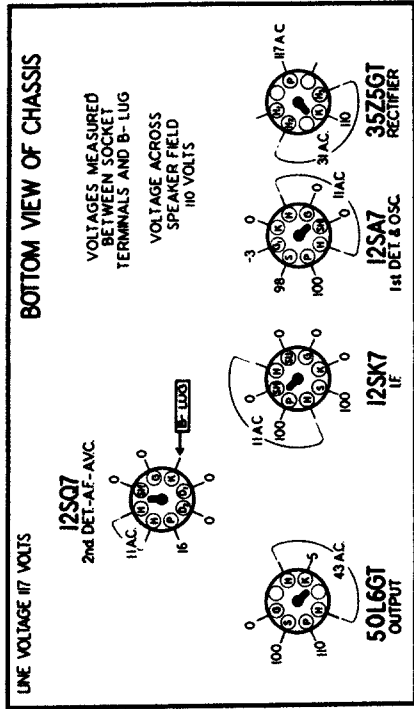
| Part Number | Description |
|-------------|-------------------------------------------|
| 116467 | Base for mounting electrolytic condenser. |
| 114955 | Clamp for dial cord. |
| 112745 | Clip—coil mounting |
| 117057 | Cord—drive supplied in 3' lengths. |
| 500562 | Dial Scale |
| 500422 | Knob (for 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.



REAR OF CHASSIS

Diagram Number

| 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 |
| 36A-36B | 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)

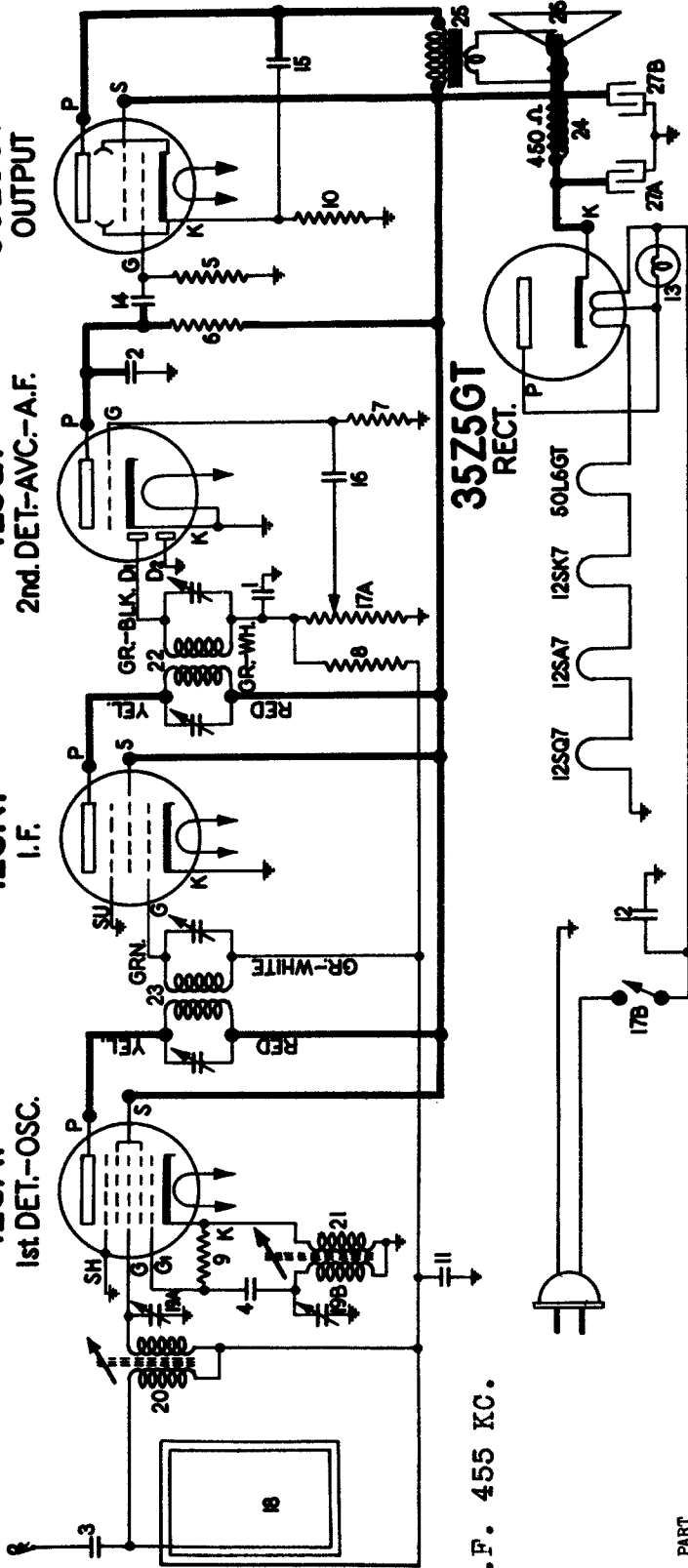
STEWART-WARNER 205F CHASSIS Use a Voltmeter of 1000 ohms per volt.

12SA7
1st DET.-OSC.

12SK7
I.F.

12SQ7
2nd DET.-A.V.C.-A.F.

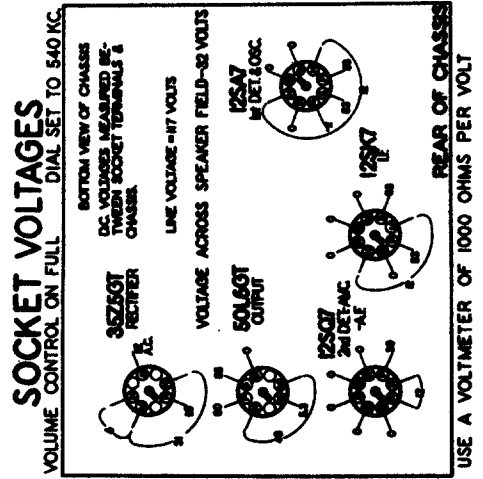
50L6GT
OUTPUT



I.F. 455 KC.

| DIAGRAM NUMBER | PART NUMBER | DESCRIPTION |
|----------------|-------------|----------------------------------------------------------------------|
| 1-2 | 85539 | Condenser - mica 280 mmfd. |
| 3 | 85061 | Condenser - mica 51 mmfd. |
| 4 | 88686 | Condenser - mica 200 mmfd. |
| 5 | 112971 | Resistor - insulated, 470,000 ohm 1/2 watt |
| 6 | 112987 | Resistor - insulated, 220,000 ohm 1/2 watt |
| 7 | 116050 | Resistor - insulated, 10 meg. 1/2 watt |
| 8 | 116058 | Resistor - 2.2 meg. 1/2 watt |
| 9 | 116088 | Resistor - insulated, 28,000 ohm 1/2 watt |
| 10 | 116092 | Resistor - 140 ohm, 1 watt-wire wound |
| 11-12 | 116819 | Condenser - .05 mfd., 600 volt |
| 13 | 118921 | Lamp-Dial (Mazda #47) |
| 14-15 | 119193 | Condenser - .01 mfd., 600 volt |
| 16 | 119875 | Condenser - .002 mfd., 600 volt |
| 17A-17B | 500223 | Volume Control - 1 meg. (with switch) |
| 18 | 501388 | Loop Antenna |
| 19A-19B | 501223 | Condenser - trimmer (2 sections) (A-35 mmfd.) (B-238 mmfd.) |
| 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 Condenser (A-40 mfd. - 150 volt) (B-20 mfd. - 150 volt) |

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

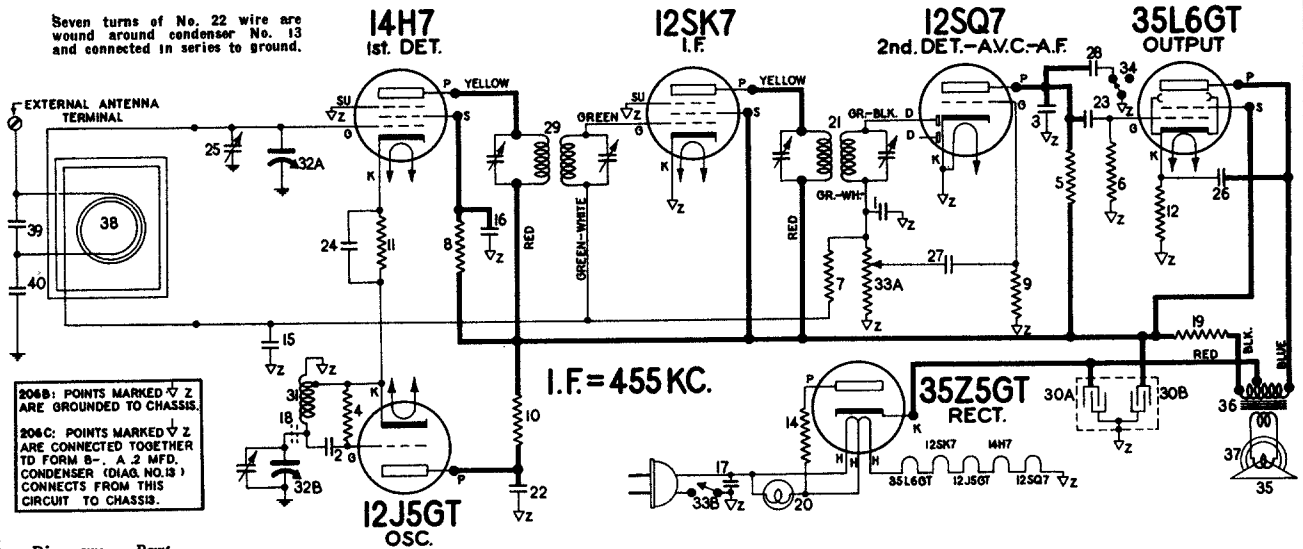


MANUAL OF 1942 MOST POPULAR SERVICE DIAGRAMS

STEWART-WARNER 206B & 206C CHASSIS

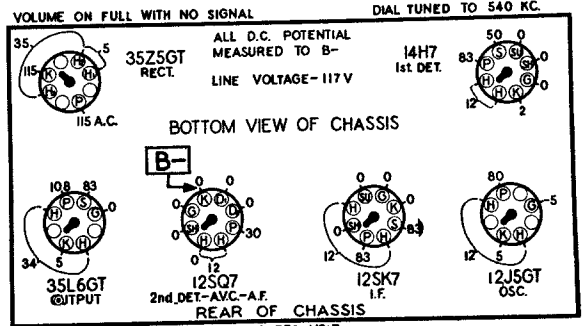
Receiver Models 206BA to 206BZ & 206CA to 206 CZ

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



| 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). |

SOCKET VOLTAGES



| Diagram Number | Part Number | Description |
|----------------|-------------|---------------------------------------------|
| 34 | { 500509 | Switch—tone (206B only) |
| | { 500546 | Switch—tone (206C only) |
| 35 | R-500587 | 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) |
| | { 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 |

- ### 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.

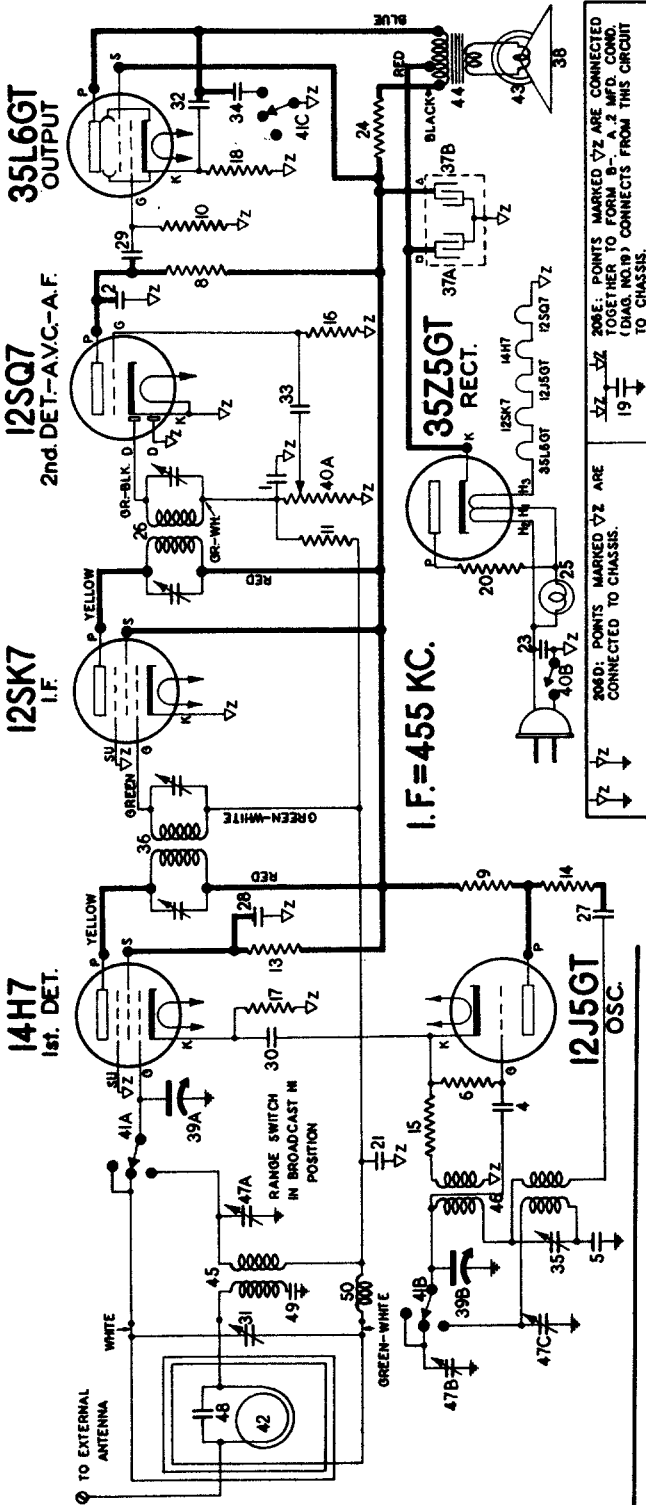
I. F. 455 KC.

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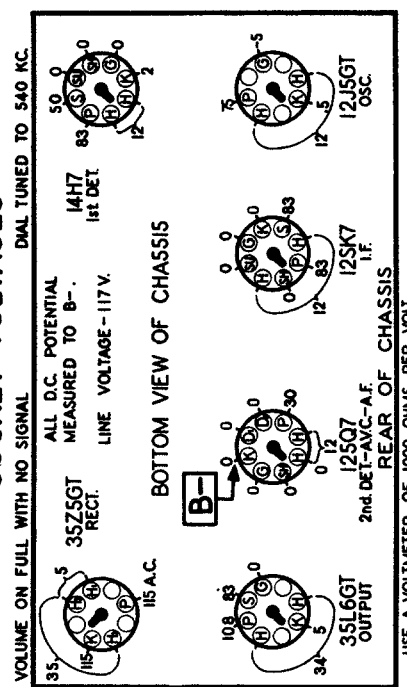
STEWART-WARNER 206D & 206E CHASSIS

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

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



SOCKET VOLTAGES



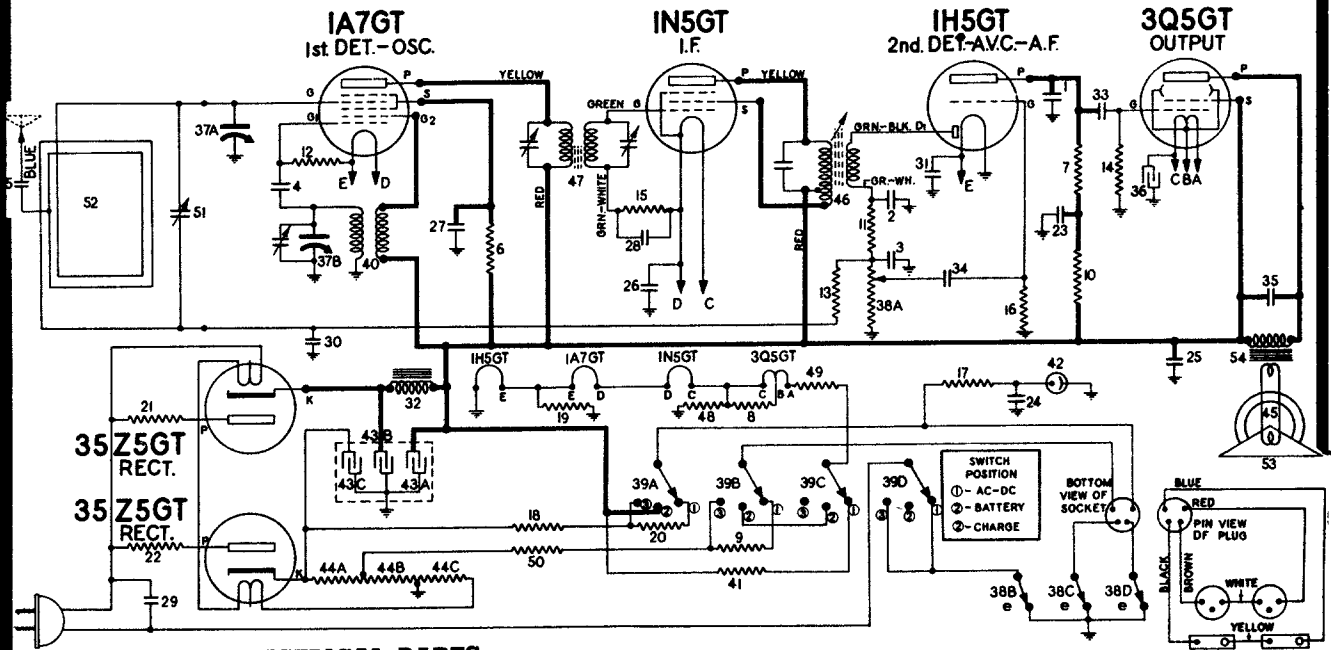
| Diagram No. | Part No. | Description |
|-------------|----------|----------------------------------------------------------------------|
| 1-2 | 85539 | Condenser, Mica 260 Mmfid. |
| 3 | 85783 | Condenser, Mica 110 Mmfid. |
| 4 | 88587 | Condenser, Mica .0042 Mid. |
| 5 | 110552 | Resistor, Carbon-47,000 Ohms 1/4 Watt. |
| 6 | 110552 | Resistor, Carbon-220,000 Ohms 1/4 Watt. |
| 7 | 110557 | Resistor, Carbon-4,700 Ohms 1/4 Watt. |
| 8 | 110557 | Resistor, Carbon-470,000 Ohms 1/4 Watt. |
| 9 | 110559 | Resistor, Carbon-2.2 Meg. 1/4 Watt. |
| 10 | 110570 | Resistor, Carbon-180 Ohms 1/4 Watt. |
| 11 | 110570 | Resistor, Carbon-180 Ohms 1/4 Watt. |
| 12 | 110578 | Resistor, Carbon-180 Ohms 1/4 Watt. |
| 13 | 110580 | Resistor, Carbon-3.3 Meg. 1/4 Watt. |
| 14-15 | 110580 | Resistor, Insulated 1200 Ohms 1/4 Watt. |
| 16 | 116079 | Resistor, 140 Ohms 1 Watt-W.W. |
| 17 | 116082 | Resistor, 33 Ohms 1 Watt-W.W. |
| 18 | 116706 | Condenser, .05 Mid. 600 Volt (206E only) |
| 19 | 116752 | Condenser, .33 Ohms 1 Watt-W.W. |
| 20 | 116819 | Resistor, Carbon-1,500 Ohms 1/2 Watt. |
| 21 to 23 | 118924 | Lamp, Dial (Marada No. 47) |
| 24 | 118924 | Transformer, 2nd I.F. |
| 25 | 119024 | Condenser, .01 Mid. 600 Volt. |
| 26 | 119193 | Condenser, Trimmer (Loop) |
| 27 to 30 | 119345 | Condenser, .02 Mid. 600 Volt. |
| 31 | 119345 | Condenser, .02 Mid. 600 Volt. |
| 32 | 119345 | Condenser, .02 Mid. 600 Volt. |
| 33 | 119817 | Condenser, .004 Mid. 600 Volt. |
| 34 | | Condenser, .04 Mid. 600 Volt. |
| 35 | | Condenser, Padder |
| 36 | | Transformer, 1st I.F. |
| 37A-37B | | { Condenser, A-40 Mid. 150 Volt Electrolytic B-20 Mid. 150 Volt } |

| SWITCH POSITION | BAND | TO NE |
|---------------------------|-----------|-------|
| EXTREME COUNTER-CLOCKWISE | BROADCAST | LOW |
| MIDDLE POSITION | BROADCAST | HIGH |
| Shown on Circuit Diagram) | | |
| EXTREME CLOCKWISE | FOREIGN | HIGH |

MANUAL OF 1942 MOST POPULAR SERVICE DIAGRAMS

STEWART-WARNER 206G CHASSIS

RECEIVER MODELS 206GA TO 206GZ



ELECTRICAL PARTS

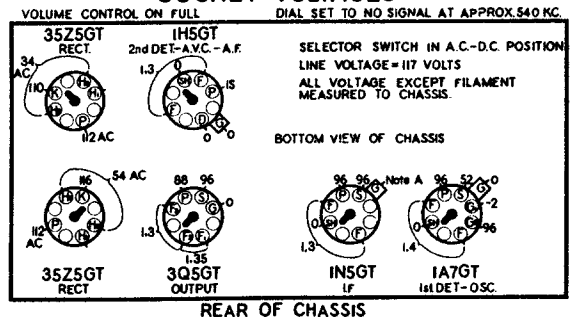
| Diagram Number | Part Number | Description |
|----------------|-------------|--------------------------------------------------------------------------------------------|
| 1 | 83783 | Condenser, Mica 110 Mmfd. |
| 2-3-4 | 85061 | Condenser, Mica 51 Mmfd. |
| 5 | 85563 | Condenser, Mica 26 Mmfd. |
| 6 | 110552 | Resistor, Carbon—47,000 Ohms 1/4 Watt. |
| 7 | 110554 | Resistor, Carbon—1 Megohm 1/4 Watt. |
| 8-9 | 110555 | Resistor, Carbon—330 Ohm 1/4 Watt. |
| 10 | 110556 | 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 | 110589 | Resistor, Carbon—6800 Ohms 1/4 Watt. |
| 19 | 112974 | Resistor, Carbon—220 Ohm 1/4 Watt. |
| 20 | 112993 | Resistor, Carbon—15,000 Ohm 1/4 Watt. |
| 21-22 | 118013 | Resistor, 50 Ohm 1 Watt. |
| 23 to 25 | 116825 | 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 | 151273 | 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



NOTE A: Voltage on the grid of the 1N5GT 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.

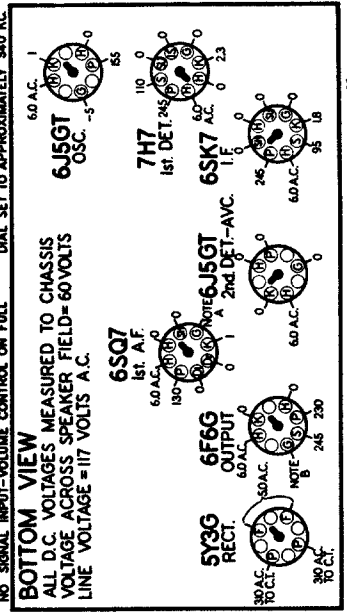
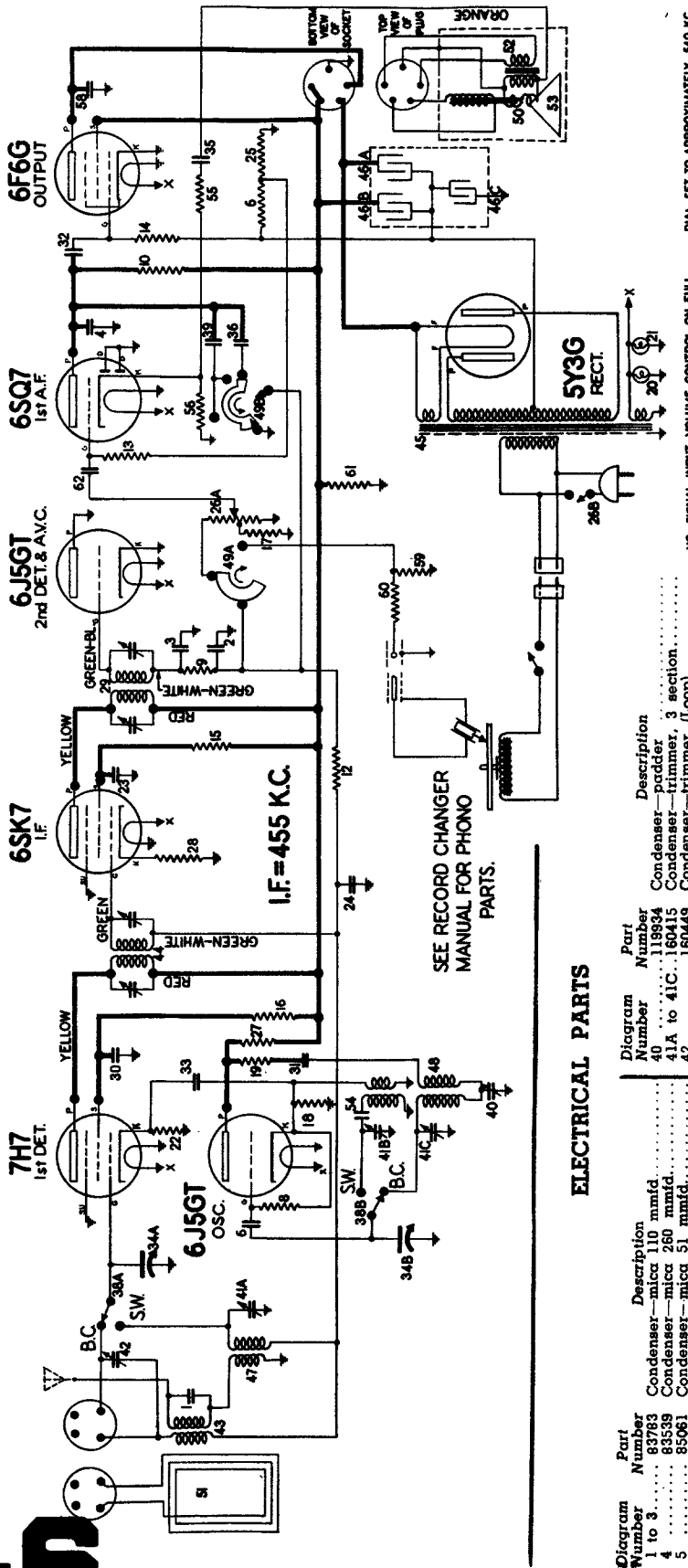
CHARGING BATTERIES

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)

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NO SIGNAL INPUT-VOLUME CONTROL ON FULL DIAL SET TO APPROXIMATELY 540 KC.

BOTTOM VIEW
ALL D.C. VOLTAGES MEASURED TO CHASSIS VOLTAGE ACROSS SPEAKER FIELD=60 VOLTS
LINE VOLTAGE=117 VOLTS A.C.

NOTE A: Voltage on the grid of the 6SK7 1st A.F. is -1 volt measured across resistor No. 25.
NOTE B: Voltage on the grid of the 6F6G Output Tube is -3 volts measured across resistor No. 25 and 6.

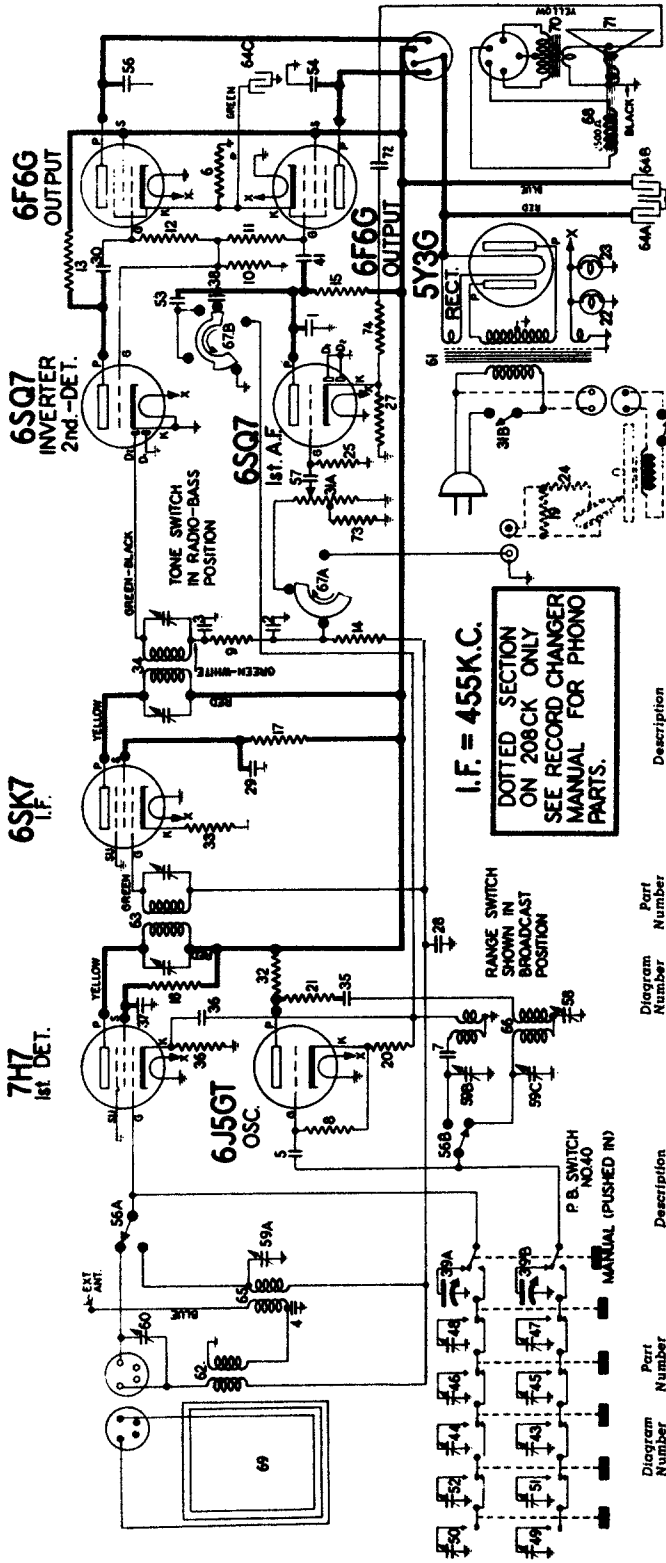
ELECTRICAL PARTS

| Diagram Number | Part Number | Description |
|----------------|-------------|---------------------------------------|
| 40 | 119834 | 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-Electrolytic |
| 46A to 46C | 501060 | Condenser-Power, 60 cycle |
| | | A-20 Mid. 400 V. |
| | | B-15 Mid. 400 V. |
| | | C-20 Mid. 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-6800 ohms 1/4 watt |
| 56 | 118875 | Resistor-560 ohms 1/4 watt |
| 57 | 118876 | Resistor-.002 mfd. 600 volt |
| 58 | 118875 | Resistor-330,000 ohms 1/4 watt |
| 59 | 110584 | Resistor-150,000 ohms 1/4 watt |
| 60 | 112962 | Resistor-33,000 ohms 1/4 watt |
| 61 | 118076 | Resistor-.001 mfd. 600 volt |
| 62 | 119193 | Condenser-.01 mfd. 600 volt |
| | 501366 | Crystal Cartridge |

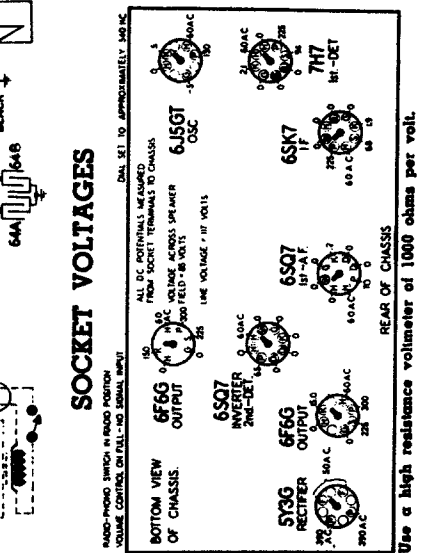
MANUAL OF 1942 MOST POPULAR SERVICE DIAGRAMS

STEWART-WARNER 208B & 208C CHASSIS

(RECEIVER MODELS
208BK AND 208CK)

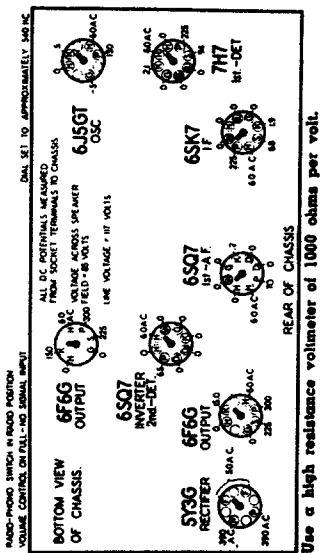


I.F. = 455K.C.
 DOTTED SECTION
 ON 208CK ONLY
 SEE RECORD CHANGER
 MANUAL FOR PHONO
 PARTS.



| Diagram Number | Part Number | Description |
|----------------|-------------|--------------------------------------------|
| 1 to 4 | 63783 | Condenser mica 110 mmfd. |
| 5 | 85061 | Condenser mica 81 mmfd. |
| 6 | 84462 | Resistor wire wound 270 ohms 1 watt |
| 7 | 89587 | Condenser mica .0045 mid. |
| 8-9 | 11052 | Resistor carbon 27,000 ohms 1/4 watt |
| 10-13 | 11053 | Resistor carbon 1 meg 1/4 watt |
| 14 | 11054 | Resistor carbon 1 meg 1/4 watt |
| 15 | 11055 | Resistor carbon 470,000 ohms 1/4 watt |
| 16-17 | 11056 | Resistor carbon 100,000 ohms 1/4 watt |
| 18 | 11057 | Resistor carbon 22,000 ohms 1/4 watt |
| 19 | 11058 | Resistor carbon 680,000 ohms 1/4 watt |
| 20-21 | 11059 | Resistor carbon 50 ohms 1/4 watt |
| 22 | 11060 | Resistor carbon 50 ohms 1/4 watt |
| 23 | 11252 | Resistor carbon 150,000 ohms 1/4 watt |
| 24 | 11253 | Resistor carbon 10 meg 1/4 watt |
| 25 | 11254 | Resistor carbon 10 meg 1/4 watt |
| 26-27 | 11676 | Resistor carbon 560 ohms 1/4 watt |
| 28 | 11682 | Condenser .05 mid. 600 volt |
| 29 | 11683 | Condenser .05 mid. 600 volt |
| 30 | 11684 | Volume Control 1,000 ohms (with switch) |
| 31A-31B | 11685 | Resistor carbon 270 ohms 1/4 watt |
| 32 | 11686 | Resistor carbon 270 ohms 1/4 watt |
| 33 | 11687 | Resistor carbon 270 ohms 1/4 watt |
| 34 | 11902A | Transformer 2nd I.F. |
| 35 | 11933 | Condenser .01 mid. 600 volt |
| 36 | 11934 | Condenser variable tuning |
| 37A-38B | 11921 | Switch push button |
| 39 | 11936 | Condenser .02 mid. 600 volt |
| 40 | 11644 | Condenser push button trimmer (Med. Freq.) |
| 41 | 11645 | Condenser push button trimmer (Med. Freq.) |
| 42 | 11646 | Condenser push button trimmer (Med. Freq.) |
| 43 | 11647 | Condenser push button trimmer (Med. Freq.) |
| 44 | 11648 | Condenser push button trimmer (Med. Freq.) |
| 45 | 11649 | Condenser push button trimmer (Med. Freq.) |
| 46 | 11650 | Condenser push button trimmer (Med. Freq.) |
| 47 | 11651 | Condenser push button trimmer (Med. Freq.) |
| 48 | 11652 | Condenser push button trimmer (Med. Freq.) |
| 49 | 11653 | Condenser push button trimmer (Med. Freq.) |
| 50 | 11654 | Condenser push button trimmer (Med. Freq.) |
| 51 | 11655 | Condenser push button trimmer (Med. Freq.) |
| 52 | 11656 | Condenser push button trimmer (Med. Freq.) |
| 53 | 11657 | Condenser push button trimmer (Med. Freq.) |
| 54 | 11658 | Condenser push button trimmer (Med. Freq.) |
| 55 | 11659 | Condenser push button trimmer (Med. Freq.) |
| 56 | 11660 | Condenser push button trimmer (Med. Freq.) |
| 57 | 11661 | Condenser push button trimmer (Med. Freq.) |
| 58 | 11662 | Condenser push button trimmer (Med. Freq.) |
| 59 | 11663 | Condenser push button trimmer (Med. Freq.) |
| 60 | 11664 | Condenser push button trimmer (Med. Freq.) |
| 61 | 11665 | Condenser push button trimmer (Med. Freq.) |
| 62 | 11666 | Condenser push button trimmer (Med. Freq.) |
| 63 | 11667 | Condenser push button trimmer (Med. Freq.) |
| 64 | 11668 | Condenser push button trimmer (Med. Freq.) |
| 65 | 11669 | Condenser push button trimmer (Med. Freq.) |
| 66 | 11670 | Condenser push button trimmer (Med. Freq.) |
| 67 | 11671 | Condenser push button trimmer (Med. Freq.) |
| 68 | 11672 | Condenser push button trimmer (Med. Freq.) |
| 69 | 11673 | Condenser push button trimmer (Med. Freq.) |
| 70 | 11674 | Condenser push button trimmer (Med. Freq.) |
| 71 | 11675 | Condenser push button trimmer (Med. Freq.) |
| 72 | 11676 | Condenser push button trimmer (Med. Freq.) |
| 73 | 11677 | Condenser push button trimmer (Med. Freq.) |
| 74 | 11678 | Condenser push button trimmer (Med. Freq.) |

SOCKET VOLTAGES



| Diagram Number | Part Number | Description |
|----------------|-------------|--------------------------------------------|
| 47-48 | 119654 | Condenser push button trimmer (High Freq.) |
| 49 to 52 | 119753 | Condenser push button trimmer (Low Freq.) |
| 53 to 55 | 119817 | Switch band |
| 56A-56B | 119859 | Condenser .004 mid. 600 volt |
| 57 | 119873 | Condenser .002 mid. 600 volt |
| 58 | 180415 | Condenser trimmer for loop |
| 59A to 59C | 180415 | Condenser trimmer for loop |
| 60 | 180449 | Condenser trimmer for loop |
| 61 | 50035 | Transformer 1st I.F. |
| 62 | 50080 | Transformer 1st I.F. |
| 63A to 64C | 501060 | Condenser electrolytic |
| 64 | 501060 | Condenser electrolytic |
| 65 | 501159 | Call-short wavy antenna |
| 66 | 501180 | Call-short wavy antenna |
| 67A-67B | 501180 | Call-short wavy antenna |
| 68 | M-501245 | Switch-tone |
| 69 | 501293 | Speaker dynamic 12" |
| 70 | M-501304 | Loop Antenna |
| 71 | M-501305 | Transformer output for M-501245 Spkr. |
| 72 | 118645 | Cone & Voice Coil for M-501245 Spkr. |
| 73 | 118645 | Condenser carbon 22,000 ohms 1/4 watt |
| 74 | 110589 | Resistor carbon 10,000 ohms 1/4 watt |

Use a high resistance voltmeter of 1000 ohms per volt.

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.

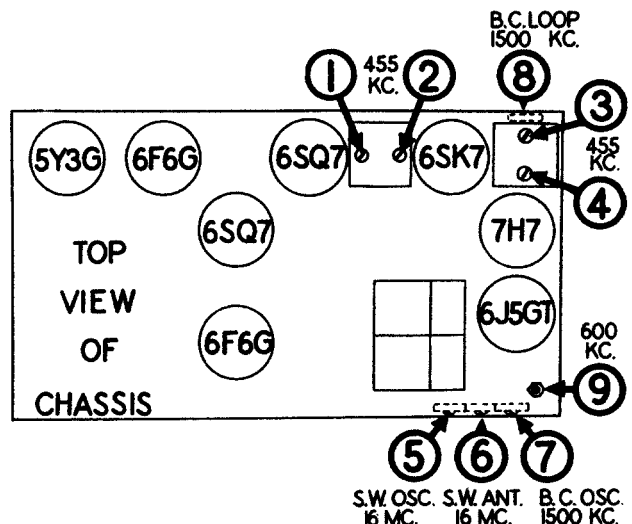
| Dummy Ant. in Series with Sig. Gen. | Connection of Sig. Generator Output to Receiver | Signal Generator Frequency | Band Switch Position | Receiver Dial Setting | Trimmer Number | Trimmer Description | Type of Adjustment |
|-------------------------------------|-------------------------------------------------|----------------------------|----------------------|-----------------------------------------------|----------------|------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| .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.

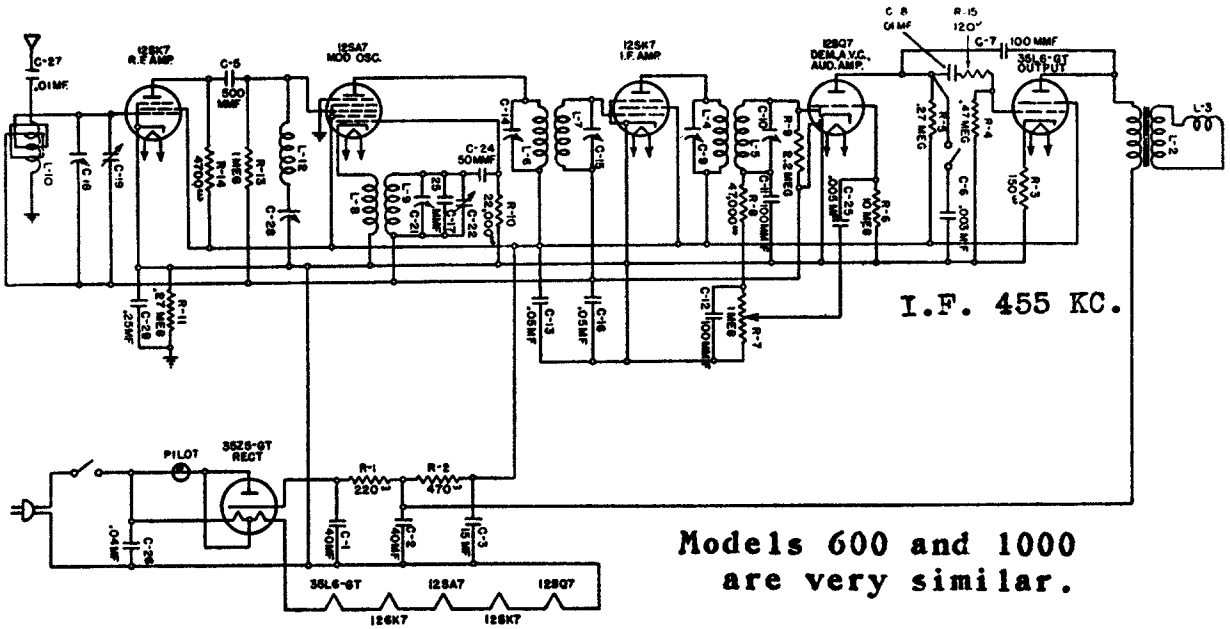
| | | | | | | | |
|---------------|---------------------------------------|---------|-----------|----------------------------------|---|-------------------------------|------------------------------------------------------------------------------------------------------------------------------------|
| 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

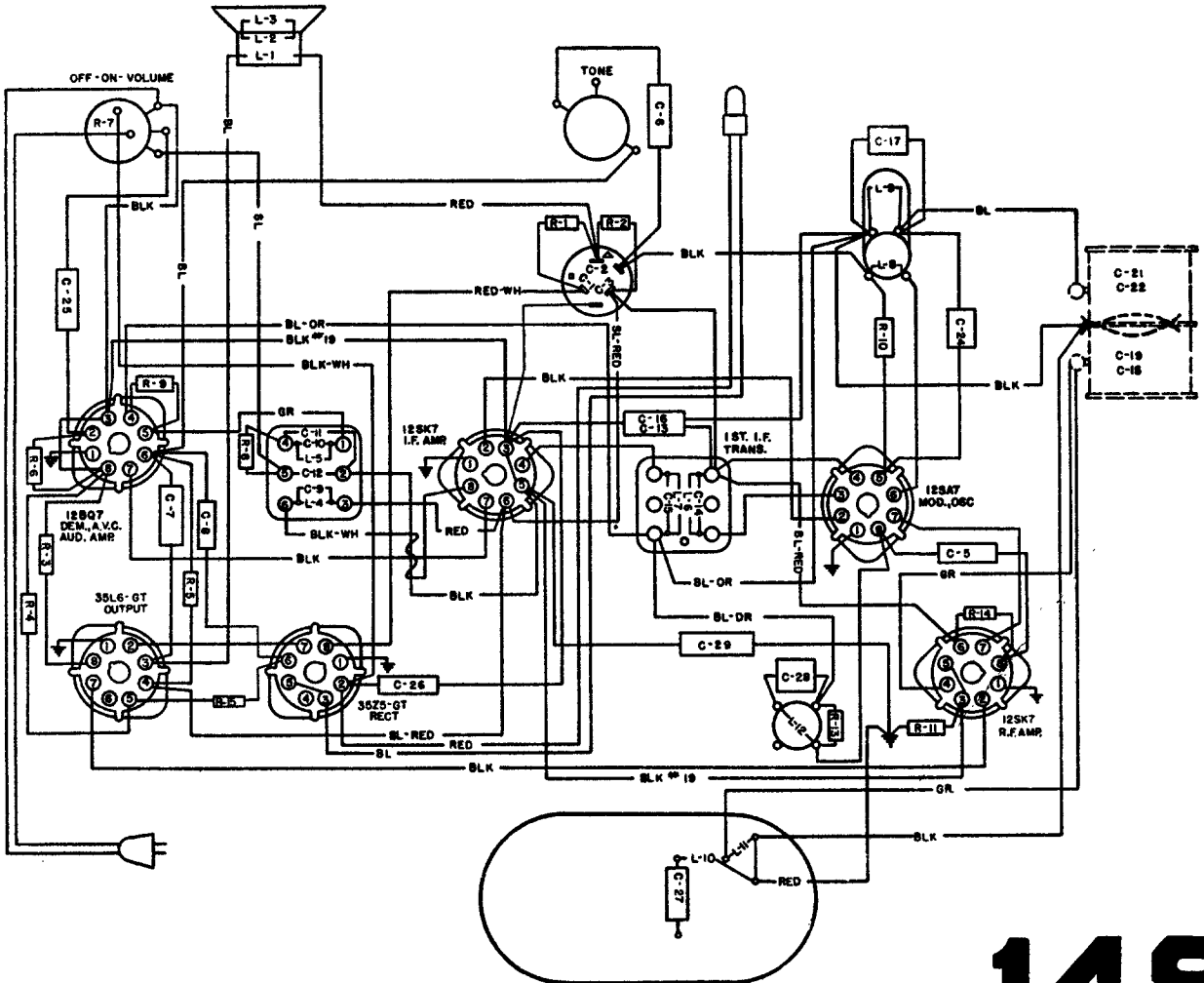
| Part Number | Description |
|-------------|-------------------------------------------------|
| 501182 | Cable—motor (with receptacle)..... |
| 117493 | Cable—pickup..... |
| 114355 | Clamp—for dial cord..... |
| 112745 | Clip—coil mounting..... |
| 117057 | Cord—drive (specify 6 ft. lengths)..... |
| 501199 | Dial Scale..... |
| 113402 | Drum—dial cord drive..... |
| 169182 | 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 | Shait—tuning..... |
| 112874 | Screw—No. 10 x 1½ 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..... |

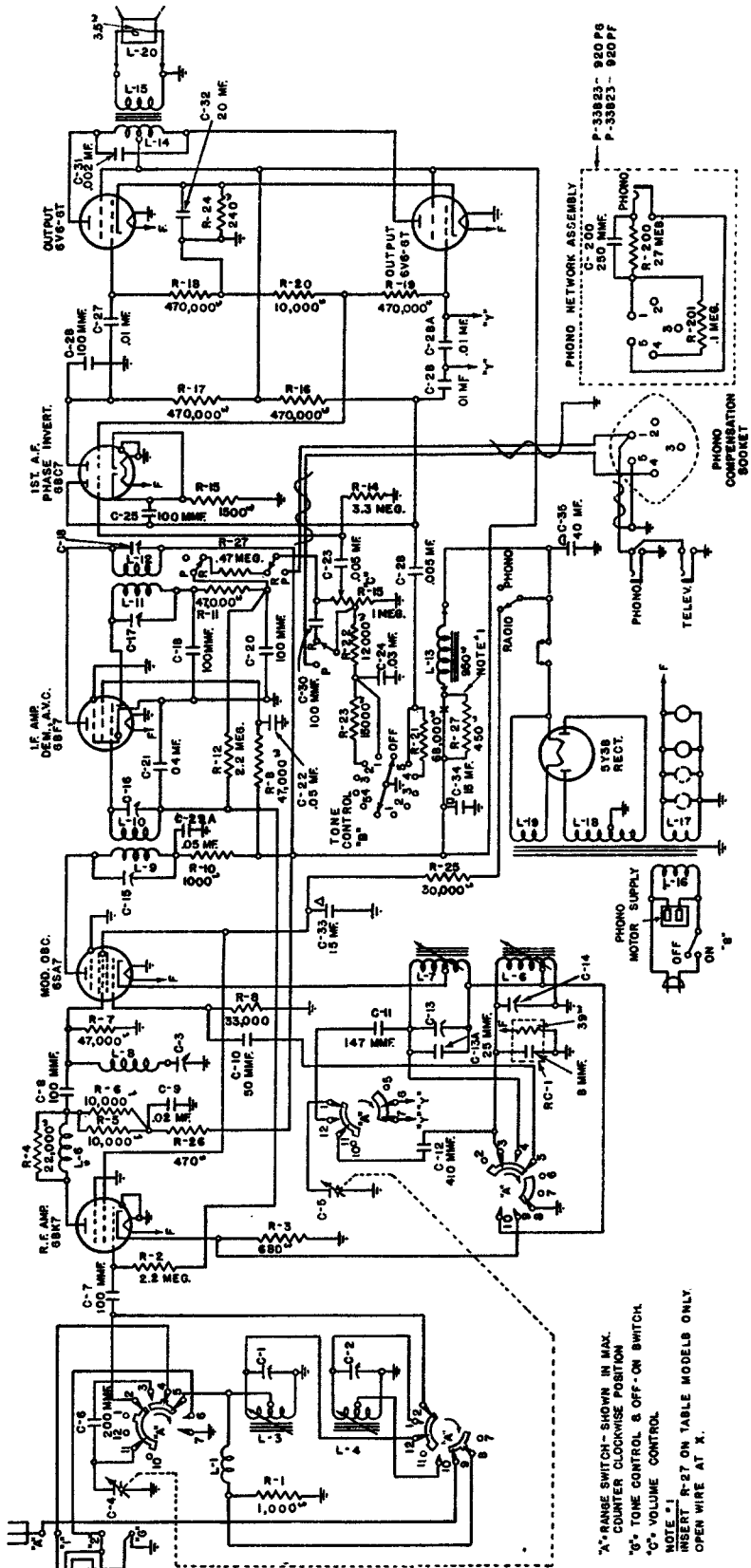


MANUAL OF 1942 MOST POPULAR SERVICE DIAGRAMS



STROMBERG-CARLSON NO. 900 AC-DC RADIO RECEIVERS





STROMBERG-CARLSON NO. 920 RADIO RECEIVERS

Also Model 1020

TERMINALS OF SOCKETS

| Tube | Circuit | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 |
|-------|-------------------------|---|------|------|------|-----|-----|------|------|
| 6SK7 | R. F. Amp. | 0 | 6.5 | 0 | 0 | 0 | +85 | 0 | +178 |
| 6SA7 | Osc. and Mod. | 0 | 0 | +240 | +85 | 0 | 0 | 0 | 6.5 |
| 6SF7 | I. F. Amp. | 0 | 0 | 0 | 0 | +95 | 0 | +240 | 0 |
| 6SC7 | Demod. and A. V. C. | 0 | +65 | 0 | 0 | 0 | +65 | 4* | 0 |
| 6V6GT | Audio Amp. and Inverter | 0 | 0 | +235 | +240 | 0 | 0 | 0 | 6.5 |
| 6V6GT | Output | 0 | 6.5 | +235 | +240 | 0 | 0 | 0 | 13* |
| 5Y3G | Rectifier | 0 | +380 | — | 380 | — | 380 | — | +380 |

*Read on lowest possible scale of voltmeter

Input Power

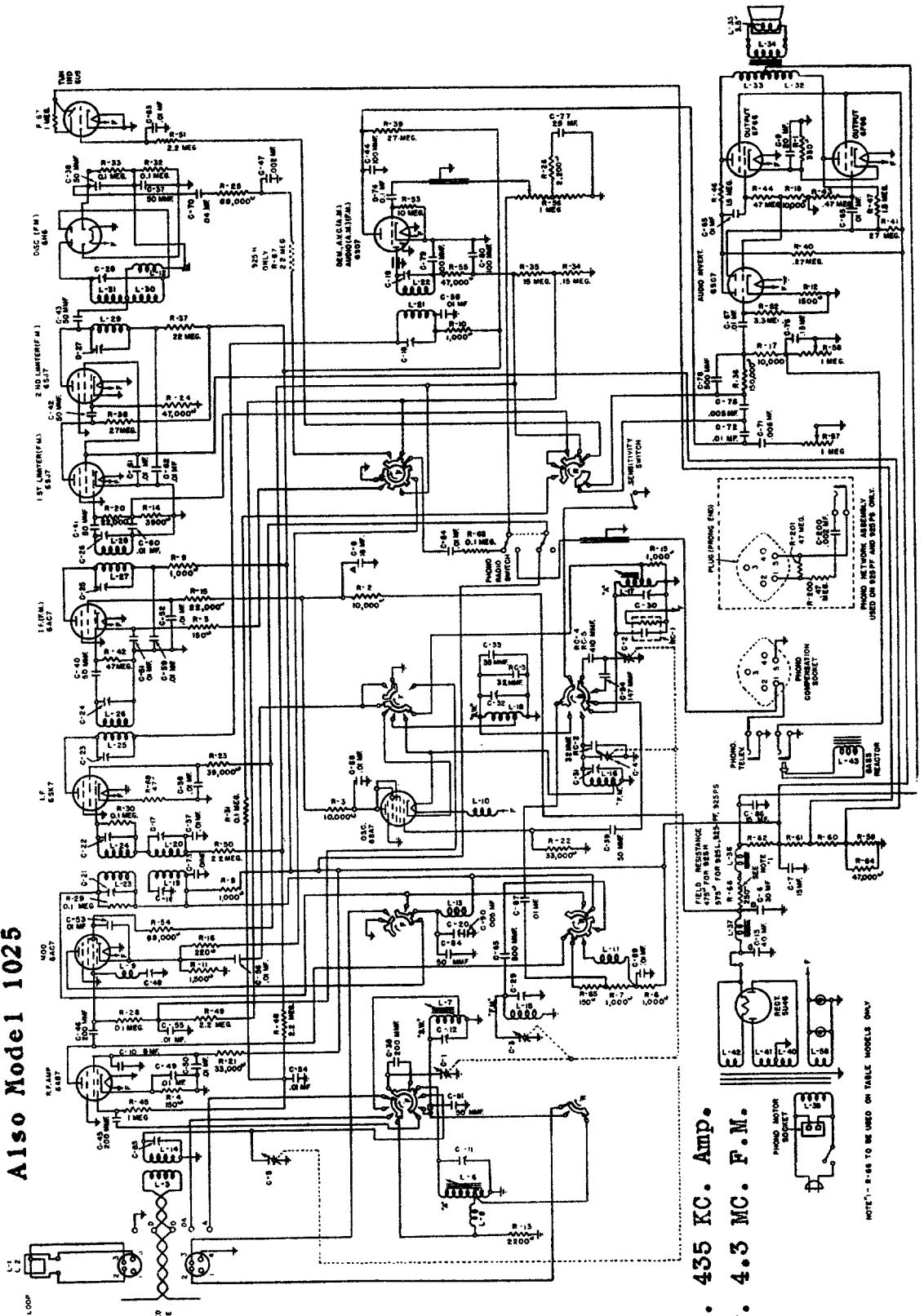
- 920-H Frequency 50-60 Cycles
- 920-HB Frequency 25-60 Cycles
- 920-L Frequency 50-60 Cycles
- 920-LB Frequency 25-60 Cycles
- 920-PF 60 Cycle
- 920-PFB 25 Cycle
- 920-PG 60 Cycle
- 920-PGB 25 Cycle

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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NOTE: R-66 TO BE USED ON TABLE MODELS ONLY

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.

| | | TERMINALS OF SOCKETS | | | | | | | |
|-------------------|----------------------------------------------|----------------------|----------------|----------------|-----------------|-----------------|-----------------|---|----------------|
| Tube | Circuit | 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 | S | 35000 Ω | 35000 Ω | 30000 Ω | S | S | 35000 Ω |
| 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

| | | TERMINALS OF SOCKETS | | | | | | | |
|-------------------|----------------------------------------------|----------------------|-------|------|------|-------|-------|-----|------|
| Tube | Circuit | 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 | +8 | +265 | 6.3 | +300 |
| 6SJ7 | 1st Limiter (F. M.) | 0 | 0 | 0 | 0 | 0 | +54 | 6.3 | +2 |
| 6SJ7 | 2nd Limiter (F. M.) | 0 | 0 | 0 | 0 | 0 | +54 | 6.3 | +3 |
| 6H6 | Discriminator (F. M.) | 0 | 0 | 0 | 0 | 0 | 0 | 6.3 | 0 |
| 6SQ7 | Demod., A. V. C. (A. M.), Audio Amplifier | 0 | 0 | 0 | 0 | 0 | +100* | 0 | 6.3 |
| 6SC7 | Audio Amp. and Inverter | 0 | +140* | 0 | 0 | +130* | +2 | 6.3 | 0 |
| 6F6G | Output | 0 | 0 | +340 | +300 | 0 | 0 | 6.3 | +22 |
| 6F6G | Output | 0 | 0 | +340 | +300 | 0 | 0 | 6.3 | +22 |
| 5U4G | Rectifier | 0 | +450 | 0 | 415 | 0 | 415 | 0 | +450 |
| 6U5 | Tuning Indicator | 6.3 | +80 | 0 | +250 | 0 | 0 | — | — |

*Read on 1000 volt scale of voltmeter.

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

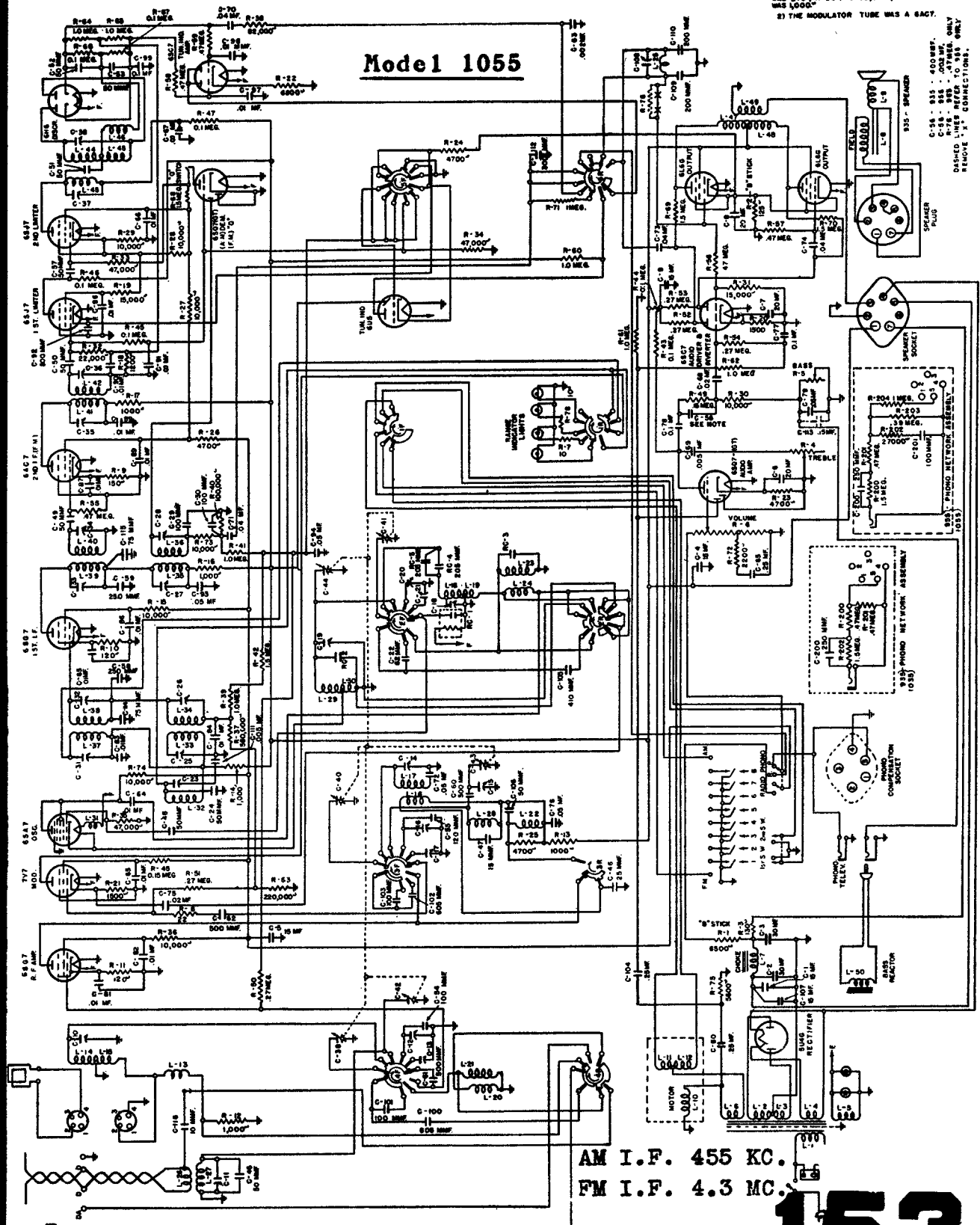
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STROMBERG-CARLSON NO. 955 RADIO

1-ALTERNATIVE WIRING WITH OTHER TYPES OF TUBES INVOLVES THE FOLLOWING DIFFERENCES:
 1) R-F & 1ST. I-F AMPLIFIER TUBES WERE 6AQ5'S WITH SUPPLIES CONNECTED TO GROUND. R-11 WAS 200 μ & R-10 WAS 1,000 μ .
 2) THE MODULATOR TUBE WAS A 6AG7.

Model 1055

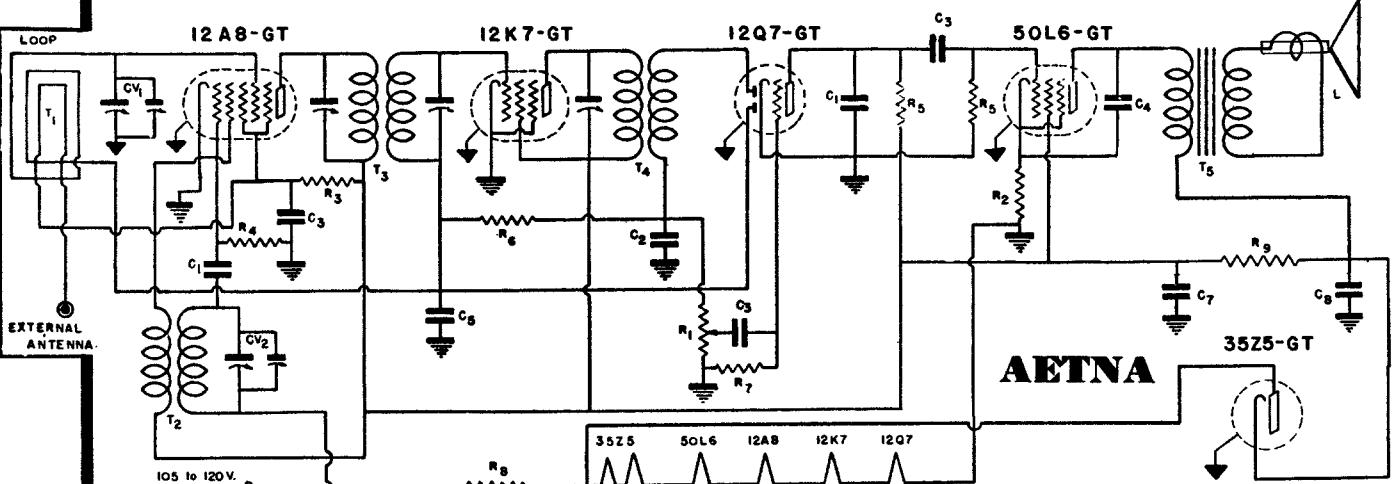


C-58 - 915 - 400 MFD.
 C-59 - 915 - 400 MFD.
 C-60 - 915 - 400 MFD. ONLY
 DASHED LINES - 915 - 400 MFD. ONLY
 REMOVE "H" CONNECTIONS.

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

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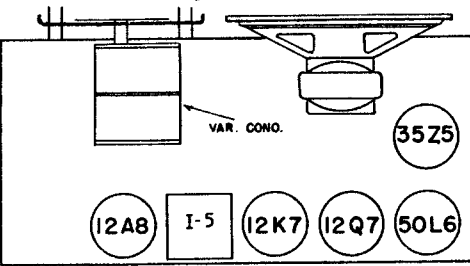
MANUAL OF 1942 MOST POPULAR SERVICE DIAGRAMS



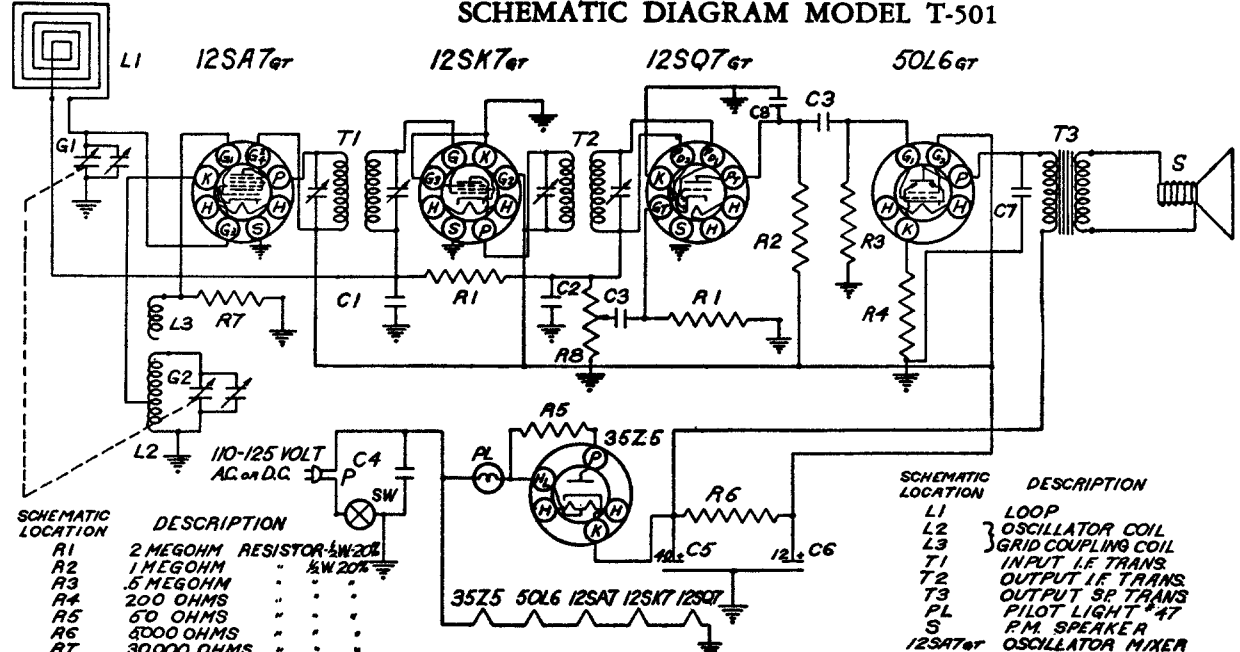
MODEL 562

| | |
|-------------------|----------------------------------------|
| C ₁ | — .00025 MFD. 600 V. TUBULAR CONDENSER |
| C ₂ | — .0005 MFD. 200V. TUBULAR CONDENSER |
| C ₃ | — .01 MFD. 400V. TUBULAR CONDENSER |
| C ₄ | — .02 MFD. 400V. TUBULAR CONDENSER |
| C ₅ | — .05 MFD. 200V. TUBULAR CONDENSER |
| C ₆ | — .1 MFD. 400V. TUBULAR CONDENSER |
| C ₇ | 20 MFD. 150W.V. ELECTROLYTIC COND. |
| C ₈ | 40 MFD. 150 W.V. ELECTROLYTIC COND. |
| CV ₁₋₂ | 64B 2 GANG VARIABLE CONDENSER |
| R ₁ | — 2500 OHM 1/2 W. CARBON RESISTOR |

| | | |
|----------------|-------|--------------------------------------|
| R ₁ | 2000Ω | 500,000 OHM VOLUME CONTROL |
| R ₂ | — | 150 OHM 1/2 WATT CARBON RESISTOR-10% |
| R ₃ | — | 50000 OHM 1/4 WATT CARBON RESISTOR |
| R ₄ | — | 50000 OHM 1/4 WATT CARBON RESISTOR |
| R ₅ | — | 500,000 OHM 1/4 WATT CARBON RESISTOR |
| R ₆ | — | 2 MEGOHM 1/4 WATT CARBON RESISTOR |
| R ₇ | — | 6 MEGOHM 1/4 WATT CARBON RESISTOR |
| R ₈ | — | 10 OHM 1/4 WATT CARBON RESISTOR |



SCHEMATIC DIAGRAM MODEL T-501



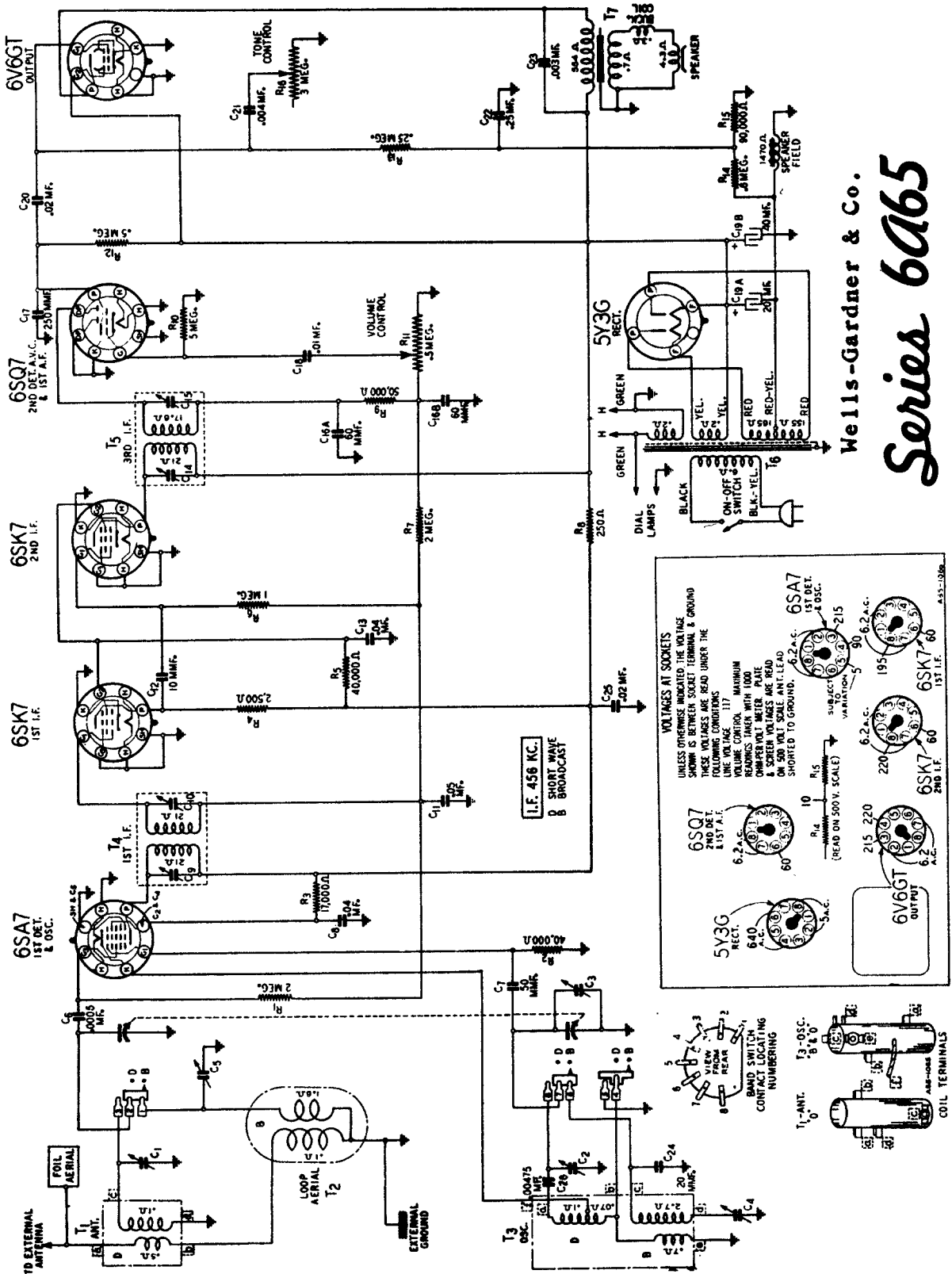
| SCHEMATIC LOCATION | DESCRIPTION |
|--------------------|----------------------------|
| R1 | 2 MEGOHM RESISTOR 1/2W 20% |
| R2 | 1 MEGOHM " 1/2W 20% |
| R3 | .5 MEGOHM " " " " " " |
| R4 | 200 OHMS " " " " " " |
| R5 | 50 OHMS " " " " " " |
| R6 | 4000 OHMS " " " " " " |
| R7 | 30000 OHMS " " " " " " |
| R8 | 1 MEQ. VOL. CONTROL SWITCH |
| G1, G2 | GANG CONDENSER |
| C1 | .05 MFD. 200V. COND. |
| C2 | .0001 MFD. MICA " " |
| C3 | .01 MFD. 400V. " " " |
| C4 | .05 MFD. 400V. " " " |
| C5 | 40 MFD. ELECTROLYTIC " " |
| C6 | 12 MFD. " " " " " |
| C7 | .005 MFD. 600V. COND. " " |
| C8 | .0005 MFD. 400V. " " " |

| SCHEMATIC LOCATION | DESCRIPTION |
|--------------------|--------------------|
| L1 | LOOP |
| L2 | OSCILLATOR COIL |
| L3 | GRID COUPLING COIL |
| T1 | INPUT I.F. TRANS. |
| T2 | OUTPUT I.F. TRANS. |
| T3 | OUTPUT SP. TRANS. |
| PL | PILOT LIGHT #47 |
| S | P.M. SPEAKER |
| 12SA7-GT | OSCILLATOR MIXER |
| 12SK7-GT | I.F. AMPLIFIER |
| 12SQ7-GT | DETECTOR-AUDIO |
| 50L6-GT | AUDIO AMPLIFIER |
| 35Z5-GT | RECTIFIER |

Walgreen

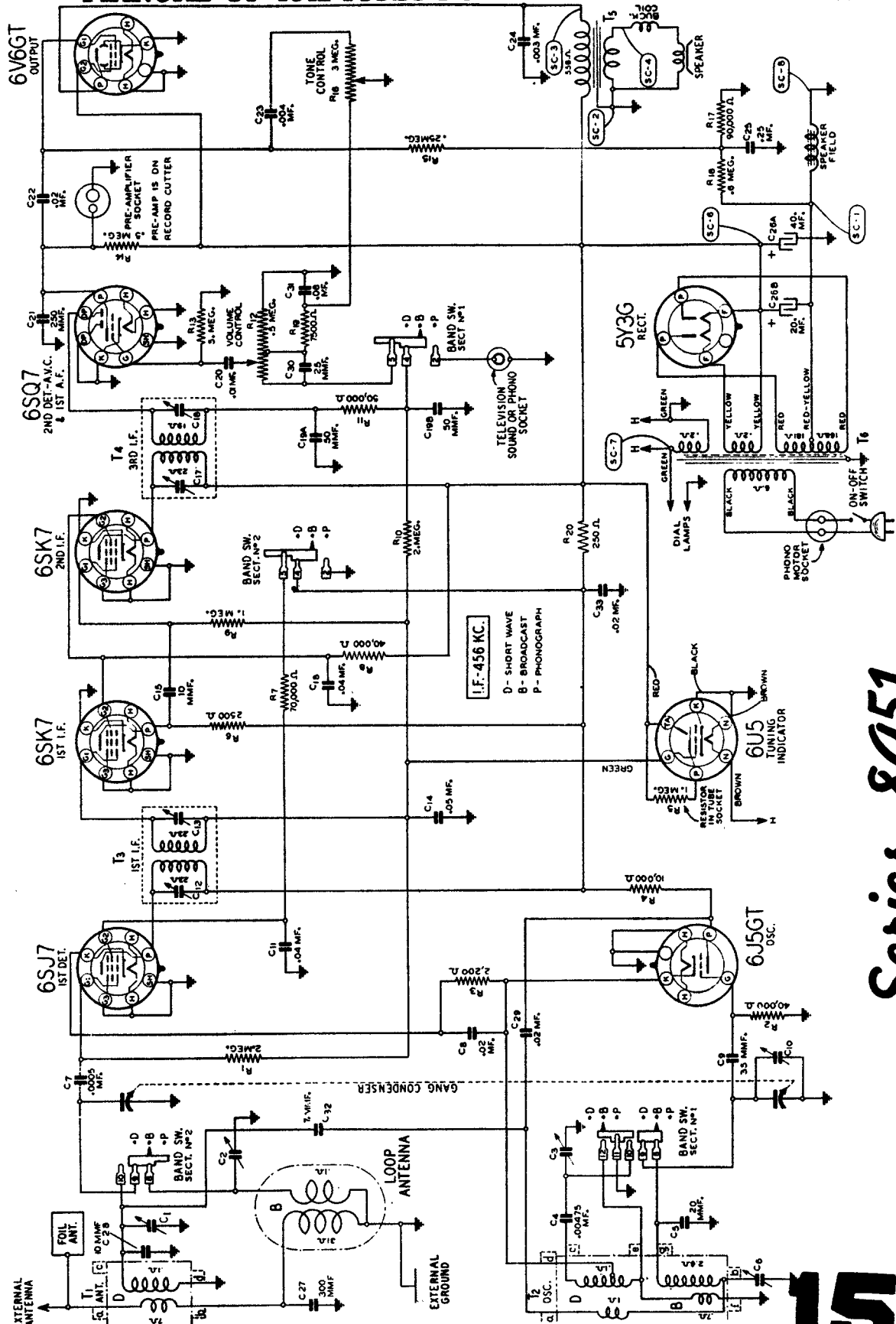
DRUG STORES

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Wells-Gardner & Co.
Series 6065

MANUAL OF 1942 MOST POPULAR SERVICE DIAGRAMS

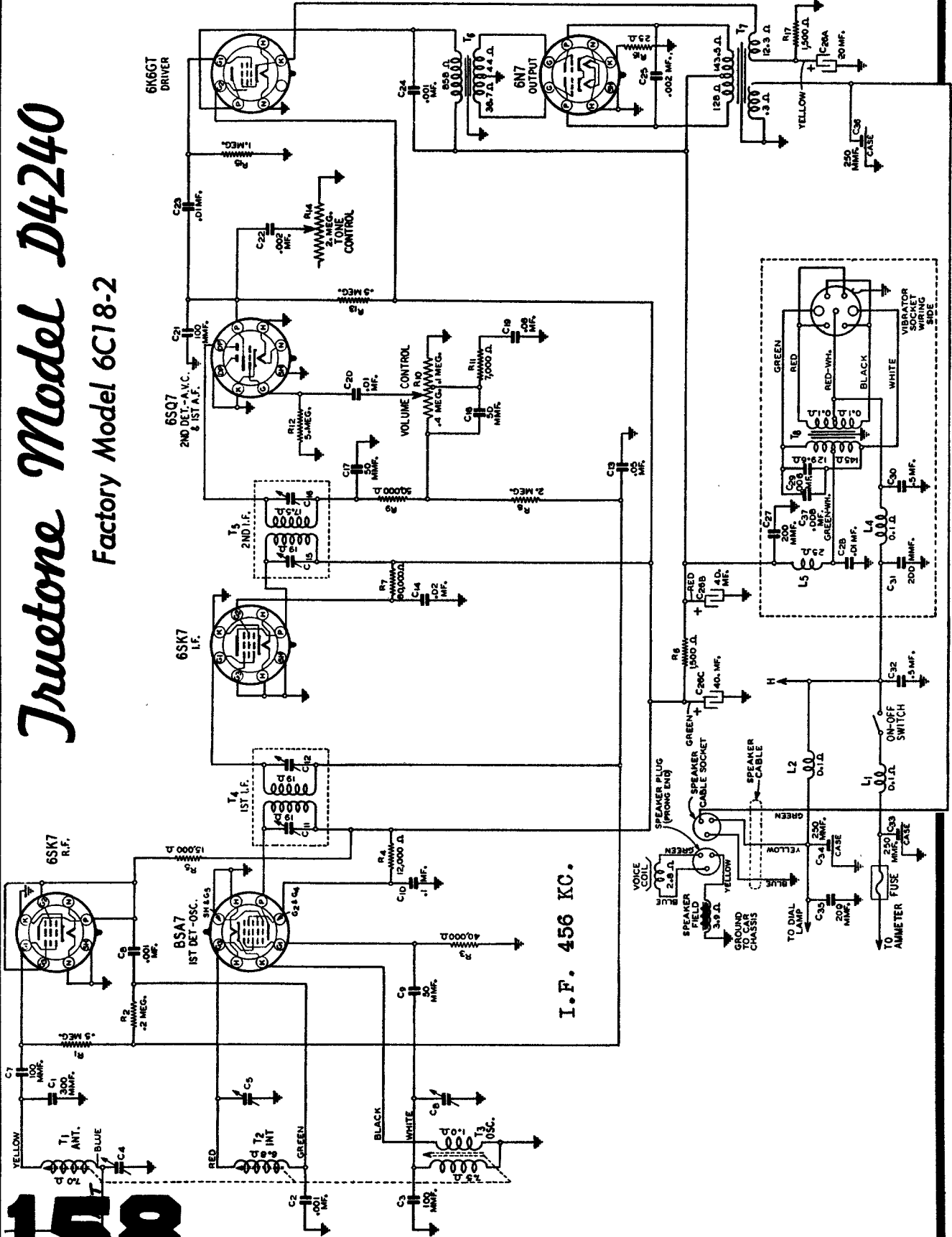


Wells-Gardner & Co.

Series 8A51

Truetone Model D4240

Factory Model 6C18-2



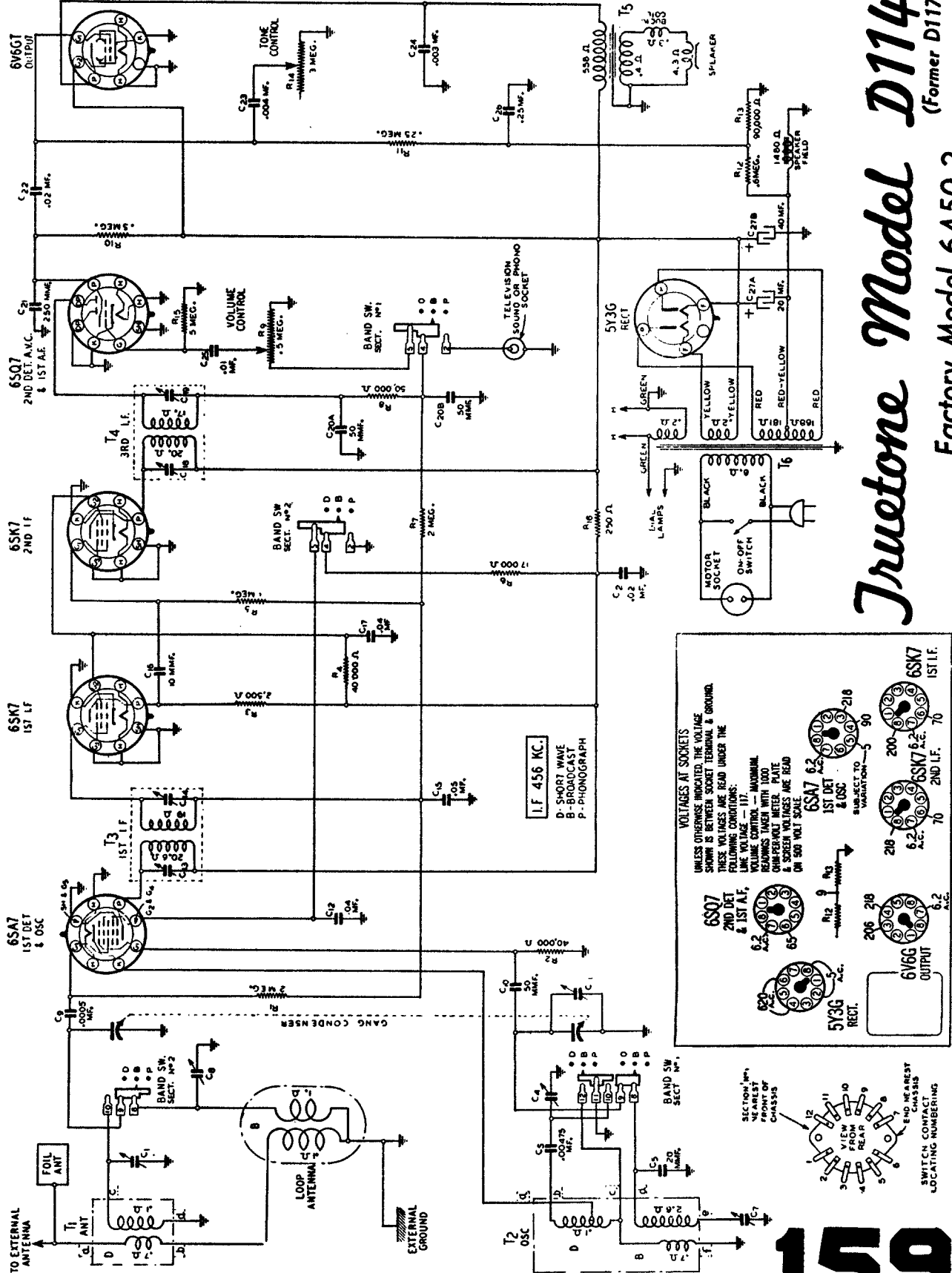
I.F. 456 KC.

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MANUAL OF 1942 MOST POPULAR SERVICE DIAGRAMS

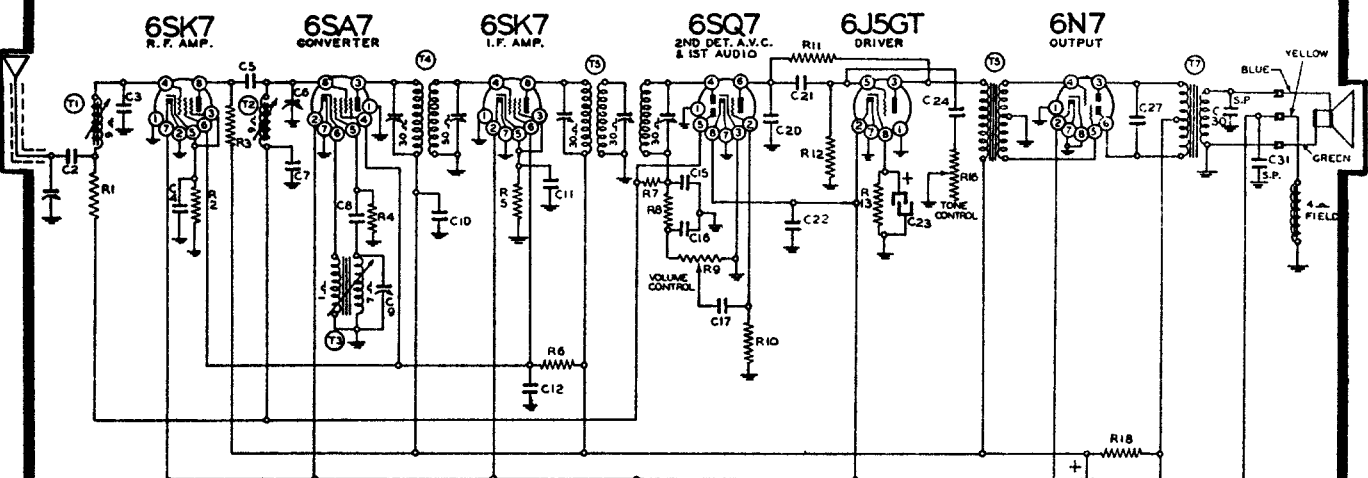
Truotone Model D1145
(Former D1176)

Factory Model 6A50-2



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RESISTORS

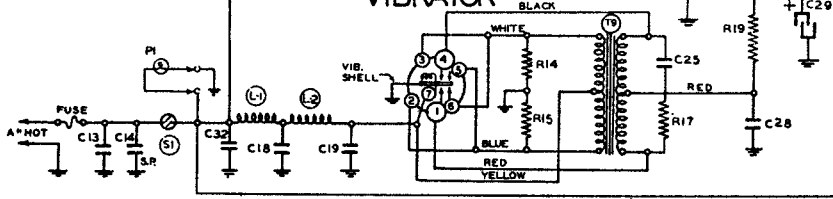
- R1 130330 220M ohm— $\frac{1}{2}$ w.
- R2 130332 250 ohm— $\frac{1}{2}$ w.
- R3 130331 15M ohm— $\frac{1}{2}$ w.
- R4 130329 47M ohm— $\frac{1}{2}$ w.
- R5 13016 900 ohm— $\frac{1}{2}$ w.
- R6 130196 30M ohm—1 w.
- R7 13019 1 megohm— $\frac{1}{2}$ w.
- R8 130329 47M ohm— $\frac{1}{2}$ w.
- R9 101242 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

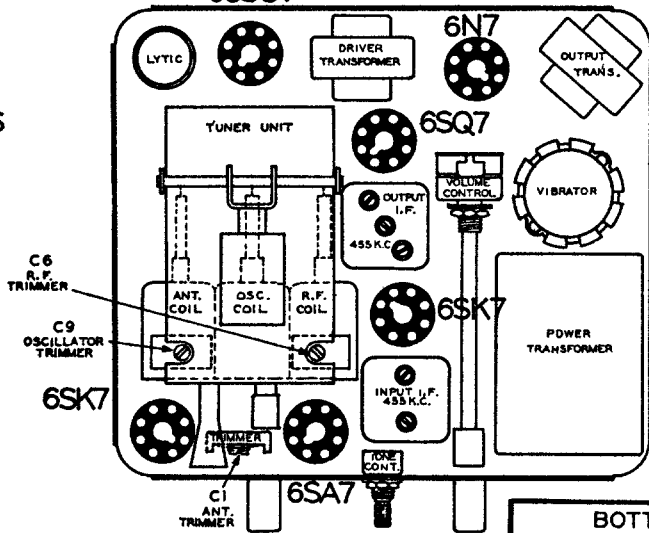
- C1 124157 Antenna trimmer
- C2 100127 .01 x 120 v.
- C3 129172 .0001 ceramicon
- C4 100128 .05 x 120 v.
- C5 129145 .00001 ceramicon
- C6 124159 R.F. trimmer
- C7 100129 .02 x 120 v.
- C8 129172 .0001 ceramicon
- C9 124158 Oscillator trimmer
- C10 1001 .1 x 400 v.
- C11 100128 .05 x 120 v.
- C12 10053 .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.



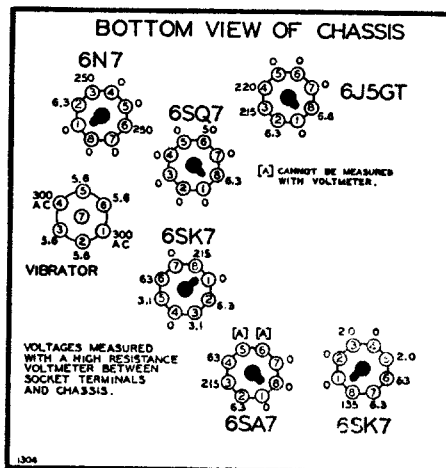
NOTE: CHECK VIBRATOR POLARITY THRU OPENING ON THIS SIDE OF CASE.

Western Auto

Truetone

MODEL D4255

(Former No. D1294)



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Westinghouse Radio

Models WR-12X3, 12X5 & 12X6

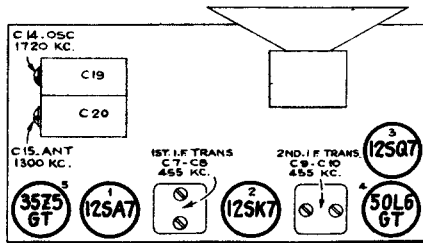
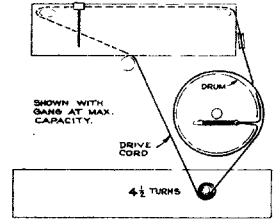
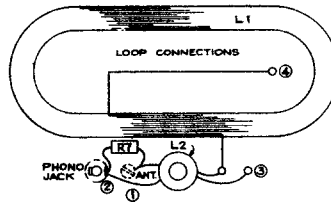
Five-Tube, Single-Band, AC-DC, Superheterodyne Receiver

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.

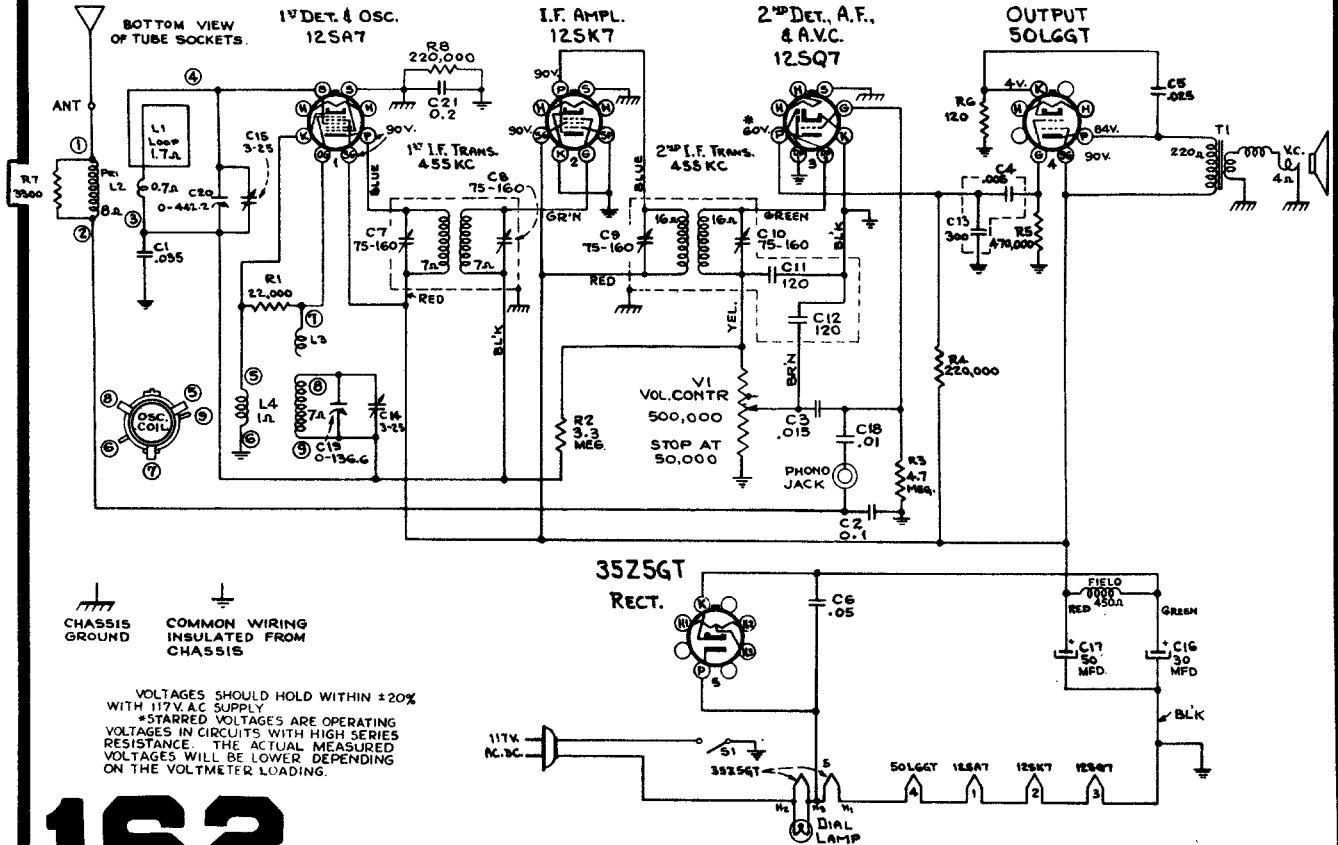
Test Oscillator.—Connect the low side of the test oscillator to the receiver chassis through a .01 mfd. capacitor. With the output meter alignment method the test oscillator output should be kept as low as possible.

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

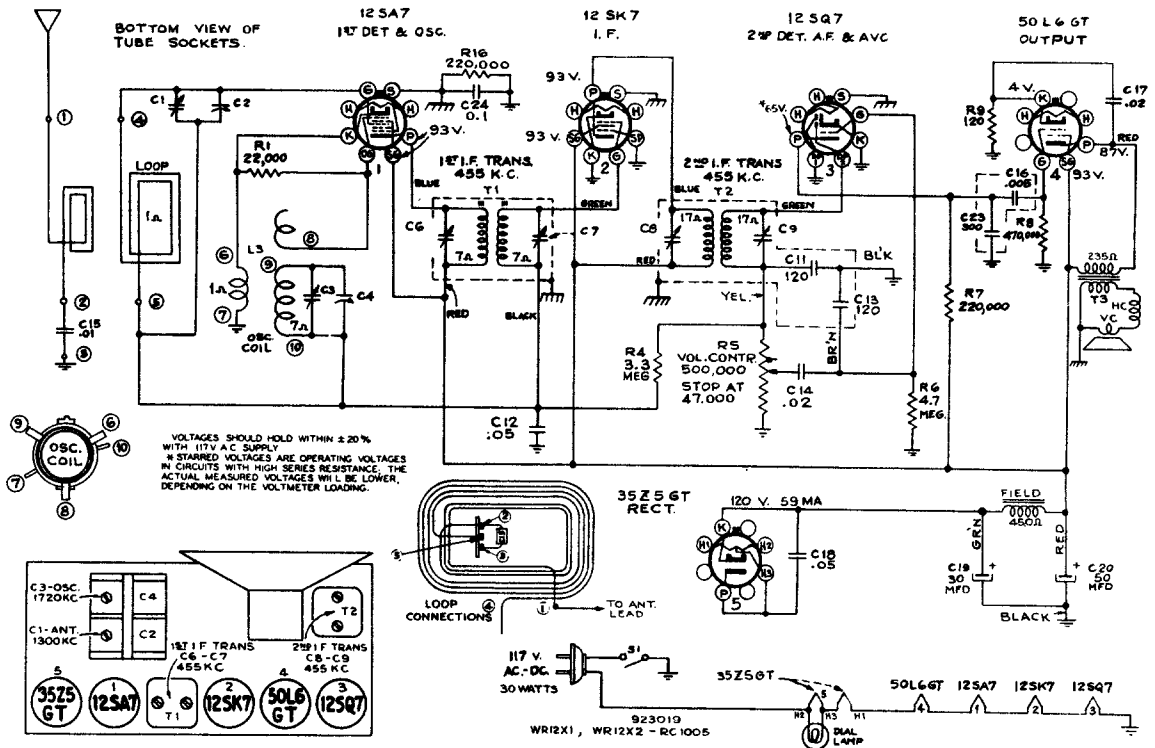


Tube and Trimmer Locations

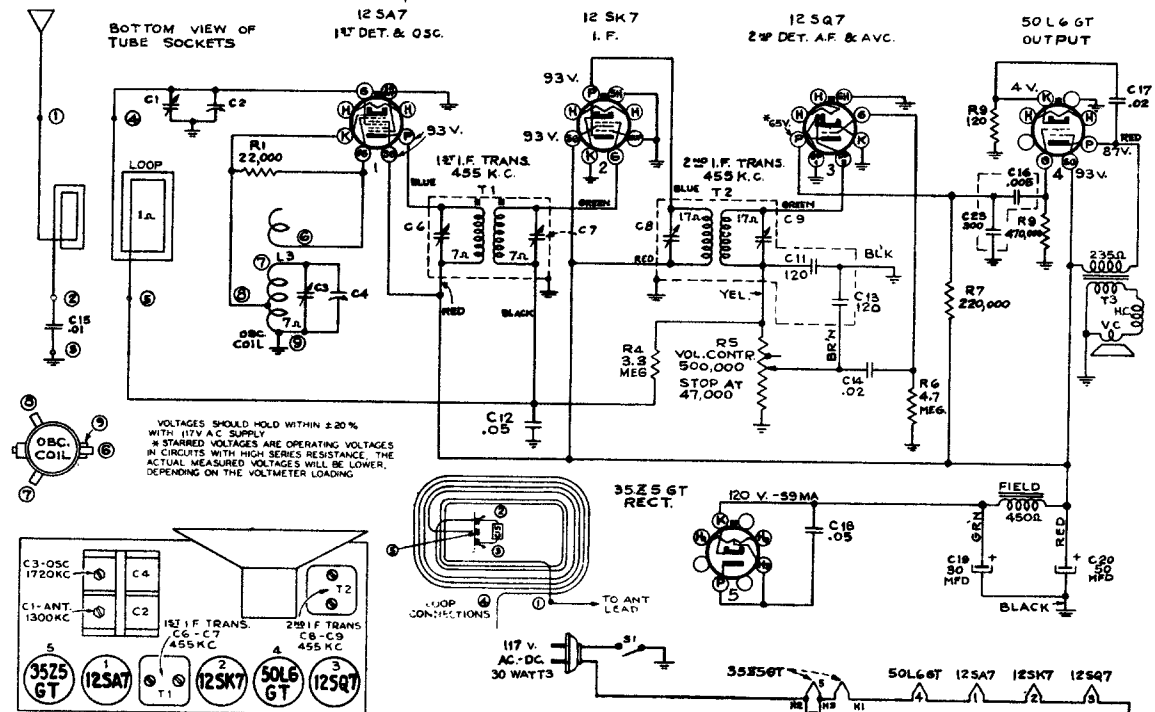
| Steps | Connect the high side of test-oscillator to— | Tune test-osc. to— | Turn radio dial to— | Adjust the following for max. peak output— |
|-------|----------------------------------------------|--------------------|----------------------------------|--------------------------------------------|
| 1 | I-F grid, in series with .01 mfd. | 455 kc | Quiet point 1,600 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. | | | |



Westinghouse Radio



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

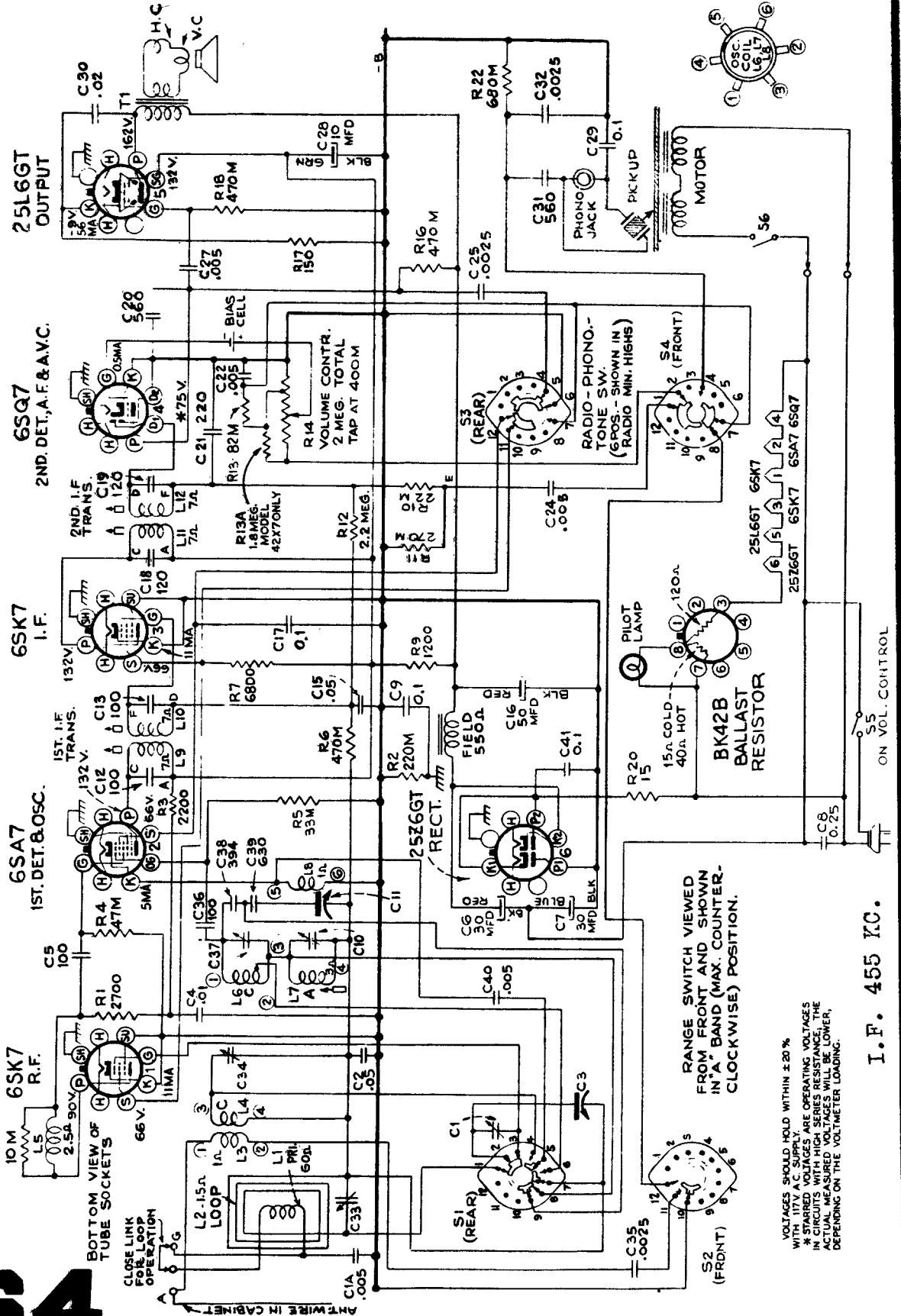


Schematic Circuit Diagram Model WR-12K1

WR-12K1

164 Westinghouse Models WR-42X3 & WR-42X7

MANUAL OF 1942 MOST POPULAR SERVICE DIAGRAMS



MANUAL OF 1942 MOST POPULAR SERVICE DIAGRAMS

Models WR-62K1 & WR-62K2

Alignment Procedure

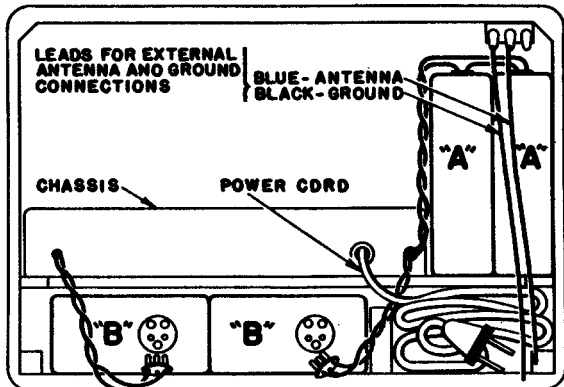
Output Meter Alignment.—If this method is used, connect the meter across the voice coil, and turn the receiver volume control to maximum.

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

Precautionary Lead Dress.—

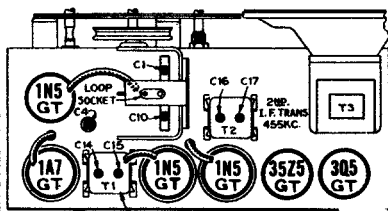
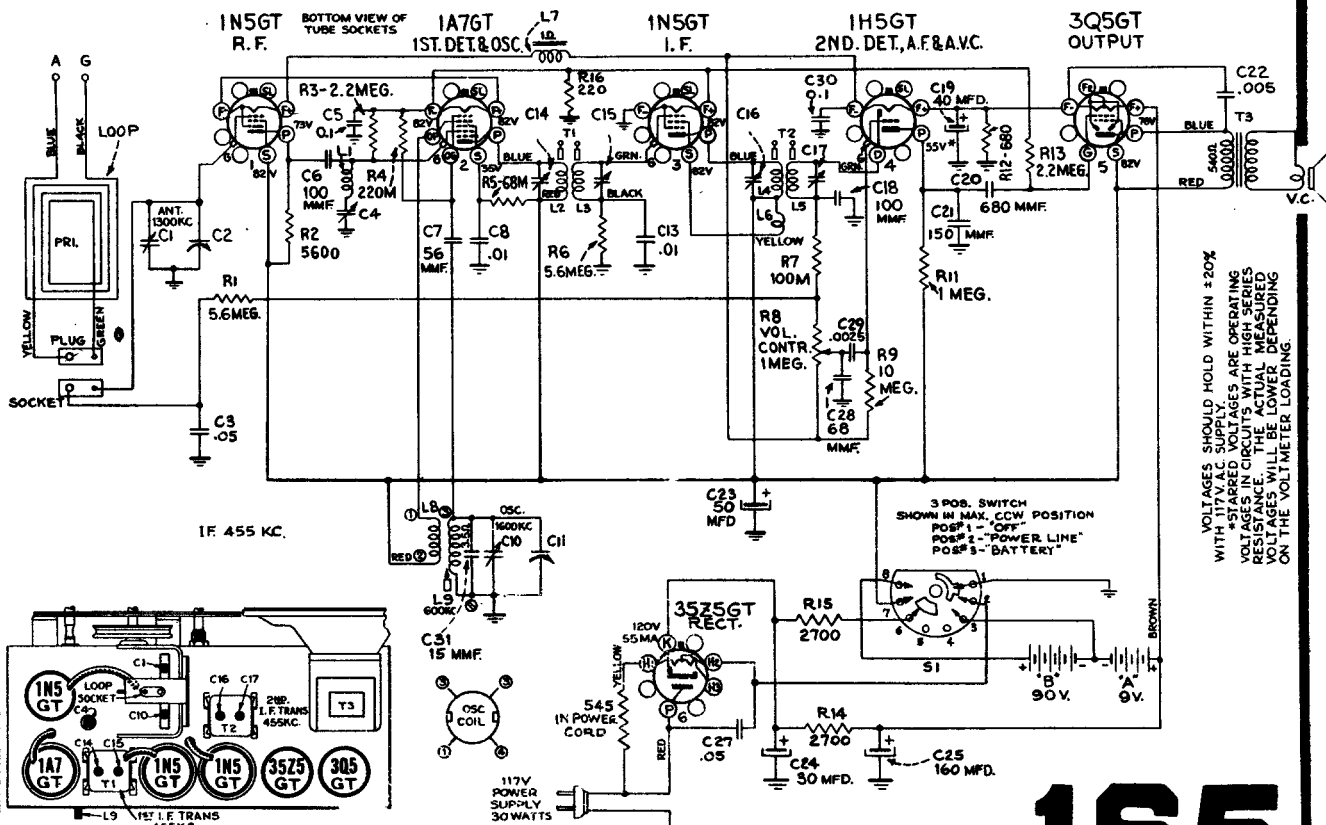
1. Keep green grid leads above chassis away from each other.
2. All filament wires should be dressed close to chassis.
3. Keep blue leads from I-F transformers close to chassis.

BATTERY INSTALLATION

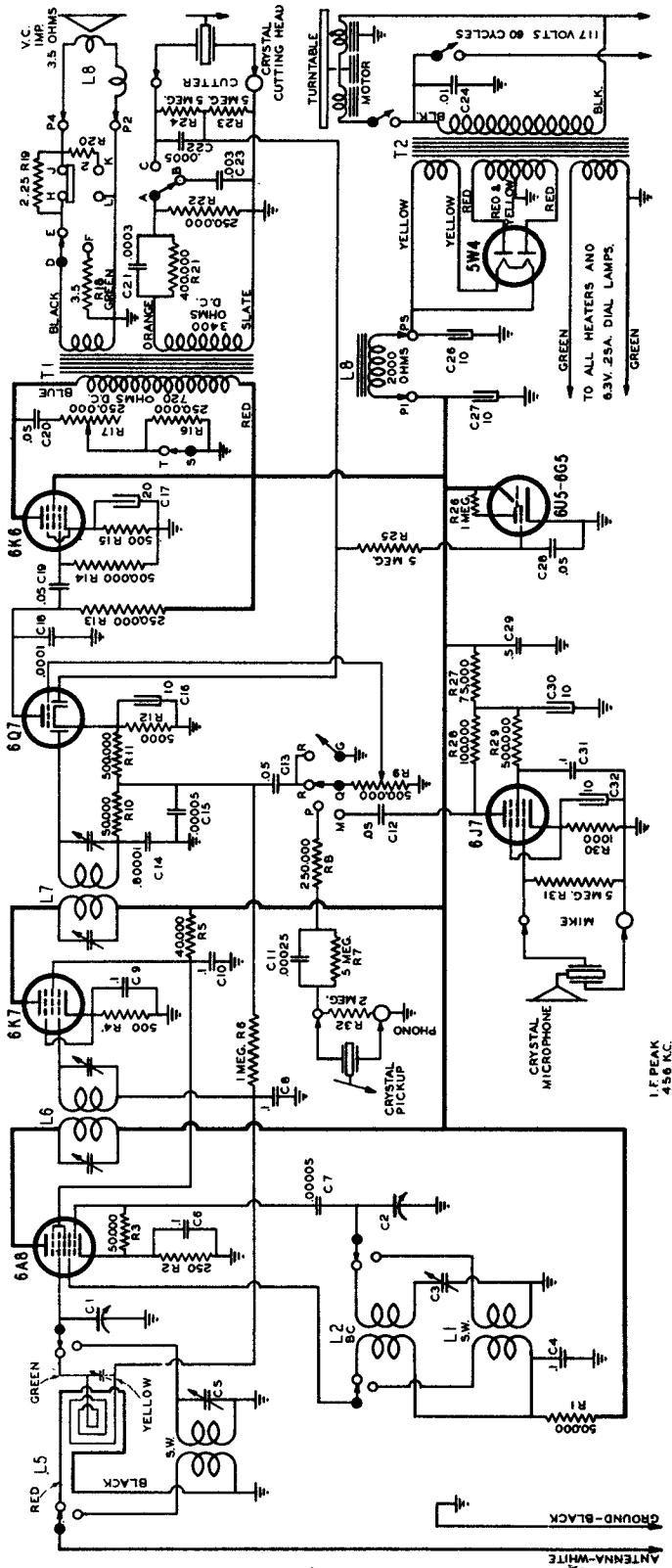


- "A"—TWO 45-VOLT EVEREADY NO. 748, BURGESS NO. G-3, RAY-O-VAC NO. P-83-A, OR EQUIVALENT.
 "B"—TWO 45-VOLT EVEREADY NO. 482, BURGESS NO. M-30, RAY-O-VAC NO. P-7830, OR EQUIVALENT.

| 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. | 600 kc | 600 kc | C4 Wave trap for minimum output |
| 4 | | | | L9 (osc.) (Rock in) |
| 5 | | | | C10 (osc.) |
| 6 | | 1,800 kc | 1,800 kc | C1 (ant.) |
| 7 | Repeat steps 4, 5 and 6 until aligned | | | |
| 8 | With chassis in cabinet and batteries connected repeat step 6 | | | |



MANUAL OF 1942 MOST POPULAR SERVICE DIAGRAMS



| <u>Tube</u> | <u>Position</u> | <u>Plate</u> | <u>Screen</u> | <u>Cathode</u> |
|-------------|-------------------|--------------|---------------|----------------|
| 6A8 | 1st. Det. Osc. | 230 | 75 | 2.2 |
| 6K7 | I.F. | 230 | 75 | 3.0 |
| 6Q7 | 2nd. Det. | 90* | | 1.6 |
| 6J7 | Mike Amp. | 45 to 65* | 30* | .8 |
| 6X6 | Output | 215 | 235 | 13.5 |

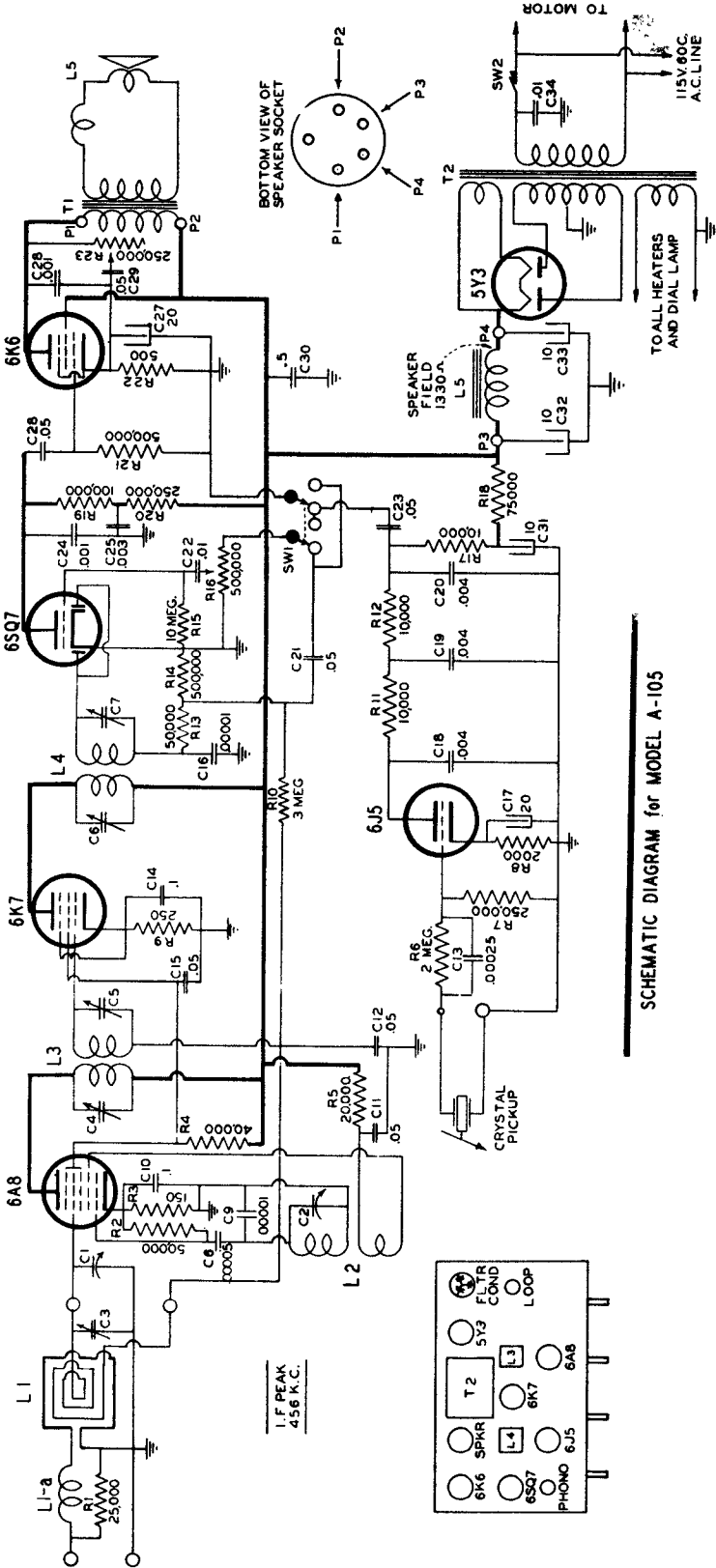
NOTE: This is a typical voltage analysis made by use of standard 1000 ohm per volt voltmeter, using the 300 volt scale for plate and screen voltage readings.

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* |
| 1400 K.C. | 1400 K.C. | C2-Osc. |
| " " | " " | Trimmer on Loop - R.F. |

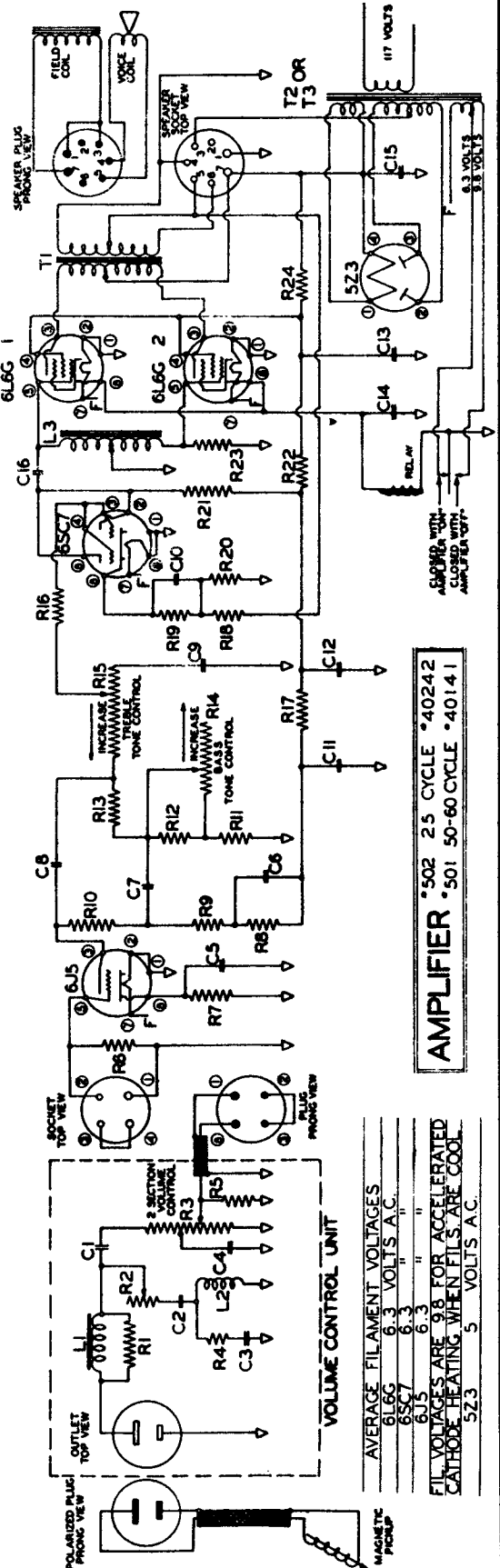
Connect signal generator to ANT. and GND. terminals.

THE RUDOLPH WURLITZER COMPANY

NORTH TONAWANDA, N. Y.

VOLTAGES & CURRENTS OF MODELS 501 & 502 AMPLIFIERS ALL MEASUREMENTS MADE WITH LINE AT 117 VOLTS 25 OR 60 CYCLE
 ALL VOLTAGES MEASURED WITH 1000 OHMS PER VOLT VOLTMETER (CALL VOLTAGES OVER 50 USE 500 VOLT SCALE)
 AVERAGE PLATE & SCREEN VOLTAGE AVERAGE VOLTAGE ACROSS CONDENSERS
 MEASURED TO CHASSIS
 6L6G 68 MA. D.C.
 6SC7 1.8 " " "
 6J5 " " "
 6L6G SCREEN 315 " " "
 6L6G SCREEN 315 " " "
 6J5 PLATE 170 " " "
 6J5 PLATE 170 " " "
 SPEAKER FIELD RESISTANCE 5200 OHMS-VOICE COIL 8 OHMS
 320 VOLTS D.C. BETWEEN TERMINALS 1 & 7 OF SPEAKER SOCKET

| ITEM PART | VALUE | REMARKS | ITEM PART | VALUE | REMARKS | ITEM | VALUE | REMARKS |
|-----------|-------|-----------|-----------|----------|---------|------------|---------|------------|
| R 1 | 40284 | 3000 OHMS | 1/10 % | 1/2 WATT | 1/10 % | CONDENSERS | 0.5 MFD | 200 WV C16 |
| R 2 | 40281 | 5000 " | 1/10 % | 1/2 WATT | 1/10 % | CONDENSERS | 0.5 MFD | ±10 % 400 |
| R 3 | 22529 | 150000 " | 1/10 % | 1/2 WATT | 1/10 % | CONDENSERS | 0.5 MFD | ±10 % 400 |
| R 4 | 20855 | 2000 " | 1/10 % | 1/2 WATT | 1/10 % | CONDENSERS | 0.5 MFD | ±10 % 400 |
| R 5 | 35924 | 150000 " | 1/10 % | 1/2 WATT | 1/10 % | CONDENSERS | 0.5 MFD | ±10 % 400 |
| R 6 | 36324 | 3000 " | 1/10 % | 1/2 WATT | 1/10 % | CONDENSERS | 0.5 MFD | ±10 % 400 |
| R 7 | 22528 | 320000 " | 1/10 % | 1/2 WATT | 1/10 % | CONDENSERS | 0.5 MFD | ±10 % 400 |
| R 8 | 37370 | 8200 " | 1/10 % | 1/2 WATT | 1/10 % | CONDENSERS | 0.5 MFD | ±10 % 400 |
| R 9 | 37441 | 2200 " | 1/10 % | 1/2 WATT | 1/10 % | CONDENSERS | 0.5 MFD | ±10 % 400 |
| R 10 | 37446 | 39000 " | 1/10 % | 1/2 WATT | 1/10 % | CONDENSERS | 0.5 MFD | ±10 % 400 |
| R 11 | 28343 | 100000 " | 1/10 % | 1/2 WATT | 1/10 % | CONDENSERS | 0.5 MFD | ±10 % 400 |
| R 12 | 20252 | 3000 " | 1/10 % | 1/2 WATT | 1/10 % | CONDENSERS | 0.5 MFD | ±10 % 400 |
| R 13 | 20609 | 100000 " | 1/10 % | 1/2 WATT | 1/10 % | CONDENSERS | 0.5 MFD | ±10 % 400 |
| R 14 | 20609 | 100000 " | 1/10 % | 1/2 WATT | 1/10 % | CONDENSERS | 0.5 MFD | ±10 % 400 |
| R 15 | 40227 | 250000 " | 1/10 % | 1/2 WATT | 1/10 % | CONDENSERS | 0.5 MFD | ±10 % 400 |
| R 16 | 36432 | 20 " | 1/10 % | 1/2 WATT | 1/10 % | CONDENSERS | 0.5 MFD | ±10 % 400 |
| R 17 | 36432 | 20 " | 1/10 % | 1/2 WATT | 1/10 % | CONDENSERS | 0.5 MFD | ±10 % 400 |
| R 18 | 37446 | 39000 " | 1/10 % | 1/2 WATT | 1/10 % | CONDENSERS | 0.5 MFD | ±10 % 400 |
| R 19 | 37446 | 39000 " | 1/10 % | 1/2 WATT | 1/10 % | CONDENSERS | 0.5 MFD | ±10 % 400 |
| R 20 | 37446 | 39000 " | 1/10 % | 1/2 WATT | 1/10 % | CONDENSERS | 0.5 MFD | ±10 % 400 |
| R 21 | 37446 | 39000 " | 1/10 % | 1/2 WATT | 1/10 % | CONDENSERS | 0.5 MFD | ±10 % 400 |
| R 22 | 37446 | 39000 " | 1/10 % | 1/2 WATT | 1/10 % | CONDENSERS | 0.5 MFD | ±10 % 400 |
| R 23 | 37446 | 39000 " | 1/10 % | 1/2 WATT | 1/10 % | CONDENSERS | 0.5 MFD | ±10 % 400 |
| R 24 | 37446 | 39000 " | 1/10 % | 1/2 WATT | 1/10 % | CONDENSERS | 0.5 MFD | ±10 % 400 |
| R 25 | 37446 | 39000 " | 1/10 % | 1/2 WATT | 1/10 % | CONDENSERS | 0.5 MFD | ±10 % 400 |
| R 26 | 37446 | 39000 " | 1/10 % | 1/2 WATT | 1/10 % | CONDENSERS | 0.5 MFD | ±10 % 400 |
| R 27 | 37446 | 39000 " | 1/10 % | 1/2 WATT | 1/10 % | CONDENSERS | 0.5 MFD | ±10 % 400 |
| R 28 | 37446 | 39000 " | 1/10 % | 1/2 WATT | 1/10 % | CONDENSERS | 0.5 MFD | ±10 % 400 |
| R 29 | 37446 | 39000 " | 1/10 % | 1/2 WATT | 1/10 % | CONDENSERS | 0.5 MFD | ±10 % 400 |
| R 30 | 37446 | 39000 " | 1/10 % | 1/2 WATT | 1/10 % | CONDENSERS | 0.5 MFD | ±10 % 400 |
| R 31 | 37446 | 39000 " | 1/10 % | 1/2 WATT | 1/10 % | CONDENSERS | 0.5 MFD | ±10 % 400 |
| R 32 | 37446 | 39000 " | 1/10 % | 1/2 WATT | 1/10 % | CONDENSERS | 0.5 MFD | ±10 % 400 |
| R 33 | 37446 | 39000 " | 1/10 % | 1/2 WATT | 1/10 % | CONDENSERS | 0.5 MFD | ±10 % 400 |
| R 34 | 37446 | 39000 " | 1/10 % | 1/2 WATT | 1/10 % | CONDENSERS | 0.5 MFD | ±10 % 400 |
| R 35 | 37446 | 39000 " | 1/10 % | 1/2 WATT | 1/10 % | CONDENSERS | 0.5 MFD | ±10 % 400 |
| R 36 | 37446 | 39000 " | 1/10 % | 1/2 WATT | 1/10 % | CONDENSERS | 0.5 MFD | ±10 % 400 |
| R 37 | 37446 | 39000 " | 1/10 % | 1/2 WATT | 1/10 % | CONDENSERS | 0.5 MFD | ±10 % 400 |
| R 38 | 37446 | 39000 " | 1/10 % | 1/2 WATT | 1/10 % | CONDENSERS | 0.5 MFD | ±10 % 400 |
| R 39 | 37446 | 39000 " | 1/10 % | 1/2 WATT | 1/10 % | CONDENSERS | 0.5 MFD | ±10 % 400 |
| R 40 | 37446 | 39000 " | 1/10 % | 1/2 WATT | 1/10 % | CONDENSERS | 0.5 MFD | ±10 % 400 |
| R 41 | 37446 | 39000 " | 1/10 % | 1/2 WATT | 1/10 % | CONDENSERS | 0.5 MFD | ±10 % 400 |
| R 42 | 37446 | 39000 " | 1/10 % | 1/2 WATT | 1/10 % | CONDENSERS | 0.5 MFD | ±10 % 400 |
| R 43 | 37446 | 39000 " | 1/10 % | 1/2 WATT | 1/10 % | CONDENSERS | 0.5 MFD | ±10 % 400 |
| R 44 | 37446 | 39000 " | 1/10 % | 1/2 WATT | 1/10 % | CONDENSERS | 0.5 MFD | ±10 % 400 |
| R 45 | 37446 | 39000 " | 1/10 % | 1/2 WATT | 1/10 % | CONDENSERS | 0.5 MFD | ±10 % 400 |
| R 46 | 37446 | 39000 " | 1/10 % | 1/2 WATT | 1/10 % | CONDENSERS | 0.5 MFD | ±10 % 400 |
| R 47 | 37446 | 39000 " | 1/10 % | 1/2 WATT | 1/10 % | CONDENSERS | 0.5 MFD | ±10 % 400 |
| R 48 | 37446 | 39000 " | 1/10 % | 1/2 WATT | 1/10 % | CONDENSERS | 0.5 MFD | ±10 % 400 |
| R 49 | 37446 | 39000 " | 1/10 % | 1/2 WATT | 1/10 % | CONDENSERS | 0.5 MFD | ±10 % 400 |
| R 50 | 37446 | 39000 " | 1/10 % | 1/2 WATT | 1/10 % | CONDENSERS | 0.5 MFD | ±10 % 400 |
| R 51 | 37446 | 39000 " | 1/10 % | 1/2 WATT | 1/10 % | CONDENSERS | 0.5 MFD | ±10 % 400 |
| R 52 | 37446 | 39000 " | 1/10 % | 1/2 WATT | 1/10 % | CONDENSERS | 0.5 MFD | ±10 % 400 |
| R 53 | 37446 | 39000 " | 1/10 % | 1/2 WATT | 1/10 % | CONDENSERS | 0.5 MFD | ±10 % 400 |
| R 54 | 37446 | 39000 " | 1/10 % | 1/2 WATT | 1/10 % | CONDENSERS | 0.5 MFD | ±10 % 400 |
| R 55 | 37446 | 39000 " | 1/10 % | 1/2 WATT | 1/10 % | CONDENSERS | 0.5 MFD | ±10 % 400 |
| R 56 | 37446 | 39000 " | 1/10 % | 1/2 WATT | 1/10 % | CONDENSERS | 0.5 MFD | ±10 % 400 |
| R 57 | 37446 | 39000 " | 1/10 % | 1/2 WATT | 1/10 % | CONDENSERS | 0.5 MFD | ±10 % 400 |
| R 58 | 37446 | 39000 " | 1/10 % | 1/2 WATT | 1/10 % | CONDENSERS | 0.5 MFD | ±10 % 400 |
| R 59 | 37446 | 39000 " | 1/10 % | 1/2 WATT | 1/10 % | CONDENSERS | 0.5 MFD | ±10 % 400 |
| R 60 | 37446 | 39000 " | 1/10 % | 1/2 WATT | 1/10 % | CONDENSERS | 0.5 MFD | ±10 % 400 |
| R 61 | 37446 | 39000 " | 1/10 % | 1/2 WATT | 1/10 % | CONDENSERS | 0.5 MFD | ±10 % 400 |
| R 62 | 37446 | 39000 " | 1/10 % | 1/2 WATT | 1/10 % | CONDENSERS | 0.5 MFD | ±10 % 400 |
| R 63 | 37446 | 39000 " | 1/10 % | 1/2 WATT | 1/10 % | CONDENSERS | 0.5 MFD | ±10 % 400 |
| R 64 | 37446 | 39000 " | 1/10 % | 1/2 WATT | 1/10 % | CONDENSERS | 0.5 MFD | ±10 % 400 |
| R 65 | 37446 | 39000 " | 1/10 % | 1/2 WATT | 1/10 % | CONDENSERS | 0.5 MFD | ±10 % 400 |
| R 66 | 37446 | 39000 " | 1/10 % | 1/2 WATT | 1/10 % | CONDENSERS | 0.5 MFD | ±10 % 400 |
| R 67 | 37446 | 39000 " | 1/10 % | 1/2 WATT | 1/10 % | CONDENSERS | 0.5 MFD | ±10 % 400 |
| R 68 | 37446 | 39000 " | 1/10 % | 1/2 WATT | 1/10 % | CONDENSERS | 0.5 MFD | ±10 % 400 |
| R 69 | 37446 | 39000 " | 1/10 % | 1/2 WATT | 1/10 % | CONDENSERS | 0.5 MFD | ±10 % 400 |
| R 70 | 37446 | 39000 " | 1/10 % | 1/2 WATT | 1/10 % | CONDENSERS | 0.5 MFD | ±10 % 400 |
| R 71 | 37446 | 39000 " | 1/10 % | 1/2 WATT | 1/10 % | CONDENSERS | 0.5 MFD | ±10 % 400 |
| R 72 | 37446 | 39000 " | 1/10 % | 1/2 WATT | 1/10 % | CONDENSERS | 0.5 MFD | ±10 % 400 |
| R 73 | 37446 | 39000 " | 1/10 % | 1/2 WATT | 1/10 % | CONDENSERS | 0.5 MFD | ±10 % 400 |
| R 74 | 37446 | 39000 " | 1/10 % | 1/2 WATT | 1/10 % | CONDENSERS | 0.5 MFD | ±10 % 400 |
| R 75 | 37446 | 39000 " | 1/10 % | 1/2 WATT | 1/10 % | CONDENSERS | 0.5 MFD | ±10 % 400 |
| R 76 | 37446 | 39000 " | 1/10 % | 1/2 WATT | 1/10 % | CONDENSERS | 0.5 MFD | ±10 % 400 |
| R 77 | 37446 | 39000 " | 1/10 % | 1/2 WATT | 1/10 % | CONDENSERS | 0.5 MFD | ±10 % 400 |
| R 78 | 37446 | 39000 " | 1/10 % | 1/2 WATT | 1/10 % | CONDENSERS | 0.5 MFD | ±10 % 400 |
| R 79 | 37446 | 39000 " | 1/10 % | 1/2 WATT | 1/10 % | CONDENSERS | 0.5 MFD | ±10 % 400 |
| R 80 | 37446 | 39000 " | 1/10 % | 1/2 WATT | 1/10 % | CONDENSERS | 0.5 MFD | ±10 % 400 |
| R 81 | 37446 | 39000 " | 1/10 % | 1/2 WATT | 1/10 % | CONDENSERS | 0.5 MFD | ±10 % 400 |
| R 82 | 37446 | 39000 " | 1/10 % | 1/2 WATT | 1/10 % | CONDENSERS | 0.5 MFD | ±10 % 400 |
| R 83 | 37446 | 39000 " | 1/10 % | 1/2 WATT | 1/10 % | CONDENSERS | 0.5 MFD | ±10 % 400 |
| R 84 | 37446 | 39000 " | 1/10 % | 1/2 WATT | 1/10 % | CONDENSERS | 0.5 MFD | ±10 % 400 |
| R 85 | 37446 | 39000 " | 1/10 % | 1/2 WATT | 1/10 % | CONDENSERS | 0.5 MFD | ±10 % 400 |
| R 86 | 37446 | 39000 " | 1/10 % | 1/2 WATT | 1/10 % | CONDENSERS | 0.5 MFD | ±10 % 400 |
| R 87 | 37446 | 39000 " | 1/10 % | 1/2 WATT | 1/10 % | CONDENSERS | 0.5 MFD | ±10 % 400 |
| R 88 | 37446 | 39000 " | 1/10 % | 1/2 WATT | 1/10 % | CONDENSERS | 0.5 MFD | ±10 % 400 |
| R 89 | 37446 | 39000 " | 1/10 % | 1/2 WATT | 1/10 % | CONDENSERS | 0.5 MFD | ±10 % 400 |
| R 90 | 37446 | 39000 " | 1/10 % | 1/2 WATT | 1/10 % | CONDENSERS | 0.5 MFD | ±10 % 400 |
| R 91 | 37446 | 39000 " | 1/10 % | 1/2 WATT | 1/10 % | CONDENSERS | 0.5 MFD | ±10 % 400 |
| R 92 | 37446 | 39000 " | 1/10 % | 1/2 WATT | 1/10 % | CONDENSERS | 0.5 MFD | ±10 % 400 |
| R 93 | 37446 | 39000 " | 1/10 % | 1/2 WATT | 1/10 % | CONDENSERS | 0.5 MFD | ±10 % 400 |
| R 94 | 37446 | 39000 " | 1/10 % | 1/2 WATT | 1/10 % | CONDENSERS | 0.5 MFD | ±10 % 400 |
| R 95 | 37446 | 39000 " | 1/10 % | 1/2 WATT | 1/10 % | CONDENSERS | 0.5 MFD | ±10 % 400 |
| R 96 | 37446 | 39000 " | 1/10 % | 1/2 WATT | 1/10 % | CONDENSERS | 0.5 MFD | ±10 % 400 |
| R 97 | 37446 | 39000 " | 1/10 % | 1/2 WATT | 1/10 % | CONDENSERS | 0.5 MFD | ±10 % 400 |
| R 98 | 37446 | 39000 " | 1/10 % | 1/2 WATT | 1/10 % | CONDENSERS | 0.5 MFD | ±10 % 400 |
| R 99 | 37446 | 39000 " | 1/10 % | 1/2 WATT | 1/10 % | CONDENSERS | 0.5 MFD | ±10 % 400 |
| R 100 | 37446 | 39000 " | 1/10 % | 1/2 WATT | 1/10 % | CONDENSERS | 0.5 MFD | ±10 % 400 |



AMPLIFIER *502 25 CYCLE *40242
 *501 50-60 CYCLE *40141

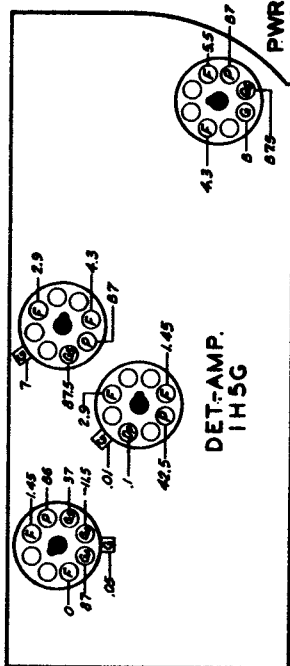
AVERAGE FILAMENT VOLTAGES
 6L6G 6.3 VOLTS A.C.
 6SC7 6.3 " "
 6J5 6.3 " "
 5Z3 5 VOLTS A.C.

FIL VOLTAGES ARE 9B FOR ACCELERATED
 CATHODE HEATING WHEN FILS ARE COOL

Zenith Radio

I.F. FREQUENCY 455 KC

CONVERTER
1A7G



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.

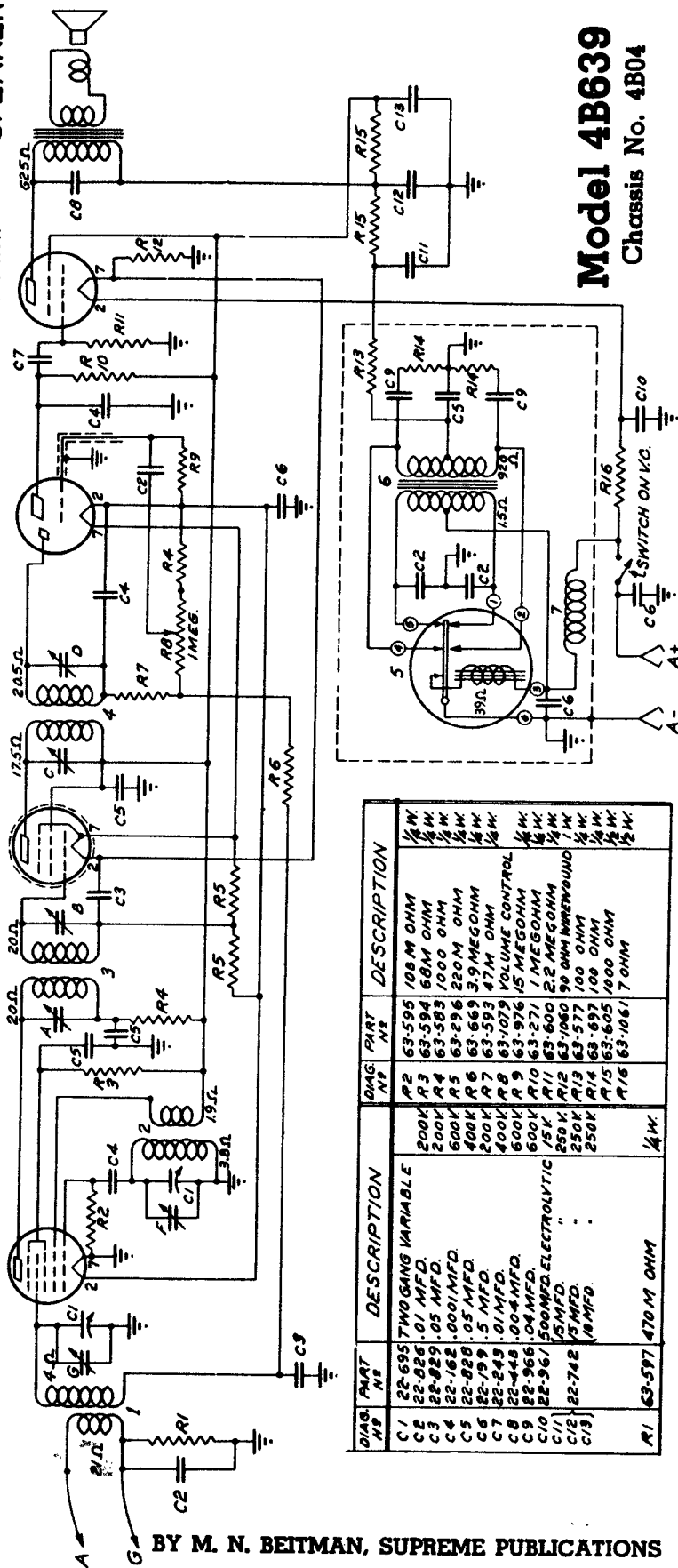
1A7G
CONVERTER

IN5G
I.F.

IH5G
DET.-AMP.

IQ5G
PWR. AMP.

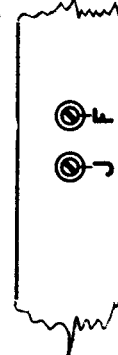
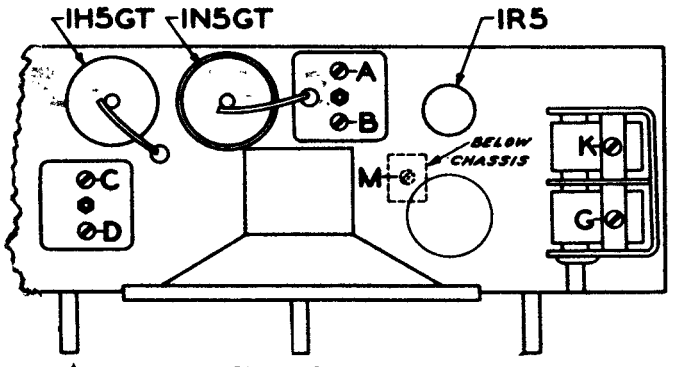
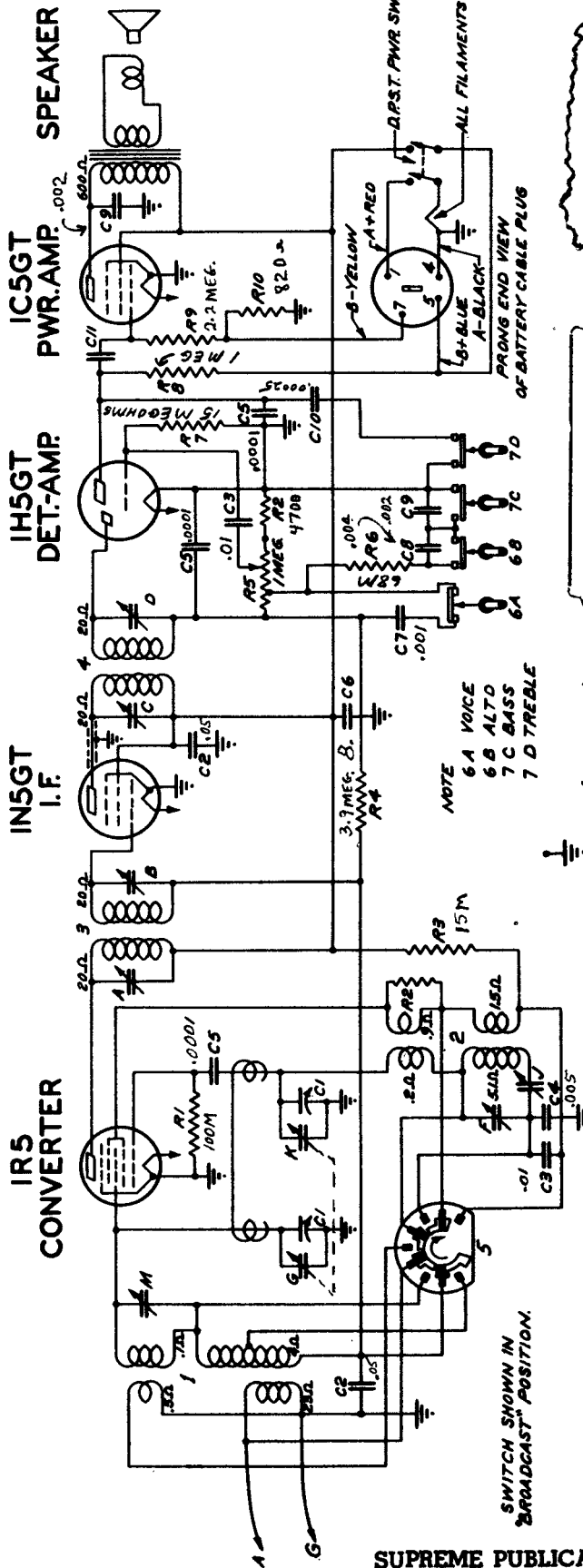
SPEAKER



| DIAG. PART NO. | DESCRIPTION | OHM. PART NO. | DESCRIPTION |
|----------------|------------------------------|---------------|----------------------------|
| C1 | 22-595 TUNING GANG VARIABLE | R2 | 63-595 108 M OHM |
| C2 | 22-828 .01 MFD. | R3 | 63-594 68M OHM |
| C3 | 22-829 .05 MFD. | R4 | 63-583 1000 OHM |
| C4 | 22-162 .0001 MFD. | R5 | 63-296 220 M OHM |
| C5 | 22-828 .05 MFD. | R6 | 63-669 3.9 MEG OHM |
| C6 | 22-199 .5 MFD. | R7 | 63-593 47 M OHM |
| C7 | 22-243 .01 MFD. | R8 | 63-1079 VOLUME CONTROL |
| C8 | 22-448 .004 MFD. | R9 | 63-976 15 MEG OHM |
| C9 | 22-966 .004 MFD. | R10 | 63-271 1 MEG OHM |
| C10 | 22-961 500 MFD. ELECTROLYTIC | R11 | 63-600 2.2 MEG OHM |
| C11 | 22-742 .01 MFD. | R12 | 63-1060 90 OHM MHSR GROUND |
| C12 | 22-742 .01 MFD. | R13 | 63-577 100 OHM |
| C13 | 22-742 .01 MFD. | R14 | 63-577 100 OHM |
| R1 | 63-597 470 M OHM | R15 | 63-605 1000 OHM |
| | | R16 | 63-1061 7 OHM |

Model 4B639
Chassis No. 4B04

MANUAL OF 1942 MOST POPULAR SERVICE DIAGRAMS



DENOTES CHASSIS 'GROUND'

Zenith Radio

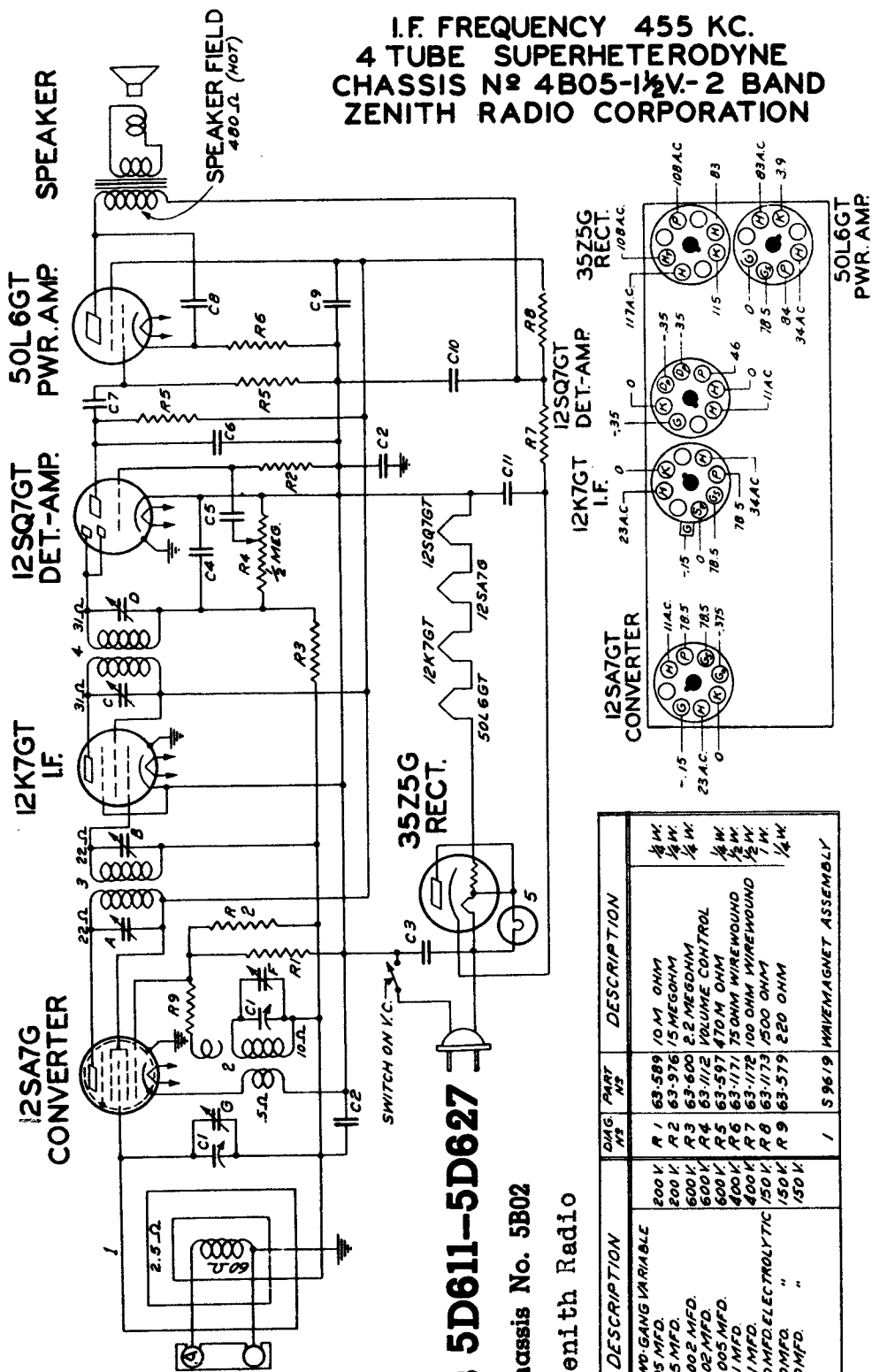
Model 4K640
Chassis No. 4B05

ALIGNMENT PROCEDURE

| Oper-ation | Conn. Test Osc. to | Dummy Ant. | Input Sig. Freq. | Band | Set Dial At | Trimmers | Purpose |
|------------|--------------------|------------|------------------|------------|-------------|----------|--------------------------|
| 1 | Converter Grid | .5 Mfd. | 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 Mmi. | 1600 Kc. | Broadcast | 1600 Kc. | F | Set Osc. to Scale |
| 4 | Ant.—Gnd. | 200 Mmi. | 1400 Kc. | Broadcast | 1400 Kc. | G | Align Ant. |
| 5 | Ant.—Gnd. | 200 Mmi. | 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 4B05-1KV-2 BAND
 ZENITH RADIO CORPORATION

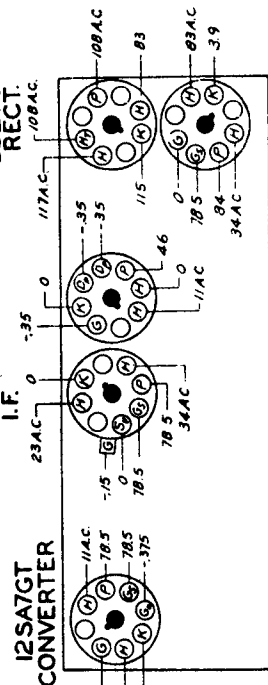


Models 5D611-5D627

Chassis No. 5B02

Zenith Radio

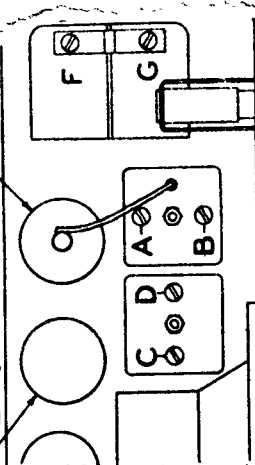
| DIAG. No | PART No | DESCRIPTION | DIAG. No | PART No | DESCRIPTION |
|----------|---------|------------------------|----------|---------|-----------------------------|
| C1 | 22-1266 | TWO-GANG VARIABLE | R1 | 63-589 | 10 M OHM |
| C2 | 22-851 | .05 MFD. | R2 | 63-976 | 15 MEG OHM |
| C3 | 22-1071 | .05 MFD. | R3 | 63-600 | 2.2 MEG OHM |
| C4 | 22-953 | .002 MFD. | R4 | 63-1112 | VOLUME CONTROL |
| C5 | 22-492 | .002 MFD. | R5 | 63-597 | 470 M OHM |
| C6 | 22-854 | .0005 MFD. | R6 | 63-1171 | 75 OHM WIREWOUND |
| C7 | 22-223 | .01 MFD. | R7 | 63-1172 | 100 OHM WIREWOUND |
| C8 | 22-1182 | .01 MFD. | R8 | 63-1173 | 250 OHM |
| C9 | | (20 MFD. ELECTROLYTIC) | R9 | 63-579 | 220 OHM |
| C10 | 22-1186 | (20 MFD. " " | | | |
| C11 | | (30 MFD. " " | | | |
| | | | | | 1 S9619 WAVEMAGNET ASSEMBLY |



50L6GT
PWR. AMP.

12SQ7GT 12K7GT

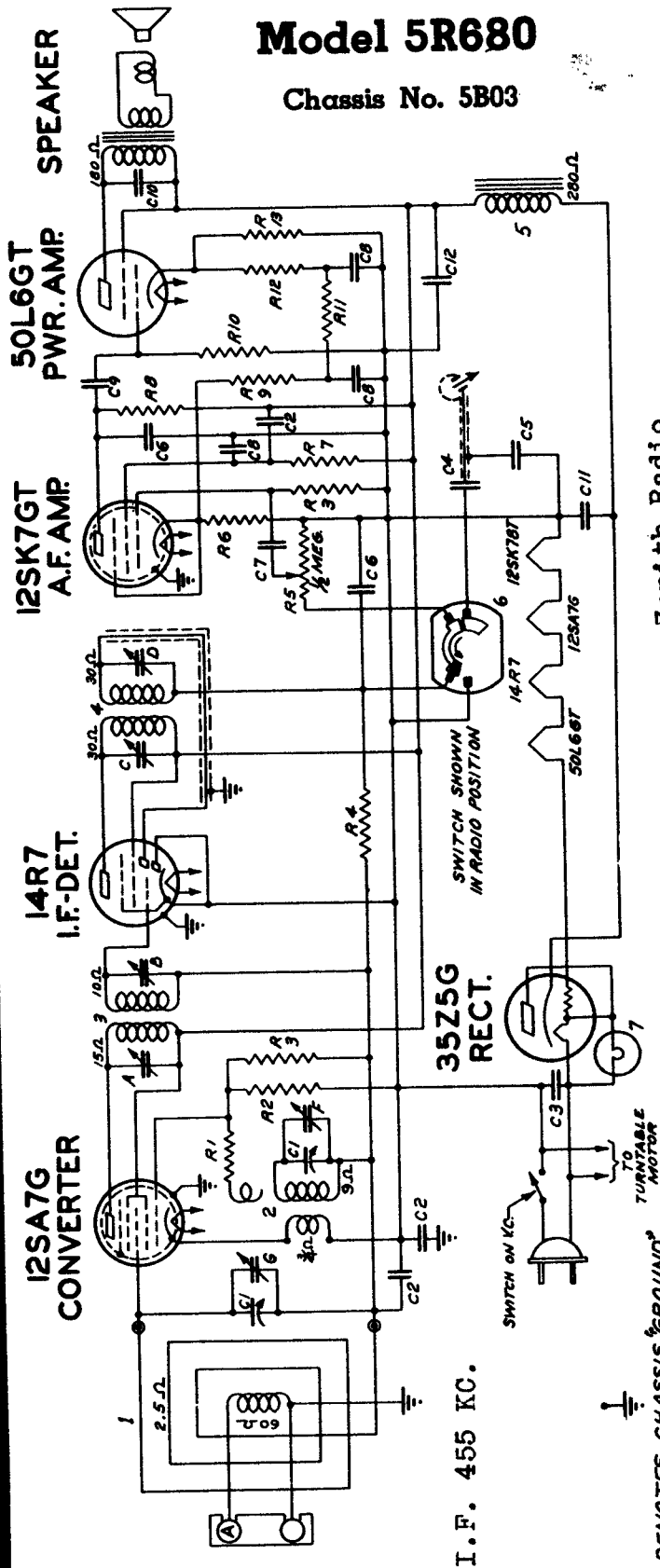
| Operation | Connect Test Oscillator to | Dummy Antenna | Input Signal Frequency | Band | Set Dial At | Trimmers | Purpose |
|-----------|-------------------------------------|---------------|------------------------|------|-------------|------------|-------------------------|
| 1 | Converter Grid |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



MANUAL OF 1942 MOST POPULAR SERVICE DIAGRAMS

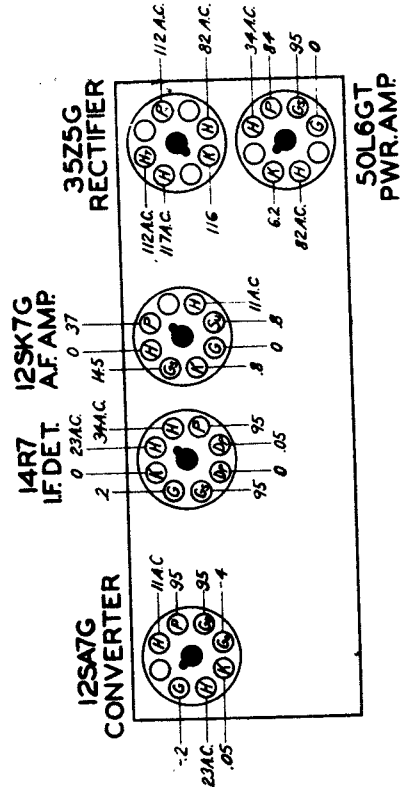
Model 5R680

Chassis No. 5B03



Zenith Radio

| COMP. PART NO. | DESCRIPTION | DIA. PART NO. | DESCRIPTION |
|----------------|------------------------------|---------------|---------------------------|
| C1 | 22-1200 170-0 GANS VARIABLE | R3 | 63-976 15 MEG OHM |
| C2 | 22-829 .05 MFD. | R4 | 63-600 2.2 MEG OHM |
| C3 | 22-1017 .05 MFD. | R5 | 63-1112 VOLUME CONTROL |
| C4 | 22-887 .001 MFD. | R6 | 63-634 820 OHM |
| C5 | 22-953 .002 MFD. | R7 | 63-770 470 OHM |
| C6 | 22-492 .002 MFD. | R8 | 63-445 100 OHM |
| C7 | 22-827 .1 MFD. | R9 | 63-439 270 OHM |
| C8 | 22-188 .02 MFD. | R10 | 63-537 470 OHM |
| C9 | 22-1182 .01 MFD. | R11 | 63-637 470 OHM |
| C10 | 22-1026 20 MFD. ELECTROLYTIC | R12 | 63-639 680 OHM |
| C11 | 22-1026 40 MFD. | R13 | 63-1015 140 OHM WIREWOUND |
| R1 | 63-579 220 OHM | | |
| R2 | 63-589 10 OHM | | |
| | | S9F99 | WAVE MAGNET |
| | | S9450 | OSCILLATOR COIL ASSEMBLY |

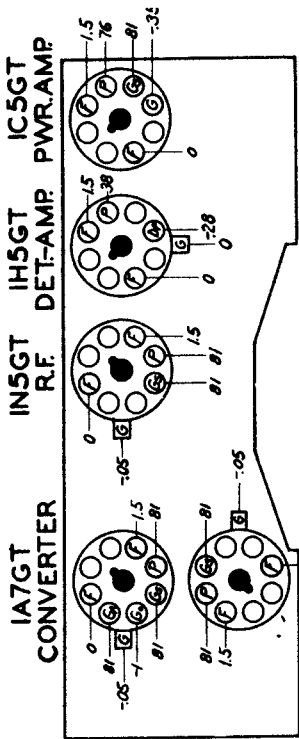
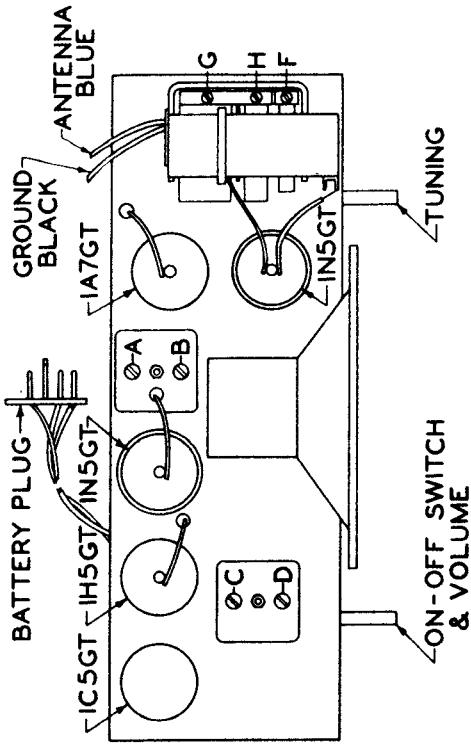


SOCKET VOLTAGES—BOTTOM VIEW

Model 5R680

Chassis No. 5B03

MANUAL OF 1942 MOST POPULAR SERVICE DIAGRAMS



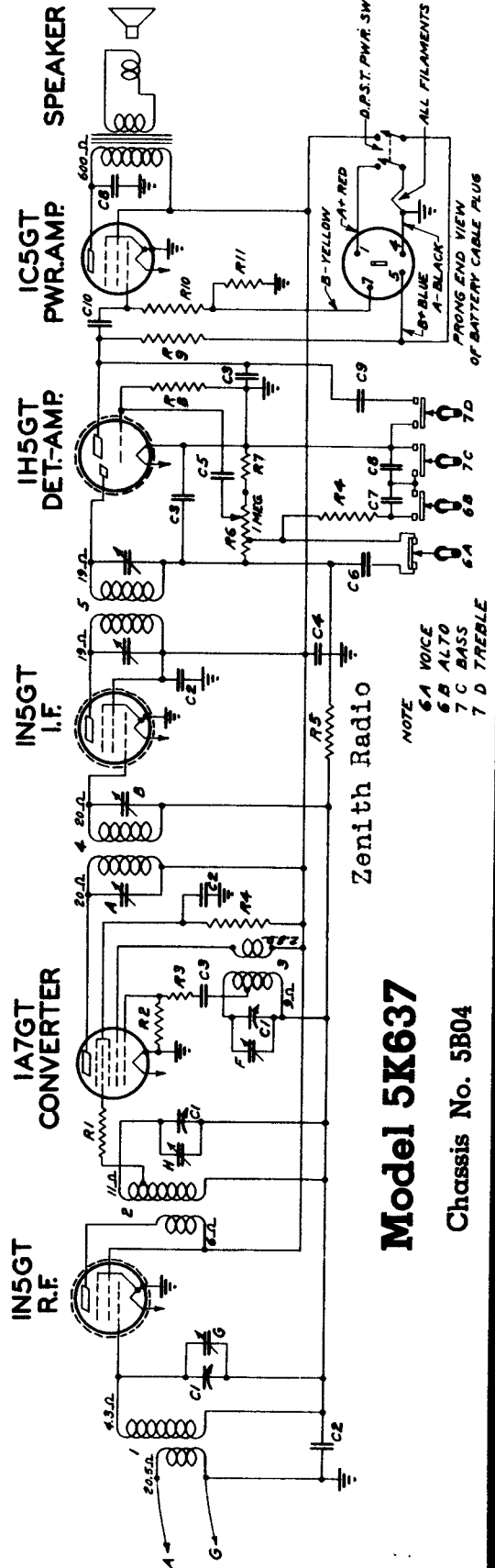
SOCKET VOLTAGES—BOTTOM VIEW

Model 5K637

Chassis No. 5B04

| DIAG. NO. | DESCRIPTION | DIAG. NO. | DESCRIPTION |
|-----------|---------------------|-----------|-------------------------|
| C1 | THREE GAIN VARIABLE | R5 | 3.9 MEG OHM |
| C2 | .05 MFD. | R6 | 200K |
| C3 | .0001 MFD. | R7 | 4700 OHM |
| C4 | 8 MFD. ELECTROLYTIC | R8 | 1/8 MEG OHM |
| C5 | .01 MFD. | R9 | 1 MEG OHM |
| C6 | .001 MFD. | R10 | 2.2 MEG OHM |
| C7 | .004 MFD. | R11 | 820 OHM |
| C8 | .002 MFD. | | |
| C9 | .0025 MFD. | | |
| C10 | .01 MFD. | | |
| R1 | 5800 OHM | | ANTENNA COIL |
| R2 | 180M OHM | | DETECTOR COIL ASSEMBLY |
| R3 | 470 OHM | | OSCILLATOR |
| R4 | 68M OHM | | 1B5 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 Mfd. | 455 Kc. | Broadcast | 600 Kc. | A, B, C, D | I. F. Alignment |
| 2 | Ant.—Grid. | 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

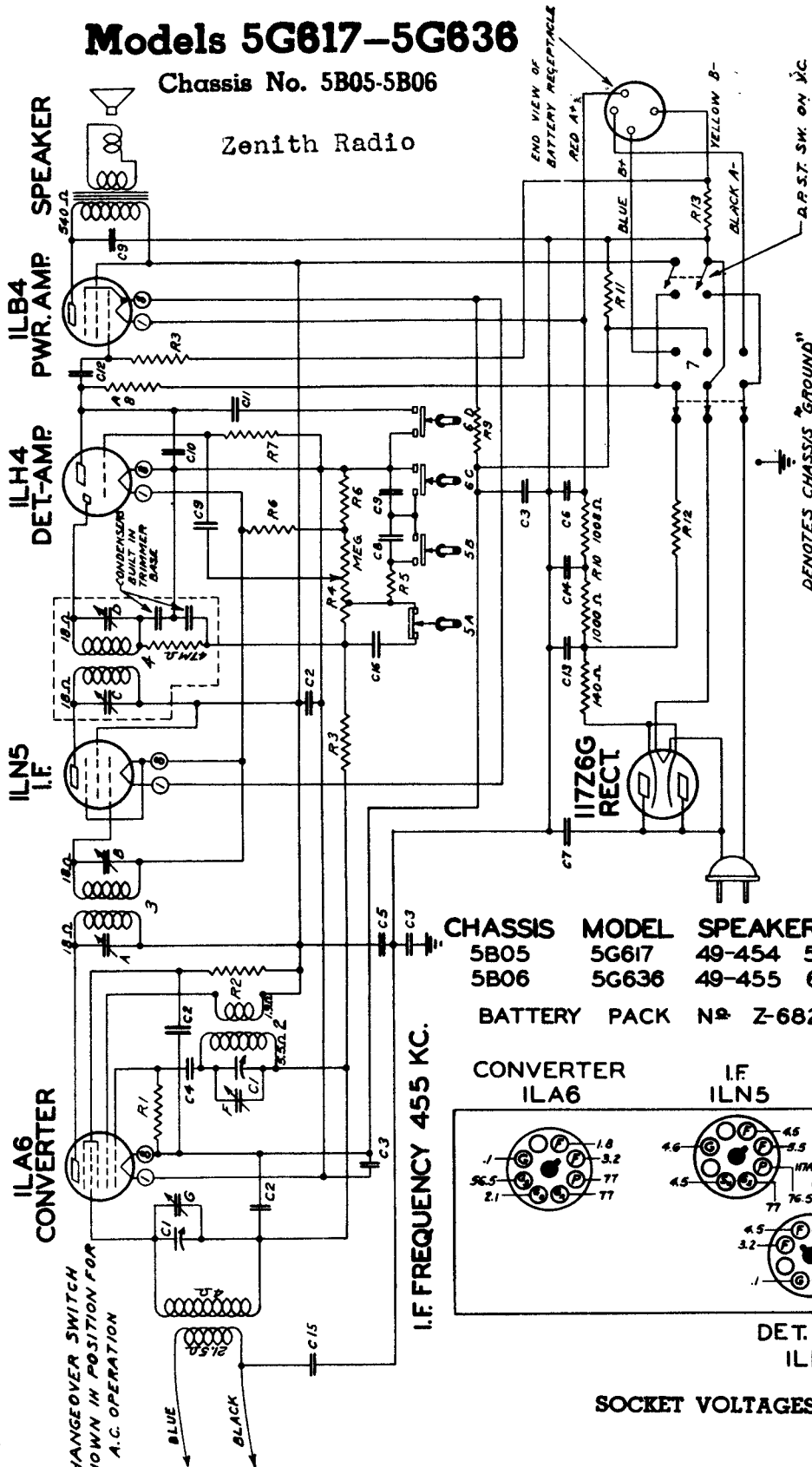
Chassis No. 5B04

MANUAL OF 1942 MOST POPULAR SERVICE DIAGRAMS

Models 5G617-5G636

Chassis No. 5B05-5B06

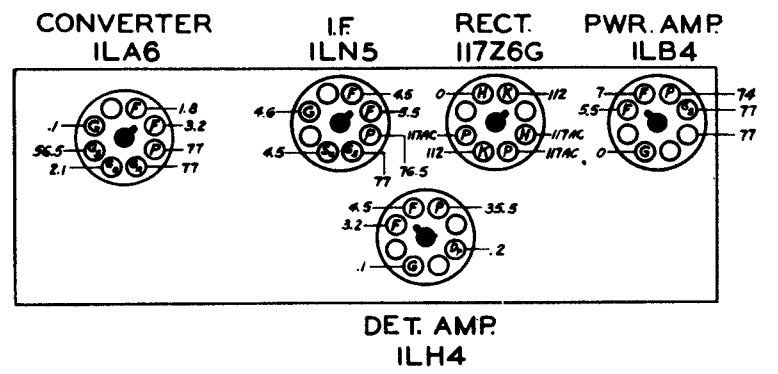
Zenith Radio



| Part No. | Description | Part No. | Description |
|--------------------------|--------------------------|----------|--------------------|
| 20-239 | ANTENNA COIL | 63-654 | 180 M OHM |
| 5-9597 | OSCILLATOR COIL ASSEMBLY | 63-646 | 33 M OHM |
| 95-816 | 1ST I.F. TRANSFORMER | 63-600 | 2.2 MEG OHM |
| 95-817 | 2ND I.F. TRANSFORMER | 63-1236 | VOLUME CONTROL |
| 85-285 | T.C. SWITCH LEFT 5B05 | 63-1841 | VOLUME CONTROL |
| 85-284 | " " " " 5B06 | 63-334 | 68 M OHM |
| 85-289 | " " " " 5B05 | 63-587 | 4700 OHM |
| 85-288 | " " " " 5B06 | 63-976 | 1/5 MEG OHM |
| 85-284 | CHANGEOVER SWITCH | 63-271 | 1 MEG OHM |
| 1ST I.F. TRANS. PRI | | 63-1097 | 870 OHM WIREWOUND |
| 1ST I.F. TRANS. SEC | | 63-1029 | 3 SECTION CANDIDUM |
| 2ND I.F. TRANS. PRI | | 63-439 | 2700 OHM |
| 2ND I.F. TRANS. SEC | | 63-627 | 180 OHM |
| BROADCAST OSC. (ON GANG) | | | |
| BROADCAST ANT. (ON GANG) | | | |

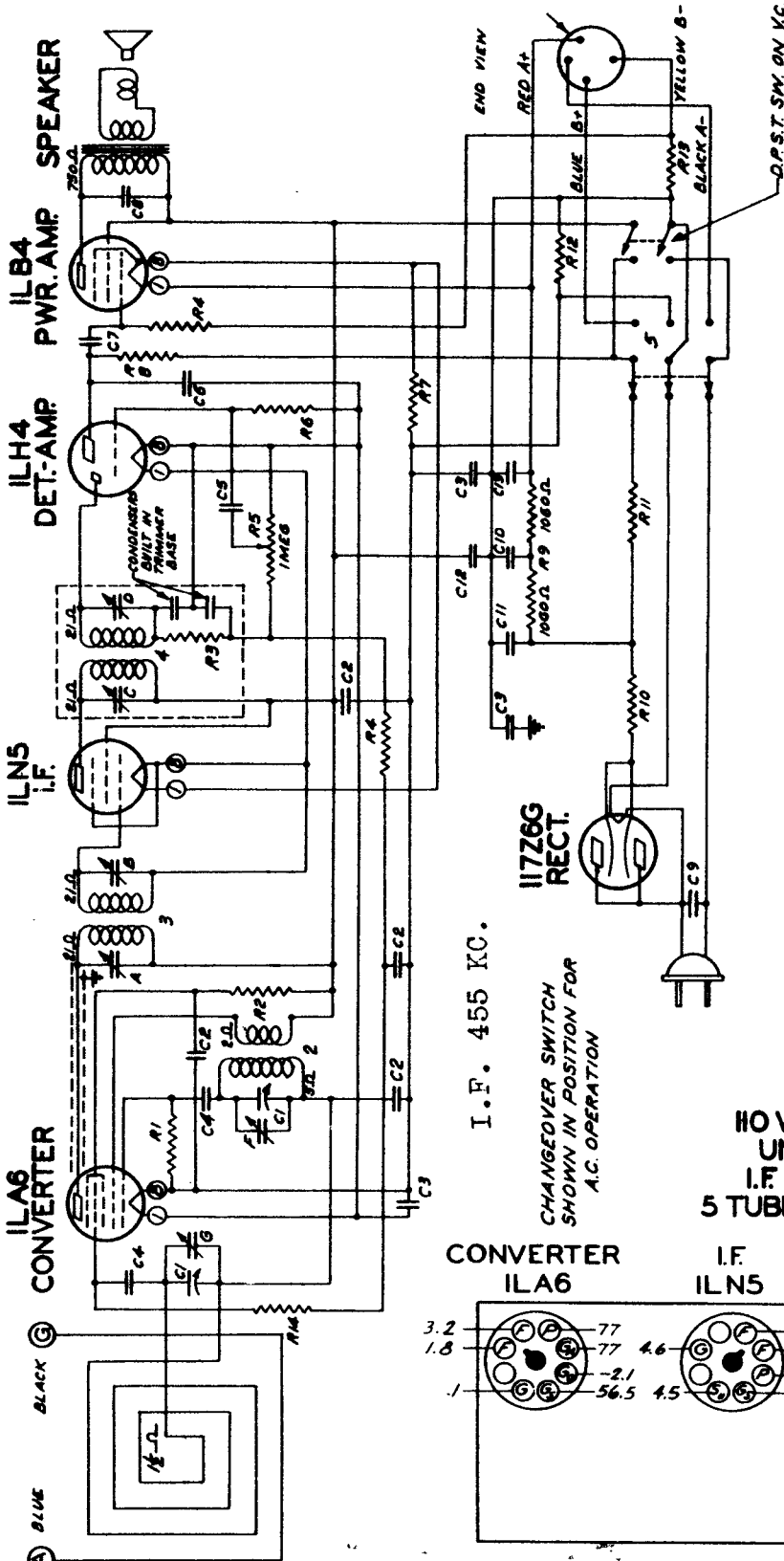
| CHASSIS | MODEL | SPEAKER |
|---------|-------|-----------|
| 5B05 | 5G617 | 49-454 5" |
| 5B06 | 5G636 | 49-455 6" |

BATTERY PACK No Z-682



SOCKET VOLTAGES—BOTTOM VIEW

MANUAL OF 1942 MOST POPULAR SERVICE DIAGRAMS



Model 5G603

Chassis No. 5B07

Zenith Radio

| DIAL NO. | PART NO. | DESCRIPTION |
|----------|----------|---------------------------|
| 1 | 58742 | WAVEMAGNET ASSEMBLY |
| 2 | 58750 | OSC. COIL ASSEMBLY |
| 3 | 95-720 | 1ST I.F. TRANSFORMER |
| 4 | 95-721 | 2ND I.F. TRANSFORMER |
| 5 | 95-242 | CHANGE-OVER SWITCH |
| 4 | | 1ST I.F. TRANS. PRI. |
| 6 | | 1ST I.F. TRANS. SEC. |
| C | | 2ND I.F. TRANS. PRI. |
| D | | 2ND I.F. TRANS. SEC. |
| F | | BROADCAST OSC. (500 GANG) |
| G | | |
| DIAL NO. | PART NO. | DESCRIPTION |
| 1 | 63-773 | 180 M OHM |
| 2 | 63-646 | 33 M OHM |
| 3 | 63-713 | 47 M OHM |
| 4 | 63-600 | 2.2 MEG OHM |
| 5 | 63-126 | VOLUME CONTROL |
| 6 | 63-976 | 1/5 MEG OHM |
| 7 | 63-1097 | 870 OHM WIREWOUND |
| 8 | 63-271 | 1 MEG OHM |
| 9 | 63-1137 | 1/2 SECTION CANDIDUM |
| 10 | 63-1096 | 140 OHM WIREWOUND |
| 11 | 63-439 | 8700 OHM |
| 12 | 63-1099 | 55 OHM WIREWOUND |
| 13 | 63-721 | 180 OHM |
| 14 | 63-296 | 220 M OHM |
| DIAL NO. | PART NO. | DESCRIPTION |
| C1 | 22-062 | TWO GANG VARIABLE |
| C2 | 22-929 | .05 MFD. |
| C3 | 22-927 | .1 MFD. |
| C4 | 22-162 | .0001 MFD. |
| C5 | 22-492 | .002 MFD. |
| C6 | 22-470 | .00015 MFD. |
| C7 | 22-243 | .01 MFD. |
| C8 | 22-326 | .003 MFD. |
| C9 | 22-869 | .05 MFD. |
| C10 | 22-1029 | 50 MFD. ELECTROLYTIC |
| C11 | 22-1027 | 150 MFD. ELECTROLYTIC |
| C12 | 22-1027 | 150 MFD. ELECTROLYTIC |
| C13 | | 180 MFD. ELECTROLYTIC |

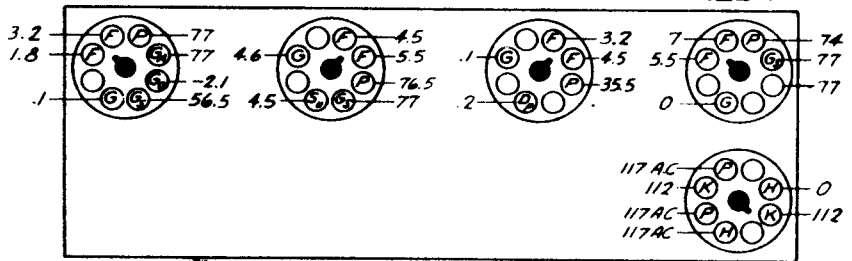
110 VOLT A.C.-BATTERY PACK
UNIVERSAL PORTABLE
I.F. FREQUENCY 455 KC.
5 TUBE SUPERHETERODYNE

CONVERTER
ILA6

I.F.
ILN5

DET. AMP.
ILH4

PWR. AMP.
ILB4

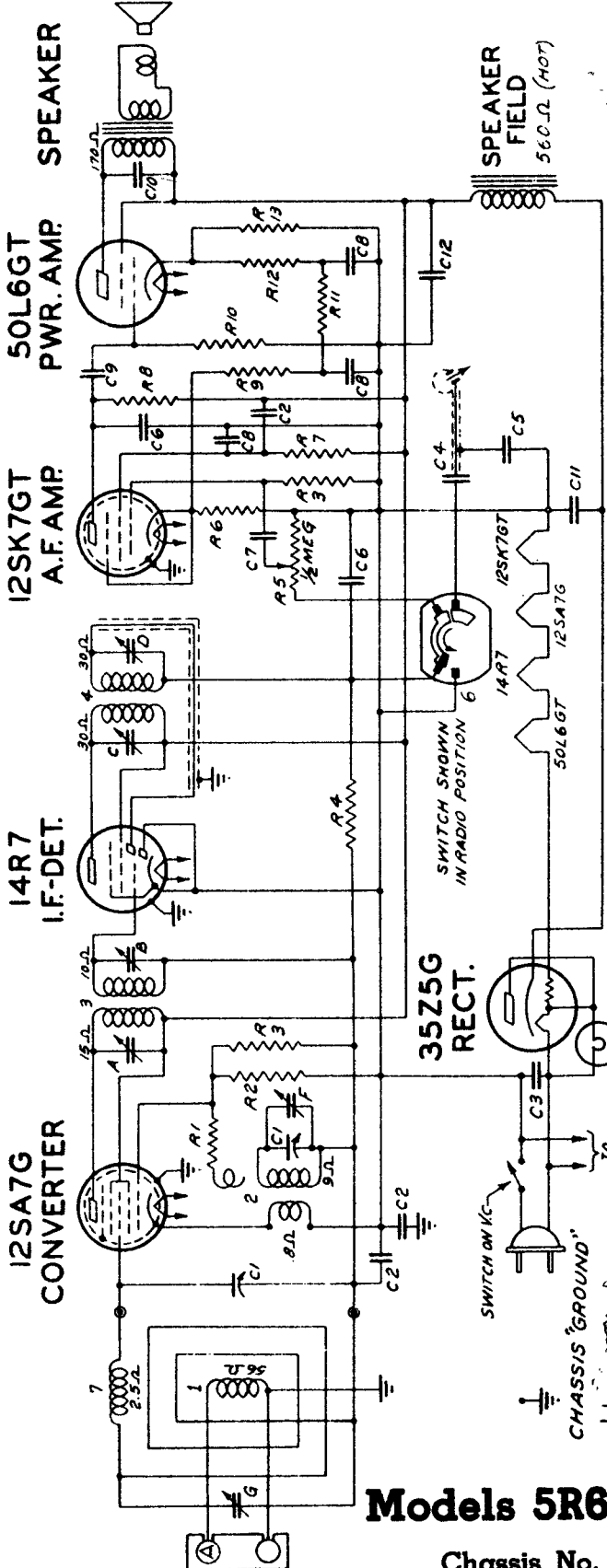


All voltages measured from point indicated to Neg. B. using 20000 ohm per volt meter.

RECT.
1176G

COMPILED BY M. N. BEITMAN, SUPREME PUBLICATIONS

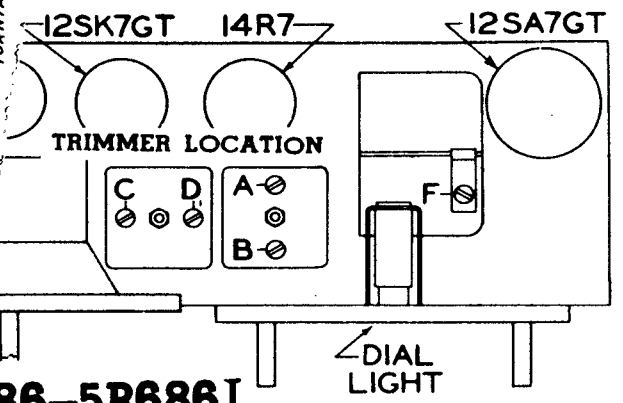
MANUAL OF 1942 MOST POPULAR SERVICE DIAGRAMS



| DIAG. PART NO. | DESCRIPTION | DIAG. PART NO. | DESCRIPTION | DIAG. PART NO. | DESCRIPTION |
|----------------|-------------------------------|----------------|--------------------------|----------------|-------------------------------|
| C1 | 22-1242 TWO-GANG VARIABLE | R3 | 63-976 .15 MEG OHM | 3 | 1E1/F TRANSFORMER |
| C2 | 22-829 .05 MFD | R4 | 63-600 2.2 MEG OHM | 4 | 95-812 2ND I/F TRANSFORMER |
| C3 | 22-1017 .05 MFD | R5 | 63-1112 VOLUME CONTROL | 5 | 100-87 DIAL LIGHT 6.3 K .15A. |
| C4 | 22-1089 .00075 MFD. | R6 | 160V R5 63-634 820 OHM | 6 | 85-282 PHONO-RADIO SWITCH |
| C5 | 22-327 .02 MFD | R7 | 63-778 470M OHM | 7 | 510072 LOOP LOADING COIL |
| C6 | 22-953 .0002 MFD | R8 | 63-445 100M OHM | | |
| C7 | 22-492 .002 MFD | R9 | 63-439 270M OHM | 1 | 1E1/F TRANS PRI |
| C8 | 22-827 .1 MFD | R10 | 63-597 470M OHM | 2 | 1E1/F SEC |
| C9 | 22-188 .02 MFD | R11 | 63-537 470M OHM | 229 | 2ND I/F SEC |
| C10 | 22-1182 .01 MFD | R12 | 63-639 6800 OHM | 221226 | BROADCAST OSC (50 GANG) |
| C11 | 22-1026 (20 MFD) ELECTROLYTIC | R13 | 63-105 140 OHM WIREWOUND | | BROADCAST ANTENNA |
| C12 | 40 MFD | | | | |
| R1 | 63-579 220 OHM | | | | |
| R2 | 63-589 10M OHM | | | | |

| DIAG. PART NO. | DESCRIPTION | DIAG. PART NO. | DESCRIPTION | DIAG. PART NO. | DESCRIPTION |
|----------------|--------------------------------|----------------|-------------|----------------|-------------|
| 1 | 59879 WAVEMAGNET | | | | |
| 2 | 59470 OSCILLATOR COIL ASSEMBLY | | | | |

| Operation | 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. |

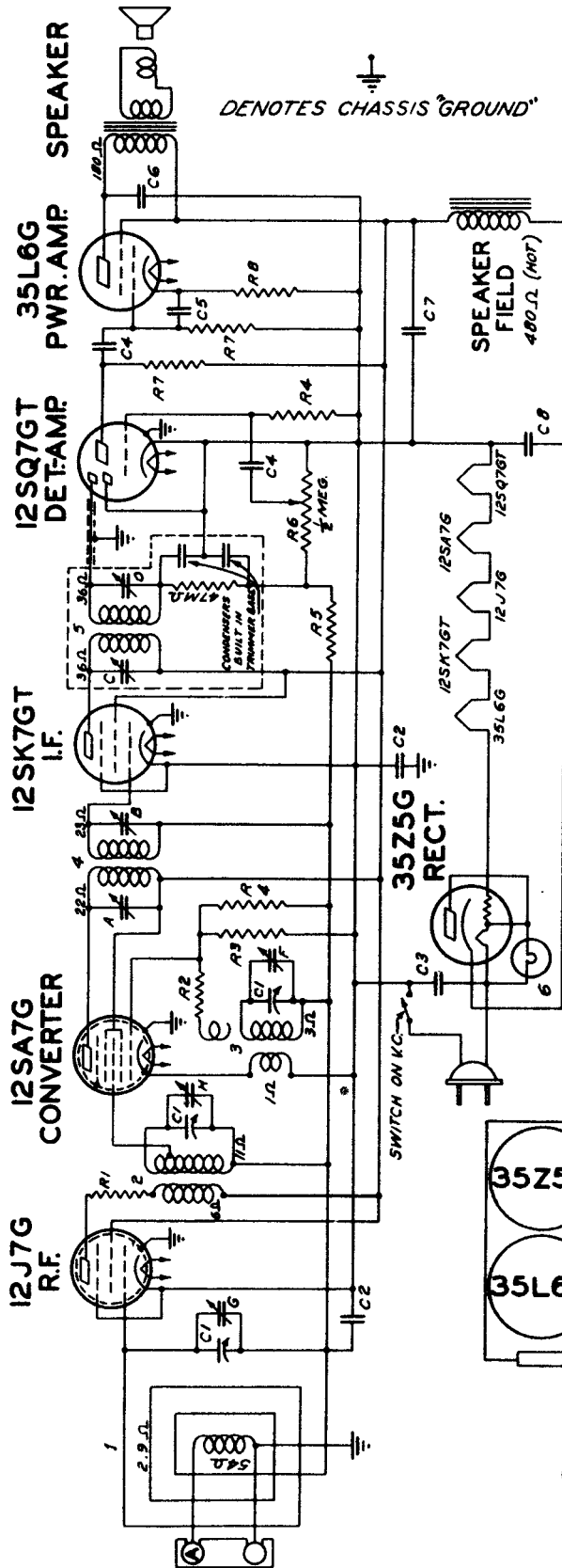


Models 5R686-5R686J

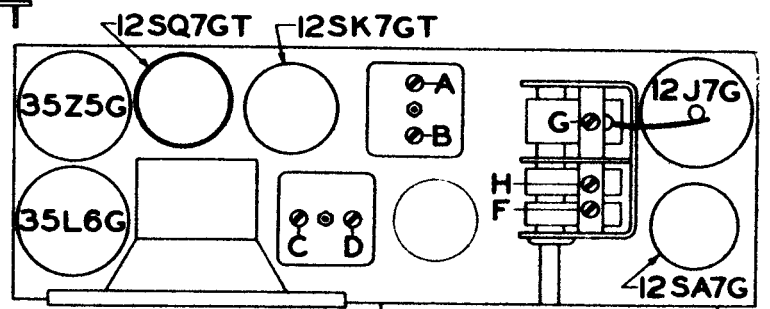
Chassis No. 5B13 Phono.

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MANUAL OF 1942 MOST POPULAR SERVICE DIAGRAMS



| DIAG. PART NO. | DESCRIPTION | DIAG. PART NO. | DESCRIPTION | DIAG. PART NO. | DESCRIPTION |
|----------------|----------------------------------|----------------|--------------------------|----------------|---------------------------------|
| C1 | 22-2201 THREE-GANG VARIABLE | R3 | 63-509 10M OHM | 4 | 95-808 1ET I.F. TRANS. |
| C2 | 22-057 .05 MFD. | R4 | 69-976 15 MEG OHM | 5 | 98-809 2B9 I.F. TRANS. |
| C3 | 22-1017 .05 MFD. | R5 | 63-608 2.2 MEG OHM | 6 | 100-67 PILOT LIGHT 6.3 V. .15A. |
| C4 | 22-243 .01 MFD. | R6 | 69-112 VOLUME CONTROL | | |
| C5 | 22-854 .0005 MFD. | R7 | 63-597 470 OHM OHM | | |
| C6 | 22-1049 .03 MFD. | R8 | 63-486 150 OHM WIREWOUND | A | 1ET I.F. TRANS. PRI. |
| C7 | 22-1014 50MFD. ELECTROLYTIC 150V | | | B | 1ET I.F. TRANS. SEC. |
| C8 | 22-1014 50MFD. ELECTROLYTIC 150V | | | C | 2B9 I.F. TRANS. PRI. |
| R1 | 63-590 15M OHM | | | D | 2B9 I.F. TRANS. SEC. |
| R2 | 63-579 220 OHM | | | F | BROADCAST OSC. (ON GANG) |
| | | | | H | BROADCAST APT. (ON GANG) |
| | | | | | BROADCAST DET. (ON GANG) |



ON-OFF SWITCH & VOLUME

TUNING

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

Zenith Radio Chassis No. 6B04

| Operation | Connect Oscillator to | Dummy Antenna | Input Signal Frequency | Band | Set Dial At | 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 |

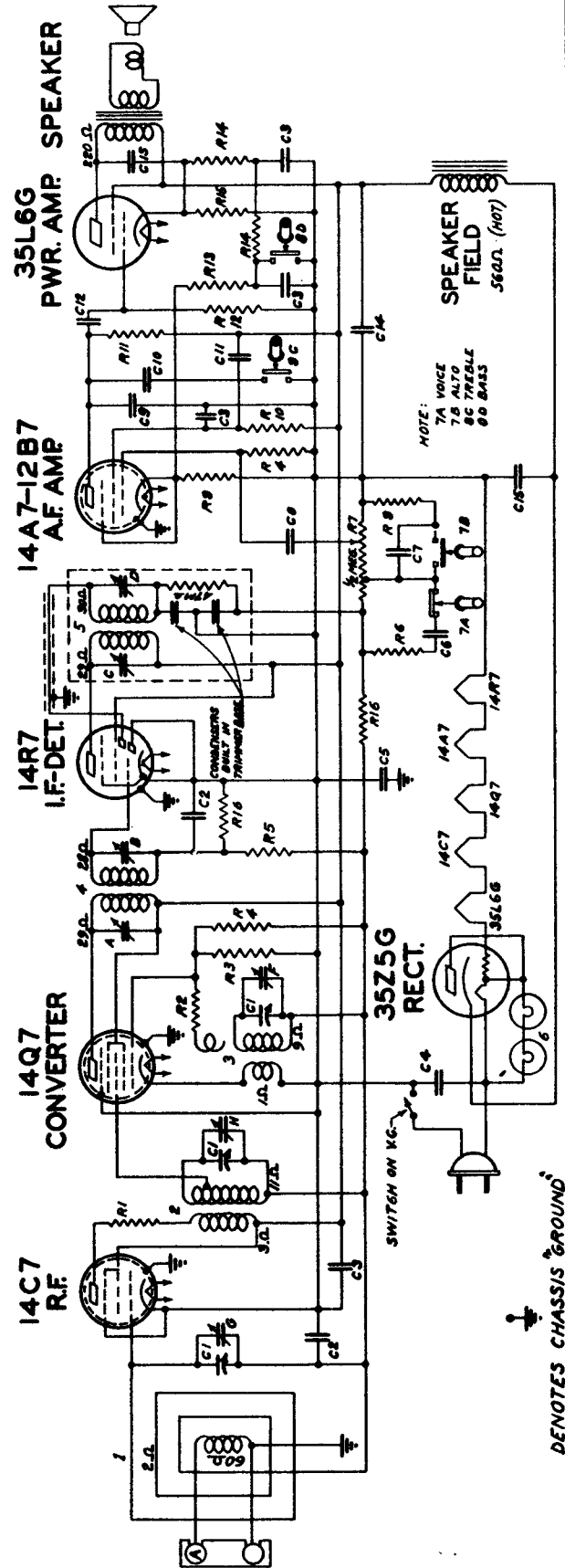
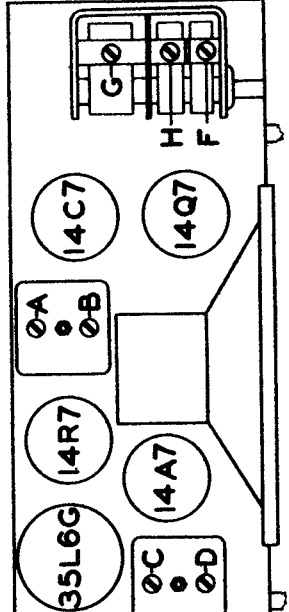
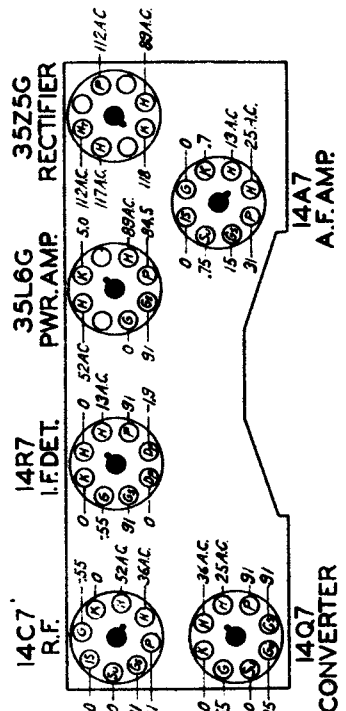
MANUAL OF 1942 MOST POPULAR SERVICE DIAGRAMS

| Operation | Connect Oscillator to Converter Grid | 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

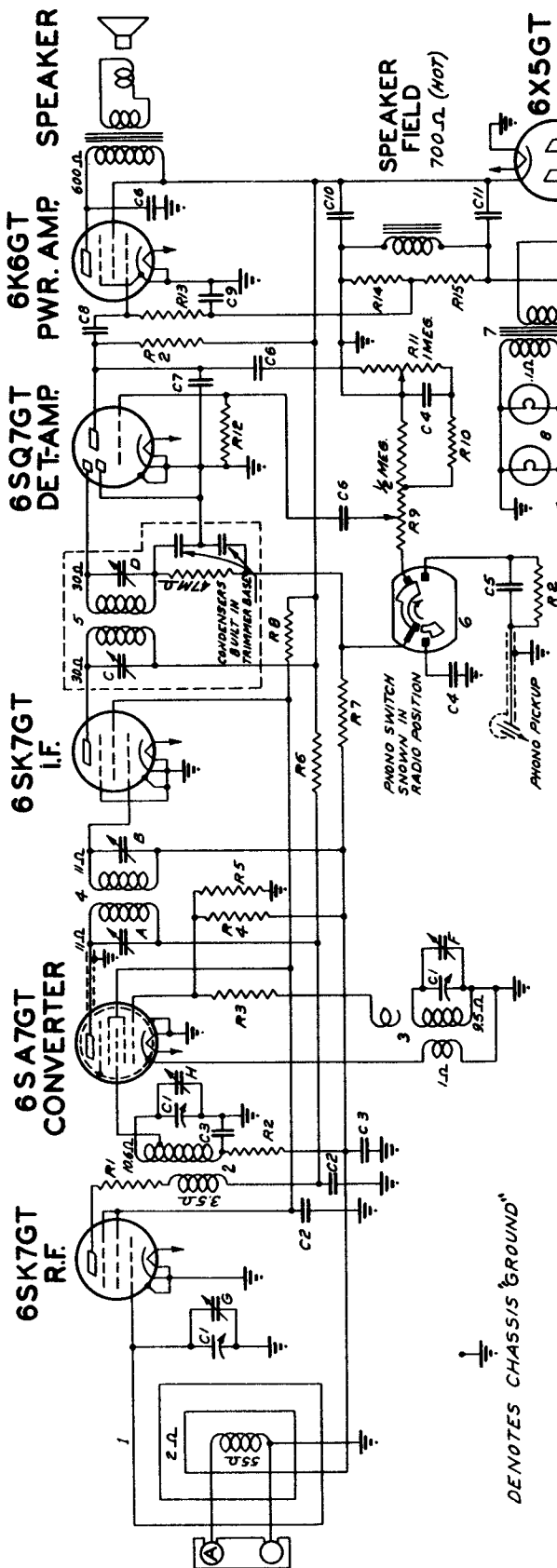
| NAME | DIAG. NO. | DESCRIPTION | DIAG. NO. | DESCRIPTION |
|------|-----------|-------------------------------|-----------|--------------------|
| C1 | 62-1281 | THREE-GANG VARIABLE | R1 | 43-530 15M OHM |
| C2 | 62-1281 | 500 K | R2 | 62-570 250 OHM |
| C3 | 62-1281 | 500 K | R3 | 62-200 10M OHM |
| C4 | 62-1017 | 500 K | R4 | 62-493 1/2 MEG OHM |
| C5 | 62-1281 | 400 K | R5 | 62-493 1/2 MEG OHM |
| C6 | 62-1281 | 400 K | R6 | 62-722 150M OHM |
| C7 | 62-1281 | 200 K | R7 | 62-225 150M OHM |
| C8 | 62-1281 | 100 K | R8 | 62-231 22 M OHM |
| C9 | 62-1281 | 100 K | R9 | 62-434 850 OHM |
| C10 | 62-1281 | 100 K | R10 | 62-659 470M OHM |
| C11 | 62-1219 | 0.4 MFD. | R11 | 62-560 100M OHM |
| C12 | 62-1219 | 0.4 MFD. | R12 | 62-560 100M OHM |
| C13 | 62-1187 | 20 MFD. | R13 | 62-560 100M OHM |
| C14 | 62-1187 | 20 MFD. | R14 | 62-560 100M OHM |
| C15 | 62-1014 | 100 MFD. ELECTROLYTIC (100 V) | R15 | 62-560 100M OHM |
| C16 | 62-1014 | 100 MFD. ELECTROLYTIC (100 V) | R16 | 62-560 100M OHM |
| | | | R17 | 62-560 100M OHM |
| | | | R18 | 62-560 100M OHM |
| | | | R19 | 62-560 100M OHM |
| | | | R20 | 62-560 100M OHM |
| | | | R21 | 62-560 100M OHM |
| | | | R22 | 62-560 100M OHM |
| | | | R23 | 62-560 100M OHM |
| | | | R24 | 62-560 100M OHM |
| | | | R25 | 62-560 100M OHM |
| | | | R26 | 62-560 100M OHM |
| | | | R27 | 62-560 100M OHM |
| | | | R28 | 62-560 100M OHM |
| | | | R29 | 62-560 100M OHM |
| | | | R30 | 62-560 100M OHM |
| | | | R31 | 62-560 100M OHM |
| | | | R32 | 62-560 100M OHM |
| | | | R33 | 62-560 100M OHM |
| | | | R34 | 62-560 100M OHM |
| | | | R35 | 62-560 100M OHM |
| | | | R36 | 62-560 100M OHM |
| | | | R37 | 62-560 100M OHM |
| | | | R38 | 62-560 100M OHM |
| | | | R39 | 62-560 100M OHM |
| | | | R40 | 62-560 100M OHM |
| | | | R41 | 62-560 100M OHM |
| | | | R42 | 62-560 100M OHM |
| | | | R43 | 62-560 100M OHM |
| | | | R44 | 62-560 100M OHM |
| | | | R45 | 62-560 100M OHM |
| | | | R46 | 62-560 100M OHM |
| | | | R47 | 62-560 100M OHM |
| | | | R48 | 62-560 100M OHM |
| | | | R49 | 62-560 100M OHM |
| | | | R50 | 62-560 100M OHM |
| | | | R51 | 62-560 100M OHM |
| | | | R52 | 62-560 100M OHM |
| | | | R53 | 62-560 100M OHM |
| | | | R54 | 62-560 100M OHM |
| | | | R55 | 62-560 100M OHM |
| | | | R56 | 62-560 100M OHM |
| | | | R57 | 62-560 100M OHM |
| | | | R58 | 62-560 100M OHM |
| | | | R59 | 62-560 100M OHM |
| | | | R60 | 62-560 100M OHM |
| | | | R61 | 62-560 100M OHM |
| | | | R62 | 62-560 100M OHM |
| | | | R63 | 62-560 100M OHM |
| | | | R64 | 62-560 100M OHM |
| | | | R65 | 62-560 100M OHM |
| | | | R66 | 62-560 100M OHM |
| | | | R67 | 62-560 100M OHM |
| | | | R68 | 62-560 100M OHM |
| | | | R69 | 62-560 100M OHM |
| | | | R70 | 62-560 100M OHM |
| | | | R71 | 62-560 100M OHM |
| | | | R72 | 62-560 100M OHM |
| | | | R73 | 62-560 100M OHM |
| | | | R74 | 62-560 100M OHM |
| | | | R75 | 62-560 100M OHM |
| | | | R76 | 62-560 100M OHM |
| | | | R77 | 62-560 100M OHM |
| | | | R78 | 62-560 100M OHM |
| | | | R79 | 62-560 100M OHM |
| | | | R80 | 62-560 100M OHM |
| | | | R81 | 62-560 100M OHM |
| | | | R82 | 62-560 100M OHM |
| | | | R83 | 62-560 100M OHM |
| | | | R84 | 62-560 100M OHM |
| | | | R85 | 62-560 100M OHM |
| | | | R86 | 62-560 100M OHM |
| | | | R87 | 62-560 100M OHM |
| | | | R88 | 62-560 100M OHM |
| | | | R89 | 62-560 100M OHM |
| | | | R90 | 62-560 100M OHM |
| | | | R91 | 62-560 100M OHM |
| | | | R92 | 62-560 100M OHM |
| | | | R93 | 62-560 100M OHM |
| | | | R94 | 62-560 100M OHM |
| | | | R95 | 62-560 100M OHM |
| | | | R96 | 62-560 100M OHM |
| | | | R97 | 62-560 100M OHM |
| | | | R98 | 62-560 100M OHM |
| | | | R99 | 62-560 100M OHM |
| | | | R100 | 62-560 100M OHM |



NOTE:
7A VOICE
7B ALTO
8C TREBLE
8D BASS

⊥ DENOTES CHASSIS GROUND

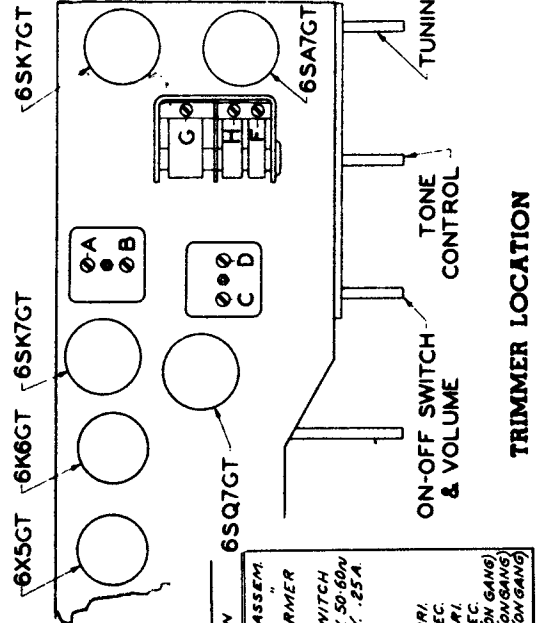
MANUAL OF 1942 MOST POPULAR SERVICE DIAGRAMS



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

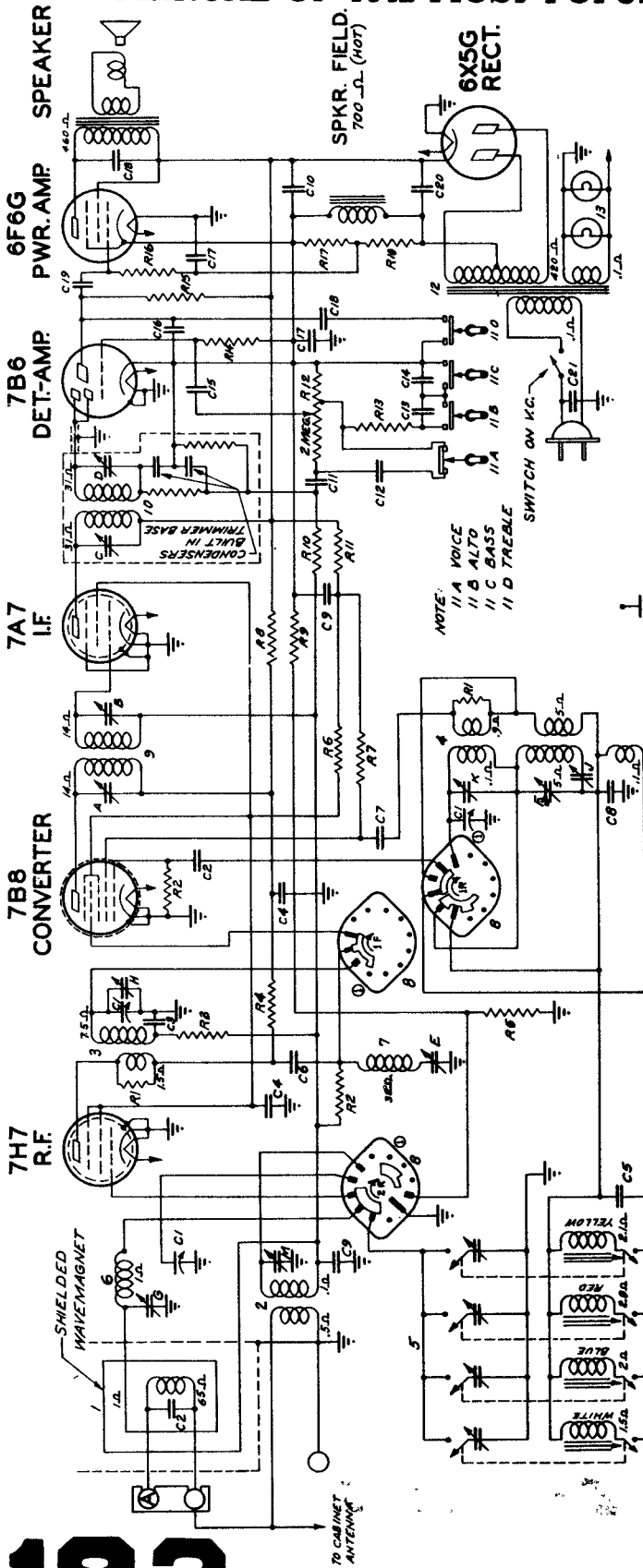
Models 6R683-6R684-6R687R* - 6R688

Chassis No. 6B06 Phono.



| DIAG. No. | PART No. | DESCRIPTION | DIAG. No. | PART No. | DESCRIPTION |
|-----------|----------|----------------------|-----------|----------|----------------|
| C1 | 22-184 | THREE GANG VARIABLE | R3 | 63-579 | 220 OHM |
| C2 | 22-828 | .05 MFD. | R4 | 63-573 | 6.2 MEGOHM |
| C3 | 22-829 | .05 MFD. | R5 | 63-589 | 10M OHM |
| C4 | 22-327 | .02 MFD. | R6 | 63-405 | 100 OHM |
| C5 | 22-887 | .001 MFD. | R7 | 63-600 | 2.2 MEGOHM |
| C6 | 22-446 | .004 MFD. | R8 | 63-1028 | 22M OHM |
| C7 | 22-854 | .0005 MFD. | R9 | 63-1266 | VOLUME CONTROL |
| C8 | 22-830 | .02 MFD. | R10 | 63-571 | 22 M OHM |
| C9 | 22-138 | .2 MFD. | R11 | 63-1247 | TONE CONTROL |
| C10 | 22-719 | 16 MFD. ELECTROLYTIC | R12 | 63-976 | 15 MEGOHM |
| C11 | 22-1036 | 14 MFD. | R13 | 63-571 | 470M OHM |
| C12 | 22-11-1 | .005 MFD. | R14 | 63-651 | 220 M OHM |
| | | | R15 | 63-656 | 270 M OHM |
| R1 | 63-1071 | 10M OHM | | | WAVE-MAGNET |
| R2 | 63-296 | 220M OHM | | | |

MANUAL OF 1942 MOST POPULAR SERVICE DIAGRAMS

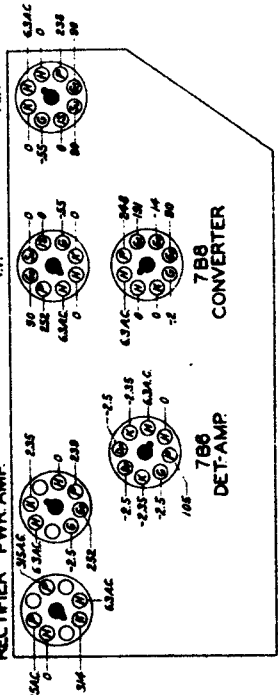


DEVOTES CHASSIS "GROUND"

BAND SWITCH SHOWN IN AUTOMATIC POSITION

I.F. FREQUENCY 455KC.

| CAP. NO. | PART NO. | DESCRIPTION | OHMS | PART NO. | DESCRIPTION | OHMS | PART NO. | DESCRIPTION |
|----------|----------|----------------------|------|----------|-------------|--------------------------|----------|-------------|
| C1 | 22-102 | TRIPLE GANG VARIABLE | 600K | R 16 | 6S-597 | 470M OHM | R 16 | 6S-597 |
| C2 | 22-421 | 500 PFD | 200K | R 17 | 6S-600 | 370M OHM | R 17 | 6S-600 |
| C3 | 22-421 | 500 PFD | 200K | R 18 | 6S-660 | 500M OHM | R 18 | 6S-660 |
| C4 | 22-421 | 500 PFD | 200K | 1 | S9587 | DETECTOR | 1 | S9587 |
| C5 | 22-421 | 500 PFD | 200K | 2 | S9585 | OSCILLATOR | 2 | S9585 |
| C6 | 22-162 | 0.001 MFD | 600K | 3 | S9586 | OSCILLATOR | 3 | S9586 |
| C7 | 22-162 | 0.001 MFD | 600K | 4 | S9589 | LOOP LOADING COIL | 4 | S9589 |
| C8 | 22-162 | 0.005 MFD | 600K | 5 | S9326 | WAVELENGTH COIL ASSEMBLY | 5 | S9326 |
| C9 | 22-162 | 0.005 MFD | 600K | 6 | 85-278 | BAND SELECTOR SWITCH | 6 | 85-278 |
| C10 | 22-162 | 0.005 MFD | 600K | 7 | 95-708 | I.F. TRANSFORMER | 7 | 95-708 |
| C11 | 22-162 | 0.005 MFD | 600K | 8 | 95-709 | 250 I.F. | 8 | 95-709 |
| C12 | 22-162 | 0.005 MFD | 600K | 9 | 95-709 | 250 I.F. | 9 | 95-709 |
| C13 | 22-162 | 0.005 MFD | 600K | 10 | 95-709 | 250 I.F. | 10 | 95-709 |
| C14 | 22-162 | 0.005 MFD | 600K | 11 | 95-709 | 250 I.F. | 11 | 95-709 |
| C15 | 22-162 | 0.005 MFD | 600K | 12 | 95-709 | 250 I.F. | 12 | 95-709 |
| C16 | 22-162 | 0.005 MFD | 600K | 13 | 95-709 | 250 I.F. | 13 | 95-709 |
| C17 | 22-162 | 0.005 MFD | 600K | 14 | 95-709 | 250 I.F. | 14 | 95-709 |
| C18 | 22-162 | 0.005 MFD | 600K | 15 | 95-709 | 250 I.F. | 15 | 95-709 |
| C19 | 22-162 | 0.005 MFD | 600K | 16 | 95-709 | 250 I.F. | 16 | 95-709 |



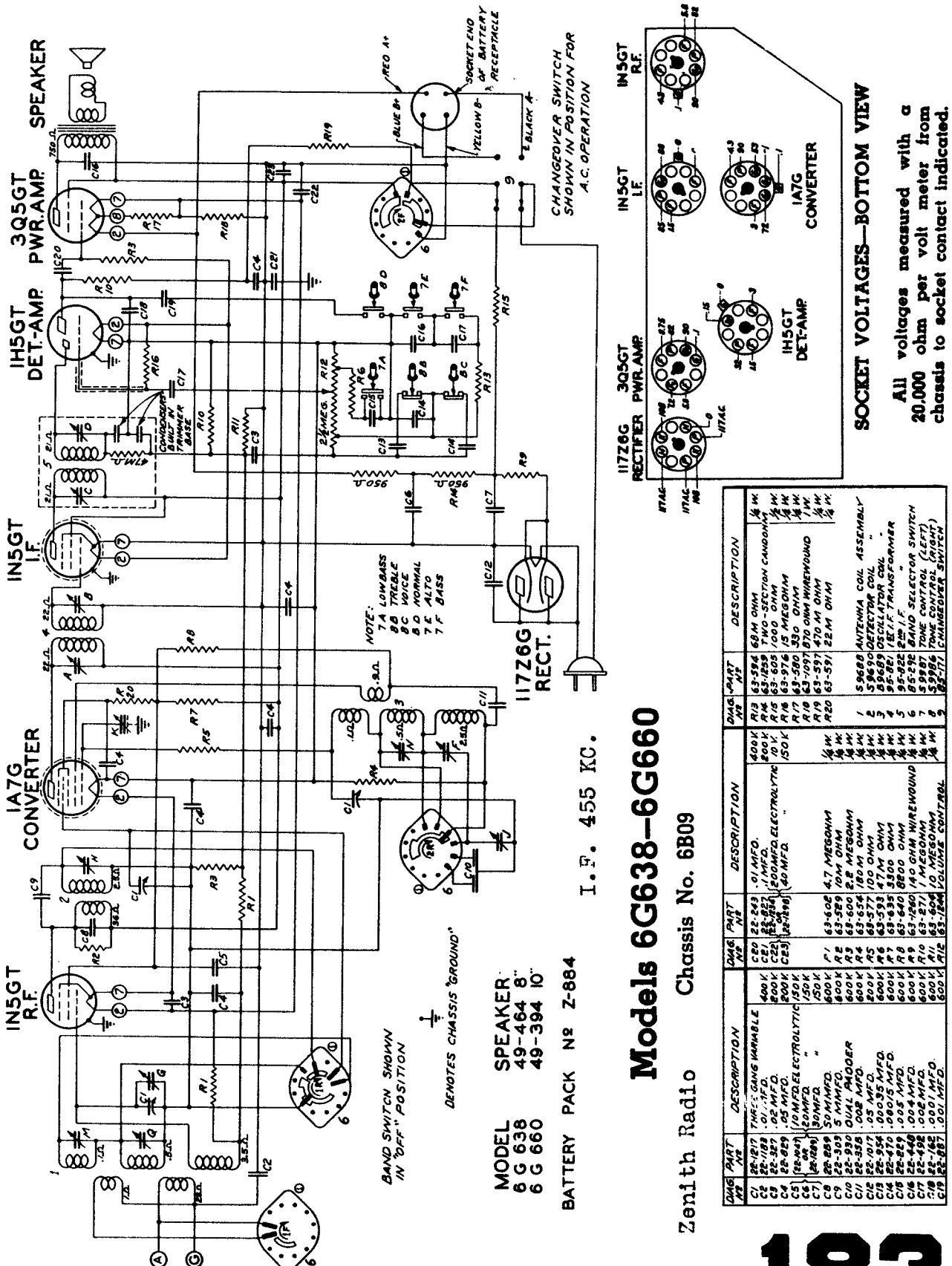
SOCKET VOLTAGES—BOTTOM VIEW

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.

MANUAL OF 1942 MOST POPULAR SERVICE DIAGRAMS



COMPILED BY M. N. BEITMAN, SUPREME PUBLICATIONS

MODEL SPEAKER
 6 G 638 49-464 8"
 6 G 660 49-394 10"

BATTERY PACK NO Z-884

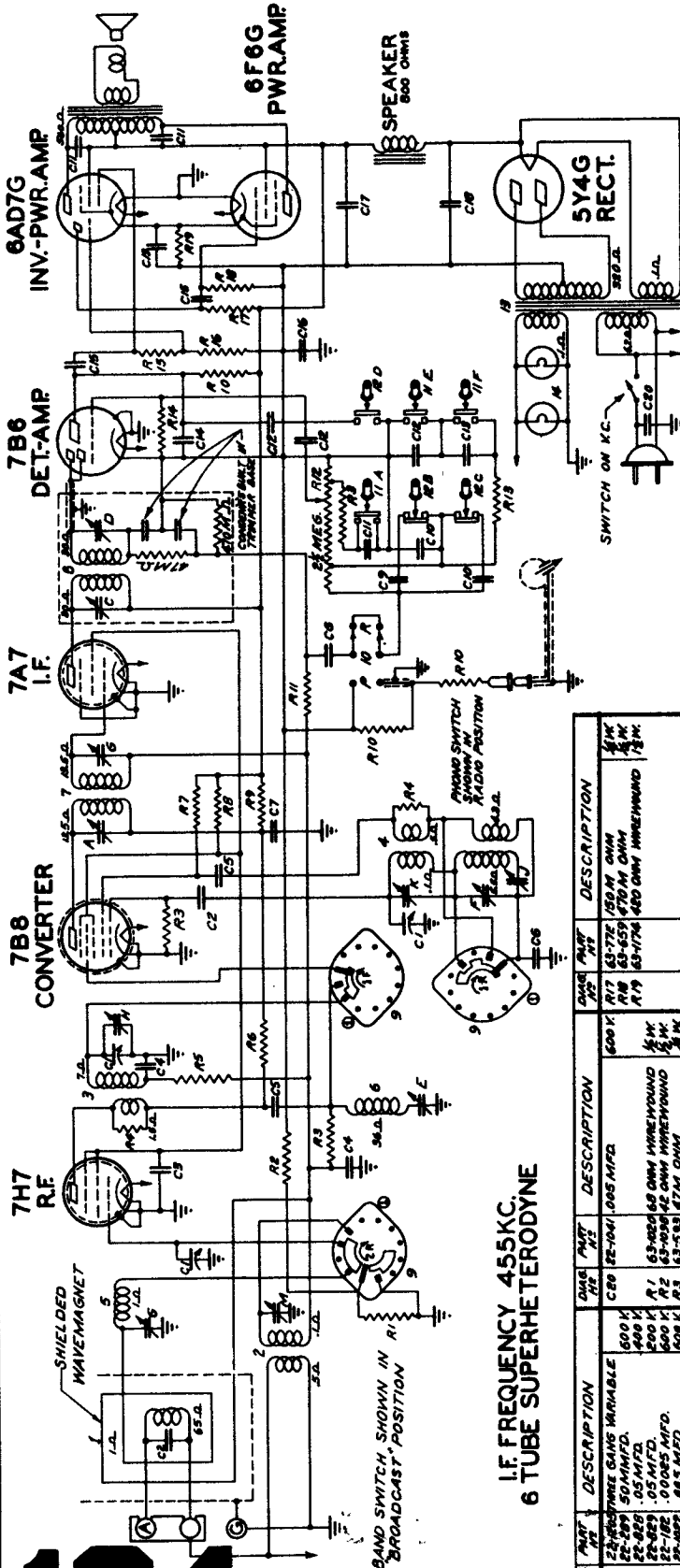
I. F. 455 KC.

Models 6G638-6G660

Zenith Radio Chassis No. 6B09

| DWG. PART NO. | DESCRIPTION | DWG. PART NO. | DESCRIPTION | DWG. PART NO. | DESCRIPTION |
|---------------|-------------------------------|---------------|------------------------------|---------------|-----------------------------|
| C1 | 22-1217 THREE-GANG VARIABLE | R13 | 63-584 68M OHM | 17A | 59688 ANTENNA COIL ASSEMBLY |
| C2 | 22-1189 .01 MFD. | R14 | 63-1259 TWO-SECTION CANDIDUM | 17B | 59690 DETECTOR COIL |
| C3 | 22-327 .05 MFD. | R15 | 63-605 1000 OHM | 17C | 59689 OSCILLATOR COIL |
| C4 | 22-859 .005 MFD. | R16 | 63-976 15 MEG OHM | 17D | 95-221 I.F.T. TRANSFORMER |
| C5 | (22-224) 10 MICROELECTROLYTIC | R17 | 63-580 330 OHM | 17E | 95-222 I.F. TRANSFORMER |
| C6 | (22-224) 10 MICROELECTROLYTIC | R18 | 63-1097 270 OHM WIREWOUND | 17F | 95-223 BAND SELECTOR SWITCH |
| C7 | (22-224) 10 MICROELECTROLYTIC | R19 | 63-1097 270 OHM WIREWOUND | 17G | 95-224 BAND SELECTOR SWITCH |
| C8 | 22-229 50 MIMED. | R20 | 63-591 22M OHM | 17H | 59966 TONE CONTROL (RIGHT) |
| C9 | 22-309 5 MIMED. | R21 | 63-591 22M OHM | 17I | 59967 TONE CONTROL (LEFT) |
| C10 | 22-930 DUAL PADDER | | | | |
| C11 | 22-1017 .005 MFD. | | | | |
| C12 | 22-1017 .005 MFD. | | | | |
| C13 | 22-470 .0005 MFD. | | | | |
| C14 | 22-278 .005 MFD. | | | | |
| C15 | 22-182 .005 MFD. | | | | |
| C16 | 22-182 .005 MFD. | | | | |
| C17 | 22-182 .005 MFD. | | | | |
| C18 | 22-182 .005 MFD. | | | | |
| C19 | 22-287 .001 MFD. | | | | |

MANUAL OF 1942 MOST POPULAR SERVICE DIAGRAMS



I.F. FREQUENCY 455KC 6 TUBE SUPERHETERODYNE

| VALVE | PART NO. | DESCRIPTION | VALVE | PART NO. | DESCRIPTION | VALVE | PART NO. | DESCRIPTION |
|-------|----------|-------------|-------|----------|-------------|-------|----------|-------------------|
| C1 | 25-180 | 50 MFD. | C8 | 100K | 600K | R17 | 63-772 | 150M OHM |
| C2 | 22-229 | 50 MFD. | C9 | 100K | 600K | R18 | 63-659 | 470M OHM |
| C3 | 22-229 | .05 MFD. | C10 | 100K | 600K | R19 | 63-1734 | 480 OHM WIREWOUND |
| C4 | 22-229 | .05 MFD. | C11 | 100K | 600K | 1 | 3-987 | MANIFOLD ASSEMBLY |
| C5 | 22-182 | .00085 MFD. | C12 | 100K | 600K | 2 | 3-988 | DETECTOR |
| C6 | 22-182 | .00085 MFD. | C13 | 100K | 600K | 3 | 3-989 | OSCILLATOR |
| C7 | 22-229 | .05 MFD. | C14 | 100K | 600K | 4 | 3-989 | MANIFOLD ASSEMBLY |
| C8 | 22-229 | .05 MFD. | C15 | 100K | 600K | 5 | 3-989 | MANIFOLD ASSEMBLY |
| C9 | 22-229 | .05 MFD. | C16 | 100K | 600K | 6 | 3-989 | MANIFOLD ASSEMBLY |
| C10 | 22-229 | .05 MFD. | C17 | 100K | 600K | 7 | 3-989 | MANIFOLD ASSEMBLY |
| C11 | 22-229 | .05 MFD. | C18 | 100K | 600K | 8 | 3-989 | MANIFOLD ASSEMBLY |
| C12 | 22-229 | .05 MFD. | C19 | 100K | 600K | 9 | 3-989 | MANIFOLD ASSEMBLY |
| C13 | 22-229 | .05 MFD. | C20 | 100K | 600K | 10 | 3-989 | MANIFOLD ASSEMBLY |
| C14 | 22-229 | .05 MFD. | C21 | 100K | 600K | 11 | 3-989 | MANIFOLD ASSEMBLY |
| C15 | 22-229 | .05 MFD. | C22 | 100K | 600K | 12 | 3-989 | MANIFOLD ASSEMBLY |
| C16 | 22-229 | .05 MFD. | C23 | 100K | 600K | 13 | 3-989 | MANIFOLD ASSEMBLY |
| C17 | 22-229 | .05 MFD. | C24 | 100K | 600K | 14 | 3-989 | MANIFOLD ASSEMBLY |
| C18 | 22-229 | .05 MFD. | C25 | 100K | 600K | 15 | 3-989 | MANIFOLD ASSEMBLY |
| C19 | 22-229 | .05 MFD. | C26 | 100K | 600K | 16 | 3-989 | MANIFOLD ASSEMBLY |
| C20 | 22-229 | .05 MFD. | C27 | 100K | 600K | 17 | 3-989 | MANIFOLD ASSEMBLY |
| C21 | 22-229 | .05 MFD. | C28 | 100K | 600K | 18 | 3-989 | MANIFOLD ASSEMBLY |
| C22 | 22-229 | .05 MFD. | C29 | 100K | 600K | 19 | 3-989 | MANIFOLD ASSEMBLY |
| C23 | 22-229 | .05 MFD. | C30 | 100K | 600K | 20 | 3-989 | MANIFOLD ASSEMBLY |
| C24 | 22-229 | .05 MFD. | C31 | 100K | 600K | 21 | 3-989 | MANIFOLD ASSEMBLY |
| C25 | 22-229 | .05 MFD. | C32 | 100K | 600K | 22 | 3-989 | MANIFOLD ASSEMBLY |
| C26 | 22-229 | .05 MFD. | C33 | 100K | 600K | 23 | 3-989 | MANIFOLD ASSEMBLY |
| C27 | 22-229 | .05 MFD. | C34 | 100K | 600K | 24 | 3-989 | MANIFOLD ASSEMBLY |
| C28 | 22-229 | .05 MFD. | C35 | 100K | 600K | 25 | 3-989 | MANIFOLD ASSEMBLY |
| C29 | 22-229 | .05 MFD. | C36 | 100K | 600K | 26 | 3-989 | MANIFOLD ASSEMBLY |
| C30 | 22-229 | .05 MFD. | C37 | 100K | 600K | 27 | 3-989 | MANIFOLD ASSEMBLY |
| C31 | 22-229 | .05 MFD. | C38 | 100K | 600K | 28 | 3-989 | MANIFOLD ASSEMBLY |
| C32 | 22-229 | .05 MFD. | C39 | 100K | 600K | 29 | 3-989 | MANIFOLD ASSEMBLY |
| C33 | 22-229 | .05 MFD. | C40 | 100K | 600K | 30 | 3-989 | MANIFOLD ASSEMBLY |
| C34 | 22-229 | .05 MFD. | C41 | 100K | 600K | 31 | 3-989 | MANIFOLD ASSEMBLY |
| C35 | 22-229 | .05 MFD. | C42 | 100K | 600K | 32 | 3-989 | MANIFOLD ASSEMBLY |
| C36 | 22-229 | .05 MFD. | C43 | 100K | 600K | 33 | 3-989 | MANIFOLD ASSEMBLY |
| C37 | 22-229 | .05 MFD. | C44 | 100K | 600K | 34 | 3-989 | MANIFOLD ASSEMBLY |
| C38 | 22-229 | .05 MFD. | C45 | 100K | 600K | 35 | 3-989 | MANIFOLD ASSEMBLY |
| C39 | 22-229 | .05 MFD. | C46 | 100K | 600K | 36 | 3-989 | MANIFOLD ASSEMBLY |
| C40 | 22-229 | .05 MFD. | C47 | 100K | 600K | 37 | 3-989 | MANIFOLD ASSEMBLY |
| C41 | 22-229 | .05 MFD. | C48 | 100K | 600K | 38 | 3-989 | MANIFOLD ASSEMBLY |
| C42 | 22-229 | .05 MFD. | C49 | 100K | 600K | 39 | 3-989 | MANIFOLD ASSEMBLY |
| C43 | 22-229 | .05 MFD. | C50 | 100K | 600K | 40 | 3-989 | MANIFOLD ASSEMBLY |
| C44 | 22-229 | .05 MFD. | C51 | 100K | 600K | 41 | 3-989 | MANIFOLD ASSEMBLY |
| C45 | 22-229 | .05 MFD. | C52 | 100K | 600K | 42 | 3-989 | MANIFOLD ASSEMBLY |
| C46 | 22-229 | .05 MFD. | C53 | 100K | 600K | 43 | 3-989 | MANIFOLD ASSEMBLY |
| C47 | 22-229 | .05 MFD. | C54 | 100K | 600K | 44 | 3-989 | MANIFOLD ASSEMBLY |
| C48 | 22-229 | .05 MFD. | C55 | 100K | 600K | 45 | 3-989 | MANIFOLD ASSEMBLY |
| C49 | 22-229 | .05 MFD. | C56 | 100K | 600K | 46 | 3-989 | MANIFOLD ASSEMBLY |
| C50 | 22-229 | .05 MFD. | C57 | 100K | 600K | 47 | 3-989 | MANIFOLD ASSEMBLY |
| C51 | 22-229 | .05 MFD. | C58 | 100K | 600K | 48 | 3-989 | MANIFOLD ASSEMBLY |
| C52 | 22-229 | .05 MFD. | C59 | 100K | 600K | 49 | 3-989 | MANIFOLD ASSEMBLY |
| C53 | 22-229 | .05 MFD. | C60 | 100K | 600K | 50 | 3-989 | MANIFOLD ASSEMBLY |
| C54 | 22-229 | .05 MFD. | C61 | 100K | 600K | 51 | 3-989 | MANIFOLD ASSEMBLY |
| C55 | 22-229 | .05 MFD. | C62 | 100K | 600K | 52 | 3-989 | MANIFOLD ASSEMBLY |
| C56 | 22-229 | .05 MFD. | C63 | 100K | 600K | 53 | 3-989 | MANIFOLD ASSEMBLY |
| C57 | 22-229 | .05 MFD. | C64 | 100K | 600K | 54 | 3-989 | MANIFOLD ASSEMBLY |
| C58 | 22-229 | .05 MFD. | C65 | 100K | 600K | 55 | 3-989 | MANIFOLD ASSEMBLY |
| C59 | 22-229 | .05 MFD. | C66 | 100K | 600K | 56 | 3-989 | MANIFOLD ASSEMBLY |
| C60 | 22-229 | .05 MFD. | C67 | 100K | 600K | 57 | 3-989 | MANIFOLD ASSEMBLY |
| C61 | 22-229 | .05 MFD. | C68 | 100K | 600K | 58 | 3-989 | MANIFOLD ASSEMBLY |
| C62 | 22-229 | .05 MFD. | C69 | 100K | 600K | 59 | 3-989 | MANIFOLD ASSEMBLY |
| C63 | 22-229 | .05 MFD. | C70 | 100K | 600K | 60 | 3-989 | MANIFOLD ASSEMBLY |

Models 7S681-7S682-7S685

Chassis No. 7B02 Phono.

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

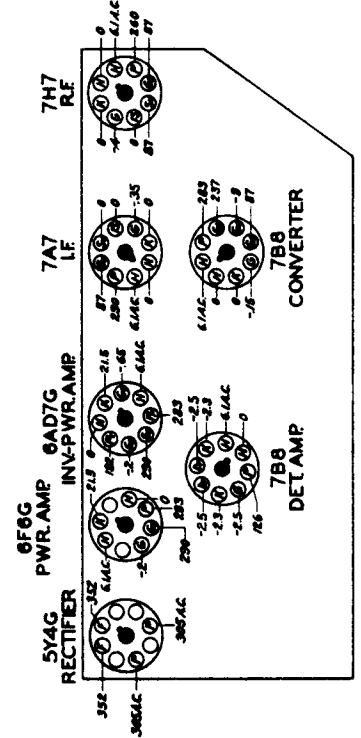
All voltages are positive D.C. unless marked otherwise.

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.

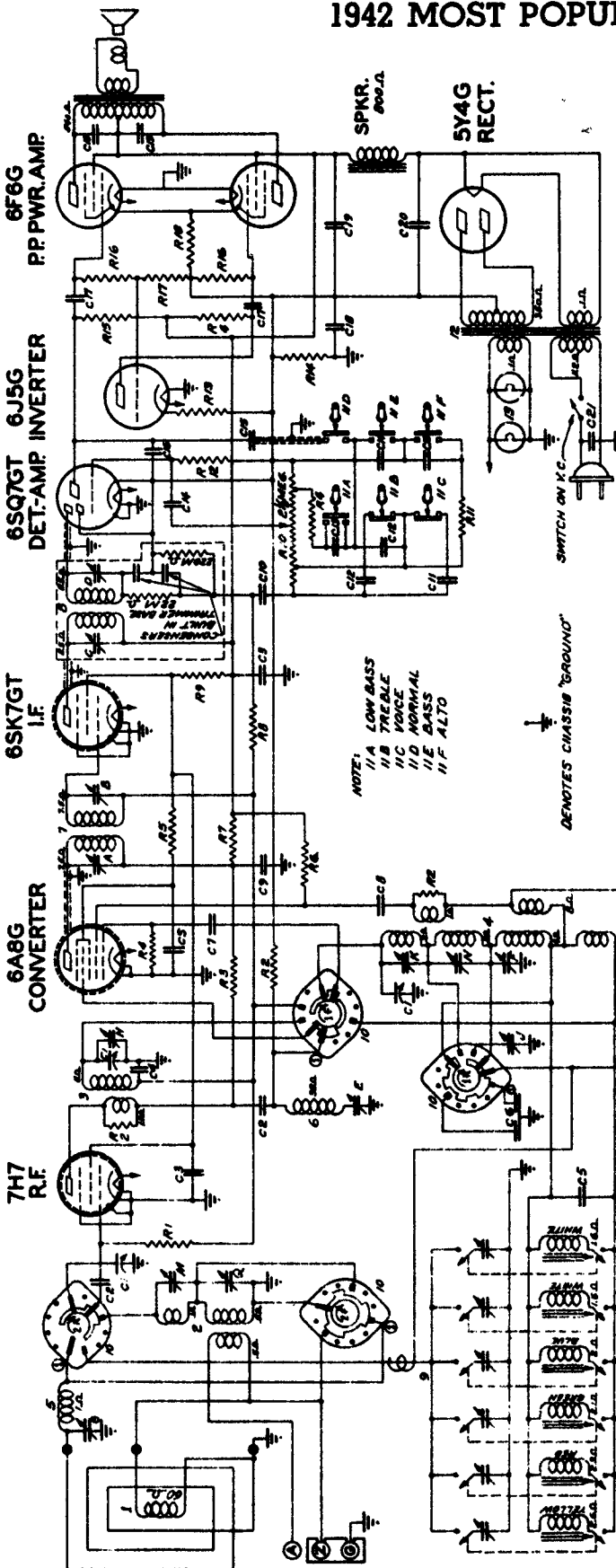
Stage Gains
Bc. and I.F.
Ant. to R.F. grid 7.1 X at 1000 Kc.
R.F. grid to conv. grid 5.6 X at 1000 Kc.

Conv. grid to I.F. grid 73 X at 455 Kc.
Overall audio 1600 X at 1 watt 400 cycles.

Zenith Radio



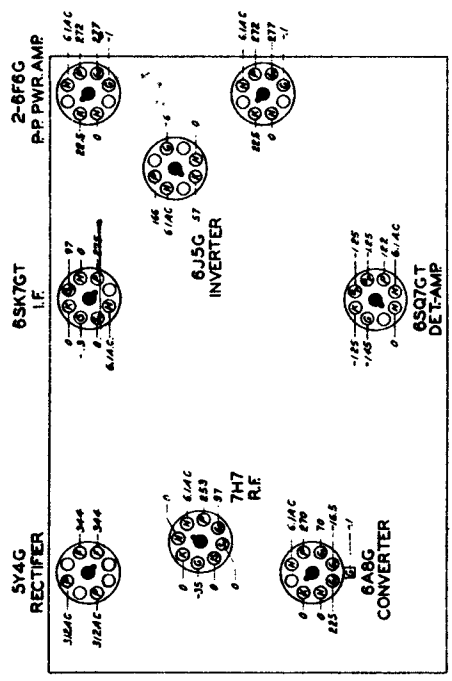
1942 MOST POPULAR SERVICE DIAGRAMS



Zenith Radio
I.F. FREQUENCY 455KC.
8 TUBE SUPERHETERODYNE

| COMPONENT | VALUE | DESCRIPTION | MANUFACTURER |
|-----------|-----------|----------------------|--------------|
| C1 | 1000 P.F. | TRIPLE GANG VARIABLE | 600K |
| C2 | .05 MFD. | 50V | 600K |
| C3 | .05 MFD. | 50V | 600K |
| C4 | .05 MFD. | 50V | 600K |
| C5 | .05 MFD. | 50V | 600K |
| C6 | .05 MFD. | 50V | 600K |
| C7 | .05 MFD. | 50V | 600K |
| C8 | .05 MFD. | 50V | 600K |
| C9 | .05 MFD. | 50V | 600K |
| C10 | .05 MFD. | 50V | 600K |
| C11 | .05 MFD. | 50V | 600K |
| C12 | .05 MFD. | 50V | 600K |
| C13 | .05 MFD. | 50V | 600K |
| C14 | .05 MFD. | 50V | 600K |
| C15 | .05 MFD. | 50V | 600K |
| C16 | .05 MFD. | 50V | 600K |
| C17 | .05 MFD. | 50V | 600K |
| C18 | .05 MFD. | 50V | 600K |
| C19 | .05 MFD. | 50V | 600K |
| C20 | .05 MFD. | 50V | 600K |
| C21 | .05 MFD. | 50V | 600K |
| C22 | .05 MFD. | 50V | 600K |
| C23 | .05 MFD. | 50V | 600K |
| C24 | .05 MFD. | 50V | 600K |
| C25 | .05 MFD. | 50V | 600K |
| C26 | .05 MFD. | 50V | 600K |
| C27 | .05 MFD. | 50V | 600K |
| C28 | .05 MFD. | 50V | 600K |
| C29 | .05 MFD. | 50V | 600K |
| C30 | .05 MFD. | 50V | 600K |
| C31 | .05 MFD. | 50V | 600K |
| C32 | .05 MFD. | 50V | 600K |
| C33 | .05 MFD. | 50V | 600K |
| C34 | .05 MFD. | 50V | 600K |
| C35 | .05 MFD. | 50V | 600K |
| C36 | .05 MFD. | 50V | 600K |
| C37 | .05 MFD. | 50V | 600K |
| C38 | .05 MFD. | 50V | 600K |
| C39 | .05 MFD. | 50V | 600K |
| C40 | .05 MFD. | 50V | 600K |
| C41 | .05 MFD. | 50V | 600K |
| C42 | .05 MFD. | 50V | 600K |
| C43 | .05 MFD. | 50V | 600K |
| C44 | .05 MFD. | 50V | 600K |
| C45 | .05 MFD. | 50V | 600K |
| C46 | .05 MFD. | 50V | 600K |
| C47 | .05 MFD. | 50V | 600K |
| C48 | .05 MFD. | 50V | 600K |
| C49 | .05 MFD. | 50V | 600K |
| C50 | .05 MFD. | 50V | 600K |
| C51 | .05 MFD. | 50V | 600K |
| C52 | .05 MFD. | 50V | 600K |
| C53 | .05 MFD. | 50V | 600K |
| C54 | .05 MFD. | 50V | 600K |
| C55 | .05 MFD. | 50V | 600K |
| C56 | .05 MFD. | 50V | 600K |
| C57 | .05 MFD. | 50V | 600K |
| C58 | .05 MFD. | 50V | 600K |
| C59 | .05 MFD. | 50V | 600K |
| C60 | .05 MFD. | 50V | 600K |
| C61 | .05 MFD. | 50V | 600K |
| C62 | .05 MFD. | 50V | 600K |
| C63 | .05 MFD. | 50V | 600K |
| C64 | .05 MFD. | 50V | 600K |
| C65 | .05 MFD. | 50V | 600K |
| C66 | .05 MFD. | 50V | 600K |
| C67 | .05 MFD. | 50V | 600K |
| C68 | .05 MFD. | 50V | 600K |
| C69 | .05 MFD. | 50V | 600K |
| C70 | .05 MFD. | 50V | 600K |
| C71 | .05 MFD. | 50V | 600K |
| C72 | .05 MFD. | 50V | 600K |
| C73 | .05 MFD. | 50V | 600K |
| C74 | .05 MFD. | 50V | 600K |
| C75 | .05 MFD. | 50V | 600K |
| C76 | .05 MFD. | 50V | 600K |
| C77 | .05 MFD. | 50V | 600K |
| C78 | .05 MFD. | 50V | 600K |
| C79 | .05 MFD. | 50V | 600K |
| C80 | .05 MFD. | 50V | 600K |
| C81 | .05 MFD. | 50V | 600K |
| C82 | .05 MFD. | 50V | 600K |
| C83 | .05 MFD. | 50V | 600K |
| C84 | .05 MFD. | 50V | 600K |
| C85 | .05 MFD. | 50V | 600K |
| C86 | .05 MFD. | 50V | 600K |
| C87 | .05 MFD. | 50V | 600K |
| C88 | .05 MFD. | 50V | 600K |
| C89 | .05 MFD. | 50V | 600K |
| C90 | .05 MFD. | 50V | 600K |
| C91 | .05 MFD. | 50V | 600K |
| C92 | .05 MFD. | 50V | 600K |
| C93 | .05 MFD. | 50V | 600K |
| C94 | .05 MFD. | 50V | 600K |
| C95 | .05 MFD. | 50V | 600K |
| C96 | .05 MFD. | 50V | 600K |
| C97 | .05 MFD. | 50V | 600K |
| C98 | .05 MFD. | 50V | 600K |
| C99 | .05 MFD. | 50V | 600K |
| C100 | .05 MFD. | 50V | 600K |

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SOCKET VOLTAGES—BOTTOM VIEW

Models 8S647-8S661

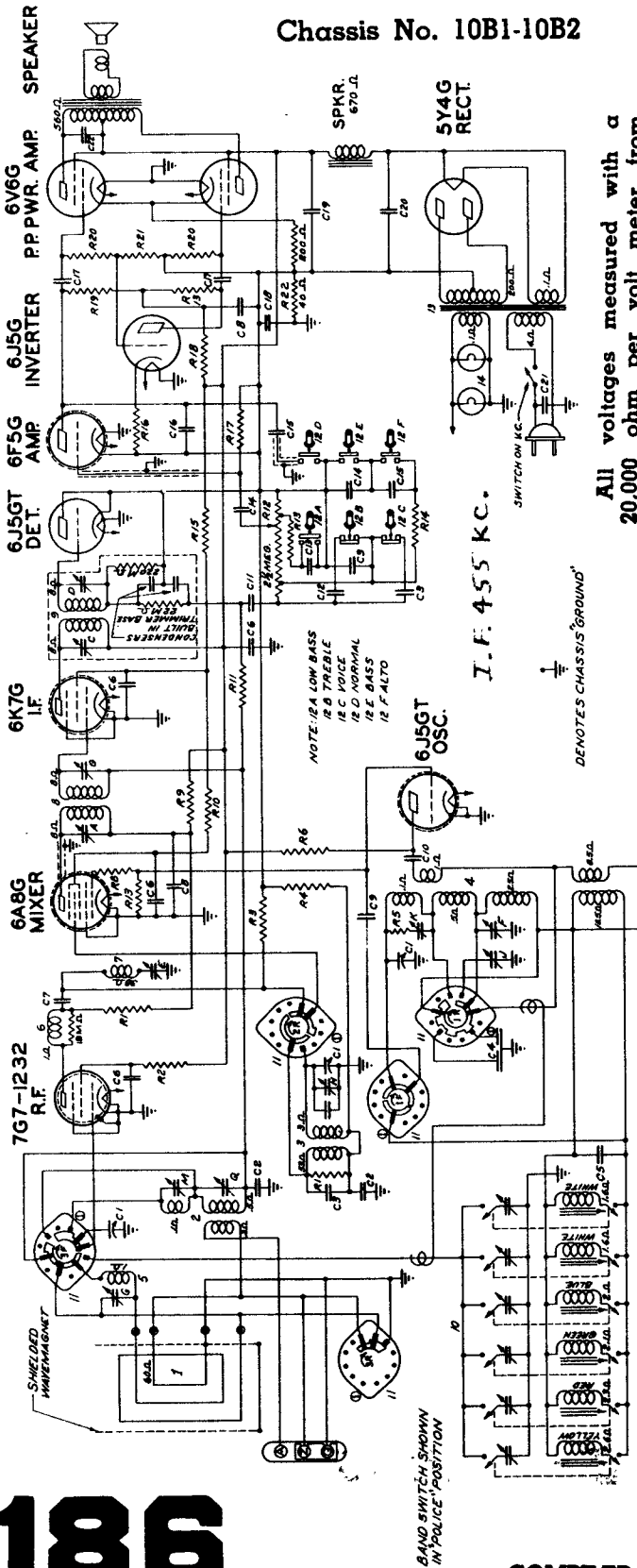
Chassis No. 8B01

MANUAL OF 1942 MOST POPULAR SERVICE DIAGRAMS

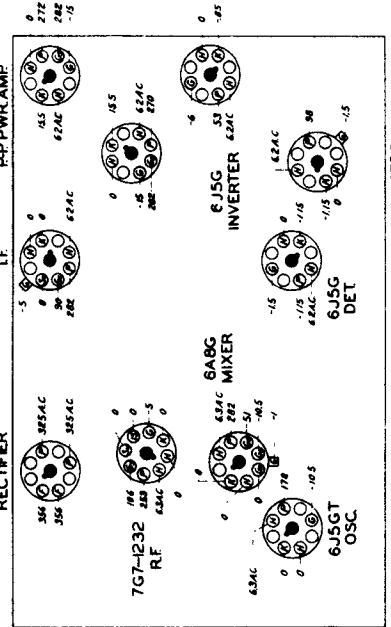
Models 10S669-10S690

Zenith Radio

Chassis No. 10B1-10B2

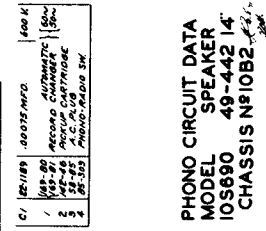


All voltages measured with a 20,000 ohm per volt meter from chassis to socket contact indicated. All voltages are positive D.C. unless marked otherwise. Volume control full on.



SOCKET VOLTAGES—BOTTOM VIEW

| DIAG. PART NO. | DESCRIPTION | DIAG. PART NO. | DESCRIPTION | DIAG. PART NO. | DESCRIPTION |
|----------------|--------------------|----------------|-------------|----------------|-------------|
| C1 | 100 MFD. 50V. CAP. | R1 | 100K OHM | R17 | 100K OHM |
| C2 | 100 MFD. 50V. CAP. | R2 | 100K OHM | R18 | 100K OHM |
| C3 | 100 MFD. 50V. CAP. | R3 | 100K OHM | R19 | 100K OHM |
| C4 | 100 MFD. 50V. CAP. | R4 | 100K OHM | R20 | 100K OHM |
| C5 | 100 MFD. 50V. CAP. | R5 | 100K OHM | | |
| C6 | 100 MFD. 50V. CAP. | R6 | 100K OHM | | |
| C7 | 100 MFD. 50V. CAP. | R7 | 100K OHM | | |
| C8 | 100 MFD. 50V. CAP. | R8 | 100K OHM | | |
| C9 | 100 MFD. 50V. CAP. | R9 | 100K OHM | | |
| C10 | 100 MFD. 50V. CAP. | R10 | 100K OHM | | |
| C11 | 100 MFD. 50V. CAP. | R11 | 100K OHM | | |
| C12 | 100 MFD. 50V. CAP. | R12 | 100K OHM | | |
| C13 | 100 MFD. 50V. CAP. | R13 | 100K OHM | | |
| C14 | 100 MFD. 50V. CAP. | R14 | 100K OHM | | |
| C15 | 100 MFD. 50V. CAP. | R15 | 100K OHM | | |
| C16 | 100 MFD. 50V. CAP. | R16 | 100K OHM | | |
| C17 | 100 MFD. 50V. CAP. | | | | |
| C18 | 100 MFD. 50V. CAP. | | | | |
| C19 | 100 MFD. 50V. CAP. | | | | |
| C20 | 100 MFD. 50V. CAP. | | | | |
| C21 | 100 MFD. 50V. CAP. | | | | |
| C22 | 100 MFD. 50V. CAP. | | | | |
| C23 | 100 MFD. 50V. CAP. | | | | |
| C24 | 100 MFD. 50V. CAP. | | | | |
| C25 | 100 MFD. 50V. CAP. | | | | |
| C26 | 100 MFD. 50V. CAP. | | | | |
| C27 | 100 MFD. 50V. CAP. | | | | |
| C28 | 100 MFD. 50V. CAP. | | | | |
| C29 | 100 MFD. 50V. CAP. | | | | |
| C30 | 100 MFD. 50V. CAP. | | | | |
| C31 | 100 MFD. 50V. CAP. | | | | |
| C32 | 100 MFD. 50V. CAP. | | | | |
| C33 | 100 MFD. 50V. CAP. | | | | |
| C34 | 100 MFD. 50V. CAP. | | | | |
| C35 | 100 MFD. 50V. CAP. | | | | |
| C36 | 100 MFD. 50V. CAP. | | | | |
| C37 | 100 MFD. 50V. CAP. | | | | |
| C38 | 100 MFD. 50V. CAP. | | | | |
| C39 | 100 MFD. 50V. CAP. | | | | |
| C40 | 100 MFD. 50V. CAP. | | | | |
| C41 | 100 MFD. 50V. CAP. | | | | |
| C42 | 100 MFD. 50V. CAP. | | | | |
| C43 | 100 MFD. 50V. CAP. | | | | |
| C44 | 100 MFD. 50V. CAP. | | | | |
| C45 | 100 MFD. 50V. CAP. | | | | |
| C46 | 100 MFD. 50V. CAP. | | | | |
| C47 | 100 MFD. 50V. CAP. | | | | |
| C48 | 100 MFD. 50V. CAP. | | | | |
| C49 | 100 MFD. 50V. CAP. | | | | |
| C50 | 100 MFD. 50V. CAP. | | | | |
| C51 | 100 MFD. 50V. CAP. | | | | |
| C52 | 100 MFD. 50V. CAP. | | | | |
| C53 | 100 MFD. 50V. CAP. | | | | |
| C54 | 100 MFD. 50V. CAP. | | | | |
| C55 | 100 MFD. 50V. CAP. | | | | |
| C56 | 100 MFD. 50V. CAP. | | | | |
| C57 | 100 MFD. 50V. CAP. | | | | |
| C58 | 100 MFD. 50V. CAP. | | | | |
| C59 | 100 MFD. 50V. CAP. | | | | |
| C60 | 100 MFD. 50V. CAP. | | | | |
| C61 | 100 MFD. 50V. CAP. | | | | |
| C62 | 100 MFD. 50V. CAP. | | | | |
| C63 | 100 MFD. 50V. CAP. | | | | |
| C64 | 100 MFD. 50V. CAP. | | | | |
| C65 | 100 MFD. 50V. CAP. | | | | |
| C66 | 100 MFD. 50V. CAP. | | | | |
| C67 | 100 MFD. 50V. CAP. | | | | |
| C68 | 100 MFD. 50V. CAP. | | | | |
| C69 | 100 MFD. 50V. CAP. | | | | |
| C70 | 100 MFD. 50V. CAP. | | | | |
| C71 | 100 MFD. 50V. CAP. | | | | |
| C72 | 100 MFD. 50V. CAP. | | | | |
| C73 | 100 MFD. 50V. CAP. | | | | |
| C74 | 100 MFD. 50V. CAP. | | | | |
| C75 | 100 MFD. 50V. CAP. | | | | |
| C76 | 100 MFD. 50V. CAP. | | | | |
| C77 | 100 MFD. 50V. CAP. | | | | |
| C78 | 100 MFD. 50V. CAP. | | | | |
| C79 | 100 MFD. 50V. CAP. | | | | |
| C80 | 100 MFD. 50V. CAP. | | | | |
| C81 | 100 MFD. 50V. CAP. | | | | |
| C82 | 100 MFD. 50V. CAP. | | | | |
| C83 | 100 MFD. 50V. CAP. | | | | |
| C84 | 100 MFD. 50V. CAP. | | | | |
| C85 | 100 MFD. 50V. CAP. | | | | |
| C86 | 100 MFD. 50V. CAP. | | | | |
| C87 | 100 MFD. 50V. CAP. | | | | |
| C88 | 100 MFD. 50V. CAP. | | | | |
| C89 | 100 MFD. 50V. CAP. | | | | |
| C90 | 100 MFD. 50V. CAP. | | | | |
| C91 | 100 MFD. 50V. CAP. | | | | |
| C92 | 100 MFD. 50V. CAP. | | | | |
| C93 | 100 MFD. 50V. CAP. | | | | |
| C94 | 100 MFD. 50V. CAP. | | | | |
| C95 | 100 MFD. 50V. CAP. | | | | |
| C96 | 100 MFD. 50V. CAP. | | | | |
| C97 | 100 MFD. 50V. CAP. | | | | |
| C98 | 100 MFD. 50V. CAP. | | | | |
| C99 | 100 MFD. 50V. CAP. | | | | |
| C100 | 100 MFD. 50V. CAP. | | | | |



PHONO CIRCUIT DATA
MODEL SPEAKER
10S690 49-442 14"
CHASSIS N810B2

MANUAL OF 1942 MOST POPULAR SERVICE DIAGRAMS

ALIGNMENT PROCEDURE

| Operation | Connect Oscillator to | Dummy Antenna | Input Signal Frequency | Band | Set Dial At | Trimmers | Purpose |
|-----------|------------------------------------------------------|---------------|------------------------|-----------|-------------|---------------------------------|-----------------------------------------------------|
| 1 | Con. Grid | 0.5 mfd. | 455 Kc. | BC | 600 Kc. | A, B, C, D | Align I.F. |
| 2 | R.F. Grid | 0.5 mfd. | 455 Kc. | BC | 600 Kc. | E | Adjust for minimum 455 Kc. signal |
| 3 | Ant. Z and G | 400 ohm | 18 Mc. | BW | 18 Mc. | K | 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 Radex 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 mfd. | 8.3 Mc. | Man. F.M. | 42.5 Mc. | A ₂ | Align for max. deflection across 1/2 discrim. load |
| 11 | " | " | " | " | " | B ₂ | Align for zero deflection across full discrim. load |
| 12 | " | " | " | " | " | A ₃ - B ₃ | 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. con 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

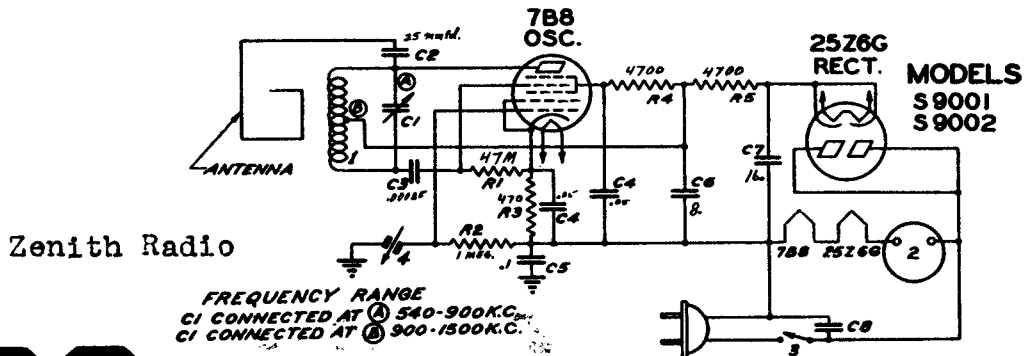
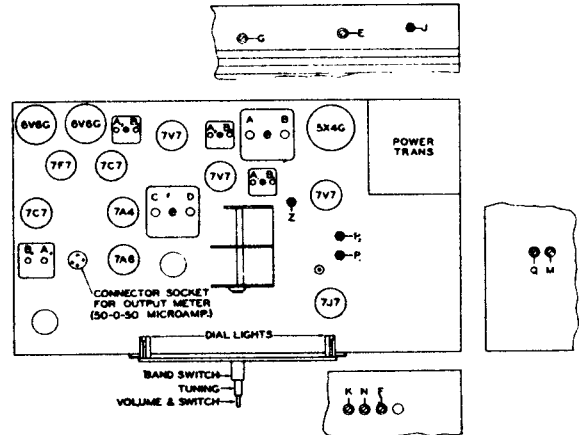
Chassis No. 12A6

Stage Gains
Bc. and I.F.

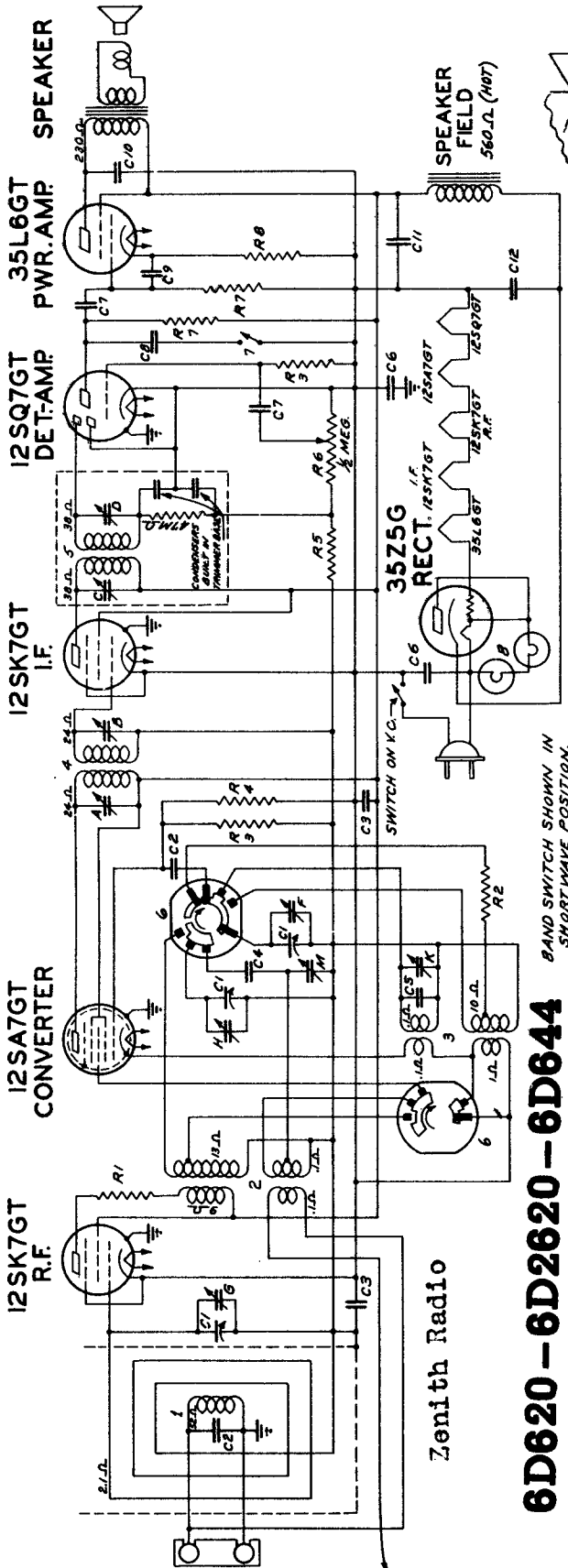
Ant. to R.F. grid 6.5× at 1000 Kc.
R.F. grid to conv. grid 28.1× at 1000 Kc.

Conv. grid to I.F. grid 265× at 455 Kc.

Overall audio 807× at 1 watt, 400 cycles.



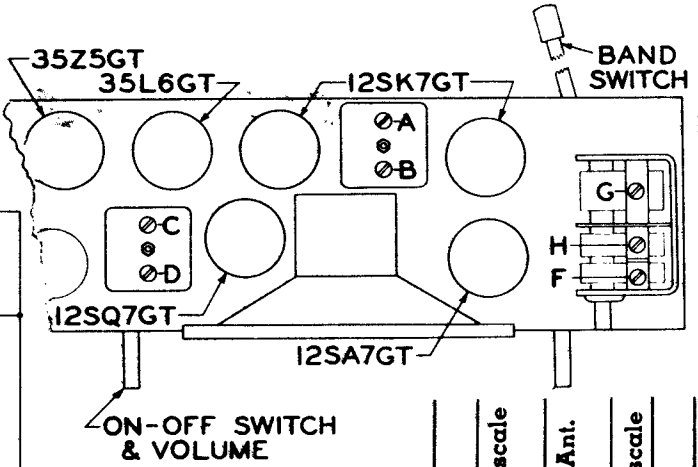
MANUAL OF 1942 MOST POPULAR SERVICE DIAGRAMS



6D620-6D2620-6D644

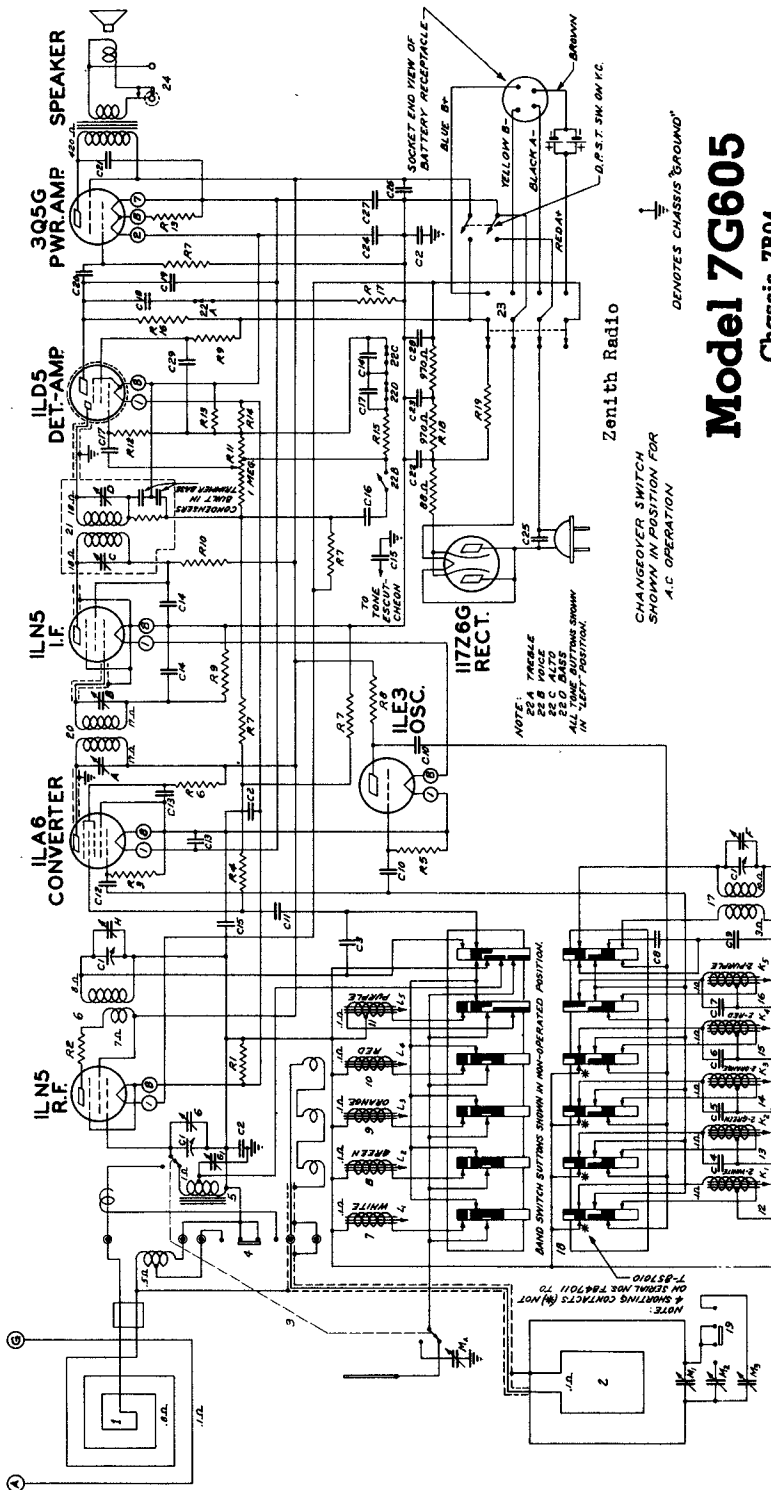
Chassis No. 6B14

BAND SWITCH SHOWN IN SHORT-WAVE POSITION.



| DWG. NO. | PART NO. | DESCRIPTION | DWG. NO. | PART NO. | DESCRIPTION |
|----------|----------|-----------------------|----------|----------|---------------------------------------------|
| C1 | 22-1268 | THREE GANGS VARIABLE | 7 | 85-2571 | TONE CONTROL SWITCH |
| C2 | 22-289 | .50 MMFD. | 8 | 100-30 | DIAL LAMP 3.2 V. .17A. |
| C3 | 22-859 | .05 MMFD. | A | 1 | 12T1-E TRANS. PRI. |
| C4 | 22-750 | .00025 MFCD. | B | 1 | 12T1-E TRANS. SEC. |
| C5 | 22-1271 | .49 MMFD. COMP. | C | 2 | 500 I.F. SEC. |
| C6 | 22-193 | .05 MFCD. | D | 2 | 500 I.F. SEC. |
| C7 | 22-432 | .002 MFCD. | E | 1 | BROADCAST OSC. (5M GANG) |
| C8 | 22-716 | .0005 MFCD. | F | 1 | BROADCAST DET. (5M GANG) |
| C9 | 22-1049 | .03 MFCD. | G | 1 | SHORT-WAVE OSC. (SEE NOTE) |
| C10 | 22-1049 | .03 MFCD. | H | 1 | SHORT-WAVE ANT. (SEE NOTE) |
| C11 | 22-1280 | 20 MFCD. ELECTROLYTIC | K | 1 | TRIMMERS K & M ARE MOUNTED ON STRIP 22-1287 |
| C12 | 22-1280 | 20 MFCD. | M | 1 | |
| R1 | 63-208 | 2000 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 | Anti.-Gnd. | 400 ohms | 12 Mc. | S.W. | 12 Mc. | K | Set oscillator to scale |
| 5 | Anti.-Gnd. | 400 ohms | 12 Mc. | S.W. | 12 Mc. | M | Align Ant. |

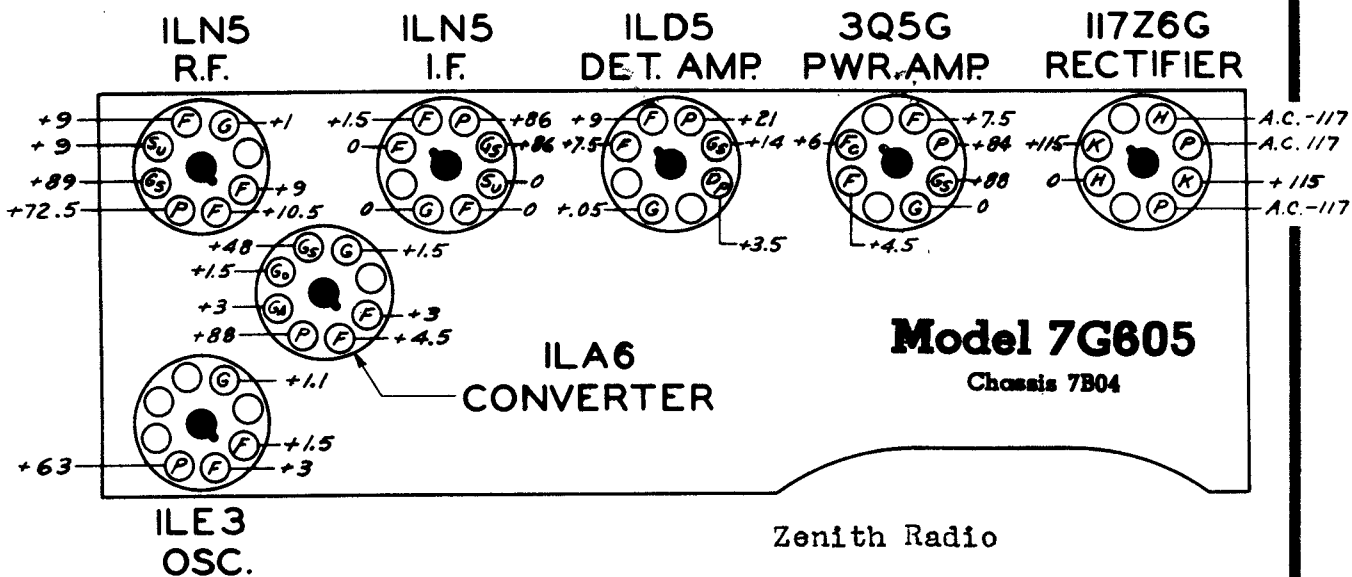


Model 7G605

Chassis 7B04

| DIAG. PART NO. | DESCRIPTION | DIAG. PART NO. | DESCRIPTION | DIAG. PART NO. | DESCRIPTION | DIAG. PART NO. | DESCRIPTION |
|----------------|----------------------|----------------|----------------------|----------------|----------------------|----------------|--------------------------|
| C1 | THREE GANG VARIABLE | 1 | 510680 | 1 | 510680 | 24 | 44-17 |
| C2 | .1 MFD. | 2 | 40 MFD. ELECTROLYTIC | 2 | 40 MFD. ELECTROLYTIC | A | 1E1 I.F. TRANS. PRI. |
| C3 | .15 MAFD. | C26 | 200 V. | 3 | 20 MFD. | B | 1E1 I.F. " SEC. |
| C4 | 100 MMFD. COMP. | C27 | 600 V. | 4 | 20 MFD. | C | 2E2 I.F. TRANS. PRI. |
| C5 | 200 MMFD. COMP. | C28 | 200 V. | 5 | .003 MFD. | D | 2E2 I.F. " SEC. |
| C6 | 150 MMFD. COMP. | C29 | 600 V. | R1 | 330 M OHM | F | BROADCAST OSC. (ON GANG) |
| C7 | 250 MMFD. COMP. | R2 | 10 M OHM | R2 | 63-641 | G | BROADCAST ANT. (ON GANG) |
| C8 | 75 MMFD. COMP. | R3 | 100 M OHM | R3 | 63-773 | H | BROADCAST DET. (ON GANG) |
| C9 | 50 MMFD. COMP. | R4 | 500 M OHM | R4 | 63-325 | A1 | SHORT WAVE OSC. 6 MC. |
| C10 | .001 MFD. | R5 | 200 K | R5 | 63-648 | K1 | SHORT WAVE OSC. 9 MC. |
| C11 | .02 MFD. | R6 | 200 V. | R6 | 63-592 | K2 | SHORT WAVE OSC. 12 MC. |
| C12 | 50 MMFD. | R7 | 200 V. | R7 | 63-600 | K3 | SHORT WAVE OSC. 15 MC. |
| C13 | .05 MFD. | R8 | 200 V. | R8 | 63-761 | K4 | SHORT WAVE OSC. 18 MC. |
| C14 | .01 MFD. | R9 | 200 V. | R9 | 63-602 | L1 | SHORT WAVE DET. 6 MC. |
| C15 | .07 MFD. | R10 | 200 V. | R10 | 63-583 | L2 | SHORT WAVE DET. 9 MC. |
| C16 | .001 MFD. | R11 | 600 V. | R11 | 63-265 | L3 | SHORT WAVE DET. 12 MC. |
| C17 | .002 MFD. | R12 | 600 V. | R12 | 63-976 | L4 | SHORT WAVE DET. 15 MC. |
| C18 | .003 MFD. | R13 | 600 V. | R13 | 63-580 | L5 | SHORT WAVE DET. 18 MC. |
| C19 | .005 MFD. | R14 | 600 V. | R14 | 63-570 | M1 | SHORT WAVE ANT. 18 MC. |
| C20 | .01 MFD. | R15 | 600 V. | R15 | 63-571 | M2 | SHORT WAVE ANT. 19 MC. |
| C21 | .04 MFD. | R16 | 600 V. | R16 | 63-584 | M3 | SHORT WAVE ANT. 25 M. |
| C22 | 40 MFD. ELECTROLYTIC | R17 | 450 V. | R17 | 63-271 | M4 | SHORT WAVE ANT. 31 M. |
| C23 | 20 MFD. | R18 | 450 V. | R18 | 63-264 | N1 | POWER CHANGE-OVER SWITCH |
| C24 | 40 MFD. | R19 | 400 V. | R19 | 63-756 | N2 | POWER CHANGE-OVER SWITCH |
| C25 | .05 MFD. | | | | | | |

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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 60 cycle or Battery Pack Z-985 and two flashlight cells.

Power consumption 85 watts.

Power output .35 watts.

Tuning ranges:

540 to 1620 Kc.

6.0 to 6.5 Mc.

9.4 to 9.8 Mc.

11.7 to 11.9 Mc.

15.1 to 15.3 Mc.

17.6 to 18.0 Mc.

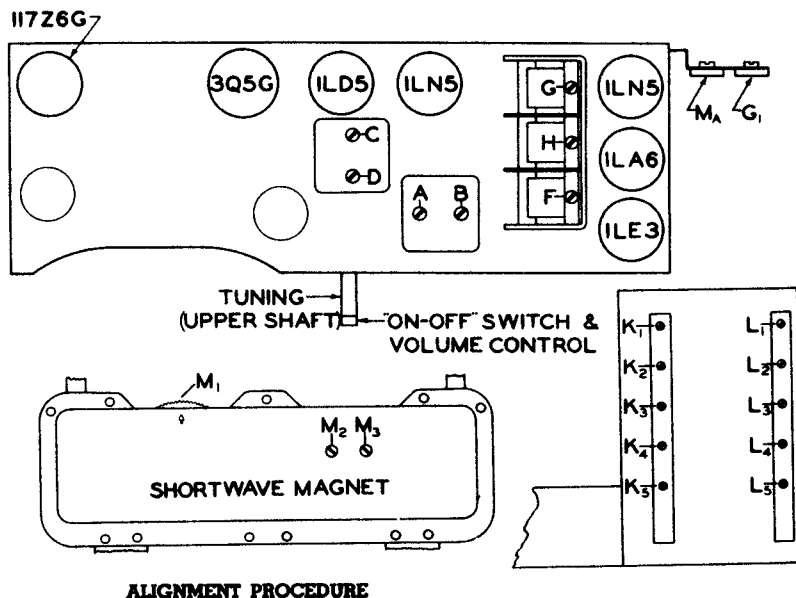
Stage Gains
Bc. and I.F.

Ant. to R.F. grid 5X at 1000 Kc.

R.F. grid to conv. grid 9X at 1000 Kc.

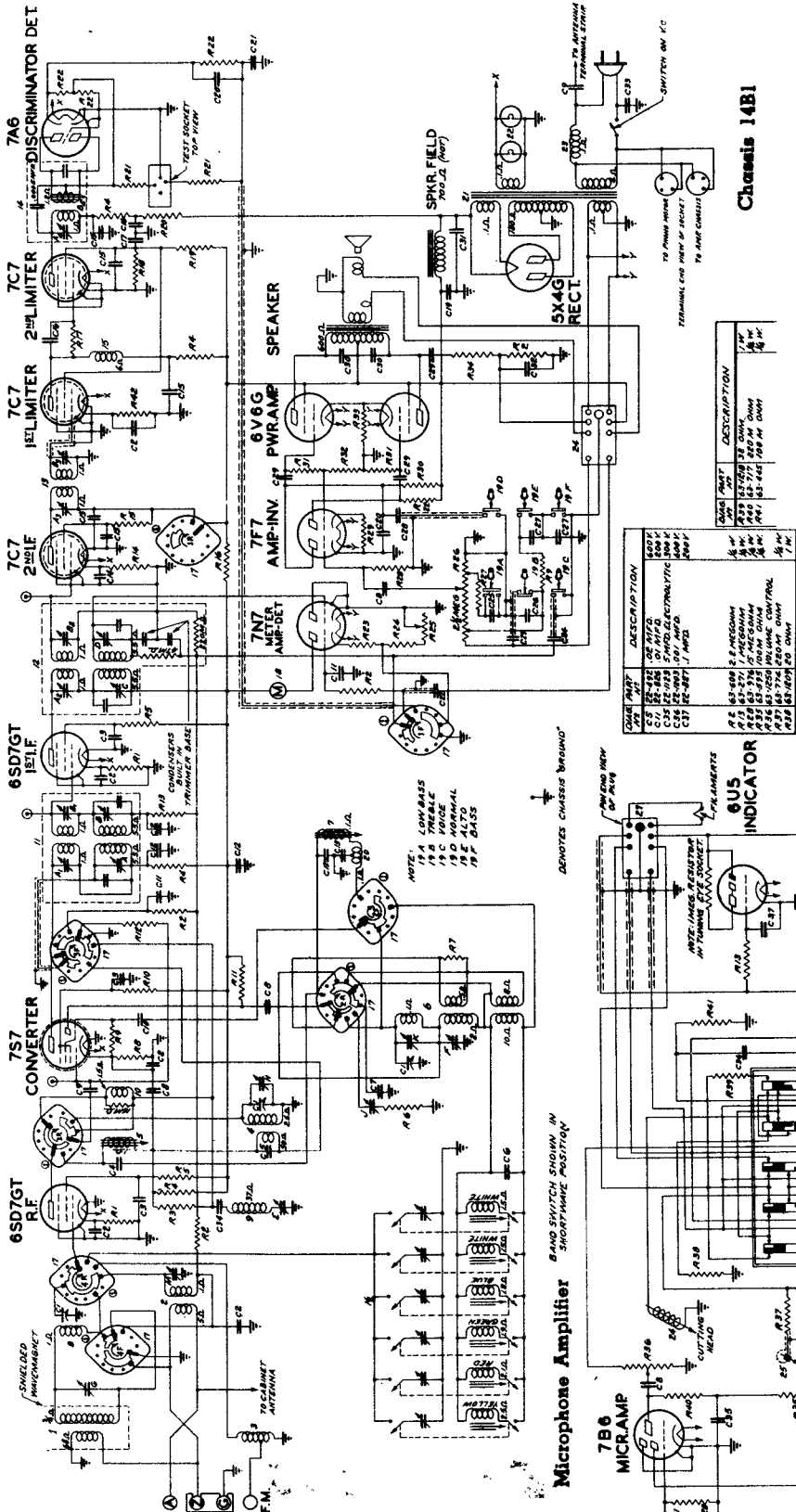
Conv. grid to I.F. grid 66X at 455 Kc.

Overall audio 900X at .05 watt. 400 cycles.



ALIGNMENT PROCEDURE

| 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 | | 1600 Kc. | BC | 1600 Kc. | F | Set oscillator to scale |
| 3 | | | 1400 Kc. | BC | 1400 Kc. | H | Alignment of detector section |
| 4 | Wavemagnet | | 1400 Kc. | BC | 1400 Kc. | G | Alignment of B.C. Wavemagnet |
| 5 | 3 Feet of Wire | | 1400 Kc. | BC | 1400 Kc. | G ₁ | B.C. waverod alignment |
| 6 | Approximately 1 Foot from Extended Waverod | | 6.3 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 | | 15.3 Mc. | 19 Met. | 15.2 Mc. | M ₁ -M ₄ | |
| 12 | | | 11.8 Mc. | 35 Met. | 11.8 Mc. | M ₂ | |
| 13 | | | 9.6 Mc. | 31 Met. | 9.6 Mc. | M ₃ | |



Chassis 14B1

| QTY | PART NO. | DESCRIPTION |
|-----|----------|----------------------|
| 1 | 7A6 | DISCRIMINATOR DET. |
| 1 | 7B6 | MICROPHONE AMPLIFIER |
| 1 | 7C7 | 1ST LIMITER |
| 1 | 7C7 | 2ND AF |
| 1 | 7S7 | CONVERTER |
| 1 | 6SD7GT | RF |
| 1 | 6V6G | AMP-INV. |
| 1 | 7F7 | AMP-INV. |
| 1 | 7N7 | AMP-DET. |
| 1 | 5X4G | RECT. |
| 1 | 6U5 | INDICATOR |
| 1 | 7A6 | DISCRIMINATOR DET. |
| 1 | 7B6 | MICROPHONE AMPLIFIER |
| 1 | 7C7 | 1ST LIMITER |
| 1 | 7C7 | 2ND AF |
| 1 | 7S7 | CONVERTER |
| 1 | 6SD7GT | RF |
| 1 | 6V6G | AMP-INV. |
| 1 | 7F7 | AMP-INV. |
| 1 | 7N7 | AMP-DET. |
| 1 | 5X4G | RECT. |
| 1 | 6U5 | INDICATOR |
| 1 | 7A6 | DISCRIMINATOR DET. |
| 1 | 7B6 | MICROPHONE AMPLIFIER |
| 1 | 7C7 | 1ST LIMITER |
| 1 | 7C7 | 2ND AF |
| 1 | 7S7 | CONVERTER |
| 1 | 6SD7GT | RF |
| 1 | 6V6G | AMP-INV. |
| 1 | 7F7 | AMP-INV. |
| 1 | 7N7 | AMP-DET. |
| 1 | 5X4G | RECT. |
| 1 | 6U5 | INDICATOR |