

*Most - Often - Needed*

1926-1938

**RADIO  
DIAGRAMS**

*and Servicing Information*



Factory Data Compiled by  
**M. N. BEITMAN**

**SUPREME PUBLICATIONS**  
CHICAGO

VOLUME 1

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*Most - Often - Needed*

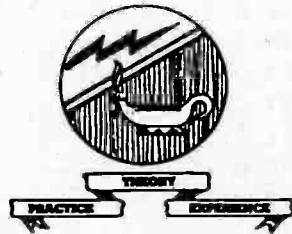
1926-1938

**RADIO  
DIAGRAMS**  
*and Servicing Information*

PREPARED UNDER THE DIRECTION OF

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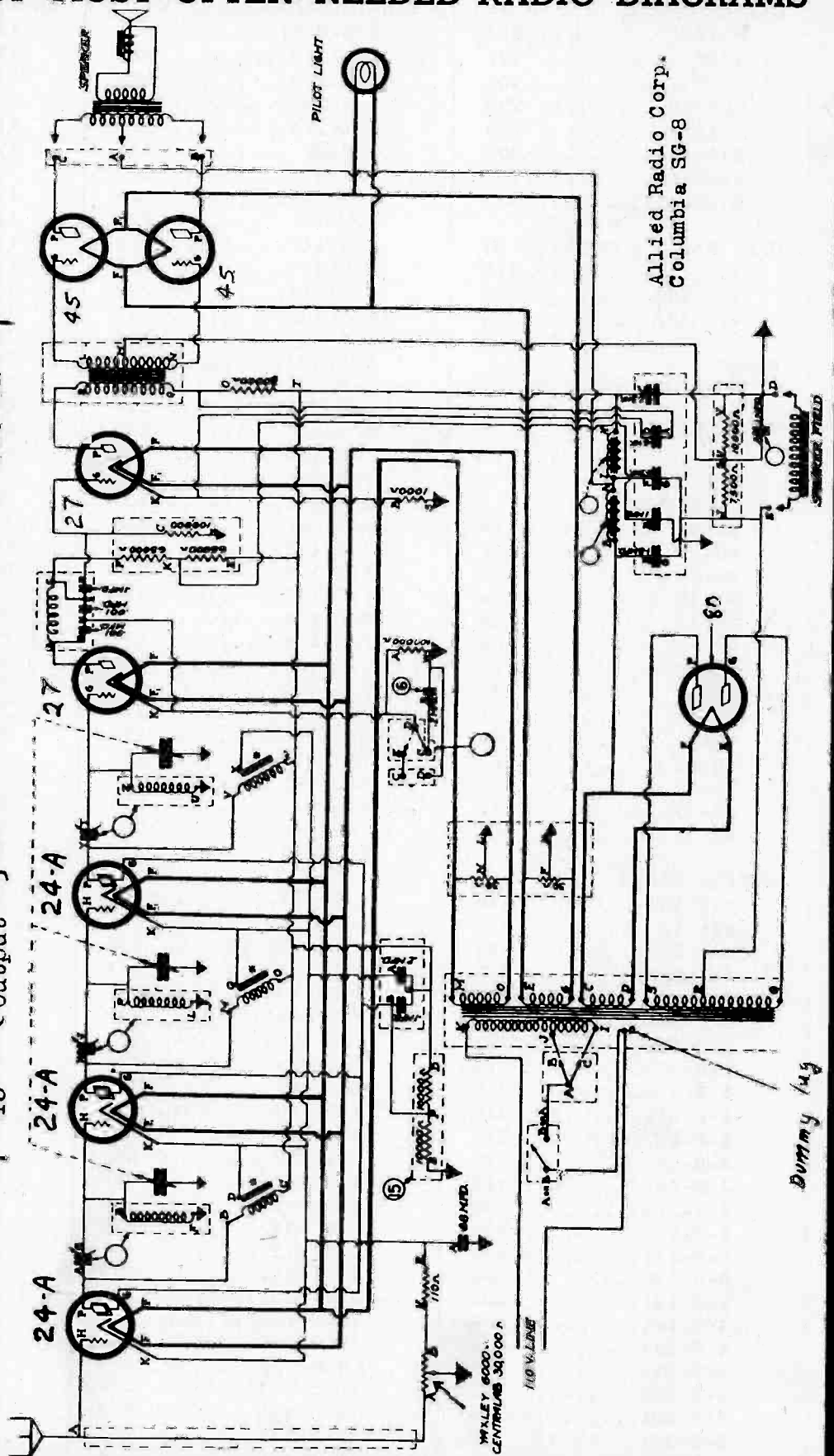


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# MANUAL OF MOST-OFTEN-NEEDED RADIO DIAGRAMS

Allied Radio Corp.  
Columbia SG-8

| Tube | Position             | Plate Volts | Screen Volts | Grid Volts | Plate Current |
|------|----------------------|-------------|--------------|------------|---------------|
| 24-A | 1st R.F.             | 180         | 80           | -1.5       | 4.5 ma.       |
| 24-A | 2nd R.F.             | 180         | 80           | -1.5       | 4.5 ma.       |
| 24-A | 3rd R.F.             | 180         | 80           | -1.5       | 4.5 ma.       |
| 27   | Detector             | 106         |              | -14.5      | 0.2 ma.       |
| 27   | 1st A.F.             | 162         |              | -3         | 3.2 ma.       |
| 45   | Final PF<br>{ Output | 230         |              |            | 20. ma        |
| 45   |                      |             |              |            |               |





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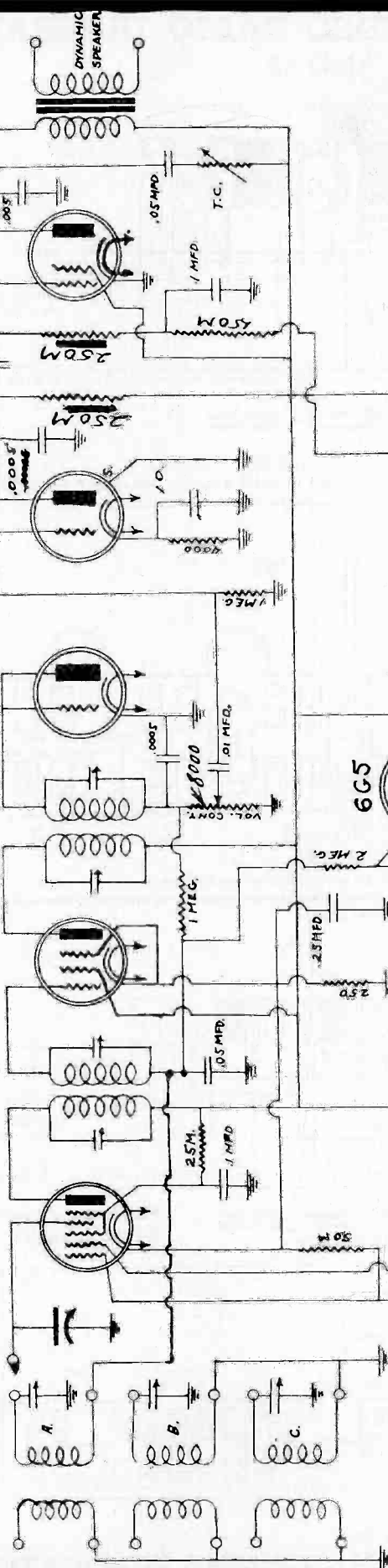
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6D6

6A7

6G5



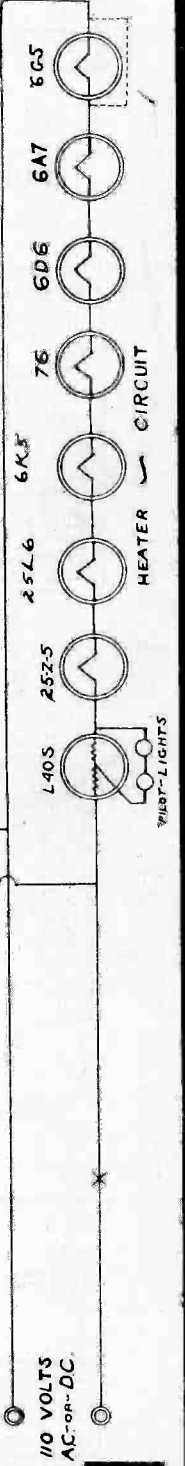
NOTE: IN SEVEN TUBE MODELS THE CATHODE - RAY INDICATOR TUBE IS OMITTED. (6G5)

| BAND | RANGE           |
|------|-----------------|
| "A"  | 540-1750 K.C.   |
| "B"  | 1.75 - 5.8 M.C. |
| "C"  | 5.8 - 18.0 M.C. |

I.F. FREQUENCY 465 K.C.

Allied Radio Corp.  
Models: A9710, A9711  
A9711E, A9712, A9712E

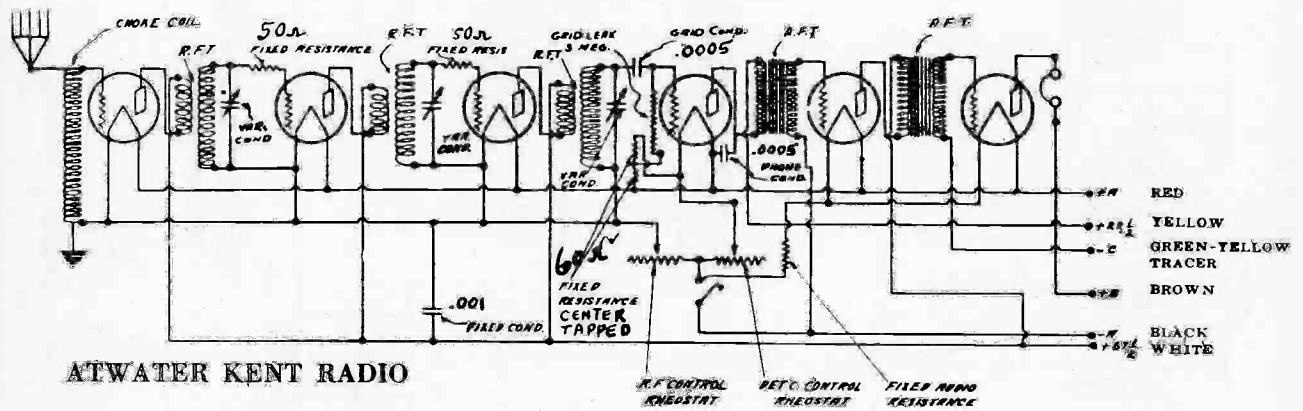
Pacific Radio Corp.  
Model 40MB1



7

# MANUAL OF MOST-OFTEN-NEEDED RADIO DIAGRAMS

## MODEL 30, 32, 35 AND 48



ATWATER KENT RADIO

WIRING DIAGRAM OF MODEL 30, 35 AND 48.

In Model 35, one rheostat controls the three R. F. filaments and a fixed resistor is connected in series with the detector and two A. F. filaments.

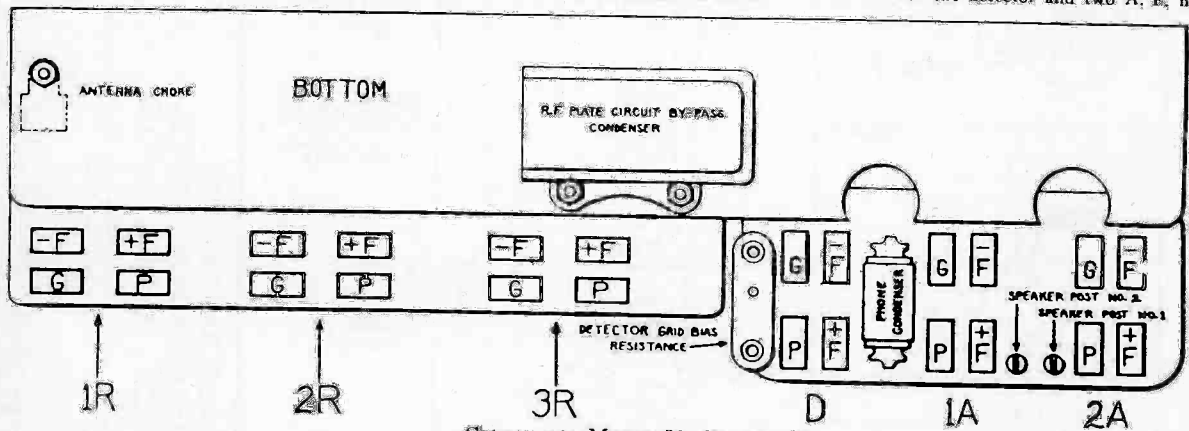
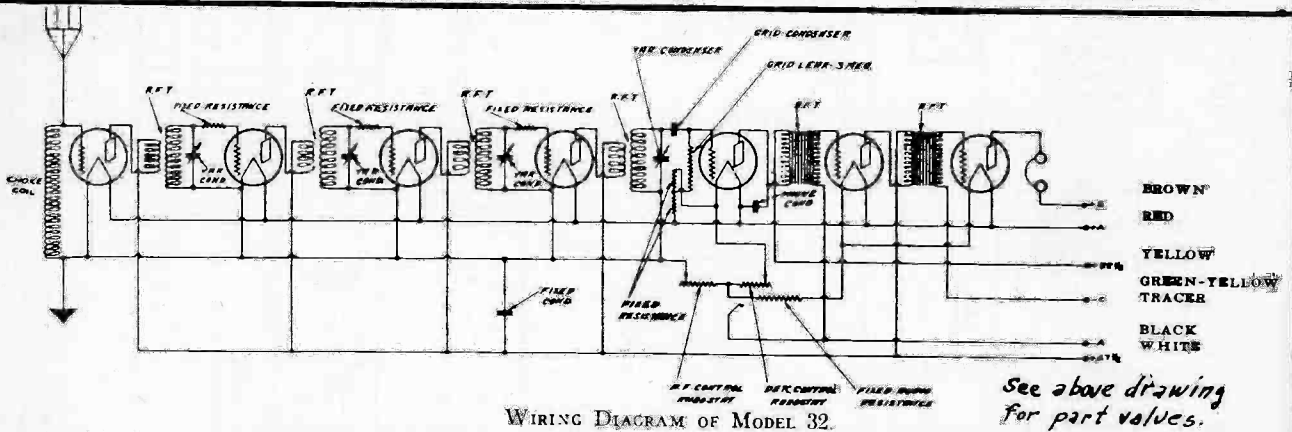


CHART FOR MODEL 30, 35 AND 48.

Early Model 30 Sets have separate R. F. sockets, but the socket contacts are in same relative position as shown in above chart.



WIRING DIAGRAM OF MODEL 32.

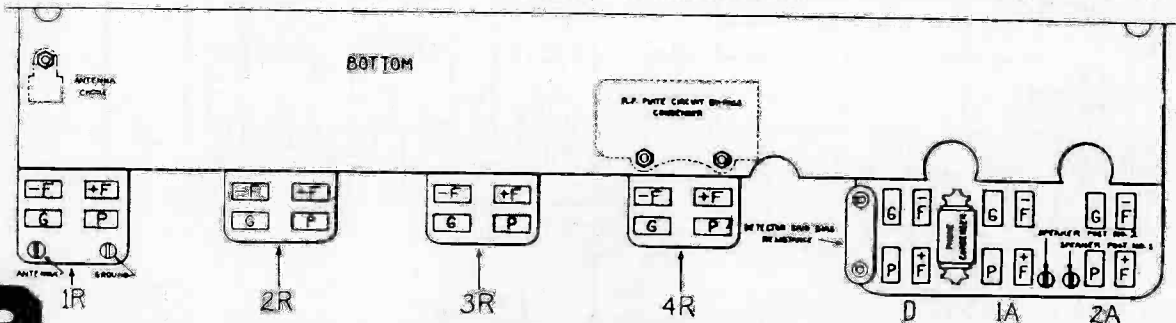


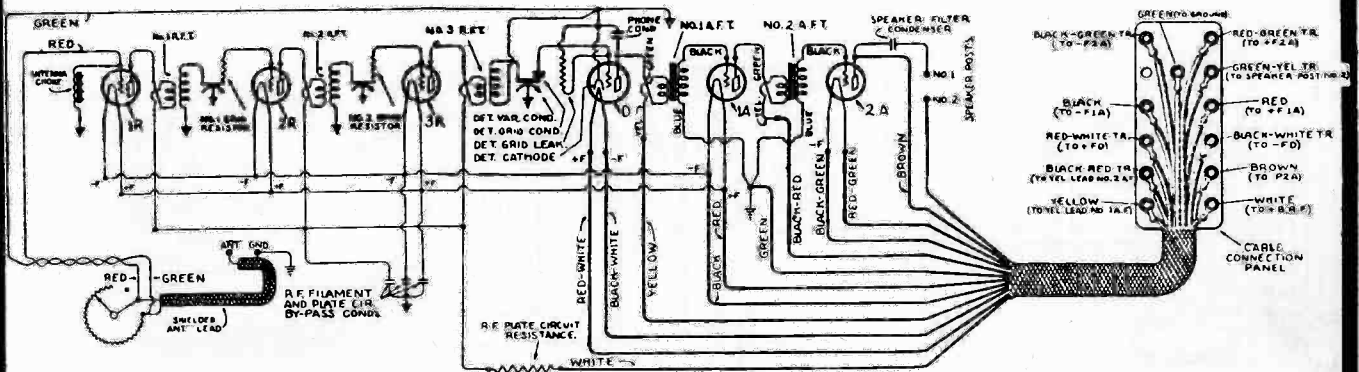
CHART FOR MODEL 32.



# MANUAL OF MOST-OFTEN-NEEDED RADIO DIAGRAMS

ATWATER KENT RADIO

## MODEL 37, 37-F, 37-C CHASSIS



WIRING DIAGRAM OF MODEL 37, 37-F, 37-C.

A 2nd-A. F. filament-shunt resistor is used before Serial No. 1,385,000, in which case speaker post No. 2 connects to the center-tap of this resistor, and the green-yellow tracer lead is not used. The R. F. plate circuit resistor is used after Serial No. 1,385,000.

In Model 37-C the on-off switch is connected to the two terminals on either side of the ground eyelet. A 2nd-A. F. filament-shunt resistor is used in the chassis of all Model 37-C receivers.

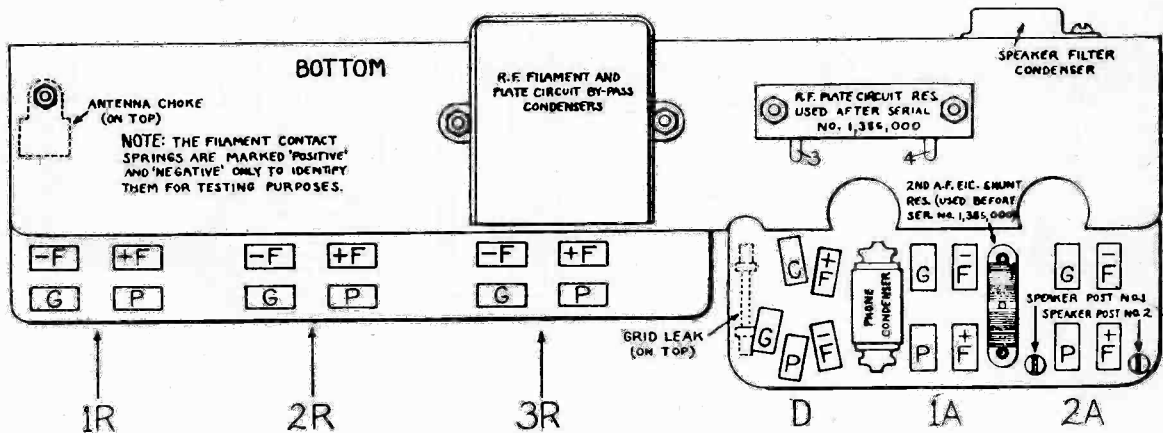
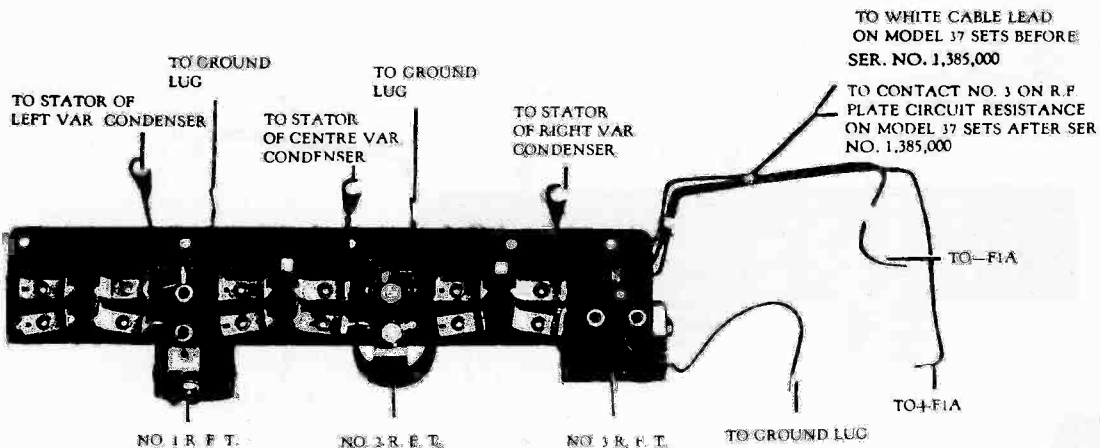


CHART FOR MODEL 37, 37-F, 37-C.

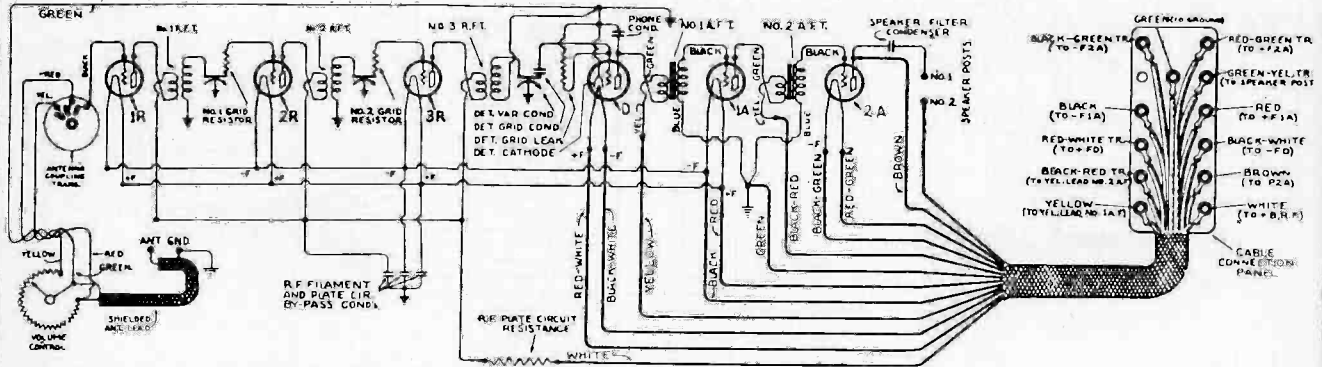


VIEW OF R. F. AMPLIFIER.

# MANUAL OF MOST-OFTEN-NEEDED RADIO DIAGRAMS

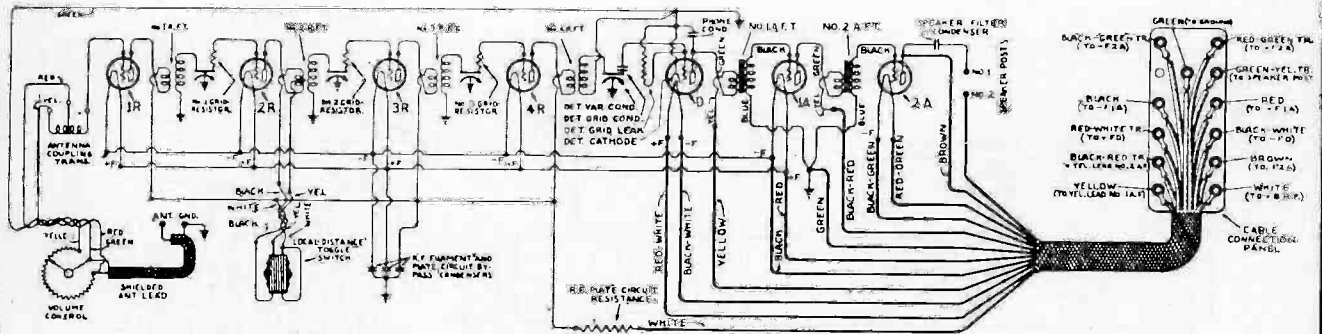
ATWATER KENT RADIO

MODEL 40, 40-F, 42, 42-F, 44, 44-F, 45, 52, 56 AND 57 CHASSIS

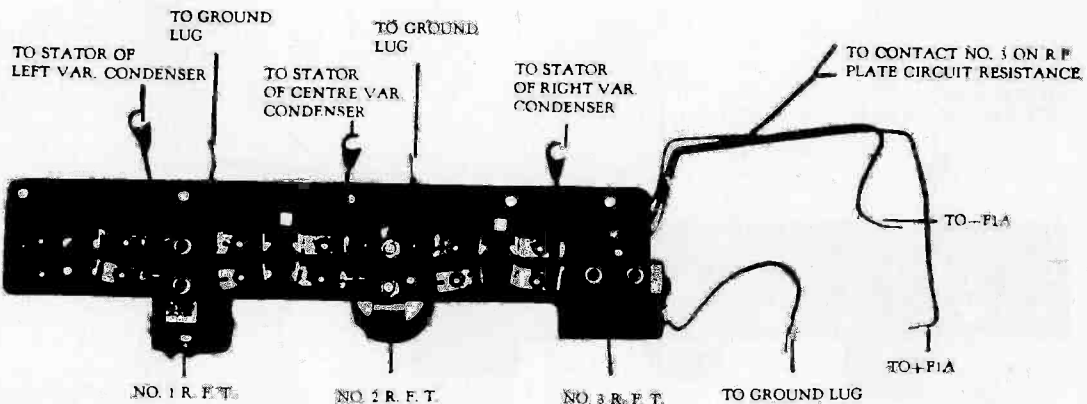


WIRING DIAGRAM OF MODEL 40, 40-F, 42, 42-F, 52, 56 AND 57.

Model 52 does not have the shielded antenna lead, but is provided with two twenty-foot leads which are connected to the volume control, black antenna and black-green tracer for ground. Model 56 and 57 have antenna and ground posts at the bottom of the cabinet.



WIRING DIAGRAM OF MODEL 44, 44-F AND 45.

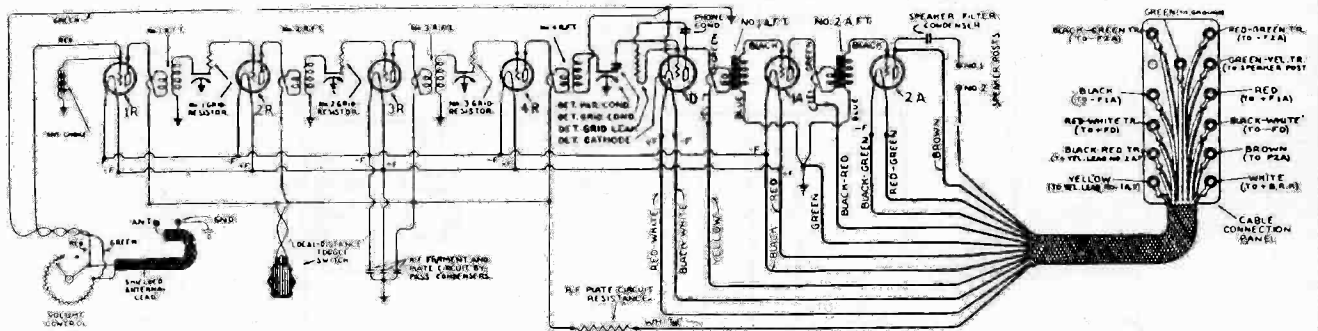


VIEW OF R.F. AMPLIFIER ASSEMBLY IN MODEL 40, 40-F, 42, 42-F, 52, 56 AND 57.

# MANUAL OF MOST-OFTEN-NEEDED RADIO DIAGRAMS

ATWATER KENT RADIO

MODEL 38 CHASSIS



WIRING DIAGRAM OF MODEL 38.

A 2nd-A. F. filament-shunt resistor is used before Serial No. 1,752,000 and the green-yellow tracer cable lead is not used.

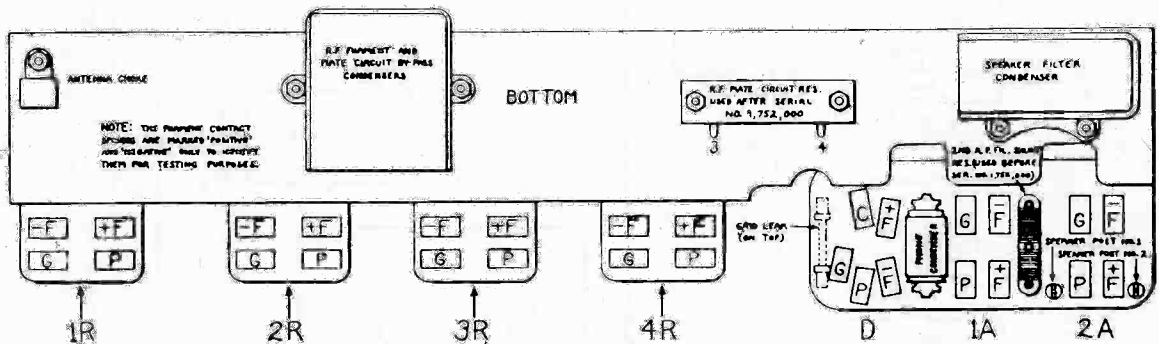
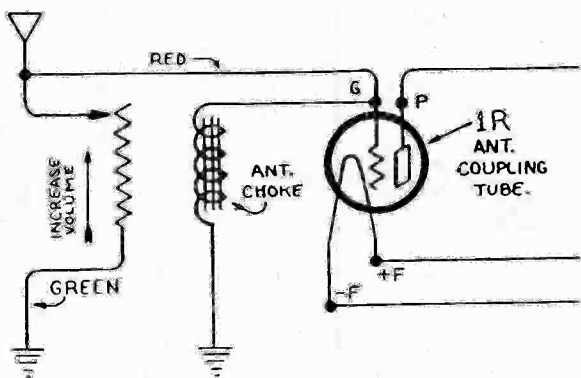
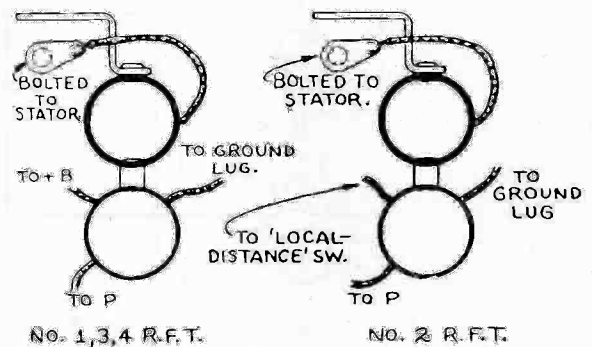


CHART FOR MODEL 38.



SCHEMATIC DIAGRAM OF VOLUME CONTROL IN MODEL 37, 37-F, 37-C AND 38.



SKETCH SHOWING CONNECTIONS FROM R. F. TRANSFORMERS, MODEL 38.



# MANUAL OF MOST-OFTEN-NEEDED RADIO DIAGRAMS

ATWATER KENT RADIO

MODEL 43, 46, 47 AND 53

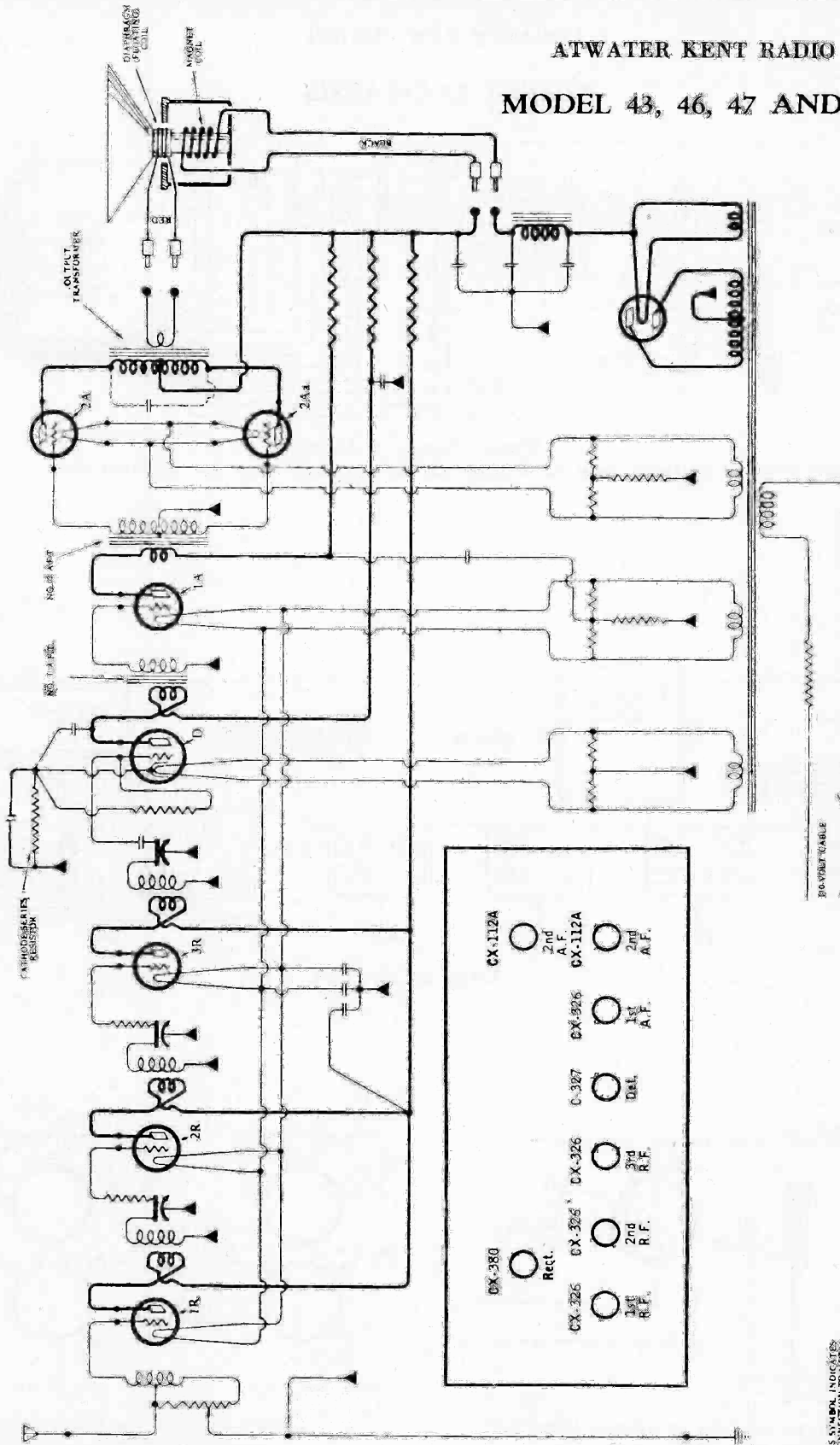


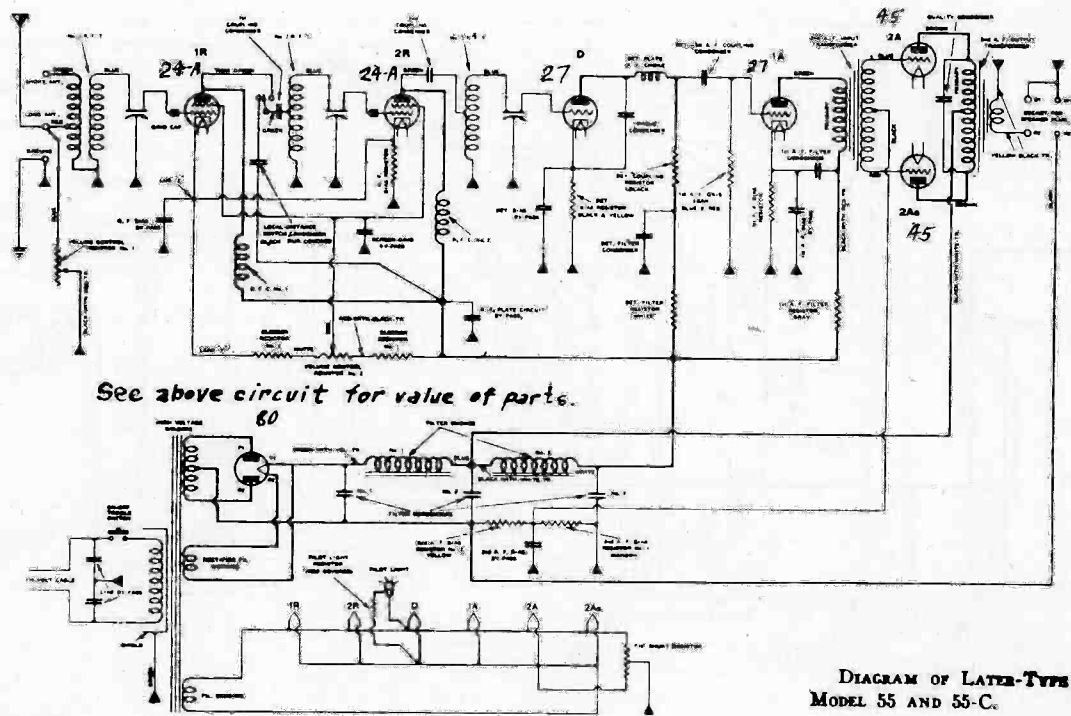
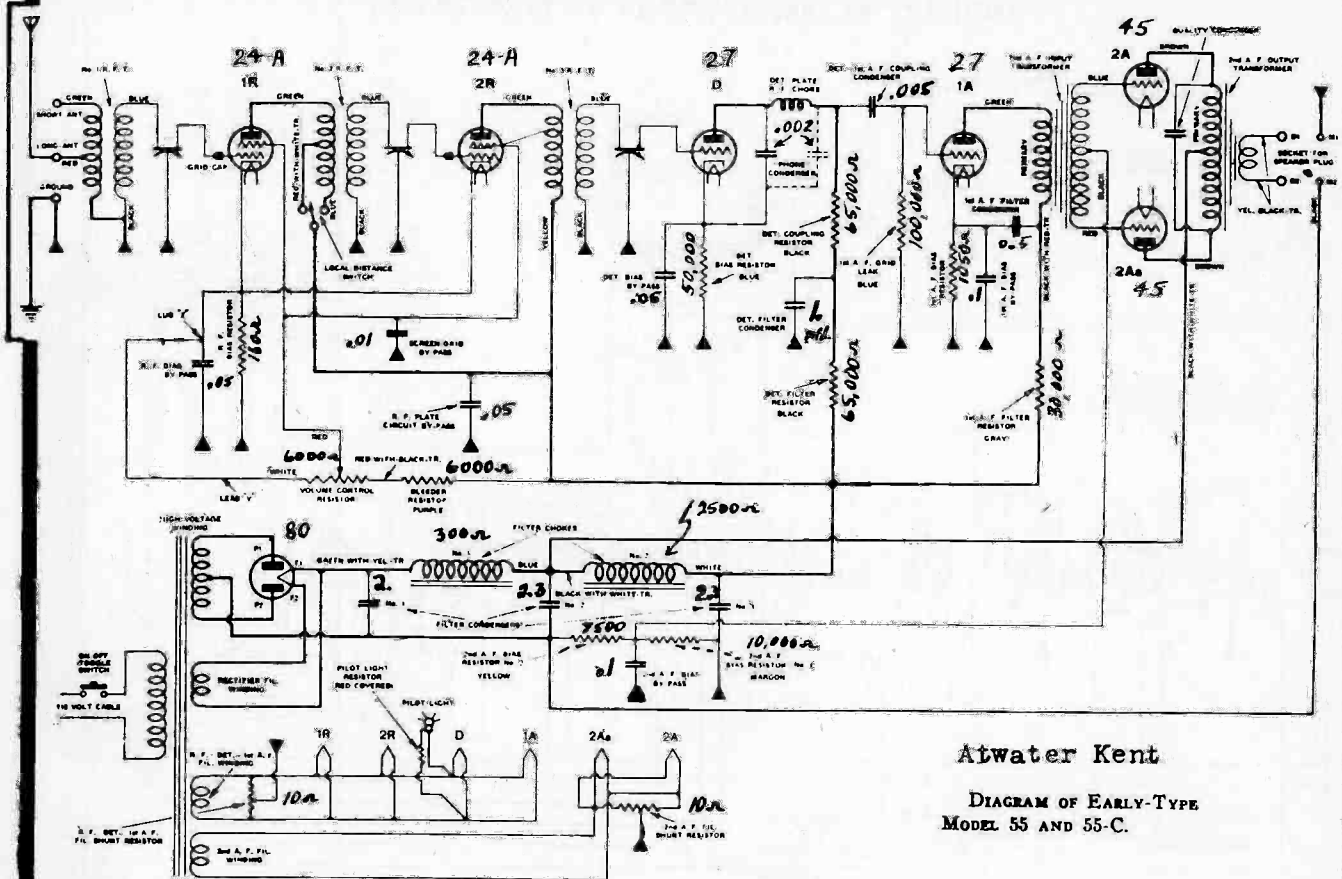
DIAGRAM OF MODEL 43, 46 AND 53. (The output transformer is sealed in the power unit.)  
 Model 47 is similar to this but has one extra stage of R. F. amplification and a local distance switch similar to that in Model 44.

*For value of parts see drawing on next page.*

THIS SYMBOL INDICATES  
 CONNECTION TO METAL  
 FRAME OF SET



# MANUAL OF MOST-OFTEN-NEEDED RADIO DIAGRAMS

















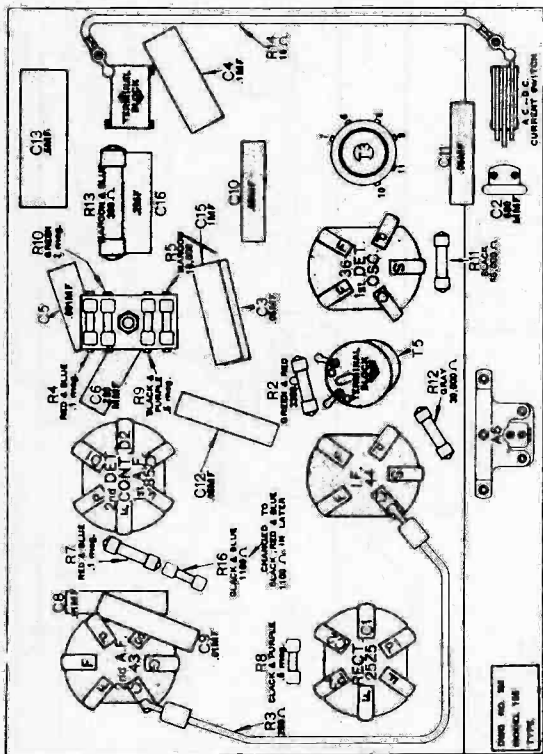




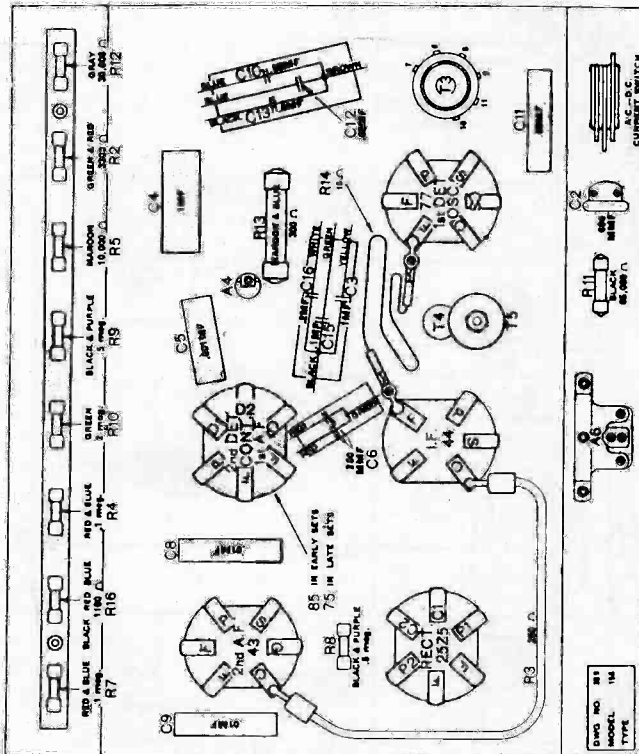
# MANUAL OF MOST-OFTEN-NEEDED RADIO DIAGRAMS

ATWATER KENT RADIO

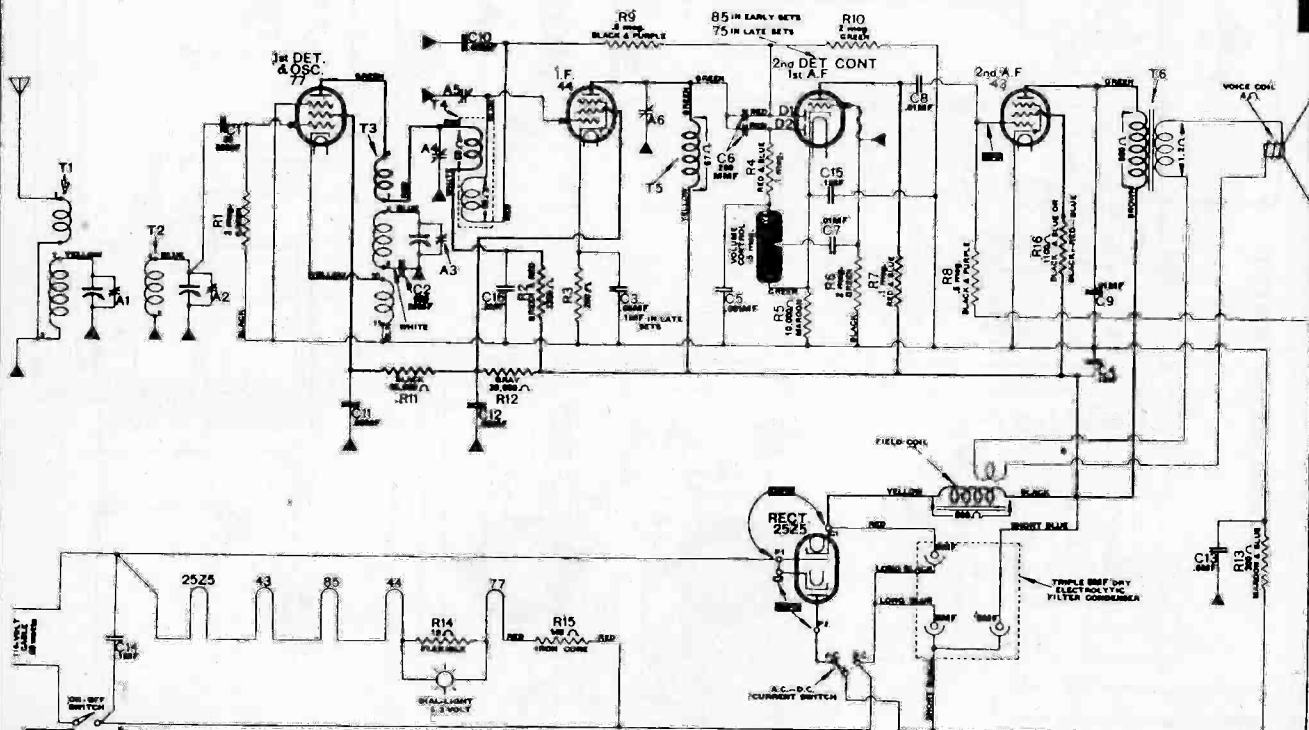
MODEL 155, 1st TYPE, Below Serial No. 7086900



First arrangement of parts under chassis in 1st-type Model 155.

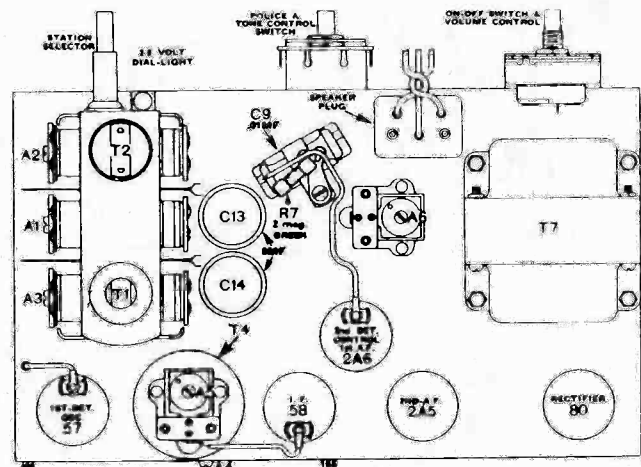
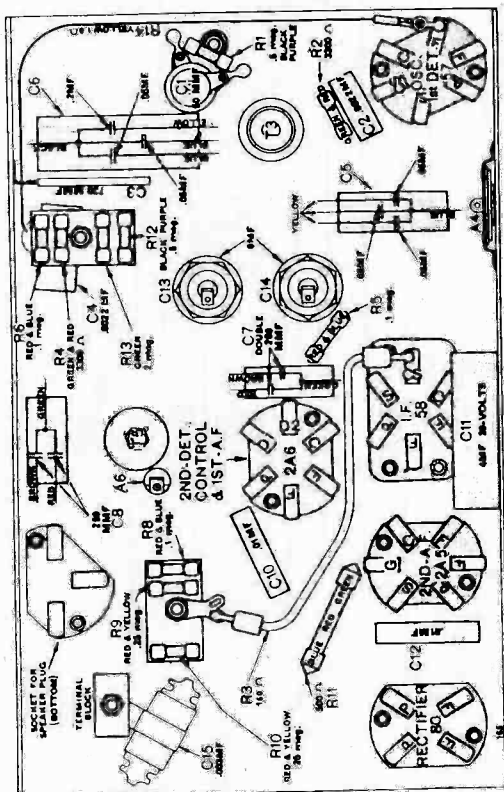
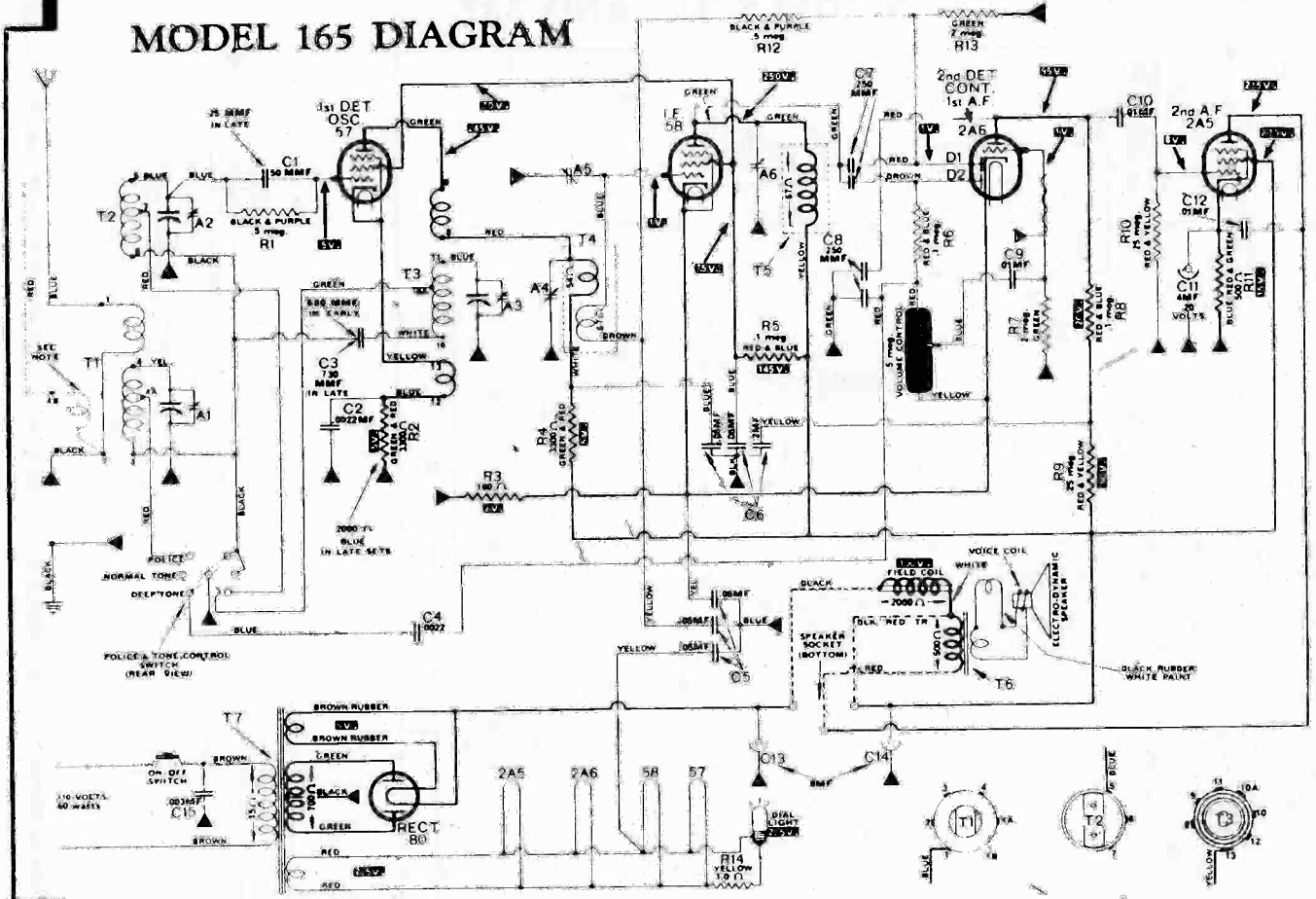


Third arrangement of parts under chassis in 1st-type Model 155.



# MANUAL OF MOST-OFTEN-NEEDED RADIO DIAGRAMS

## MODEL 165 DIAGRAM



In late type 165, the 1st-detector bias resistor R2 is 2000 ohms, 1/2 watt (blue).

In a few early 165 sets, the tracking condenser C3 is 680MMF.

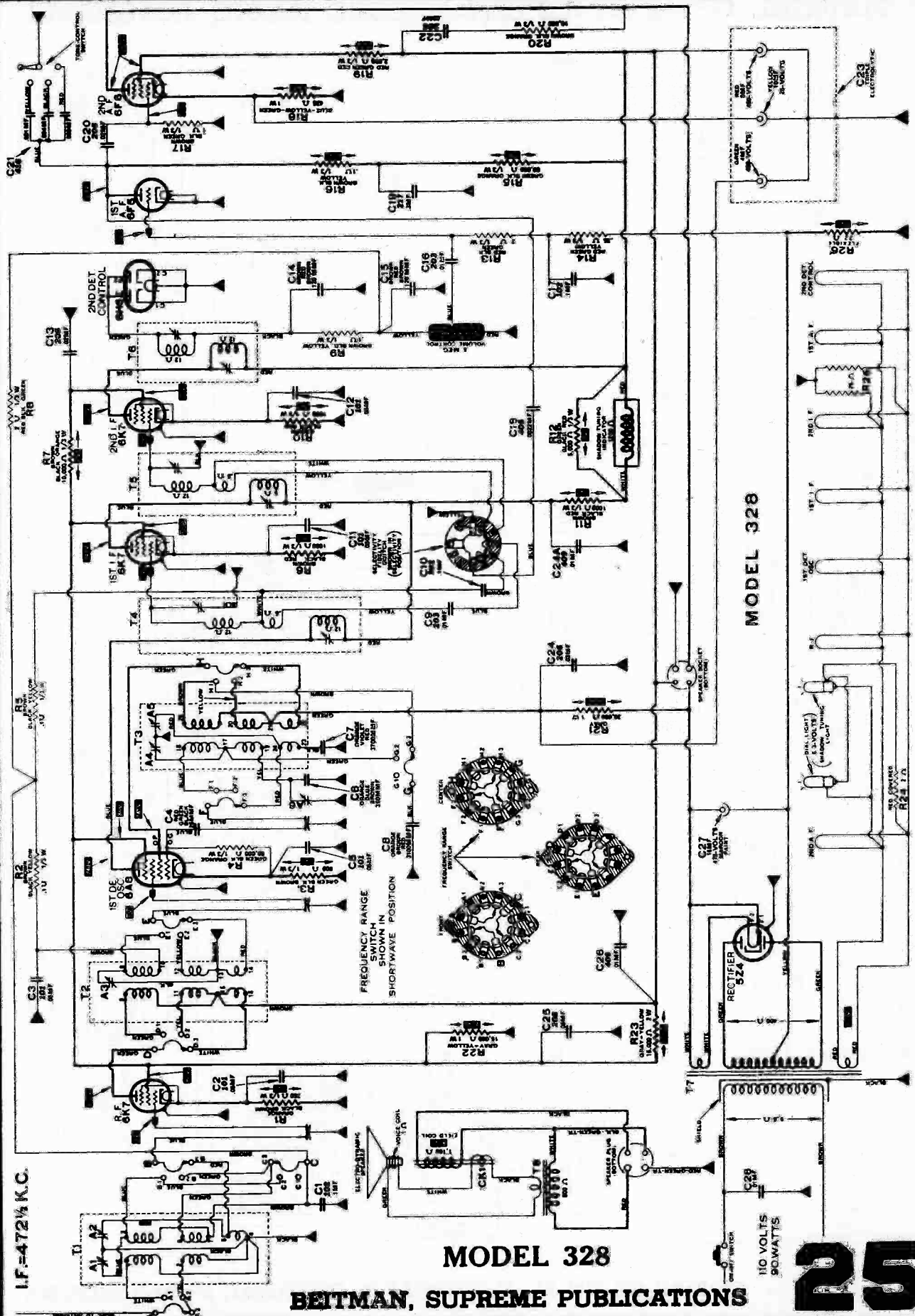
In late sets, C1 is 25MMF instead of 50MMF.

The additional primary, shown in dotted lines on No. 1 R.F.T., is used in some 165 sets.

I.F. 262.5 KC.



I.F. = 472 1/2 K.C.



# MODEL 328

BEITMAN, SUPREME PUBLICATIONS

# 25











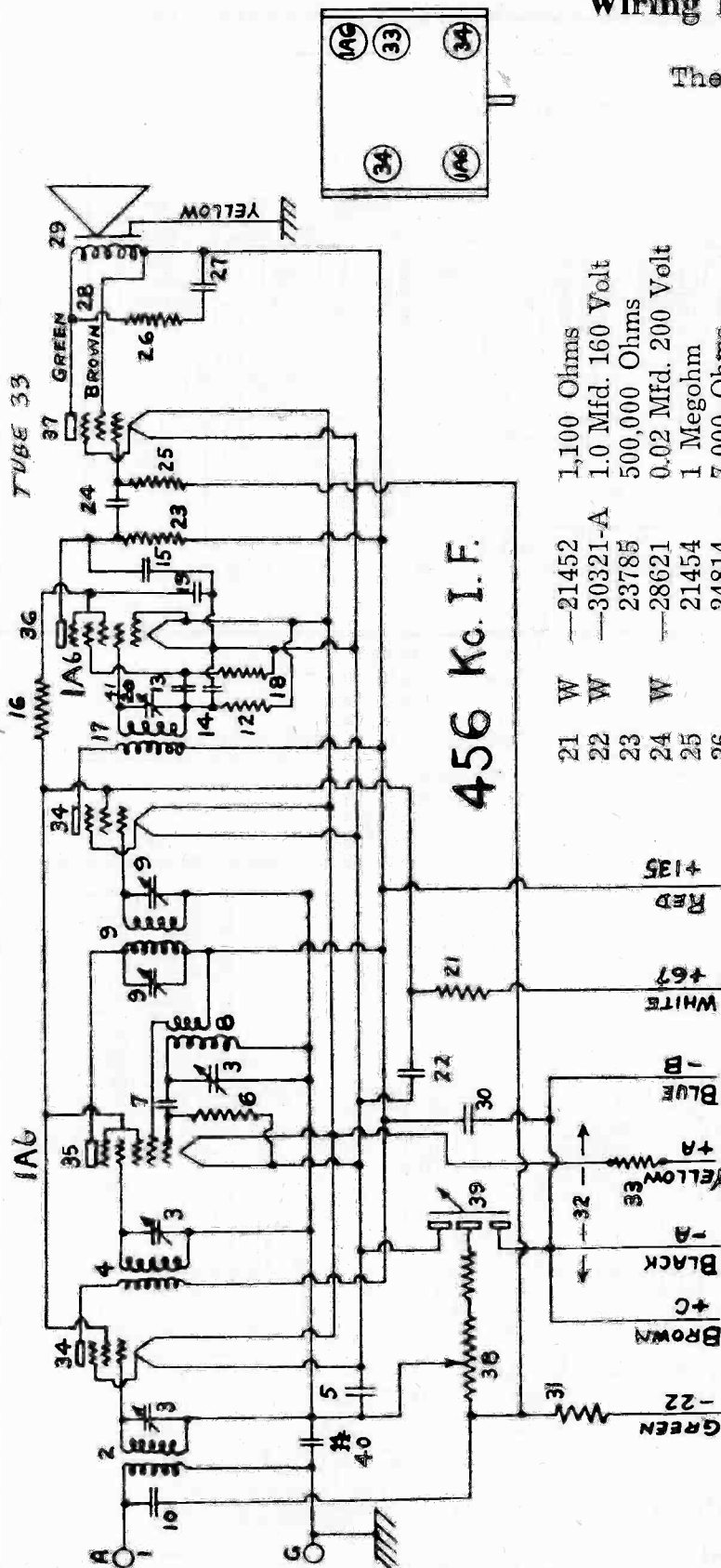




# MANUAL OF MOST-OFTEN-NEEDED RADIO DIAGRAMS

## Wiring Diagram For Model 5B3

The Crosley Corp.

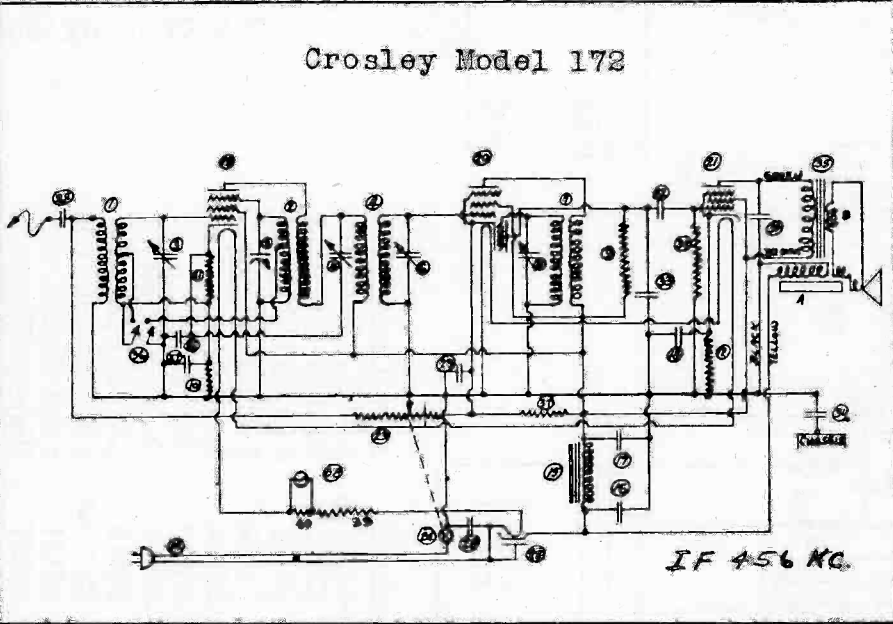


- |    |     |          |                            |
|----|-----|----------|----------------------------|
| 21 | W   | —21452   | 1,100 Ohms                 |
| 22 | W   | —30321-A | 1.0 Mfd. 160 Volt          |
| 23 | W   | 23785    | 500,000 Ohms               |
| 24 | W   | —28621   | 0.02 Mfd. 200 Volt         |
| 25 | W   | 21454    | 1 Megohm                   |
| 26 | W   | 24814    | 7,000 Ohms                 |
| 27 | W   | —28619   | .006 Mfd.                  |
| 28 | W   | —27933   | Speaker Cable              |
| 29 | W   | 30418    | 336-3B Speaker             |
| 30 | W   | —29910-A | 0.25 Mfd. 200 Volt         |
| 31 | W   | 27121    | 5,000 Ohms                 |
| 32 | G2  | —29237   | Battery Cable              |
| 33 | G2  | —23300   | Air Cell Resistor .53 Ohms |
| 34 | G31 | —27975   | 34 Socket                  |
| 35 | G55 | —27975   | 1A6 Socket                 |
| 36 | G4  | —33070   | 1A6 Flex. Socket           |
| 37 | G36 | —27975   | 33 Socket                  |
| 38 | W   | —32649   | { Volume Cont. 10,000 Ohms |
| 39 | W   | —24049-B | { Switch 3. P. S. T.       |
| 40 | W   | —24049-B | { 0.1 Mfd. 200 Volt        |

Figures in first column correspond to figures in diagram

# MANUAL OF MOST-OFTEN-NEEDED RADIO DIAGRAMS

|    |          |                      |
|----|----------|----------------------|
| 1  | 6B-2499A | ANTENNA COIL         |
| 2  | 6B-2499B | OSCILLATOR COIL      |
| 3  | 6B-2499C | GRID CONDENSER       |
| 4  | 6B-2499D | 1.5 MF. TRANS.       |
| 5  | 6B-2499E | 1.5 MF. TUNING COND. |
| 6  | 6B-2499F | 1.5 MF. TUNING COND. |
| 7  | 6B-2499G | 1.5 MF. TRANS.       |
| 8  | 6B-2499H | 2.5 MF. TUNING COND. |
| 9  | 24577    | 3 MF. C.             |
| 10 | 24580    | 2700 Ω               |
| 11 | W-24589  | 350 Ω                |
| 12 | W-24591  | 750 Ω                |
| 13 | W-24592  | 150 Ω                |
| 14 | W-24593  | 150 Ω                |
| 15 | W-24594  | 150 Ω                |
| 16 | W-24595  | 150 Ω                |
| 17 | W-24596  | 150 Ω                |
| 18 | W-24597  | 150 Ω                |
| 19 | W-24598  | 150 Ω                |
| 20 | W-24599  | 150 Ω                |
| 21 | W-24600  | 150 Ω                |
| 22 | W-24601  | 150 Ω                |
| 23 | W-24602  | 150 Ω                |
| 24 | W-24603  | 150 Ω                |
| 25 | W-24604  | 150 Ω                |
| 26 | W-24605  | 150 Ω                |
| 27 | W-24606  | 150 Ω                |
| 28 | W-24607  | 150 Ω                |
| 29 | W-24608  | 150 Ω                |
| 30 | W-24609  | 150 Ω                |
| 31 | W-24610  | 150 Ω                |
| 32 | W-24611  | 150 Ω                |
| 33 | W-24612  | 150 Ω                |
| 34 | W-24613  | 150 Ω                |
| 35 | W-24614  | 150 Ω                |
| 36 | W-24615  | 150 Ω                |
| 37 | W-24616  | 150 Ω                |
| 38 | W-24617  | 150 Ω                |
| 39 | W-24618  | 150 Ω                |
| 40 | W-24619  | 150 Ω                |
| 41 | W-24620  | 150 Ω                |
| 42 | W-24621  | 150 Ω                |
| 43 | W-24622  | 150 Ω                |
| 44 | W-24623  | 150 Ω                |
| 45 | W-24624  | 150 Ω                |



### Control Grid Voltages

- Pentode .05 to 1.5
- I. F. .... 1.5 to 2.5 (20-30 vol. cont. off)
- 1st Det. .55 to 7.5
- 2nd Det. .40 to 6.0

### Screen Grid Voltages

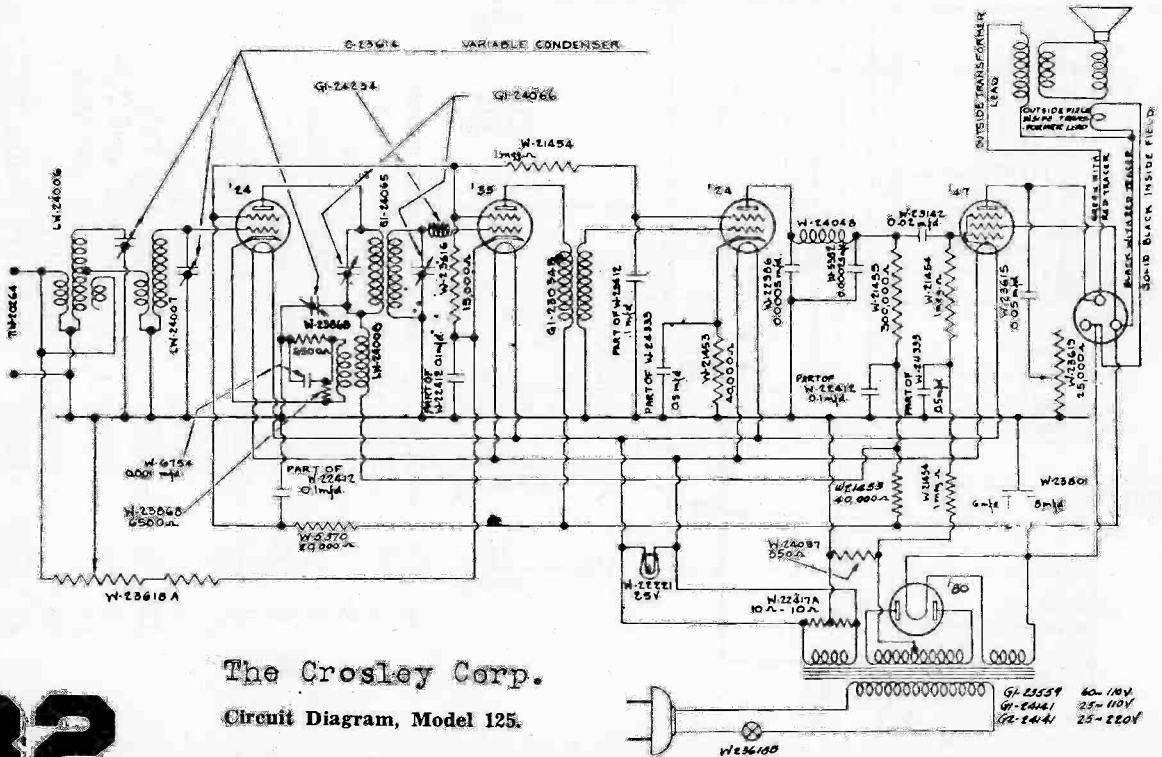
- Pentode .200 to 230
- I. F. .... 75 to 95
- 1st Det. . 75 to . 95
- 2nd Det. 15 to 25 (250V scale), 3-8 (50V scale)

### Filament Voltages

- All tubes but rectifier ..... 2.3 to 2.5
- Rectifier tube ..... 4.6 to 5.0

### Plate Voltages

- Pentode 200 to 230
- I. F. .... 200 to 230
- 1st Det. .160 to 180
- 2nd Det. 75 to 90 (250V scale), 20-30 (50V scale)



# 32

# MANUAL OF MOST-OFTEN-NEEDED RADIO DIAGRAMS

## MODEL 48

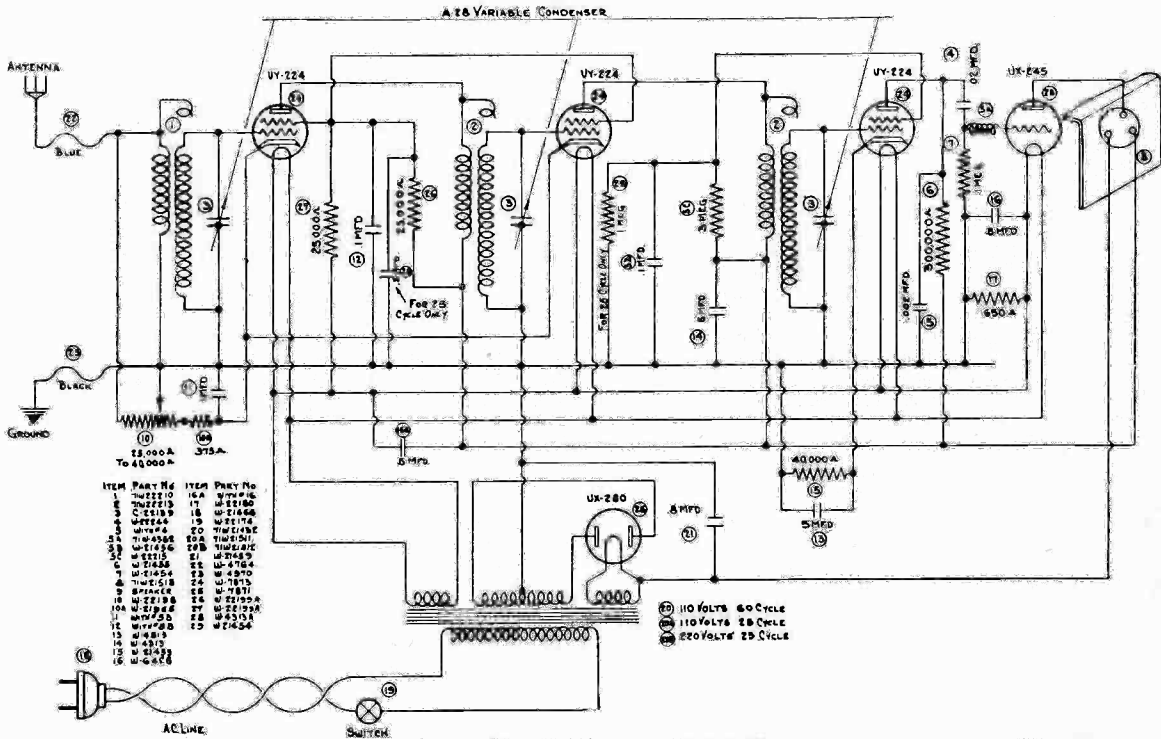
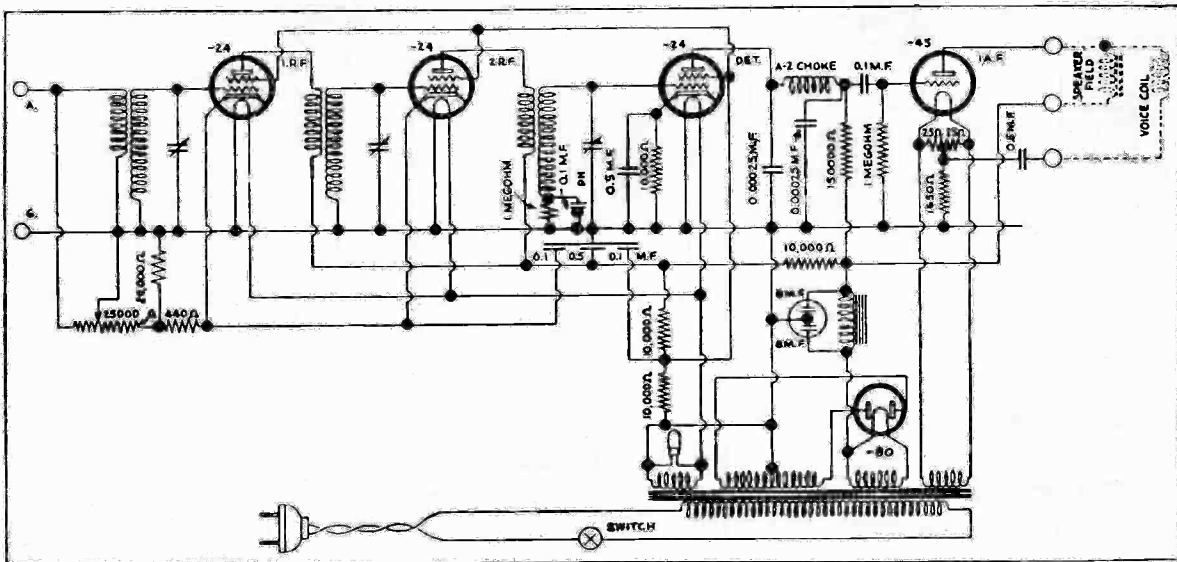


Fig. 1—Circuit Diagram Model 48

**Crosley**

## Models 53, 54 and 57

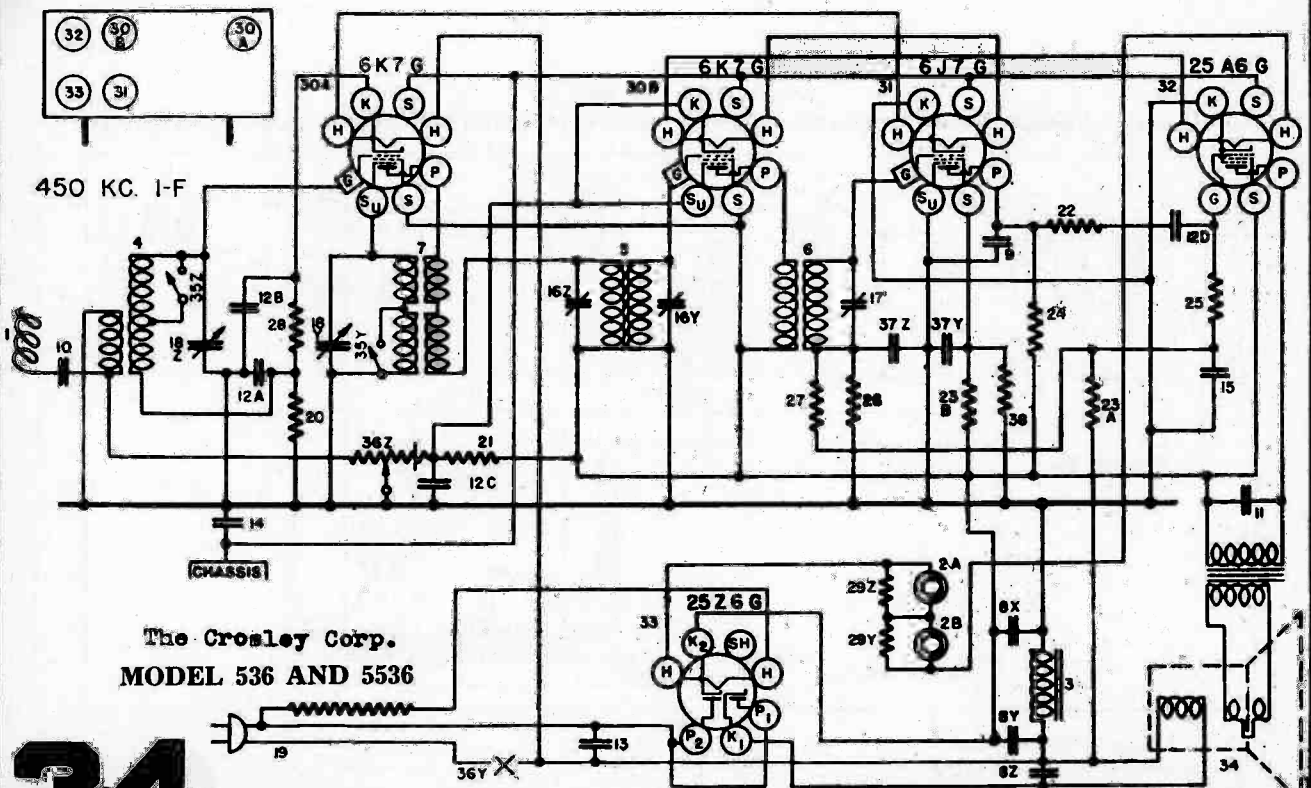


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# MANUAL OF MOST-OFTEN-NEEDED RADIO DIAGRAMS

Figures in first column refer to parts in Diagrams.

| Item No. | Part No.    | Description  | Item No. | Part No.   | Description                         |                           |
|----------|-------------|--|----------|------------|-------------------------------------|---------------------------|
| 1        | W -29784B   | Antenna—Flexible   |          | W -41162   | Drive Chain—5536 only               |                           |
| 2A       | W -4099B    | Dial Light   |          | W -41160   | Bearing Bracket—5536 only           |                           |
| 2B       | W -4099B    | Dial Light   |          | W -41159A  | Shaft—5536 only                     |                           |
|          | G6 -27134   | Dial Light Socket Assembly                                     |          | W -40909   | Spring Washer—5536 only             |                           |
| 3        | G4 -28859   | Filter Choke   |          | W -31840A  | Snap Ring—5536 only                 |                           |
| 4        | G106 -32000 | Ant. Coil  | 19       | B -40999   | Power Cord & Plug                   |                           |
| 5        | G104 -32004 | 1st I-F Coil   | 20       |            | Resistor, 2700 Ohm ¼W.              |                           |
| 6        | G103 -32004 | 2nd I-F Coil   | 21       |            | Resistor, 10,000 Ohm 1W.            |                           |
| 7        | G94 -32002  | Osc. Coil  | 22       |            | Resistor, 60,000 Ohm ¼W.            |                           |
| 8Z       |             | Condenser, { 8 Mfd. 125 V.<br>16 Mfd. 125 V.<br>25 Mfd. 100 V. | 23A      |            | Resistor, 100,000 Ohm ¼W.           |                           |
| 8Y       | W -29804A   |  |          | 23B        |                                     | Resistor, 100,000 Ohm ¼W. |
| 8X       |             |  |          | 24         |                                     | Resistor, 300,000 Ohm ¼W. |
| 9        | G1 -34002   | Condenser, .00025 Mfd. (Molded)                                | 25       |            | Resistor, 500,000 Ohm ¼W.           |                           |
| 10       | W -28620    | Condenser, .003 Mfd. 200 V.                                    | 26       |            | Resistor, 2 Megohm ¼W.              |                           |
| 11       | W -23191A   | Condenser, .01 Mfd. 400 V.                                     | 27       |            | Resistor, 10 Megohm ¼W.             |                           |
| 12A      | W -36541    | Condenser, .02 Mfd. 160 V.                                     | 28       | W -28589   | Resistor, 350 Ohm ½W. Flex.         |                           |
| 12B      | W -36541    | Condenser, .02 Mfd. 160 V.                                     | 29       | W -41000   | Candohm—2 Sections                  |                           |
| 12C      | W -36541    | Condenser, .02 Mfd. 160 V.                                     | 30A      | G151-3F400 | Socket Type 6K7                     |                           |
| 12D      | W -36541    | Condenser, .02 Mfd. 160 V.                                     | 30B      | G151-3F400 | Socket Type 6K7                     |                           |
| 13       | W -32780B   | Condenser, .05 Mfd. 400 V.                                     | 31       | G157-3F400 | Socket Type 6J7                     |                           |
| 14       | W -24049C   | Condenser, 1 Mfd. 160 V.                                       | 32       | G161-36400 | Socket Type 25A6                    |                           |
| 16       | W -37075    | Condenser, 2 Section Trimmer                                   | 33       | G162-36400 | Socket Type 25Z6                    |                           |
| 17       | W -40998    | Condenser, 1 Section Trimmer                                   |          | W -40711   | Tube Shield                         |                           |
| 18       | G22 -33001  | 2 Section Var. Tuning Condenser                                |          | W -27981A  | Tube Shield Base                    |                           |
|          | C -40926    | Dial Glass—536 only  | 34       | B -41012   | Speaker 237BL9                      |                           |
|          | W -40632B   | Pointer Disc—536 only  |          | W -40593   | Speaker Mtg. Bracket                |                           |
|          | W -41014A   | Dial Glass Bracket R-H—536 only                                |          |            | Mtg. Bracket Screw                  |                           |
|          | W -41013A   | Dial Glass Bracket L-H—536 only                                | 35       |            | Band Selector Switch                |                           |
|          | W -41227    | Drive Chain—536 only   | 36Z      |            | Volume Control 4800 Ohm Tap 160 Ohm |                           |
|          | W -40633B   | Bearing Support—536 only                                       | 36Y      |            | Line Switch                         |                           |
|          | W -41112A   | Driven Sprocket—536 only                                       |          | B -40590   | Escutcheon                          |                           |
|          | W -41113A   | Driver Sprocket  |          | D -28      | Escutcheon Mtg. Screws (4) 536 only |                           |
|          | W -40486    | Pointer Disc Mtg. Screw  |          | W -41019   | Knob                                |                           |
|          | C -40927    | Dial Glass—5536 only   |          | W -40839   | Escutcheon                          |                           |
|          | B -40818B   | Pointer Disc—5536 only   |          | W -40840   | Escutcheon Plate                    |                           |
|          | W -41158    | Support Bracket L-H—5536 only                                  |          | W -29760A  | Escutcheon Pin 5536 only            |                           |
|          | W -41143    | Support Bracket R-H—5536 only                                  |          | W -41019   | Knob (2)                            |                           |
|          | W -40797    | Dial Glass Bracket—5536 only                                   |          | W -41021   | Knob (1)                            |                           |



The Crosley Corp.  
MODEL 536 AND 5536

# 34

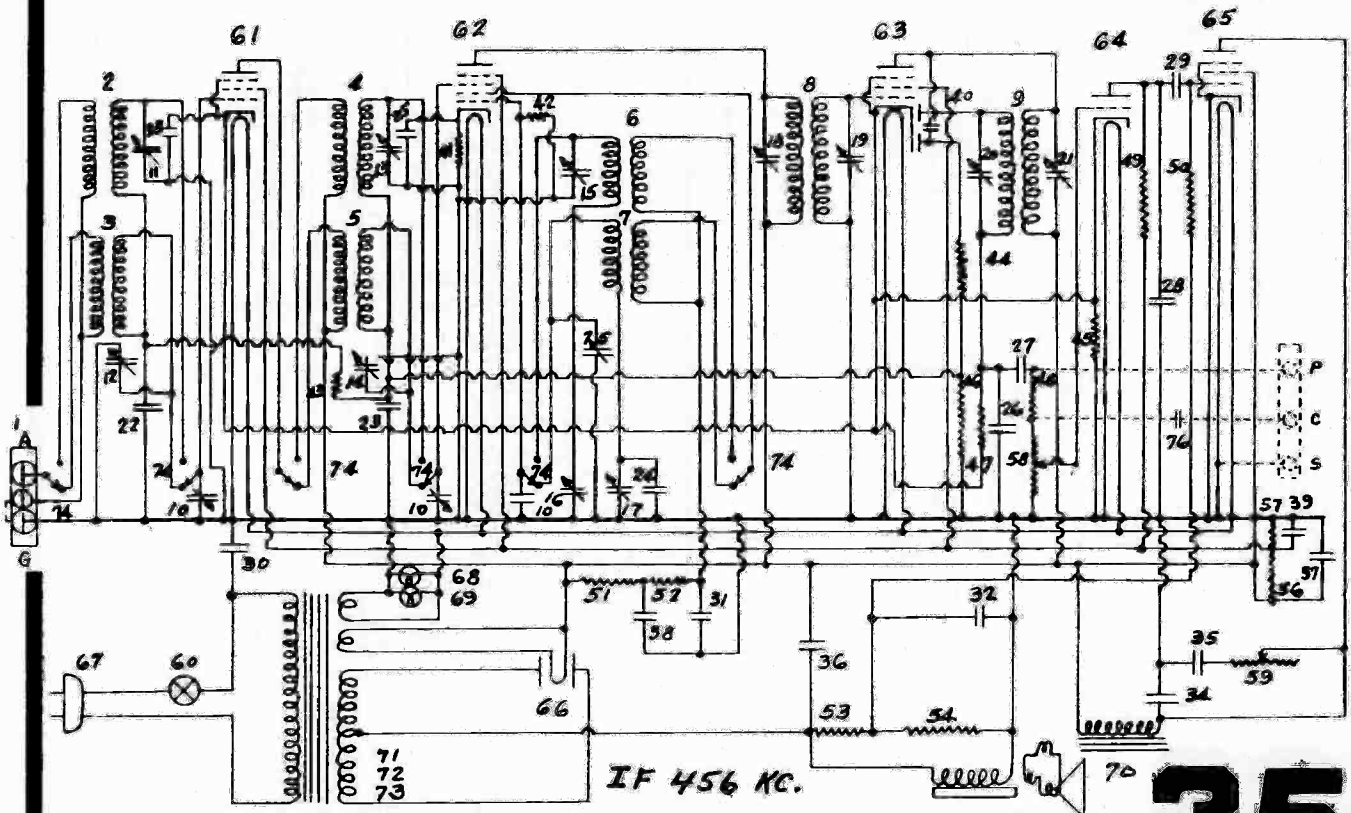
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# MANUAL OF MOST-OFTEN-NEEDED RADIO DIAGRAMS

## PARTS LIST—MODEL 6H2

\* Figures in 2nd last column refer to parts shown in wiring diagram of Model 6H2

| Qty. | Part No.  | Description                                 | Item  | Qty. | Part No.  | Description                            | Item  |
|------|-----------|---|-------|------|-----------|--|-------|
| 1    | G3-32000  | Antenna Coil (Low Freq.)                    | 2     | 1    | B30375A   | Cable & Plug                           | 67    |
| 1    | G1-32002  | Antenna Coil (High Freq.)                   | 3     | 1    | W28552    | Level Control (Volume) (3 Megohms)     | 58    |
| 1    | G2-32001  | R. F. Trans. Coll. (L. F.)                  | 4     | 2    | G4-27134  | Dial Light Brkt Assm.                  | 59-60 |
| 1    | G1-32001  | R. F. Trans. Coll. (H. F.)                  | 5     | 1    | W25394B   | Tone Control (80000 Ohm) & Line Switch | 1     |
| 1    | G2-32002  | Oscillator Coll. (L. F.)                    | 6     | 1    | G16-26719 | Ant.-Gnd. Terminal                     |       |
| 1    | G1-32002  | Osc. Coll. (H. F.)                          | 7     |      |           |  |       |
| 1    | G9-32004  | 1st I. F. Trans. (With Trimmers)            | 8-18  |      |           |  |       |
| 1    | G10-32004 | 2nd I. F. Trans. (With Trimmers)            | 19    |      |           |  |       |
|      |           |   | 21    |      |           |  |       |
| 6    | W25200    | Coll Shield Socket                          |       | 1    | W20097C   | <b>FILTER &amp; BY-PASS CONDENSERS</b> |       |
| 3    | W30802    | Coll Shield                                 |       | 1    | W26194B   | 8-.8-.8 Mfd. 450 V.-450 V.-250 V.      | 37-38 |
| 2    | W25025A   | Coll Shield                                 |       | 1    | W30321    | 12. Mfd. 475 V.                        | 39    |
| 1    | W25025A   | Coll Shield                                 |       | 1    | W30321    | 1. Mfd. 160 V.                         | 30    |
| 3    | W26891    | Insulating Washer L. F. Ant.-R. F. and Osc. | 2-4-6 | 3    | W32379    | 0.02 Mfd. 200 V.                       | 32    |
| 3    | W21541B   | Retaining Ring                              | 2-4-6 | 1    | W32304    | 0.0014 Mfd.                            | 22-23 |
| 2    | W30025    | Retaining Ring                              | 3-5-7 | 1    | W30322A   | 0.00017-0.006 Mfd. 200 V.-200 V.       | 25    |
| 1    | G1-33008  | L. F. & H. F. Antenna Trimmer Cond.         | 11-12 | 1    | W25537A   | 0.001-0.03 Mfd. 400 V.-400 V.          | 24    |
| 1    | G1-33008  | L. F. & H. F. R. F. Trimmer Cond.           | 13-14 | 1    | W30805    | 0.01 Mfd. 400 V.                       | 26-27 |
| 1    | G15-33009 | L. F. & H. F. Osc. Trimmer Condenser        | 15-75 | 1    | W32378    | 0.01 Mfd. 400 V.                       | 28-29 |
| 1    | G2-33007  | L. F. & H. F. Osc. Series Trimmer Cond.     | 16-17 | 1    | W24784    | 0.25 Mfd. 200 V.                       | 30    |
| 1    | G19-33002 | Variable Tuning Condenser Gang              | 10    | 1    | W25517    | 0.008-0.05 Mfd. 400 V.-400 V.          | 31    |
| 1    | G5-32086  | Dial Drive Assm.                            |       | 1    | W27540    | 0.0005 Mfd. 400 V.                     | 33    |
| 1    | W32208A   | Dial Hand                                   |       | 1    | W28589    | <b>RESISTORS</b>                       |       |
| 2    | W32293    | Dial Hand Nut                               |       | 1    | 21453     | 350 Ohms (Flexible)                    | 41    |
| 1    | G75-27456 | 6D6 Socket                                  | 61    | 1    | 21453     | 40000 Ohms                             | 42    |
| 1    | G47-27456 | 6A7 Socket                                  | 62    | 4    | 23785     | 500000 Ohms                            | 43-48 |
| 1    | G48-27456 | 6B7 Socket                                  | 63    | 2    | 26377     | 3 Megohms                              | 50-53 |
| 1    | G80-27456 | 76 Socket                                   | 64    | 1    | W27504    | 100 Ohms (Flexible)                    | 44-46 |
| 1    | G25-27456 | 42 Socket                                   | 65    | 1    | 21454     | 1 Megohm                               | 45    |
| 1    | G6-27456  | 80 Socket                                   | 66    | 1    | 23403     | 150000 Ohms                            | 47    |
| 3    | W26010    | Tube Shield Base                            |       | 1    | 21876     | 10000 Ohms                             | 49    |
| 2    | W27328A   | Tube Shield (6A7, 6B7)                      |       | 1    | 24814     | 7000 Ohms                              | 51    |
| 1    | B26009C   | Tube Shield (6D6)                           |       | 1    | 33474     | 120000 Ohms                            | 52    |
| 1    | G6-30745  | Power Transformer 60 cy. 110 V.             | 71    | 1    | W31883    | 8500-25000 Ohms                        | 53-57 |
| 1    | G7-30745  | Power Transformer 25 cy. 110 V.             | 72    | 3    | W32352    | Knob                                   |       |
| 1    | G8-30745  | Power Transformer 25 cy. 220 V.             | 73    | 1    | W32353    | Knob                                   |       |
| 1    | B32285    | Band Change Switch                          | 74    | 1    | W31007A   | Speaker Cord (4 Lead)                  |       |
|      |           |   |       | 1    | W32219A   | Dial Glass                             |       |
|      |           |   |       | 1    | W32220A   | Dial Glass Retainer                    |       |
|      |           |   |       | 1    | B32190C   | Escutcheon                             |       |
|      |           |   |       | 1    | W33106A   | Escutcheon Gasket                      |       |
|      |           |   |       | 4    | D28       | Escutcheon Screws (.10 doz)            |       |



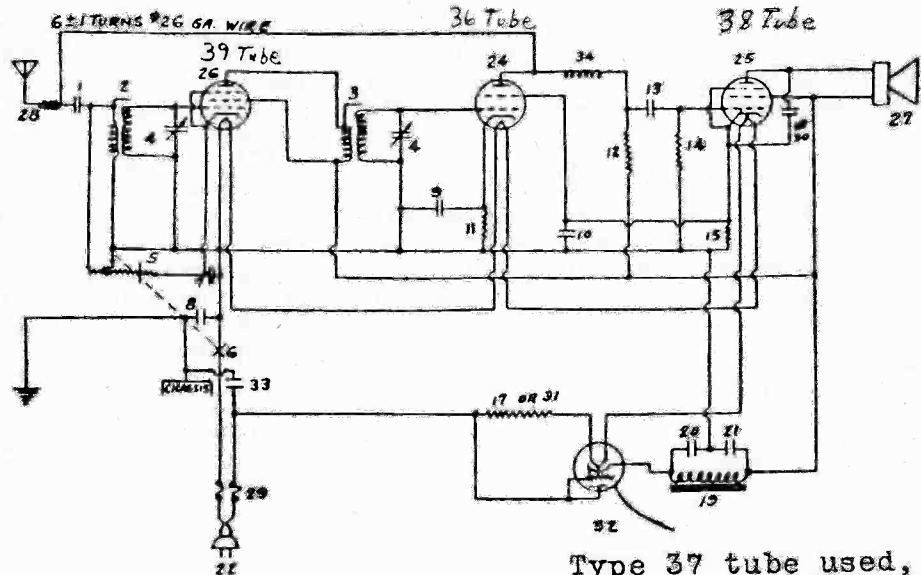




# MANUAL OF MOST-OFTEN-NEEDED RADIO DIAGRAMS

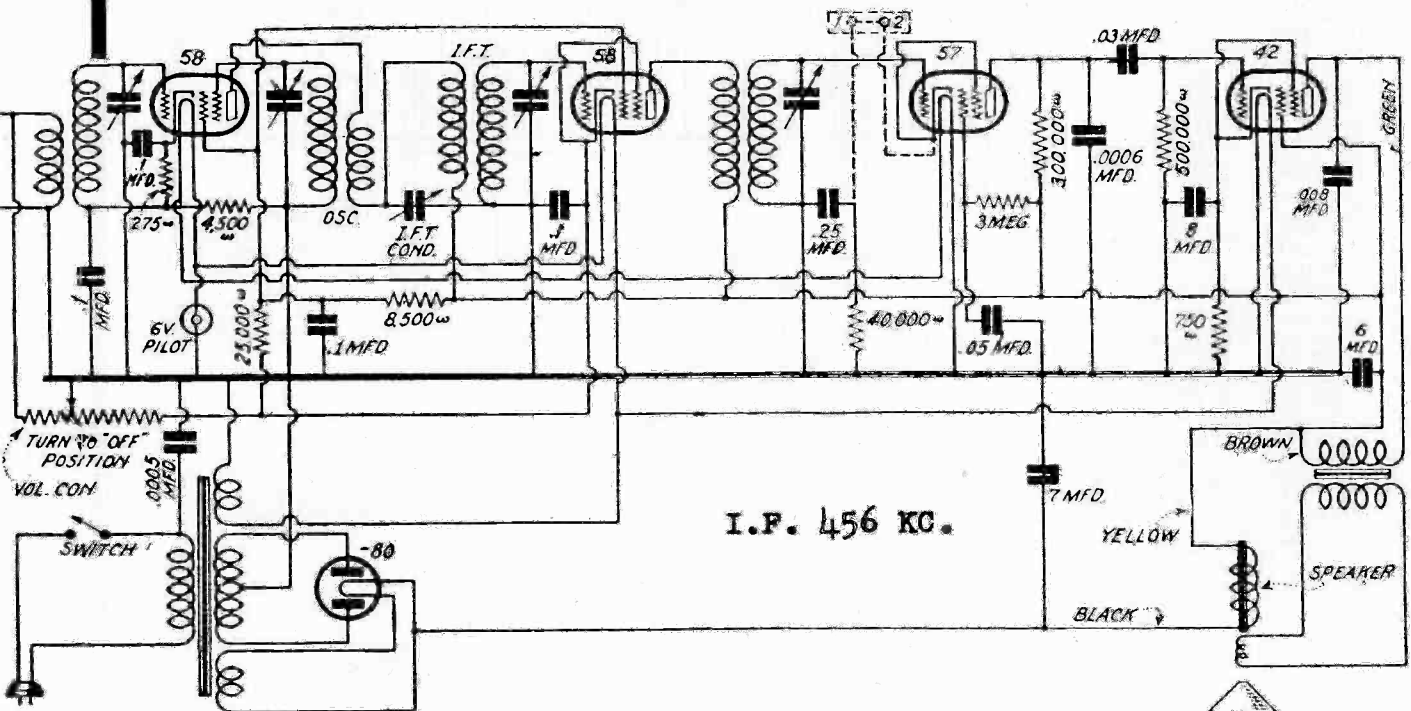
## Crosley Model 147

|    |                    |                      |
|----|--------------------|----------------------|
| 1  | W-27652            | .003 MFD.            |
| 2  | LW-27680           | ANTENNA COIL         |
| 3  | W-27681            | INTERSTAGE COIL      |
| 4  | B-27706            | TUNING CONDENSER     |
| 5  | W-27694            | VOLUME CONT. 4500 Ω  |
| 6  |                    | LINE SWITCH          |
| 7  | W-25438            | .1 MFD.              |
| 8  |                    | .1 MFD.              |
| 9  | W-27677A           | 8 MFD.               |
| 10 |                    | 8 MFD.               |
| 11 | W-21237A           | 60,000 Ω             |
| 12 | W-26577            | 3 MEG.               |
| 13 | W-27203            | .02 MFD.             |
| 14 | W-26578            | 5 MEG.               |
| 15 | W-26690            | 4500 Ω               |
| 16 | <del>W-26538</del> | <del>.003 MFD.</del> |
| 17 | W-27675            | 300 Ω RED DRY        |
| 18 | <del>W-26539</del> | <del>20 MFD.</del>   |
| 19 | W-24714            | FILTER CHOKER        |
| 20 |                    | 4 MFD.               |
| 21 | W-27676            | 4 MFD.               |
| 22 | LW-27815           | CORD & PLUG          |
| 23 |                    | SOCKET               |
| 24 | GU-27127           | -36 SOCKET           |
| 25 | W-27127            | -3A SOCKET           |
| 26 | GU-27127           | -3B SOCKET           |
| 27 | K1790              | 340 SPEAKER          |
| 28 | W-26072            | ANTENNA LEAD         |
| 29 | W-4639C            | 2 AMP. FUSE          |
| 30 | W-27652            | .003 MFD.            |
| 31 | W-24189            | 300 Ω CARBON         |
| 32 | GU-27127           | -37 SOCKET           |
| 33 | W-27652            | .003 MFD.            |
| 34 | W-24224            | FILTER CHOKER        |



Type 37 tube used,  
Early models used  
type KR tube.

## Crosley Model 148

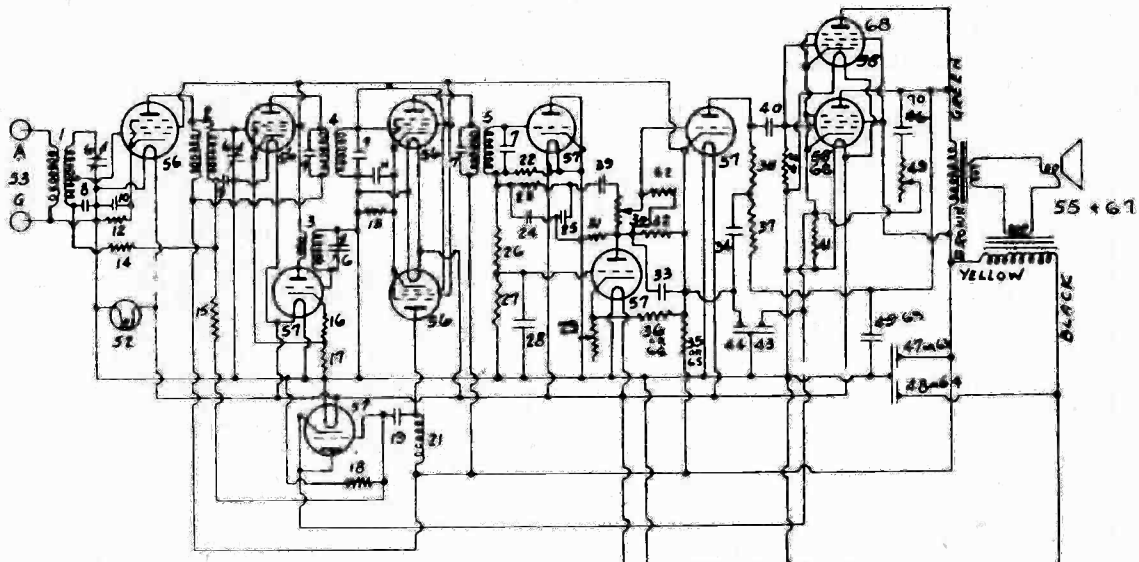




# MANUAL OF MOST-OFTEN-NEEDED RADIO DIAGRAMS

Model 160

The Crosley Radio Corporation

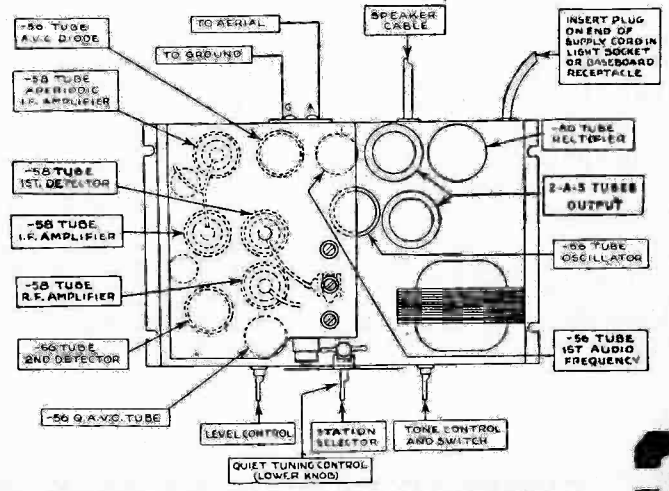


I.F. 181.5 KC.

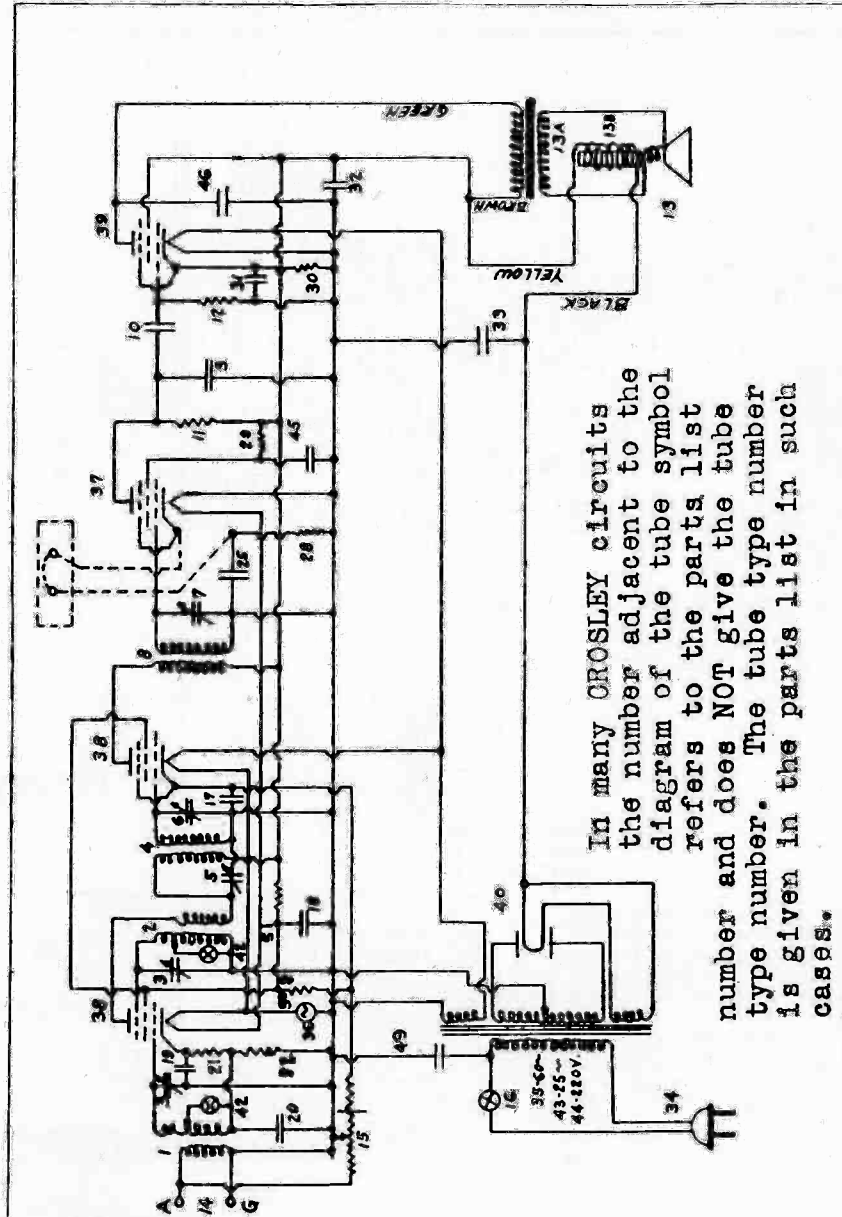
- 1 G7-24995 ANTENNA COIL
- 2 G2-2596B INTERSTAGE COIL
- 3 G14-24996 OSCILLATOR COIL
- 4 G5-24065 1ST I.F. TRANS.
- 5 G10-24065 2ND I.F. TRANS.
- 6 C-6442B TUNING CONDENSER
- 7 G3-25948 I.F. TUNING COND.
- 8 W-27204 .02 MFD.
- 9 W-27204 .02 MFD.
- 10 W-25438 .1 MFD.
- 11 W-25438 .1 MFD.
- 12 W-25937 275 Ω
- 13 W-21964 165 Ω
- 14 W-23785 500,000 Ω
- 15 W-21454 1 MEGOHM
- 16 W-23013 2000 Ω
- 17 W-22514 750 Ω
- 18 W-21455 300,000 Ω
- 19 W-27540 .0005 MFD.
- 20
- 21 G3-25445 COUPLING CHOKE
- 22 W-21454 1- MEGOHM
- 23 W-23785 500,000 Ω
- 24 W-26152 .00015 MFD.
- 25 W-26152 .0001 MFD.
- 26 W-26578 5- MEGOHM
- 27 W-26577 3- MEGOHM
- 28 W-27203 .02 MFD.
- 29 W-28287A LEVEL CONT. 5000 Ω
- 30 W-25666 AUDIO LEVEL CONT. 3-1/2 MEG
- 31 W-26577 3- MEGOHM
- 32 W-23403 150,000 Ω
- 33 W-2556 { .25 MFD.
- 34 W-2556 { .25 MFD.
- 35 W-27120 { 8500 Ω
- 36 W-21237 { 25,000 Ω
- 37 W-21875 { 60,000 Ω
- 38 W-21875 { 100,000 Ω
- 39 W-23142 .02 MFD.
- 40 W-23613 .05 MFD.
- 41 W-22873 220 Ω
- 42 W-21455 300,000 Ω
- 43 W-25857A { 8 MFD. 25V
- 44 W-25857A { 8 MFD. 200V
- 45 W-28340 { 8 MFD. 350V
- 46 W-28340 { 12 MFD. 475V
- 47
- 48
- 49 W-25594A TONE CONT. 80,000 Ω
- 50 W-25594A LINE SWITCH
- 51 B-21491A CABLE & PLUG
- 52 W-22221 2-5V DIAL LAMP
- 53 LW-20264 ANT.-GND TERMINAL
- 54 G19-25669 POWER TRANS. 60W
- 55 27869 337.4M SPEAKER

- 60 G6-27456 -58 SOCKET
- 61 G18-27456 -56 SOCKET
- 62 G6-27456 -80 SOCKET
- 63 G20-25669 POWER TRANS. 25W
- 64 G21-25669 POWER TRANS. 220V
- 65 W-21454 1- MEGOHM
- 66 W-28468A 8 MFD. 250V
- 67 W-28468A 12 MFD. 475V
- 68 W-28471 8500 Ω
- 69 W-28471 25,000 Ω
- 70 27870 337.5M SPEAKER
- 71 643-27456 2A.5 SOCKET
- 72 W-28860 .008 MFD.
- 73 W-28860 .15 MFD.

| RECORD OF CHANGES  |   |          | Checked by |
|--|---|----------|------------|
| A  | ITEM 62 ADDED                             | 12-29-32 | 1109       |
| B  | ITEMS 63 AND 64 ADDED                     | 1-6-33   | 1200       |
| C  | ITEMS 65 AND 66 ADDED                     | 1-7-33   | 1202       |
| D  | ITEM 58 REPLACED BY ITEM 68               | 1-7-33   | 1203       |
| E  | ITEMS 45 & 46 REPLACED WITH ITEMS 63 & 70 | 1-7-33   | 1204       |
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| THE CROSLY RADIO CORPORATION, CINCINNATI, OHIO   |   |          |            |
| <b>160 WIRING DIAGRAM</b>  |   |          |            |



Model 167



In many CROSLEY circuits the number adjacent to the diagram of the tube symbol refers to the parts list number and does NOT give the tube type number. The tube type number is given in the parts list in such cases.

|    |          |                      |
|----|----------|----------------------|
| 1  | 60-24995 | ANTENNA COIL         |
| 2  | W-24396  | OSCILLATOR COIL      |
| 3  | L-27426  | VARIABLE CONDENSER   |
| 4  | W-26444  | 1ST I.F. TRANS.      |
| 5  | W-25948  | DET. & 1ST AF TRANS. |
| 6  | W-25008A | 2ND I.F. TRANS.      |
| 7  | W-27549  | PUSH-BUTTON          |
| 8  | W-25445  | VOLUME CONTROL       |
| 9  | W-25537A | 2ND AF TRANS.        |
| 10 | W-21455  | 3RD AF TRANS.        |
| 11 | W-23785  | 500,000 Ω            |
| 12 | W-27610  | 335 Ω SPEAKER        |
| 13 | W-20264  | ANT. GND. TERN.      |
| 14 | W-26573B | VOLUME CONTROL       |
| 15 | W-25438  | TONE SWITCH          |
| 16 | W-25438  | 0.1 MFD. 200V.       |
| 17 | W-25438  | 0.1 MFD. 200V.       |
| 18 | W-25438  | 0.1 MFD. 200V.       |
| 19 | W-25438  | 0.1 MFD. 200V.       |
| 20 | W-25438  | 0.1 MFD. 200V.       |
| 21 | W-25937  | 875 Ω                |
| 22 |          |                      |
| 23 |          |                      |
| 24 | W-24784  | 0.25 MFD. 200V.      |
| 25 | W-24784  | 0.25 MFD. 200V.      |
| 26 | W-24784  | 0.25 MFD. 200V.      |
| 27 | W-24784  | 0.25 MFD. 200V.      |
| 28 | W-21455  | 40,000 Ω             |
| 29 | W-26577  | 3 MEG.               |
| 30 | W-23907  | 750 Ω                |
| 31 | W-27488  | 8 MFD. 25V.          |
| 32 | W-23701B | 6 MFD. 200V.         |
| 33 | W-2491A  | 7 MFD. 440V.         |
| 34 | W-2491A  | CARD & PLUG          |
| 35 | W-23559  | POWER TRANS. (60-)   |
| 36 | W-4099A  | 6V BULLIGHT          |
| 37 | W-27456  | -57 SOCKET           |
| 38 | W-27456  | -58 SOCKET           |
| 39 | W-27456  | -58 SOCKET           |
| 40 | W-27456  | -80 SOCKET           |
| 41 | W-27456  | -80 SOCKET           |
| 42 | W-28913  | WAVE CHANGE SWITCH   |
| 43 | W-23559  | POWER TRANS. (60-)   |
| 44 | W-23559  | POWER TRANS. (200V.) |
| 45 | W-23559  | POWER TRANS. (200V.) |
| 46 | W-29089  | 0.015 MFD. 400V.     |

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I.F. 456 KC.

RECORD OF CHANGES

|      |   |
|------|---|
| Item | Change                                    |
| A    | ITEMS 66 & 67 REPLACED WITH ITEMS 65 & 64 |
| B    | ITEMS 15 & 16 ARE NOW W-26577 & W-23907   |
| C    | ITEMS 2 & 3 ARE NOW W-21455 & W-26577     |
| D    | ITEM 41 REPLACED BY ITEM 43               |

THE CROSLEY RADIO CORPORATION, CINCINNATI, OHIO  
 WAVE-CHANGING  
 SET WIRING DIAGRAM  
 Schaefer No. B-28932



# MANUAL OF MOST-OFTEN-NEEDED RADIO DIAGRAMS

The Crosley Radio Corporation, Cincinnati, Ohio

## Model 168

### Specifications

Model 168 is a seven tube dual band super-heterodyne designed for operation from A.C. electric circuits. The intermediate frequency is 181.5 Kc.

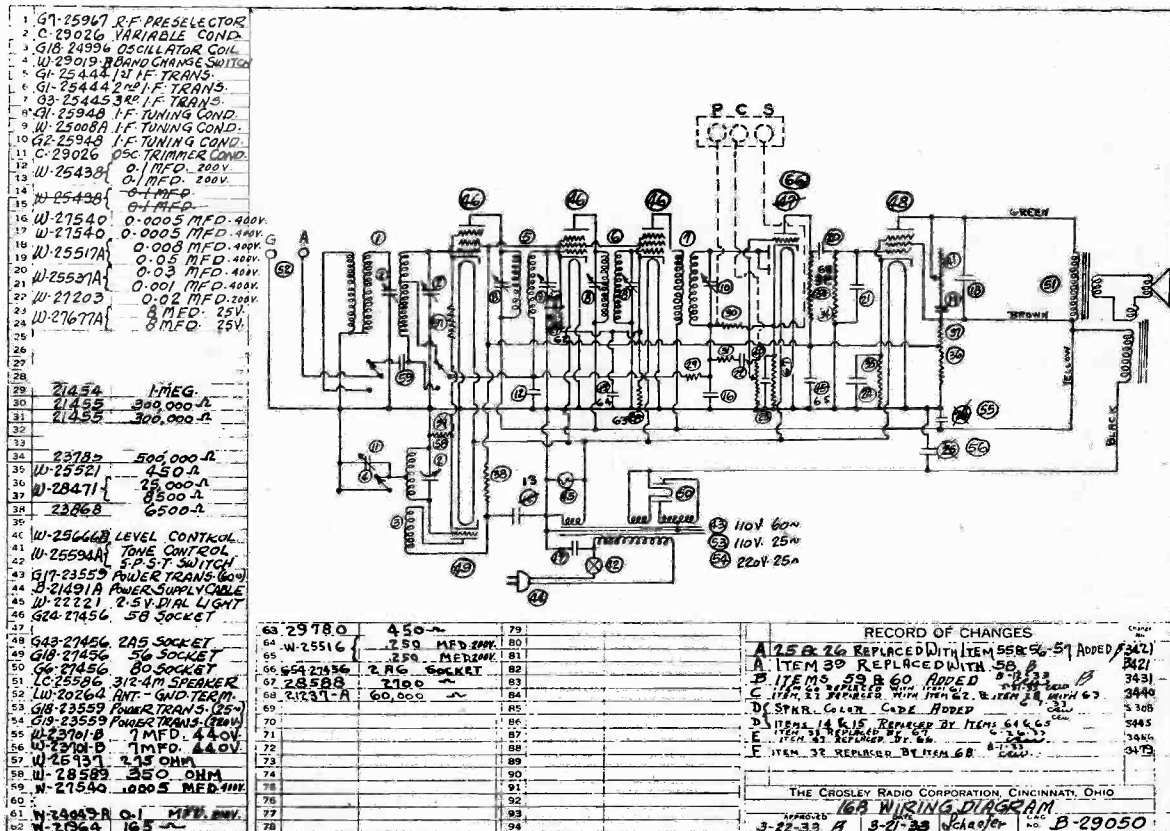
### Tubes and Voltage Limits

The following are the tubes and voltages

measured with the receiver in operating condition but with no signal to the antenna circuit. Line voltage should be 117.5 volts (235 volts for 220 volt receivers). All voltages, except filament, are measured from tube contact to chassis with a 500 volt D.C. voltmeter (1000 ohms per volt). Filament voltages are measured with a low range A.C. voltmeter.

| Tube | Position                     | Plate | Screen Grid | Cathode | Suppressor Grid | Filament |
|------|------------------------------|-------|-------------|---------|-----------------|----------|
| 56   | Oscillator                   | 66    |             | 6.5     |                 | 2.5      |
| 58   | Modulator                    | 270   | 122         | 8.0     | 8.0             | 2.5      |
| 58   | I. F. Amplifier              | 270   | 122         | 8.5     | 8.5             | 2.5      |
| 58   | I. F. Amplifier              | 270   | 122         | 7.0     | 7.0             | 2.5      |
| 2A6  | Detector and A. F. Amplifier | 231   |             | 2.0     |                 | 2.5      |
| 2A5  | Output                       | 257   | 270         | 18.0    |                 | 2.5      |
| 80   | Rectifier                    | 380   |             |         |                 | 4.9      |

Voltage limits are plus or minus 10% of values given.



# MANUAL OF MOST-OFTEN-NEEDED RADIO DIAGRAMS

The Crosley Radio Corporation, Cincinnati, Ohio

## Model 169

### Specifications

Model 169 is a four tube dual band super-heterodyne designed for operation from A.C. electric circuits. The intermediate frequency is 456 Kc.

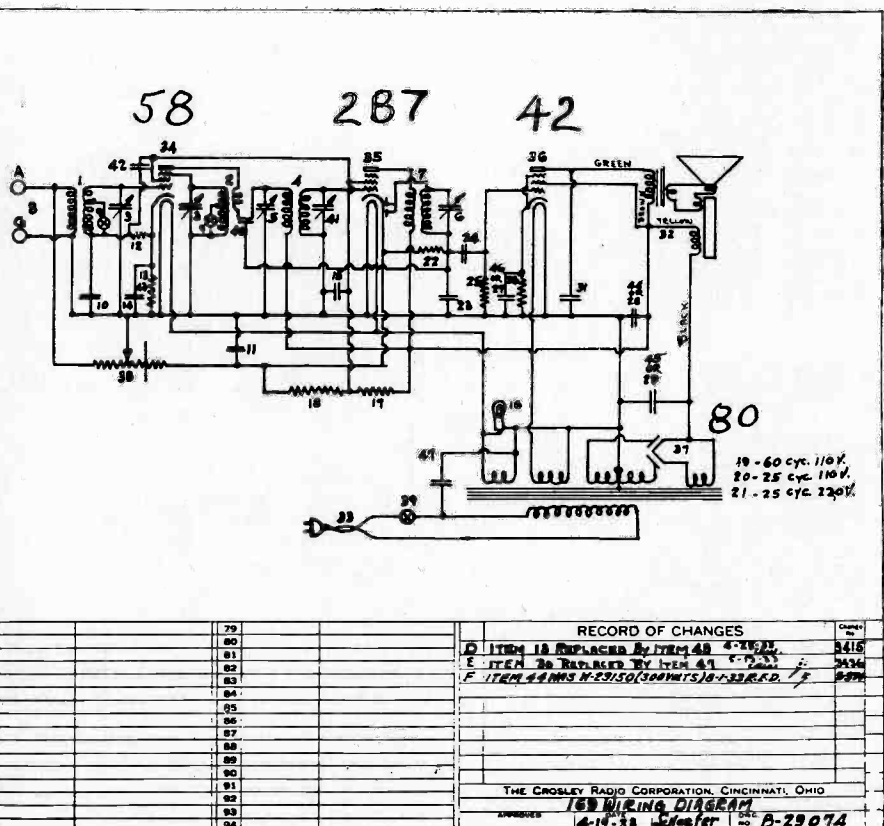
### Tubes and Voltage Limits

The following are the tubes and voltages measured with the receiver in operating con-

dition but with no signal to the antenna circuit, with a line voltage of 117.5 volts (235 volts for 220 volt receivers). All voltages, except filament, are measured with a 500 volt D.C. voltmeter (1000 ohms per volt) from tube contact to chassis. Filament voltages are measured with a low range A.C. voltmeter.

| Tube | Position                     | Plate | Screen Grid | Cathode | Suppressor Grid | Filament |
|------|------------------------------|-------|-------------|---------|-----------------|----------|
| 58   | Oscillator-Modulator         | 188   | 88          | 28      | 0               | 2.5      |
| 2B7  | I. F. Amplifier and Detector | 188   | 88          | 2       |                 | 2.5      |
| 42   | Output                       | 178   | 188         | 14.5    |                 | 2.5      |
| 80   | Rectifier                    | 322   |             |         |                 | 4.9      |

Voltage limits are plus or minus 10% of values given.





# MANUAL OF MOST-OFTEN-NEEDED RADIO DIAGRAMS

The Crosley Radio Corporation, Cincinnati, Ohio

## Model 171

### Specifications

Model 171 is a twelve tube dual band superheterodyne designed for operation from A.C. electric circuits. The intermediate frequency is 181.5 Kc.

### Voltages and Tube Limits

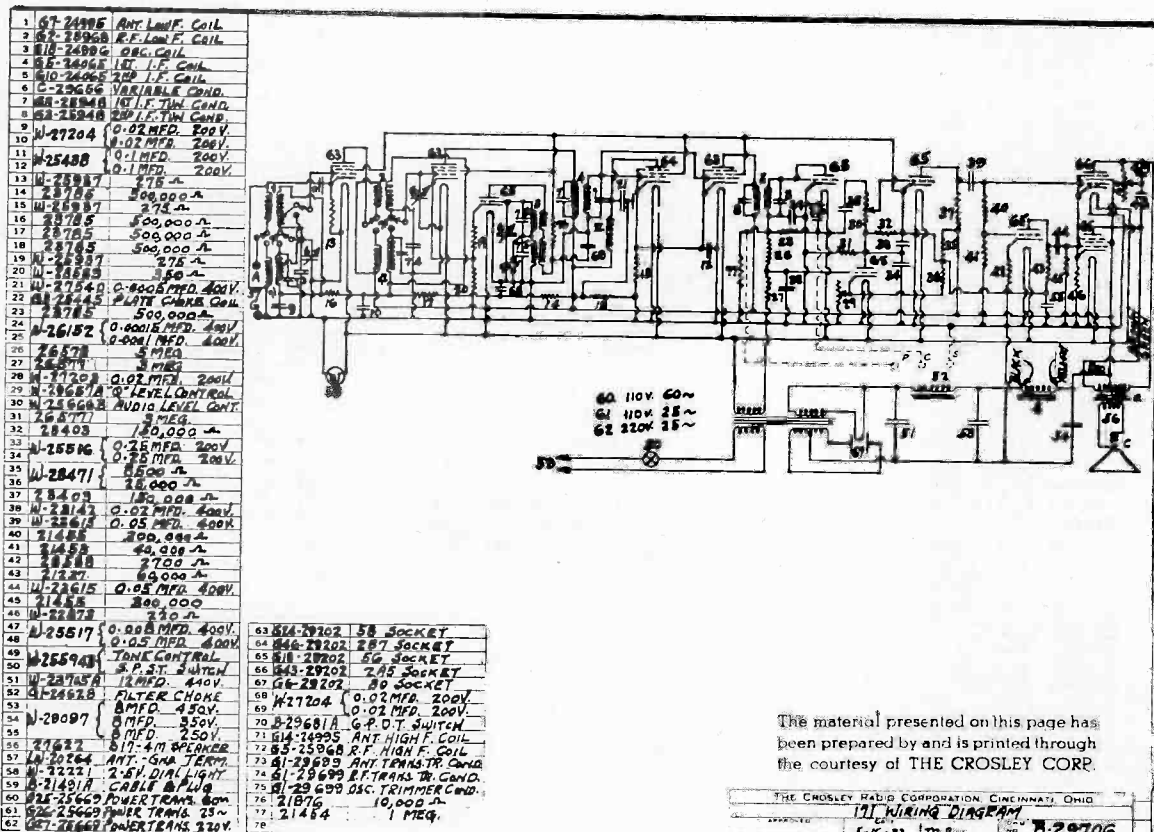
The following are the tubes and voltages measured with the receiver in operating con-

dition but with no signal to the antenna circuit, and with a line voltage of 117.5 volts (235 volts for 220 volt receivers). All voltages, except filament are measured with a 500 volt D.C. voltmeter (1000 ohms per volt) from tube contact to chassis. Filament voltages are measured with a low range A.C. voltmeter.

| Tube  | Position        | Plate | Screen Grid | Cathode | Suppressor Grid | Filament |
|-------|-----------------|-------|-------------|---------|-----------------|----------|
| 58    | R. F. Amplifier | 267   | 115         | 3.0     | 3.0             | 2.5      |
| 56    | Oscillator      | 60    |             | 7.0     |                 | 2.5      |
| 58    | Modulator       | 267   | 115         | 5.5     | 5.5             | 2.5      |
| 58    | I. F. Amplifier | 267   | 115         | 4.5     | 4.5             | 2.5      |
| 2B7   | A. V. C. Tube   | 267   | 115         | 4.5     | 4.5             | 2.5      |
| 56    | QAVC Tube       | 70    |             | 0-20.0* |                 | 2.5      |
| 56    | Detector        | 0     |             | 0       |                 | 2.5      |
| 56    | Phase Shifter   | 58    |             | 2.5     |                 | 2.5      |
| 56    | A. F. Amplifier | 170   |             | 115     |                 | 2.5      |
| 2-2A5 | Output          | 260   | 267         | 17.5    |                 | 2.5      |
| 80    | Rectifier       | 355   |             |         |                 | 4.9      |

Voltage limits are plus or minus 10% of values given.

\*Voltage depends on position of "Q" control.

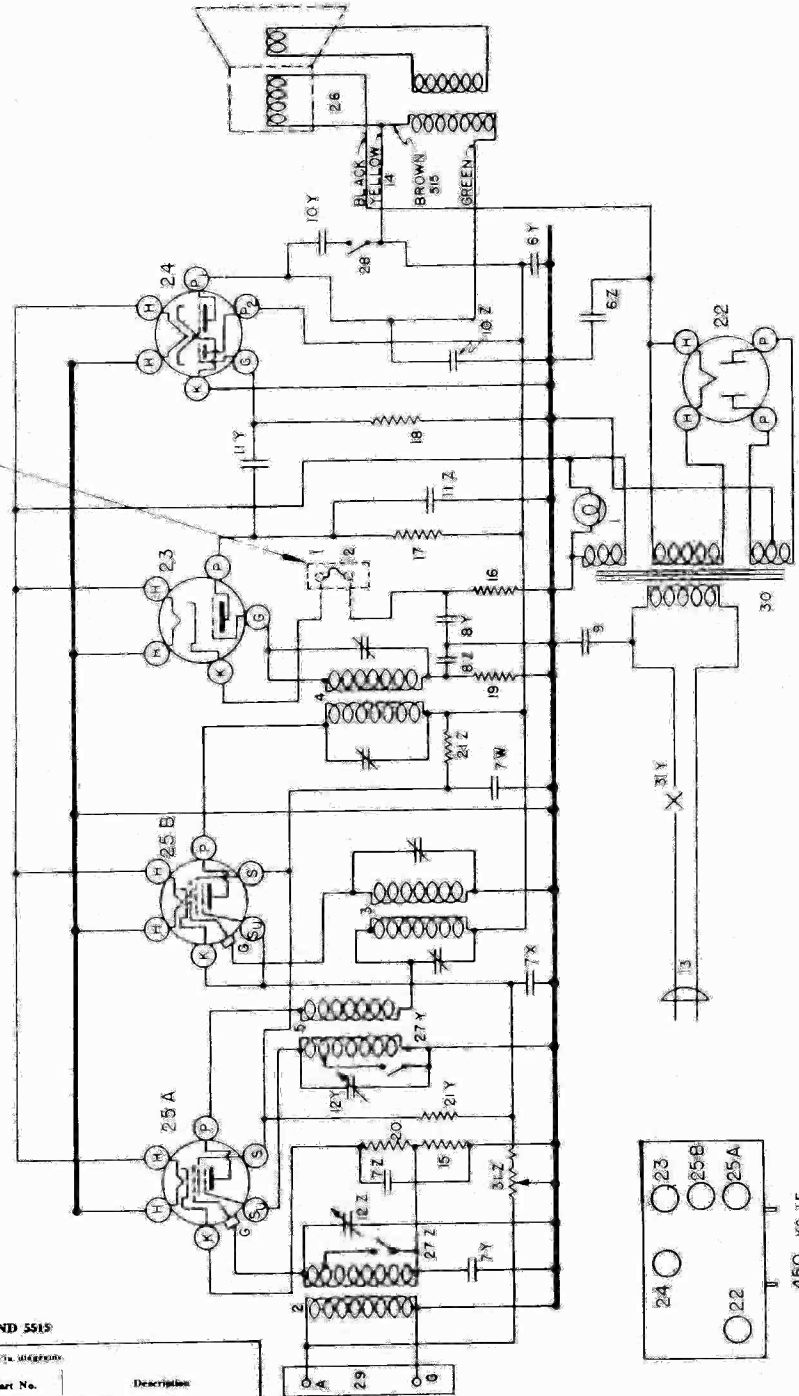


# MANUAL OF MOST-OFTEN-NEEDED RADIO DIAGRAMS

## IMPORTANT NOTICE

In this and many other CROSLLEY circuits, the number-figure adjacent to the schematic of the tube symbol where the refers to this part number in the parts list where the actual tube type number is stated.

NOTE: TERMINALS 1 & 2 TO BE STRAPPED TOGETHER WHEN PHONO ADAPTER IS NOT IN USE



WIRING DIAGRAM OF MODELS 515 AND 5515

### PARTS LIST—MODELS 515 AND 5515

Figures in star return refer to specifications in Appendix

| Item No. | Part No.  | Description                      | Item No. | Part No.  | Description                       |                |
|----------|-----------|----------------------------------|----------|-----------|-----------------------------------|----------------|
| 1        | C4—27134  | Dial Light Socket Assembly       | 80       | W—25937   | Resistor, 275 Ohms Flex           |                |
| 2        | C12—32700 | Grid Ant.                        | 21Z      | W—35963   | Resistor, 8,500 Ohms              |                |
| 3        | C48—32808 | 1st I. F. Trans.                 | 21Y      | W—36007   | Resistor, 25,000 Ohms             |                |
| 4        | C49—32804 | 2nd I. F. Trans.                 | G6       | G6—28807  | Socket, 80                        |                |
| 5        | C47—32802 | Detector                         | G80      | G80—28807 | Socket, 76                        |                |
| 6Y       | W—36719   | Condenser, 8 Mfd., 450 Volts.    | D90      | D90—28807 | Socket, 88S                       |                |
| 7Z       | W—28621   | Condenser, 8 Mfd., 450 Volts.    | G75      | G75—28807 | Socket, 6D6                       |                |
| 8Y       | W—28623   | Condenser, 0.02 Mfd., 300 Volt.  | W        | W—35772   | Tube Shield, Half                 |                |
| 9        | W—28622   | Condenser, 0.02 Mfd., 300 Volt.  | W        | W—35773   | Tube Shield Cap                   |                |
| 10Z      | W—30806   | Condenser, 0.01 Mfd., 400 Volt.  | W        | W—35774   | Tube Shield Base                  |                |
| 11Y      | W—35011   | Condenser, 0.006 Mfd., 400 Volt. | W        | W—219-8L9 | Speaker                           |                |
| 12       | W—25537A  | Condenser, 0.03 Mfd., 400 Volt.  | 22Z      | W—36753A  | Band Change Switch                |                |
| 12Z      | G16—33001 | Variable Tuning Condenser Gang   | 27Y      | W—36784A  | Tone Control Switch               |                |
| 13       | —36148    | Dial Assembly complete           | G1       | G1—26719  | Ant. Grid Terminal                |                |
| 14       | —3696A    | Card—Power Supply                | G5       | G5—28500  | Power Transformer, 60 Cy., 110 V. |                |
| 15       | —31784    | Speaker Cable (50 ft. only)      | G6       | G6—28500  | Power Transformer, 25 Cy., 110 V. |                |
| 16       | —2127A    | Resistor, 4,500 Ohms             | G7       | G7—28500  | Power Transformer, 25 Cy., 220 V. |                |
| 17       | —21455    | Resistor, 60,000 Ohms            | 31Z      | —37343    | Volume Control                    |                |
| 18       | —21785    | Resistor, 300,000 Ohms           | 31Y      | —35917    | On-Off Switch                     |                |
| 19       | —21454    | Resistor, 1 Megohm               | B        | —35917    | Earcutcheon                       |                |
|          |           |                                  |          | —37158    | Dial Glass                        |                |
|          |           |                                  |          | —37156    | Dial Pointer                      |                |
|          |           |                                  |          | —37157    | Pointer Screw                     |                |
|          |           |                                  |          | W         | —31565B                           | Knob (2) large |
|          |           |                                  |          | W         | —36355                            | Knob (2) small |

Crosley Radio

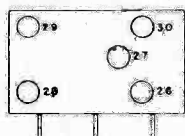
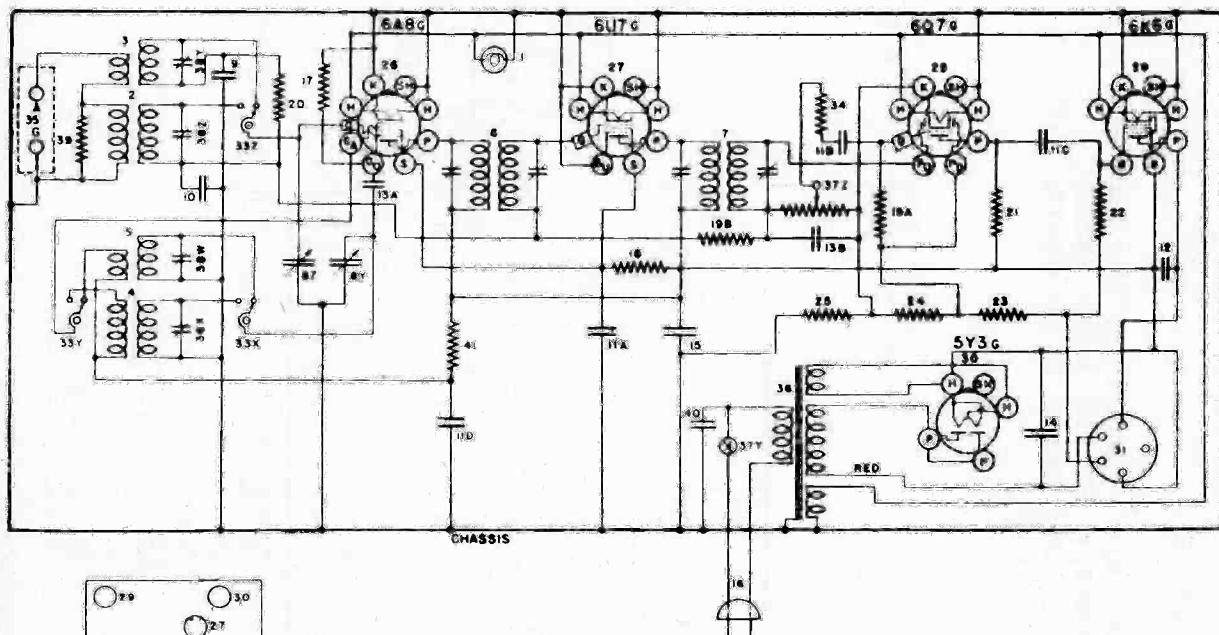
I.F. 450 KC.

450 KC. I.F.

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# MANUAL OF MOST-OFTEN-NEEDED RADIO DIAGRAMS



MODELS 517 B 547 455 KC 1F

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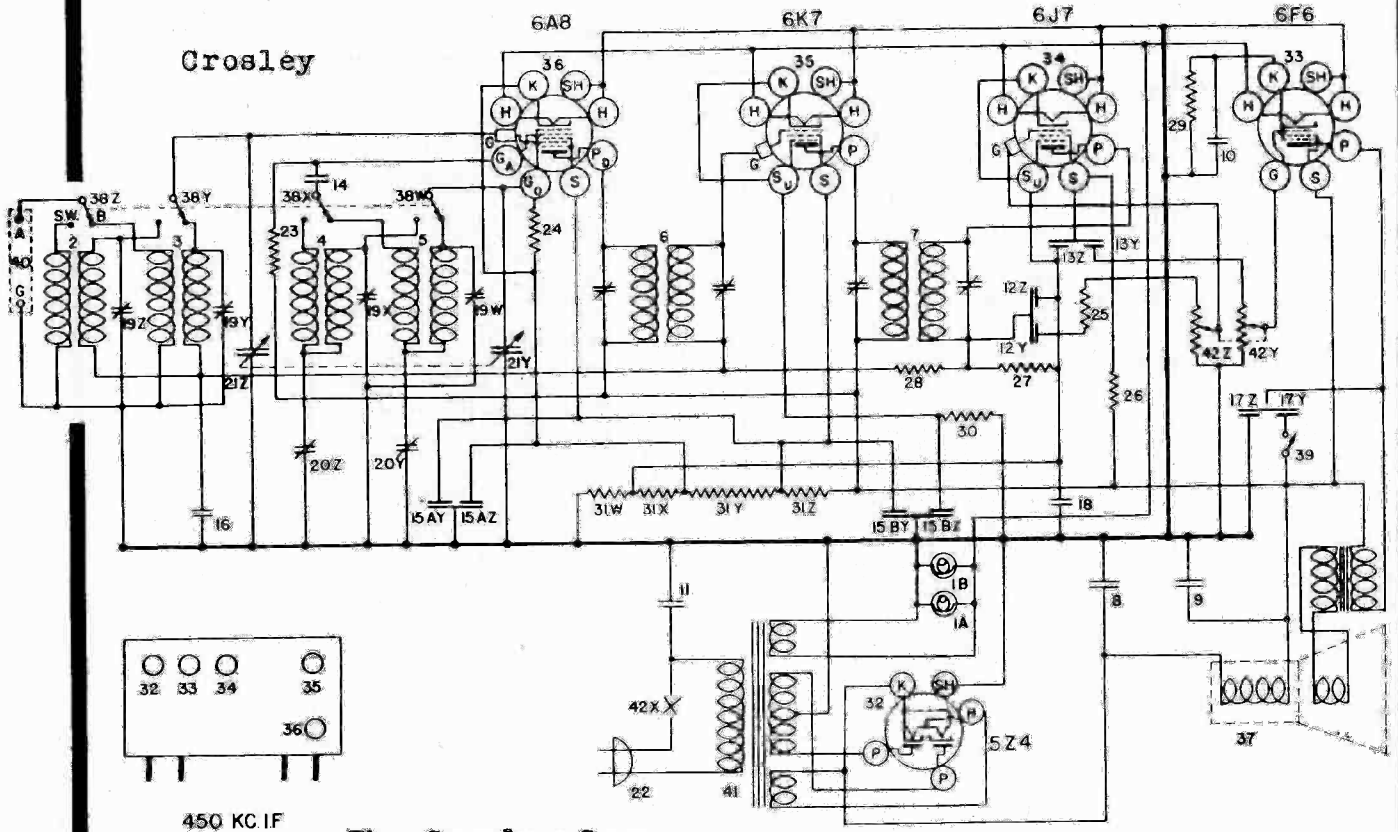
WIRING DIAGRAM—MODEL 517 AND 547

## PARTS LIST — MODEL 517 AND 547

Figures in first column refer to parts in Diagrams.

| Item No. | Part No.   | Description                          | Item No. | Part No.    | Description                                  |
|----------|------------|--------------------------------------|----------|-------------|--|
| 1        | W -43567   | Bulb—Dial Light                      | 30       | G173-36400  | Socket Type 5Y3                              |
|          | W -43568   | Light Bracket                        |          | W -40911    | Tube Shield                                  |
| 2        | G132-32000 | Ant. Coil, B. C.                     | 31       | G103-28807  | Socket—Speaker                               |
| 3        | G133-32000 | Ant. Coil, H. F.                     | 32       | 257BP11"B"  | Speaker, Spec. No. 51-A-5<br>(Cab. 6K & 7KA) |
| 4        | G132-32002 | Osc. Coil, B. C.                     |          | -42927      | Cone for 257BP11 "B" Speaker                 |
| 5        | G133-32002 | Osc. Coil, H. F.                     |          | -41473      | O. P. Trans. for 257BP11 "B" Spkr            |
| 6        | G136-32004 | 1st I-F Assembly                     |          | -43539      | Cardb'd Ring for 257BP11 "B" Spk             |
| 7        | G137-32004 | 2nd I-F Assembly                     |          | 257BP18"B"  | Speaker, Spec. No. 51-A-8<br>(Cab. 7H & 7HA) |
| 8        | G33-33001  | 2 Sect. Var. Tuning Cond. (547 only) |          | -42927      | Cone for 257BP18 "B" Speaker                 |
| 8        | G31-33001  | 2 Sect. Var. Tuning Cond. (517 only) |          | -43986      | O. P. Trans. for 257BP18 "B" Spkr            |
|          | B -43551   | Dial Face (517 only)                 |          | -43539      | Cardb'd Ring for 257BP18 "B" Spk             |
|          | B -43729   | Dial Face (Tel. Tun. Dial only)      |          | -40405      | Cone for 462CP11 "M" Speaker                 |
|          | W -43694   | Disc—Center of Dial                  |          | 462CP11 "M" | Spkr., Spec. No. 1-D-971 (Cab. 6FF)          |
|          | W -43693   | Mask Ring (Dial)                     |          | -43989      | Cone for 462CP11 "M" Spkr                    |
|          | W -43778   | Dial Support Ring                    |          | -43988      | O. P. Trans. for 462CP11 "M" Spkr            |
|          | B -43544   | Dial Glass Support                   |          | 464BP15 "M" | Field Coil for 462CP11 "M" Spkr              |
|          | G1 -43564  | Pulley Assembly                      |          | -43993      | Spkr., Spec. No. 1-D-1017 (Cab. 7M)          |
|          | W -43548   | Drive Shaft                          |          | -43994      | Cone for 464BP15 "M" Speaker                 |
|          | W -43549   | Retaining Ring                       |          | -43995      | O. P. Trans. for 464BP15 "M" Spkr            |
|          | W -43550   | Pointer (517 only)                   |          | 43448       | Switch Band Selector                         |
|          | W -43542A  | Drive Shaft Bracket                  |          | -36761      | Resistor 40,000 Ohm 1/4 W.                   |
|          | W -43561   | Drive Cable Spring                   | 33       | W -26719    | Ant. and Ground Terminal Board               |
|          | W -41582   | Drive Cable                          | 35       | G1 -43479   | Power Trans. 110 V. 60 Cy.                   |
| 9        | G12-34002  | Condenser .0005 Mf. H.F. Osc. Ser.   | 36       | W -43480    | Power Trans. 110 V. 25 Cy.                   |
| 10       | W -36541   | Condenser .02 Mf. 160 V.             |          | W -43481    | Power Trans. 220 V. 25 Cy.                   |
| 11 ABCD  | W -29621   | Condenser .02 Mf. 200 V.             |          | 37Z         | Volume Control, 1 Megohm                     |
| 12       | W -34647   | Condenser .01 Mf. 400 V.             |          | 37Y         | Line Switch                                  |
| 13 AB    | G1 -34002  | Condenser .00025 Mf. Molded          |          | 38Z         | Trimmer Cond. B. C. Ant.                     |
| 14       | W -41081   | Condenser 16 Mf. 250 V.              |          | 38Y         | Trimmer Cond. H. F. Ant.                     |
| 15       | W -43450   | Condenser 16 Mf. 200 V.              |          | 38X         | Trimmer Cond. B. C. Osc.                     |
| 16       | B -33906A  | Power Cord and Plug                  |          | 38W         | Trimmer Cond. H. F. Osc.                     |
| 17       | -21237A    | Resistor 60,000 Ohm 1/4 W.           |          | 39          | Resistor 20,000 Ohm 1/4 W.                   |
| 18       | -24814     | Resistor 7,000 Ohm 1/4 W.            |          | W -30605    | Condenser .01 Mf. 400 V.                     |
| 19 AB    | -36688     | Resistor 3 Megohm 1/4 W.             |          | W -30137    | Resistor 3,500 Ohm 1/4 W.                    |
| 20       | -21455     | Resistor 300,000 Ohm 1/4 W.          |          | GJ -43724   | Tel. Tun. Escutcheon                         |
| 21       | -35601     | Resistor 300,000 Ohm 1/4 W.          |          | W -43769    | Pointer—Cabinet (547 only)                   |
| 22       | -23785     | Resistor 500,000 Ohm 1/4 W.          |          | W -43554    | Knob (1 required) Small                      |
| 23       | W -28589   | Resistor 350 Ohm 1/4 W. Flex.        |          | W -43625    | Knob (2 required) Large                      |
| 24       | W -33012A  | Resistor 40 Ohm 1/4 W. Flex.         |          | W -43553    | Rubber Mtg. Foot                             |
| 25       | W -24537   | Resistor 60 Ohm 1/4 W. Flex.         |          | W -43552    | Clamp—Speaker Plug                           |
| 26       | G156-36400 | Socket Type 6A8                      |          | W -43726    | Celluloid Disc (547 only)                    |
| 27       | G171-36400 | Socket Type 6U7                      |          |             |  |
| 28       | G160-36400 | Socket Type 6Q7                      |          |             |  |
| 29       | G172-36400 | Socket Type 6K6                      |          |             |  |

# MANUAL OF MOST-OFTEN-NEEDED RADIO DIAGRAMS



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The Crosley Corp.

WIRING DIAGRAMS—MODELS 555 AND 555S

| Item No. | Part No. | Description                            | Item No. | Part No.  | Description                           |
|----------|----------|--|----------|-----------|---------------------------------------|
| 1A       | G6       | —27134 Dial Light Assm.                | 22       | B         | —37354 Dial Face only                 |
| 1B       | G6       | —27134 Dial Light Assm.*               | 23       |           | —33906A A. C. Cord & Plug             |
| 2        | G82      | —32000 Ant. Coil, S. W. E.             | 24       |           | —5370A Resistor, 20,000 Ohm           |
| 3        | G81      | —32000 Ant. Coil, B. C. B.             | 25       |           | —21237 Resistor, 60,000 Ohm           |
| 4        | G65      | —32002 Osc. Coil, S. W. E.             | 26       |           | —21875 Resistor, 100,000 Ohm          |
| 5        | G66      | —32002 Osc. Coil, B. C. B.             | 27       |           | —21455 Resistor, 300,000 Ohm          |
| 6        | G71      | —32004 1st I. F. Assm.                 | 28       |           | —33344 Resistor, 400,000 Ohm          |
| 7        | G72      | —32004 2nd I. F. Assm.                 | 29       | W         | —37245 Resistor, 1.5 Megohm           |
| 8        | W        | —36055 Condenser, 35. Mfd. 400 Volt    | 30       | W         | —25291 Resistor, 500 Ohm 1½ W. (Flex) |
| 9        | W        | —36057 Condenser, 40. Mfd. 300 V.      | 31Z      |           | —28106 Resistor, 500 Ohm ½ W. (Flex)  |
| 10       | W        | —36931 Condenser, 12 Mfd. 25 V.        | 31X      |           | Resistor, 10,000 Ohm Candohm          |
| 11       | W        | —30805 Condenser, 0.01 Mfd. 400 V.     | 31Y      | W         | —37246A Resistor, 25,000 Ohm Candohm  |
| 12Z      | W        | —30322A Condenser, 0.00017 Mfd. 200 V. | 31Z      |           | Resistor, 185. Ohm Candohm            |
| 12Y      | W        | —30322A Condenser, 0.006 Mfd. 200 V.   | 31W      |           | Resistor, 185. Ohm Candohm            |
| 13Z      | W        | —25537A Condenser, 0.001 Mfd. 400 V.   | 32       | G154      | —36400 Socket, 5Z4                    |
| 13Y      | W        | —25537A Condenser, 0.03 Mfd. 400 V.    | 33       | G153      | —36400 Socket, 6F6                    |
| 14       | W        | —23191A Condenser, 0.01 Mfd. 400 V.    | 34       | G157      | —36400 Socket, 6J7                    |
| 15AZ     | W        | —28623 Condenser, 0.02 Mfd. 200 V.     | 35       | G151      | —36400 Socket, 6K7                    |
| 15AY     | W        | —28623 Condenser, 0.02 Mfd. 200 V.     | 36       | G156      | —36400 Socket, 6A8                    |
| 15BZ     | W        | —28623 Condenser, 0.02 Mfd. 200 V.     | 37       | 331-CL-9  | Speaker, (555)                        |
| 15BY     | W        | —28623 Condenser, 0.02 Mfd. 200 V.     |          | 432-CJ-3M | Speaker, (5555) Console               |
| 16       | W        | —27216 Condenser, 0.05 Mfd. 200 V.     |          | G3        | —35696 Speaker Cable (5555)           |
| 17Z      | W        | —35011 Condenser, 0.006 Mfd. 400 V.    | 38W      |           | Band Change Switch                    |
| 17Y      | W        | —35011 Condenser, 0.03 Mfd. 400 V.     | To       |           |                                       |
| 18       | W        | —36541 Condenser, 0.02 Mfd. 160 V.     | 38Z      |           | Tone Control Switch                   |
| 19Z      |          |  | 39       | W         |                                       |
| 19Y      | W        | —37241A 4 Section Trimmer Cond.        | 40       | G1        | —26719 Power Trans. 60 Cy. 110 V.     |
| 19W      |          |  | 41       | G12       | —28500 Power Trans. 25 Cy. 110 V.     |
| 20Z      | G29      | —33006 S. W. Qsc. Series Padder        | 41       | G13       | —28500 Power Trans. 25 Cy. 220 V.     |
| 20Y      | G29      | —33006 B. C. Osc. Series Padder        | 42Z      | G14       | —28500 Volume Control A. F. Grid      |
| 21Z      | G17      | —33001 Var. Tuning Cond. Gang          | 42Y      |           | Volume Control Output Grid            |
| 21Y      |          |  | 42X      |           | On-Off Switch                         |
|          |          | —37353C Dial Assm. Complete            |          |           |                                       |
|          |          | —37158 Dial Glass                      |          |           |                                       |
|          |          | —37156 Dial Pointer                    |          |           |                                       |
|          |          | —37157 Pointer Screw                   |          |           |                                       |

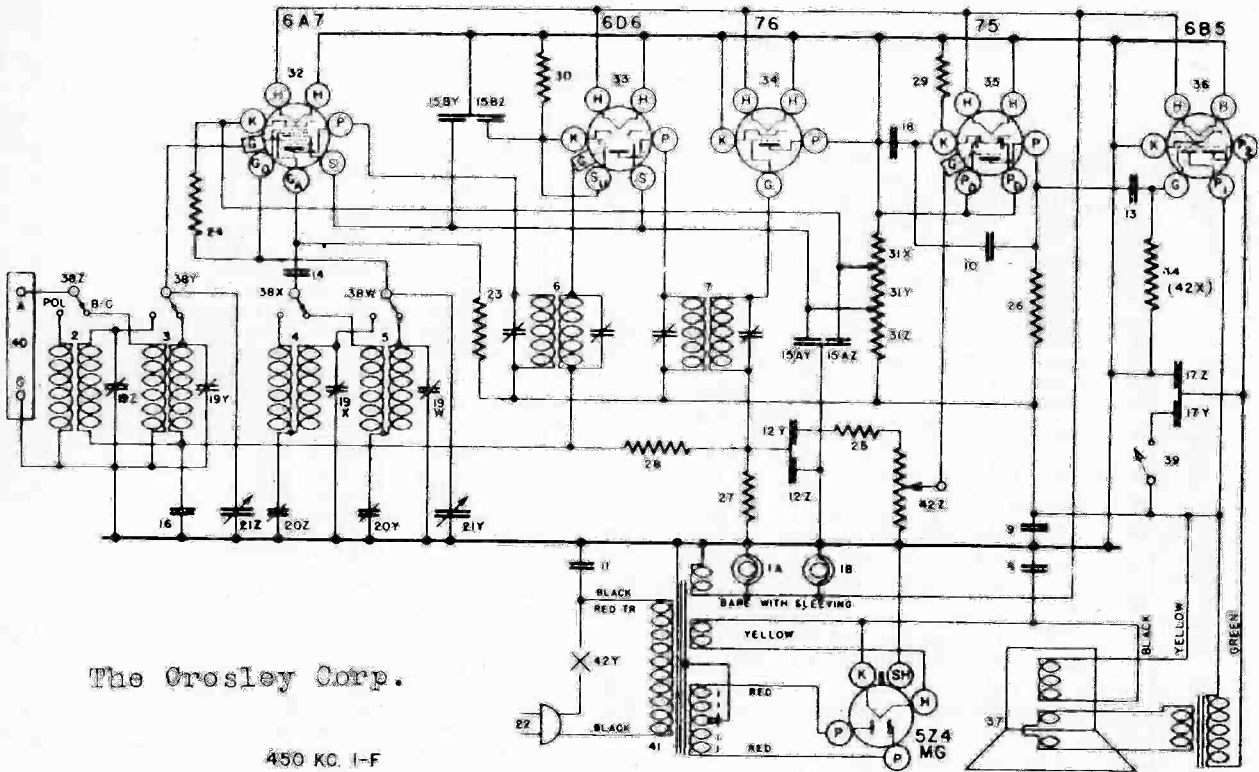
# MANUAL OF MOST-OFTEN-NEEDED RADIO DIAGRAMS

## PARTS LIST—MODELS 666 and 5666

Figures in first column refer to parts in Diagrams.

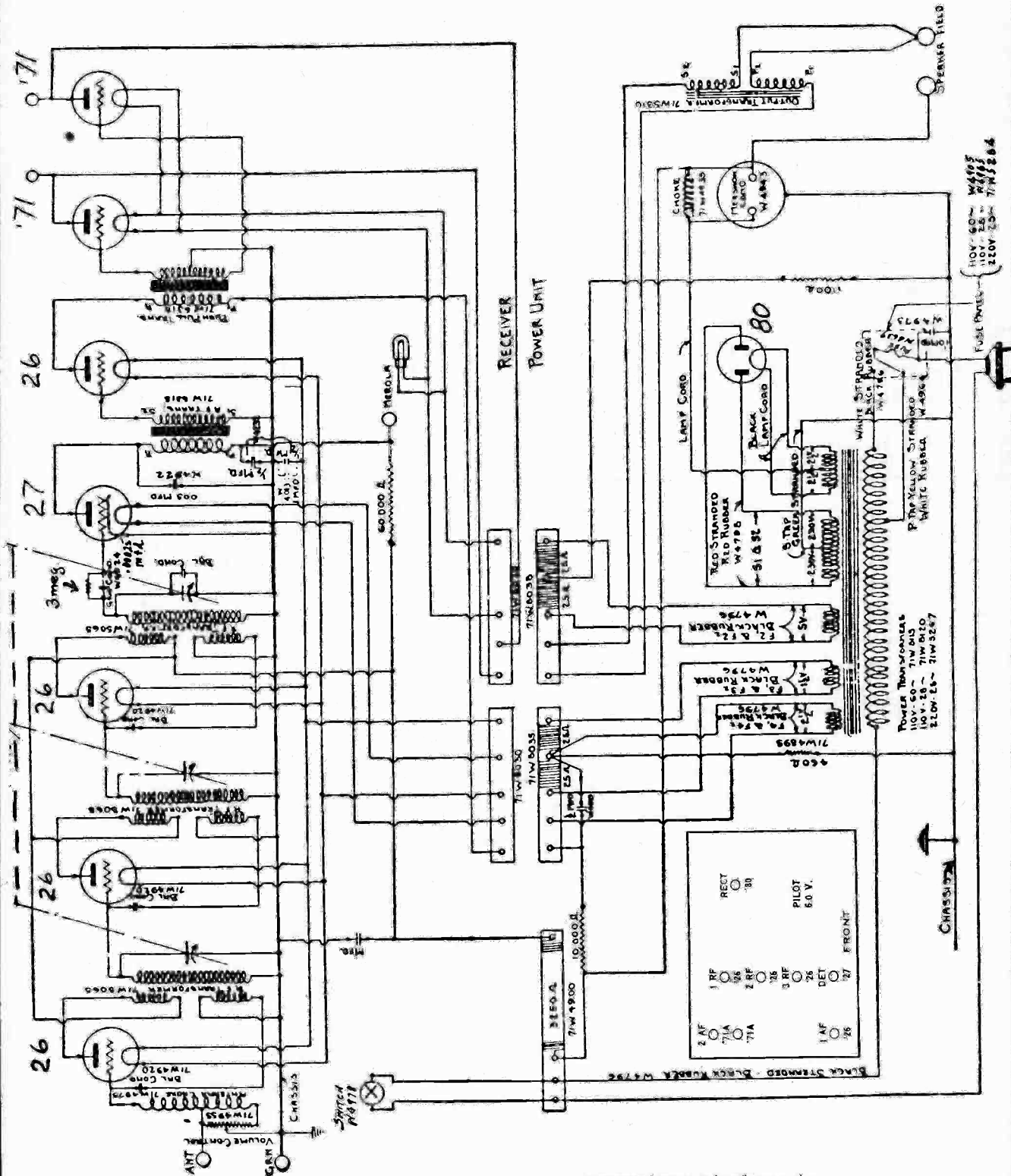
| Item No. | Part No.    | Name                        | Item No. | Part No.   | Name                                |
|----------|-------------|-----------------------------|----------|------------|-------------------------------------|
| 1        | W -37922    | 6-8 V. Bulb, Dial Light     | 25       | -21875     | Resistor, 100,000 Ohm. 1/2 W.       |
| 2        | G3 -37965   | Socket Assy., Dial Light    | 26       | -35929-C   | Resistor, 150,000 Ohm. 1/2 W.       |
| 3        | G82 -32000  | Coil Antenna—2350—7000 Kc.  | 27       | -33344     | Resistor, 400,000 Ohm. 1/2 W.       |
| 4        | G81 -32000  | Coil Antenna—540—1725 Kc.   | 28       | -37245-C   | Resistor, 1.5 Megohm. 1/2 W.        |
| 5        | G 65 -32002 | Coil—2350—7000 Kc. Osc.     | 29       | -36316     | Resistor, 2,700 Ohm. 1/2 W.         |
| 6        | G 66 -32002 | Coil—540—1725 Kc. Osc.      | 30       | W -28106   | Resistor, 500 Ohm. 1/2 W. Flex.     |
| 7        | G118 -32004 | Coil—Assy., 1st I-F.        | 31Z      | -37246     | Resistor, 1,000 Ohm. Candohm        |
| 8        | G 72 -32004 | Coil—Assy., 2nd I-F.        | 31Y      | W -37246   | Resistor, 2,000 Ohm. Candohm        |
| 9        | W -36065    | Cond. 35 Mf. 400 V.         | 31X      | W -37246   | Resistor, 185-185 Ohm. Candohm      |
| 10       | W -36057    | Cond. 40 Mf. 300V.          | 32       | G47 -28807 | Socket—Type 6A7                     |
| 11       | W -32270    | Cond. 001 Mf. 400V.         | 33       | G75 -28807 | Socket—Type 6D6                     |
| 12Z      | W -30805    | Cond. 01 Mf. 400V.          | 34       | G90 -28807 | Socket—Type 76                      |
| 13       | W -30322-A  | Cond. .00017 Mf.            | 35       | G41 -28807 | Socket—Type 75                      |
| 14       | W -22615    | Cond. .006 Mf.              | 36       | G90 -28807 | Socket—Type 6B5                     |
| 15 AZ    | W -23191-A  | Cond. .05 Mf. 400V.         | 37       | W -27981   | Base—Tube Shield                    |
| 16 AY    | W -28623    | Cond. .02 Mf. 400V.         | 38       | W -40911   | Shield—Tube                         |
| 17 BZ    | W -28623    | Cond. .02 Mf. 400V.         | 39       | 244-BL-9   | Speaker, "B" Spec. 50A-2            |
| 18 BY    | W -27216    | Cond. .05 Mf. 200V.         | 40       | -42928     | Cone Assy., For above Speaker       |
| 19 Z     | W -31052    | Cond. .004 Mf. 400V.        | 41       | -41473     | Output Trans., For above Speaker    |
| 20 Y     | W -37732    | Cond. 3 Mf. 160V.           | 42       | 632-CJ-3   | Speaker, "M" Spec. 1-D-610          |
| 21       | W -37241    | Cond. 4 Section Trimmer     | 43       | -42879     | Cone Assy., For above Speaker       |
|          | G 31 -33006 | Cond. Series Trimmers       | 44       | -42880     | Field Coil, For above Speaker       |
|          | G 17 -33001 | Cond. Var. Tuning           | 45       | -42861     | Output Trans., For above Speaker    |
|          | W -41736    | Drive Unit, 8Pt. Disc Assy. | 46       | -37247     | Switch, Band Sel.                   |
|          | W -41897    | Dial-Calibrated Glass       | 47       | W -36184-A | Switch, Tone Con.                   |
|          | W -41737    | Mtg. Brkt. Dial Glass R.H.  | 48       | G1 -26719  | Terminal Board, Ant. & Grid         |
|          | W -41738    | Mtg. Brkt. Dial Glass L.H.  | 49       | -41978     | Transformer, 110V.-60 Cy. Power     |
|          | W -41739    | Drive Unit                  | 50       | -37395     | Volume Control (3 Meg.) 1st A-F     |
|          | W -42617    | Dial (Calibrated)           | 51       | NONE       | Volume Control (1 Meg.) Output Grid |
|          | MG-14-41980 | Dial Glass, Mtg. Brkt. R.H. | 52       | -35601     | Resistor, 300,000 Ohm 1/2 W.        |
|          | W -40798    | Dial Glass, Mtg. Brkt. L.H. | 53       | B -40590   | Output Grid to Grid                 |
|          | W -40797-A  | Dial Glass Retaining Brkt.  | 54       | W -42345   | Escutcheon, (5666)                  |
|          | W -42629    | Pointer—Dial                | 55       | D -28      | Escutcheon Mtg. Screws              |
|          | W -40735    | Shaft—Pointer               | 56       | W -37399   | Knob, (2) V.C. & S.S.               |
|          | W -40909    | Washer (Spring) Shaft       | 57       | W -37341   | Knob, (2) T. C. & B. S. W.          |
|          | W -41611    | Ring Shaft, Retaining       | 58       | -36287     | Volume Control, 3 Meg.*             |
|          | B -42374-A  | Mask (Metal) Dial           | 59       | AC         | Cabinet Model 666                   |
|          | B -33906-A  | Cord & Plug—Power           | 60       | MA         | Cabinet Model 5666                  |
|          | B -5370-A   | Resistor, 20,000 Ohm 1/2 W. |          |            |                                     |
|          | B -35928    | Resistor, 60,000 Ohm 1/2 W. |          |            |                                     |

\*May be used in place of Dual Volume Control.



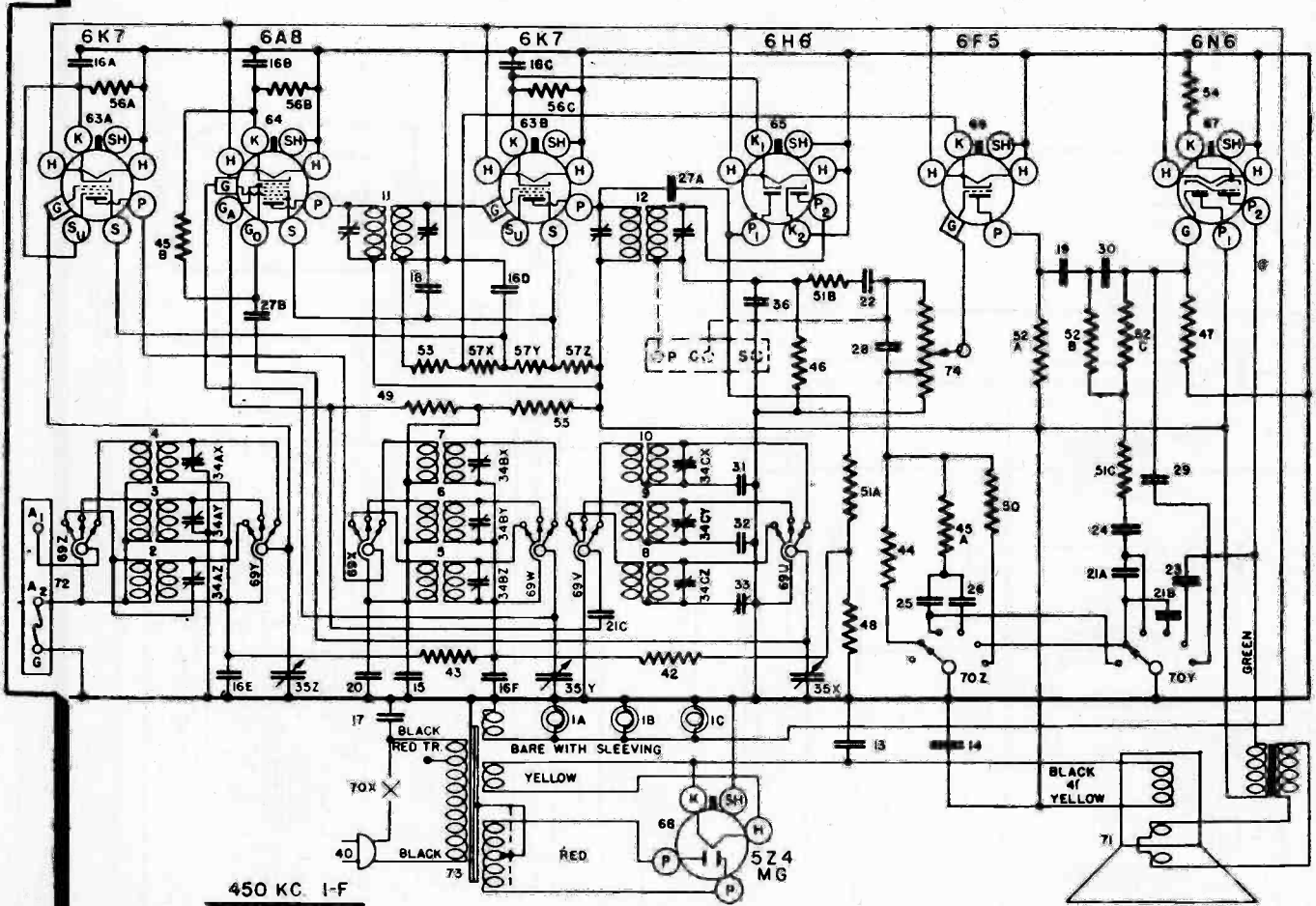
# MANUAL OF MOST-OFTEN-NEEDED RADIO DIAGRAMS

Crosley Model 706



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# MANUAL OF MOST-OFTEN-NEEDED RADIO DIAGRAMS



WIRING DIAGRAM—MODEL 726

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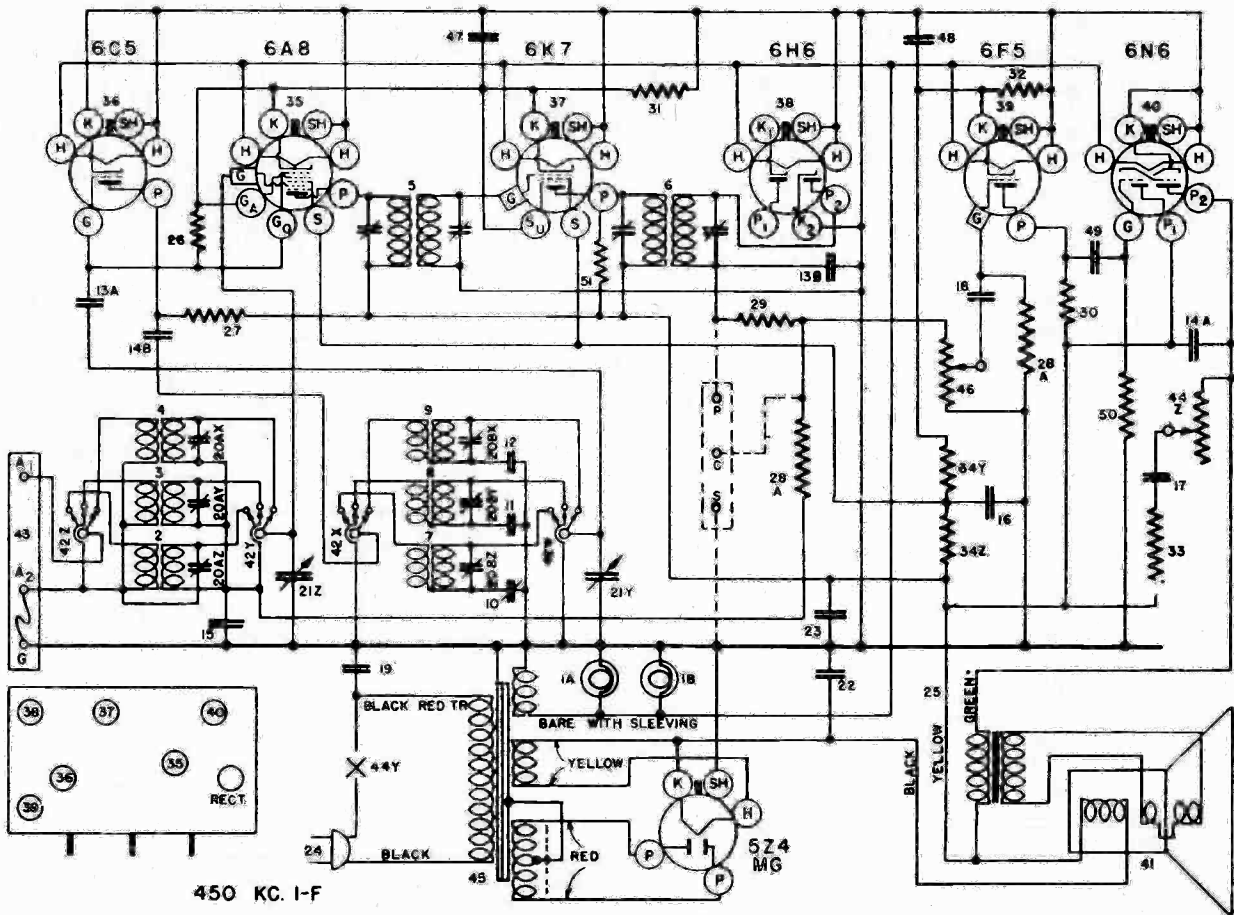
## PARTS LIST—MODEL 726

Figures in first column refer to parts in Diagram.

| Item No. | Part No.   | Description                        | Item No. | Part No.   | Description                       |
|----------|------------|------------------------------------|----------|------------|-----------------------------------|
| 1A/B/C   | W-37922    | Dial Light                         | 44       | -36319     | Resistor, 75,000 Ohm 1/4 W.       |
| 2        | G3-37965   | Socket Assy. Dial Light            | 45       | -35228     | Resistor, 60,000 Ohm 1/4 W.       |
| 3        | G10-32000  | Coil Ant. 540-1800 Kc.             | 46       | -35228     | Resistor, 60,000 Ohm 1/4 W.       |
| 4        | G111-32000 | Coil Ant. 1800-6000 Kc.            | 47       | -36321     | Resistor, 400,000 Ohm 1/4 W.      |
| 5        | G112-32000 | Coil Ant. 6-18 Mc.                 | 47       | -36623     | Resistor, 750,000 Ohm 1/4 W.      |
| 6        | G78-32001  | Coil R. F. 540-1800 Kc.            | 48       | -35222     | Resistor, 600,000 Ohm 1/4 W.      |
| 7        | G89-32001  | Coil R. F. 1800-6000 Kc.           | 49       | -37377     | Resistor, 20,000 Ohm 1 W.         |
| 8        | G90-32001  | Coil R. F. 6-18 Mc.                | 50       | -35229     | Resistor, 150,000 Ohm 1/4 W.      |
| 9        | G115-32002 | Coil Osc. 500-1800 Kc.             | 51A      | -35601     | Resistor, 200,000 Ohm 1/4 W.      |
| 10       | G121-32002 | Coil Osc. 1800-6000 Kc.            | 51B      | -35601     | Resistor, 300,000 Ohm 1/4 W.      |
| 11       | G122-32002 | Coil Osc. 6-18 Mc.                 | 51C      | -35601     | Resistor, 300,000 Ohm 1/4 W.      |
| 12       | G121-32001 | Int. IF. Assy.                     | 52A      | -35600     | Resistor, 200,000 Ohm 1/4 W.      |
| 13       | G120-32004 | Zen. IF. Assy.                     | 52B      | -35930     | Resistor, 200,000 Ohm 1/4 W.      |
| 14       | W-36055    | Condenser, 35Mf. 400V.             | 52C      | -35930     | Resistor, 200,000 Ohm 1/4 W.      |
| 15       | W-36057    | Condenser, 40Mf. 300V.             | 53       | W-30127    | Resistor, 450 Ohm 1/2 W. Flex.    |
| 16       | W-410R1    | Condenser, 16Mf. 250V.             | 54       | W-22012A   | Resistor, 40 Ohm 1/2 W. Flex.     |
| 17       | W-36541    | Condenser, 02Mf. 160V.             | 55       | W-6705     | Resistor, 3500 Ohm 1 W.           |
| 18       | W-36541    | Condenser, 02Mf. 160V.             | 56A      | W-26589    | Resistor, 350 Ohm 1/4 W. Flex.    |
| 19       | W-36541    | Condenser, 01Mf. 400V.             | 56B      | W-26589    | Resistor, 350 Ohm 1/4 W. Flex.    |
| 20       | W-36541    | Condenser, 02Mf. 200V.             | 57       | W-26589    | Resistor, 350 Ohm 1/4 W. Flex.    |
| 21       | W-35139    | Condenser, 01Mf. 400V.             | 57       | W-377R1    | Resistor, 4,000 Ohm 1/2 W. Flex.  |
| 22       | W-35139    | Condenser, 02Mf. 400V.             | 58A      | G151-36400 | Socket Type 6A7                   |
| 23       | W-36231    | Condenser, 02Mf. 200V.             | 58B      | G151-36400 | Socket Type 6K7                   |
| 24       | W-36231    | Condenser, 02Mf. 200V.             | 59       | G155-36400 | Socket Type 6H6                   |
| 25       | W-36231    | Condenser, 02Mf. 200V.             | 60       | G156-36400 | Socket Type 6F5                   |
| 26       | W-36231    | Condenser, 01Mf. 200V.             | 61       | G155-36400 | Socket Type 6N6                   |
| 27       | W-36231    | Condenser, 02Mf. 200V.             | 62       | G154-36400 | Socket Type 5Z4                   |
| 28       | G2-34002   | Condenser, 0001Mf. (Mica)          | 63       | C-40310A   | Band Selector Switch              |
| 29       | G2-34002   | Condenser, 0001Mf. (Mica)          | 70Z      | II-42387C  | Fidelity Switch                   |
| 30       | G2-34002   | Condenser, 0001Mf. (Mica)          | 70Y      | II-42387C  | Fidelity Switch                   |
| 31       | G3-34002   | Condenser, 0001Mf. (Mica)          | 71       | -645C13    | Speaker "M" Spec. 1D640           |
| 32       | G3-34002   | Condenser, 0001Mf. (Mica)          |          | -42863     | Cone Assy. For Above Speaker      |
| 33       | G3-34002   | Condenser, 0001Mf. (Mica)          |          | -40405     | Field Coil                        |
| 34       | W-40769    | Condenser, B. C. Dec. Series Trim. |          | -42865     | Outp. 1 Trans.                    |
| 35       | G32-42250  | Condenser, 2 Section Trimmer       | 72       | G27-26719  | Ant. & Cml. Terminal Assy.        |
|          | G32-42250  | Condenser, 3 Gang Var. Tuning      | 73       | W-42250    | Power Trans. 60 Cy. 110 V.        |
|          | MC35-42250 | Dial Drive Assy.                   | 74       | -42251     | Power Trans. 25 Cy. 110 V.        |
|          | C-42291    | Dial Case (Calibrated)             |          | -42501     | Volume Control 3 Meg. Mixer Parts |
|          | -42300     | Drive Unit                         |          | -43045     | Eucutcheon                        |
|          | W-42307    | Dial Mark (Carthart)               |          | -42043     | Eucutcheon Rubber                 |
|          | W-41144    | Dial Hand, Pointer                 |          | W-42043    | Screws-Eucutcheon Mtg.            |
|          | W-41144    | Dial Hand, Time Low                |          | W-42044    | Lens-Eucutcheon                   |
|          | G1-40468   | Pointer Mfg. Screw                 |          | W-40209    | Emblem                            |
|          | W-33062    | Condenser, 00025Mf. (Mica)         |          | W-42829    | Nut-Emblem Mtg.                   |
|          | W-33070    | Condenser, 001Mf. 400V.            |          | W-36117    | Rubber Mtg. Foot                  |
|          | W-33064    | Power Cord & Plug                  |          | W-37329    | Knob, (2 Req.)                    |
|          | W-33066    | Cable, Speaker                     |          | W-40192B   | Knob, R. S. Sw. (1 Req.)          |
|          | W-37345    | Resistor, Mex. (Hum. 1/2 W.)       |          | W-42480    | Knob, S. S. (1 Req.)              |
|          | W-35600    | Resistor, 100,000 Ohm 1/2 W.       |          | 67NC       | Cabinet                           |



# MANUAL OF MOST-OFTEN-NEEDED RADIO DIAGRAMS



WIRING DIAGRAM—MODEL 716

| Item No. | Part No.    | Name                                  | Item No. | Part No.    | Name  |
|----------|-------------|---------------------------------------|----------|-------------|---|
| -AB      | W -37922    | Bulb 6-8V., Dial Light                | 28A      | -36688      | Resistor, 3 Megohm 1/4 W. (Car.)                        |
|          | G3 -37965   | Socket Assv., Dial Light              | 28B      | -36688      | Resistor, 3 Megohm 1/4 W. (Car.)                        |
| 2        | G120 -32000 | Coil, Ant. (510-1800 Kc.)             | 29       | -21455      | Resistor, 300,000 Ohm 1/4 W. (Car.)                     |
| 3        | G119 -32000 | Coil, Ant. (1800-6000 Kc.)            | 30       | -35930      | Resistor, 200,000 Ohm 1/4 W. (Car.)                     |
| 4        | G121 -32000 | Coil, Ant. (5800-18000 Kc.)           | 31       | W -21964    | Resistor, 165 Ohm 1/4 W. (Flex.)                        |
| 5        | G122 -32004 | Coil Assy. 1st I-F (450Kc.)           | 32       | W -35457    | Resistor, 210 Ohm 1/4 W. (Flex.)                        |
| 6        | G123 -32004 | Coil Assy. 2nd I-F (450Kc.)           | 33       | W -27503    | Resistor, 1400 Ohm 1/4 W. (Flex.)                       |
| 7        | G112 -32002 | Coil, Osc. (540-1800 Kc.)             | 34Z      | W -32301    | Resistor, 10,000 Ohm<br>Resistor, 15,000 Ohm } Candohtn |
| 8        | G111 -32002 | Coil, Osc. (1800-6000 Kc.)            | 34Y      |             |   |
| 9        | G123 -32002 | Coil Cs. (5800-18000 Kc.)             | 35       | G156 -3F400 | Socket Type 6AB   |
| 10       | -40769      | Cond. 400-500 M.m.f.                  | 36       | G152 -36400 | Socket Type 6C5   |
| 11       | G7 -34007   | Cond. 1750 Mmf.                       | 37       | G151 -36400 | Socket Type 6K7   |
| 12       | G 8 -34007  | Cond. 4350 Mmf.                       | 38       | G155 -36400 | Socket Type 6H6   |
| 13A      | G 2 -34002  | Cond., .0001Mf. (Molded)              | 39       | G158 -36400 | Socket Type 6F5   |
| 13B      | G 2 -34002  | Cond., .0001 Mf. (Molded)             | 40       | G165 -36400 | Socket Type 6N6   |
| 14A      | W -35139    | Cond., .004 Mf. 400V. (Tub.)          | 41       | 332-BJ3     | Speaker "M" Spec. 1-D-390                               |
| 14B      | W -35139    | Cond., .004Mf.400V. (Tub.)            |          | -41638      | Cone Assv. for "M" 332BJ3                               |
| 15       | W -35936    | Cond., .05Mf.200V. (Tub.)             |          | -40275      | Field Coil for "M" 332FJ3                               |
| 16       | W -24049-B  | Cond., .1Mf.200V. (Tub.)              |          | -41639      | Output Trans. for "M" 332BJ3                            |
| 17       | W -37873    | Cond., .1Mf. 400V. (Tub.)             | 42       | -40770-A    | Switch, Band Selector                                   |
| 18       | W -30488    | Cond., .02Mf.400 V. (Tub.)            | 43       | G27 -26719  | Terminal Board, Antenna & Grd.                          |
| 19       | W -30805    | Cond., .01 Mf.400V. (Tub.)            | 44Z      |             | Tone Control, 100,000 Ohm                               |
| 20       | W -35951    | Cond.-3 Section Trimmer               | 44Y      |             | Switch, Line  |
| 21       | G21 -33001  | Cond.-2 Section Tuning                | 45       | -41978      | Transformer, 110V. 60 Cy.                               |
|          | B -42142-A  | Dial-Calibrated Glass                 |          | -42149      | Transformer, 110V. 25 Cy.                               |
|          | -42346      | Drive Unit                            |          | -42150      | Transformer, 220V. 25 Cy.                               |
|          | B -42338    | Mask-Metal                            | 46       | -37967      | Volume Control 1Megohm                                  |
|          | -41145      | Pointer-Dial                          | 47       | W -29910-A  | Cond., .25Mf.200V. (Tub.)                               |
|          | W -40486    | Screw, Pointe. Mtg.                   | 48       | W -28F21    | Cond., .02Mf.26J.V. (Tub.)                              |
|          | MG27-42151  | Dial Drive Complete                   | 49       | W -35758    | Cond., .008. 400V. (Tub.)                               |
|          | -41582      | Cable, Drive                          | 50       | -23785      | Resistor, 500,000 Ohm 1/4 W. (Car.)                     |
| 22       | W -36055    | Cond., .35Mf.400V. (Elect.)           |          | W -42345    | Escutcheon  |
| 23       | W -36057    | Cond., .40Mf.300V. (Elect.)           |          | D -28       | Screw Escutcheon Mtg.                                   |
| 24       | B -33906-A  | Cord and Plug, Power                  |          |             |   |
| 25       | G4 -35696   | Speaker Cable                         |          |             |   |
| 26       | -40757      | Resistor, 50,000 Ohm 1/4 W. (Car.)    |          |             |   |
| 27       | W -37987    | Resistor, 15,000 Ohm 1 W (Wire Wound) |          |             |   |

THE CROSLEY CORP.

51





# MANUAL OF MOST-OFTEN-NEEDED RADIO DIAGRAMS

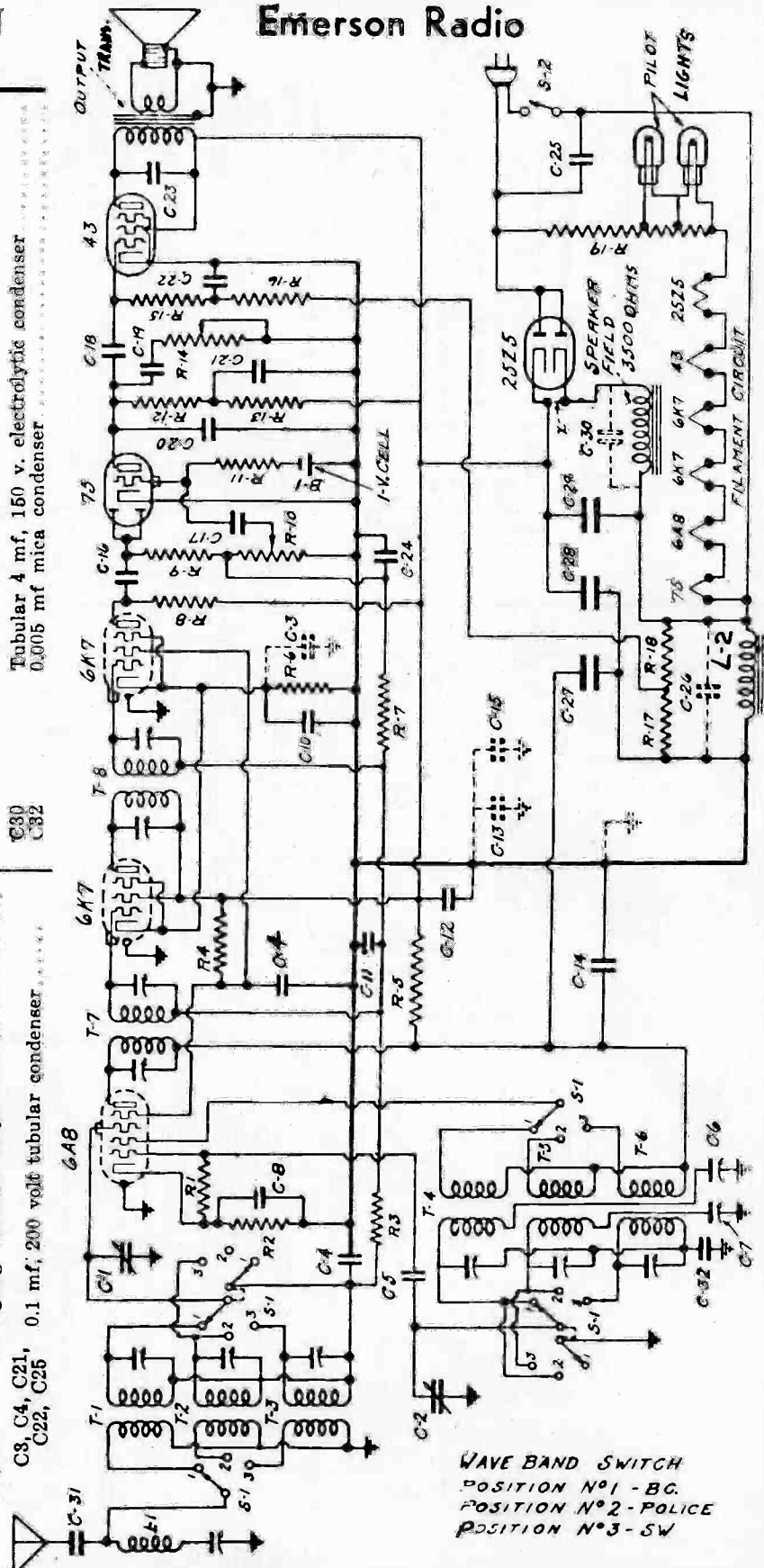
## MODELS 107 and 111

Chassis Model U6A

### Emerson Radio

- C5 0.0001 mf mica condenser
- C6, C7 Dual adjustable padding condenser
- C6—250 to 550 mmf.
- C7—800 to 1400 mmf.
- Seven-section condenser block
- C8—0.1 mf, 200 v.
- C9—0.1 mf, 200 v.
- C10—0.2 mf, 200 v.
- C11—0.05 mf, 200 v.
- C12—0.1 mf, 200 v.
- C13—0.1 mf, 200 v.
- C14—0.1 mf, 200 v.
- C15 0.02 mf, 200 v. tubular condenser
- C16, C20, C24 0.00025 mf mica condenser
- C17, C18 0.01 mf, 200 v. tubular condenser
- C19 0.006 mf, 200 v. tubular condenser
- C23, C31 0.001 mf mica condenser
- C26 0.25 mf, 200 v. tubular condenser
- C27, C28, C29 4, 8 and 16 mf electrolytic filter condenser block
- C27—4 mf, 150 v.
- C28—8 mf, 150 v.
- C29—16 mf, 150 v.
- C30 Tubular 4 mf, 150 v. electrolytic condenser
- C32 0.005 mf mica condenser

- L1 456 kc adjustable wave-trap
- L2 Filter choke—500 ohms
- T1, T3 Three-band antenna coil assembly
- T4, T5, T6 Three-band oscillator coil assembly
- T7 456 kc first i-f transformer
- T8 456 kc second i-f transformer
- R1, R8 50,000 ohm, 1/4 watt carbon resistor
- R2, R3 500 ohm, 1/2 watt wire-wound resistor
- R4, R7, R11 1 megohm, 1/4 watt carbon resistor
- R5 30,000 ohm, 1/4 watt carbon resistor
- R6 10,000 ohm, 1/4 watt carbon resistor
- R9, R13 850 ohm, 1/4 watt wire-wound resistor
- R10, S2 100,000 ohm, 1/4 watt carbon resistor
- R12 200,000 ohm, 1/4 watt carbon resistor
- R14 Tone control—0.25 megohms
- R15 500,000 ohm, 1/4 watt carbon resistor
- R16 5,000 ohm, 1/4 watt carbon resistor
- R18 Wire-wound ballast resistor—130 ohms
- R19 Two-gang variable condenser
- C1, C2 C3, C4, C21, C22, C25 0.1 mf, 200 volt tubular condenser



WAVE BAND SWITCH  
 POSITION N°1 - BG.  
 POSITION N°2 - POLICE  
 POSITION N°3 - SW



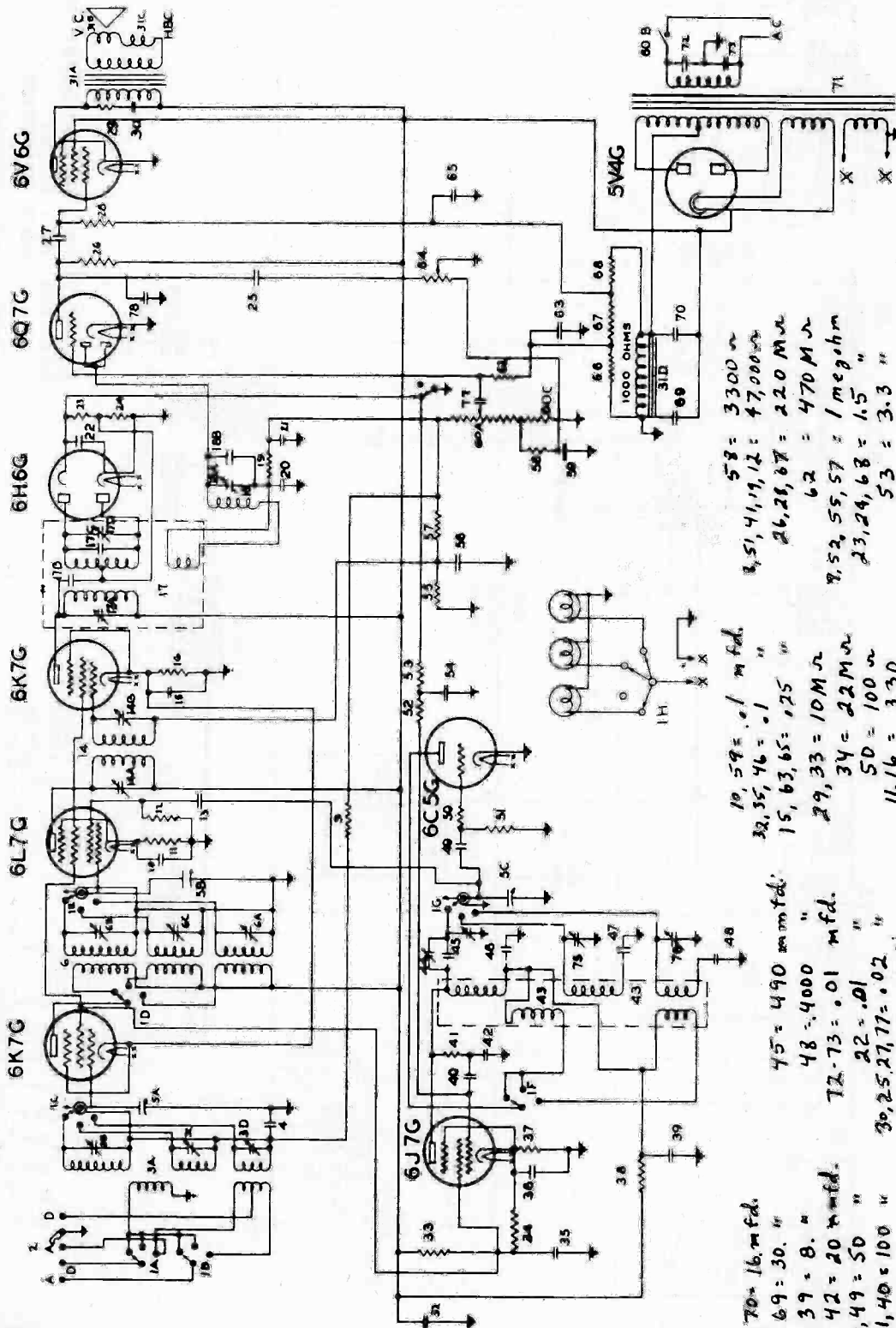






# MANUAL OF MOST-OFTEN-NEEDED RADIO DIAGRAMS

## Fairbanks-Morse Radio, Chassis Model 9A

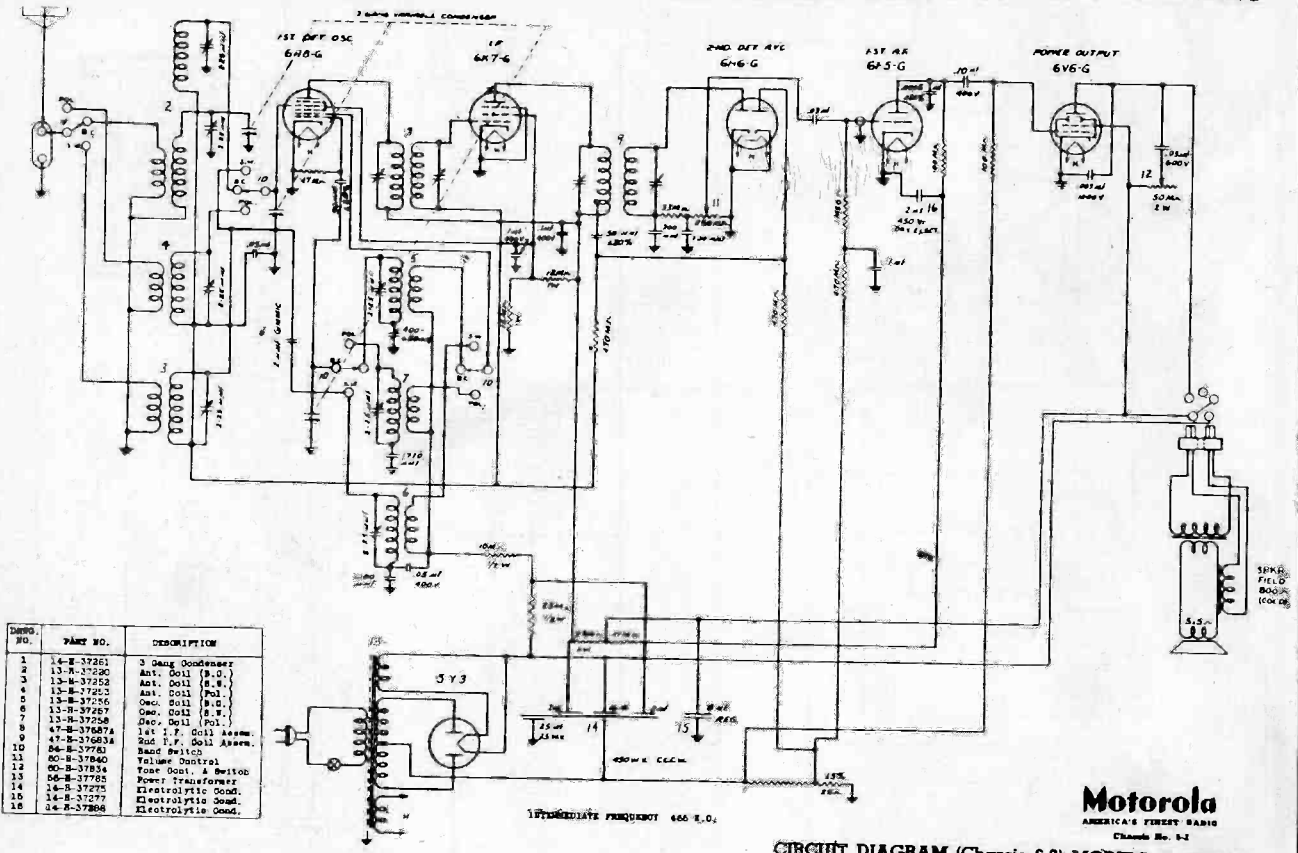


- 70 = 16 mfd.
- 69 = 30 "
- 39 = 8 "
- 42 = 20 mfd.
- 13, 49 = 50 "
- 20, 21, 40 = 100 "
- 78 = 500 "
- 75 = 490 mmfd.
- 48 = 4000 "
- 72-73 = .01 mfd.
- 22 = .01 "
- 30, 25, 27, 77 = .02 "
- 47, 54, 56, 36 = .05 "
- 10, 59 = .1 mfd.
- 32, 35, 46 = .1 "
- 15, 63, 65 = .25 "
- 29, 33 = 10M $\Omega$
- 34 = 22M $\Omega$
- 50 = 100 "
- 11, 16 = 330 "
- 38 = 2,000 "
- 58 = 3300 "
- 3, 51, 41, 19, 12 = 47,000 $\Omega$
- 26, 28, 67 = 220M $\Omega$
- 62 = 470M $\Omega$
- 7, 52, 55, 57 = 1 megohm
- 23, 24, 68 = 1.5 "
- 53 = 3.3 "
- 37 = 850 ohms

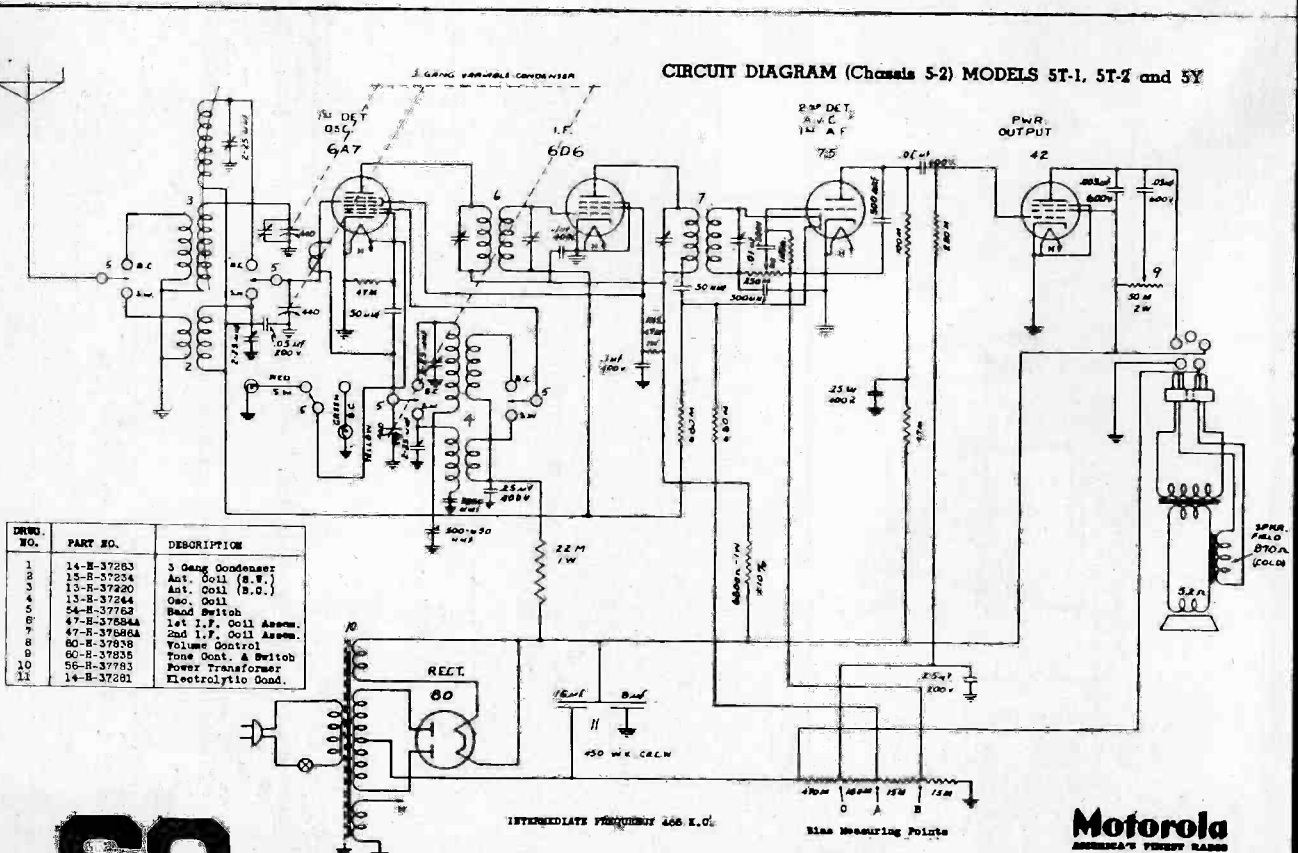
I.F. 456 KC.



# MANUAL OF MOST-OFTEN-NEEDED RADIO DIAGRAMS



CIRCUIT DIAGRAM (Chassis 6-2) MODELS 6T and 6Y



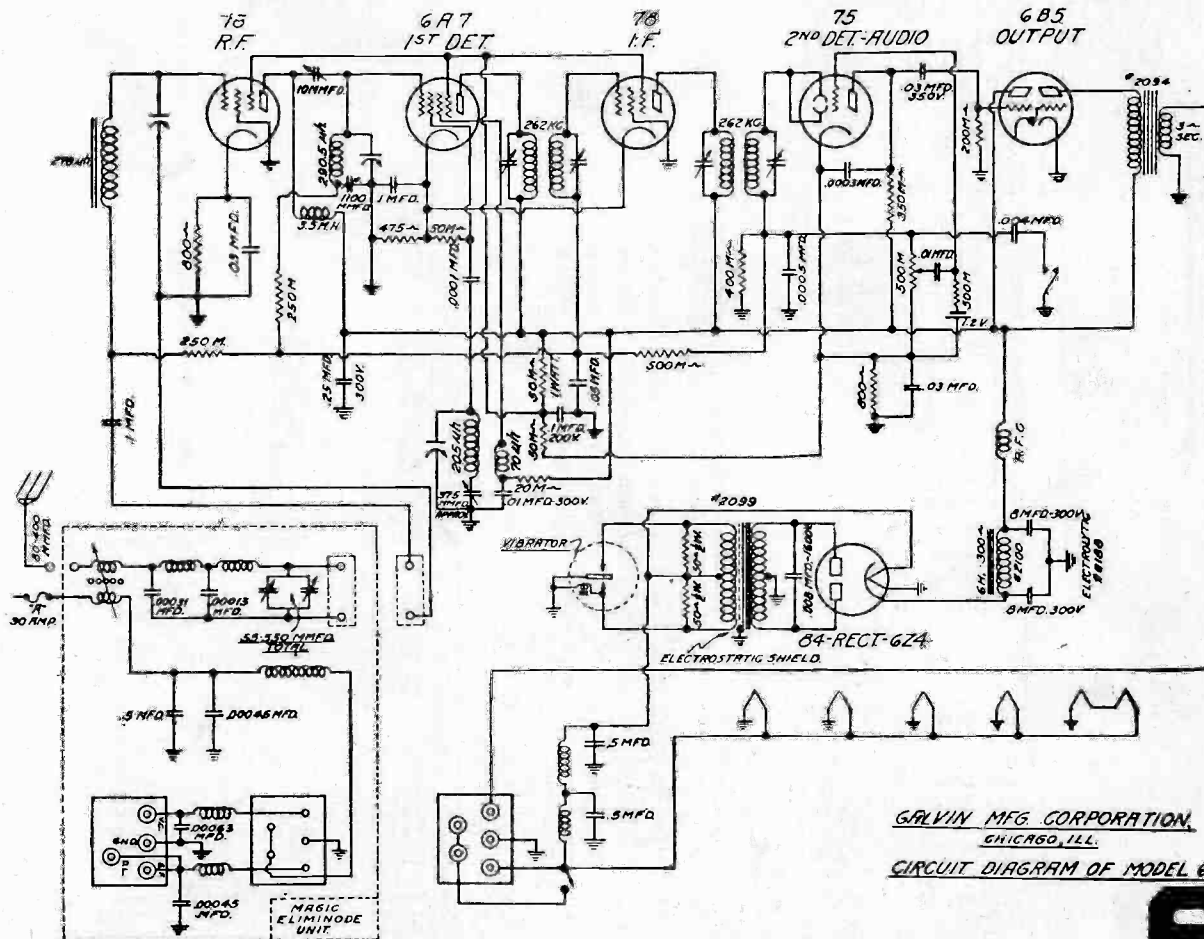
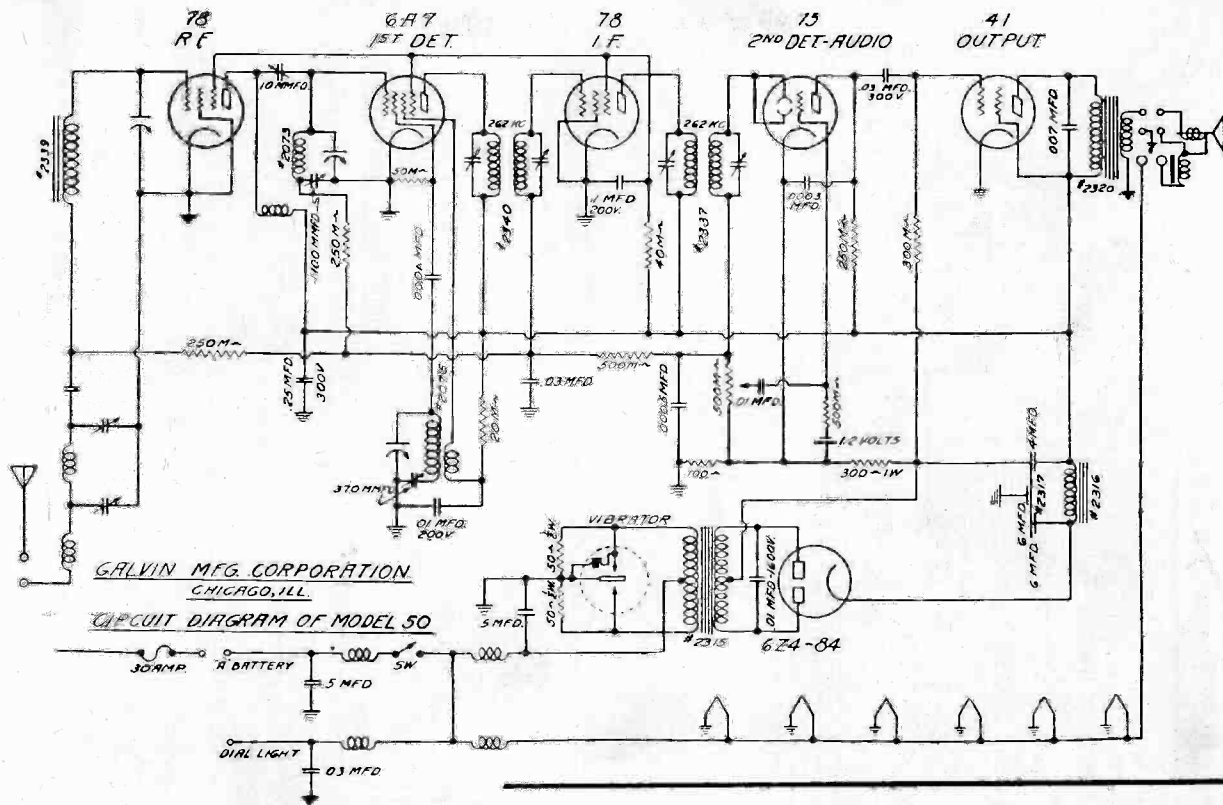
CIRCUIT DIAGRAM (Chassis 5-2) MODELS 5T-1, 5T-2 and 5Y

**60**

COMPILED BY M. N. BEITMAN, SUPREME PUBLICATIONS



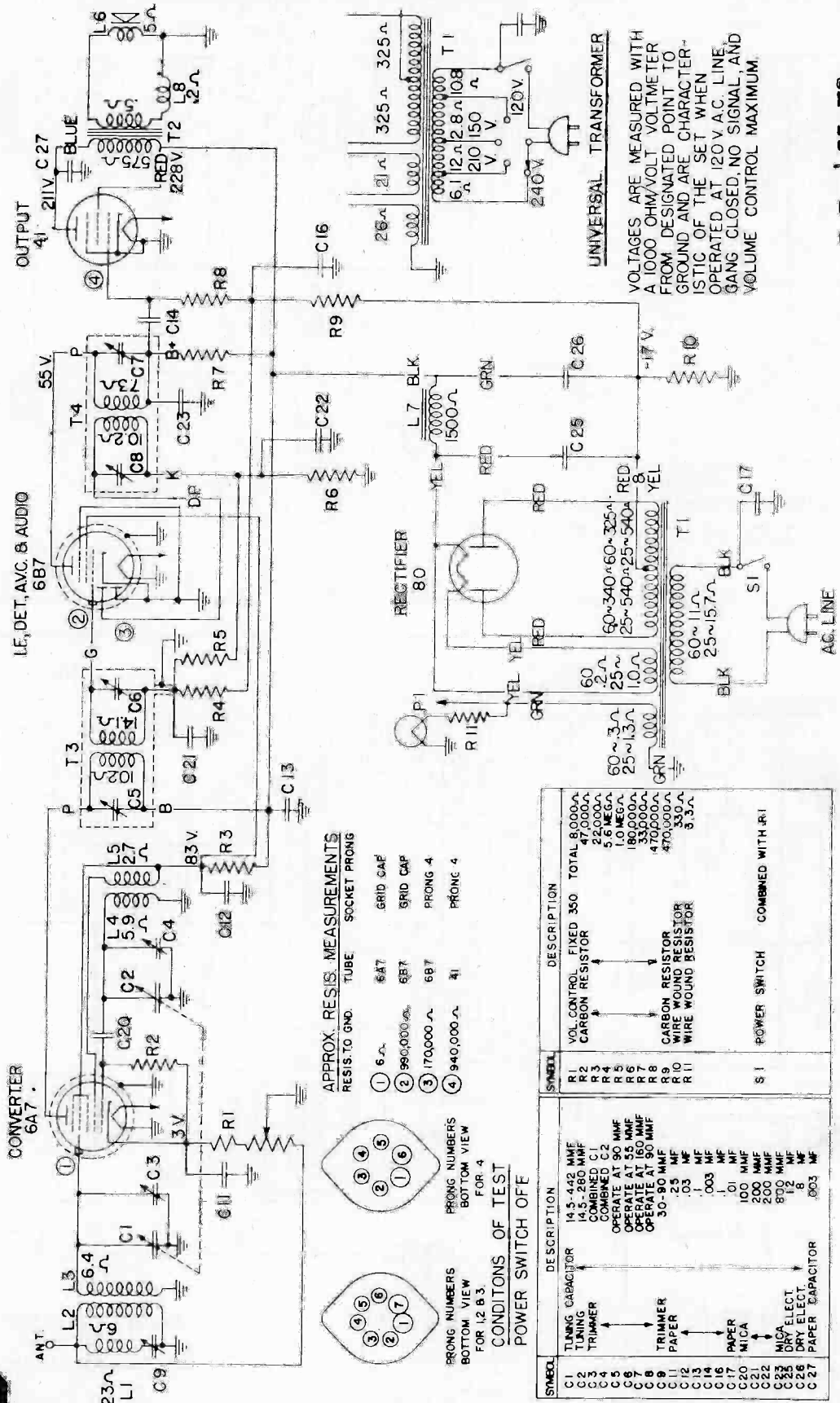
# MANUAL OF MOST-OFTEN-NEEDED RADIO DIAGRAMS



# MANUAL OF MOST-OFTEN-NEEDED RADIO DIAGRAMS

General Electric Co.

Radio Receiver, Model F-40



I.F. 455 KC.

APPROX. RESIS. MEASUREMENTS  
RESIS. TO GND. TUBE SOCKET PRONG

- ① 6 Ω GRID CAP 6A7
- ② 990,000 Ω GRID CAP 6B7
- ③ 170,000 Ω PRONG 4 6B7
- ④ 940,000 Ω PRONG 4 6A7

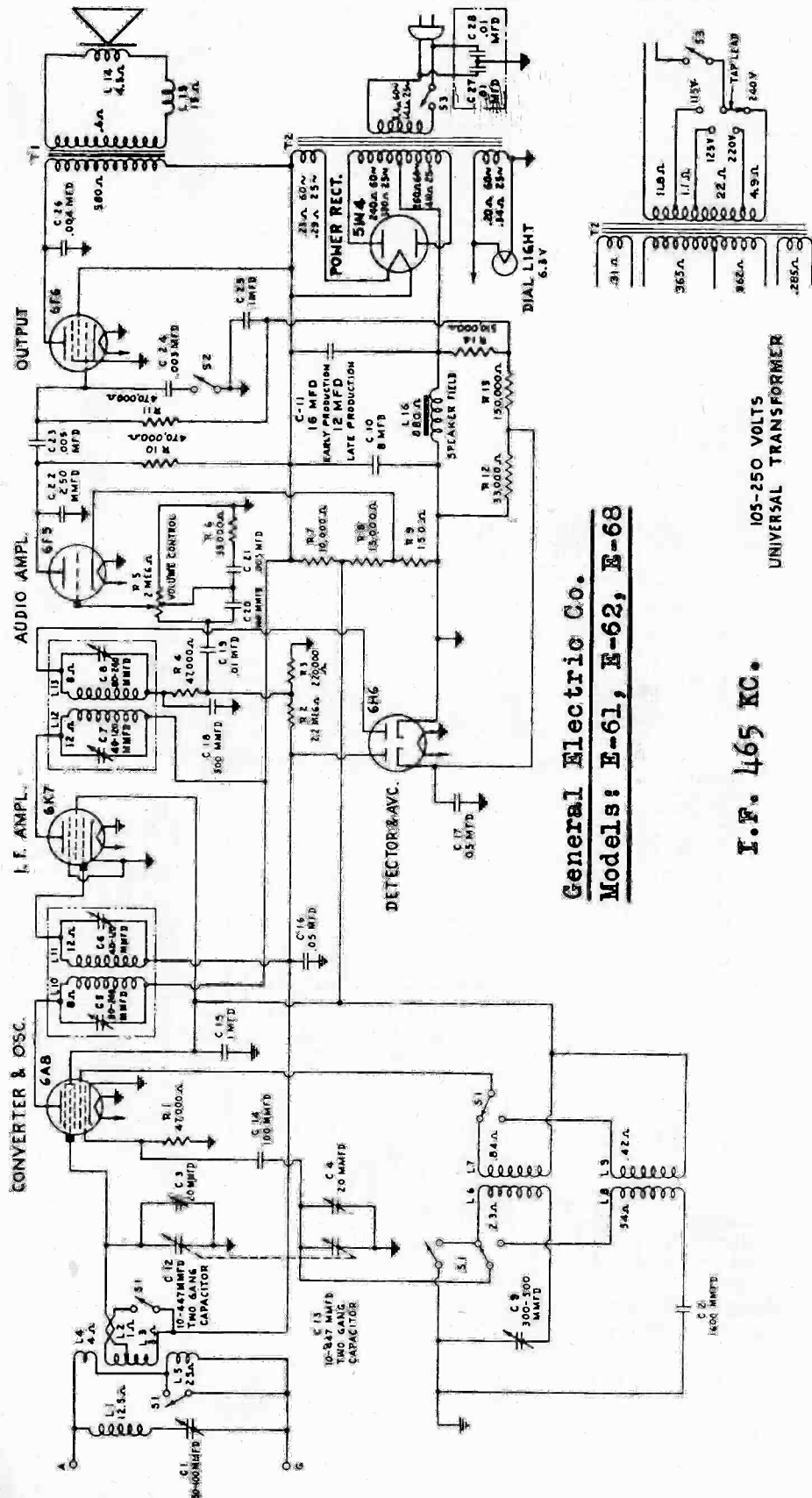
PRONG NUMBERS  
BOTTOM VIEW  
FOR 4

CONDITIONS OF TEST  
POWER SWITCH OFF

| SYMBOL | DESCRIPTION      | DESCRIPTION            |
|--------|------------------|------------------------|
| C1     | TUNING CAPACITOR | VOL. CONTROL FIXED 350 |
| C2     | TUNING TRIMMER   | CARBON RESISTOR        |
| C3     | COMBINED C1      | CARBON RESISTOR        |
| C4     | OPERATE AT 55 MF | 60-340-60-325 Ω        |
| C5     | OPERATE AT 55 MF | 25-540-25-540 Ω        |
| C6     | OPERATE AT 90 MF | 60 Ω                   |
| C7     | OPERATE AT 90 MF | 25 Ω                   |
| C8     | 30-80 MF         | 1.0 Ω                  |
| C9     | .25 MF           | 25 Ω                   |
| C10    | .03 MF           | 1.0 Ω                  |
| C11    | .003 MF          | 25 Ω                   |
| C12    | .01 MF           | 1.0 Ω                  |
| C13    | .01 MF           | 25 Ω                   |
| C14    | .01 MF           | 1.0 Ω                  |
| C15    | .01 MF           | 25 Ω                   |
| C16    | 100 MF           | 1.0 Ω                  |
| C17    | 200 MF           | 25 Ω                   |
| C18    | 200 MF           | 1.0 Ω                  |
| C19    | 800 MF           | 25 Ω                   |
| C20    | 12 MF            | 1.0 Ω                  |
| C21    | 8 MF             | 25 Ω                   |
| C22    | .003 MF          | 1.0 Ω                  |
| C23    | DRY ELECT.       | 1.0 Ω                  |
| C24    | DRY ELECT.       | 25 Ω                   |
| C25    | PAPER CAPACITOR  | 1.0 Ω                  |
| C26    |                  | 25 Ω                   |
| C27    |                  | 1.0 Ω                  |



# MANUAL OF MOST-OFTEN-NEEDED RADIO DIAGRAMS



General Electric Co.  
**Models: E-61, E-62, E-68**

I.F. 465 KC.

105-250 VOLTS  
 UNIVERSAL TRANSFORMER









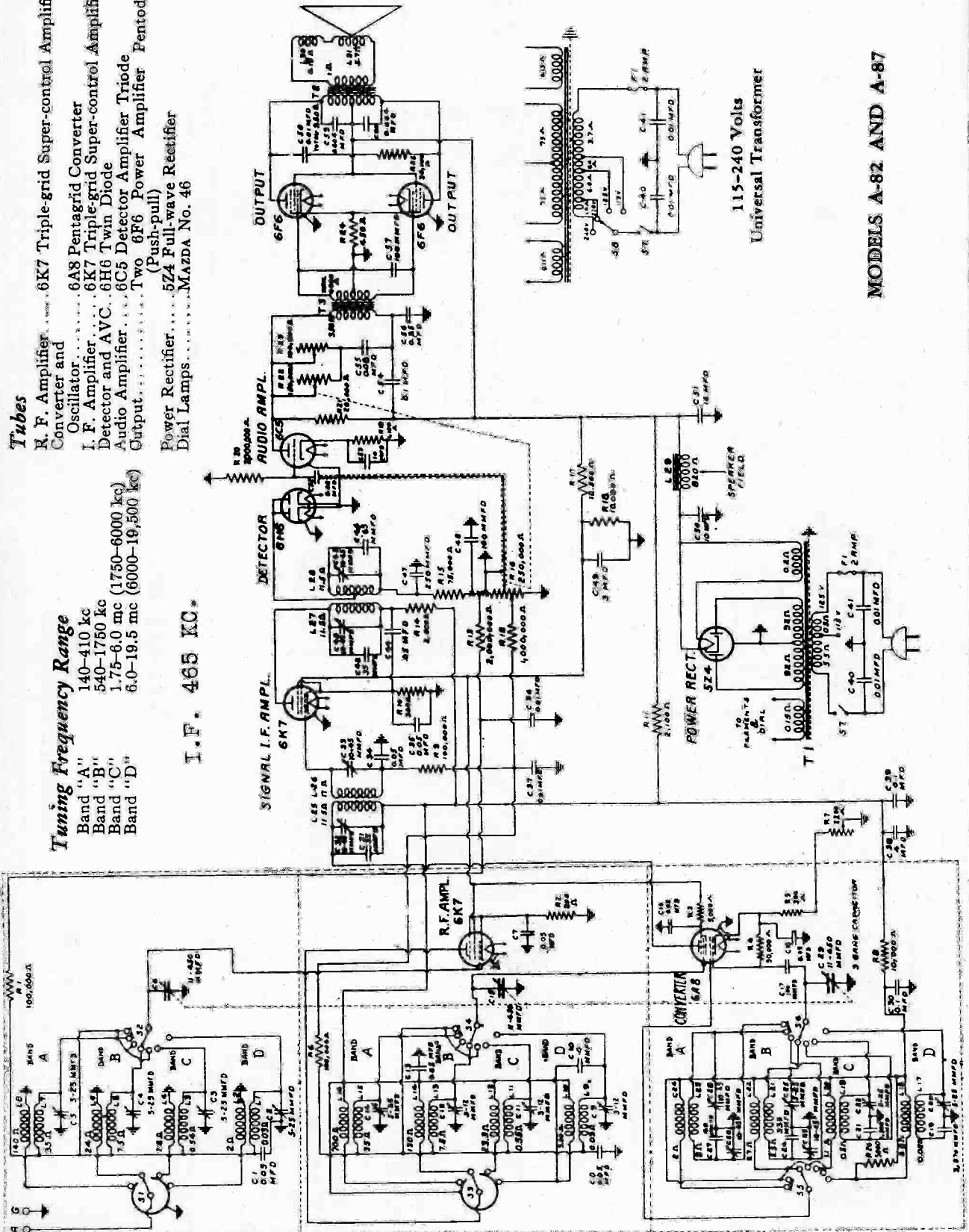
# MANUAL OF MOST OFTEN-NEEDED RADIO DIAGRAMS

**Tubes**  
 R. F. Amplifier... 6K7 Triple-grid Super-control Amplifier  
 Converter and Oscillator... 6A8 Pentagrid Converter  
 I. F. Amplifier... 6K7 Triple-grid Super-control Amplifier  
 Detector and AVC... 6H6 Twin Diode  
 Audio Amplifier... 6C5 Detector Amplifier Triode  
 Output... Two 6F6 Power Amplifier Pentodes (Push-pull)  
 Power Rectifier... 5Z4 Full-wave Rectifier  
 Dial Lamps... MAZDA No. 46

## Tuning Frequency Range

Band "A" 140-410 kc  
 Band "B" 540-1750 kc  
 Band "C" 1.75-6.0 mc (1750-6000 kc)  
 Band "D" 6.0-19.5 mc (6000-19,500 kc)

I. F. 465 KC.



# 68

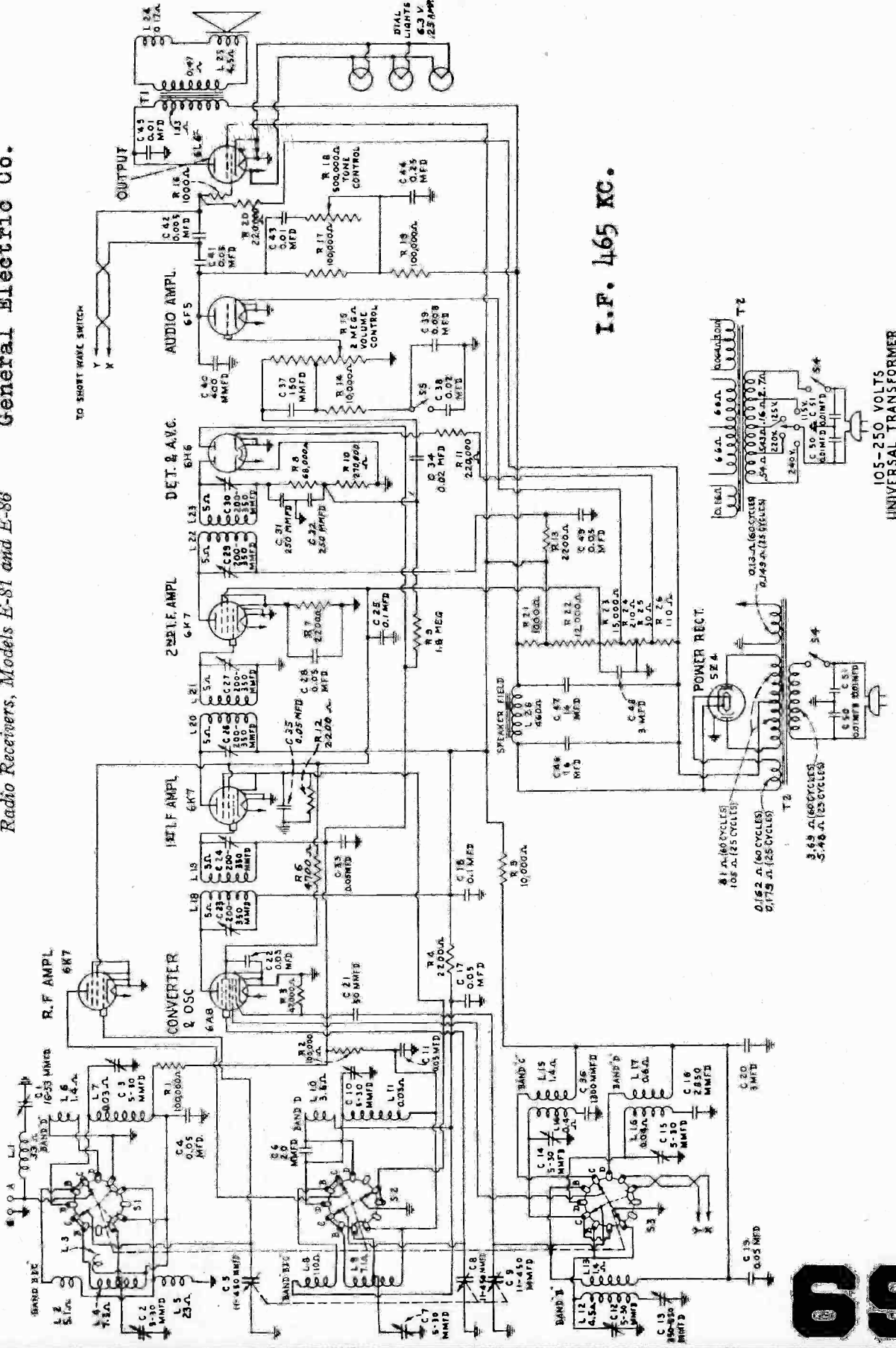
MODELS A-82 AND A-87

# MANUAL OF MOST-OFTEN-NEEDED RADIO DIAGRAMS

General Electric Co.

Radio Receivers, Models E-81 and E-86

I.F. 465 KC.



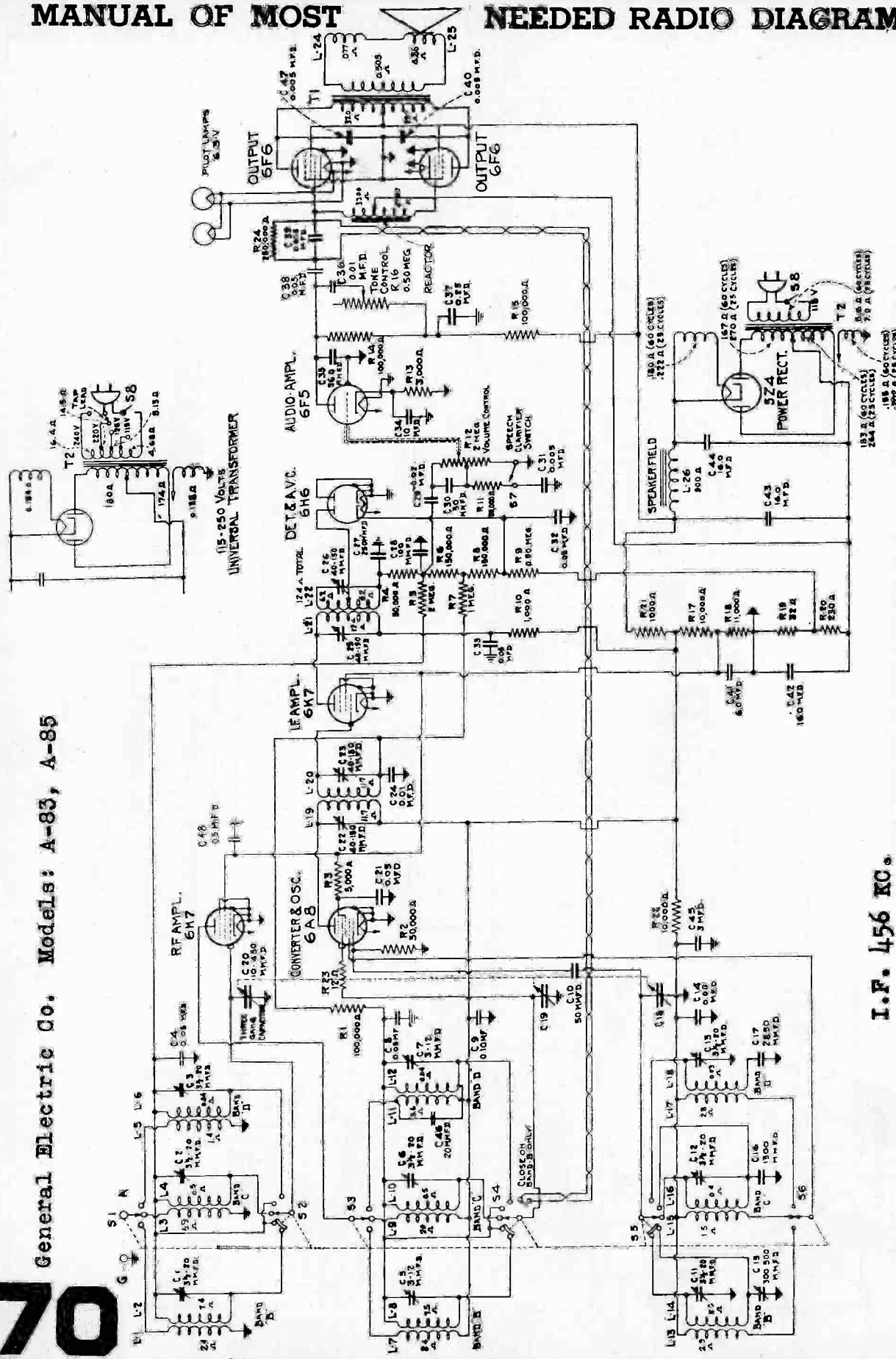
105-250 VOLTS  
UNIVERSAL TRANSFORMER

**69**

# MANUAL OF MOST NEEDED RADIO DIAGRAMS

General Electric Co. Models: A-83, A-85

# 70

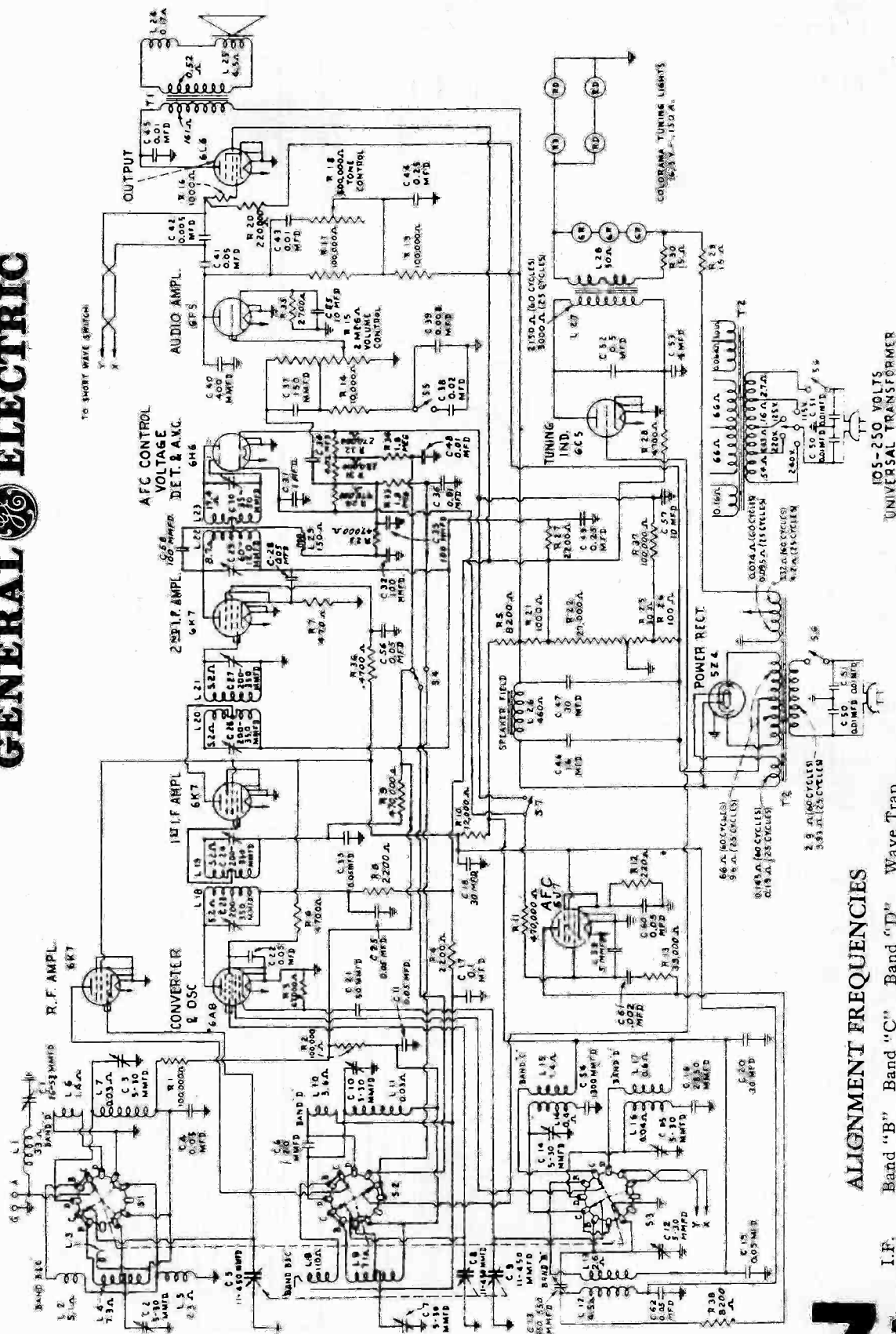


I.F. 456 KC.



# MANUAL OF MOST-OFTEN-NEEDED RADIO DIAGRAMS

## GENERAL ELECTRIC



### ALIGNMENT FREQUENCIES

- I.F. Band "B" 580 kc.
- Band "C" 5220 kc.
- Band "D" 18,000 kc.
- Wave Trap 465 kc.
- 465 kc.
- 1500 kc.

105-250 VOLTS  
UNIVERSAL TRANSFORMER

Radio Receivers, Models E-101, E-105 and E-106

# DIAGRAMS

2-6F6 *ron* CHASSIS 12B  
2-6L6 *ron* CHASSIS 12W  
POWER OUTPUT

2-6C5  
AUDIO DRIVERS

6H6  
2ND DET.-A.V.C.  
A.F.C. DISCRIMINATOR

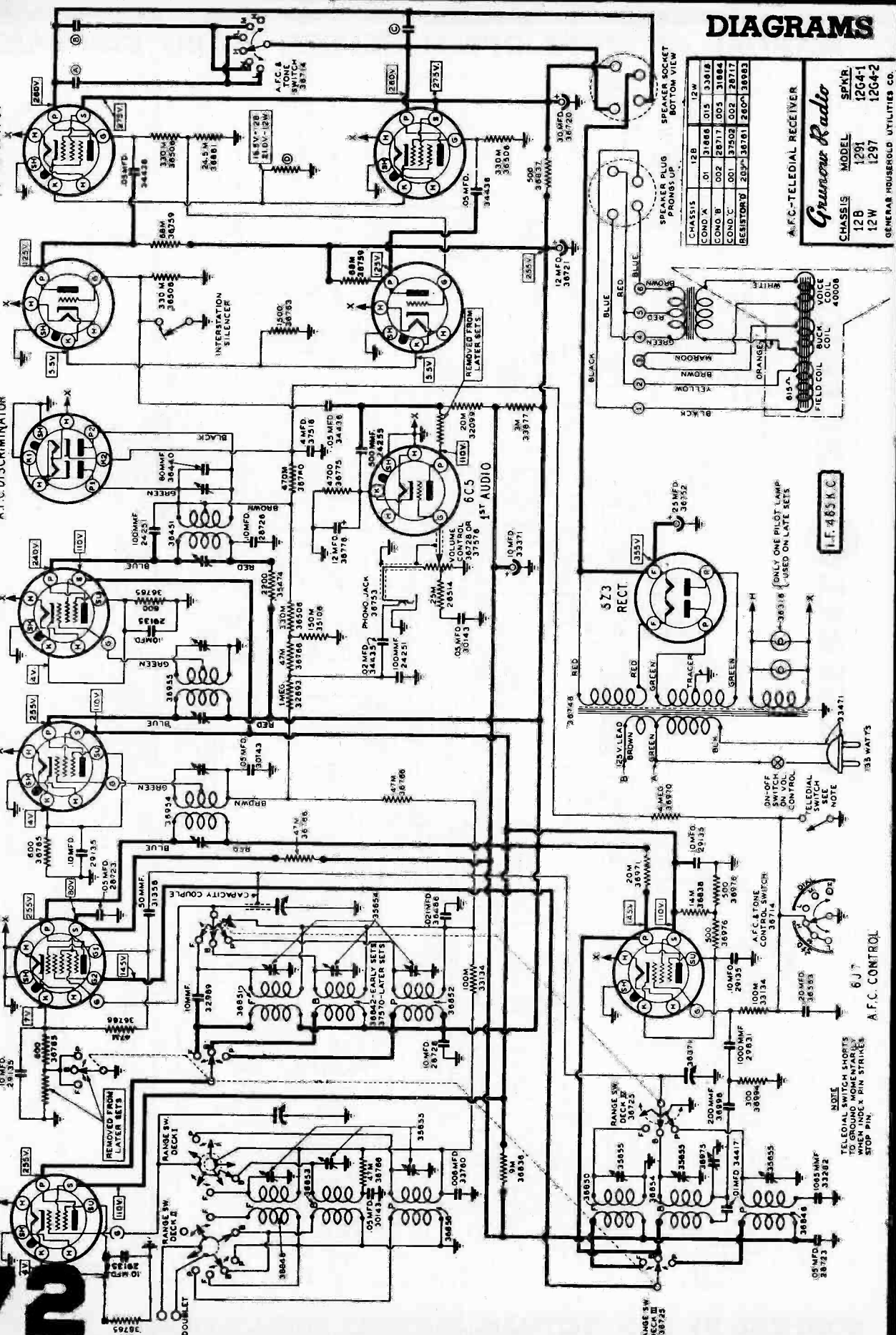
6K7  
2ND I.F.

6K7  
1ST I.F.

6A8  
1ST DET.-OSC.

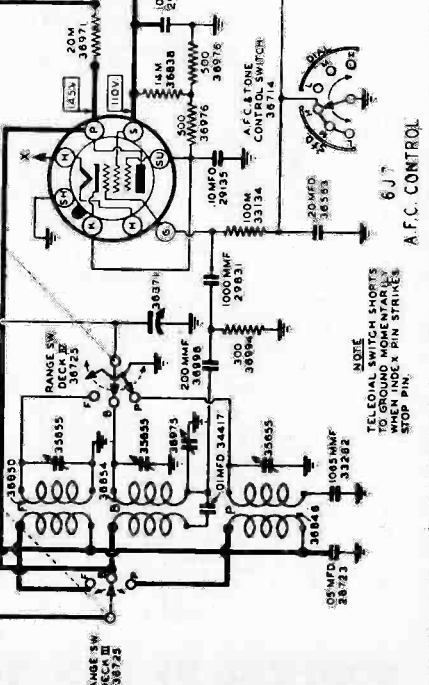
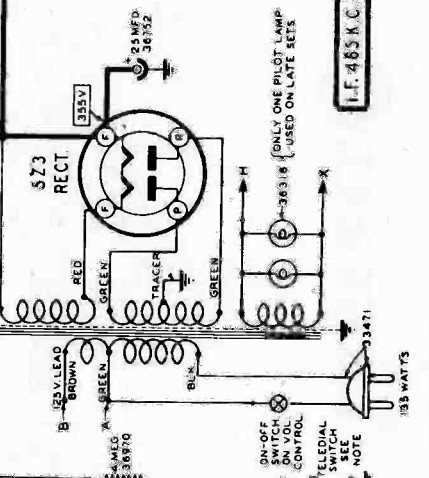
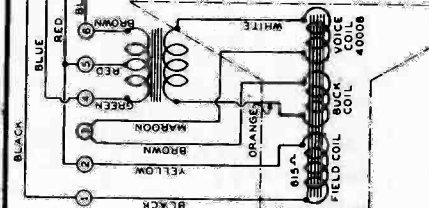
6K7  
R.F.

# 72



| COND. A             | COND. B   | COND. C   |
|---------------------|-----------|-----------|
| 01 31888            | 002 28717 | 001 37508 |
| 012 33818           | 005 31884 | 002 28717 |
| RESISTORS 260-38761 | 260-36983 |           |

A.F.C.-TELEIDIAL RECEIVER  
**Grumman Radio**  
CHASSIS MODEL 12W  
12B 1291  
12W 1297  
SPMR 1264-1  
1264-2  
GENERAL HOUSEHOLD UTILITIES CO.

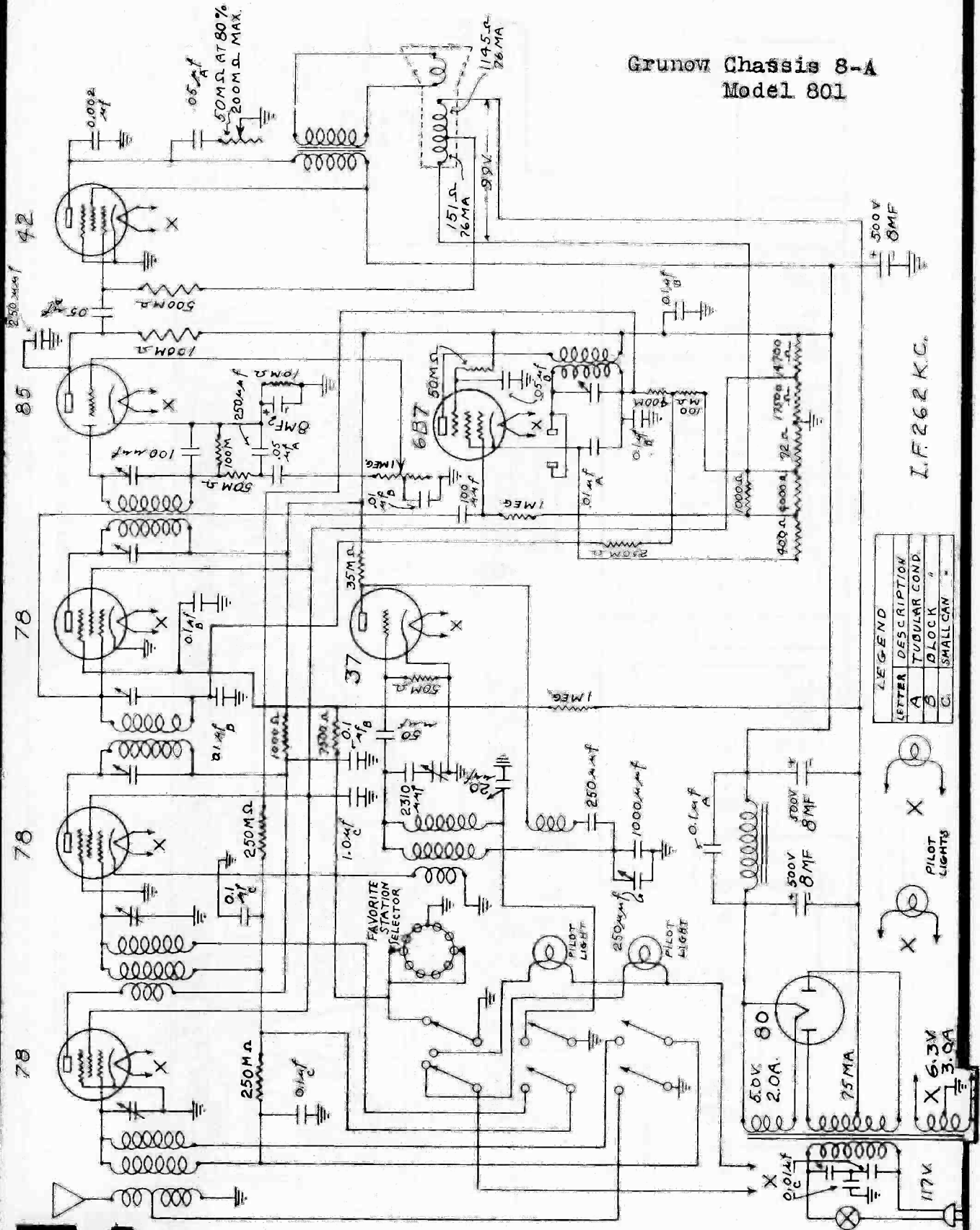


NOTE:  
TELEIDIAL SWITCH SHORTS  
TO GROUND MOMENTARILY  
WHEN INDEX PIN STRIKES  
STOP PIN.



# MANUAL OF MOST-OFTEN-NEEDED RADIO DIAGRAMS

Grunow Chassis 8-A  
Model 801



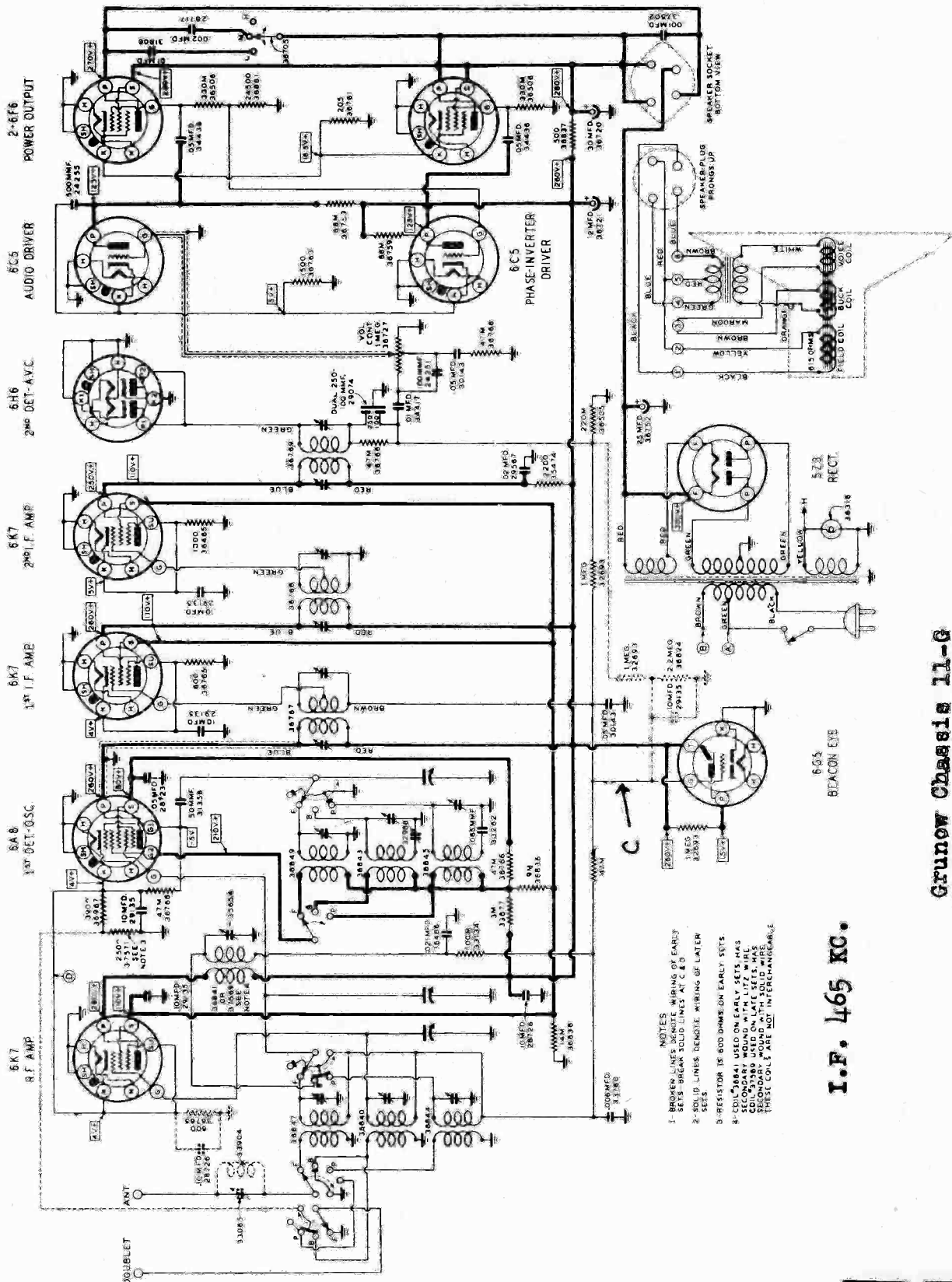
I.F. 262 K.C.

| LETTER | DESCRIPTION  |
|--------|--------------|
| A      | TUBULAR COND |
| B      | BLOCK "      |
| C      | SMALL CAP "  |

# 74



# MANUAL OF MOST-OFTEN-NEEDED RADIO DIAGRAMS



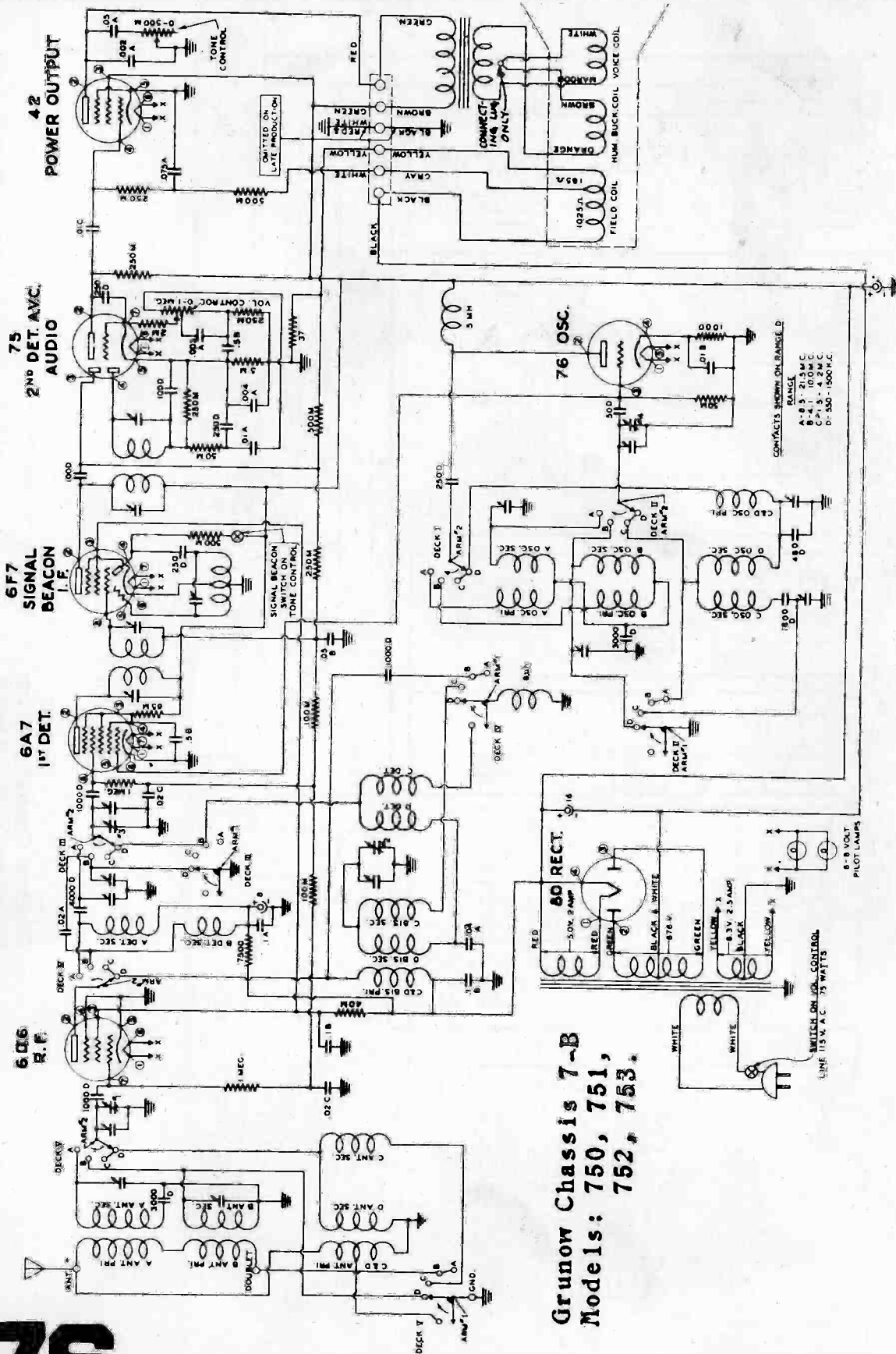
NOTES  
 1- BROKEN LINES DENOTE WIRING OF EARLY SETS. BREAK SOLID LINES AT C & D.  
 2- SOLID LINES DENOTE WIRING OF LATER SETS.  
 3- RESISTOR IS 500 OHMS ON EARLY SETS.  
 4- COIL 38841 USED ON EARLY SETS. HAS SECONDARY WOUND WITH LIGHT WIRE. COIL 38841 USED ON LATER SETS. SECONDARY WOUND WITH SOLID WIRE. THESE COILS ARE NOT INTERCHANGEABLE.

Grunow Chassis 11-G  
 Models: 1191, 1191B

I.F. 465 KC.



# MANUAL OF MOST-OFTEN-NEEDED RADIO DIAGRAMS



**Grunow Chassis 7-B  
Models: 750, 751,  
752, 753.**

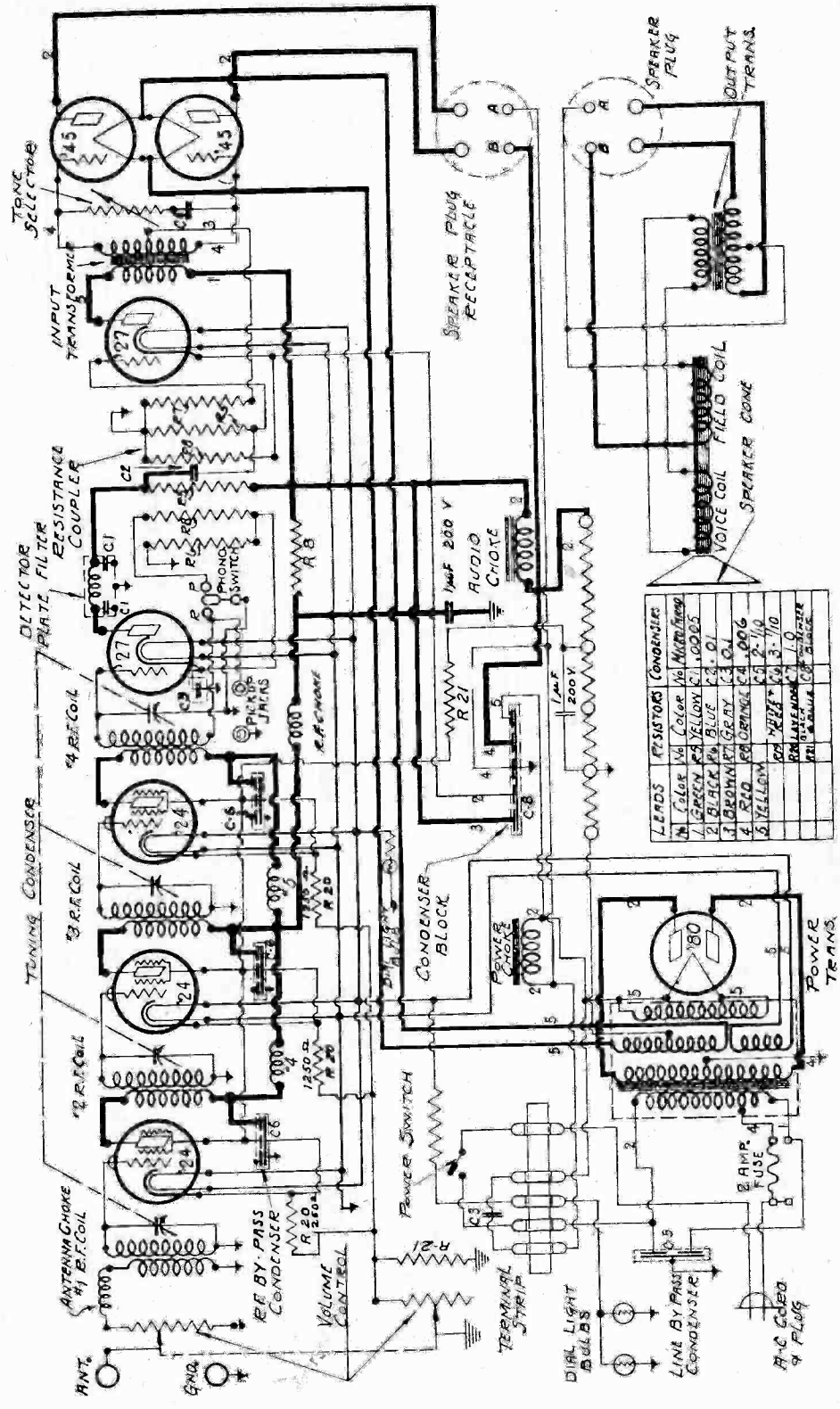
**I.F. 262 KC.**

**76**

# MANUAL OF MOST-OFTEN-NEEDED RADIO DIAGRAMS

MODELS 120, 130 and 140  
CHASSIS MODELS "A" and "B"

General Motors



| LEADS | RESISTOR COLOR | RESISTANCE | CONDENSER VALUE |
|-------|----------------|------------|-----------------|
| 1     | Color          | 1/4        | Microfarad      |
| 2     | GREEN          | 1/2        | 10000           |
| 3     | BLACK          | 1/2        | 10              |
| 4     | BROWN          | 1/2        | 1000            |
| 5     | YELLOW         | 1/2        | 100             |

Circuit Diagram of Chassis with Serial Numbers Between 29100A and 6200A; and 1700B and 1946B.







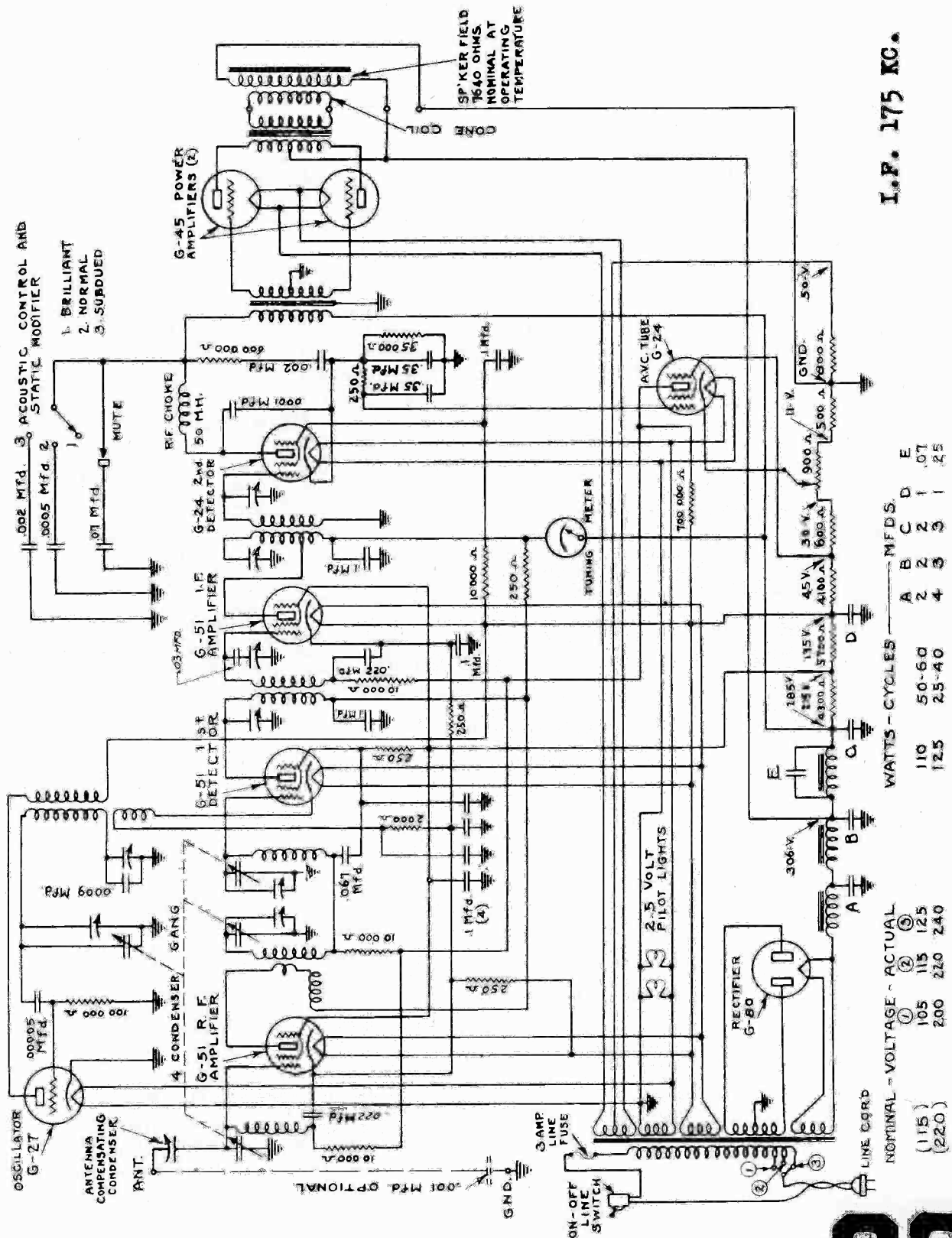






# MANUAL OF MOST-OFTEN-NEEDED RADIO DIAGRAMS

SCHEMATIC DIAGRAM OF MAJESTIC SCREEN GRID SUPERHETERODYNE AUTOMATIC VOLUME CONTROL RECEIVER - MODEL 60 CHASSIS 115 AND 220 VOLTS,



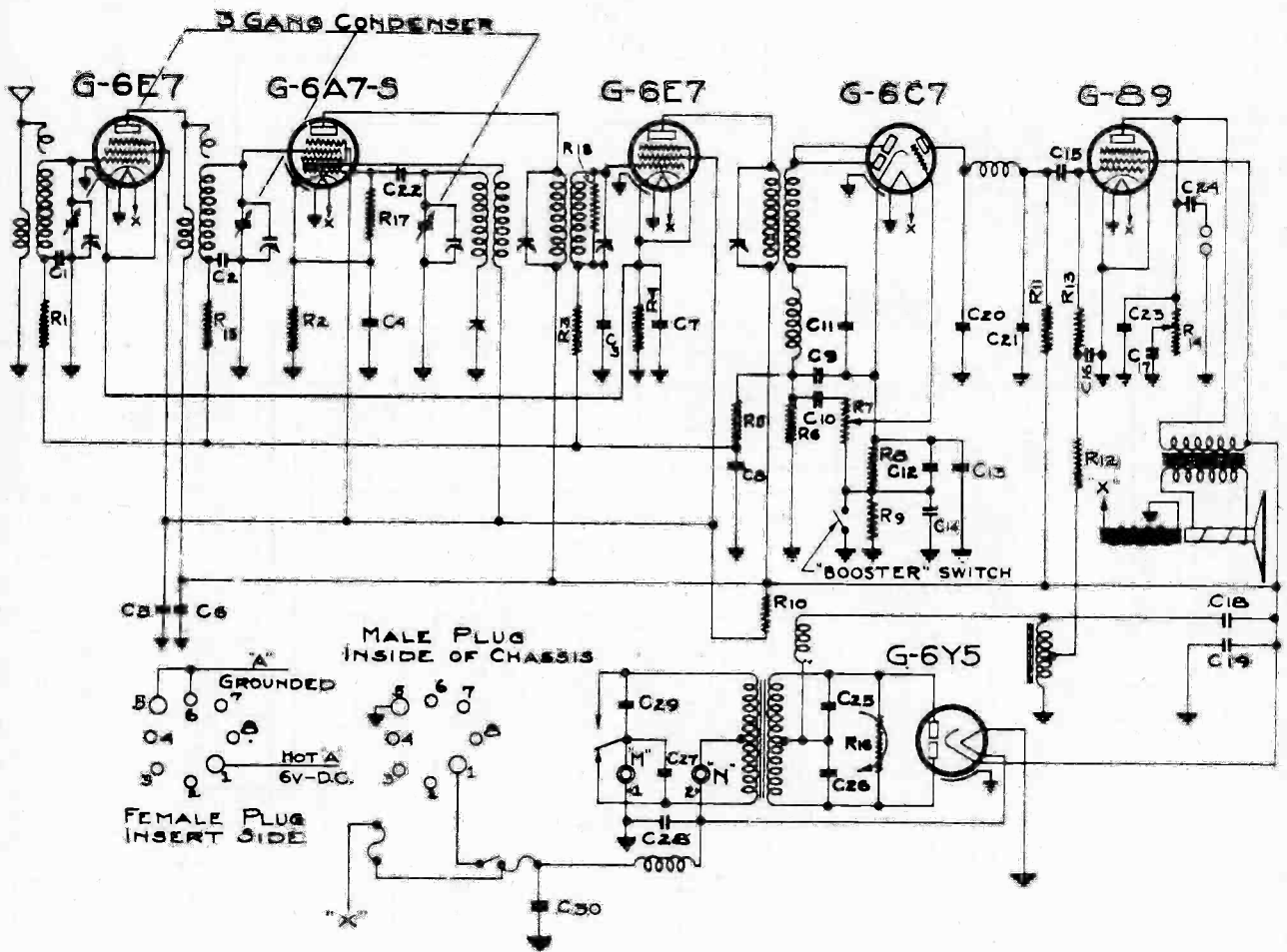
I.P. 175 KC.

| WATTS - CYCLES | A     | B | C | D | E     |
|----------------|-------|---|---|---|-------|
| 110            | 50-60 | 2 | 2 | 1 | .07   |
| 125            | 25-40 | 4 | 3 | 3 | 1 .25 |

| NOMINAL - VOLTAGE - ACTUAL | (1) | (2) | (3) |
|----------------------------|-----|-----|-----|
| (115)                      | 105 | 115 | 125 |
| (220)                      | 200 | 210 | 240 |

# MANUAL OF MOST-OFTEN-NEEDED RADIO DIAGRAMS

## SCHEMATIC DIAGRAM OF MAJESTIC MODEL 66 AUTOMOBILE RECEIVER.



### CONDENSERS

|           |            |
|-----------|------------|
| C1—.03    | C16—.25    |
| C2—.03    | C17—.02    |
| C3—.01    | C18—.0.0   |
| C4—.1     | C19—.0.0   |
| C5—.25    | C20—.0005  |
| C6—.25    | C21—.0005  |
| C7—.25    | C22—.00025 |
| C8—.03    | C23—.005   |
| C9—.0005  | C24—.1     |
| C10—.03   | C25—.005   |
| C11—.0005 | C26—.005   |
| C12—.10   | C27—.1     |
| C13—.25   | C28—.5     |
| C14—.25   | C29—.1     |
| C15—.03   | C30—.5     |

### RESISTORS

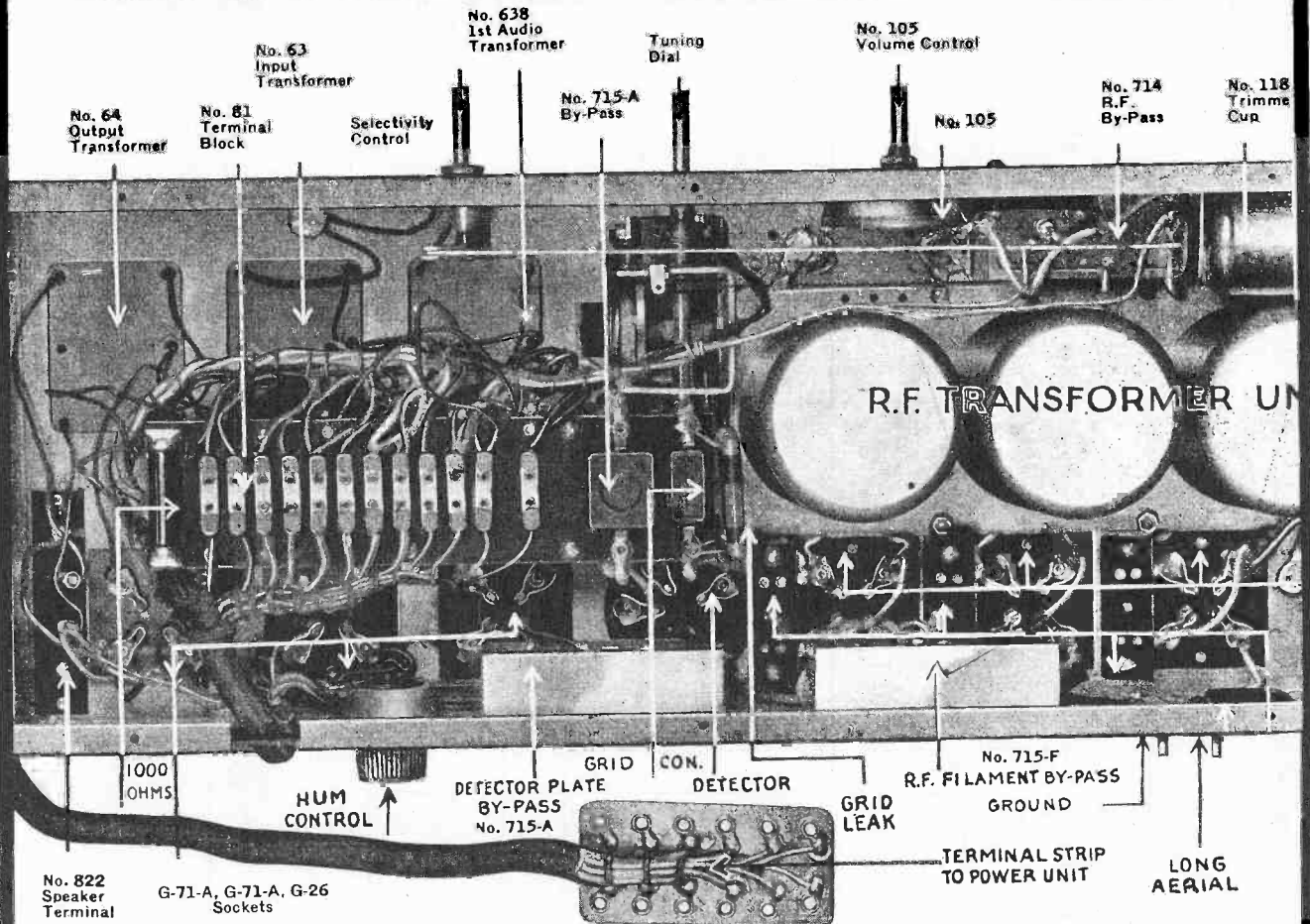
|            |                   |
|------------|-------------------|
| R1—300,000 | R10—10,000        |
| R2—250     | R11—200,000       |
| R3—300,000 | R12—250,000       |
| R4—400     | R13—250,000       |
| R5—300,000 | R14—50,000        |
| R6—100,000 | R15—300,000       |
| R7—200,000 | R16—500,000 GLASS |
| R8—2,500   | R17—50,000        |
| R9—10,000  | R18—1,000,000     |

⚡ NOTE ⚡

WHEN A+ IS GROUNDING VIBRATOR LEAD #1 (BLUE) SHOULD CONNECT TO TERMINAL "M" (VIBRATOR ARMATURE) AND LEAD #2 (BLACK) SHOULD CONNECT TO TRANS. PRIMARY CENTER TAP (TERMINAL "N") WHEN A+ IS GROUNDING REVERSE ABOVE CONNECTIONS.

I.F. 175 KC.

# MANUAL OF MOST-OFTEN-NEEDED RADIO DIAGRAMS



## CHASSIS 70 and 70-B Models 71 and 72

### TUBES

|            |      |                  |            |
|------------|------|------------------|------------|
| R. F. .... | G-26 | 1st A. F. ....   | G-26       |
| R. F. .... | G-26 | P. P. Ampl. .... | G-71-A     |
| R. F. .... | G-26 | P. P. Ampl. .... | G-71-A     |
| Det. ....  | G-27 | G-80 Rect. ....  | Power Unit |

### THE CIRCUIT

Tuned Radio Frequency. Built upon unit assembly plan.

*Chassis.* Has the 3 A.F. transformers, the volume control and input circuit, sockets, balancing condensers and by-pass condensers.

*Tuning Condenser.* 4 gang variable condenser, dial lamp and dial.

*R.F. Transformers.* Entirely Contained in shield, with leads that connect to various parts.

*Terminal Strip.* Includes power cable, grid condenser, grid leak, detector plate R.F. by-pass condenser, 2 center tapped resistances and 2 bias resistance units.

*Wiring Cable.* Accomplishes the internal wiring of receiver.

### INPUT SYSTEM AND VOLUME CONTROL

The volume control is effected in the input circuit, making a smooth control due to the fact that R.F. amplifiers are functioning at maximum efficiency at any degree of volume. A potentiometer is placed across the .001 condenser with the movable arm attached to the antenna and controls signal voltage impressed across this condenser.

### SELECTIVITY CONTROL

Integral with the input system is the antenna trimmer, which operates to vary the inductance of the antenna input coil and permits adjusting the input circuit to exact resonance with the other 3 tuned circuits.





# CHASSIS 90

Models 91, 92

## METHOD OF BIASING

Grid Biasing of the various tubes is accomplished by grounding the grids and applying a positive potential to the cathodes of three tubes.

The biasing of the first, second and third R.F. Tubes is accomplished by the use of a variable resistance from 500 to 2,500 Ohms, which is in series with the volume control resistor and is mounted on the rotor shaft of the variable capacitor. The rotor plates are moved by the equalizer arm, which is mounted on the rotor plates. A potential of 8 to 15 Volt is applied to the tuning dial frequency. The equalizer is adjusted for a resistance of 1,500 Ohm at 500 kilocycles, 500 Ohm at 550 kilocycles, 2,500 Ohm at 1,500 kilocycles, with 1% allowable variation for the last two measurements. The equalizer adjustment arm is secured by a set screw to the back of the gang condenser frame.

The position and tightness of this arm is important. Make sure that the set screw holding the Equalizer Shaft to the gang condenser just inside the gang frame is against the flat portion of the equalizer shaft.

BIASING  
4th R. F. Stage  
Detector  
G-45

RESISTOR  
1,800 Ohm  
35,000 Ohm  
800 Ohm

BIAS VOLTAGE  
9  
32  
On Power Unit Terminal Strip

## ALIGNING AND BALANCING

Make certain that resonance is obtained for each stage, using both Master Tuning Control and Trimmer. When using dummy tube for balancing, place shield over it, to include capacity effect of shield. A dummy tube having a Grid to Plate of appr. 3.4 m.m.f. is suggested, as this capacity is used when receiver was originally balanced. PROCEDURE OF BALANCING IS THE SAME AS FOR CHASSIS 70, 70B

## ANTENNA SWITCH

To prevent distortion of tone from close-by powerful transmitters on moderately long antenna, snap switch to "Local" position. Use "Distance" position for stations with less powerful reception.

## POWER UNIT

The Power Unit 9-P-6 and 9-P-3 is described on Page 79

## INPUT CIRCUIT

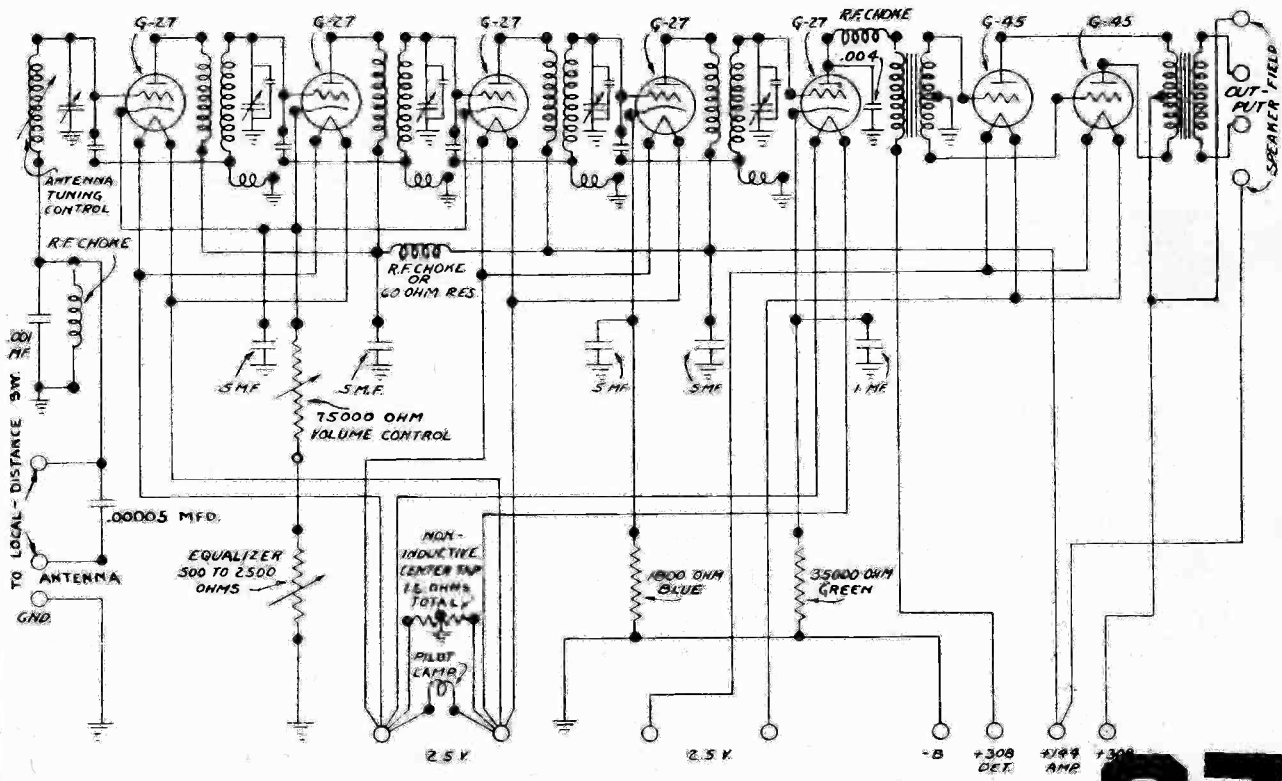
On early production models, a fixed condenser of .0001 MFD. capacity is used, on later production a condenser of .00005 MFD. for the input circuit.

## TABLE OF VOLTAGES

The voltage readings given below were taken with the receiver turned to 550 Kilocycles, and the volume control set at maximum. When taking comparative readings, be certain that receiver is turned to 550 kilocycles and volume control is set at maximum.

| Purpose   | Tube | Type | A<br>Volts | B<br>Volts | C<br>Volts | Cathode<br>Volts | Plate<br>M.A. | Normal |
|-----------|------|------|------------|------------|------------|------------------|---------------|--------|
| 1st R. F. | G-27 | G-27 | 2.35       | 130        | 8          | 8                | 5.5           | ..     |
| 2nd R. F. | G-27 | G-27 | 2.35       | 130        | 8          | 8                | 5.5           | ..     |
| 3rd R. F. | G-27 | G-27 | 2.35       | 130        | 8          | 8                | 5.5           | ..     |
| 4th R. F. | G-27 | G-27 | 2.35       | 130        | 9          | 9                | 5.0           | ..     |
| Detector  | G-27 | G-27 | 2.70       | 270        | 30         | 30               | 1             | ..     |
| Power     | G-45 | G-45 | 2.45       | 250        | 50         | 50               | 32            | ..     |
| Power     | G-45 | G-45 | 2.45       | 250        | 50         | 50               | 32            | ..     |
| Rectifier | G-80 | G-80 | ..         | ..         | ..         | ..               | ..            | ..     |

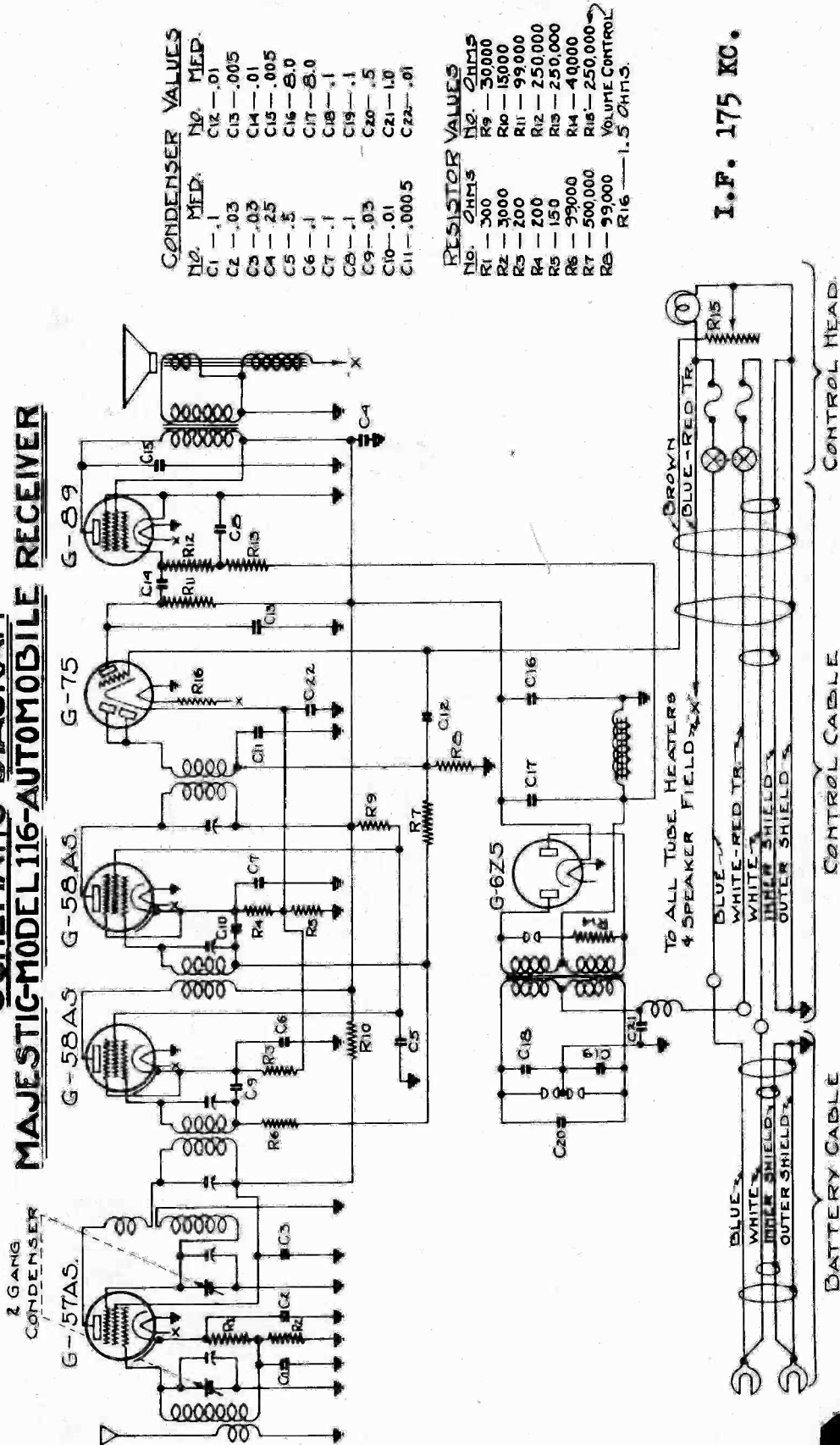
Line Voltage 115 A. C.





# MANUAL OF MOST-OFTEN-NEEDED RADIO DIAGRAMS

## SCHEMATIC DIAGRAM MAJESTIC-MODEL 116-AUTOMOBILE RECEIVER

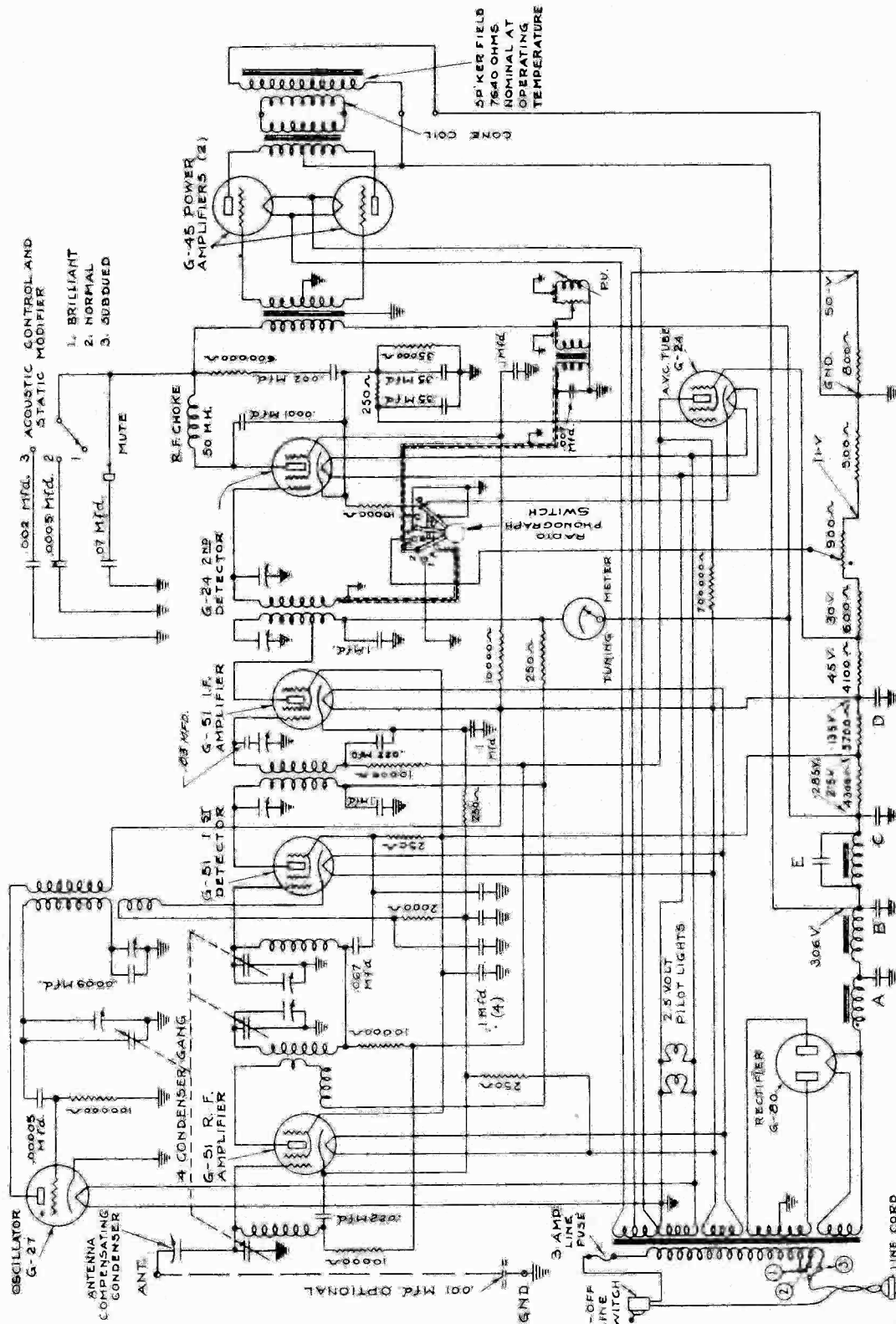






# MANUAL OF MOST-OFTEN-NEEDED RADIO DIAGRAMS

SCHEMATIC DIAGRAM OF MAJESTIC SCREEN GRID SUPERHETERODYNE AUTOMATIC VOLUME CONTROL RECEIVER AND ELECTRIC PHONOGRAPH COMBINATION MODEL 160 CHASSIS 115 AND 220 VOLTS, 25 - 40 AND 50-60 CYCLES.

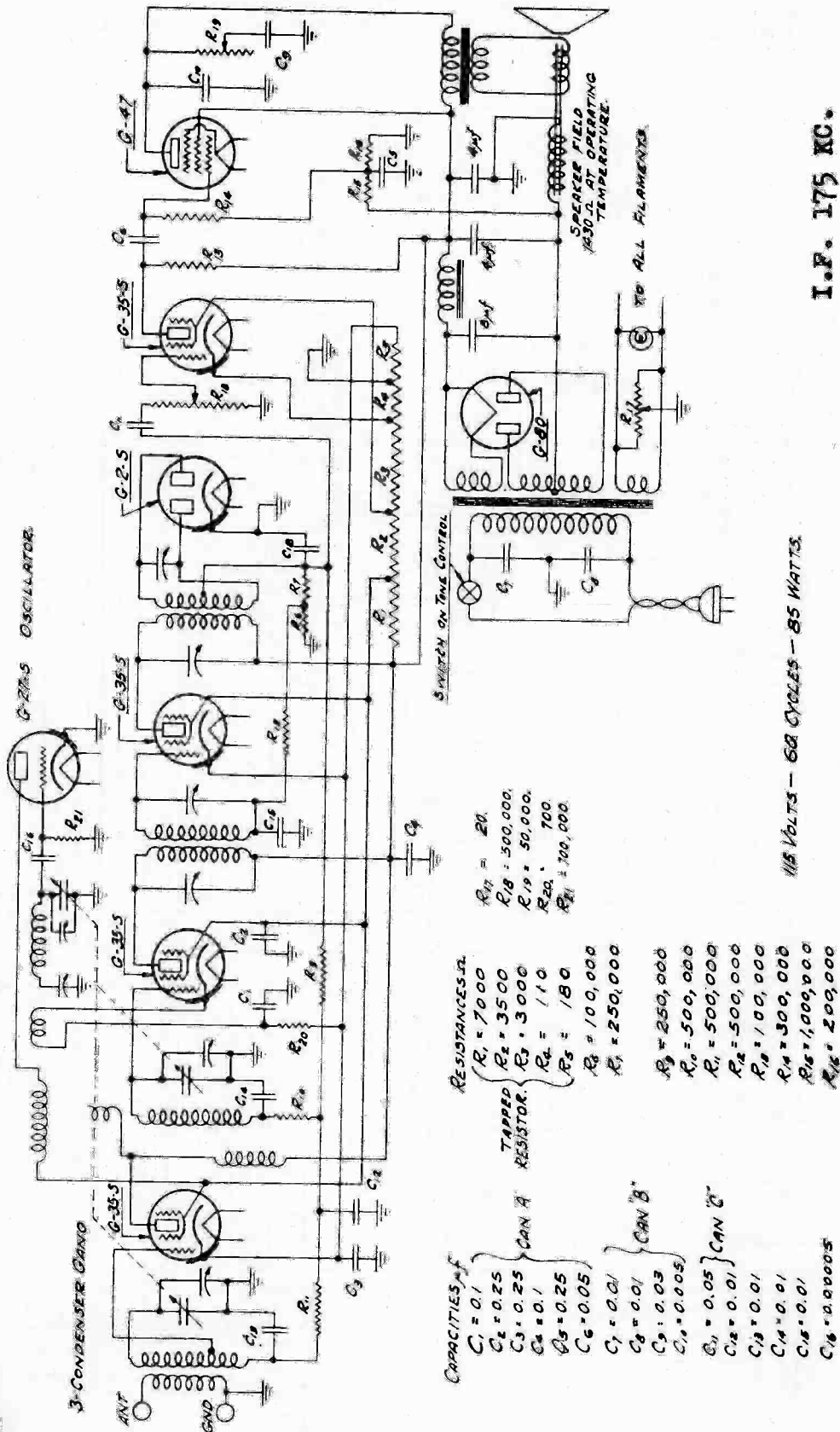


I.F. 175 KC.

| NOMINAL - VOLTAGE - ACTUAL | WATTS - CYCLES |     |     |       |       |
|----------------------------|----------------|-----|-----|-------|-------|
|                            | A              | B   | C   | D     | E     |
| (115)                      | 105            | 115 | 125 | 150   | 150   |
| (220)                      | 200            | 220 | 240 | 25-40 | 50-60 |

# MANUAL OF MOST-OFTEN-NEEDED RADIO DIAGRAMS

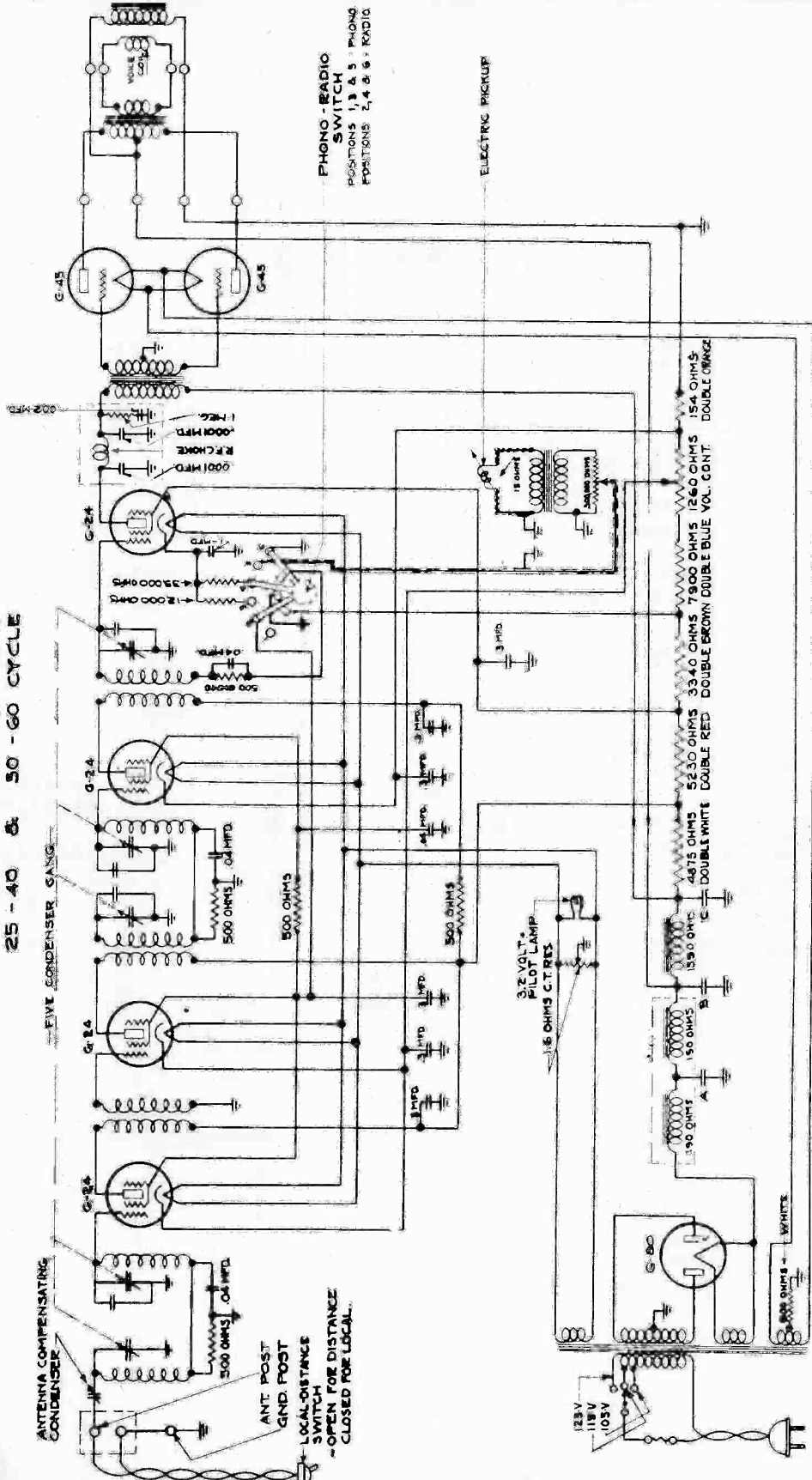
SCHEMATIC DIAGRAM OF MAJESTIC SCREEN GRID SUPERHETERODYNE  
AUTOMATIC VOLUME CONTROL RECEIVER - MODEL 200 CHASSIS.





# MANUAL OF MOST-OFTEN-NEEDED RADIO DIAGRAMS

## DIAGRAM of MAJESTIC SUPER SCREEN GRID RECEIVER MODEL 230-A CHASSIS 25 - 40 & 50 - 60 CYCLE



PHONO - RADIO  
SWITCH  
POSITIONS 1, 3 & 5 - PHONO  
POSITIONS 2, 4 & 6 - RADIO

ELECTRIC PICKUP

ANTENNA COMPENSATING  
CONDENSER

FIVE CONDENSER GANG

ANT. POST  
GND. POST  
LOCAL DISTANCE  
SWITCH FOR DISTANCE  
- OPEN FOR DISTANCE  
- CLOSED FOR LOCAL

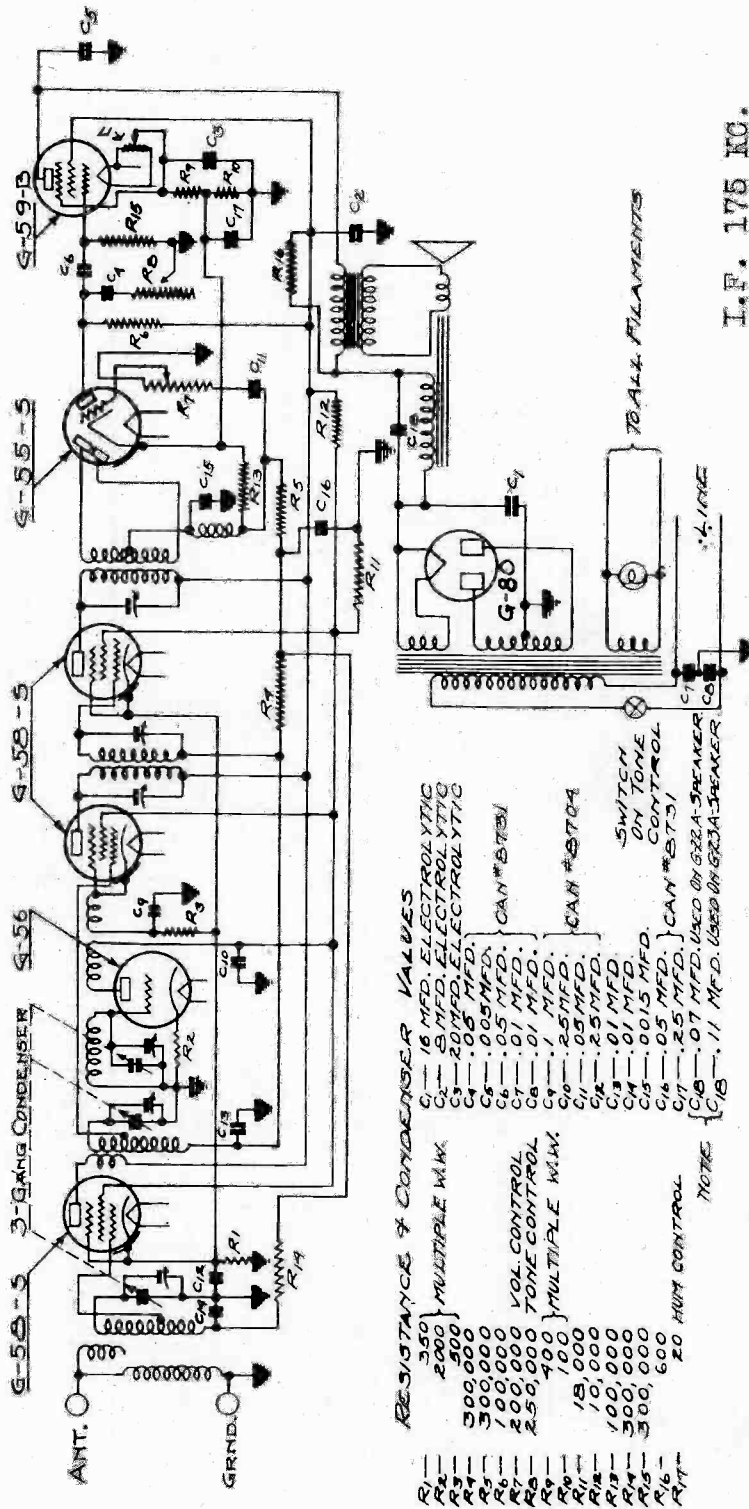
A B C  
25-40 CYCLE 4 MFD. 2MFD. 2MFD.  
50-60 CYCLE 2MFD. 2MFD. 2MFD.





# MANUAL OF MOST-OFTEN-NEEDED RADIO DIAGRAMS

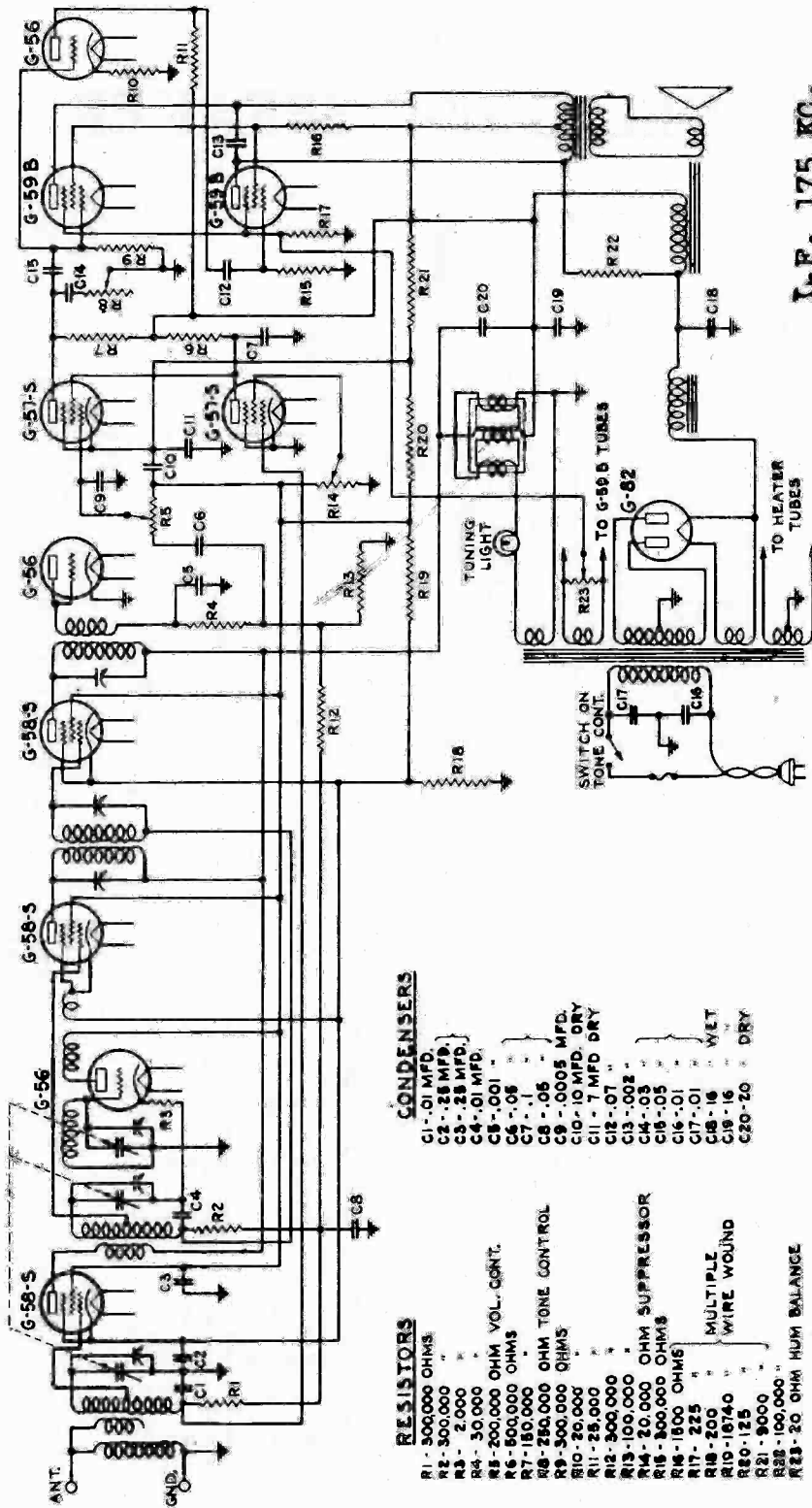
## DIAGRAM OF MAJESTIC AUTOMATIC VOLUME CONTROL SUPERHETERODYNE MODEL 330



Automatic volume control bias voltage is developed across resistors R-13 and R-10 and is applied to the grid of the radio frequency, first detector and intermediate frequency tubes to control their amplification.

The manual volume control is a 200,000 ohm potentiometer which is connected in the grid circuit of the G-55-S tube and works entirely independent of the automatic volume control.

SCHEMATIC DIAGRAM OF  
MAJESTIC MODEL 360 RECEIVER



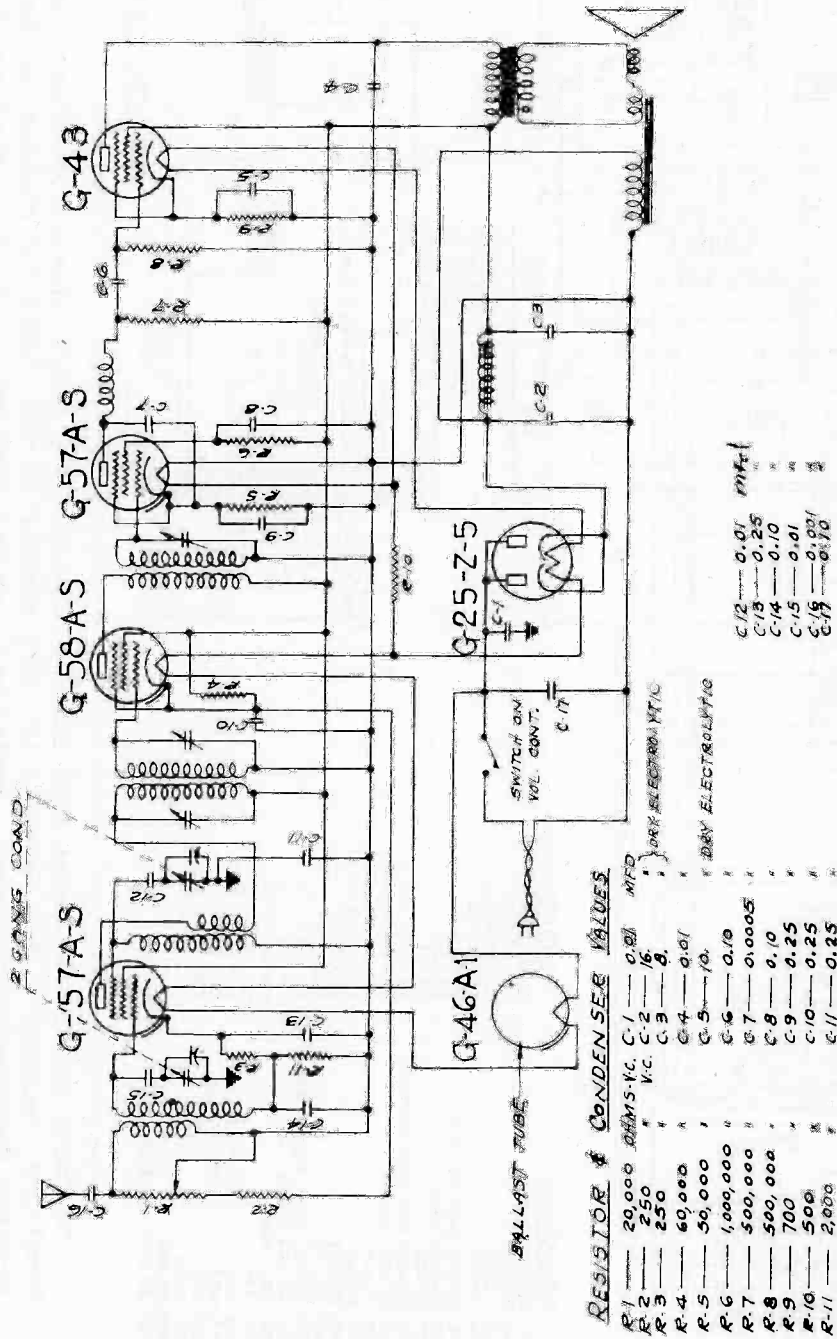
The Model 360 is an eleven tube chassis designed for single speaker operation in the Model 363 receiver. This chassis is very similar to the Model 300 chassis in that it provides Synchro-Silent Tuning, resistance coupled push-pull output, reactance dimmer action and automatic volume control. The tubes employed and their respective stages are as follows: G-58-S, R.F. amplifier; G-56, Oscillator; G-58-S, first detector; G-58-S, I.F. amplifier; G-56, second detector; G-57-S, first audio amplifier, G-57-S, suppressor; G-56, phase rotator; two G-59-B push-pull output and G-82 rectifier.

# MODEL 400 CHASSIS

and

# MODEL G-26-C SPEAKER

SCHEMATIC DIAGRAM OF MAJESTIC SCREEN GRID  
AC.-D.C. SUPERHETERODYNE RECEIVER MODEL - 400



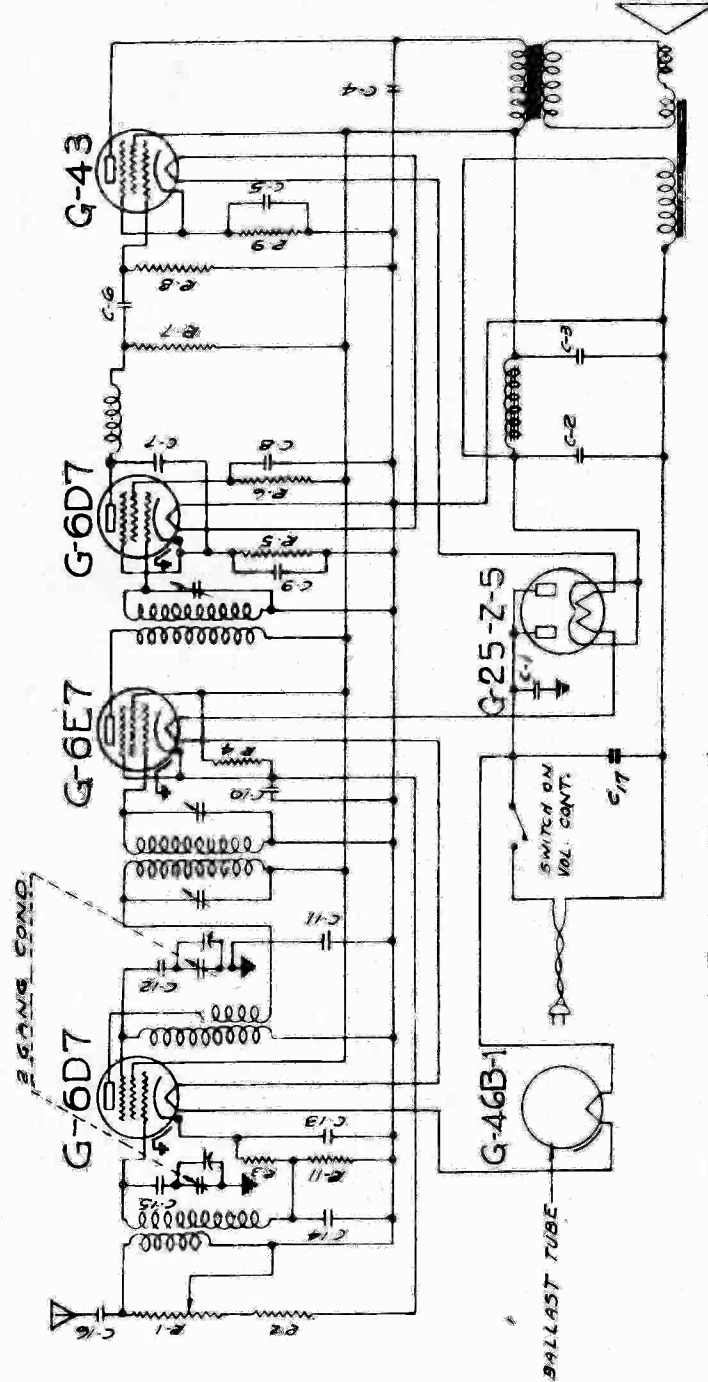
1 - With the volume control in maximum volume position and the gang condenser completely out of mesh, supply a 456 K.C. signal to the grid of the modulator tube and adjust the 4 I.F. tuning condensers for maximum sensitivity.

### ALIGNMENT PROCEDURE

2 - With the gang condenser and volume control in the same position, supply a 1730 K.C. signal to the input of the receiver and align the 2 R.F. trimmer condensers for maximum sensitivity.

# MANUAL OF MOST-OFTEN-NEEDED RADIO DIAGRAMS

## SCHEMATIC DIAGRAM OF MAJESTIC SCREEN GRID A.C.-D.C. SUPERHETERODYNE RECEIVER MODEL - 400-A



**RESISTOR & CONDENSER VALUES**

|      |           |           |      |        |     |
|------|-----------|-----------|------|--------|-----|
| R-1  | 20,000    | OHMS-V.C. | C-1  | 0.01   | MFD |
| R-2  | 250       | "         | C-2  | 16     | "   |
| R-3  | 160       | "         | C-3  | 5      | "   |
| R-4  | 60,000    | "         | C-4  | 0.01   | "   |
| R-5  | 50,000    | "         | C-5  | 10     | "   |
| R-6  | 1,000,000 | "         | C-6  | 0.10   | "   |
| R-7  | 500,000   | "         | C-7  | 0.0005 | "   |
| R-8  | 500,000   | "         | C-8  | 0.10   | "   |
| R-9  | 700       | "         | C-9  | 0.25   | "   |
| R-10 | 700       | "         | C-10 | 0.25   | "   |
| R-11 | 2500      | "         | C-11 | 0.25   | "   |
|      |           |           | C-12 | 0.01   | "   |
|      |           |           | C-13 | 0.25   | "   |
|      |           |           | C-14 | 0.10   | "   |
|      |           |           | C-15 | 0.01   | "   |
|      |           |           | C-16 | 0.01   | "   |
|      |           |           | C-17 | 0.10   | "   |

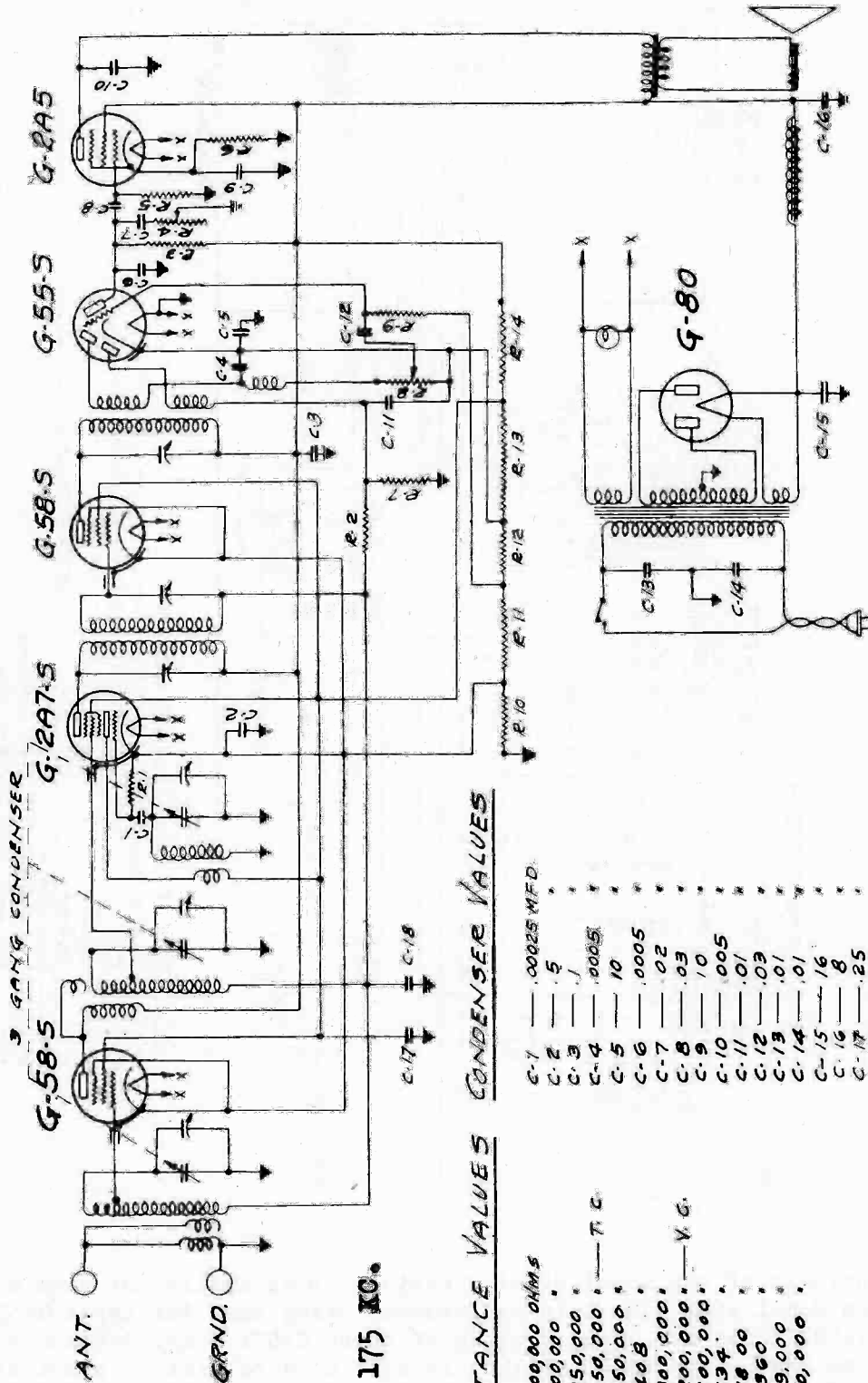
\* DRY ELECTROLYTIC  
\* DRY ELECTROLYTIC

I.F. 456 KC.

The circuit of the Model 400-A chassis is practically the same as that of the Model 400. The main differences being that the types G-6D7 and G-6E7 tubes are used in place of types G-57A-S and G-58A-S respectively; and that a type G-46A-1 tube is used as a ballast in place of the G-46B-1.

Resistors R-3 and R-11 have a value of 160 and 2500 ohms respectively in the Model 400-A chassis while they have a value of 250 and 200 ohms in the Model 400 chassis. Resistor R-10 is omitted entirely.

SCHEMATIC DIAGRAM  
OF  
MAJESTIC MODEL-460 RECEIVER



I.F. 175 KC.

RESISTANCE VALUES

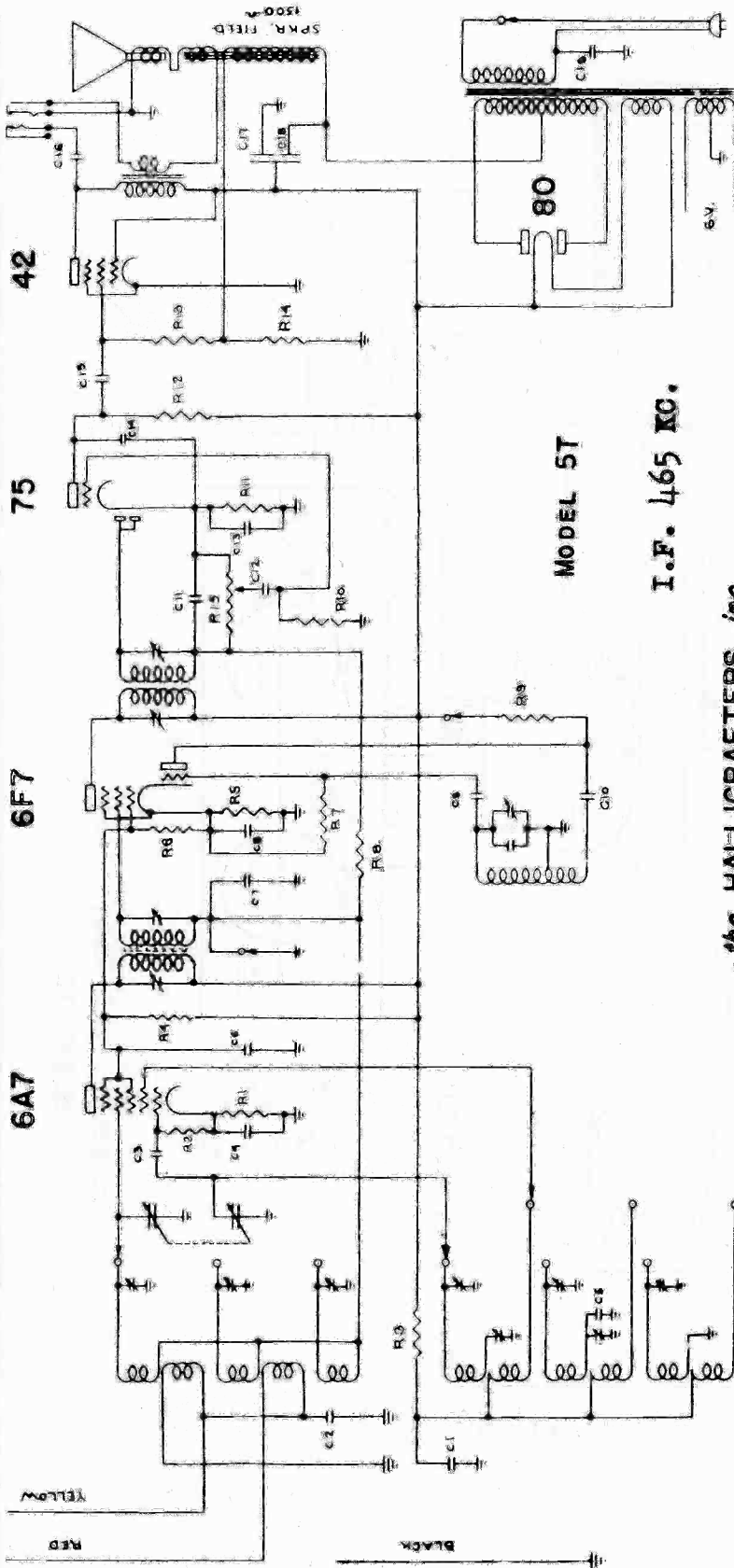
|      |                   |
|------|-------------------|
| R-1  | 100,000 OHMS      |
| R-2  | 100,000 "         |
| R-3  | 250,000 "         |
| R-4  | 250,000 " — T. C. |
| R-5  | 250,000 "         |
| R-6  | 408 "             |
| R-7  | 300,000 "         |
| R-8  | 200,000 " — V. C. |
| R-9  | 500,000 "         |
| R-10 | 134 "             |
| R-11 | 1800 "            |
| R-12 | 560 "             |
| R-13 | 9,000 "           |
| R-14 | 10,000 "          |

CONDENSER VALUES

|      |             |
|------|-------------|
| C-1  | .00025 MFD. |
| C-2  | .5 "        |
| C-3  | .1 "        |
| C-4  | .0005 "     |
| C-5  | 10 "        |
| C-6  | .0005 "     |
| C-7  | .02 "       |
| C-8  | .03 "       |
| C-9  | 10 "        |
| C-10 | .005 "      |
| C-11 | .01 "       |
| C-12 | .03 "       |
| C-13 | .01 "       |
| C-14 | .01 "       |
| C-15 | 16 "        |
| C-16 | 8 "         |
| C-17 | .25 "       |
| C-18 | .25 "       |



# MANUAL OF MOST-OFTEN-NEEDED RADIO DIAGRAMS



|     |         |
|-----|---------|
| R1  | 250     |
| R2  | 30,000  |
| R3  | 25,000  |
| R4  | 25,000  |
| R5  | 200     |
| R6  | 25,000  |
| R7  | 100,000 |
| R8  | 1 meg   |
| R9  | 100,000 |
| R10 | 1 meg   |
| R11 | 4000    |
| R12 | 250,000 |
| R13 | 400,000 |
| R14 | 250     |

MODEL 5T

I.F. 465 KC.

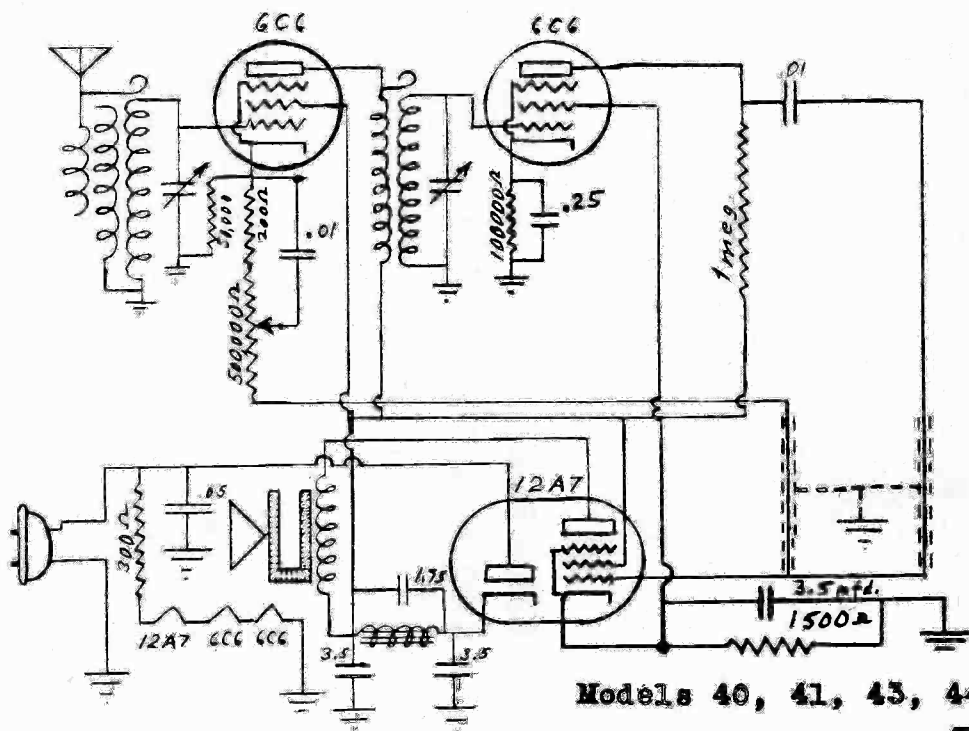
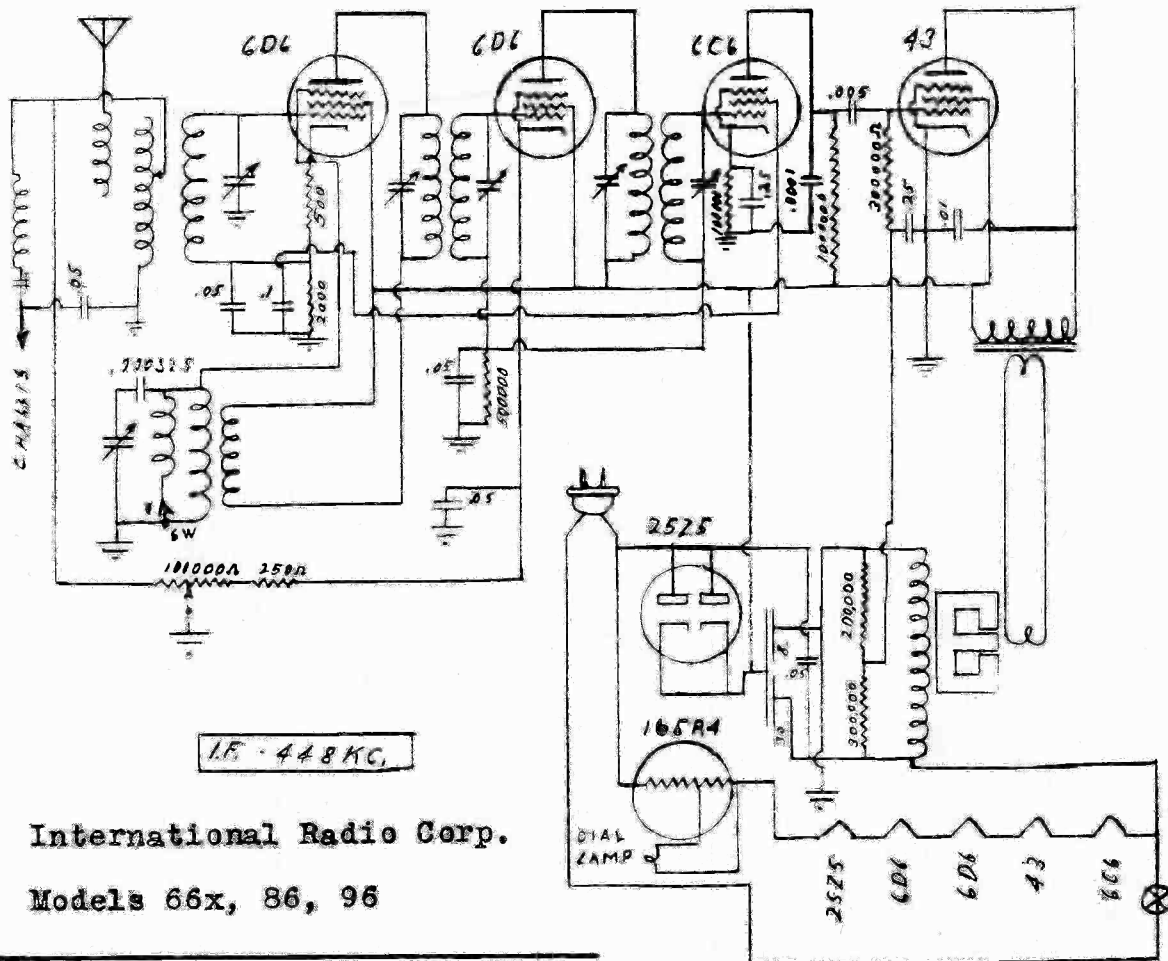
the HALLCRAFTERS inc.

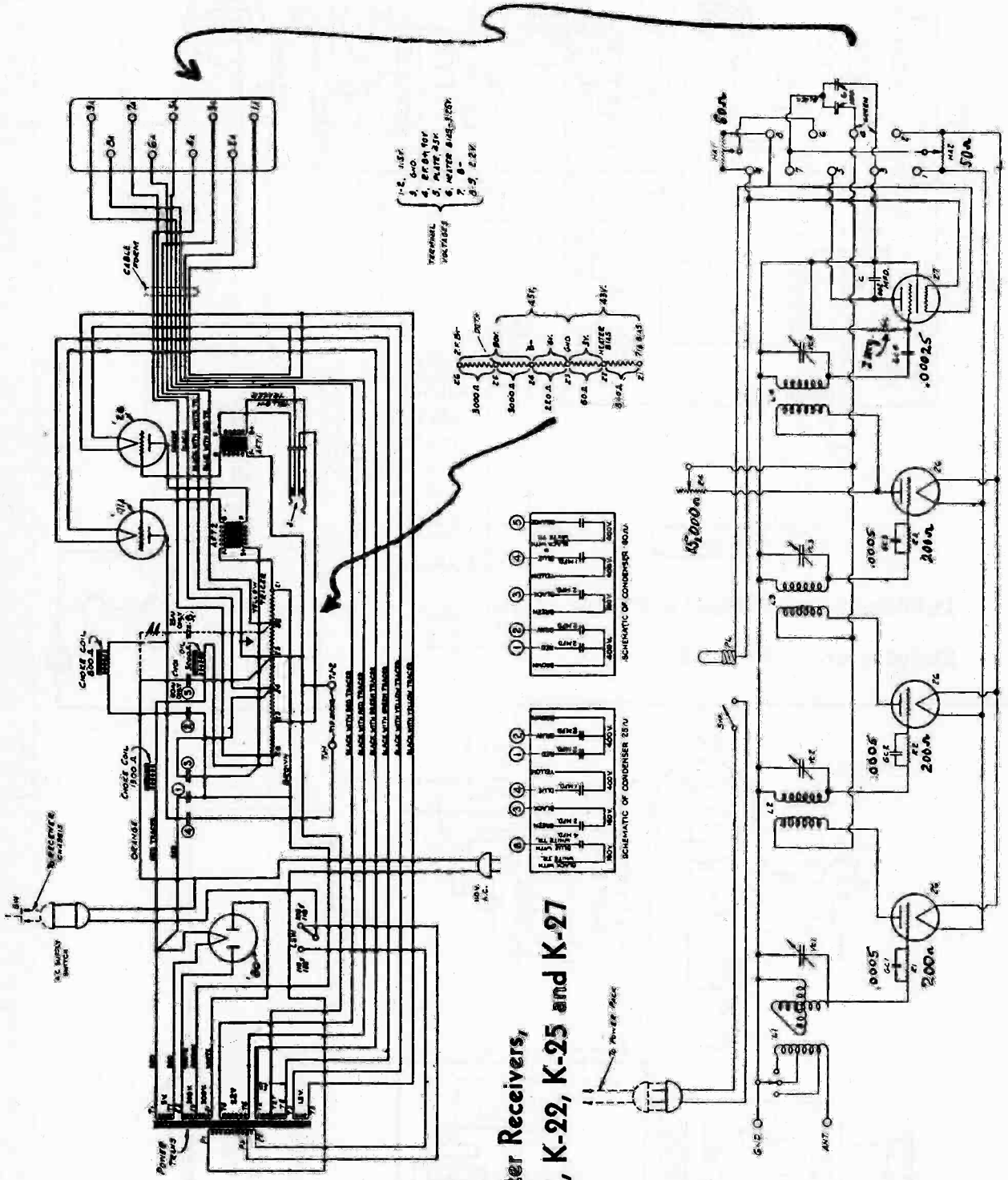
SKY BUDDY

|     |          |
|-----|----------|
| C1  | .1       |
| C2  | 10 mmf   |
| C3  | 100 mmf  |
| C4  | .1       |
| C5  | 1000 mmf |
| C6  | .1       |
| C7  | .05      |
| C8  | .1       |
| C9  | 250      |
| C10 | .01      |
| C11 | 250 mmf  |
| C12 | .01      |
| C13 | .1       |
| C14 | 250 mmf  |
| C15 | .01      |
| C16 | .05      |
| C17 | 8.mfd    |
| C18 | 4.mfd    |
| C19 | .01      |
| R1  | 400      |
| R2  | 200      |
| R3  | 400      |
| R4  | 200      |
| R5  | 200      |
| R6  | 400      |
| R7  | 400      |
| R8  | 400      |
| R9  | 400      |
| R10 | 400      |
| R11 | 400      |
| R12 | 400      |
| R13 | 400      |
| R14 | 200      |



# MANUAL OF MOST-OFTEN-NEEDED RADIO DIAGRAMS





Kolster Receivers,  
Models K-20, K-22, K-25 and K-27

# MANUAL OF MOST-OFTEN-NEEDED RADIO DIAGRAMS

## Simplified Radio Servicing by COMPARISON Method



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**

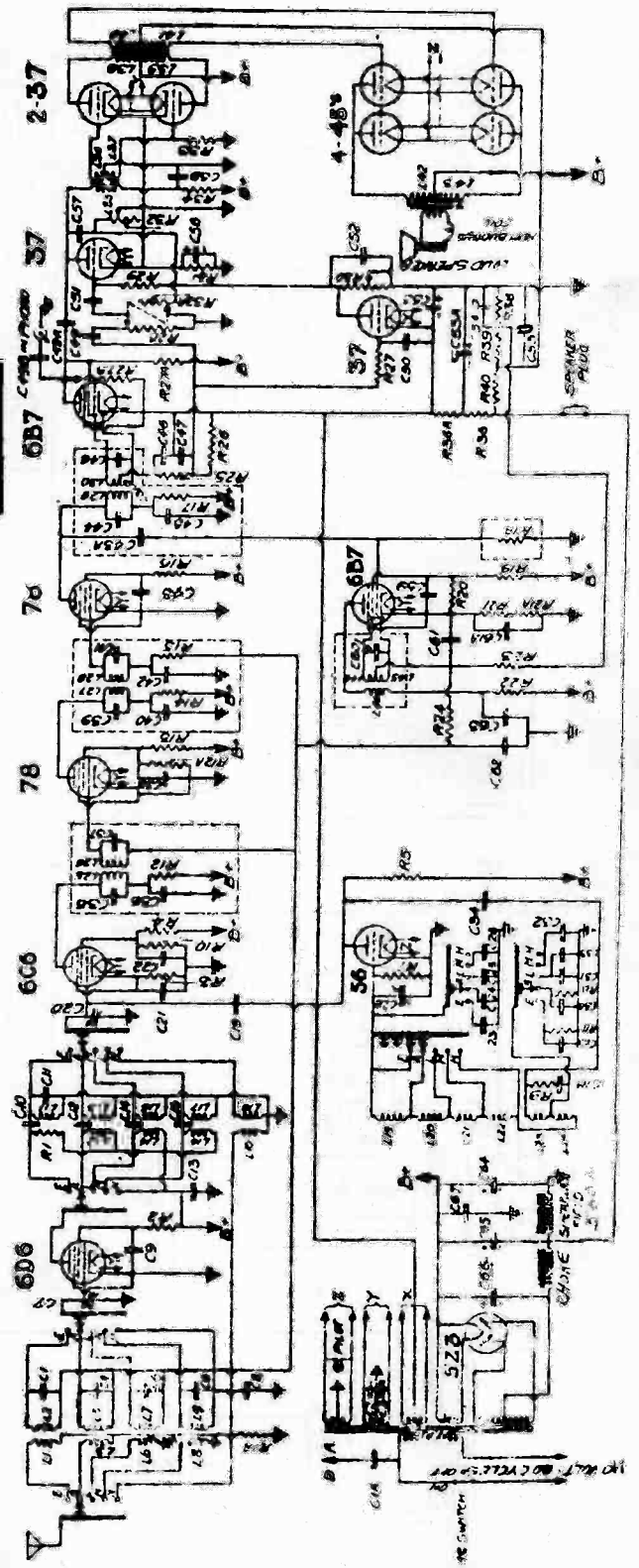
## Supreme Publications

PUBLISHERS OF RADIO BOOKS, MANUALS, AND DIAGRAMS

|                               |                          |                                       |
|-------------------------------|--------------------------|---------------------------------------|
| C1A - 250 MFD - MICA          | C57 - .25 - 400          | R10 - 5 000 - 25 WATT                 |
| C1 - 80 - TRIMMER             | C58 - 1 - 300            | R11 - 75 000 - 25                     |
| C2 - .05 MFD - 200 VOLT       | C59 - .25 - 400          | R12 - 200 000 - 25                    |
| C3 - .05 - 250                | C60 - I.F.T. - TRIMMER   | R13 - 5 000 - 25                      |
| C4 - 20 MFD - TRIMMER         | C61 - .05 MFD - 600 VOLT | R14 - 50 000 - 25                     |
| C5 - 20 -                     | C62 - .05 - 200          | R15 - 10 000 - 25                     |
| C6 - 20 -                     | C63 - .25 - 400          | R16 - 50 000 - 25                     |
| C7 - .365 - TUNING CONDENSER  | C64 - 8 - ELECTROLYTE    | R17 - 5 000 - 25                      |
| C8 - .05 MFD - 200 VOLT       | C65 - 8 -                | R18 - 3 MEG - 25                      |
| C9 - .05 - 400                | C66 - 8 -                | R19 - 25 000 - 5                      |
| C10 - 25 MFD - MICA           | C67 - .25 - 400 VOLT     | R20 - 50 000 - 5                      |
| C11 - 80 - TRIMMER            |                          | R21 - 4 000 - 25                      |
| C12 - 20 -                    |                          | R22 - 5 000 - 25                      |
| C13 - .05 MFD - 400 VOLT      |                          | R23 - 500 000 - 25                    |
| C14 - 20 MFD - TRIMMER        |                          | R24 - 100 000 - 25                    |
| C15 - 20 -                    |                          | R25 - 100 000 - 25                    |
| C16 - 25 - MICA               |                          | R26 - 500 000 - 25                    |
| C17 - 20 - TRIMMER            |                          | R27 - 500 000 - 25                    |
| C18 - 25 -                    |                          | R27A - 500 000 - 5                    |
| C19 - 20 - TRIMMER            |                          | R27B - 100 000 - 25                   |
| C20 - .365 - TUNING CONDENSER |                          | R28 - 500 000 - POT VOLUME CONTROL    |
| C21 - .05 MFD - 200 VOLT      |                          | R29 - 50 000 - 25 WATT                |
| C22 - .05 -                   |                          | R30 - 50 000 - POT SERVO-POT CONTROL  |
| C23 - 80 MFD - TRIMMER        |                          | R31 - 700 - I.F. TUNING               |
| C24 - 20 -                    |                          | R32 - 30 000 - VARIABLE TUNE CONTROL  |
| C25 - 20 -                    |                          | R32A - 50 000 - VARIABLE TUNE CONTROL |
| C26 - 20 -                    |                          | R33 - 10 000 - 25 WATT                |
| C27 - .365 - TUNING CONDENSER |                          | R34 - 10 000 - 1                      |
| C28 - 150 -                   |                          | R35 - 25 000 - 25                     |
| C29 - 500 -                   |                          | R36 - 25 000 - 25                     |
| C30 - 2000 - MICA             |                          | R37 - 10 000 - 25                     |
| C31 - 500 -                   |                          | R38 - 100 000 - 25                    |
| C32 - 2000 - MICA             |                          | R39 - 50 000 - 25                     |
| C33 - 500 -                   |                          | R40 - 50 000 -                        |
| C34 - 2000 -                  |                          | R41 - 50 000 -                        |
| C35 - I.F.T. - TRIMMER        |                          | R42 - 50 000 -                        |
| C36 - .05 MFD - 400 VOLT      |                          | R43 - 50 000 -                        |
| C37 - I.F.T. - TRIMMER        |                          | R44 - 50 000 -                        |
| C38 - .05 MFD - 400 VOLT      |                          | R45 - 50 000 -                        |
| C39 - I.F.T. - TRIMMER        |                          | R46 - 50 000 -                        |
| C40 - .05 MFD - 400 VOLT      |                          | R47 - 50 000 -                        |
| C41 - I.F.T. - TRIMMER        |                          | R48 - 50 000 -                        |
| C42 - .05 MFD - 200 VOLT      |                          | R49 - 50 000 -                        |
| C43 - .05 - 400               |                          | R50 - 50 000 -                        |
| C43A - 25 MFD - MICA          |                          | R51 - 50 000 -                        |
| C44 - I.F.T. - TRIMMER        |                          | R52 - 50 000 -                        |
| C45 - .05 MFD - 400 VOLT      |                          | R53 - 50 000 -                        |
| C46 - 250 MFD - MICA          |                          | R54 - 50 000 -                        |
| C47 - 250 - MICA              |                          | R55 - 50 000 -                        |
| C48 - I.F.T. - TRIMMER        |                          | R56 - 50 000 -                        |
| C49 - .05 MFD - 200 VOLT      |                          | R57 - 50 000 -                        |
| C50 - .05 - 400               |                          | R58 - 50 000 -                        |
| C51 - .05 - 200               |                          | R59 - 50 000 -                        |
| C52 - .05 - 200               |                          | R60 - 50 000 -                        |
| C53 - .05 - 200               |                          | R61 - 50 000 -                        |
| C54 - .05 - 200               |                          | R62 - 50 000 -                        |
| C55 - .05 - 200               |                          | R63 - 50 000 -                        |
| C56 - .05 - 200               |                          | R64 - 50 000 -                        |
| C57 - .05 - 200               |                          | R65 - 50 000 -                        |
| C58 - .05 - 200               |                          | R66 - 50 000 -                        |
| C59 - .05 - 200               |                          | R67 - 50 000 -                        |
| C60 - .05 - 200               |                          | R68 - 50 000 -                        |
| C61 - .05 - 200               |                          | R69 - 50 000 -                        |
| C62 - .05 - 200               |                          | R70 - 50 000 -                        |
| C63 - .05 - 200               |                          | R71 - 50 000 -                        |
| C64 - .05 - 200               |                          | R72 - 50 000 -                        |
| C65 - .05 - 200               |                          | R73 - 50 000 -                        |
| C66 - .05 - 200               |                          | R74 - 50 000 -                        |
| C67 - .05 - 200               |                          | R75 - 50 000 -                        |
| C68 - .05 - 200               |                          | R76 - 50 000 -                        |
| C69 - .05 - 200               |                          | R77 - 50 000 -                        |
| C70 - .05 - 200               |                          | R78 - 50 000 -                        |
| C71 - .05 - 200               |                          | R79 - 50 000 -                        |
| C72 - .05 - 200               |                          | R80 - 50 000 -                        |
| C73 - .05 - 200               |                          | R81 - 50 000 -                        |
| C74 - .05 - 200               |                          | R82 - 50 000 -                        |
| C75 - .05 - 200               |                          | R83 - 50 000 -                        |
| C76 - .05 - 200               |                          | R84 - 50 000 -                        |
| C77 - .05 - 200               |                          | R85 - 50 000 -                        |
| C78 - .05 - 200               |                          | R86 - 50 000 -                        |
| C79 - .05 - 200               |                          | R87 - 50 000 -                        |
| C80 - .05 - 200               |                          | R88 - 50 000 -                        |
| C81 - .05 - 200               |                          | R89 - 50 000 -                        |
| C82 - .05 - 200               |                          | R90 - 50 000 -                        |
| C83 - .05 - 200               |                          | R91 - 50 000 -                        |
| C84 - .05 - 200               |                          | R92 - 50 000 -                        |
| C85 - .05 - 200               |                          | R93 - 50 000 -                        |
| C86 - .05 - 200               |                          | R94 - 50 000 -                        |
| C87 - .05 - 200               |                          | R95 - 50 000 -                        |
| C88 - .05 - 200               |                          | R96 - 50 000 -                        |
| C89 - .05 - 200               |                          | R97 - 50 000 -                        |
| C90 - .05 - 200               |                          | R98 - 50 000 -                        |
| C91 - .05 - 200               |                          | R99 - 50 000 -                        |
| C92 - .05 - 200               |                          | R100 - 50 000 -                       |

THE MIDWEST RADIO CORP.  
808 BROADWAY CINCINNATI, OHIO.

SCHEMATIC CIRCUIT DIAGRAM  
OF THE  
MODEL 15-34 SET



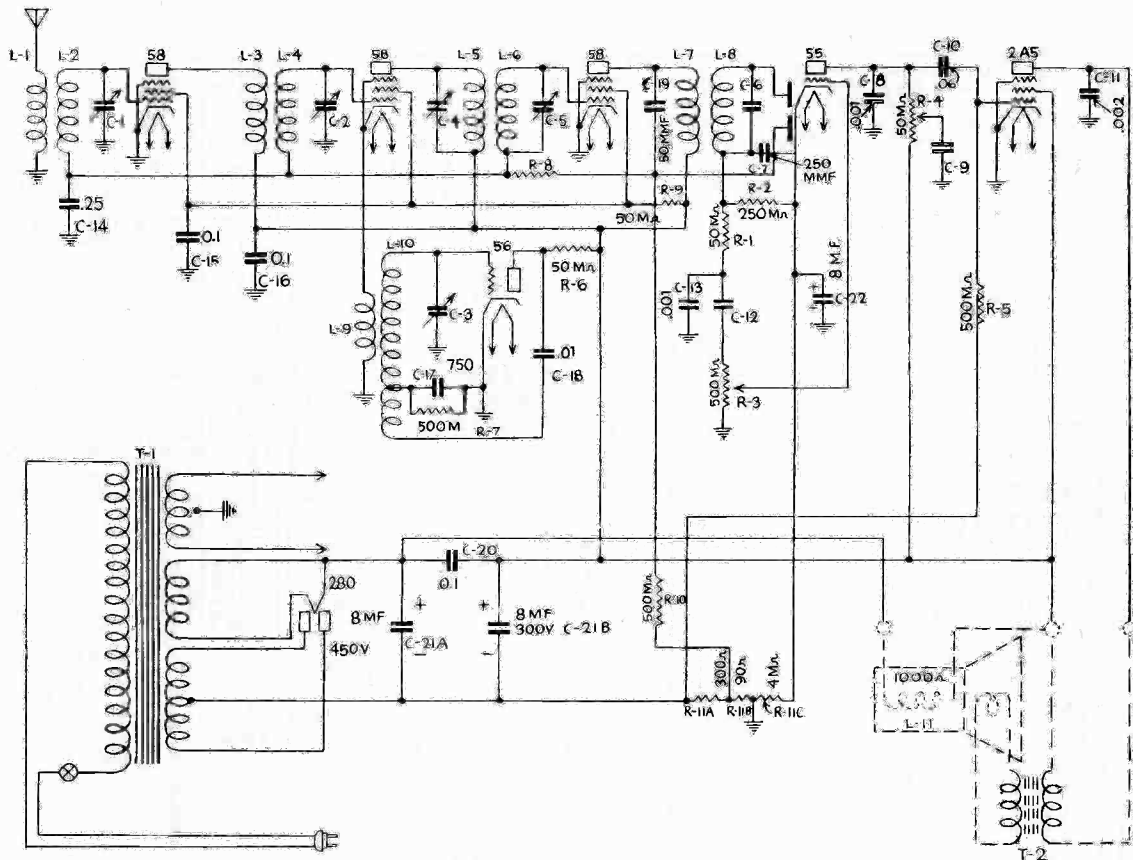
I.F. 450 KC.





# MANUAL OF MOST-OFTEN-NEEDED RADIO DIAGRAMS

MONTGOMERY WARD & Co.



No. 62-99 AND 62-97

## Circuit

The complete circuit consists of a type 58 tube functioning as an R. F. Amplifier, followed by another type 58 tube operating as a 1st detector, or mixer tube. A type 56 tube is used as an oscillator.

The I. F. amplifier utilizes a type 58 tube and is followed by the type 55 tube described above, functioning as a second detector, A. V. C. and first audio amplifier. A type 2A5 is used in the power audio stage.

The 58 R. F. Amplifier Tube is inductively coupled to the antenna by means of the antenna transformer, L-1, L-2, the secondary of which is tuned by one section of the three gang Tuning Condenser.

The second R. F. or first detector transformer provides inductive coupling between the plate circuit of the 58 R. F. Tube and grid circuit of the 58 1st Detector Tube. The secondary of this transformer is tuned by the second section of the three gang Tuning Condenser.

The stage of R. F. amplification consisting of the 58 R. F. Tube, together with its associated R. F. Transformers serves the double purpose of increasing the sensitivity and selectivity of the receiver as well as practically eliminating image or double frequency response.

Grid bias for the 58 R. F. Tube is variable and is controlled by the A. V. C. diode in accordance with the strength of the incoming signal.

A type 58 tube is used as a first detector or mixer which is of the bias type. The grid bias of this tube is also controlled by the A. V. C.

The oscillator is of the tuned grid type and is tuned by the third section of the three gang Tuning Condenser.

The oscillator frequency is exactly 262 K. C. above the frequency of the received signal. To provide that the oscillator shall track accurately it is provided with a 675 Mmf. Series Padder Condenser, C-17, and also a shunt trimmer condenser which allows accurate alignment at high frequencies.

## Voltages at Sockets

Line Voltage 115—Volume Control at Maximum

| Type of Tube | Position of Tube | Function               | $\frac{1}{2}$ " A. V. Volts | $\frac{1}{4}$ " B. V. Volts          | Control Grid "C" Volts | Screen Grid Volts | Screen Current mA | Plate Current mA     | Cathode Volts |
|--------------|------------------|------------------------|-----------------------------|--------------------------------------|------------------------|-------------------|-------------------|----------------------|---------------|
| 56           | 1                | Osc.                   | 2.3                         | 110                                  | 15-30 <sup>(1)</sup>   | .....             | .....             | 3-3.4 <sup>(1)</sup> | 0             |
| 58           | 2                | R. F.                  | 2.3                         | 260                                  | 2.0 <sup>(2)</sup>     | 90 <sup>(3)</sup> | 1.2               | 4.8                  | 0             |
| 58           | 3                | 1st Det.               | 2.3                         | 260                                  | 2.0 <sup>(2)</sup>     | 90 <sup>(3)</sup> | 1.2               | 5.4                  | 0             |
| 58           | 4                | I. F.                  | 2.3                         | 260                                  | 2.0 <sup>(2)</sup>     | 90 <sup>(3)</sup> | 1.2               | 4.6                  | 0             |
| 55           | 5                | 2nd Det. AVC-1st Audio | 2.3                         | Diode 1-0<br>Diode 2-3<br>Triode 135 | 2.0 <sup>(2)</sup>     | .....             | .....             | 4.6                  | 12            |
| 2A5          | 6                | Power                  | 2.3                         | 255                                  | 3.0 <sup>(4)</sup>     | 260               | .....             | .....                | 0             |
| 80           | 7                | Rectifier              | 4.8                         | .....                                | .....                  | .....             | .....             | 26 Per Plate         | 0             |

<sup>(1)</sup>Varies with frequency approximately as shown.

<sup>(2)</sup>Voltage as read with 60,000 ohm meter—across 90 ohm section of R-11—50 volts.

<sup>(3)</sup>Voltage as read with 600,000 ohm meter.

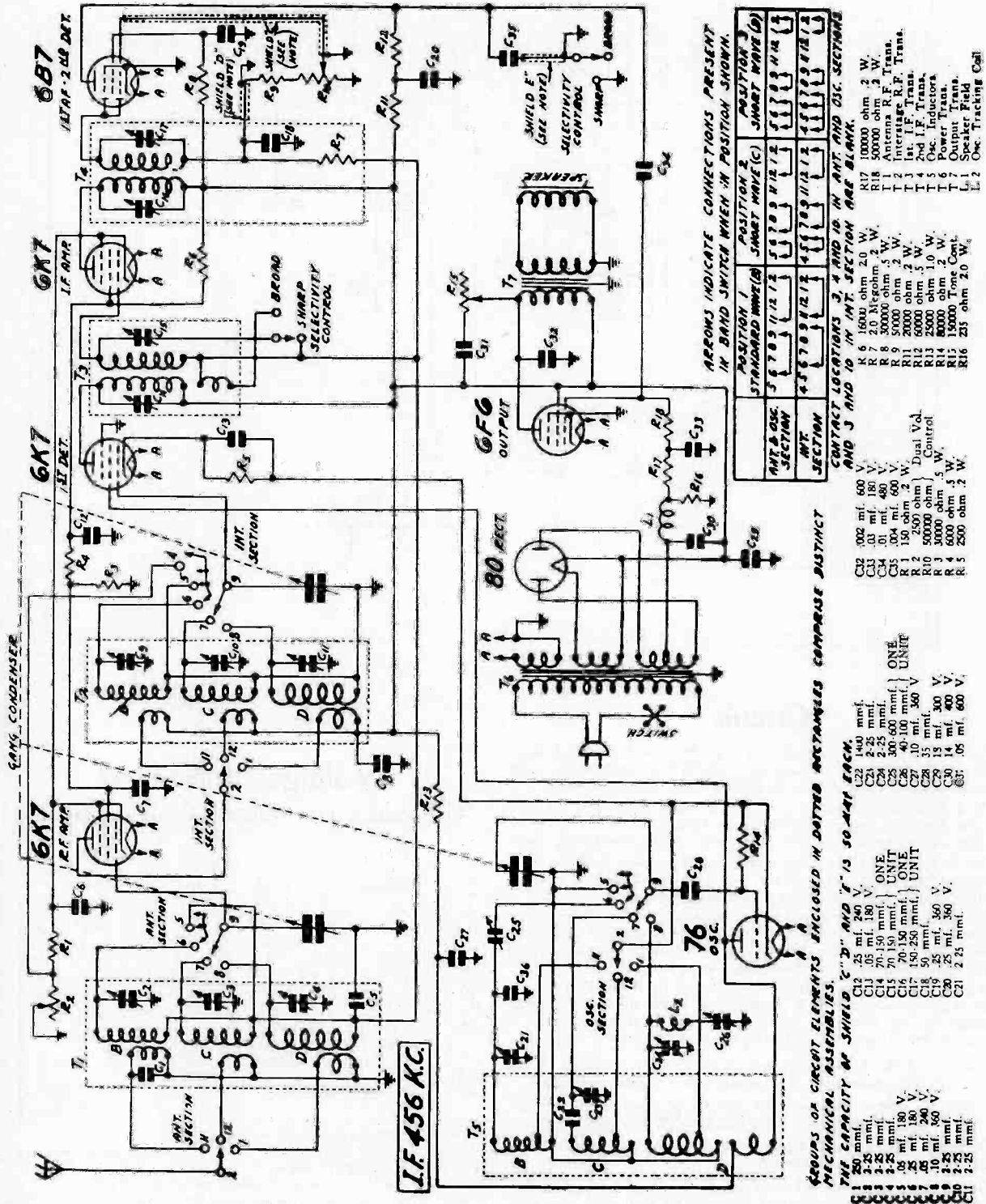
<sup>(4)</sup>Not actual voltage due to resistance in circuit—tone voltage—17 volts.

<sup>(5)</sup>Voltage as read with 60,000 ohm meter—across 4000 ohm section of R-11—12 volts.

<sup>(6)</sup>Voltage as read with 60,000 ohm meter—across 300 and 90 ohm section of R-11—23 volts.

# MANUAL OF MOST-OFTEN-NEEDED RADIO DIAGRAMS

Montgomery Ward Models 62-185, 62-187, 62-190, 62-196



ARROWS INDICATE CONNECTIONS PRESENT IN BAND SWITCH WHEN IN POSITION SHOWN.

| POSITION 1<br>STANDARD WAVE (A) | POSITION 2<br>SHORT WAVE (C) | POSITION 3<br>SHORT WAVE (D) |
|---------------------------------|------------------------------|------------------------------|
| 5 7 9 11 12 14                  | 1 3 5 7 9 11 12 14           | 1 3 5 7 9 11 12 14           |
| 4 5 6 7 8 9 10 11 12            | 4 5 6 7 8 9 10 11 12         | 4 5 6 7 8 9 10 11 12         |

CONTACT LOCATIONS 3, 4 AND 10 IN ANT. AND OSC. SECTIONS AND 3 AND 10 IN INT. SECTION ARE BLANK

- R 7 15000 ohm 2.0 W.
- R 8 50000 ohm 2.0 W.
- R 9 30000 ohm .5 W.
- R 10 20000 ohm .5 W.
- R 11 20000 ohm .5 W.
- R 12 50000 ohm .5 W.
- R 13 50000 ohm .5 W.
- R 14 40000 ohm .5 W.
- R 15 150000 Time Cont.
- R 16 235 ohm 2.0 W.
- R 17 10000 ohm 2.0 W.
- R 18 50000 ohm 2.0 W.
- T 1 Antenna R.F. Trans.
- T 2 Intermediate R.F. Trans.
- T 3 1st I.F. Trans.
- T 4 2nd I.F. Trans.
- T 5 Osc. Inductors
- T 6 Output Trans.
- T 7 Speaker Field
- L 1 Osc. Tracking Coil

- C 2 100 mf. 60 V.
- C 3 .02 mf. 180 V.
- C 4 .01 mf. 60 V.
- C 5 .004 mf. 60 V.
- R 1 150 ohm 2.0 W.
- R 2 50000 ohm .5 W.
- R 3 6000 ohm .5 W.
- R 4 3000 ohm .5 W.
- R 5 250 ohm 2.0 W.
- C 22 140 mmi.
- C 23 2.25 mmi.
- C 24 2.25 mmi.
- C 25 300-600 mmi.
- C 26 70-150 mmi.
- C 27 10 mf. 360 V.
- C 28 35 mmi.
- C 29 15 mf. 300 V.
- C 30 14 mf. 400 V.
- C 31 .05 mf. 600 V.
- C 32 2.25 mmi.

- C 12 .25 mf. 240 V.
- C 13 .05 mf. 180 V.
- C 14 70-150 mmi.
- C 15 300-600 mmi.
- C 16 70-150 mmi.
- C 17 150-250 mmi.
- C 18 50 mmi.
- C 19 .25 mf. 360 V.
- C 20 .25 mf. 360 V.
- C 21 2.25 mmi.

- C 22 140 mmi.
- C 23 2.25 mmi.
- C 24 2.25 mmi.
- C 25 300-600 mmi.
- C 26 70-150 mmi.
- C 27 10 mf. 360 V.
- C 28 35 mmi.
- C 29 15 mf. 300 V.
- C 30 14 mf. 400 V.
- C 31 .05 mf. 600 V.
- C 32 2.25 mmi.

- C 1 250 mmi.
- C 2 2.25 mmi.
- C 3 2.25 mmi.
- C 4 70-150 mmi.
- C 5 300-600 mmi.
- C 6 70-150 mmi.
- C 7 150-250 mmi.
- C 8 50 mmi.
- C 9 .25 mf. 360 V.
- C 10 .25 mf. 360 V.
- C 11 2.25 mmi.

GROUPS OF CIRCUIT ELEMENTS ENCLOSED IN DOTTED RECTANGLES COMPRISE DISTINCT MECHANICAL ASSEMBLIES. THE CAPACITY OF SHIELD "D" AND "E" IS 50 MMF EACH.

# MANUAL OF MOST-OFTEN-NEEDED RADIO DIAGRAMS

Montgomery Ward Radio Model 62-233

## DESCRIPTION

### Tubes

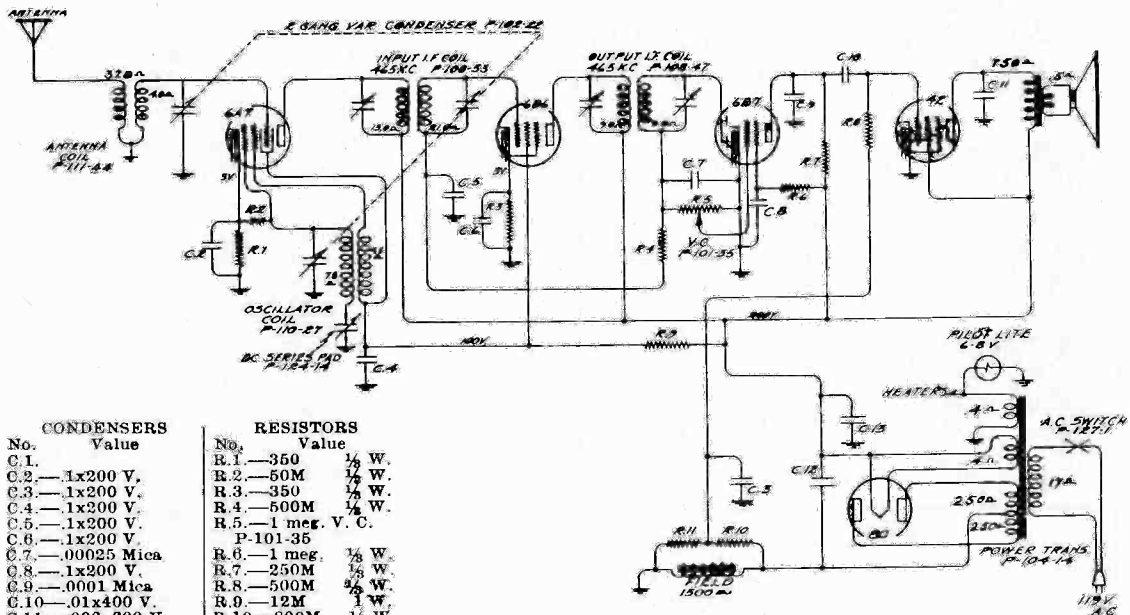
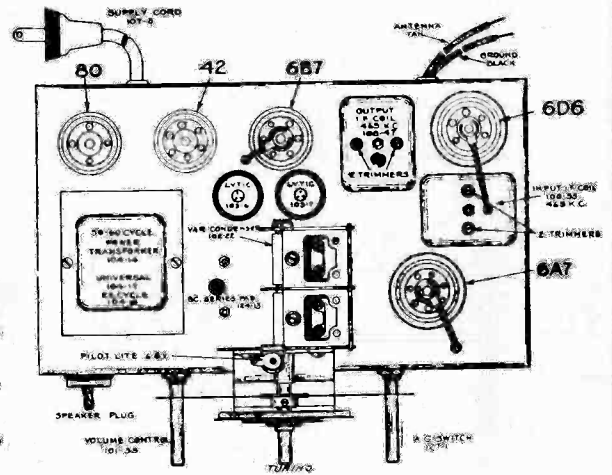
The Tube complement of this chassis is as follows:

- 1 Type 6A7—pentagrid electron coupled oscillator and first detector.
- 1 Type 6D6—remote cut-off pentode as I.F. amplifier.
- 1 Type 6B7—duplex diode pentode as diode detector, A.V.C. and A.F.
- 1 Type 42—pentode output tube.
- 1 Type 80—high vacuum rectifier.

Voltages taken from different points of circuit to chassis are measured with volume control full on, all tubes in their sockets and speaker connected, with a volt meter having a resistance of 1000 ohms per volt. These voltages are clearly indicated on the circuit diagram.

All voltages are measured with 119 volts on the primary of the power transformer.

Resistance of coils and transformer windings are indicated in ohms on schematic circuit diagram.



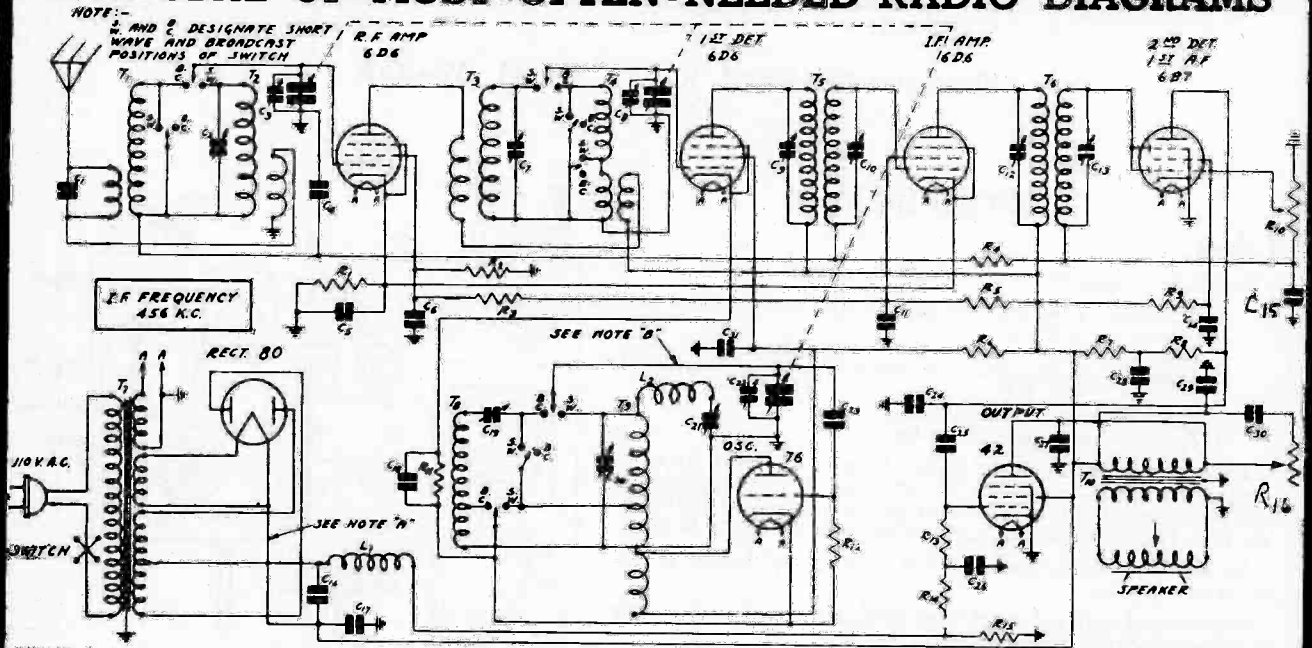
| CONDENSERS |                               |
|------------|-------------------------------|
| No.        | Value                         |
| C.1.       |                               |
| C.2.       | 1x200 V.                      |
| C.3.       | 1x200 V.                      |
| C.4.       | 1x200 V.                      |
| C.5.       | 1x200 V.                      |
| C.6.       | 1x200 V.                      |
| C.7.       | .00025 Mica                   |
| C.8.       | 1x200 V.                      |
| C.9.       | .0001 Mica                    |
| C.10.      | .01x400 V.                    |
| C.11.      | .006x800 V.                   |
| C.12.      | 8 mfd. lytic x 350 V.—P-103-6 |
| C.13.      | 8 mfd. lytic x 300 V.—P-103-7 |

| RESISTORS |              |     |
|-----------|--------------|-----|
| No.       | Value        | W.  |
| R.1.      | 350          | 1/2 |
| R.2.      | 50M          | 1/2 |
| R.3.      | 350          | 1/2 |
| R.4.      | 500M         | 1/2 |
| R.5.      | 1 meg. V. C. |     |
|           | P-101-35     |     |
| R.6.      | 1 meg.       | 1/2 |
| R.7.      | 250M         | 1/2 |
| R.8.      | 500M         | 1/2 |
| R.9.      | 12M          | 1   |
| R.10.     | 800M         | 1/2 |
| R.11.     | 201M         | 1/2 |

### Service Notes

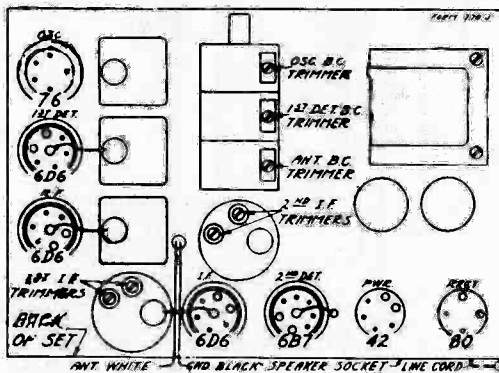
To check for open by-pass condensers, shunt each condenser with another of similar capacity and of the same voltage rating, which is known to be good, until the defective unit is located. Open by-pass condensers frequently cause oscillation and distorted tone. Defective and shorted electrolytic filter condensers cause excessive hum, motor-boating, low volume and a reduction in all D.C. voltages. Open or shorted electrolytic and by-pass condensers (across bias resistor of type 42 tube) will cause low volume and distorted tone.

# MANUAL OF MOST-OFTEN-NEEDED RADIO DIAGRAMS



NOTE "A" - FILTER CHoke USED IN SERIES AT THIS POINT IN 1ST MODELS. NOTE "B" - SERIES PADDER USED IN SERIES AT THIS POINT IN 761 MODELS. C<sub>15</sub> & C<sub>16</sub> WERE NOT USED.

## Montgomery Ward Models 62-123, 62-131, 62-133, 62-142, 62-144, 62-152,



| Code | Capacity           | Volts | Type                 |
|------|--------------------|-------|----------------------|
| C1   | .00025 mfd.        |       | Moulded              |
| C2   | 3-40 mmfd.         |       | Ant. S. W. Trimmer   |
| C3   | (See 3 Gang Cond.) |       | Gang Trimmer         |
| C4   | .05 mfd.           | 200V. | Tubular              |
| C5   | .25 mfd.           | 200V. | Tubular              |
| C6   | .05 mfd.           | 400V. | Tubular              |
| C7   | 3-40 mmfd.         |       | 1st Det. S. W. Trim  |
| C8   | (See 3 Gang Cond.) |       | Gang Trimmer         |
| C9   | 90±30 mmfd.        |       | Dual Trimmer         |
| C10  | 90±30 mmfd.        |       | Part of I. F. Assem. |
| C11  | .25 mfd.           | 300V. | Tubular              |
| C12  | 90±30 mmfd.        |       | Dual Trimmer         |
| C13  | 90±30 mmfd.        |       | Part of I. F. Assem. |
| C14  | .25 mfd.           | 400V. | Tubular              |
| C15  | .0001 mfd.         |       | Moulded              |
| C16  | 18.0 mfd.          | 300V. | Electrolytic Wet     |
| C16  | 8.0 mfd.           | 450V. | Electrolytic Wet     |
| C17  | 8.0 mfd.           | 500V. | Electrolytic Wet     |
| C17  | 14.0 mfd.          | 400V. | Electrolytic Wet     |
| C18  | .05 mfd.           | 200V. | Tubular              |
| C19  | 300-500 mmfd.      |       | 600 K. C. Trimmer    |
| C20  | 3-40 mmfd.         |       | Osc. S. W. Trimmer   |
| C21  | 70±30 mmfd.        |       | 6000 K. C. Trimmer   |
| C22  | (See 3 Gang Cond.) |       | Gang Trimmer         |
| C23  | .000035 mfd.       |       | Moulded              |
| C24  | .002 mfd.          | 600V. | Tubular              |
| C25  | .01 mfd.           | 400V. | Tubular              |
| C26  | .03 mfd.           | 400V. | Tubular              |
| C27  | .002 mfd.          | 600V. | Tubular              |
| C28  | .25 mfd.           | 400V. | Tubular              |
| C29  | .1 mfd.            | 400V. | Tubular              |
| C30  | .05 mfd.           | 400V. | Tubular              |
| C31  | .1 mfd.            | 400V. | Tubular              |

## Voltages at Sockets LINE VOLTAGE — 115 ANTENNA SHORTED TO GROUND

| Type of Tube | Function  | Across Fila. or Heater | Plate to Cath. | Screen to Cath. | Control Grid to Cath. | Normal Plate M. A. |
|--------------|-----------|------------------------|----------------|-----------------|-----------------------|--------------------|
| 6D6          | R. F.     | 6.3                    | 246            | 100             | 3.6(1)                | 5.3                |
| 6D6          | 1st Det.  | 6.6                    | 237            | 97              | 8.0(2)                | 3.4                |
| 76           | Osc.      | 6.3                    | 115            |                 | 0                     | 4.8                |
| 6D6          | I. F.     | 6.3                    | 246            | 130             | 3.6(1)                | 8.3                |
| 6B7          | 2nd Det.  | 6.3                    | 50(3)          | 40(3)           | 0                     | 2.7                |
| 42           | Power     | 6.3                    | 230            | 245             | 17.0(4)               | 33.0               |
| 80           | Rectifier | 5.0                    |                |                 |                       | 37.0 per plate     |

- (1) Cathode to ground
- (2) Subject to variation
- (3) Read with 1,000,000 ohm meter
- (4) As read across R15

| Code | Resistance  | Watts | Type                  |
|------|-------------|-------|-----------------------|
| R1   | 200 ohm     | .2    | Flex. Wire Wound      |
| R2   | 30,000 ohm  | .5    | Carbon                |
| R3   | 6,000 ohm   | .5    | Carbon                |
| R4   | 2.0 megohm  | .2    | Carbon                |
| R5   | 16,000 ohm  | 1.5   | Armored               |
| R6   | 25,000 ohm  | 1.0   | wire wound            |
| R7   | 20,000 ohm  | .2    | Carbon                |
| R8   | 60,000 ohm  | .5    | Carbon                |
| R9   | 250,000 ohm | .5    | Carbon                |
| R10  | 500,000 ohm |       | Vol. Control & Switch |
| R11  | 2,500 ohm   | .2    | Carbon                |
| R12  | 100,000 ohm | .2    | Carbon                |
| R13  | 500,000 ohm | .2    | Carbon                |
| R14  | 100,000 ohm | .2    | Carbon                |
| R15  | 235 ohm     | 2.0   | Flex. Wire Wound      |
| R16  | 150,000 ohm |       | Tone Control          |

COMPILED BY M. N. BEITMAN, SUPREME PUBLICATIONS



# MANUAL OF MOST-OFTEN-NEEDED RADIO DIAGRAMS

## WARDS AIRLINE RADIO

### MODELS 62-425 and 62-265

The tube complement of this chassis is as follows:

- 1 Type 6A7—pentagrid oscillator and first detector.
- 1 Type 78 —remote cut-off triode as I.F. amplifier.
- 1 Type 75 —duplex diode triode as diode detector, A.V.C. and A.F.
- 1 Type 41—pentode output tube.
- 1 Type 5Z4 or 5Y3—high vacuum rectifier.

#### ALIGNING INSTRUCTIONS:

**CAUTION:**—No aligning adjustments should be attempted without first thoroughly checking over all other possible causes of trouble, such as poor installations, open or grounded antenna systems, low line voltages, defective tubes, condensers and resistors. In order to properly align this chassis, an oscillator (generator) is absolutely necessary. No aligning adjustments should be attempted with the chassis in the cabinet. Remove the knobs and the two bolts which are used to fasten the chassis.

All adjustments should be made with a non-metallic screw driver.

#### RESONANCE INDICATOR:

Use as a resonance indicator an output meter connected across the primary of the speaker input transformer, or by

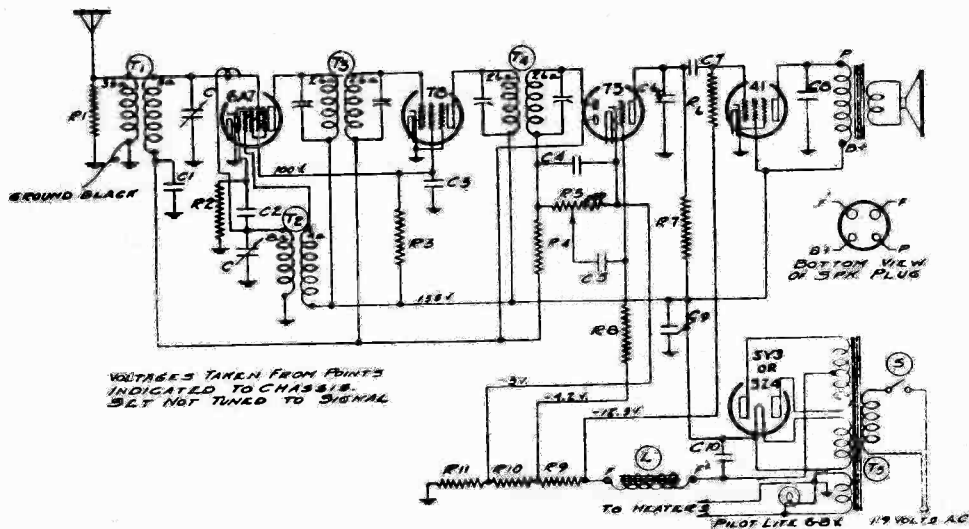
means of an adapter between the plate and screen terminals of the type 41 output tube. Use only enough signal to get a readily readable output. A low range output meter or the low scale of a multi-range voltmeter should be used.

#### ALIGNING I. F. TRANSFORMERS: (465 K. C.)

Connect external oscillator which has been adjusted to 465 kilocycles in series with .1 mfd. condenser, to the control grid cap of the type 6A7 tube. Ground the chassis to the oscillator. Adjust output I.F. transformer (No. 108-83) and input I.F. transformer (No. 108-82) to resonance. See label on bottom of cabinet for location of these transformers.

#### R. F. ALIGNMENT: (535-1720 K. C.)

1. With gang condenser in its minimum capacity position, plates entirely out of mesh, connect an external oscillator in series with a 200 mmf. condenser to an antenna and black ground leads and make the following adjustments:
  - (a) With external oscillator set at 1720 kilocycles, adjust oscillator trimmer (rear of gang condenser).
  - (b) Re-set external oscillator to 1400 kilocycles, rotate condenser, pick up oscillator signal and adjust antenna trimmer to resonance (front section of gang condenser).
  - (c) Check sensitivity at 600 and 1000 kilocycles.



#### CONDENSERS

| Part No.  | Schematic Reference | Description                         | No. Used In Set |
|-----------|---------------------|-------------------------------------|-----------------|
| BE 100-11 | C-5:C-7             | .01 x 400 Volt Tubular              | 2               |
| BE 100-19 | C-8                 | .006 x 600 Volt Tubular             | 1               |
| BE 100-1  | C-3                 | .1 x 400 Volt Tubular               | 1               |
| BE 100-22 | C-1                 | .05 x 200 Volt Tubular              | 1               |
| BE 119-24 | C-9:C-10            | Dual 5 mfd. x 200 Volt Electrolytic | 1               |
| BE 129-5  | C-6                 | .0001 Mica—Type MT—20%              | 1               |
| BE 129-12 | C-2:C-4             | .00025 Mica—Type MT—20%             | 2               |

#### RESISTORS

| Part No.   | Schematic Reference | Description  | No. Used In Set |
|------------|---------------------|--|-----------------|
| BE 106-29  | R-9;R-10            | (R9, 200 ohm); (R10, 33 ohm); (R11, 100 ohm) Metal clad resistor | 1               |
| BE 130-17  | R-1                 | 10M Ohm-1/3 Watt-20%-20 V. Carbon                                | 1               |
| BE 130-109 | R-3                 | 7500 Ohm-1/2 Watt-20%-10 V. Carbon                               | 1               |
| BE 130-117 | R-2                 | 50M Ohm-1/10 Watt-20%-50 V. Carbon                               | 1               |
| BE 130-118 | R-6                 | 600M Ohm-1/3 Watt-20%-100 V. Carbon                              | 2               |
| BE 130-121 | R-4;R-8             | 3.2 Meg Ohm-1/3 Watt-30%-100 V. Carbon                           | 2               |
| BE 130-122 | R-7                 | 210M Ohm-1/10 Watt-30%-20%-50 V. Carbon                          | 1               |

#### COILS

| Part No.  | Schematic Reference | Description                             | No. Used In Set |
|-----------|---------------------|---|-----------------|
| BE 108-82 | T3                  | Input I.F. Coil Assem. Comp. with Can.  | 1               |
| BE 108-83 | T4                  | Output I.F. Coil Assem. Comp. with Can. | 1               |
| BE 110-46 | T2                  | Oscillator Coil Assembly Complete       | 1               |
| BE 111-58 | T1                  | Antenna Coil Assembly Complete          | 1               |

#### SOCKETS

| Part No.  | Description                           | No. Used In Set |
|-----------|---------------------------------------|-----------------|
| BE 121-6  | Six Prong Socket—Marked "41"          | 1               |
| BE 121-6  | Six Prong Socket—Marked "75"          | 1               |
| BE 121-6  | Six Prong Socket—Marked "78"          | 1               |
| BE 121-7  | Seven Prong Socket—Marked "6A7"       | 1               |
| BE 121-9  | Four Prong Socket—Marked "5PR"        | 1               |
| BE 121-16 | Five Prong Socket—Marked "5Z4"(Octal) | 1               |

#### MISCELLANEOUS

| Part No.  | Schematic Reference | Description                           | No. Used In Set |
|-----------|---------------------|---------------------------------------|-----------------|
| BE 101-54 | R-5                 | Volume Control and Switch (1 meg ohm) | 1               |
| BE 102-33 | C                   | Two Gang Variable Condenser           | 1               |
| BE 107-39 |                     | Line Cord & Plug                      | 1               |
| BE 128-8  |                     | Ivory Bakelite Knob (Model 62-265)    | 2               |
| BE 131-2  |                     | Brown Bakelite Knob                   | 1               |
| BE 131-8  |                     | Spring for above knob                 | 2               |

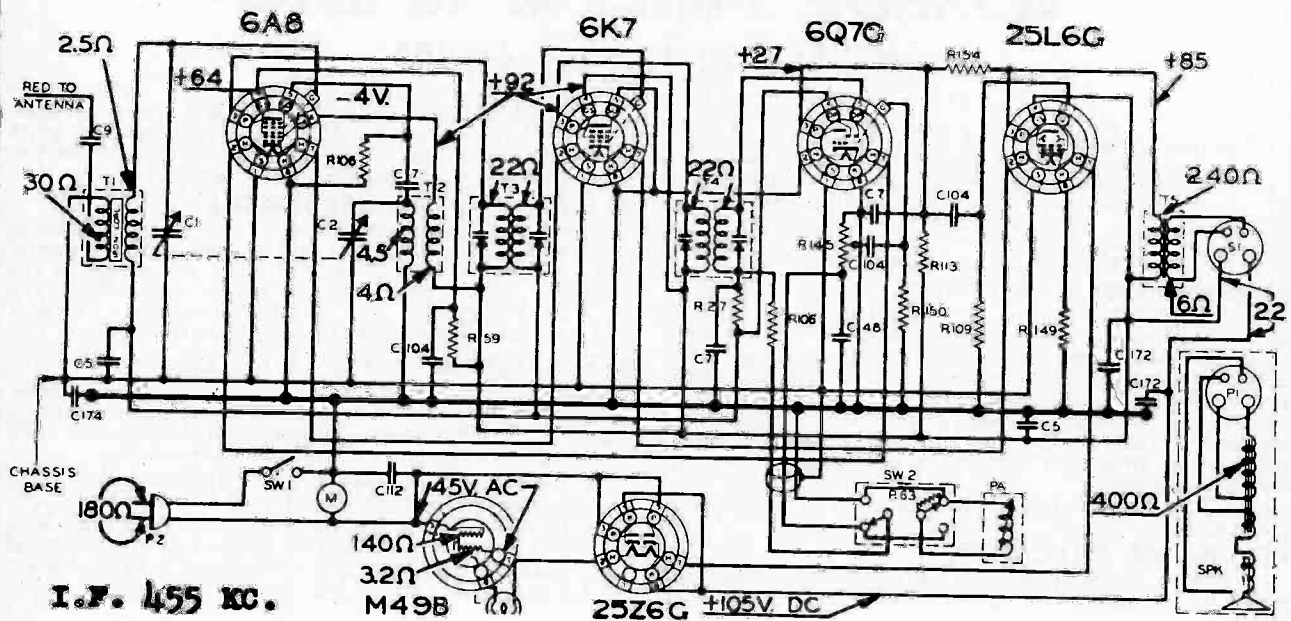
#### DIAL PARTS LIST

| Part No.    | Description  | No. Used In Set |
|-------------|--|-----------------|
| BE 107-28   | Pilot Light Socket   | 1               |
| BE 112-15   | Dial Crystal only—less escutcheon                            | 1               |
| BE 112-160  | Dial Pointer Complete with screw                             | 1               |
| BE 112-164  | Brown bakelite Escutcheon complete with crystal              | 1               |
| BE 112-226  | Ivory Bakelite Escutcheon complete with glass (Model 62-265) | 1               |
| BE 112-167A | Dial Scale   | 1               |
| BE 116-13   | 6-8 Volt, T-51 Pilot Light Bulb                              | 1               |
| BE 117-59   | Pointer Bushing Stud   | 1               |
| BE 117-60   | Pointer Bushing Assembly                                     | 1               |
| BE 117-61   | Drive Pulley   | 1               |
| BE 117-68   | Dial Bracket   | 1               |
| BE 120-7A   | Take-up Spring   | 1               |
| BE 131-52   | Drive Belt   | 1               |
| BE 134-9    | House Shoe Washer  | 1               |

# MANUAL OF MOST-OFTEN-NEEDED RADIO DIAGRAMS

ARVIN RADIO CHASSIS RE29 AND RE35

MODEL NUMBERS-58, 58A AND 88



| RESISTORS |          |                     |
|-----------|----------|---------------------|
| Ref. No.  | Part No. | Description         |
| R57       | 17-4191  | 15,000 ohms watt    |
| R106      | 17-4788  | 2,000,000 ohms watt |
| R109      | 17-14171 | 50,000 ohms watt    |
| R-113     | 17-14174 | 500,000 ohms watt   |
| R149      | 17-14178 | 250,000 ohms watt   |
| R150      | 17-12241 | 150 ohms watt       |
| R154      | 17-14242 | 5,000,000 ohms watt |
|           | 17-14244 | 1,500,000 ohms watt |

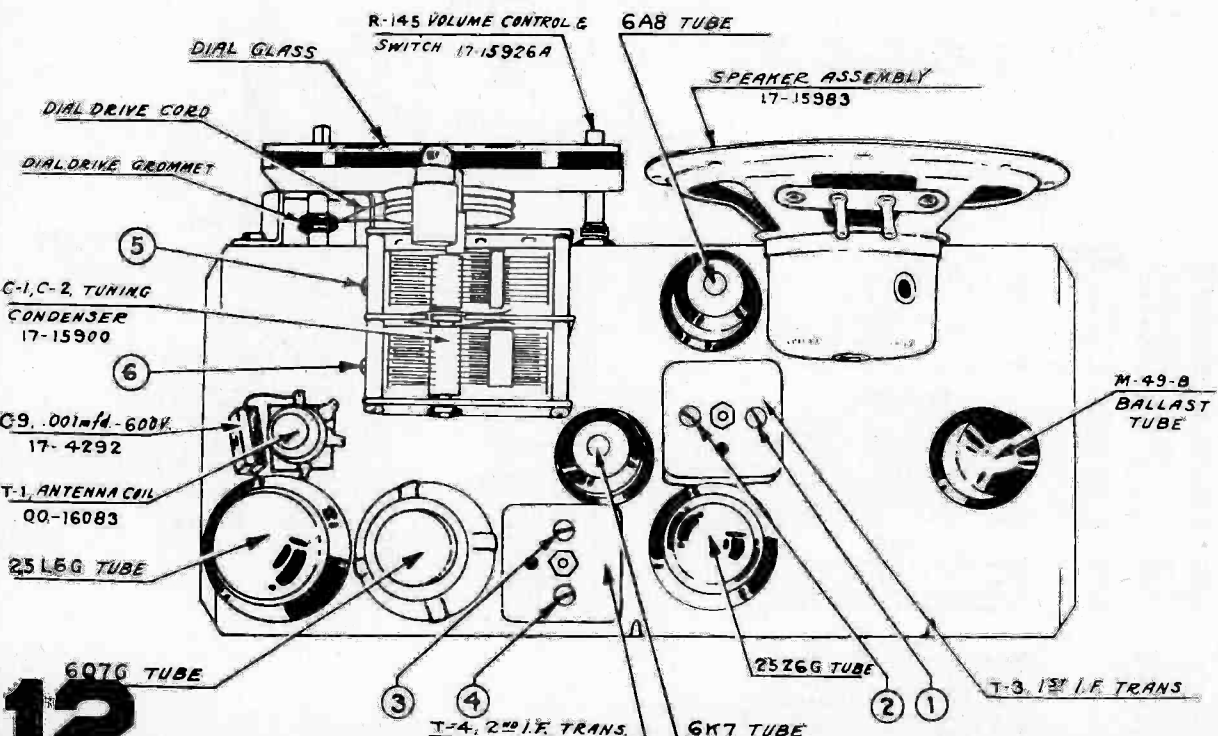
  

| CONDENSERS |          |                      |
|------------|----------|----------------------|
| Ref. No.   | Part No. | Description          |
| C7         | 17-2064  | .0001 mfd. 600 volt  |
| C104       | 17-4206  | .01 mfd. 200 volt    |
| C48        | 17-4207  | .00025 mfd. 600 volt |
| C9         | 17-4292  | .001 mfd. 600 volt   |
| C112       | 17-14015 | .05 mfd. 200 volt    |
| C113       | 17-14139 | .05 mfd. 400 volt    |
| C172 A & B | 17-14233 | 20-20 mfd. 150 volt  |
| C174       | 17-14248 | .2 mfd. 400 volt     |
| C3-C2      | 17-15900 | Tuning Condenser     |

| COILS and TRANSFORMERS |          |                      |
|------------------------|----------|----------------------|
| Ref. No.               | Part No. | Description          |
| T2                     | 00-15979 | Oscillator Coil      |
| T-3                    | 00-15980 | Output Transformer   |
|                        | 00-16060 | 1st I.F. Transformer |
| T4                     | 00-16061 | 2nd I.F. Transformer |
| T1                     | 00-16083 | Antenna Coil         |

|           |                               |
|-----------|-------------------------------|
| 27-15791E | Line cord and plug            |
| 29-15905  | Cabinet (58A Ivory)           |
| 32-15907  | Cabinet bottom cover          |
| 29-15909  | Cabinet (58-Black)            |
| 32-15915  | Tuning shaft bracket          |
| 29-15916  | Cabinet back cover            |
| 17-15926A | Volume control switch         |
| 29-15929  | Knob (wood-walnut finish)     |
| 29-15937  | Knob (walnut bakelite)        |
| 25-15958  | Tuning Shaft                  |
| 17-15973  | Dial light socket and clip    |
| 81-15974  | Dial glass (blank background) |
| 17-15983  | Speaker (5" diameter)         |
| 17-15989  | Speaker (6" diameter)         |
| 81-16015  | Dial glass (brown background) |
| 27-16020  | Cabinet (Model 88)            |
| 17-16021  | Phono pickup and arm          |
| 17-16022  | Phono turntable and motor     |
| 29-16024  | Knob (Ivory bakelite)         |
| 17-16065  | Radio-Phono switch            |
| 24-16068  | Knob (Radio-Phono switch)     |

| SPEAKERS, DIAL PARTS, CABINETS & MISCELLANEOUS |                                 |  |
|--|---------------------------------|--|
| Part No.                                       | Description                     |  |
| 10-5181  | Chassis Mounting Screw per doz. |  |
| 28-5188  | Dial drive pulley (rubber)      |  |
| 83-2357  | Grille cloth (Ivory rayon)      |  |
| 29-13470                                       | Tuning shaft retaining washer   |  |
| 29-13583                                       | Dial drive cord (16" long)      |  |
| 34-13360                                       | Dial drive takeup spring        |  |
| 17-14997                                       | Needle cup                      |  |
| 17-14998                                       | Needle cup cover                |  |
| 19-15476                                       | Tuning oscillator drive pulley  |  |

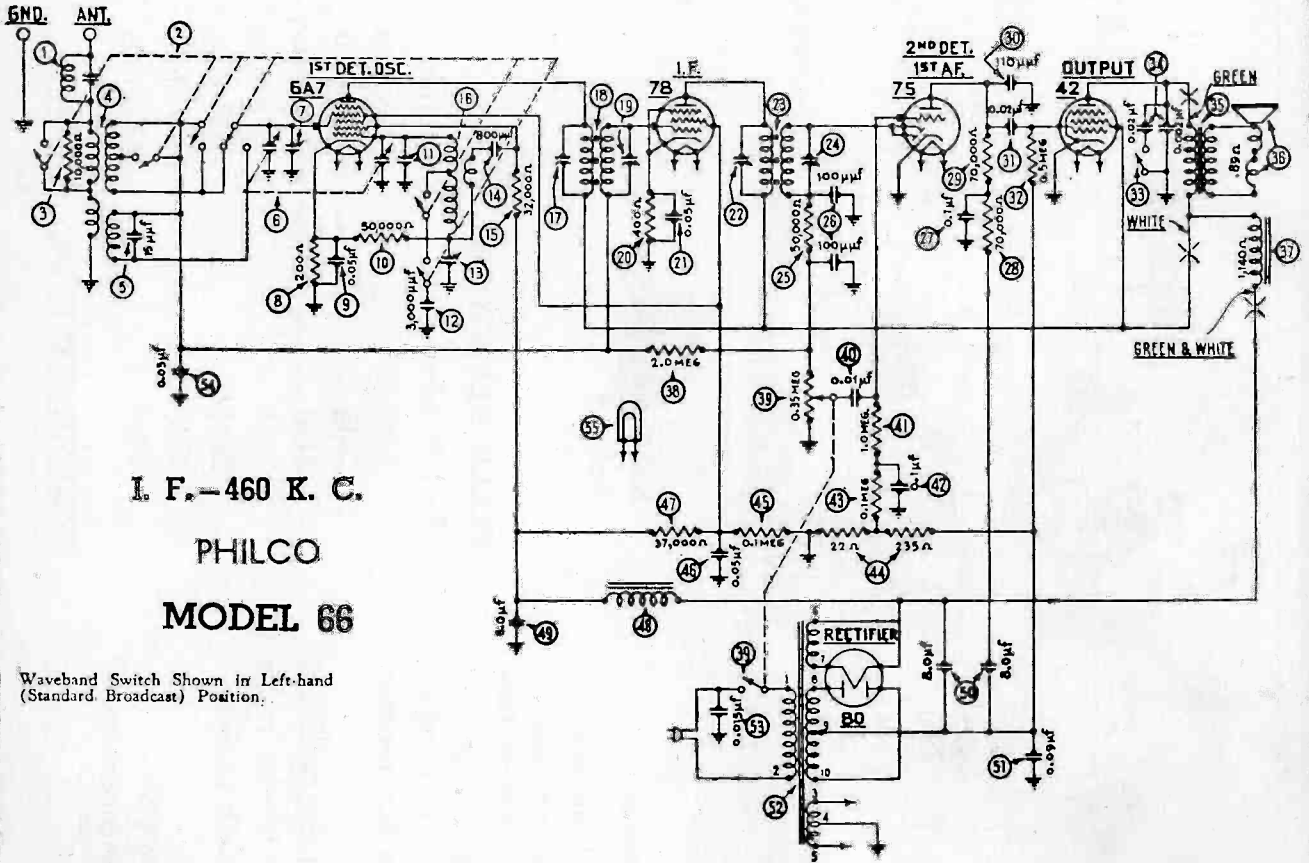


# 112

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# MANUAL OF MOST-OFTEN-NEEDED RADIO DIAGRAMS



I. F.—460 K. C.  
 PHILCO  
 MODEL 66

Waveband Switch Shown in Left-hand  
 (Standard Broadcast) Position.

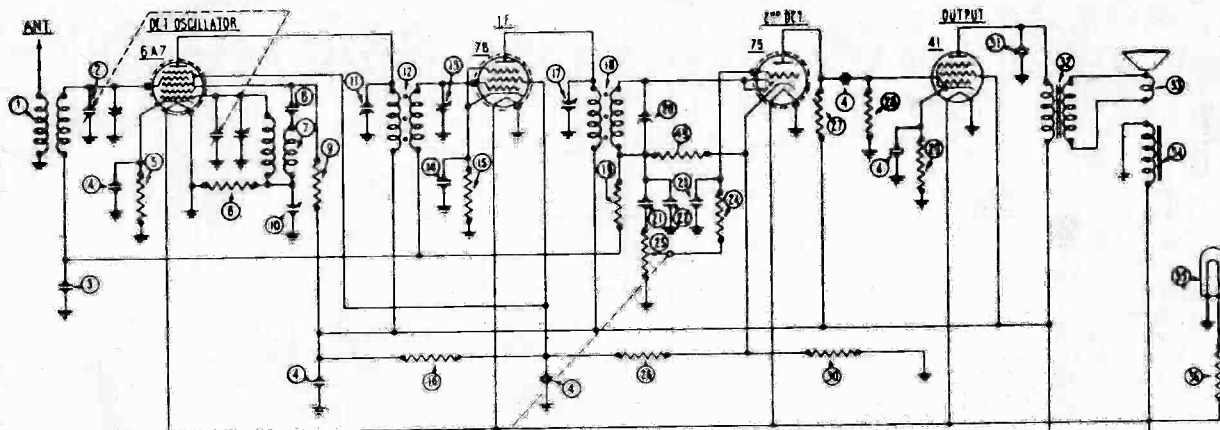
| No. on Figs. | Description                                    | Part No.  |
|--------------|--|-----------|
| 1            | Wave Trap                                      | 38-5199   |
| 2            | Wave-band Switch                               | 42-1066   |
| 3            | Resistor (10,000 ohms) (Brown-Black-Orange)    | 33-1000   |
| 4            | Antenna Transformer                            | 32-1412   |
| 5            | Condenser (.000015 Mfd.)                       | 30-1030   |
| 6            | Tuning Condenser Assembly                      | 31-1231   |
| 7            | Compensating Condenser (ANT.)                  | Part of 6 |
| 8            | Resistor (200 ohms Flexible) (Red-Black-Brown) | 7217      |
| 9            | Condenser (.05 Mfd. Tubular)                   | 30-4020   |
| 10           | Resistor (50,000 ohms) (Green-Green-Orange)    | 6098      |
| 11           | Compensating Condenser (OSC. HF)               | Part of 6 |
| 12           | Condenser (.003 Mfd. Mica)                     | 30-1022   |
| 13           | Compensating Condenser (Osc. I. F.)            | 04000-S   |
| 14           | Condenser (.0008 Mfd. Mica)                    | 5378      |
| 15           | Resistor (32,000 ohms) (Orange-Red-Orange)     | 5279      |
| 16           | Oscillator Transformer                         | 32-1413   |
| 17           | Compensating Condenser (1st I. F. Pri.)        | 04000M    |
| 18           | 1st I. F. Transformer                          | 32-1414   |
| 19           | Compensating Condenser (1st I. F. Secondary)   | 04000M    |
| 20           | Resistor (400 ohms Flexible)                   | 33-3016   |
| 21           | Condenser (.05 Mfd. Tubular)                   | 30-4020   |
| 22           | Compensating Condenser (2d I. F. Primary)      | 04000M    |
| 23           | 2d I. F. Transformer                           | 32-1415   |
| 24           | Compensating Condenser (2d I. F. Secondary)    | 04000J    |
| 25           | Resistor (50,000 ohms) (Green-Brown-Orange)    | 6098      |
| 26           | Condenser (.0001 Mfd. Twin Bakelite Block)     | 8035-B    |
| 27           | Condenser (.1 Mfd. Tubular)                    | 30-4170   |
| 28           | Resistor (70,000 ohms) (Violet-Black-Orange)   | 33-1115   |
| 29           | Resistor (70,000 ohms) (Violet-Black-Orange)   | 33-1115   |
| 30           | Condenser (.00011 Mfd. Mica)                   | 30-1006   |
| 31           | Condenser (.02 Mfd. Tubular)                   | 30-4113   |
| 32           | Resistor (500,000 ohms) (Yellow-White-Yellow)  | 6097      |
| 33           | Tone Control                                   | 30-4192   |
| 34           | Condensers in Tone Control                     | Inside 33 |

| No. on Figs. | Description                                   | Part No. |
|--------------|---|----------|
| 35           | Output Transformer                            | 32-7019  |
| 36           | Voice Coil & Cone Assembly (S-12)             | 36-3014  |
| 37           | Field Coil and Pot. Assembly (S-12)           | 38-3341  |
| 38           | Resistor (2 Megohms) (Red-Black-Green)        | 33-1025  |
| 39           | Volume Control and On-Off Switch              | 33-5006  |
| 40           | Condenser (.01 Mfd.) (Bakelite Block)         | 3903-AB  |
| 41           | Resistor (1 Megohm) (Brown-Black-Green)       | 33-1096  |
| 42           | Condenser (.1 Mfd.)                           | 30-4122  |
| 43           | Resistor (.1 Meg.) (White-White-Orange)       | 6099     |
| 44           | Resistor (B. C. Wire-wound) (22, 235 ohms)    | 33-3037  |
| 45           | Resistor (.1 Meg.) (White-White-Orange)       | 6099     |
| 46           | Condenser (.05 Mfd. Tubular)                  | 30-4123  |
| 47           | Resistor (37,000 ohms) (Orange-Violet-Orange) | 33-1098  |
| 48           | Filter Choke                                  | 32-7018  |
| 49           | Condenser (Electrolytic—6 Mfd.)               | 30-2021  |
| 50           | Condenser (Electrolytic—8-8 Mfd.)             | 30-2028  |
| 51           | Condenser (.09 Mfd. Bakelite Block)           | 4989-D   |
| 52           | Power Transformer                             | 8046     |
| 53           | Condenser (.015 Mfd. Bakelite Block)          | 3793-W   |
| 54           | Condenser (.05 Mfd. Tubular)                  | 30-4020  |
| 55           | Dial Light                                    | 6608     |
| 56           | Four Prong Socket                             | 7544     |
| 57           | Six Prong Socket                              | 7547     |
| 58           | Seven Prong Socket                            | 27-8005  |
| 59           | Tube Shield                                   | 28-1107  |
| 60           | Chassis Mounting Screw                        | W-567    |
| 61           | Chassis Mounting Washer (Metal)               | W-315    |
| 62           | Chassis Mounting Washer (Rubber)              | 5189     |
| 63           | Knob (Large)                                  | 27-4051  |
| 64           | Knob (Small)                                  | 27-4052  |
| 65           | Dial Assembly                                 | 31-1234  |
| 66           | Dial Scale                                    | 27-5057  |
| 67           | A. C. Cord and Plug Assembly                  | L-943A   |

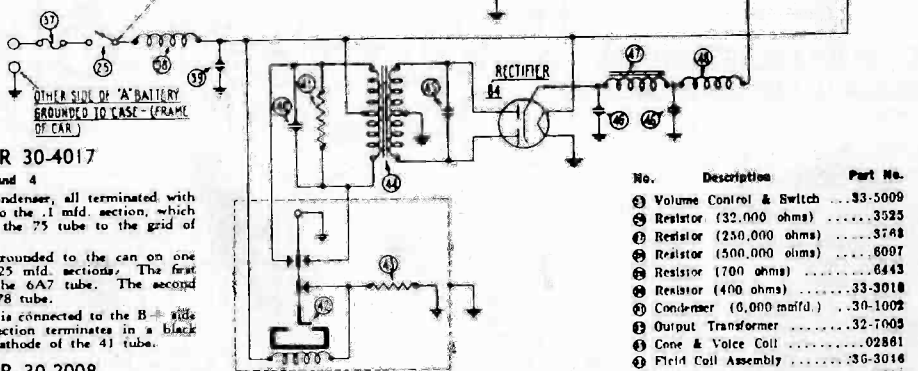


# MANUAL OF MOST-OFTEN-NEEDED RADIO DIAGRAMS

## PHILCO AUTO RADIO MODEL 5



1 F = 460 K. C.



### FILTER CONDENSER 30-4017

ⓐ on Figures 3 and 4

There are five sections in this filter condenser, all terminated with wire leads. The two green leads connect to the .1 mfd. section, which is used for coupling the plate output of the 78 tube to the grid of the 41 tube.

The remaining four sections are all grounded to the can on one side. The white leads connect to two .25 mfd. sections. The first section is connected to the cathode of the 6A7 tube. The second section is connected to the screen of the 78 tube.

The red lead from the .5 mfd. section is connected to the B+ side of all the plate circuits. A 20 mfd. section terminates in a black lead, which in turn is connected to the cathode of the 41 tube.

### FILTER CONDENSER 30-2008

ⓑ on Figures 3 and 4

The condenser consists of two sections, a 4 mfd. section and an 8 mfd. section, both of them grounded on one side.

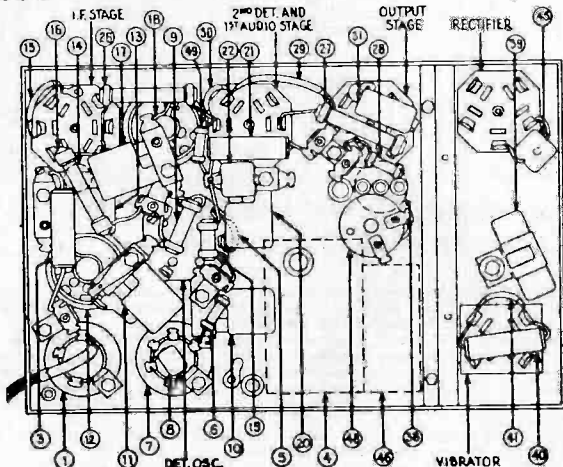
The 4 mfd. section terminates in a red lead, which is connected to the cathode of the 84 tube. The 8 mfd. section terminates in a green lead, which is connected between the two chokes in the rectifier filter circuit.

FIGURE 3

### PARTS LIST

| No. | Description                                 | Part No. |
|-----|---|----------|
| ①   | Antenna Transformer                         | 33-1084  |
| ②   | Tuning Condenser                            | 31-1019  |
| ③   | Condenser (.05 mfd.)                        | 30-4020  |
| ④   | Filter Condenser<br>(.25, .25, .5, 20 mfd.) | 30-4017  |
| ⑤   | Resistor (200 ohms)                         | 7217     |
| ⑥   | Resistor (13,000 ohms)                      | 8207     |
| ⑦   | Oscillator Transformer                      | 32-1085  |
| ⑧   | Condenser (250 mmfd.)                       | 3082     |
| ⑨   | Resistor (15,000 ohms)                      | 8208     |
| ⑩   | Padder                                      | 04000S   |
| ⑪   | Padder                                      | 04000J   |
| ⑫   | First I. F. Transformer                     | 32-1086  |
| ⑬   | Padder                                      | 04000Y   |
| ⑭   | Condenser (.5 mfd.)                         | 30-4018  |
| ⑮   | Resistor (1000 ohms)                        | 33-3017  |
| ⑯   | Resistor (10,000 ohms)                      | 4412     |
| ⑰   | Padder                                      | 04000D   |
| ⑱   | Second I. F. Transformer                    | 32-1087  |
| ⑲   | Resistor (1,000,000 ohms)                   | 4409     |
| ⑳   | Padder                                      | 04000M   |
| ㉑   | Condenser (.05 mfd.)                        | 30-4020  |
| ㉒   | Condenser (250 mmfd.)                       | 3082     |
| ㉓   | Condenser (500 mmfd.)                       | 3910     |
| ㉔   | Resistor (100,000 ohms)                     | 6099     |

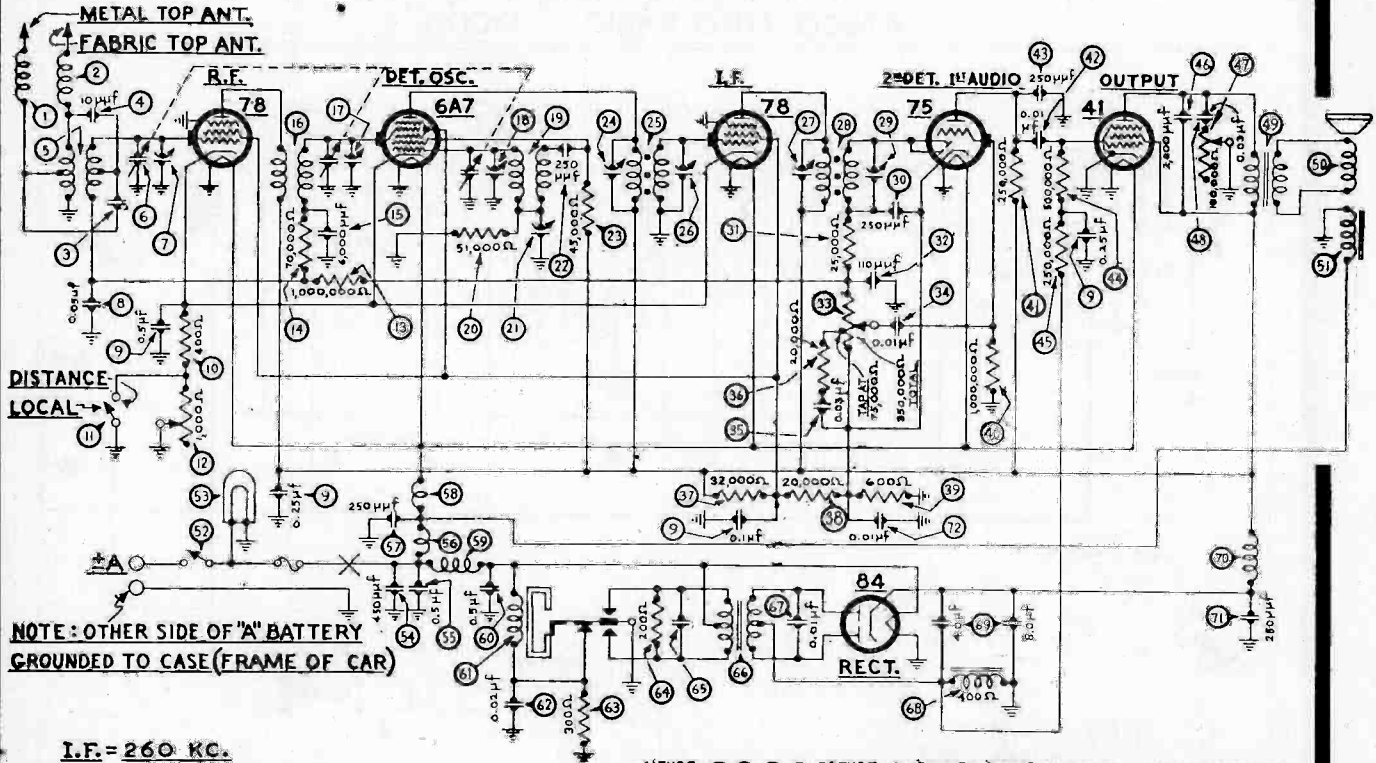
| No.              | Description                | Part No. |
|------------------|----------------------------|----------|
| ㉕                | Volume Control & Switch    | 33-5009  |
| ㉖                | Resistor (32,000 ohms)     | 3925     |
| ㉗                | Resistor (250,000 ohms)    | 3748     |
| ㉘                | Resistor (500,000 ohms)    | 6007     |
| ㉙                | Resistor (700 ohms)        | 6443     |
| ㉚                | Resistor (400 ohms)        | 33-3018  |
| ㉛                | Condenser (0,000 mmfd.)    | 30-1002  |
| ㉜                | Output Transformer         | 32-7005  |
| ㉝                | Cone & Voice Coil          | 02881    |
| ㉞                | Field Coil Assembly        | 36-3016  |
| ㉟                | Pilot Lamp                 | 6708     |
| ㊱                | Resistor (7 ohms)          | 5110     |
| ㊲                | Fuse (15 amp.)             | 7227     |
| ㊳                | R. F. Choke                | 32-1083  |
| ㊴                | Condenser (.5 mfd.)        | 30-4015  |
| ㊵                | Condenser (.05 mfd.)       | 30-4020  |
| ㊶                | Resistor (200 ohms)        | 7217     |
| ㊷                | Vibrator                   | 41-3186  |
| ㊸                | Resistor (200 ohms)        | 7217     |
| ㊹                | Transformer                | 32-7030  |
| ㊺                | Condenser (6000 mmfd.)     | 30-1002  |
| ㊻                | Condenser (4 mfd., 8 mfd.) | 30-2008  |
| ㊼                | Filter Choke               | 32-7026  |
| ㊽                | R. F. Choke (high voltage) | 32-1078  |
| ㊾                | Resistor (250,000 ohms)    | 4410     |
| Control Assembly |                            |          |
|                  | (direct drive)             | 42-5008  |
|                  | Tuning Shaft               | 28-8006  |
|                  | Volume Shaft               | 28-8007  |
|                  | Dial                       | 27-5008  |
|                  | Knob                       | 03334    |
|                  | Fuse                       | 7227     |
|                  | Fuse Insulator             | 27-7131  |
|                  | Antenna Lead               | 33-5131  |
|                  | "A" Lead                   | 38-5296  |
|                  | Bracket (control mtg.)     | 6035     |
|                  | Studs (set mtg.)           | 28-8036  |
|                  | Nuts (set mtg.)            | 1755A    |
|                  | Strap (control mtg.)       | 04344    |





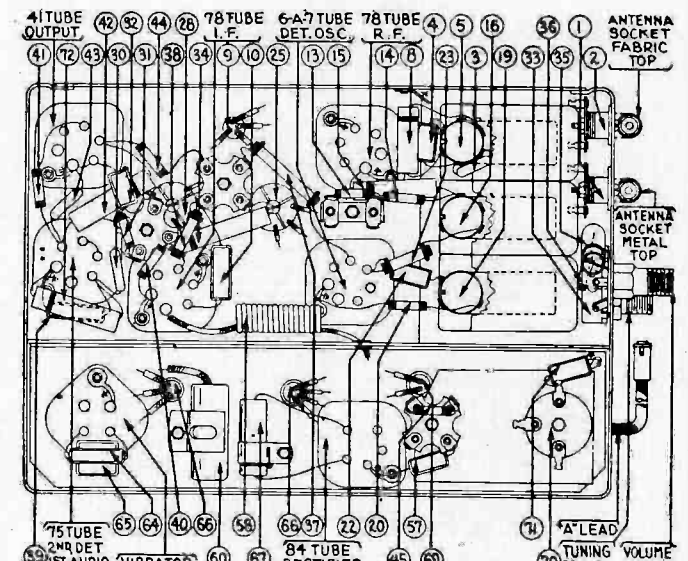
# MANUAL OF MOST-OFTEN-NEEDED RADIO DIAGRAMS

## PHILCO AUTO RADIO MODEL T11



### PARTS LIST

| No. | Description                        | Part No.  | No. | Description                 | Part No.  |
|-----|------------------------------------|-----------|-----|-----------------------------|-----------|
| 1   | Antenna Choke                      | 38-7210   | 37  | Tone Control                | 33-5121   |
| 2   | Antenna Choke                      | 38-7210   | 38  | Condenser (.03 mfd.)        | 30-4124   |
| 3   | Condenser (10 mmfd.)               | 30-1068   | 39  | Output Transformer          | 30-4440   |
| 4   | Condenser (10 mmfd.)               | 30-1065   | 40  | Cone & Voice Coil           | 33-320334 |
| 5   | Antenna Transformer                | 32-1925   | 41  | Field Coil Assembly         | 33-332434 |
| 6   | Tuning Condenser                   | 31-1674   | 42  | On & Off Switch             | 33-320333 |
| 7   | First Padder (on Tun. Cond.)       | 30-4444   | 43  | Pilot Lamp                  | 33-320334 |
| 8   | Condenser (.05 mfd.)               | 30-4374   | 44  | Condenser (450 mmfd.)       | 33-320334 |
| 9   | Condenser (1.25-25-.5 mfd.)        | 30-4374   | 45  | Condenser (.5 mfd.)         | 30-1032   |
| 10  | Resistor (400 ohms)                | 33-1211   | 46  | "A" Choke                   | 33-510344 |
| 11  | Sensitivity Control Switch         | 42-1140   | 47  | Condenser (250 mmfd.)       | 33-424344 |
| 12  | Sensitivity Control                | 33-51129  | 48  | Filament Choke              | 33-424344 |
| 13  | Resistor (1,000,000 ohms)          | 33-510344 | 49  | Vibrator Choke              | 33-320334 |
| 14  | Resistor (70,000 ohms)             | 33-370334 | 50  | Condenser (.5 mfd.)         | 30-1032   |
| 15  | Condenser (6,000 mmfd.)            | 30-4445   | 51  | Vibrator                    | 33-320334 |
| 16  | I. F. Transformer                  | 32-1926   | 52  | Condenser (.02 mfd.)        | 30-4177   |
| 17  | Second Transformer (on Tun. Cond.) | 32-2164   | 53  | Resistor (300 ohms)         | 33-1225   |
| 18  | Third Padder (on Tun. Cond.)       | 32-1927   | 54  | Resistor (200 ohms)         | 33-1225   |
| 19  | Oscillator Transformer             | 33-1927   | 55  | Condenser (.05 mfd.)        | 30-1032   |
| 20  | Resistor (51,000 ohms)             | 33-351344 | 56  | Power Transformer           | 33-320334 |
| 21  | Low Frequency Padder               | 31-6056   | 57  | Condenser (.01 mfd.)        | 30-1032   |
| 22  | Condenser (250 mmfd.)              | 30-1032   | 58  | Filter Choke                | 33-320334 |
| 23  | Resistor (45,000 ohms)             | 33-345344 | 59  | Filter Condenser (4-8 mfd.) | 33-320334 |
| 24  | Padder (Pri. 1st I. F. Trans.)     | 32-1260   | 60  | R. F. Choke                 | 33-320334 |
| 25  | First I. F. Transformer            | 32-1260   | 61  | Condenser (250 mmfd.)       | 30-4177   |
| 26  | Padder (Sec. 2nd I. F. Trans.)     | 32-2164   | 62  | Condenser (.01 mfd.)        | 30-1032   |
| 27  | Second I. F. Transformer           | 32-2164   | 63  | Condenser (250 mmfd.)       | 30-4177   |
| 28  | Padder (Sec. 2nd I. F. Trans.)     | 32-2164   | 64  | Condenser (.01 mfd.)        | 30-1032   |
| 29  | Condenser (250 mmfd.)              | 30-1032   | 65  | Condenser (250 mmfd.)       | 30-4177   |
| 30  | Resistor (25,000 ohms)             | 33-325344 | 66  | Condenser (250 mmfd.)       | 30-4177   |
| 31  | Condenser (110 mmfd.)              | 30-1031   | 67  | Condenser (250 mmfd.)       | 30-4177   |
| 32  | Volume Control                     | 33-5121   | 68  | Condenser (250 mmfd.)       | 30-4177   |
| 33  | Condenser (.01 mfd.)               | 30-4124   | 69  | Condenser (250 mmfd.)       | 30-4177   |
| 34  | Condenser (.03 mfd.)               | 30-4440   | 70  | Condenser (250 mmfd.)       | 30-4177   |
| 35  | Resistor (20,000 ohms)             | 33-320334 | 71  | Condenser (250 mmfd.)       | 30-4177   |
| 36  | Resistor (32,000 ohms)             | 33-332434 | 72  | Condenser (250 mmfd.)       | 30-4177   |
| 37  | Resistor (20,010 ohms)             | 33-320333 | 73  | Condenser (250 mmfd.)       | 30-4177   |
| 38  | Resistor (600 ohms)                | 33-1212   | 74  | Condenser (250 mmfd.)       | 30-4177   |
| 39  | Resistor (1,000,000 ohms)          | 33-510344 | 75  | Condenser (250 mmfd.)       | 30-4177   |
| 40  | Resistor (250,000 ohms)            | 33-424344 | 76  | Condenser (250 mmfd.)       | 30-4177   |
| 41  | Condenser (.01 mfd.)               | 30-4145   | 77  | Condenser (250 mmfd.)       | 30-4177   |
| 42  | Condenser (250 mmfd.)              | 30-1032   | 78  | Condenser (250 mmfd.)       | 30-4177   |
| 43  | Resistor (500,000 ohms)            | 33-449344 | 79  | Condenser (250 mmfd.)       | 30-4177   |
| 44  | Resistor (250,000 ohms)            | 33-424344 | 80  | Condenser (250 mmfd.)       | 30-4177   |
| 45  | Condenser (2,000 mmfd.)            | 30-4177   | 81  | Condenser (250 mmfd.)       | 30-4177   |



**CHANGES** — "Run Numbers" are stamped on the chassis sub-base for identification. These "Run Numbers" are changed consecutively as major changes are made in the Receiver wiring and parts.

**RUN No. 3** — A 250 mmfd. condenser has been added to the Receiver. One side is connected between resistors 37 and 38 and the other side to ground.

**RUN No. 4** — The 250 mmfd. condenser added in Run No. 3 has been removed.

**RUN No. 5** — The Antenna Transformer 5 is replaced with a new type having the same part number. It can be identified by the red and blue paint marks on the fibre.

**RUN No. 6** — Condenser 61 has been removed from the cathode side of the "B" choke 60 and connected to the plate side of choke 60.

**RUN No. 6A** — A 250 mmfd. condenser has been added to the Receiver. One side is connected between resistors 41 and 42 and the other side to ground.

**RUN No. 8** — Condenser 82 removed (1250 mmfd.). Part No. 30-4020 added (.05 mfd.)

**RUN No. 13** — The 250 mmfd. condenser that was added in Run No. 6A has been removed.

**RUN No. 14** — Resistor 14 removed (400 ohms). Part No. 33-1225 added (350 ohms.)

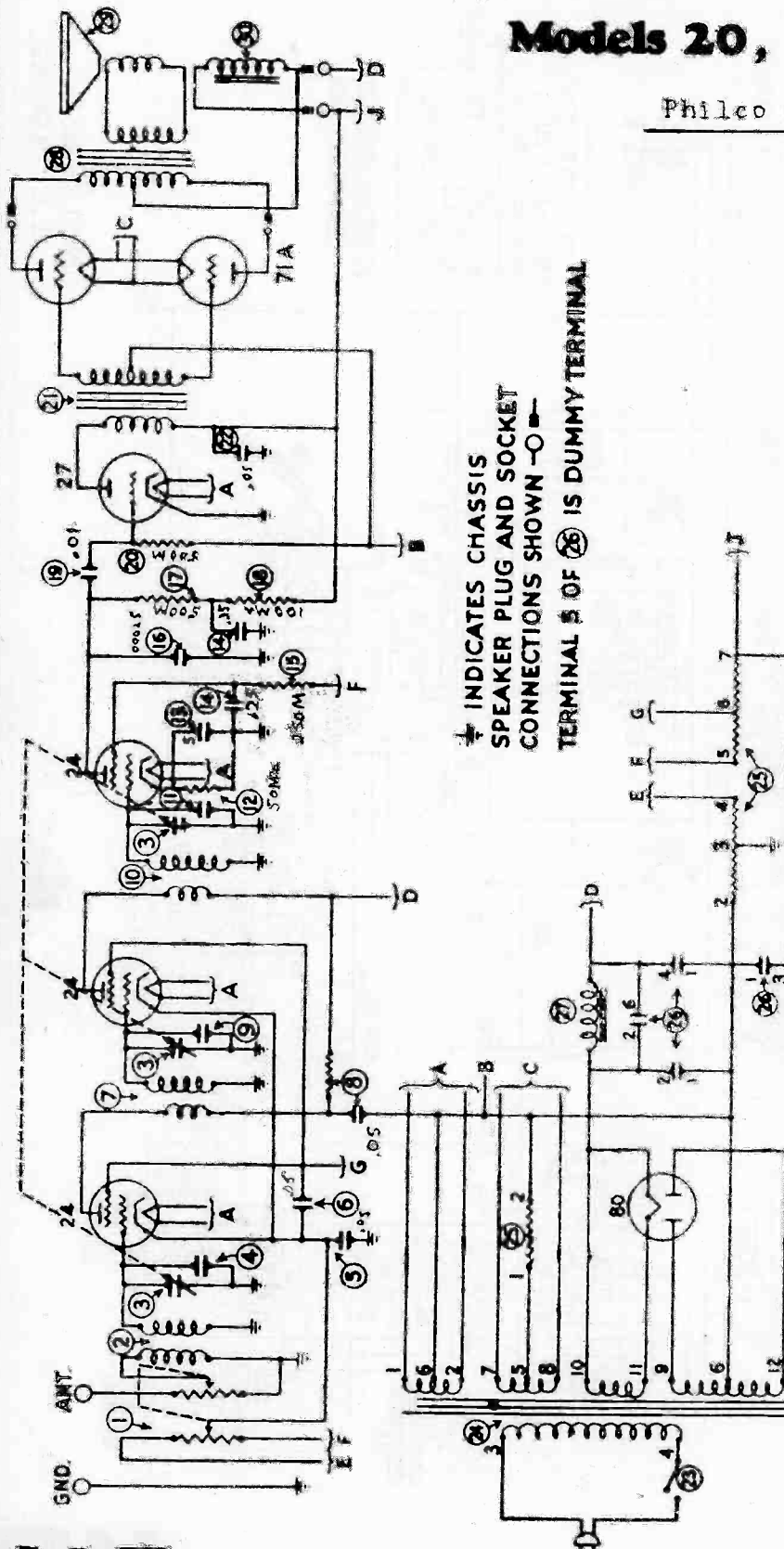
No major changes were involved in Run Nos. 2, 7, 9, 10, 11, 12.



# MANUAL OF MOST-OFTEN-NEEDED RADIO DIAGRAMS

## Models 20, 20-A and 21

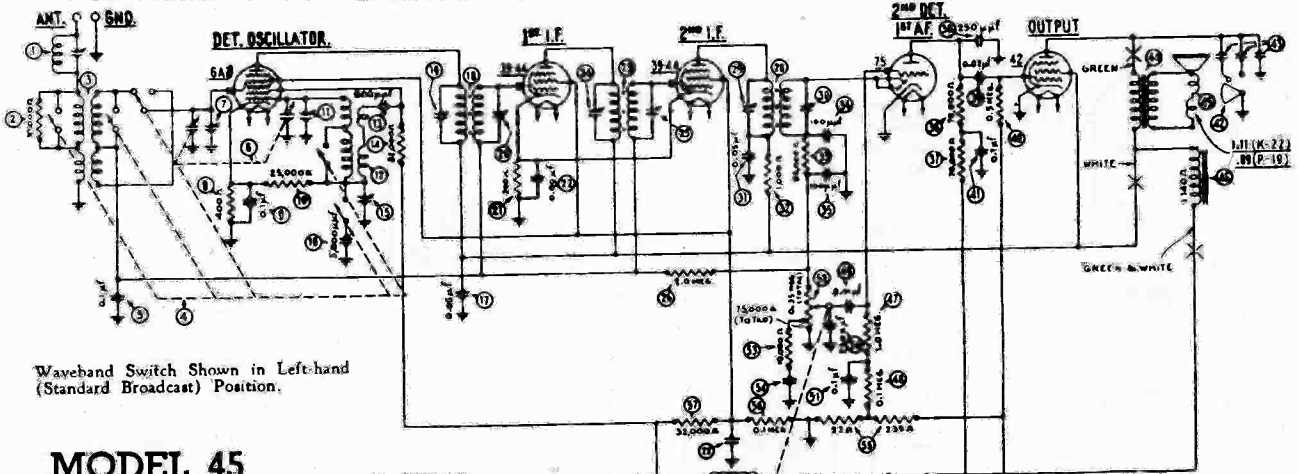
Philco Radio



INDICATES CHASSIS  
SPEAKER PLUG AND SOCKET  
CONNECTIONS SHOWN -O-  
TERMINAL 5 OF (25) IS DUMMY TERMINAL

- |  |  |   |
|--|--|---|
| <p>No. 1 Volume Control<br/>2 First R. F. Transformer<br/>3 Tuning Condenser<br/>4 First Compensating Condenser (Part of Tuning Condenser Assembly)<br/>5 By-Pass Condenser (.05)<br/>6 By-Pass Condenser (.05)<br/>7 Second R. F. Transformer<br/>8 By-Pass Condenser (.05) and Resistor<br/>9 Second Compensating Condenser (Part of Tuning Condenser Assembly)<br/>10 Third Compensating Condenser (Part of Tuning Condenser Assembly)<br/>11 Resistor (50,000)<br/>12 By-Pass Condenser (.5)<br/>13 By-Pass Condenser (double .25)<br/>14 Resistor (250,000)<br/>15 By-Pass Condenser (.00025)<br/>16 Resistor (500,000)<br/>17 Resistor (100,000)<br/>18 Resistor (.01)<br/>19 Resistor (500,000)<br/>20 Push-pull Input Transformer<br/>21 By-Pass Condenser (.05)<br/>22 On-off Switch.<br/>23 Part No. 4094<br/>24 Part No. 3884-N<br/>25 Part No. 4200-A<br/>26 Part No. 3615-J<br/>27 Part No. 3615-M<br/>28 Part No. 3884-P<br/>29 Part No. 3615-K<br/>30 Part No. 3884-F</p> | <p>4237<br/>3583<br/>3557<br/>3768<br/>3082<br/>3769<br/>3767<br/>3903-F<br/>3769<br/>4232<br/>3615-L<br/>4095</p> | <p>4234<br/>4268<br/>4230<br/>4235<br/>4269<br/>4231<br/>2766<br/>2769-B<br/>2768</p> |
|--|--|---|

# MANUAL OF MOST-OFTEN-NEEDED RADIO DIAGRAMS



Waveband Switch Shown in Left-hand (Standard Broadcast) Position.

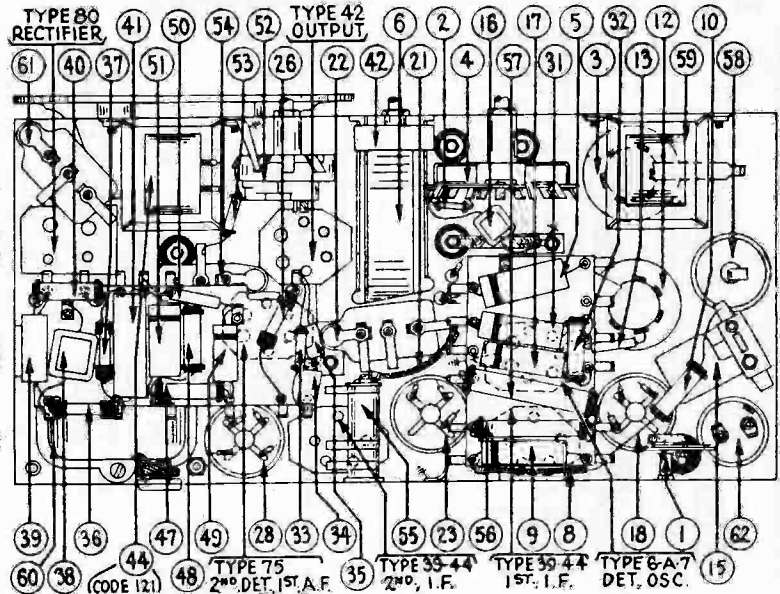
## MODEL 45

I.F. 460 KC.

| No. on Figs. | Description                                  | Part No.   |
|--------------|--|------------|
| 1            | Wave Trap                                    | 38-5199    |
| 2            | Resistor (10,000 ohms) (Brown-Black-Orange)  | 4412       |
| 3            | Antenna Transformer                          | 32-1360    |
| 4            | Wave Band Switch                             | 42-1062    |
| 5            | Condenser (.1 Mfd.) (Tubular)                | 30-4122    |
| 6            | Tuning Condenser Assembly                    | 31-1169    |
| 7            | Compensating Condenser (Det.)                | Part of 6  |
| 8            | Resistor (400 ohms—Flexible wire wound)      | 33-3016    |
| 9            | Condenser (.1 Mfd.) (Tubular)                | 30-4122    |
| 10           | Resistor (25,000 ohms) (Red-Green-Orange)    | 4516       |
| 11           | Compensating Condenser (Osc. H. F.)          | Part of 6  |
| 12           | Oscillator Transformer                       | 32-1361    |
| 13           | Condenser (.0008 Mfd.—Mica)                  | 5878       |
| 14           | Resistor (32,000 ohms) (Orange-Red-Orange)   | 3525       |
| 15           | Compensating Condenser (Osc. L. F.)          | 04000-S    |
| 16           | Condenser (.003 Mfd.—Mica)                   | 7301       |
| 17           | Condenser (.05 Mfd.—Tubular)                 | 30-4123    |
| 18           | 1st I. F. Transformer                        | 32-1362    |
| 19           | Compensating Condenser (1st I. F. Primary)   | Part of 18 |
| 20           | Compensating Condenser (1st I. F. Secondary) | Part of 18 |
| 21           | Resistor (500 ohms—Flexible wire wound)      | 6977       |
| 22           | Condenser (.09 Mfd. twin) (Bakelite block)   | 4989-Z     |
| 23           | 2d I. F. Transformer                         | 32-1363    |
| 24           | Compensating Condenser (2d I. F. Primary)    | Part of 23 |
| 25           | Compensating Condenser (2d I. F. Secondary)  | Part of 23 |
| 26           | Resistor (2 meg.) (Red-Black-Green)          | 5872       |
| 27           | Pilot Lamp                                   | 6608       |
| 28           | 3d I. F. Transformer                         | 32-1364    |
| 29           | Compensating Condenser—3d I. F. Primary      | Part of 28 |
| 30           | Compensating Condenser—3d I. F. Secondary    | Part of 28 |
| 31           | Condenser (.05 Mfd. Tubular)                 | 30-4123    |
| 32           | Resistor (1,000 ohms) (Brown-Black-Red)      | 5837       |
| 33           | Resistor (50,000 ohms) (Green-Brown-Orange)  | 4518       |
| 34           | Condenser (.0001 Mfd. Mica)                  | 30-1031    |
| 35           | Condenser (.0001 Mfd. Mica)                  | 30-1031    |
| 36           | Resistor (70,000 ohms) (Violet-Black-Orange) | 5385       |
| 37           | Resistor (70,000 ohms) (Violet-Black-Orange) | 5385       |
| 38           | Condenser (.00025 Mfd. Mica)                 | 5858       |
| 39           | Condenser (.02 Mfd. Tubular)                 | 30-4113    |
| 40           | Resistor (.5 meg.) (Yellow-White-Yellow)     | 4517       |
| 41           | Condenser (.1 Mfd.) (Tubular)                | 30-4170    |
| 42           | Tone Control                                 | 30-4178    |
| 43           | Condensers                                   | Inside 42  |
| 44           | Output Transformer (Code 121)                | 32-7041    |
| 45           | Output Transformer (Code 122)                | 2580       |
| 46           | Voice Coil & Cone Assembly                   |            |
| 47           | P-19 (Compact)                               | 36-3027    |
| 48           | K-22 (Lowboy)                                | 30-3174    |
| 49           | Field Coil and Pot Assembly                  |            |
| 50           | P-19 (Compact)                               | 36-3298    |
| 51           | K-22 (Lowboy)                                | 02767      |

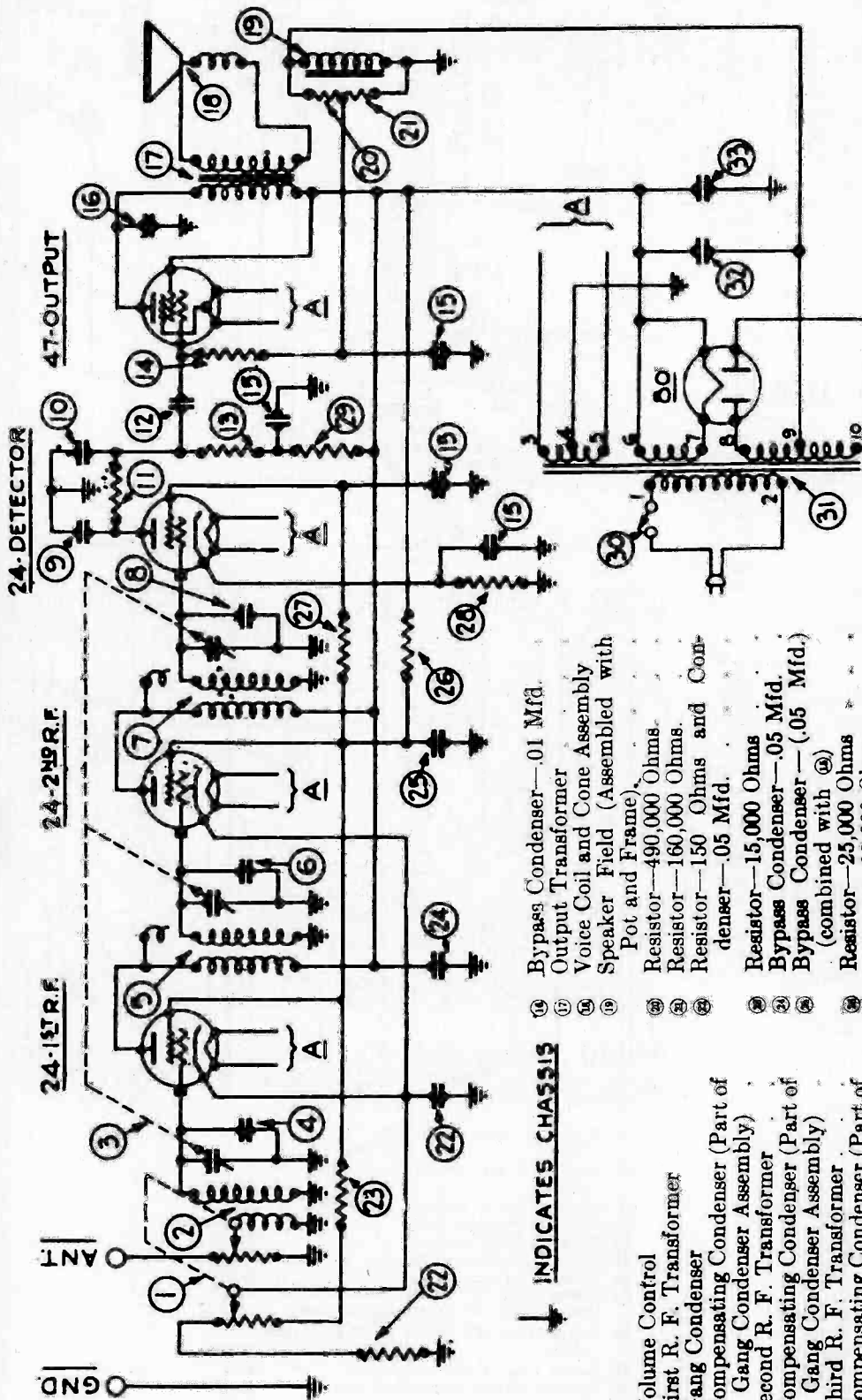
Philco

Note: Resistor 21 is 500 ohms in current production.



|    |  |         |
|----|--|---------|
| 47 | Resistor (1 meg.) (Brown-Black-Green)                  | 4409    |
| 48 | Resistor (.1 meg.) (White-White-Orange)                | 4411    |
| 49 | Condenser (.01 Mfd. Tubular)                           | 30-4124 |
| 50 | Condenser (.00025 Mfd. Mica)                           | 5858    |
| 51 | Condenser (.1 Mfd. Tubular)                            | 30-4122 |
| 52 | Volume Control and On-Off Switch                       | 33-5066 |
| 53 | Resistor 10,000 ohms (Brown-Black-Orange)              | 33-1000 |
| 54 | Condenser (Code 121) (.05 Mfd.) (Bakelite Block)       | 3615-W  |
| 55 | Condenser (Code 122) (.09 Mfd.) (Bakelite Block)       | 4989-AM |
| 56 | Voltage Divider (BC Resistor 22—235 ohms) (Wire wound) | 33-3037 |
| 57 | Resistor .1 meg (White-White-Orange)                   | 3767    |
| 58 | Resistor 32,000 ohms (Orange-Red-Orange)               | 33-1026 |
| 59 | Condenser (Electrolytic—6 Mfd.)                        | 30-2020 |
| 60 | Filter Choke   | 32-7018 |
| 61 | Power Transformer                                      | 32-7226 |
| 62 | Condenser (.015 Mfd. twin—Bakelite block)              | 3793-E  |
| 63 | Condenser (Electrolytic 8—8 Mfd. 450 Volts)            | 30-3028 |





Philco Radio

**MODELS 50 AND 50-A**

**INDICATES CHASSIS**

- ① Volume Control
- ② First R. F. Transformer
- ③ Gang Condenser
- ④ Compensating Condenser (Part of Gang Condenser Assembly)
- ⑤ Second R. F. Transformer
- ⑥ Compensating Condenser (Part of Gang Condenser Assembly)
- ⑦ Third R. F. Transformer
- ⑧ Compensating Condenser (Part of Gang Condenser Assembly)
- ⑨ Condenser—250 Mmf.
- ⑩ Condenser—250 Mmf.
- ⑪ Resistor—10,000 Ohms
- ⑫ Condenser—.01 Mfd.
- ⑬ Resistor—240,000 Ohms
- ⑭ Resistor—490,000 Ohms
- ⑮ Bypass Condenser (15 Mfd., 25 Mfd., 2-5 Mfd., 1 Mfd.) 50-60 cycles

- ⑯ Bypass Condenser—.01 Mfd.
- ⑰ Output Transformer
- ⑱ Voice Coil and Cone Assembly
- ⑲ Speaker Field (Assembled with Pot and Frame)
- ⑳ Resistor—490,000 Ohms
- ㉑ Resistor—160,000 Ohms
- ㉒ Resistor—150 Ohms and Condenser—.05 Mfd.
- ㉓ Resistor—15,000 Ohms
- ㉔ Bypass Condenser—.05 Mfd. (combined with ㉓)
- ㉕ Resistor—25,000 Ohms
- ㉖ Resistor—99,000 Ohms
- ㉗ Resistor—32,000 Ohms
- ㉘ Resistor—99,000 Ohms
- ㉙ On-Off Switch
- ㉚ Power Transformer—50-60 cycles
- ㉛ Electrolytic Condenser—6 Mfd.—50-60 cycles
- ㉜ Electrolytic Condenser—10 Mfd. 25-40 cycles
- ㉝ Electrolytic Condenser—6 Mfd.—



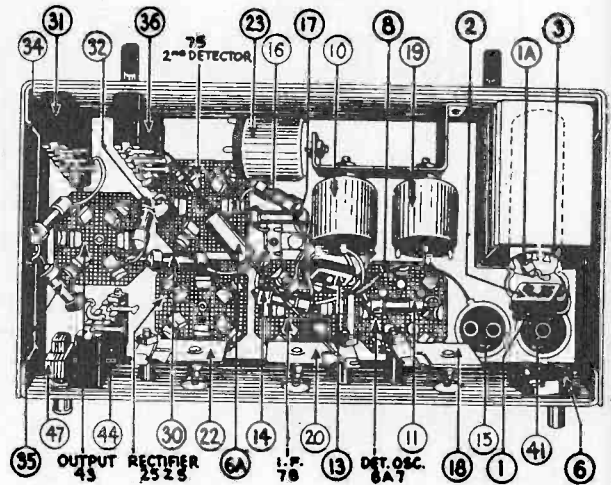
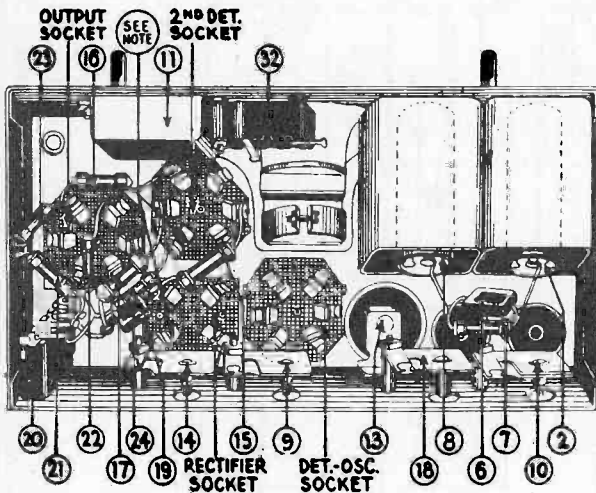


# MANUAL OF MOST-OFTEN-NEEDED RADIO DIAGRAMS

## Model 53

## Model 54

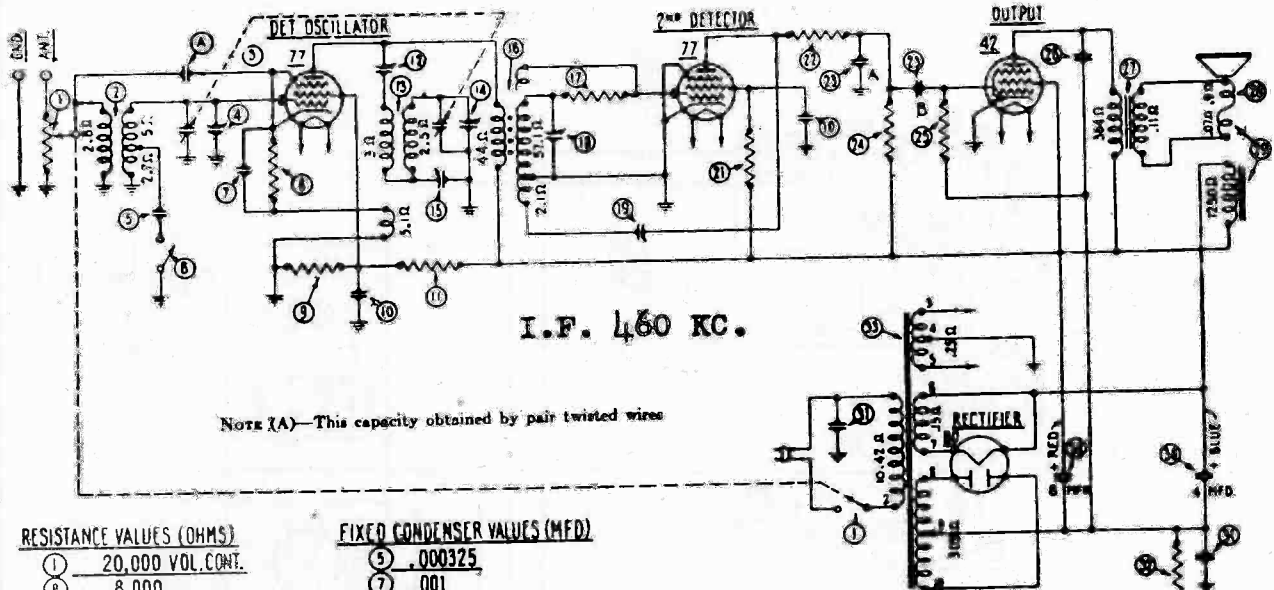
(A. C. — D. C.)



| No. on Figs. 2, 3 and 4 | Description  | Part No.             |
|-------------------------|--|----------------------|
| 1                       | Volume Control   | 33-5001              |
| 2                       | Antenna Transformer  | 32-1000              |
| 3                       | Tuning Condenser Assembly                                  | 31-1000              |
| 4                       | Compensating Condenser (Part of Tuning Condenser Assembly) |                      |
| 5                       | Filter Condenser Block (.05-.09-.25-.75-.2 Mfd.)           | 30-4000              |
| 6                       | Condenser (.0014 Mfd.)                                     | 7007                 |
| 7                       | Resistor (8,000 ohms) Gray-Black-Red                       | 5838                 |
| 8                       | Oscillator Transformer                                     | 32-1001              |
| 9                       | Compensating Condenser (I.F. Primary)                      | 04000-A              |
| 10                      | Compensating Cond. (Low Frequency)                         | 04000-S              |
| 11                      | Condenser (10.0 Mfd.)                                      | 7440                 |
| 12                      | Compensating Condenser (Part of Tuning Condenser Assembly) |                      |
| 13                      | I.F. Transformer   | 32-1002              |
| 14                      | Compensating Cond. (I.F. Secondary)                        | 04000-A              |
| 15                      | Resistor (10,000 ohms) Brown-Black-Orange                  | 4412                 |
| 16                      | Resistor (490,000 ohms) Yellow-White-Yellow                | 4517                 |
| 17                      | Resistor (10,000 ohms) Brown-Black-Orange                  | 4412                 |
| 18                      | Compensating Condenser (Regeneration)                      | 04000                |
| 19                      | Condenser (.00025 Mfd.)                                    | 3082                 |
| 20                      | Condenser (.01 Mfd.)                                       | 3903-AM              |
| 21                      | Resistor (240,000 ohms) Red-Yellow-Yellow                  | 4410                 |
| 22                      | Resistor (490,000 ohms) Yellow-White-Yellow                | 4517                 |
| 23                      | Resistor (51,000 ohms) Green-Brown-Orange                  | 4518                 |
| 24                      | Resistor (99,000 ohms) White-White-Orange                  | 4411                 |
| 25                      | Condenser (.015 Mfd.)                                      | 3793-S               |
| 26                      | Output Transformer   | 32-7000              |
| 27                      | Voice Coil and Cone Assembly                               | 36-3000              |
| 28                      | A. C. Switch (Part of Volume Control Assembly)             | 33-5001              |
| 29                      | Resistors (2 Wire Wound-108 ohms each)                     | { 33-3000<br>33-3001 |
| 30                      | Electrolytic Condenser (8 Mfd.)                            | 30-2000              |
| 31                      | Electrolytic Condenser (8 Mfd.)                            | 30-2000              |
| 32                      | Condenser (.05 Mfd.)                                       | 3615-E               |
| 33                      | Filter Choke   | 32-7001              |
| 34                      | Tube Shield  | 7172                 |
| 35                      | Knobs (Both Controls)                                      | 03064                |
| 36                      | Four Prong Socket  | 7544                 |

| No. on Figs. | Description  | Part No. |
|--------------|--|----------|
| 1            | Condenser  | 30-1005  |
| 1a           | Resistor (Green-Black-Red)                             | 6096     |
| 2            | Condenser  | 5215     |
| 3            | Antenna Transformer Assembly                           | 32-1117  |
| 4            | Tuning Condenser Assembly                              | 31-1027  |
| 5            | Compensating Condenser (Part of 3)                     |          |
| 6            | Wave Band Switch                                       | 42-1027  |
| 6a           | Condenser  | 30-4020  |
| 7            | Filter Condenser (Block)                               | 30-4023  |
| 8            | Resistor (Flexible)                                    | 33-3010  |
| 9            | Compensating Condenser (High Frequency 1400) Part of 4 |          |
| 10           | Oscillator Coil  | 32-1118  |
| 11           | Resistor (Green-Brown-Orange)                          | 4518     |
| 12           | Compensating Condenser (Low Freq.)                     | 04000-B  |
| 13           | Condenser  | 4519     |
| 14           | Resistor (Green-Black-Red)                             | 5310     |
| 15           | Electrolytic Condenser (Double)                        | 30-2002  |
| 16           | Resistor (White-White-Orange)                          | 4411     |
| 17           | Resistor (Gray-Black-Red)                              | 5838     |
| 18           | Compensating Cond. (1st I. F. Primary)                 | 04000-A  |
| 19           | 1st I. F. Transformer                                  | 32-1115  |
| 20           | Compensating Condenser (1st I. F. Secondary)           | 04000-A  |
| 21           | Resistor (Red-Black-Green)                             | 5872     |
| 22           | Compensating Cond. (2nd I. F. Primary)                 | 04000-A  |
| 23           | 2nd I. F. Transformer                                  | 32-1116  |
| 24           | Condenser (Double)                                     | 8035-G   |
| 25           | Volume Control and "On-Off" Switch                     | 33-5010  |
| 26           | Resistor (Green-Brown-Orange)                          | 4518     |
| 27           | Condenser  | 3903AM   |
| 28           | Resistor (Yellow-White-Yellow)                         | 6097     |
| 29           | Resistor (Green-Brown-Orange)                          | 4518     |
| 30           | Condenser (Double)                                     | 8035-F   |
| 31           | Resistor (Red-Yellow-Yellow)                           | 4410     |
| 32           | Resistor (Yellow-White-Yellow)                         | 4517     |
| 33           | Resistor (Red-Green-Orange)                            | 4516     |
| 34           | Condenser  | 3793-Y   |
| 35           | Output Transformer                                     | 32-7020  |
| 36           | Voice Coil and Cone Assembly                           | 36-3029  |
| 37           | Field Coil and Pot Assembly                            | 36-3040  |
| 38           | Filter Choke   | 32-7036  |
| 39           | Electrolytic Condenser                                 | 30-2001  |
| 40           | Resistor (Wire Wound)                                  | 33-3012  |
| 41           | Resistor (Yellow-White-Yellow)                         | 6097     |
| 42           | Condenser  | 3615-B   |
| 43           | Pilot Lamp   | 4567     |
| 44           | Resistor (Wire Wound)                                  | 33-3011  |
| 45           | Safety Switch  | 42-1028  |
| 46           | Tube Shield  | 28-1130  |
| 47           | Six Prong Socket                                       | 7547     |
| 48           | Seven Prong Socket                                     | 27-6005  |

# MANUAL OF MOST-OFTEN-NEEDED RADIO DIAGRAMS



I.F. 460 KC.

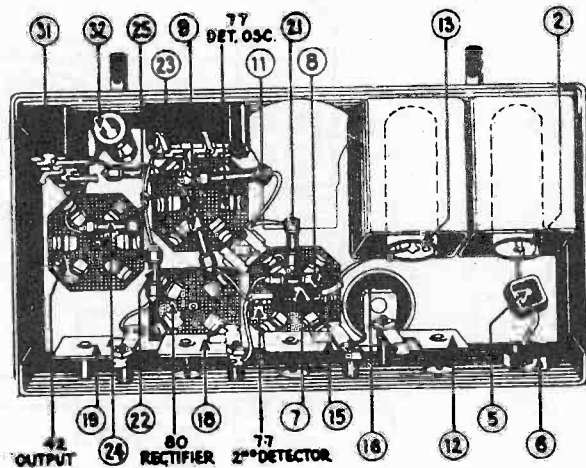
NOTE (A)—This capacity obtained by pair twisted wires

## RESISTANCE VALUES (OHMS)

|    |                   |
|----|-------------------|
| 1  | 20,000 VOL. CONT. |
| 8  | 8,000             |
| 9  | 20,000            |
| 11 | 25,000            |
| 17 | 4000,000          |
| 21 | 1,000,000         |
| 22 | 10,000            |
| 24 | 240,000           |
| 25 | 490,000           |
| 32 | 32.5 (WIRE WOUND) |

## FIXED CONDENSER VALUES (MFD)

|    |               |
|----|---------------|
| 5  | .000325       |
| 7  | .001          |
| 10 | .09-.09       |
| 23 | A-.001-B-.015 |
| 26 | .006          |
| 31 | .015-.015     |



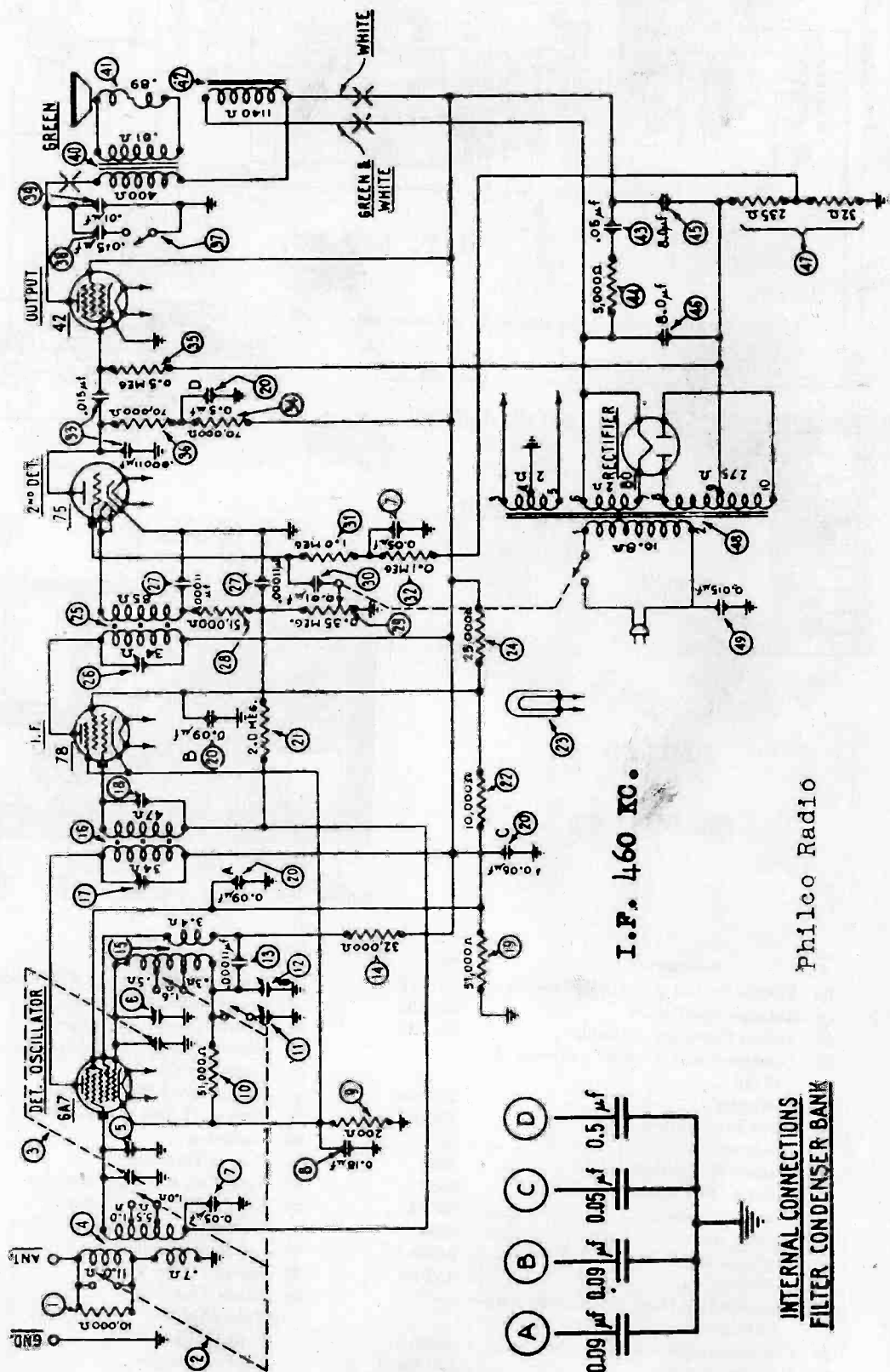
## PHILCO MODEL 57

| No. on Figs. | Description   | Part No. |
|--------------|---|----------|
| 1            | Volume Control and "On-Off" Switch                              | 33-5011  |
| 2            | Antenna Transformer   | 32-1153  |
| 3            | Tuning Condenser Assembly                                       | 31-1035  |
| 4            | Compensating Condenser (Antenna; Part of 3)                     |          |
| 5            | Condenser   | 30-1004  |
| 6            | Wave Band Switch  | 42-1027  |
| 7            | Condenser   | 5215     |
| 8            | Resistor (Gray-Black-Red)                                       | 5838     |
| 9            | Resistor (Red-Black-Orange)                                     | 6650     |
| 10           | Condenser (Double)  | 4989-C   |
| 11           | Resistor (Red-Green-Orange)                                     | 3658     |
| 12           | Compensating Condenser (I. F. Primary)                          | 04000-A  |
| 13           | Oscillator Coil   | 32-1023  |
| 14           | Compensating Cond. (High Frequency—1400 kilocycles) (Part of 3) |          |
| 16           | Compensating Cond. (Low Frequency)                              | 04000-S  |
| 24           | I. F. Transformer   | 32-1155  |
| 27           | Resistor (Yellow-Black-Green)                                   | 8010     |

| No. on Figs. | Description                          | Part No. |
|--------------|--------------------------------------|----------|
| 10           | Compensating Cond. (I. F. Secondary) | 04000-D  |
| 19           | Compensating Condenser               | 04000    |
| 21           | Resistor (Brown-Black-Green)         | 4409     |
| 22           | Resistor (Brown-Black-Orange)        | 4412     |
| 23           | Condenser (Double)                   | 7762-B   |
| 24           | Resistor (Red-Yellow-Yellow)         | 4410     |
| 25           | Resistor (Yellow-White-Yellow)       | 3769     |
| 26           | Condenser                            | 7625-E   |
| 27           | Output Transformer                   | 32-7041  |
| 28           | Voice Coil and Cone Assembly         | 36-3029  |
| 29           | Field Coil and Pot Assembly          | 36-3081  |
| 30           | Electrolytic Condenser (Double)      | 30-2004  |
| 31           | Condenser (Double)                   | 3793-R   |
| 32           | Resistor (Wire Wound)                | 7465     |
| 32           | Power Transformer                    | 32-7046  |
|              | Tube Shield                          | 28-1107  |
|              | Four Prong Socket                    | 7544     |
|              | Six Prong Socket                     | 7547     |

# MANUAL OF MOST-OFTEN-NEEDED RADIO DIAGRAMS

## Model 60



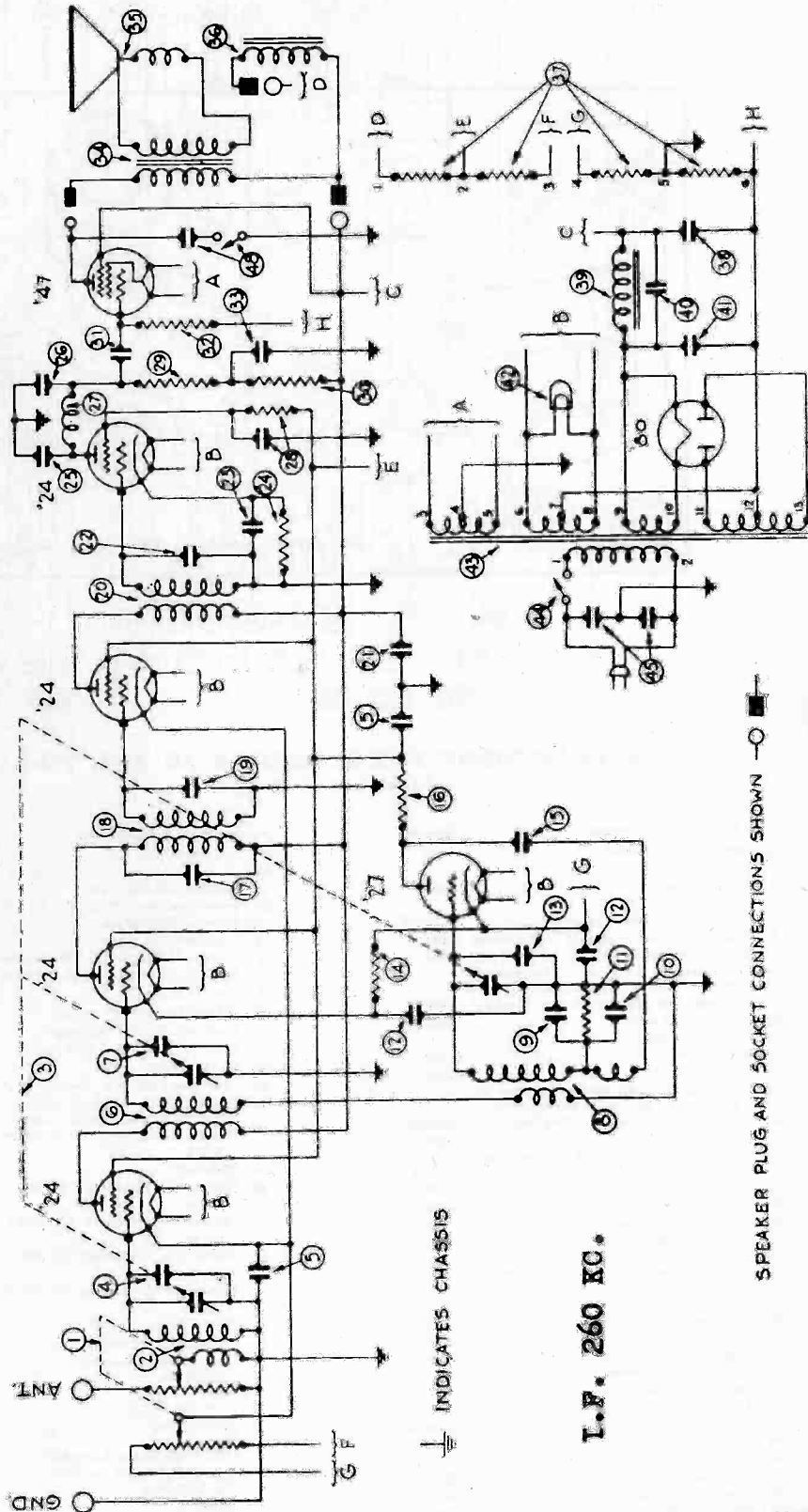
I.F. 460 KC.

Philco Radio

INTERNAL CONNECTIONS  
FILTER CONDENSER BANK

# MANUAL OF MOST-OFTEN-NEEDED RADIO DIAGRAMS

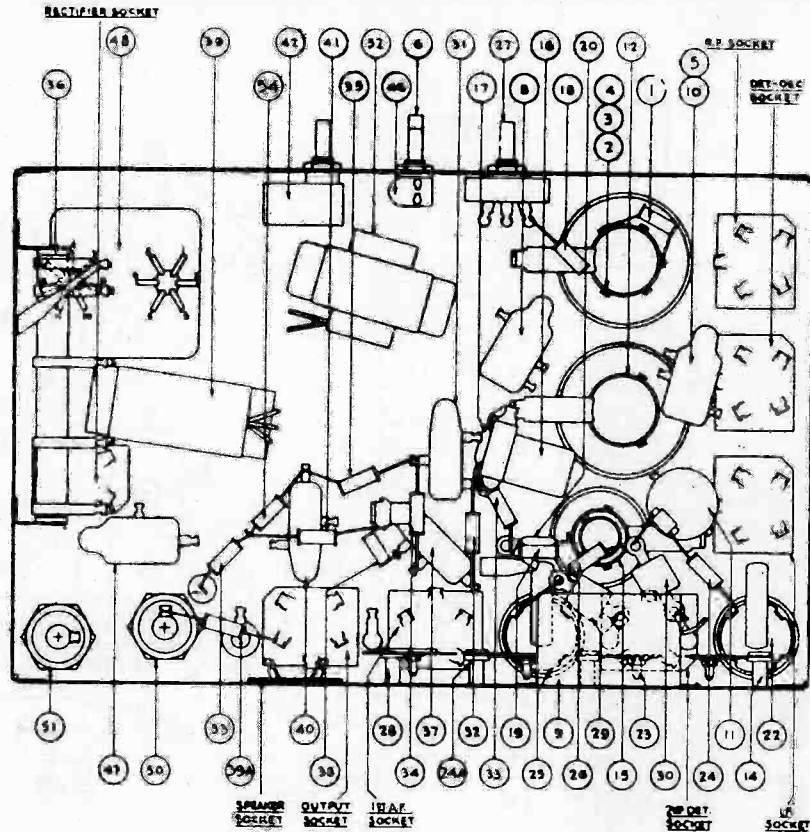
## MODELS 70 AND 70-A



Philco Radio



# MANUAL OF MOST-OFTEN-NEEDED RADIO DIAGRAMS



## REPLACEMENT PARTS MODELS 70 AND 70-A

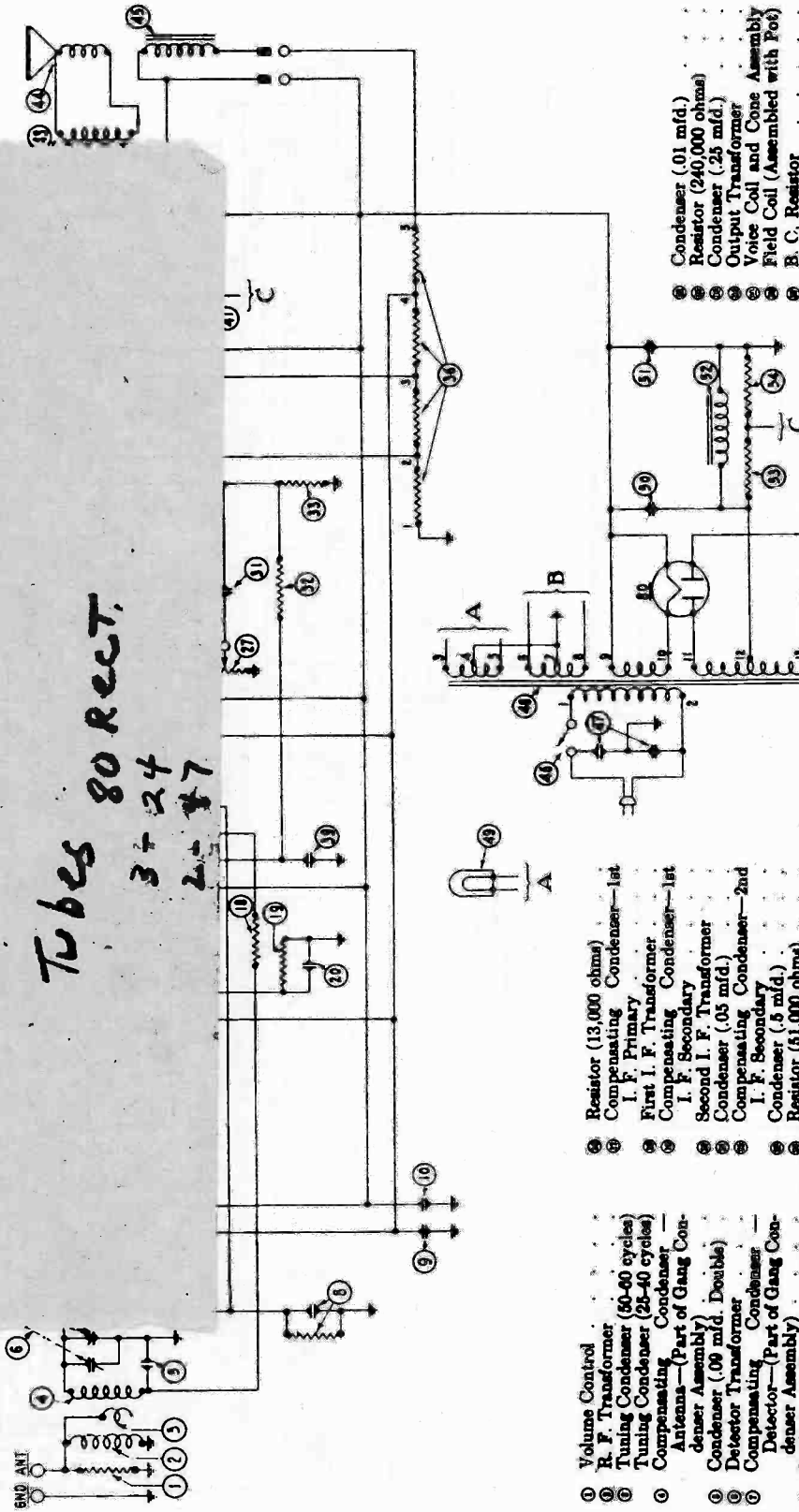
(Above Serial No. B-22,000)

| No. on<br>Fig. 3 and 4 | Description   | Part No. | No. on<br>Fig. 3 and 4 | Description                                      | Part No. |
|------------------------|---|----------|------------------------|--|----------|
| ①                      | Resistor (10,000 ohms)  | 4112     | ②                      | B. C. Resistor                                   | 04106    |
| ②                      | Antenna Coil  | 04330    | ③                      | Condenser (.01 mfd.)                             | 3903-T   |
| ③                      | Condenser (.05 mfd.) double   | 3615-AF  | ④                      | Resistor (490,000 ohms)                          | 4517     |
| ④                      | Tuning Condenser Assembly 50-60 cycles  | 04164    | ⑤                      | Filter Condenser Block (.05, 25 1.5 mfd.)        | 04194    |
| ⑤                      | Tuning Condenser Assembly 25-40 cycles  | 04186    | ⑥                      | Resistor (3,000 ohms)                            | 5309     |
| ⑥                      | Compensating Condenser - Antenna -<br>(Part of Tuning Condenser Assembly)             |          | ⑦                      | Condenser (.01 mfd.)                             | 3903-U   |
| ⑦                      | Condenser (.09 mfd. and 200 ohm Resistor)   | 4080-L   | ⑧                      | Resistor (330,000 ohms) 50-60 cycles             | 6046     |
| ⑧                      | Condenser (.5 mfd.)   | 3583     | ⑨                      | Resistor (490,000 ohms) 25-40 cycles             | 4517     |
| ⑨                      | Combined with ⑧   |          | ⑩                      | Tone Control                                     | 03637    |
| ⑩                      | R. F. Choke   | 04188    | ⑪                      | Output Transformer                               | 2873     |
| ⑪                      | Interstage Coil   | 04188    | ⑫                      | Voice Coil & Cone Assembly                       | 02996    |
| ⑫                      | Compensating Condenser - Detector -<br>(Part of Tuning Condenser Assembly)            |          | ⑬                      | Field Coil Assembly with Pot                     | 02966    |
| ⑬                      | Compensating Condenser - Coupling   | 04000-M  | ⑭                      | On-Off Switch                                    | 4095     |
| ⑭                      | Oscillator Coil   | 04188    | ⑮                      | Condenser (.015 mfd. Double)                     | 3793-F   |
| ⑮                      | Compensating Condenser - Low Fre-<br>quency   | 04000-F  | ⑯                      | Power Transformer (50-60 cycles)                 | 5117     |
| ⑯                      | Condenser (410 mmf.)  | 5120     | ⑰                      | Power Transformer (25-40 cycles)                 | 5118     |
| ⑰                      | Resistor (2,000,000 ohms)   | 5872     | ⑱                      | Power Transformer (50-60 cycles, 230<br>volts)   | 5119     |
| ⑱                      | Resistor (10,000 ohms)  | 4412     | ⑳                      | Pilot Light                                      | 3408     |
| ⑳                      | Condenser (700 mmf.)  | 4520     | ㉑                      | Electrolytic Condenser (6 mfd.) 50-60<br>cycles  | 4916     |
| ㉑                      | Compensating Condenser - High Fre-<br>quency - (part of Tuning Condenser<br>Assembly) |          | ㉒                      | Electrolytic Condenser (14 mfd.) 25-40<br>cycles | 5728     |
| ㉒                      | First I. F. Transformer   | 04180    | ㉓                      | Electrolytic Condenser (6 mfd.) 50-60<br>cycles  | 4918     |
| ㉓                      | Compensating Condenser - First I. F.  | 04000-M  | ㉔                      | Electrolytic Condenser (10 mfd.) 25-40<br>cycles | 5142     |
| ㉔                      | Resistor (2,000,000 ohms)   | 5872     | ㉕                      | Filter Choke                                     | 4819     |
| ㉕                      | Compensating Condenser 2nd I. F. Primary  | 04000-M  | ㉖                      | Resistor (51,000 ohms)                           | 4518     |
| ㉖                      | Second I. F. Transformer  | 08038    | ㉗                      | Resistor (490,000 ohms)                          | 4517     |
| ㉗                      | Resistor (99,000 ohms)  | 4411     | ㉘                      | Tube Shield                                      | 04108    |
| ㉘                      | Volume Control  | 6015     | ㉙                      | Knob (Large)                                     | 03064    |
| ㉙                      | Compensating Condenser - Second I. F.   | 04000-M  | ㉚                      | Knob (Small)                                     | 03437    |
| ㉚                      | Condenser (110 mmf.)  | 4519     | ㉛                      | Knob Spring                                      | 4147     |
| ㉛                      | Condenser (110 mmf.)  | 4519     | ㉜                      | Grid Clip  | 4897     |
| ㉜                      | Condenser (.01 mfd.)  | 3903-G   | ㉝                      | Five Prong Socket Assembly                       | 4956     |
| ㉝                      | Resistor (4,000,000 ohms)   | 6010     | ㉞                      | Four Prong Socket Assembly                       | 4955     |
| ㉞                      | Resistor (1,000,000 ohms)   | 4409     | ㉟                      | Dial Complete                                    | 03031    |
| ㉟                      | Resistor (70,000 ohms)  | 5285     | ㊱                      | Bezel  | 5312     |
| ㊱                      | Resistor (25,000 ohms)  | 4516     | ㊲                      | Chassis Mounting Screw                           | W-468    |
|                        |   |          | ㊳                      | Mounting Washer                                  | W-315    |
|                        |   |          | ㊴                      | Rubber Washer                                    | -5189    |

# MANUAL OF MOST-OFTEN-NEEDED RADIO DIAGRAMS

Philco Mod. 70-70A  
270-370

Tubes 80 RECT.  
3-24  
2-47



- ① Volume Control
- ② R. F. Transformer
- ③ Tuning Condenser (50-40 cycles)
- ④ Tuning Condenser (25-40 cycles)
- ⑤ Compensating Condenser—Antenna—(Part of Gang Condenser Assembly)
- ⑥ Detector Transformer
- ⑦ Compensating Condenser—Detector—(Part of Gang Condenser Assembly)
- ⑧ Oscillator Coil
- ⑨ Condenser (410 mmf.)
- ⑩ Compensating Condenser—Low Frequency
- ⑪ Resistor (51,000 ohms)
- ⑫ Condenser (.09 mfd. Double)
- ⑬ Compensating Condenser—High Frequency—(Part of Gang Condenser Assembly)
- ⑭ Resistor (5,000 ohms)
- ⑮ Condenser (110 mmf.)

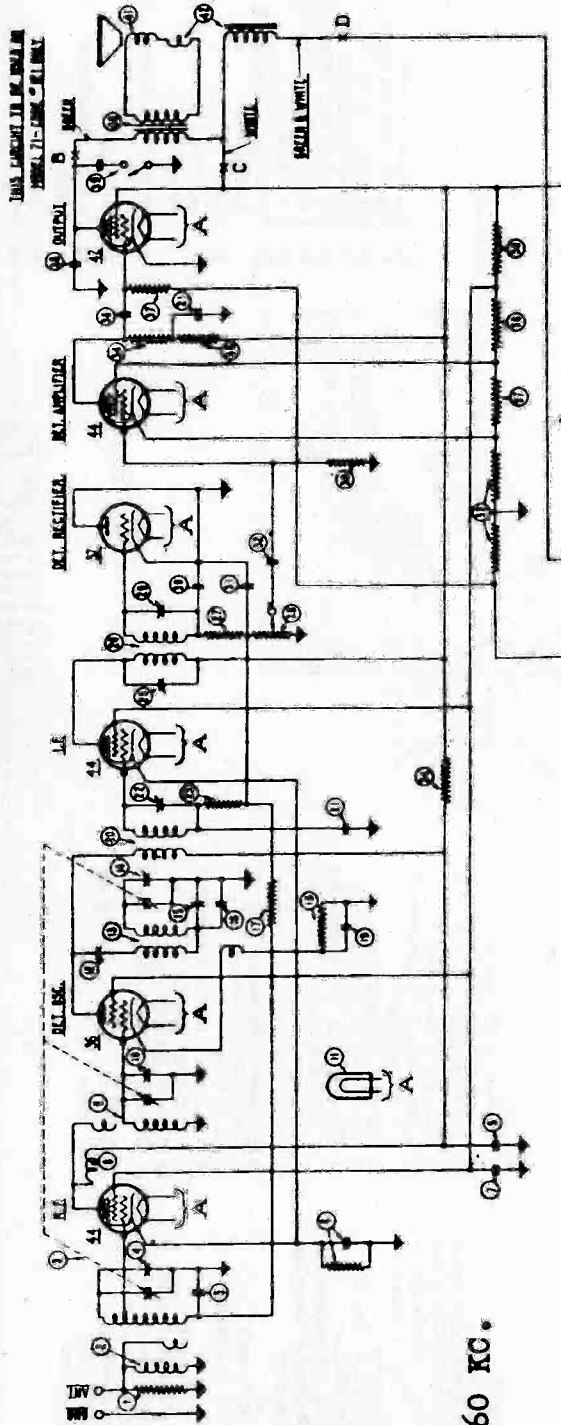
- ⑯ Resistor (15,000 ohms)
- ⑰ Compensating Condenser—1st I. F. Primary
- ⑱ First I. F. Transformer
- ⑲ Compensating Condenser—1st I. F. Secondary
- ⑳ Second I. F. Transformer
- ㉑ Condenser (.05 mfd.)
- ㉒ Compensating Condenser—2nd I. F. Secondary
- ㉓ Resistor (.5 mfd.)
- ㉔ Resistor (51,000 ohms)
- ㉕ Condenser (500 mmf.)
- ㉖ Condenser (250 mmf.)
- ㉗ R. F. Choke
- ㉘ Condenser (.09 mfd. Combined with 250 ohm Resistor)
- ㉙ Resistor (240,000 ohms)
- ㉚ Resistor (45,000 ohms) 50-60 cycles
- ㉛ Resistor (99,000 ohms) 25-40 cycles

- ㉜ Condenser (.01 mfd.)
- ㉝ Resistor (240,000 ohms)
- ㉞ Condenser (.25 mfd.)
- ㉟ Output Transformer
- ㊱ Voice Coil and Cone Assembly
- ㊲ Field Coil (Assembled with Pot)
- ㊳ B. C. Resistor
- ㊴ Electrolytic Condenser (6 mfd.) 50-60 cycles
- ㊵ Choke
- ㊶ Condenser (.09 mfd.) 50-60 cycles
- ㊷ Electrolytic Condenser (6 mfd.) 50-60 cycles
- ㊸ Pilot Light
- ㊹ Power Transformer (50-60 cycles)
- ㊺ "On-Off" Switch
- ㊻ Condenser (.015 mfd. Double)

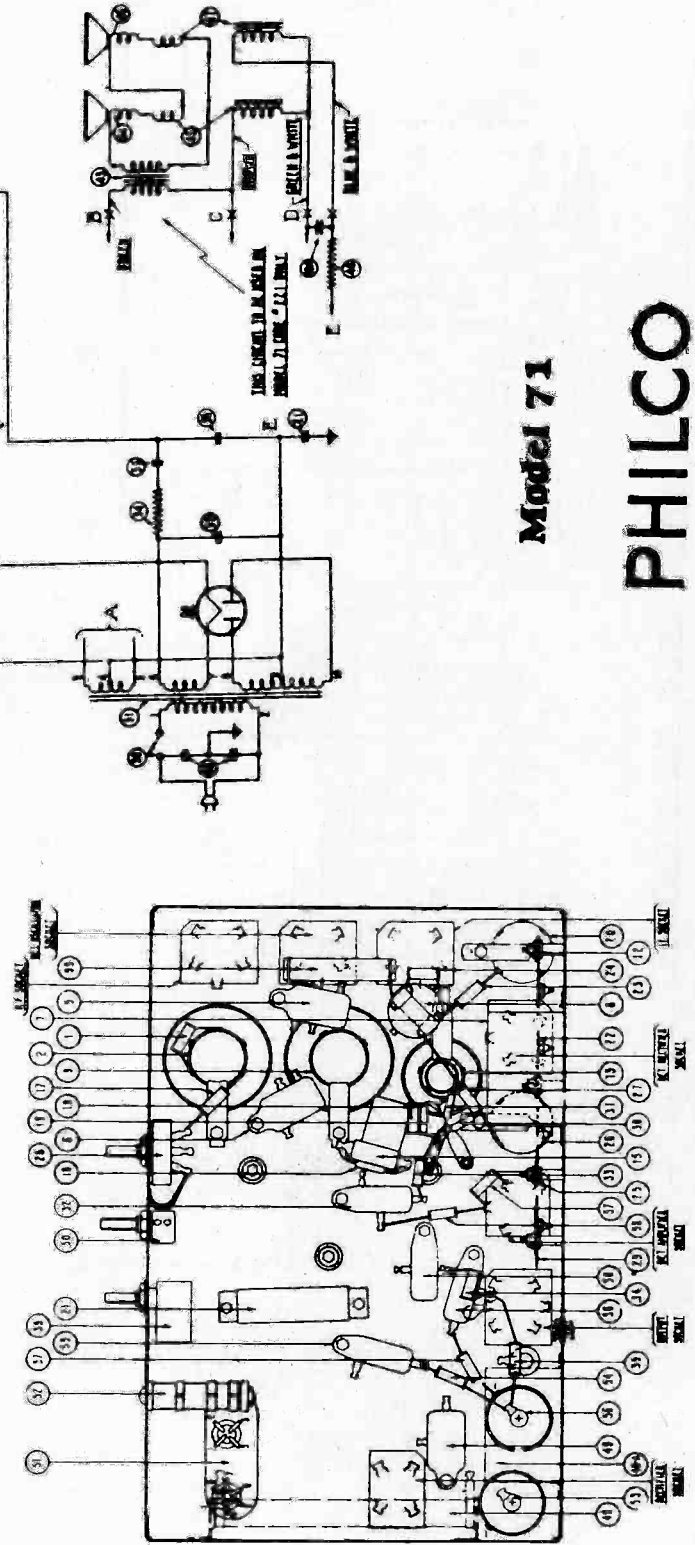
I. F. 260 KC.

**PHILCO**

# MANUAL OF MOST-OFTEN-NEEDED RADIO DIAGRAMS



I.F. 260 KC.



Model 71

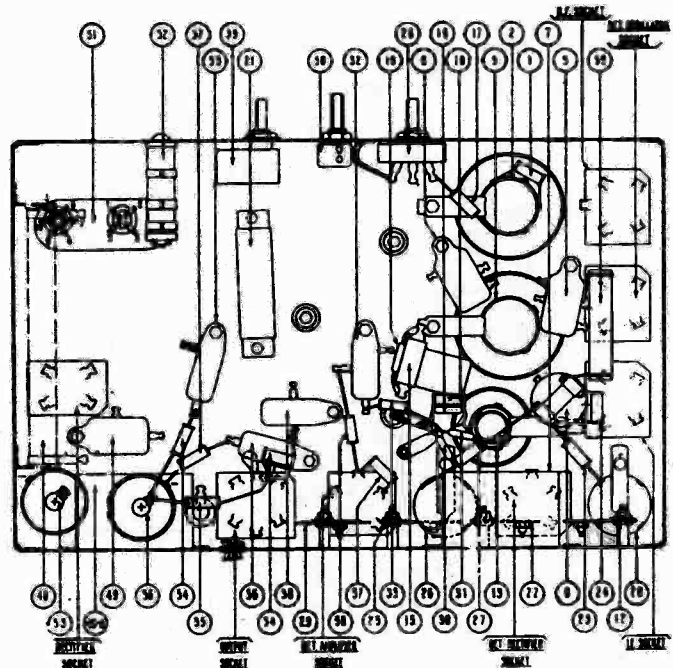
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# MANUAL OF MOST-OFTEN-NEEDED RADIO DIAGRAMS

## Replacement Parts for Model 71 Series

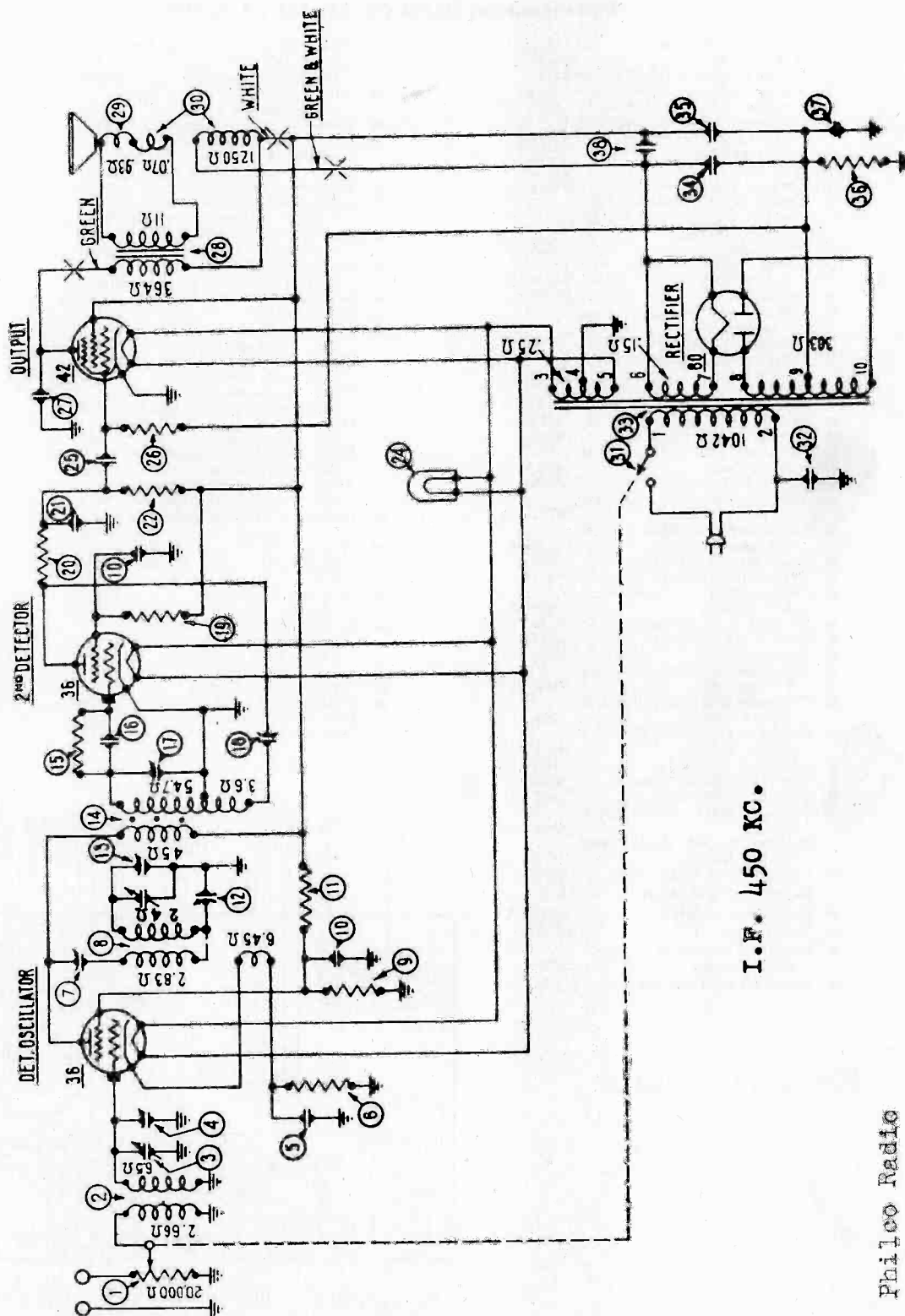
- |   |         |   |        |
|---|---------|---|--------|
| ① Resistor (10,000 ohms)  | 4412    | Ⓜ Speaker Field and Bucking Coil assembled with pot—(K-7) single speaker models | 02761  |
| ② R. F. Transformer   | 04339   | Ⓝ Output Transformer — Twin speaker models                                      | 2564   |
| ③ Tuning Condenser (50-60 cycles)   | 04733   | Ⓞ Voice Coil and cone assembly  | 02823  |
| ④ Tuning Condenser (25-40 cycles)   | 04734   | Ⓟ Speaker Field and Bucking Coil assembled with pot—(K-10) Twin speaker models  | 02767  |
| ⑤ Condenser (.05 Mfd. double)   | 3615-AF | Ⓠ Voice coil and cone assembly  | 02823  |
| ⑥ Condenser (.09 Mfd. and 200 ohm resistor)                               | 4989-L  | Ⓡ Speaker field assembled with pot—(K-9) Twin speaker models                    | 02762  |
| ⑦ Condenser (.5 Mfd.)   | 3583    | Ⓢ Resistor (5620 ohms) wire wound—Twin speaker models                           | 6451   |
| ⑧ R. F. Choke   | 04198   | Ⓣ A Condenser (.25 Mfd.) Twin Speaker Models                                    | 04997  |
| ⑨ Detector Transformer  | 04185   | Ⓤ Condenser (.015 Mfd. Double)  | 3793-H |
| Ⓛ Compensating Condenser—Detector—Part of tuning condenser assembly       |         | ⓖ On-off Switch   | 6496   |
| Ⓜ Pilot Light   | 6608    | ⓗ Power Transformer—50-60 cycles—single speaker                                 | 6454   |
| Ⓝ Compensating Condenser — 1st I. F. primary                              | 04000-M | ⓘ Power Transformer—25-40 cycles—single speaker                                 | 6455   |
| Ⓞ Oscillator Coil   | 04186   | Ⓤ Power Transformer—50-60 cycles—230 volts—single speaker                       | 6456   |
| Ⓟ Compensating Condenser—High frequency—Part of tuning condenser assembly |         | ⓗ Power Transformer—50-60 cycles—twin speaker                                   | 6457   |
| Ⓠ Compensating condenser—Low frequency                                    | 04000-F | Ⓣ Power Transformer—25-40 cycles—twin speaker                                   | 6458   |
| Ⓡ Condenser (410 Mmf.) (Yellow and Orange)                                | 5120    | Ⓤ Power Transformer—50-60 cycles—230 volts—twin speaker                         | 6459   |
| Ⓢ Resistor (1,000,000 ohms)   | 4409    | ⓗ Resistor—wire wound (245 ohms and 185 ohms)                                   | 6462   |
| Ⓣ Resistor (15,000 ohms)  | 6208    | Ⓣ Electrolytic Condenser (6 Mfd.) (50-60 cycles) single speaker                 | 6453   |
| Ⓤ Condenser (700 Mmf.) (White and Yellow)                                 | 4520    | Ⓤ 8 Mfd. Twin speaker   | 6707   |
| ⓖ First I.-F. Transformer   | 04190   | ⓗ Resistor (10,000 ohms)  | 4412   |
| Ⓡ Filter Condenser Bank (2 — .05, .25 Mfd.)                               | 04731   | Ⓣ Condenser (.05 Mfd.)  | 3615-G |
| Ⓢ Compensating Condenser — 1st I. F. secondary                            | 04000-M | Ⓤ Electrolytic Condenser (6 Mfd.) (50-60 cycles) single speaker                 | 4916   |
| Ⓣ Resistor (1,000,000 ohms)   | 4409    | ⓗ 8 Mfd. Twin speaker   | 6706   |
| Ⓤ Resistor (1,000 ohms)   | 5837    | Ⓣ Resistor (5,000 ohms)   | 5310   |
| ⓖ Compensating Condenser—2nd I. F. primary                                | 04000-M | Ⓤ Resistor (5,000 ohms)   | 5310   |
| Ⓡ Second I. F. Transformer  | 04319   | ⓗ Resistor (13,000 ohms)  | 6450   |
| Ⓢ Resistor (99,000 ohms)  | 4411    | Ⓣ Tube Shield (small)   | 5387   |
| Ⓣ Volume Control  | 6499    | Ⓤ Tube Shield (large)   | 04735  |
| Ⓤ Compensating Condenser—2nd I. F. secondary                              | 04000-M |   |        |
| ⓖ Condenser (110 Mmf.) (Blue and Golden Yellow)                           | 4519    |   |        |
| Ⓡ Condenser (110 Mmf.) (Blue and Golden Yellow)                           | 4519    |   |        |
| Ⓢ Condenser (.01 Mfd.)  | 3903-J  |   |        |
| Ⓣ Resistor (1,000,000 ohms)   | 4409    |   |        |
| Ⓤ Resistor (70,000 ohms)  | 5385    |   |        |
| ⓖ Resistor (25,000 ohms) Single Speaker                                   | 4516    |   |        |
| Ⓡ Resistor (51,000 ohms) Twin Speaker Models                              | 4518    |   |        |
| Ⓢ Condenser (.01 Mfd.)  | 3903-N  |   |        |
| Ⓣ Resistor (490,000 ohms)   | 4517    |   |        |
| Ⓤ Condenser (.01 Mfd.)  | 3903-AA |   |        |
| ⓖ Tone Control  | 04757   |   |        |
| Ⓡ Output Transformer — single speaker models                              | 2580    |   |        |
| Ⓢ Voice Coil and Cone assembly  | 02823   |   |        |

Philco Radio



# MANUAL OF MOST - OFTEN - NEEDED RADIO DIAGRAMS

## Model 80

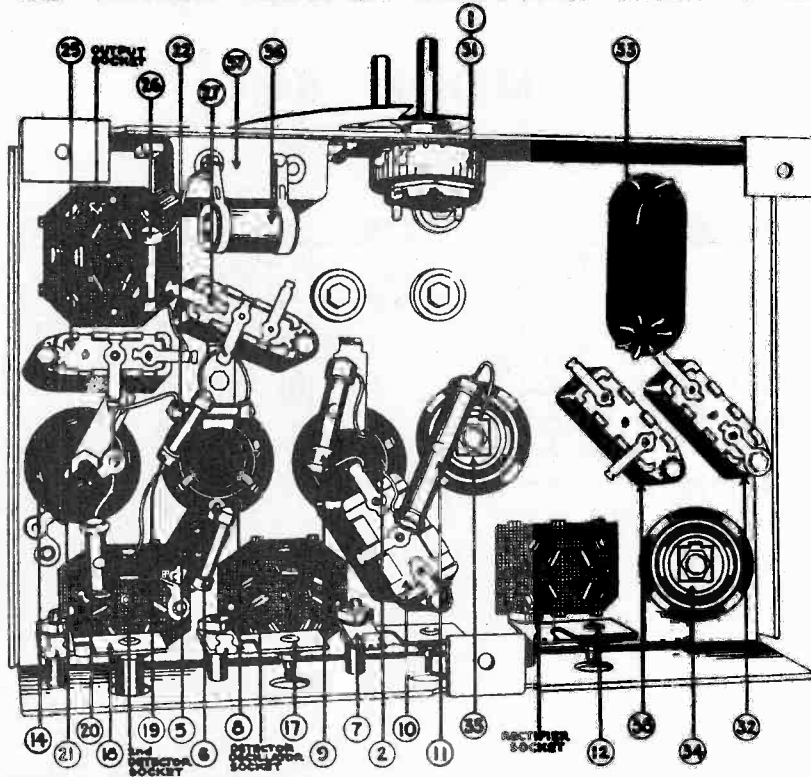


I.F. 450 KC.

Philco Radio



# MANUAL OF MOST-OFTEN-NEEDED RADIO DIAGRAMS



## REPLACEMENT PARTS MODEL 80

| No. on<br>Figs. 2 and 3 | Description  | Part No. |
|-------------------------|--|----------|
| ①                       | Volume Control—Combined with On-Off Switch                         | 7439     |
| ②                       | Antenna Transformer  | 05831    |
| ③                       | Tuning Condenser Assembly  | 05794    |
| ④                       | Compensating Condenser—Antenna—Part of Tuning Con. Assembly        |          |
| ⑤                       | Condenser (710 Mmf.) White and Yellow                              | 4520     |
| ⑥                       | Resistor (10,000 Ohms)   | 4412     |
| ⑦                       | Compensating Condenser—I.F. Primary                                | 04000-A  |
| ⑧                       | Oscillator Coil  | 05832    |
| ⑨                       | Resistor (9,000 Ohms)  | 7501     |
| ⑩                       | Condenser (.09 Twin)   | 4989-B   |
| ⑪                       | Resistor (16,000 Ohms)   | 7500     |
| ⑫                       | Compensating Condenser—Low Frequency                               | 04000-S  |
| ⑬                       | Compensating Condenser—High Frequency—Part of Tuning Con. Assembly |          |
| ⑭                       | I.F. Transformer   | 05834    |
| ⑮                       | Resistor (4,000,000 Ohms) Mounted on I.F. Transformer              | 6010     |
| ⑯                       | Condenser (50 Mmf.) White—Mounted on I.F. Transformer              | 3774     |
| ⑰                       | Compensating Condenser—I.F. Secondary                              | 04000-D  |
| ⑱                       | Compensating Condenser   | 04000    |
| ⑲                       | Resistor (1,000,000 Ohms)  | 4409*    |
| ⑳                       | Resistor (10,000 Ohms)   | 4412     |
| ㉑                       | Condenser (1,000 Mmf.) Green and White                             | 5215     |
| ㉒                       | Resistor (240,000 Ohms)  | 4410     |
| ㉓                       | Pilot Light  | 6608     |

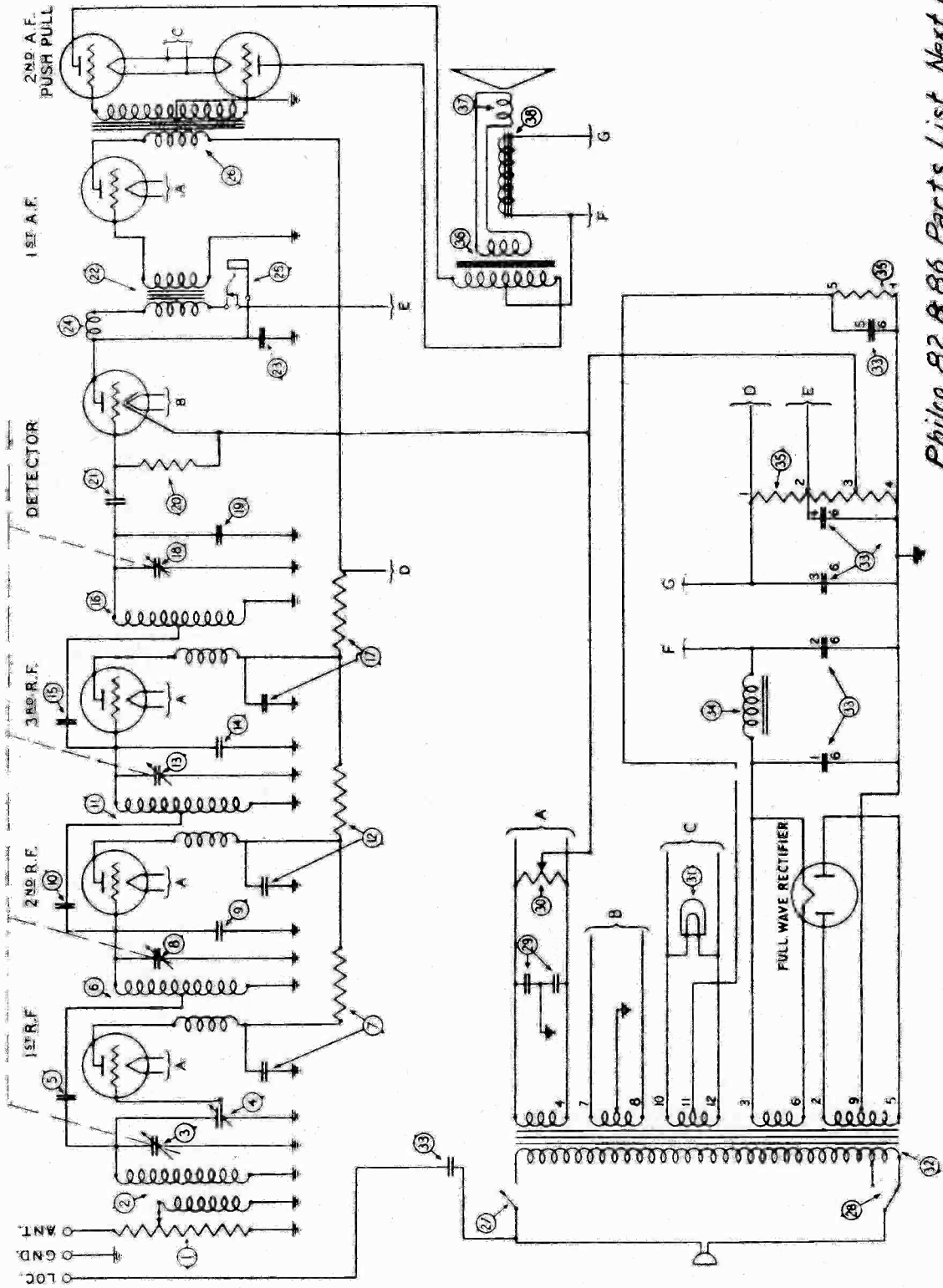
| No. on<br>Figs. 2 and 3 | Description                                       | Part No. |
|-------------------------|---|----------|
| ㉔                       | Condenser (.015 Mfd.)                             | 3793-B   |
| ㉕                       | Resistor (490,000 Ohms)                           | 4517*    |
| ㉖                       | Condenser (.008 Mfd.)                             | 7625-B*  |
| ㉗                       | Output Transformer                                | 2660     |
| ㉘                       | Voice Coil and Cone Assembly                      | 02861    |
| ㉙                       | Speaker Field and Bucking Coil Assembled with Pot | 02877*   |
| ㉚                       | On-Off Switch—Combined with Volume Control        | 7439     |
| ㉛                       | Condenser (.01 Mfd.)                              | 3903-AH* |
| ㉜                       | Power Transformer 50-60 Cycles                    | 7421     |
| ㉝                       | Power Transformer 25-40 Cycles                    | 7422     |
| ㉞                       | Power Transformer 50-60 Cycles, 230 Volts         | 7423     |
| ㉟                       | Electrolytic Condenser (8.0 Mfd.)                 | 6707     |
| ㊱                       | Electrolytic Condenser (4.0 Mfd.)                 | 7467     |
| ㊲                       | Resistor (325 Ohms) Wire Wound                    | 7465*    |
| ㊳                       | Electrolytic Condenser—Dry—(10 Mfd.)              | 7440*    |
| ㊴                       | Condenser (.01 Mfd.)                              | 3903-AJ* |
| ㊵                       | Basel   | 7417     |
| ㊶                       | Dial Complete                                     | 05828    |
| ㊷                       | Tube Shield                                       | 7172     |
| ㊸                       | Knob (Large)                                      | 03063    |
| ㊹                       | Knob (Small)                                      | 03064    |
| ㊺                       | Knob Spring                                       | 5262     |
| ㊻                       | Grid Clip   | 4897     |
| ㊼                       | Four Prong Socket Assembly                        | 5026     |
| ㊽                       | Five Prong Socket Assembly                        | 4956     |
| ㊾                       | Six Prong Socket Assembly                         | 6417     |
| ㊿                       | Chassis Mounting Screw                            | W-567    |
| 1                       | Chassis Mounting Washer                           | W-315    |
| 2                       | Rubber Washer                                     | 5189     |
| 3                       | Pilot Lamp Shield                                 | 5760     |

\* A number of circuit changes were made on chassis of run No. 5 and above. This run number is rubber stamped in a star on the back of the chassis. Referring to Figs. 2 and 3, the condenser ㉔ connects to the B- end of resistor ㉕ instead of to ground. The bucking coil - that section of ㉙ in series with the voice coil - is shorted out. The 10 mfd. dry electrolytic condenser ㉛ is eliminated, and replaced with a substitute .015 section combined with ㉔, part 3793R. The .01 mfd. condenser ㉜ is eliminated. The positions of ㉚ and ㉛ are changed in the chassis from that shown in Fig. 3.



# MANUAL OF MOST-OFTEN-NEEDED RADIO DIAGRAMS

## PHILCO Model 86 and 82



*Philco 82 & 86 Parts List Next Page*

Replacement Parts for Model 86

| PART NAME   | PART No. | PART NAME                                | PART No. |
|---|----------|--|----------|
| Volume Control  | 3076     | Speaker Plug                             | 2871-A   |
| R. F. Transformer (Antenna Tuning)                      | 3075-B   | Speaker Cone and Voice Coil              | 2808     |
| Tuning Condenser (complete with drum and scale)         | 3001-B   | Speaker Field Coil                       | 2806     |
| Range Control   | 3133     | Cable Spring                             | 3012     |
| Neutralizing Condenser                                  | 3025-A   | Control Knob (Tuning Condenser)          | 3033-A   |
| R. F. Transformer                                       | 3075-A   | Control Knob (Volume and Range Control)  | 3036-A   |
| By-Pass Condenser (.1 mfd. with Plate Resistor-Winding) | 3292-A   | 226 Tube Socket                          | 3051-A   |
| Compensating Condensers                                 | 3282-A   | Condenser Drive Cable                    | 3054-A   |
| Grid Leak   | 3083     | Knob Spring                              | 3103     |
| Grid Condenser  | 3082     | Fibre Adjusting Wrench                   | 3164     |
| Audio Transformer                                       | 3241     | 280 Tube Socket                          | 3169-A   |
| By-Pass Condenser (.001 mfd.)                           | 3081     | 171 Tube Socket                          | 3170-A   |
| Detector R. F. Choke                                    | 3256-A   | Pilot Lamp Socket Assembly               | 3202-A   |
| Phonograph Pick-Up Jack                                 | 3087     | Jack Insulator Nut                       | 3231     |
| Push-Pull Input Transformer                             | 3242     | Terminal Panel Assembly                  | 3236-A   |
| Power-Toggle Switch                                     | 3253     | Speaker Socket                           | 3247-A   |
| Primary Tap Switch                                      | 3116     | 227 Tube Socket, Spring Type             | 3263-A   |
| Filament By-Pass Condenser (2 sections .5 mfd.)         | 3080     | Jack Insulator                           | 3272     |
| 6-Ohm Hum Adjuster                                      | 3096     | A.C. Attachment Cord and Plug            | L-943-A  |
| Pilot Lamp  | 3105     | Wiring Cable                             | L-1037   |
| Power Transformer (60 cycle)                            | 3271     | Speaker Cable                            | L-1039   |
| Filter Condenser Block (60 cycle)                       | 3246     | Socket Wrench for Speaker Mounting Bolts | 3312     |
| Filter Choke Coil                                       | 3269     |  |          |
| B-C Section Resistor                                    | 3232     |  |          |
| Push-Pull Output Transformer                            | 2897     |  |          |

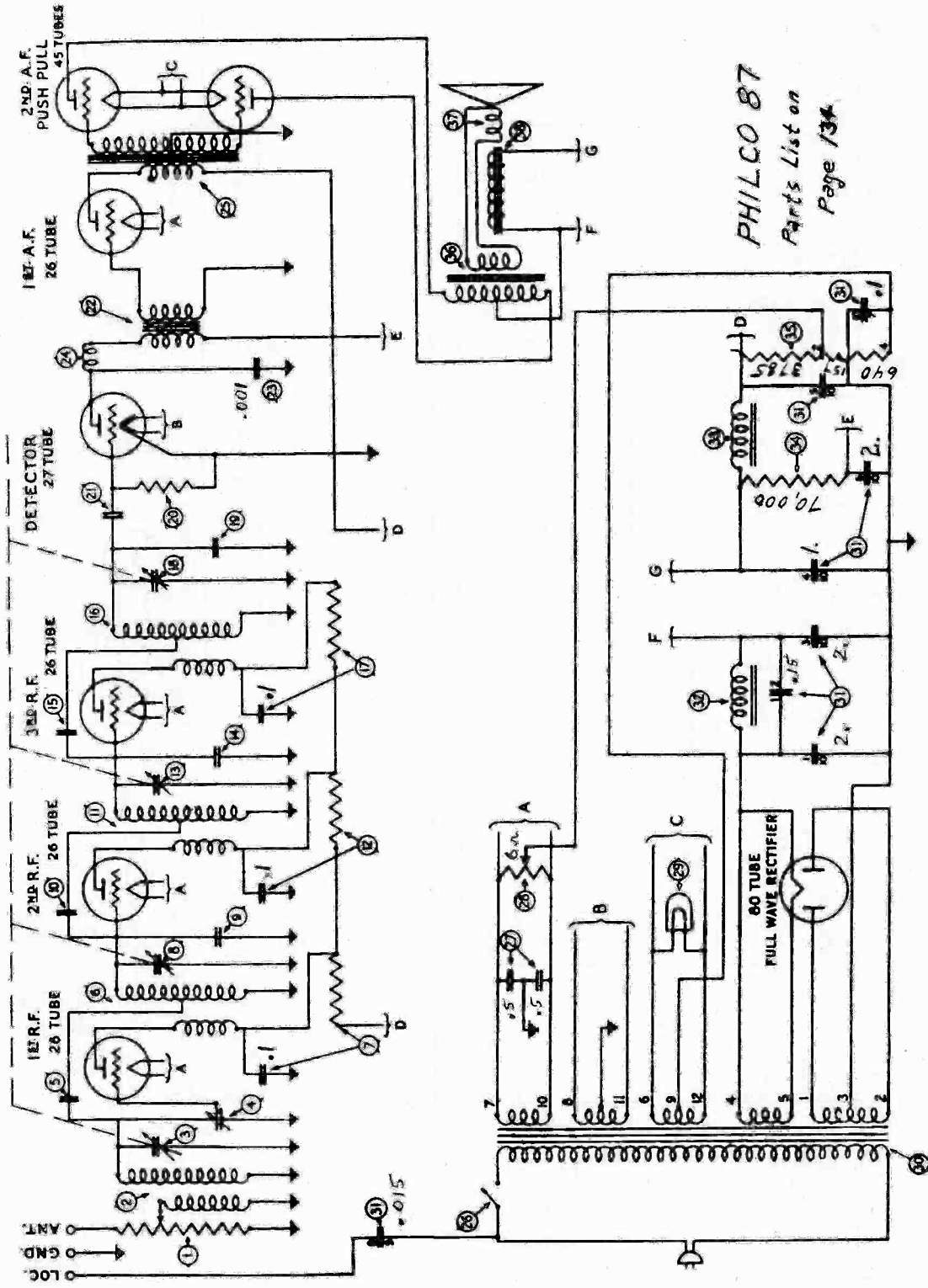
Note:—When ordering replacements for 25-cycle Receivers (Model 83) use the following part numbers instead of those given above. All other part numbers remain the same.

Replacement Parts for Model 87

| PART NAME   | PART No. | PART NAME                                | PART No. |
|---|----------|--|----------|
| Volume Control  | 3076     | Detector Resistor                        | 3532     |
| R. F. Transformer (Antenna Tuning)                      | 3075-B   | B-C Resistor                             | 3309     |
| Tuning Condenser (Complete with Drum and Scale)         | 3001-B   | Push-Pull Output Transformer             | 2848     |
| Range Control   | 3133     | Speaker Cone and Voice Coil              | 2844-A   |
| Neutralizing Condenser                                  | 3441-A   | Speaker Field Coil                       | 2850     |
| R. F. Transformer                                       | 3075-A   | Speaker Plug                             | 2871-A   |
| By-Pass Condenser (.1 mfd. with Plate Resistor Winding) | 3292-A   | Cable Spring                             | 3012     |
| Compensating Condensers                                 | 3435-A   | Control Knob (Tuning Condenser)          | 3301     |
| Grid Leak   | 3083     | Control Knob (Volume and Range Control)  | 3300     |
| Grid Condenser  | 3082     | Condenser Drive Cable                    | 3484     |
| Audio Transformer                                       | 3241     | Knob Spring                              | 3306     |
| By-Pass Condenser (.001 mfd.)                           | 3081     | Fibre Adjusting Wrench                   | 3164     |
| Detector R. F. Choke                                    | 3256-A   | 4-Hole Tube Socket                       | 3429-A   |
| Push-Pull Input Transformer                             | 3242     | Pilot Lamp Socket Assembly               | 3202-A   |
| Power Toggle Switch                                     | 3501     | Terminal Panel Assembly                  | 3256-A   |
| Filament By-Pass Condenser (2 Sections .5 mfd.)         | 3080     | Speaker Socket                           | 3464-A   |
| 6-Ohm Hum Adjuster                                      | 3096     | 4-Hole Tube Socket                       | 3442-A   |
| Pilot Lamp  | 3463     | A.C. Attachment Cord and Plug            | L-943-A  |
| Power Transformer                                       | 3400     | Socket Wrench for Speaker Mounting Bolts | L-1036-A |
| Filter Condenser Block                                  | 3401     | Speaker Cable                            | 3312     |
| Filter Choke Coil (First)                               | 3422     | Tuning Scale                             | 3398     |
| Filter Choke Coil (Second)                              | 3472     | Oscillator Kit                           | 3540     |
|   |          | Wood Switch Plug                         | 3597     |

# MANUAL OF MOST-OFTEN-NEEDED RADIO DIAGRAMS

## Model 87



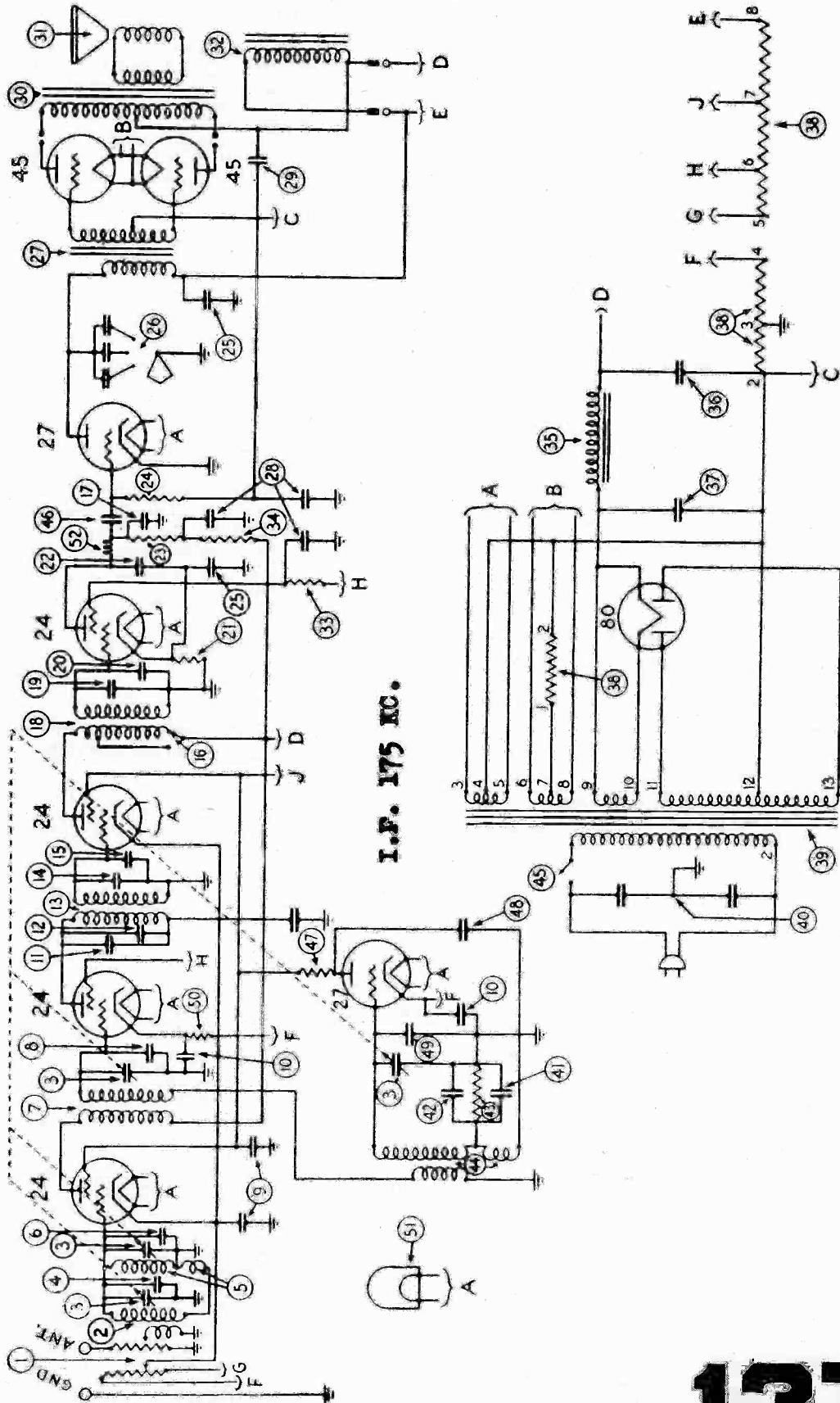




# MANUAL OF MOST-OFTEN-NEEDED RADIO DIAGRAMS

## Models 90 and 90-A

WITH 2-TYPE 45 TUBES



I.F. 175 KC.

# MANUAL OF MOST-OFTEN-NEEDED RADIO DIAGRAMS

## Models 90 and 90-A

WITH 2- TYPE 45 TUBES

| No. on<br>Figs. 3 and 4 | Description  | Part No. | No. on<br>Figs. 3 and 4 | Description  | Part No. |
|-------------------------|--|----------|-------------------------|--|----------|
| ①                       | Volume Control   | 8080     | ②                       | Condenser .015 M. F. (Double)                              | 3793-E   |
| ①                       | 1st R. F. Transformer  | 03013    | ②                       | Condenser .0007 M. F.                                      | 3793-E   |
| ①                       | Gang Condenser—50 to 60 cycles                                 | 03001    | ②                       | Compensating Condenser } Assembled                         | 03080    |
| ①                       | Gang Condenser—25 to 40 cycles                                 | 03078    | ②                       | Resistor—80,000 Ohms                                       | 4237     |
| ①                       | Compensating Condenser (Part of Tuning Condenser Assembly)     |          | ②                       | Oscillator Coil  | 03016    |
| ①                       | 2nd R. F. Transformer  | 03014    | ②                       | On-Off Switch  | 4095     |
| ①                       | Compensating Condenser (Part of Tuning Condenser Assembly)     |          | ②                       | Condenser .001 M. F.                                       | 5215     |
| ①                       | 1st Det. Transformer   | 03015    | ②                       | Resistor—13,000 Ohms                                       | 3796     |
| ①                       | Compensating Condenser (Part of Tuning Condenser Assembly)     |          | ②                       | Condenser .00011 M. F.                                     | 4519     |
| ①                       | Condenser .09 M. F. (Double)                                   | 4992-C   | ②                       | Compensating Condenser (Part of Tuning Condenser Assembly) |          |
| ①                       | Condenser .09 M. F. (Double)                                   | 4999-B   | ②                       | Resistor—5,000 Ohms  | 3898     |
| ①                       | Fixed Condenser .00011 } Assembled                             | 3772-C   | ②                       | Pilot Bulb   | 3453     |
| ①                       | Compensating Condenser   |          | ②                       | R. F. Choke  | 03085    |
| ①                       | 1st I. F. Transformer  | 03009    | ②                       | Line Cord and Plug   | L-943    |
| ①                       | Compensating Condenser } Assembled                             | 03061    | ②                       | Tube Shield  | 03002    |
| ①                       | Fixed Condenser .00011 }                                       |          | ②                       | Knob (Large) Dial Control                                  | 4966-A   |
| ①                       | Normal Maximum Switch  | 3116     | ②                       | Spring (Dial Knobs)  | 4147     |
| ①                       | Condenser (.00035 mf)  | 4990     | ②                       | Knobs (small) Tone and Volume Control                      | 0309-A   |
| ①                       | 2nd I. F. Transformer  | 03143    | ②                       | Knob (switch)  | 4230-A   |
| ①                       | Compensating Condenser } Assembled                             | 03051    | ②                       | Grid Clip  | 4977     |
| ①                       | Fixed Condenser .00011 }                                       |          | ②                       | Speaker Plug and Cable                                     | L-1194-A |
| ①                       | Resistor—80,000 Ohms   | 4518     | ②                       | Grommet for R. F. Transformer Shield                       | 3747     |
| ①                       | Condenser .00085   | 4990     | ②                       | Rectifier Tube Socket                                      | 5026     |
| ①                       | Resistor—250,000 Ohms  | 4410     | ②                       | Four Prong Socket Assembly                                 | 4955     |
| ①                       | Resistor—1,000,000 Ohms  | 4409     | ②                       | Five Prong Socket Assembly                                 | 4956     |
| ①                       | Condenser .5 M. F. (Double)                                    | 03024    | ②                       | Speaker Socket   | 4967     |
| ①                       | Tone Control   | 4037-A   | ②                       | Volume Control Insulator                                   | 4092     |
| ①                       | 1st Audio Transformer  | 4952     | ②                       | Volume Control Insulator                                   | 4298     |
| ①                       | Condensers 2—25 M. F. and 1—.5 M. F.                           | 03029    | ②                       | Fabstook Clip  | L-1126   |
| ①                       | Condenser .05 M. F.  | 3615-G   | ②                       | Finishing Rosettes   | 4367     |
| ①                       | Output Transformer:  |          | ②                       | Speaker Mounting Screws (3 used)                           | W-493    |
| ①                       | H <sub>1</sub> (For Large Cone Assembly)                       | 2848     | ②                       | Speaker Mounting Screws (1 used)                           | W-493    |
| ①                       | H <sub>2</sub> (For Small Cone Assembly)                       | 2798     | ②                       | Dial   | 3021     |
| ①                       | Voice Coil Assembly and Cone:                                  |          | ②                       | Mica for Gang Condenser Compensating Condenser             | 3473     |
| ①                       | H <sub>1</sub> (Large Cone)                                    | 02897    | ②                       | Insulating Washer for Compensating Condenser               | 2400     |
| ①                       | H <sub>2</sub> (Small Cone)                                    | 02898    | ②                       | Tuning Condenser Mounting Washer                           | 3514     |
| ①                       | Speaker Field—Assembled with Pot and Frame                     |          | ②                       | Tuning Condenser Mounting Washer                           | 3515     |
| ①                       | Resistor—250,000 Ohms  | 3786     | ②                       | Tuning Condenser Mounting Sleeve                           | 3516     |
| ①                       | Resistor—250,000 Ohms  | 5510     | ②                       | Spring for Tuning Condenser                                | 4255     |
| ①                       | Filter Choke   | 6951     | ②                       | Base   | 3009     |
| ①                       | Condenser 6 M. F. Electrolytic Type (50-60 cycles)             | 4916     | ②                       | Complete Pilot Bracket                                     | 03081-A  |
| ①                       | Condenser 10 M. F. Electrolytic Type (25-40 cycles)            | 5142     | ②                       | Dial Disc  | 4625     |
| ①                       | Condenser 6 M. F. Electrolytic Type (25-40) and (50-60) cycles | 4916     | ②                       | Light Shield Screen  | 4937     |
| ①                       | B. C. Resistor   | 4053     | ②                       | Friction Drive Bracket                                     | 4980     |
| ①                       | Power Transformer (50 to 60 cycles)                            | 4028     | ②                       | Brass Collar for Friction Drive Shaft                      | 4985     |
| ①                       | Power Transformer (25 to 40 cycles)                            | 4030     |                         |  | 4951     |

## REPLACEMENT PARTS—MODELS 90 and 90-A RECEIVERS

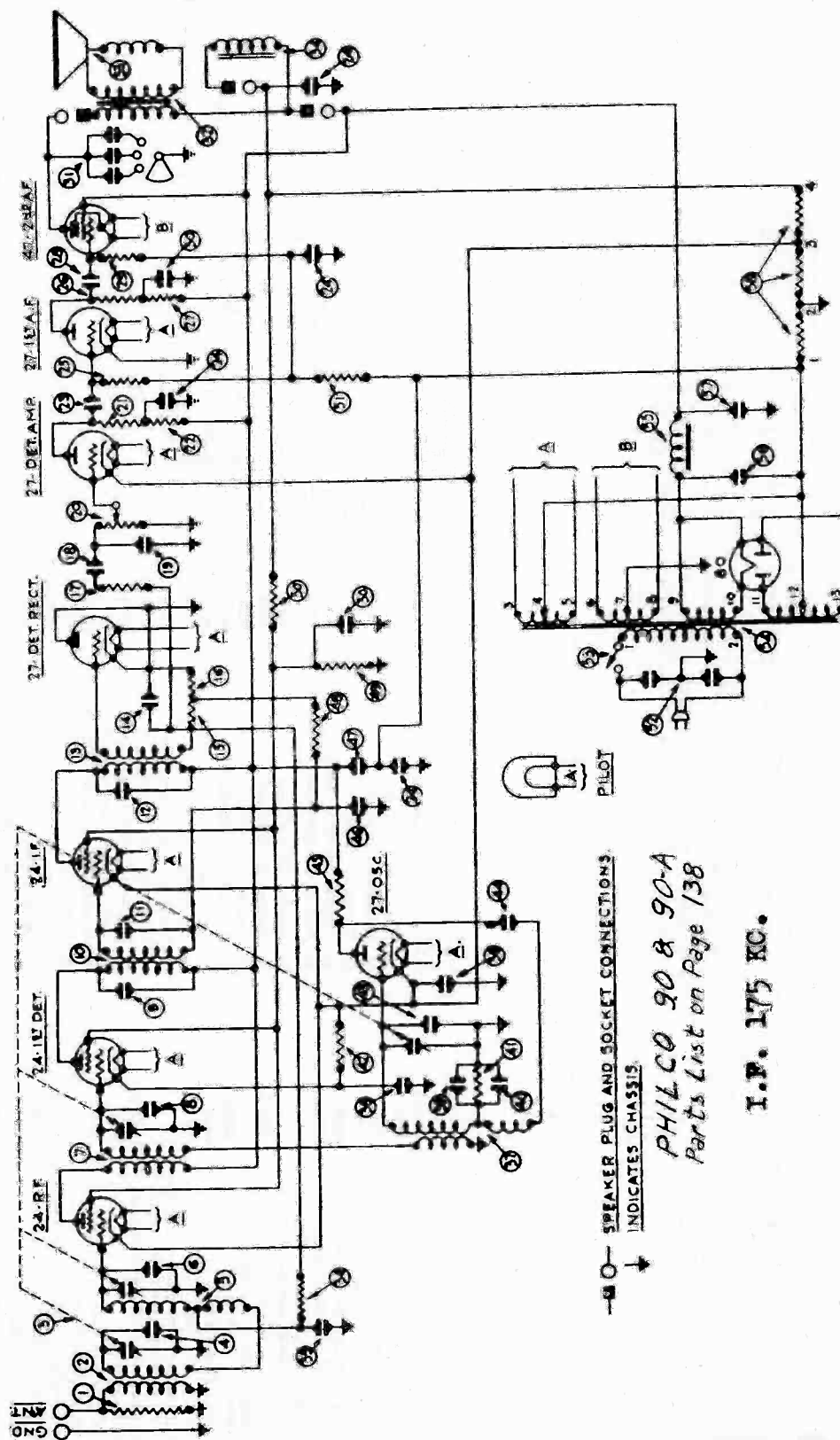
(Above Serial No. 237,001)

| No. on<br>Figs. 3 and 4 | Description  | Part No. | No. on<br>Figs. 3 and 4 | Description  | Part No. |
|-------------------------|--|----------|-------------------------|--|----------|
| ①                       | Resistor (10,000 ohms)                                   | 4412     | ⑤                       | Voice Coil Assembly and Cone:                              |          |
| ①                       | First R. F. Transformer                                  | 03360    | ⑤                       | H <sub>1</sub> (Large Cone)                                | 02997    |
| ①                       | Gang Condenser (50-60 cycles)                            | 03001    | ⑤                       | H <sub>2</sub> (Small Cone)                                | 02996    |
| ①                       | Gang Condenser (25-40 cycles)                            | 03078    | ⑤                       | Speaker Field (Assembled with pot and frame)               |          |
| ①                       | Compensating Condenser (part of gang condenser assembly) |          | ⑤                       | By-Pass Condenser (.05 mfd.)                               | 3615-W   |
| ①                       | Second R. F. Transformer                                 | 03014    | ⑤                       | Resistor (490,000 ohms)                                    | 4517     |
| ①                       | Compensating Condenser (part of gang condenser assembly) |          | ⑤                       | Oscillator Coil  | 03016    |
| ①                       | First Detector Transformer                               | 03015    | ⑤                       | By-Pass Condenser (.09 mfd.) double                        | 4989-G   |
| ①                       | Compensating Condenser (part of gang condenser assembly) |          | ⑤                       | Compensating Condenser } Assembled                         | 03060    |
| ①                       | Compensating Condenser (First I. F. Primary)             | 03315    | ⑤                       | Condenser (.0007 mfd.)                                     | 4518     |
| ①                       | First I. F. Transformer                                  | 03009    | ⑤                       | Resistor (51,000 ohms)                                     | 5310     |
| ①                       | Compensating Condenser (First I. F. Secondary)           | 03315    | ⑤                       | Compensating Condenser (part of tuning condenser assembly) |          |
| ①                       | Compensating Condenser (Second I. F. Primary)            | 03317    | ⑤                       | Condenser (110 mmf.)                                       | 4519     |
| ①                       | Second I. F. Transformer                                 | 03345    | ⑤                       | Resistor (51,000 ohms)                                     | 4237     |
| ①                       | Condenser (110 mmf.)                                     | 4519     | ⑤                       | By-Pass Condenser (.05 mfd.)                               | 3615-U   |
| ①                       | Resistor (51,000 ohms)                                   | 4518     | ⑤                       | By-Pass Condenser (.05 mfd.)                               | 3615-E   |
| ①                       | Resistor (51,000 ohms)                                   | 4518     | ⑤                       | Resistor (490,000 ohms)                                    | 4517     |
| ①                       | Resistor (59,000 ohms)                                   | 4411     | ⑤                       | Resistor (70,000 ohms)                                     | 5385     |
| ①                       | By-Pass Condenser (.01 mfd.)                             | 3902-M   | ⑤                       | Resistor (25,000 ohms)                                     | 4516     |
| ①                       | Condenser (.00025 mfd.)                                  | 3082     | ⑤                       | Resistor (240,000 ohms)                                    | 3768     |
| ①                       | Volume Control   | 5366     | ⑤                       | Condenser (.015 mfd.) double                               | 3793-E   |
| ①                       | Resistor (51,000 ohms)                                   | 4518     | ⑤                       | On-Off Switch  | 4095     |
| ①                       | Resistor (70,000 ohms)                                   | 5385     | ⑤                       | Power Transformer (50-60 cycles)                           | 5362     |
| ①                       | By-Pass Condenser (.01 mfd.)                             | 3903-M   | ⑤                       | Power Transformer (25-40 cycles)                           | 5363     |
| ①                       | Condenser (1-.1 mfd., 1-.13 mfd., 2-.25 mfd.)            | 03325    | ⑤                       | Power Transformer (50-60 cycles, 220 volts)                | 5364     |
| ①                       | Resistor (240,000 ohms)                                  | 4410     | ⑤                       | Choke  | 4951     |
| ①                       | Resistor (25,000 ohms)                                   | 3656     | ⑤                       | Condenser (6 mfd.) Electrolytic type (50-60 cycles)        | 4916     |
| ①                       | Resistor (25,000 ohms)                                   | 3656     | ⑤                       | Condenser (10 mfd.) Electrolytic type (25-40 cycles)       | 5142     |
| ①                       | By-Pass Condenser (.01 mfd.)                             | 3903-P   | ⑤                       | Condenser (6 mfd.) Electrolytic type (50-60 cycles)        | 4916     |
| ①                       | Resistor (240,000 ohms)                                  | 4410     | ⑤                       | Condenser (10 mfd.) Electrolytic type (25-40 cycles)       | 5142     |
| ①                       | Condenser (.25 mfd., 1 mfd.)                             | 03327    | ⑤                       | B. C. Resistor   | 5385     |
| ①                       | Tone Control   | 4027-A   | ⑤                       | Line Cord and Plug   | L-943    |
| ①                       | Output Transformer                                       | 2873     | ⑤                       | Tube Shield (Large)  | 03378    |

# MANUAL OF MOST-OFTEN-NEEDED RADIO DIAGRAMS

## Models 90 and 90-A

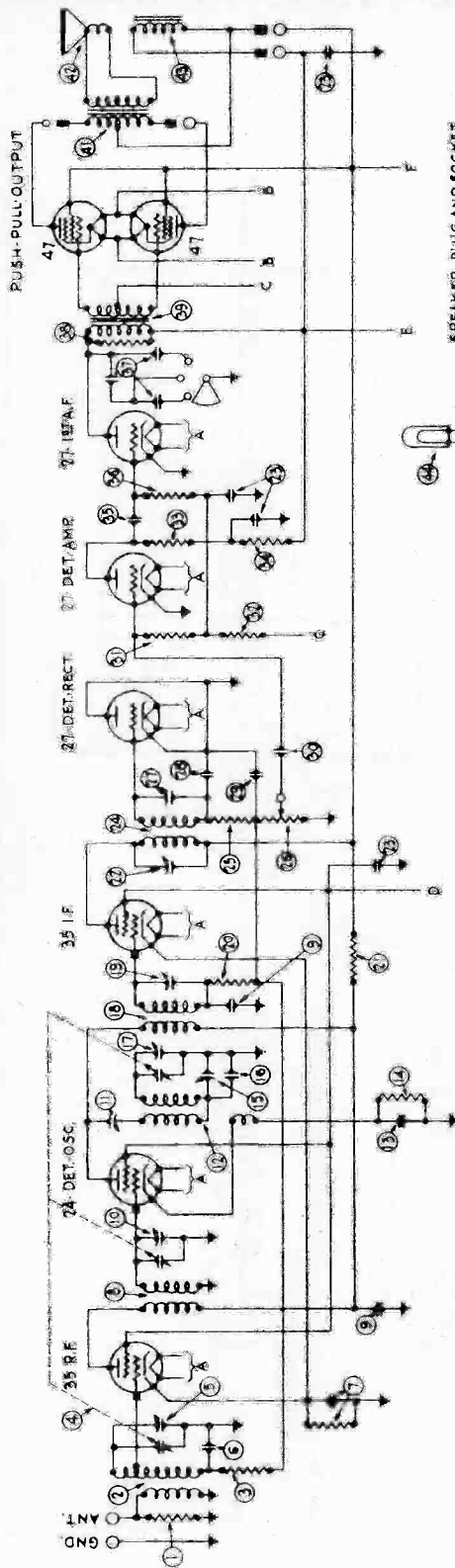
ABOVE SERIAL NO. 237,001  
WITH 1-TYPE 47 TUBE



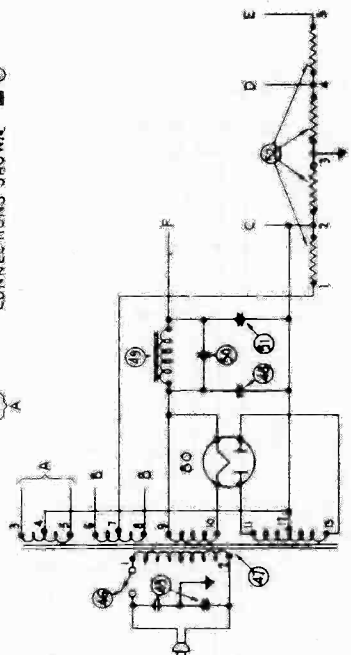
PHILCO 90 & 90-A  
Parts List on Page 138

I.F. 175 KC.

# MANUAL OF MOST OFTEN-NEEDED RADIO DIAGRAMS



SPEAKER PLUG AND SOCKET CONNECTIONS SHOWN



| No. on Fig. 1 and 2 | Description   | Part No. |
|---------------------|---|----------|
| 1                   | Resistor (10,000 Ohms)  | 4412     |
| 2                   | Antenna Transformer   | 04317    |
| 3                   | Resistor (1,000,000 Ohms)   | 4408     |
| 4                   | Tuning Condenser (50-60 cycles)                                     | 04309    |
| 5                   | Tuning Condenser (25-40 cycles)                                     | 04310    |
| 6                   | Compensating Condenser - Antenna Part of Tuning Condenser Assembly  |          |
| 7                   | Condenser (.05 Mfd.)  | 3815-L   |
| 8                   | Condenser (.05 Mfd. and 200 Ohm Resistor)                           | 4988-L   |
| 9                   | Condenser (.05 Mfd.)  | 04406    |
| 10                  | Condenser (.05 Mfd.)  | 3815-AJ  |
| 11                  | Compensating Condenser - Detector Part of Tuning Condenser Assembly |          |
| 12                  | Compensating Condenser - Coupling                                   | 04000-M  |
| 13                  | Oscillator Coil   | 04408    |
| 14                  | Condenser (700 Mmf.)  | 4890     |
| 15                  | Resistor (15,000 Ohms)  | 6208     |
| 16                  | Compensating Condenser - Low Frequency                              | 04000-B  |
| 17                  | Condenser (410 Mfd.)  | 5120     |
| 18                  | Resistor (1,000,000 Ohms)   | 1409     |
| 19                  | Resistor (1,000 Ohms)   | 4990     |
| 20                  | Compensating Condenser - Second I.F. Primary                        | 04000-M  |
| 21                  | Condenser (2-25, 2-5 Mfd.)  | 04407    |
| 22                  | Second I.F. Transformer   | 04320    |
| 23                  | Resistor (99,000 Ohms)  | 4411     |
| 24                  | Volume Control  | 6015     |
| 25                  | Resistor (110 Mmf.)   | 4819     |
| 26                  | Condenser (110 Mmf.)  | 4409     |
| 27                  | Condenser (.01 Mfd.)  | 3908-N   |
| 28                  | Resistor (1,000,000 Ohms)   | 4817     |
| 29                  | Resistor (490,000 Ohms)   | 4816     |
| 30                  | Resistor (25,000 Ohms)  | 4809     |
| 31                  | Resistor (25,000 Ohms)  | 4409     |
| 32                  | Condenser (.01 Mfd.)  | 3908-X   |
| 33                  | Resistor (1,000,000 Ohms)   | 4409     |
| 34                  | Tone Control  | 03187    |
| 35                  | Resistor (51,000 Ohms)  | 4518     |
| 36                  | Push-Pull Input Transformer   | 6004     |
| 37                  | Condenser (1,000 Mmf.)  | 5215     |
| 38                  | Push-Pull Output Transformer  | 2035     |
| 39                  | Voice Coil and Core Assembly  | 02874    |
| 40                  | Speaker Field Assembled with Pot                                    | 02892    |
| 41                  | Pilot Light   | 3408     |
| 42                  | Condenser (.015 Mfd. Double)  | 3708-E   |
| 43                  | On-Off Switch   | 4005     |
| 44                  | Power Transformer (50-60 cycles)                                    | 5072     |
| 45                  | Power Transformer (25-40 cycles)                                    | 3073     |
| 46                  | Power Transformer (50-60 cycles, 200 volts)                         | 8074     |
| 47                  | Electrolytic Condenser (5 Mfd.) 90-40 cycles                        | 4916     |
| 48                  | Fiber Choke   | 4819     |
| 49                  | Condenser (.15 Mfd.)  | 6287-B   |
| 50                  | Condenser (5 Mfd.)  | 4916     |
| 51                  | B. C. Resistor  | 6071     |

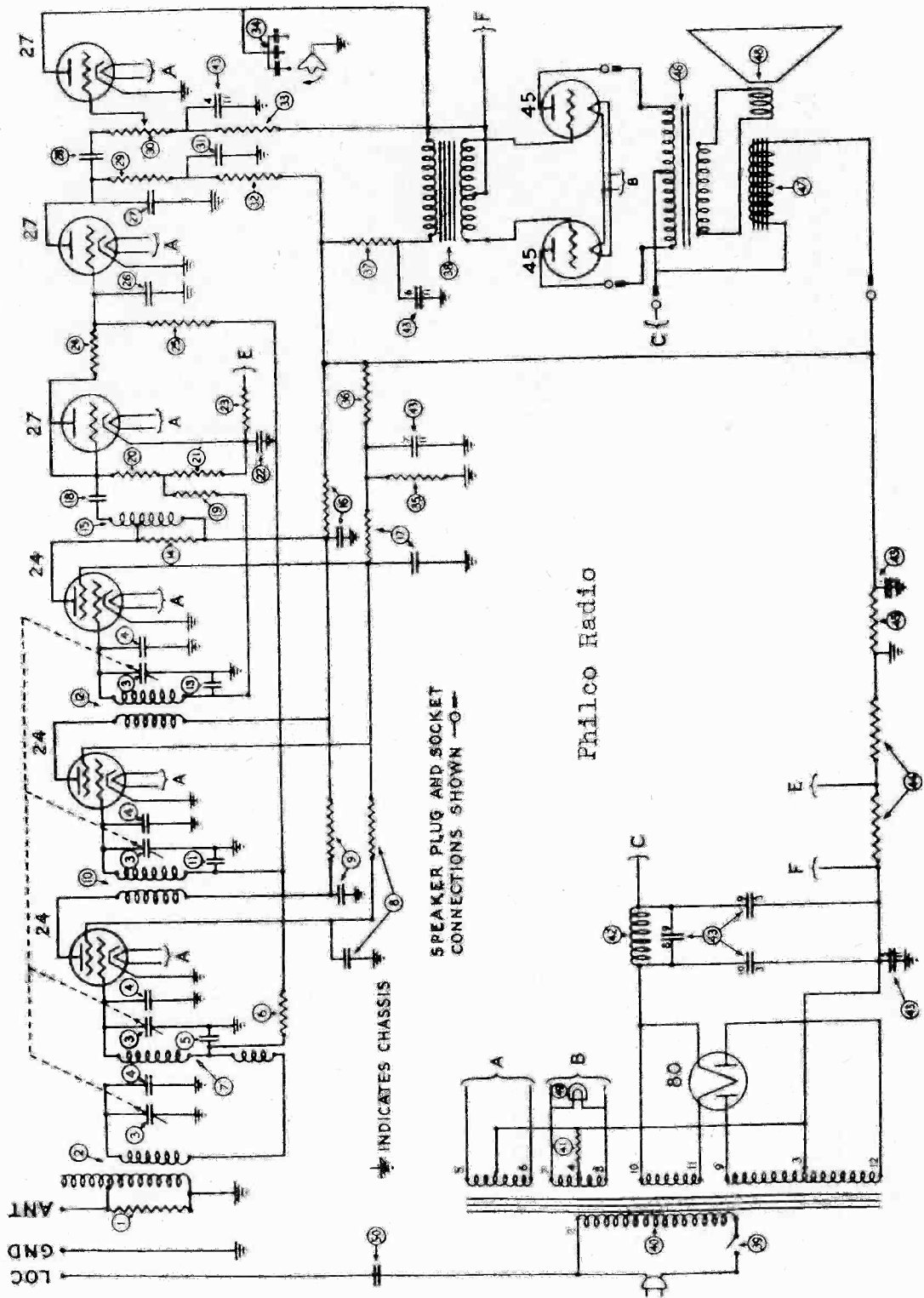
I.F. 260 KC.  
Phileco Radio  
MODEL 90

WITH 2-TYPE 47 TUBES  
SERIAL NO. 32,001 TO B35,000  
AND ABOVE B53,100

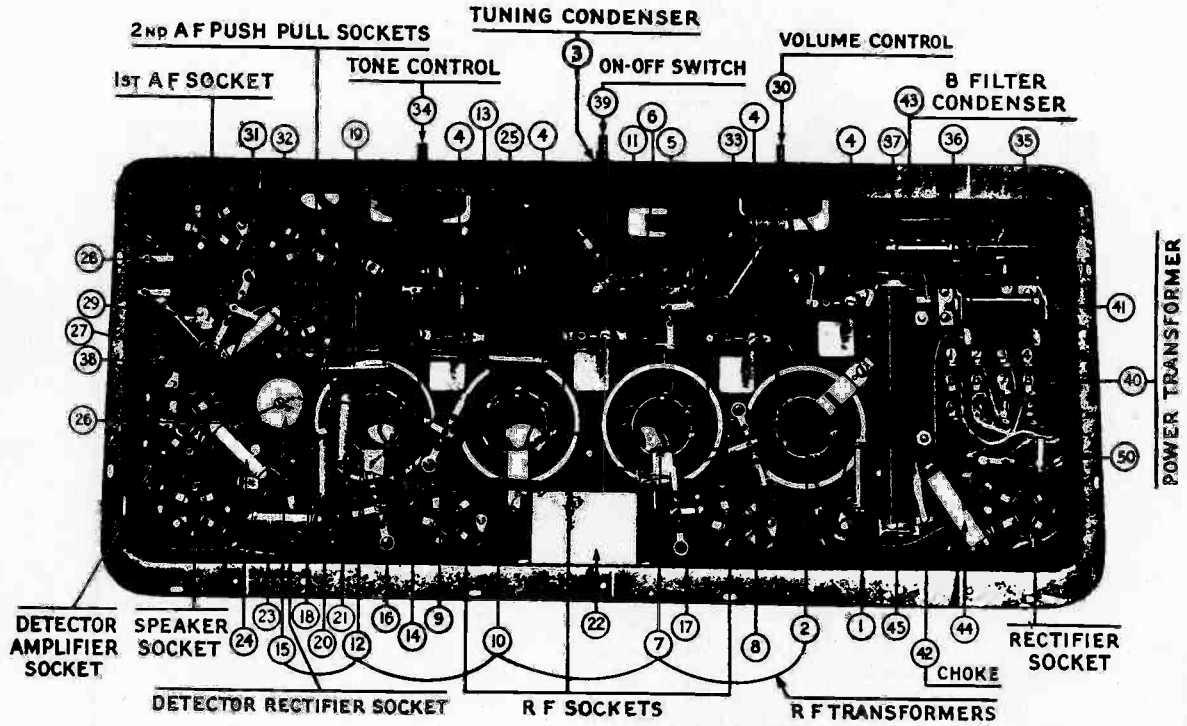


# MANUAL OF MOST-OFTEN-NEEDED RADIO DIAGRAMS

MODEL 96



# MANUAL OF MOST-OFTEN-NEEDED RADIO DIAGRAMS

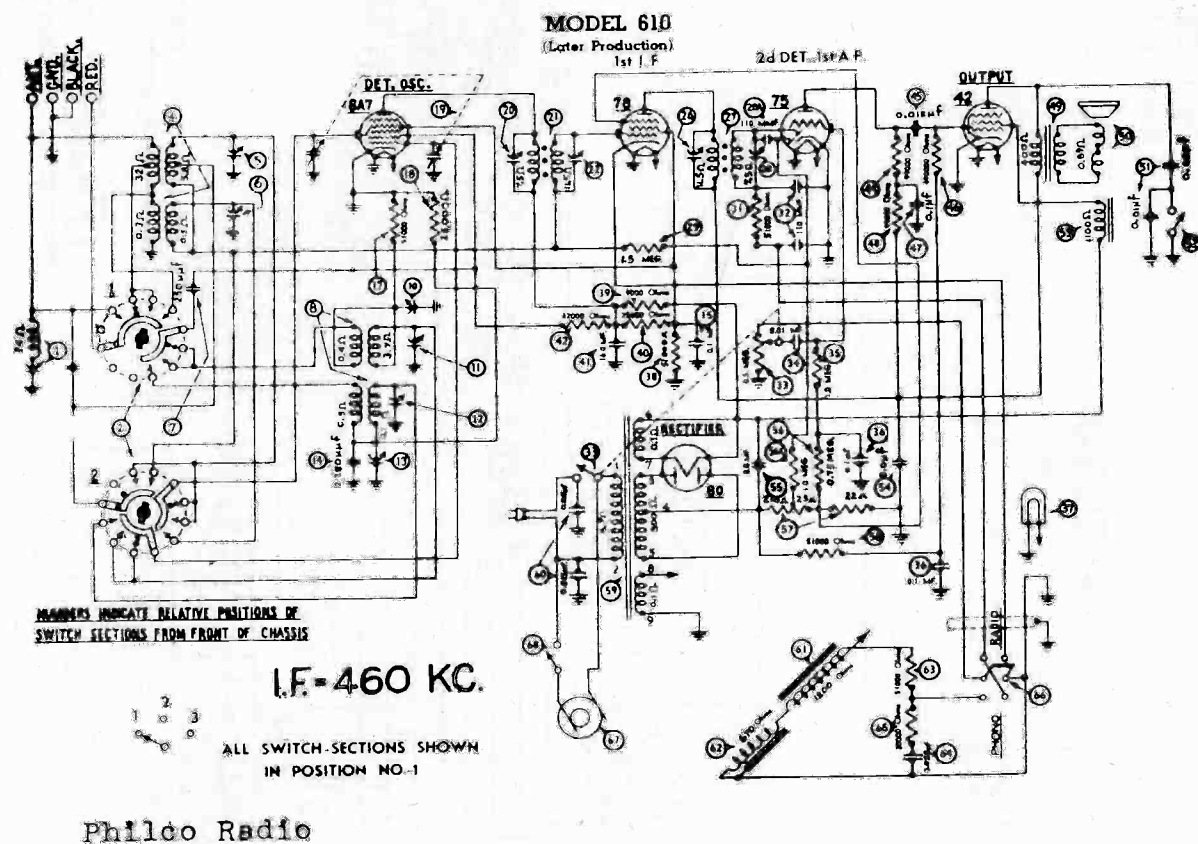
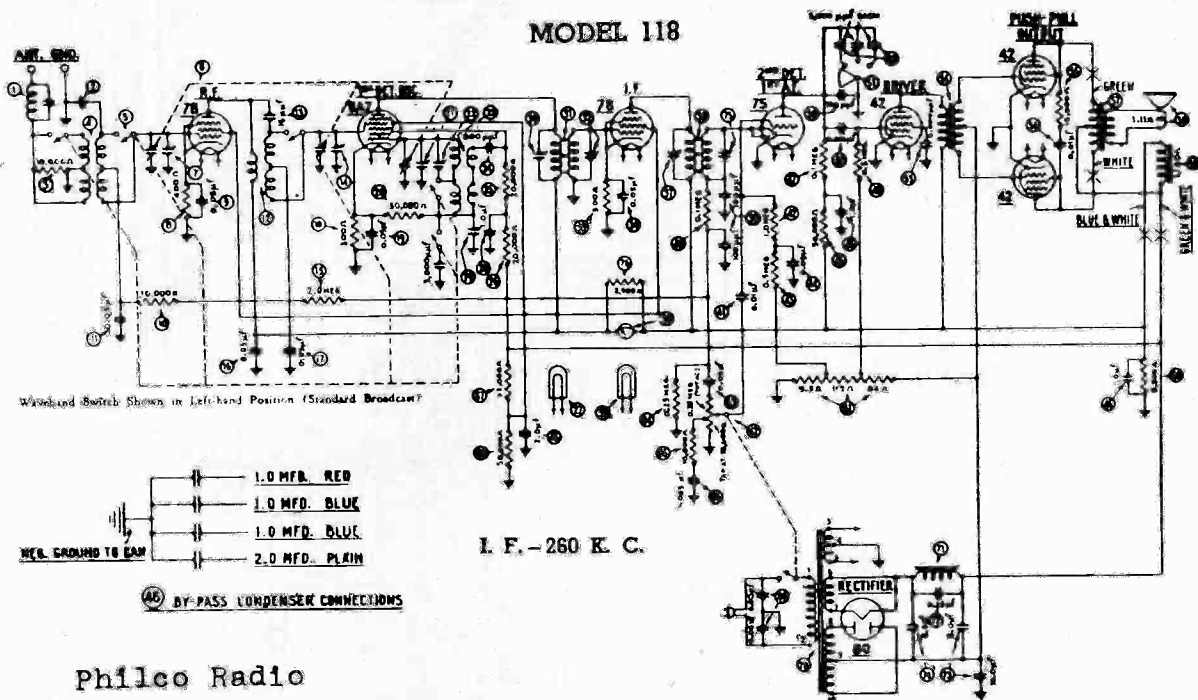


## Replacement Parts for Model 96

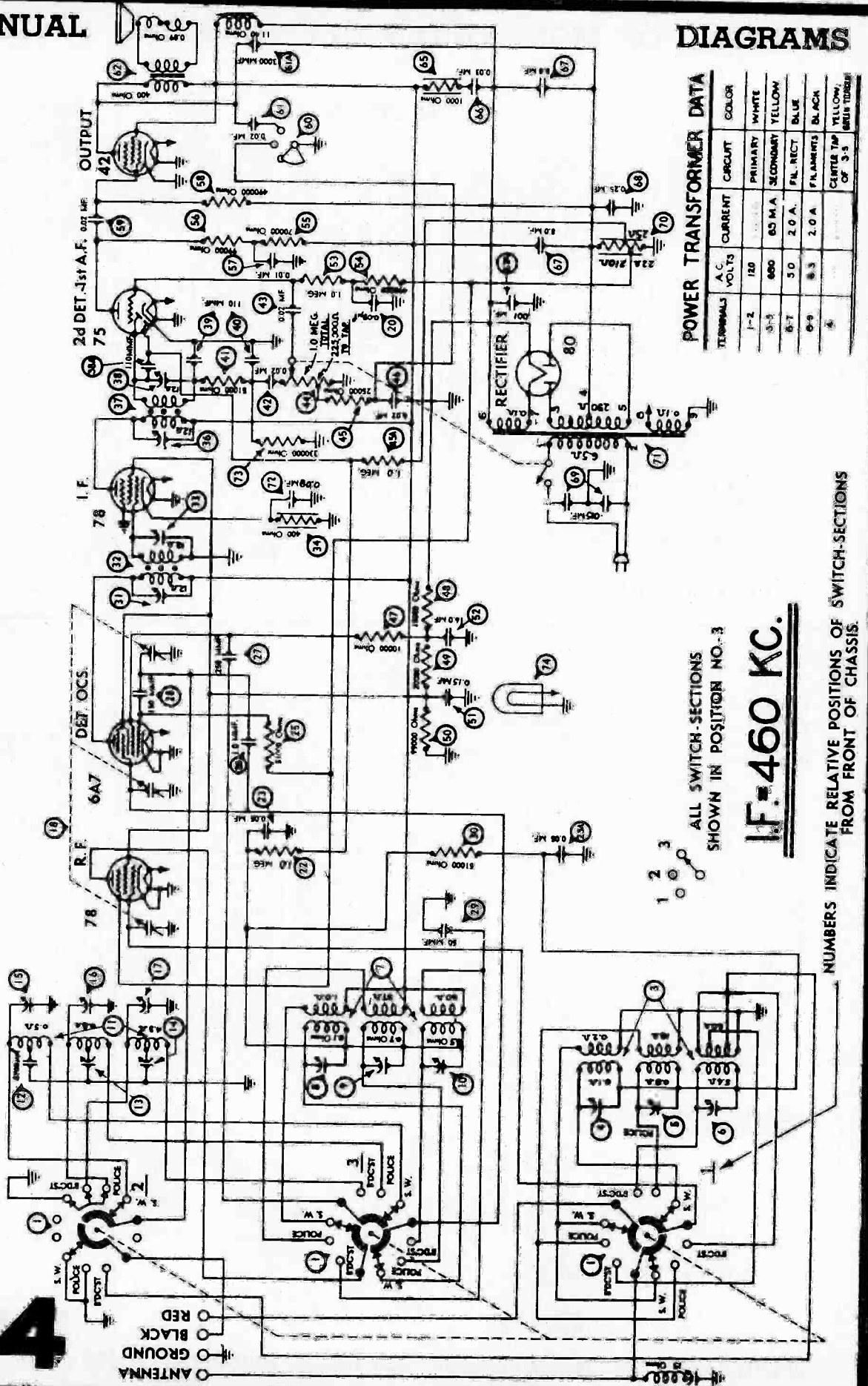
| No. | Description                    | Part No. | No. | Description                    | Part No. |
|-----|--------------------------------|----------|-----|--------------------------------|----------|
| 1   | Antenna Resistor               | 3526     | 30  | Volume Control                 | 4093     |
| 2   | First R. F. Transformer        | 3744-A   | 31  | By-Pass Condenser              | 3615-D   |
| 3   | Tuning Condenser               | 4000-D   | 32  | Resistor                       | 3768     |
| 4   | Compensating Condenser         | 3772-A   | 33  | Resistor                       | 3542     |
| 5   | By-Pass Condenser              | 3615-F   | 34  | Tone Control                   | 4037-A   |
| 6   | Resistor                       | 3542     | 35  | Resistor                       | 3542     |
| 7   | Second R. F. Transformer       | 3744-B   | 36  | Resistor                       | 3766     |
| 8   | By-Pass Condenser and Resistor | 3615-C   | 37  | Resistor                       | 3656     |
| 9   | By-Pass Condenser and Resistor | 3615-B   | 38  | Input Transformer              | 3537     |
| 10  | Third R. F. Transformer        | 3744-C   | 39  | On-Off Switch                  | 4095     |
| 11  | By-Pass Condenser              | 3615-E   | 40  | Power Transformer (60 Cycle)   | 3752     |
| 12  | Fourth R. F. Transformer       | 3744-C   | 41  | Power Transformer (25 Cycle)   | 3753     |
| 13  | By-Pass Condenser              | 3615-E   | 42  | C Resistor                     | 3763     |
| 14  | Resistor                       | 3766     | 43  | Choke                          | 3422     |
| 15  | Fifth R. F. Transformer        | 3775-B   | 44  | Filter Condenser (60 Cycle)    | 3754     |
| 16  | By-Pass Condenser and Resistor | 3615-B   | 45  | Filter Condenser (25 Cycle)    | 3755     |
| 17  | By-Pass Condenser and Resistor | 3615-C   | 46  | Resistor                       | 3764     |
| 18  | Condenser                      | 3774     | 47  | B Resistor                     | 3762     |
| 19  | Resistor                       | 3769     | 48  | Out-Put Transformer            | 2848     |
| 20  | Resistor                       | 3767     | 49  | Field Coil                     | 2850     |
| 21  | Resistor                       | 3767     | 50  | Voice Coil and Cone            | 2794-B   |
| 22  | Resistor                       | 3767     | 51  | Pilot Lamp                     | 3463     |
| 23  | By-Pass Condenser              | 3583     | 52  | Condenser (LOC)                | 3793-B   |
| 24  | Resistor                       | 3767     | 53  | Knob (Vol. Control)            | 3579     |
| 25  | Resistor                       | 3768     | 54  | Knob (Tuning Condenser)        | 3580     |
| 26  | Resistor                       | 3769     | 55  | Dial Indicator                 | 4006     |
| 27  | By-Pass Condenser              | 3082     | 56  | Scale                          | 4118     |
| 28  | By-Pass Condenser              | 3082     | 57  | Speaker Plug and Cable (Short) | L-1101-A |
| 29  | Condenser                      | 3793-C   | 58  | Speaker Plug and Cable (Long)  | L-1102-A |
| 30  | Resistor                       | 3769     |     |                                |          |

Note: The first two Compensating Condensers ① are 3772-A; the third and fourth Condensers are 3968-A.

# MANUAL OF MOST-OFTEN-NEEDED RADIO DIAGRAMS



**MODEL 620**  
(Later Production)



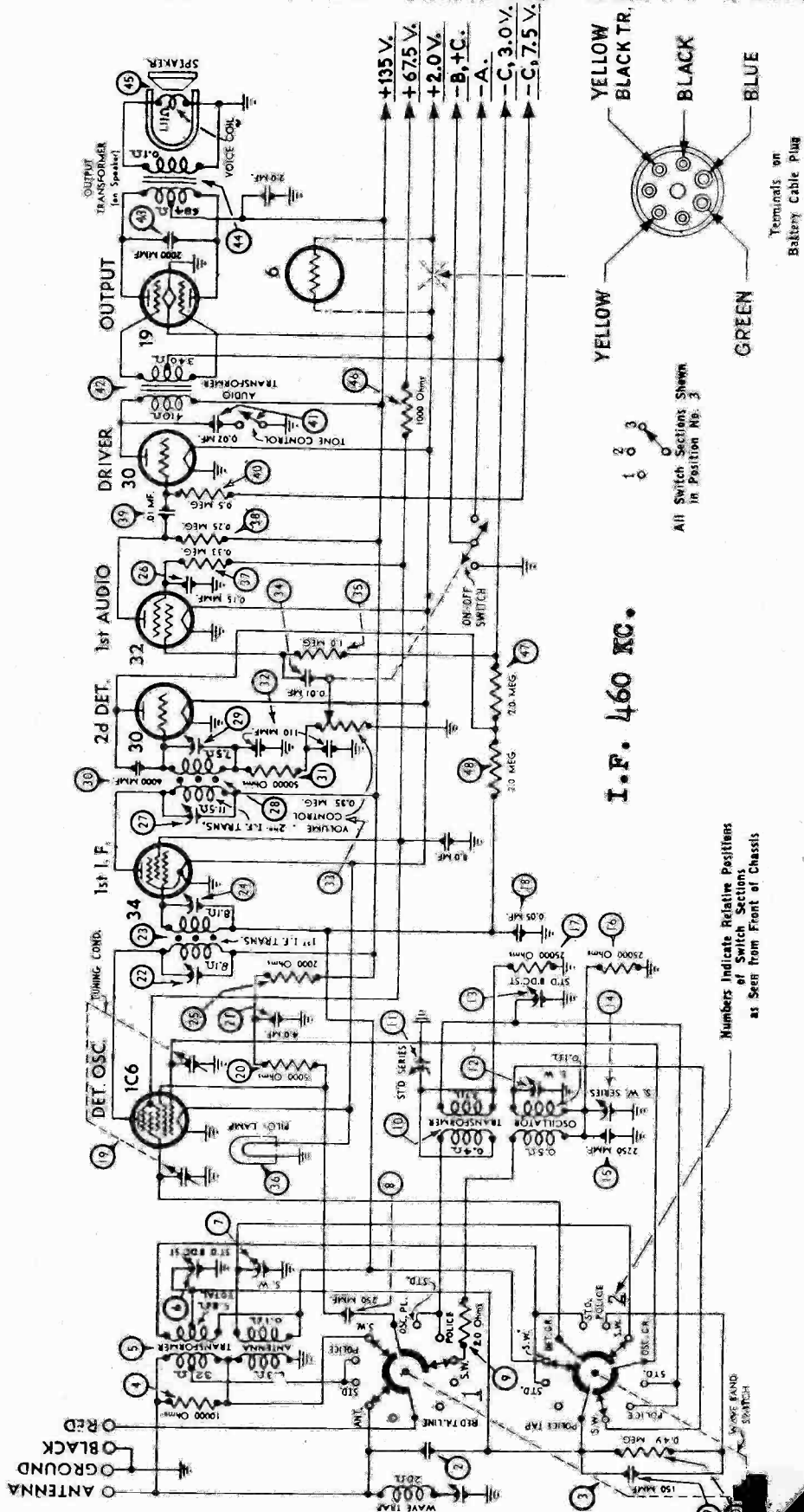
**POWER TRANSFORMER DATA**

| TERMINALS | A.C. VOLTS | CURRENT | CIRCUIT           | COLOR               |
|-----------|------------|---------|-------------------|---------------------|
| 1-2       | 120        |         | PRIMARY           | WHITE               |
| 3-4       | 000        | 65 M.A. | SECONDARY         | YELLOW              |
| 5-7       | 50         | 2.0 A.  | FIL. RECT.        | BLUE                |
| 6-9       | 0.3        | 2.0 A.  | FIL. AMPTS.       | BLACK               |
| 8         |            |         | CENTER TAP OF 3-5 | YELLOW, WITH TUBING |

NUMBERS INDICATE RELATIVE POSITIONS OF SWITCH-SECTIONS FROM FRONT OF CHASSIS.

# MANUAL OF MOST - OFTEN - NEEDED RADIO DIAGRAMS

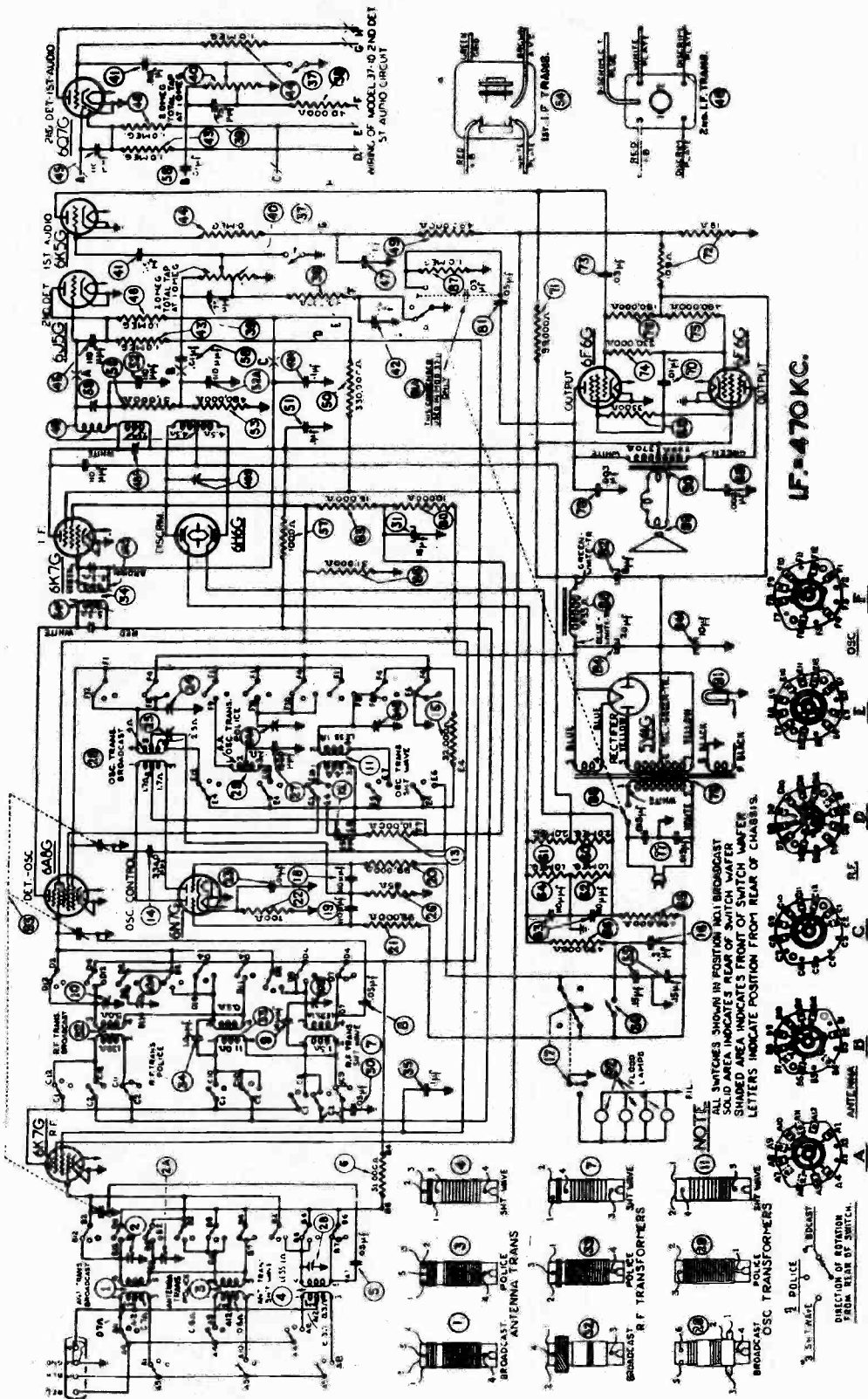
## MODEL 623 (Battery Operated)







# MANUAL OF MOST-OFTEN-NEEDED RADIO DIAGRAMS

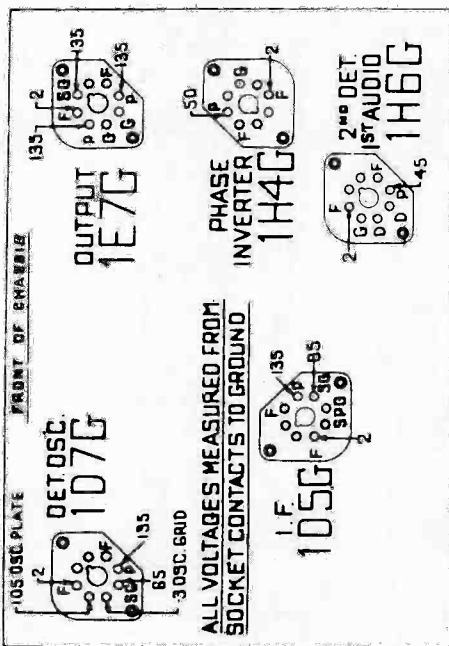
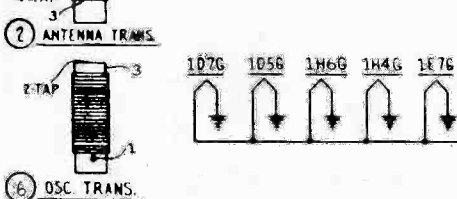
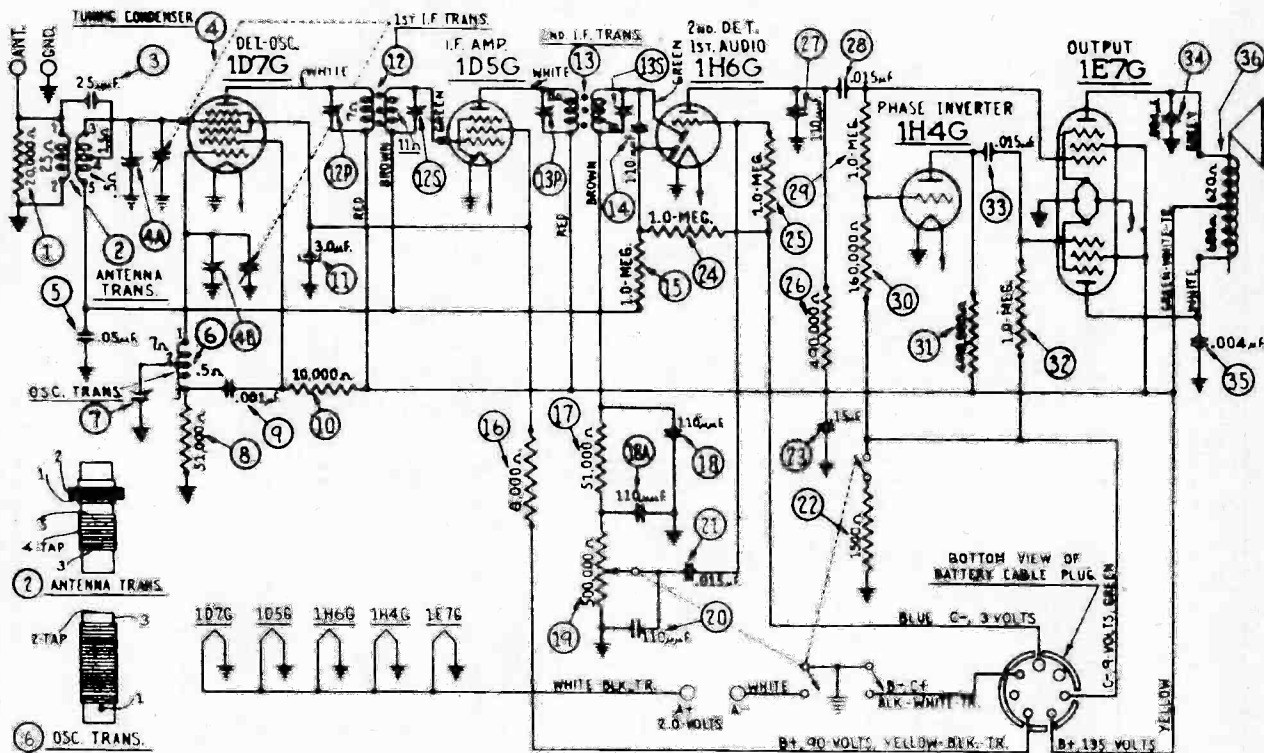


Philco Radio

Models 37-10, 37-11

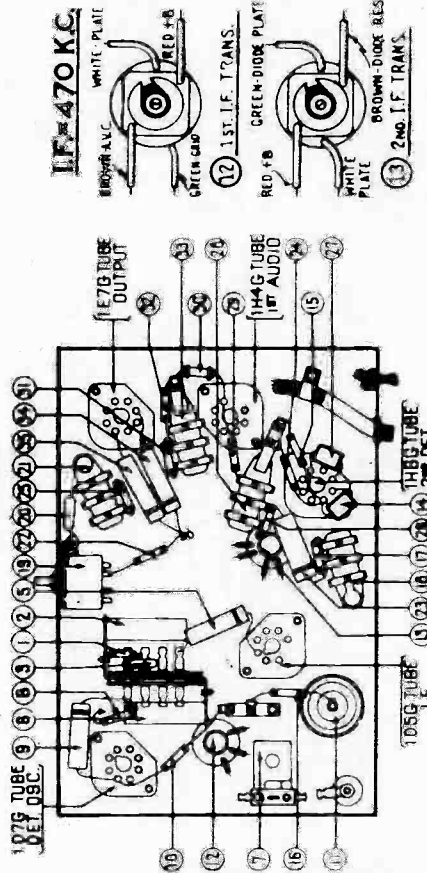
# MANUAL OF MOST-OFTEN-NEEDED RADIO DIAGRAMS

## PHILCO Model 37-33



View of Sockets from Underside Channels

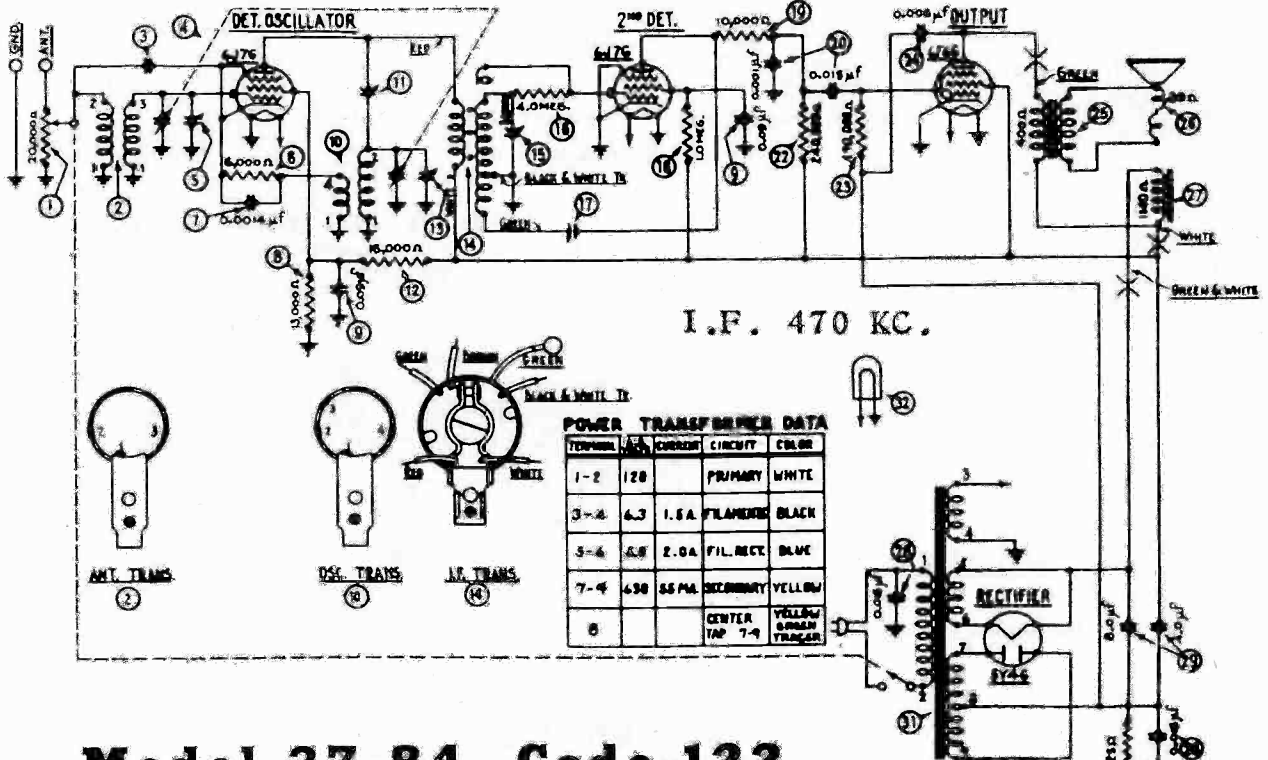
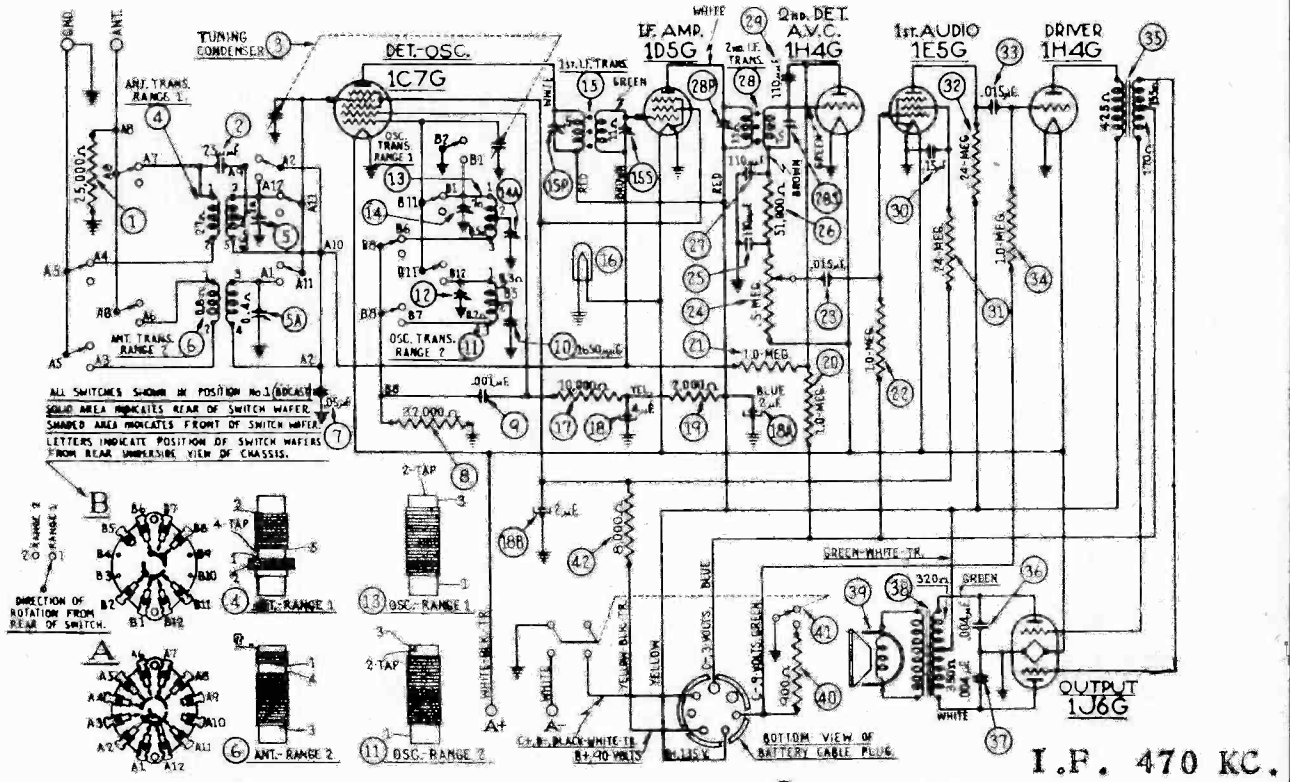
The voltages indicated by arrows were measured with a Philco 25 Circuit Tester which contains a voltmeter having a resistance of 1000 ohms per volt. Volume Control at minimum.



# MANUAL OF MOST-OFTEN-NEEDED RADIO DIAGRAMS

## PHILCO

## Model 37-38



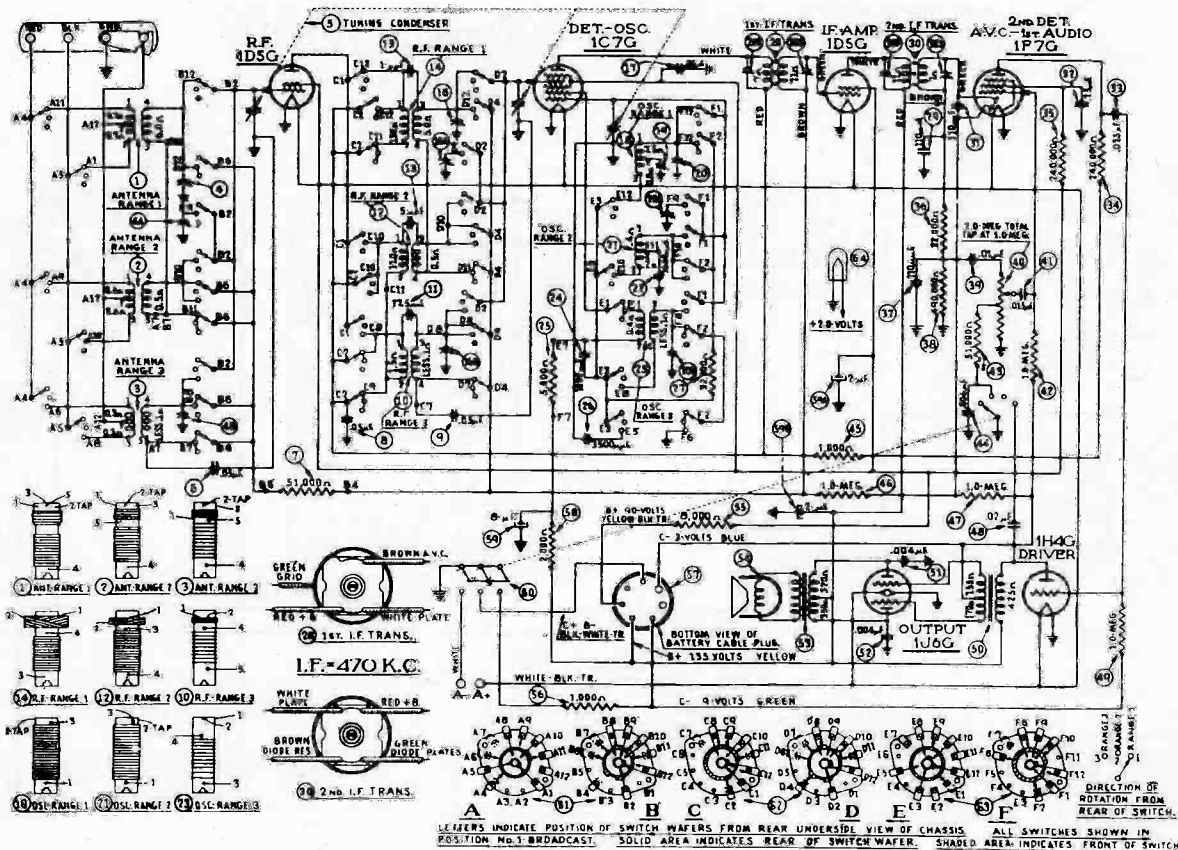
Model 37-84, Code-122







# MANUAL OF MOST-OFTEN-NEEDED RADIO DIAGRAMS



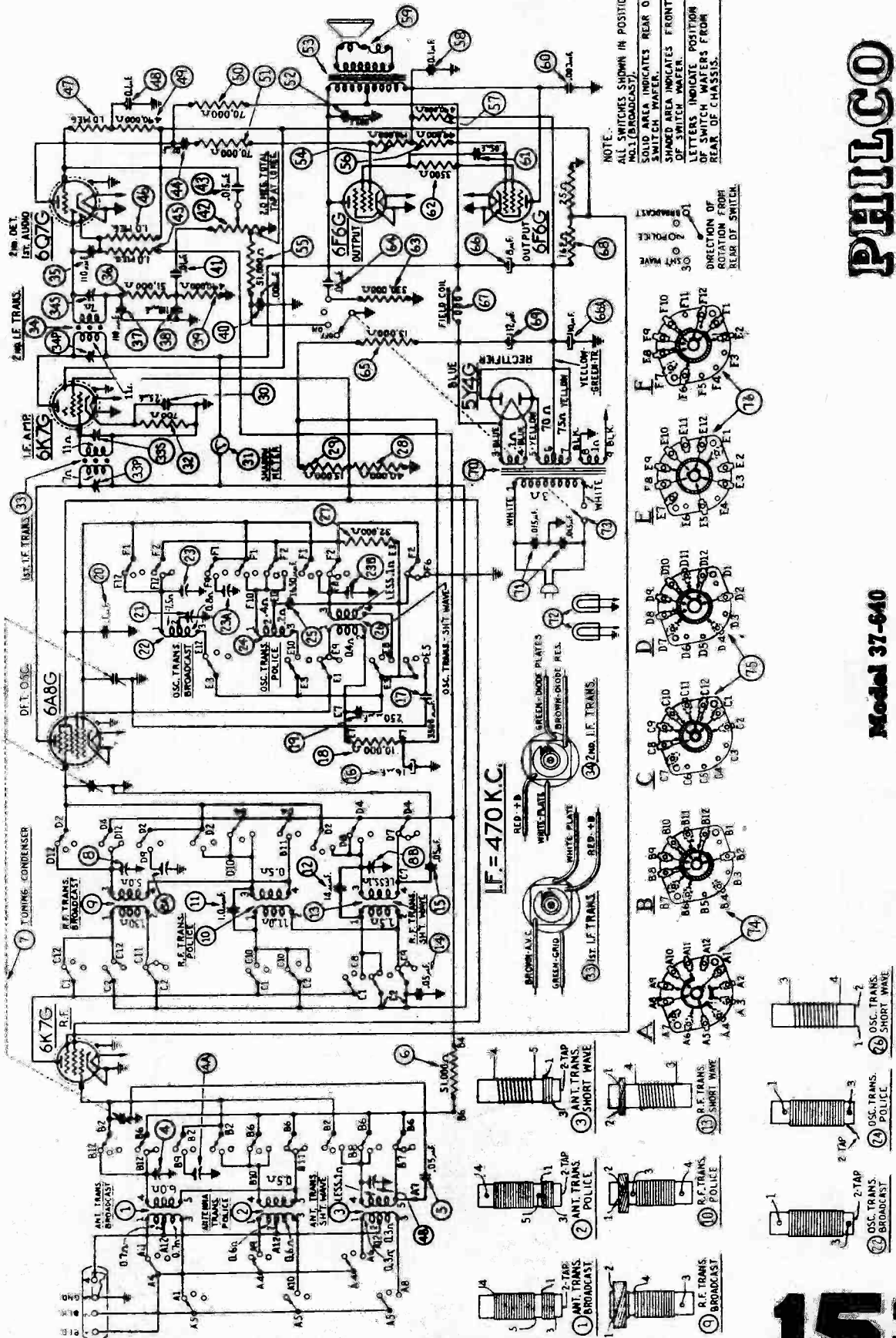
Philco Radio

Schematic Diagram

## Replacement Parts—Model 37-623

| Schem. No. | Description                              | Part No.  | Schem. No. | Description                           | Part No.  | Schem. No. | Description                  | Part No. |
|------------|--|-----------|------------|---------------------------------------|-----------|------------|------------------------------|----------|
| 1          | Antenna Transformer (530-1720 K.C.)      | 32-2108   | 45         | Resistor (1,000 ohms, 1/2 watt)       | 33-210339 |            | Spring (Vol. Shaft)          | 28-4117  |
| 2          | Antenna Transformer (2.3 to 7.4 M.C.)    | 32-2119   | 46         | Resistor (1 megohm, 1/2 watt)         | 33-510339 |            | Socket (8 prong)             | 27-6058  |
| 3          | Antenna Transformer (7.35 to 22 M.C.)    | 32-2109   | 47         | Resistor (1 megohm, 1/2 watt)         | 33-510339 |            | Socket (7 prong)             | 27-6057  |
| 4          | Compensator (Three Sections)             | 31-6092   | 48         | Condenser (.02 mfd. Tubular)          | 30-4113   |            | Shield Tube                  | 28-2726  |
| 5          | Tuning Condenser                         | 31-1818   | 49         | Resistor (1 megohm, 1/2 watt)         | 33-510339 |            | Base Tube Shield             | 28-3898  |
| 6          | Condenser (.05 mfd. Tubular)             | 30-4020   | 50         | Audio Input Transformer               | 32-7637   |            | Grommet Mtg. R. F. Unit      | 27-4317  |
| 7          | Resistor (51,000 ohms, 1/2 watt)         | 33-351339 | 51         | Condenser (.004 mfd. Tubular)         | 30-4456   |            | Sleeve Mtg. R. F. Unit       | 28-2257  |
| 8          | Condenser (.05 mfd. Tubular)             | 30-4020   | 52         | Condenser (.004 mfd. Tubular)         | 30-4456   |            | Screw Mtg. R. F. Unit        | W-729    |
| 9          | Condenser (.05 mfd. Tubular)             | 30-4020   | 53         | Output Transformer                    | 32-7638   |            | Washer Mtg. R. F. Unit       | 28-3927  |
| 10         | R. F. Transformer (7.35 to 22 M.C.)      | 32-2126   | 54         | Cone and Voice Coil Assembly KR-17    | 36-3540   |            | Washer Mtg. R. F. Unit       | 27-8339  |
| 11         | Condenser (17.5 mmfd. Mica)              | 30-1079   |            | (Cone and Voice Coil Assembly HR-12)  | 36-3587   |            | Rubber Mtg. Tuning Condenser | 27-8228  |
| 12         | R. F. Transformer (2.3 to 7.4 M.C.)      | 32-2106   | 55         | Resistor (8,000 ohm, 1/2 watt)        | 33-280339 |            | Mtg. Plate (Trans.)          | 28-3808  |
| 13         | Condenser (5 mmfd. Mica)                 | 30-1080   | 56         | Resistor (1,000 ohms, 1/2 watt)       | 33-210339 |            | Mtg. Snacur (Trans.)         | 27-8228  |
| 14         | R. F. Transformer (530-1720 K.C.)        | 32-2105   | 57         | (Table Battery)                       | 41-3198   |            | Terminal Panel I. F. Unit    | W-1635   |
| 15         | Condenser (Twist wire and lug)           | 38-7878   | 58         | Resistor (2,000 ohms, 1/2 watt)       | 33-220339 |            | Mtg. Bolt (Chassis)          | 41-3207  |
| 16         | Compensator (Three section)              | 31-1621   | 59         | Electrolytic Condenser (2, 2, 8 mfd.) | 30-2181   |            | Mtg. Bolt (Chassis)          | W-1495   |
| 17         | Condenser (.05 mfd. Tubular)             | 30-4020   | 60         | Power and Tone Control Switch         | 42-1207   |            | Mtg. Rubbers                 | 5189     |
| 18         | Oscillator Transformer (530-1720 K.C.)   | 32-2120   | 61         | Range Switch (A.V.T.)                 | 42-1200   |            | Knob                         | 27-4360  |
| 19         | Compensator (580 K.C.)                   | 31-6056   | 62         | Range Switch (R.F.)                   | 42-1245   |            | Knob                         | 27-4331  |
| 20         | Compensator (Three section)              | 31-6092   | 63         | Range Switch (Osc.)                   | 42-1246   |            | Knob                         | 27-4326  |
| 21         | Oscillator Transformer (2.3 to 7.4 M.C.) | 32-2121   |            | Pilot Lamp Assembly                   | 38-7875   |            | Knob                         | 27-4332  |
| 22         | Condenser (1650 mmfd.)                   | 31-6096   |            | Pilot Lamp                            | 34-2150   |            | "B" Battery                  | 41-8007  |
| 23         | Oscillator Transformer (7.35 to 22 M.C.) | 32-2110   |            | Vernier Drive Assembly                | 31-1871   |            | "A" Battery (Wet)            | 172R     |
| 24         | Condenser (1,000 mmfd. Mica)             | 30-4453   |            | Dial                                  | 27-5214   |            | "A" Battery (Dry)            | 41-8011  |
| 25         | Resistor (5,000 ohms, 1/2 watt)          | 33-250339 |            | Dial Hub                              | 28-7187   |            | Ballast Lamp                 | 1F1      |
| 26         | Condenser (3,500 mmfd. Semifixed)        | 31-6097   |            | Dial Clamp                            | 28-2837   |            | Base Plate and Frame         | 40-5939  |
| 27         | Resistor (32,000 ohms, 1/2 watt)         | 33-323339 |            | Dial Guard                            | 27-8324   |            | Gasket                       | 27-8311  |
| 28         | First I. F. Transformer                  | 32-2100   |            | Set Screw                             | W-1641    |            | Glass                        | 27-8298  |
| 29         | Condenser (110 mmfd. Mica)               | 30-1031   |            | Gear (Dial)                           | 28-7185   |            | Ring                         | 28-3967  |
| 30         | Second I. F. Transformer                 | 32-2102   |            | Thrust Spring                         | 28-8611   |            | Screws                       | W-1044   |
| 31         | Condenser (110 mmfd. Mica)               | 30-1041   |            | Thrust Washer                         | 28-3976   |            |                              |          |
| 32         | Condenser (.15 mfd. Bakelite)            | 62875G    |            | O Washer                              | 28-3904   |            |                              |          |
| 33         | Condenser (.015 mfd. Tubular)            | 30-4226   |            | Gear (Drive)                          | 31-1854   |            |                              |          |
| 34         | Resistor (240,000 ohms, 1/2 watt)        | 33-424339 |            | Mask                                  | 27-5108   |            |                              |          |
| 35         | Resistor (240,000 ohms, 1/2 watt)        | 33-424339 |            | Mask Arm and Assembly                 | 31-1840   |            |                              |          |
| 36         | Resistor (32,000 ohms, 1/2 watt)         | 33-323339 |            | Shaft Coupling (Mask)                 | 31-1941   |            |                              |          |
| 37         | Condenser (110 mmfd. Mica)               | 30-1031   |            | Felt Washers                          | 27-8399   |            |                              |          |
| 38         | Resistor (490,000 ohms, 1/2 watt)        | 33-440339 |            | Washer                                | 27-8318   |            |                              |          |
| 39         | Condenser (.01 mfd. Tubular)             | 30-4124   |            | Snap Fastener                         | 38-4279   |            |                              |          |
| 40         | Volume Control                           | 33-5158   |            | Indicator Bracket and Lens Assembly   | 38-7912   |            |                              |          |
| 41         | Condenser (.015 mfd. Tubular)            | 30-4366   |            | Mask Guide and Lamp Support           | 38-7844   |            |                              |          |
| 42         | Resistor (1 megohm, 1/2 watt)            | 33-510339 |            | Shaft and Index Plate (Range Switch)  | 42-1173   |            |                              |          |
| 43         | Resistor (51,000 ohms, 1/2 watt)         | 33-351339 |            | Shaft (Volume Control)                | 38-8059   |            |                              |          |
| 44         | Condenser (.006 mfd. Tubular)            | 30-4125   |            | Retaining Clip (Vol. Shaft)           | 28-4394   |            |                              |          |

# MANUAL OF MOST-OFTEN-NEEDED RADIO DIAGRAMS



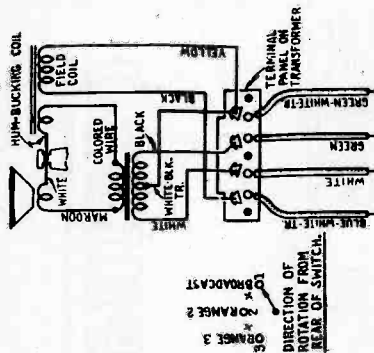
# PULLCO

Model 37-640

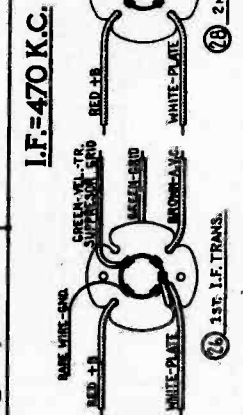
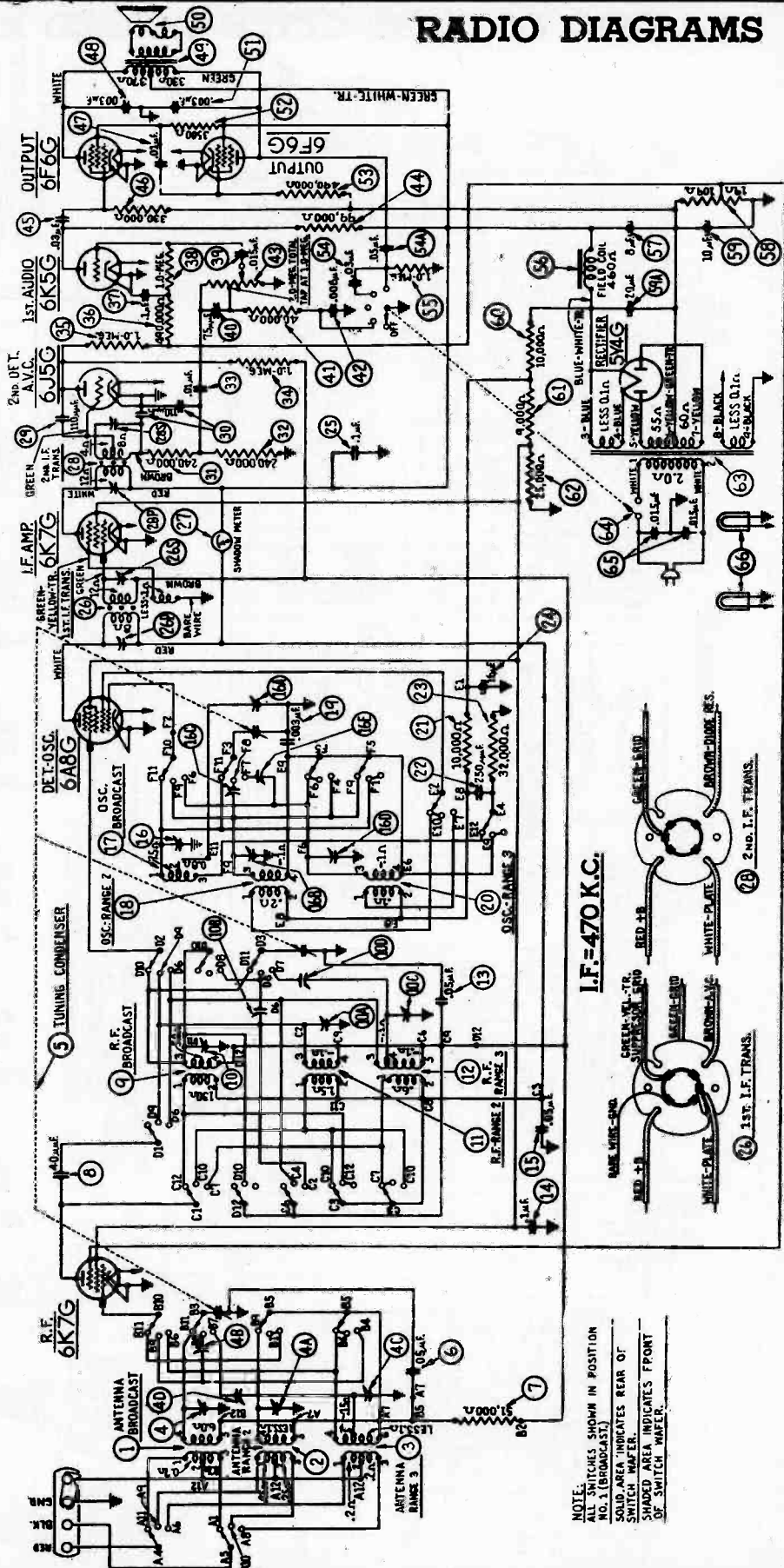
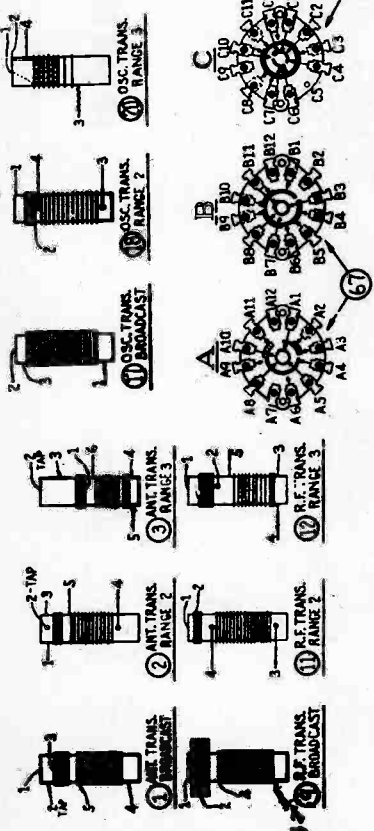
# MANUAL OF

# RADIO DIAGRAMS

Philco Radio  
Model 37-650



DIRECTION OF ROTATION FROM REAR OF SWITCH.  
1 RANGE 1  
2 RANGE 2  
3 RANGE 3  
BROADCAST



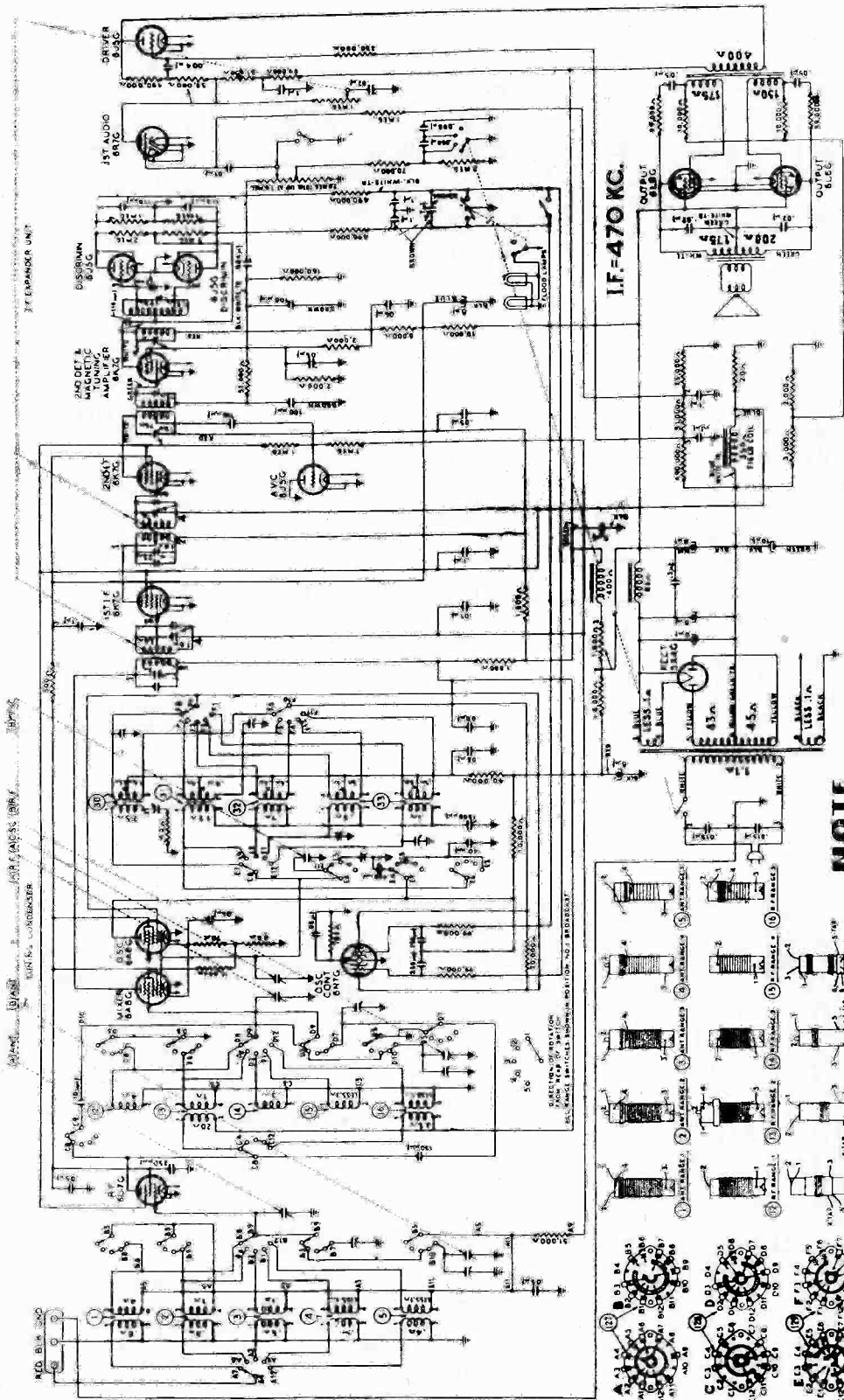
NOTE:  
ALL SWITCHES SHOWN IN POSITION NO. 1 (BROADCAST).  
SOLID AREA INDICATES REAR OF SWITCH WAFER.  
SHADED AREA INDICATES FRONT OF SWITCH WAFER.



# MANUAL OF MOST-OFTEN-NEEDED RADIO DIAGRAMS

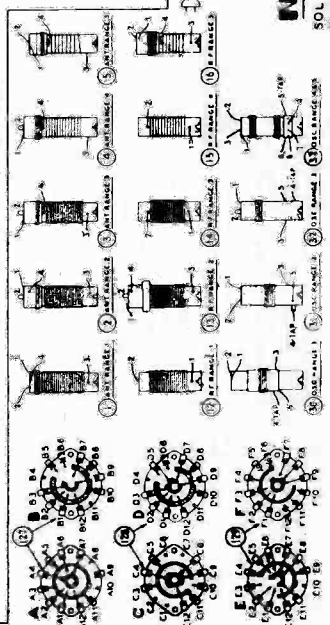
Model 38-116, Code 121

PHILCO



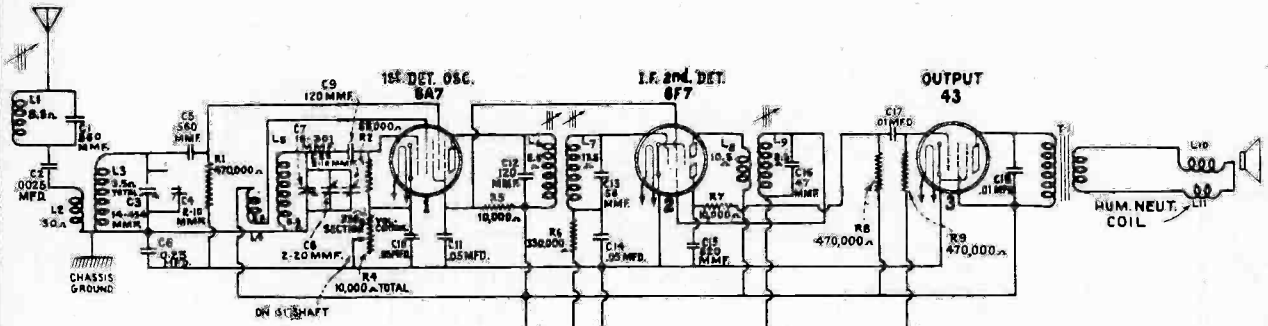
**NOTE**

SOLID AREA INDICATES RING AT REAR OF SWITCH WAFER.  
 SHADED AREA INDICATES RING AT FRONT OF SWITCH WAFER.  
 LETTERS INDICATE POSITION OF SWITCH WAFERS FROM REAR OF CHASSIS. (BOTTOM VIEW)





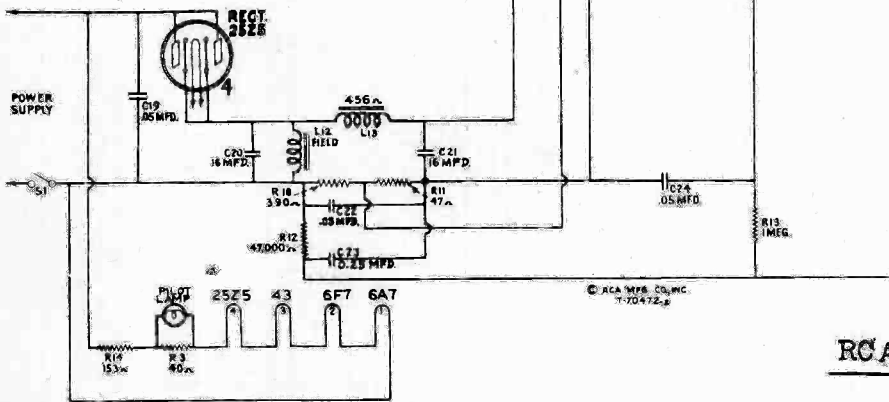
# MANUAL OF MOST-OFTEN-NEEDED RADIO DIAGRAMS



I.F. 460 KC.

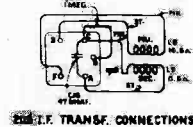
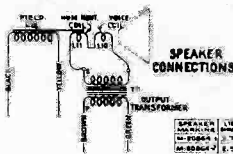
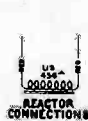
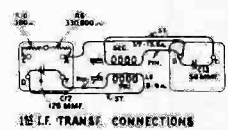
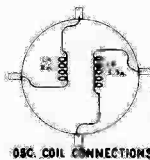
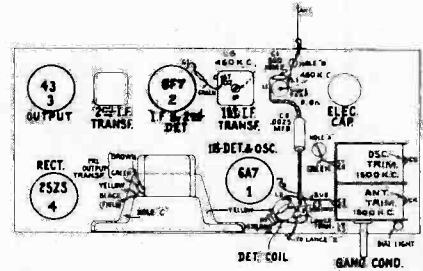
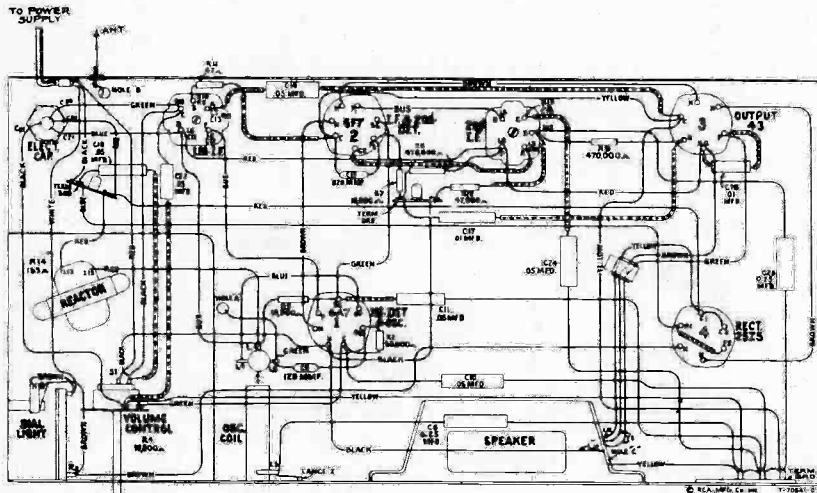
### SERVICE HINTS

- (1) Excessive hum or distortion is sometimes caused by pilot lamp socket short-circuiting to chassis.



RCA Models: 4X, 4X3, 4X4

Schematic Circuit Diagram

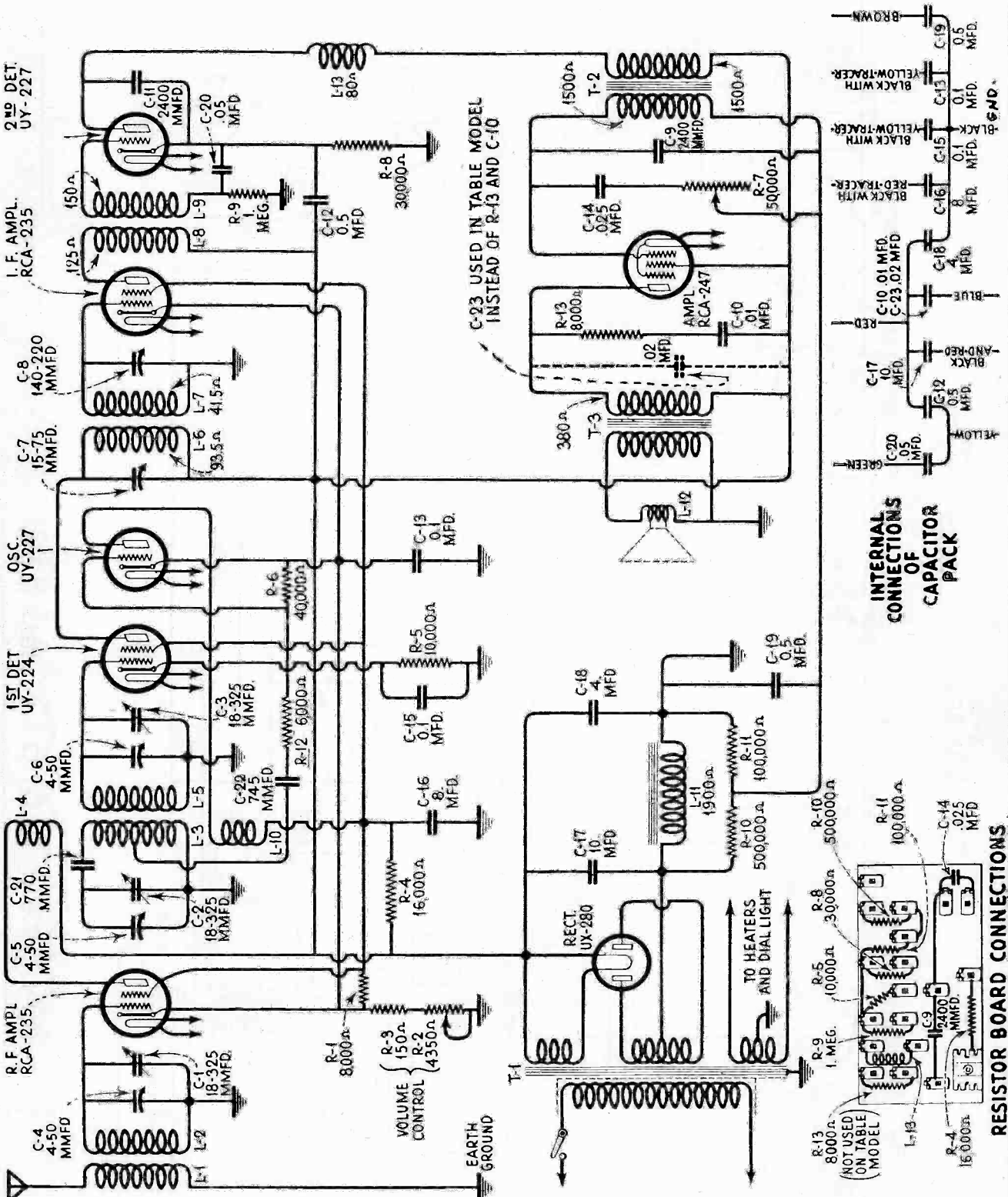


# 156

Chassis Wiring Diagram, Radiotron, Coil, and Trimmer Locations

COMPILED BY M. N. BEITMAN, SUPREME PUBLICATIONS

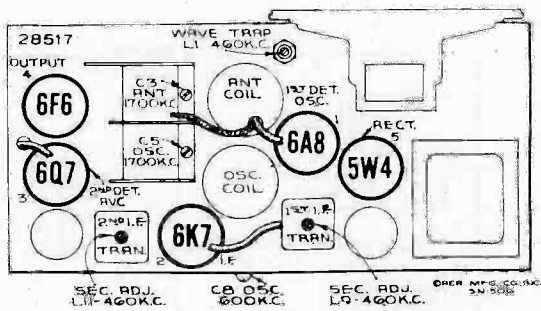
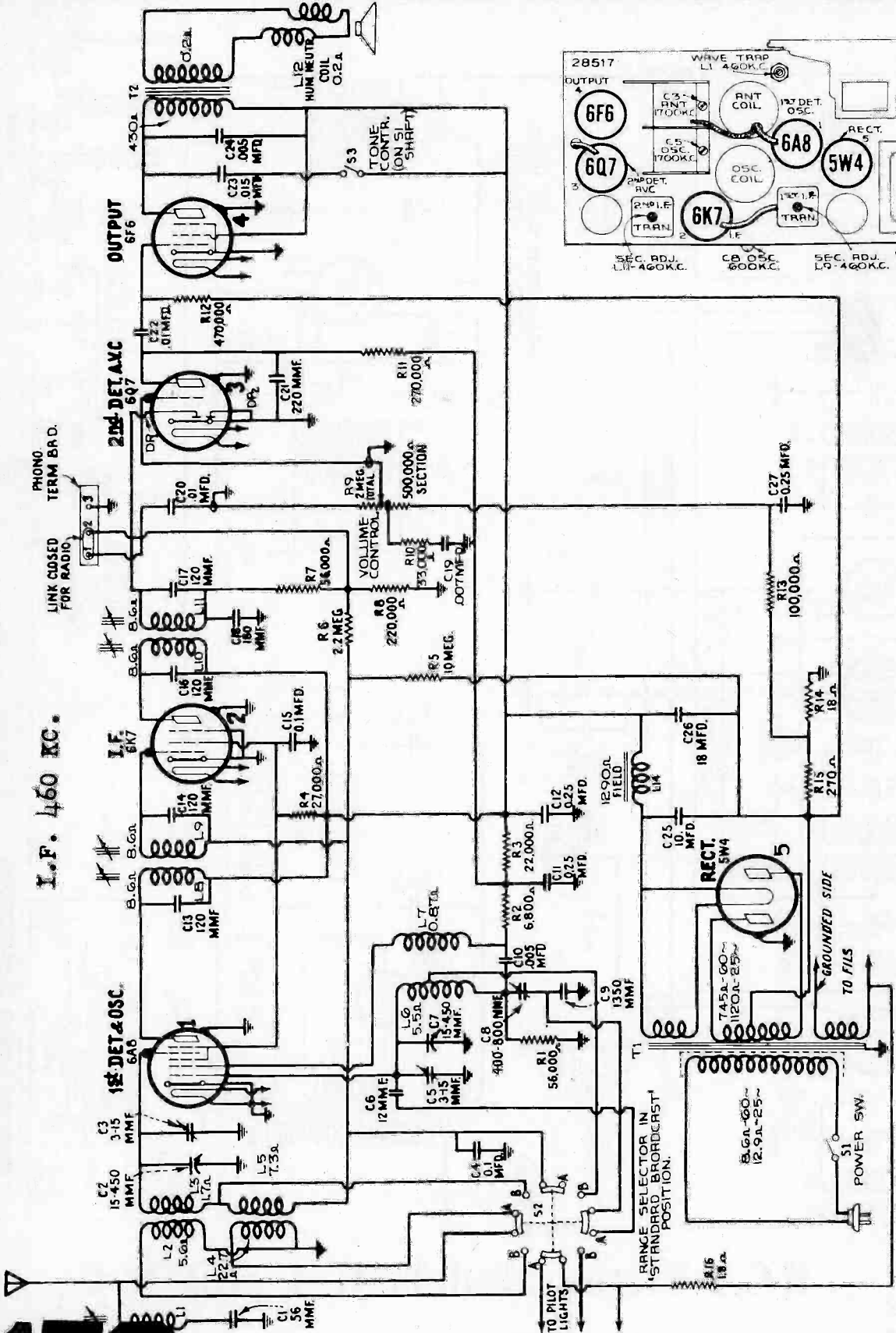
# MANUAL OF MOST-OFTEN-NEEDED RADIO DIAGRAMS



- L-1 40  $\mu$
- L-2 5  $\mu$
- L-3 6  $\mu$
- L-4 58  $\mu$
- L-10 1  $\mu$

## RCA Victor Models R-4 and R-6

# MANUAL OF MOST-OFTEN-NEEDED RADIO DIAGRAMS



I.F. 460 KC.

158

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MODELS 5T6, 5T7, and 5T8

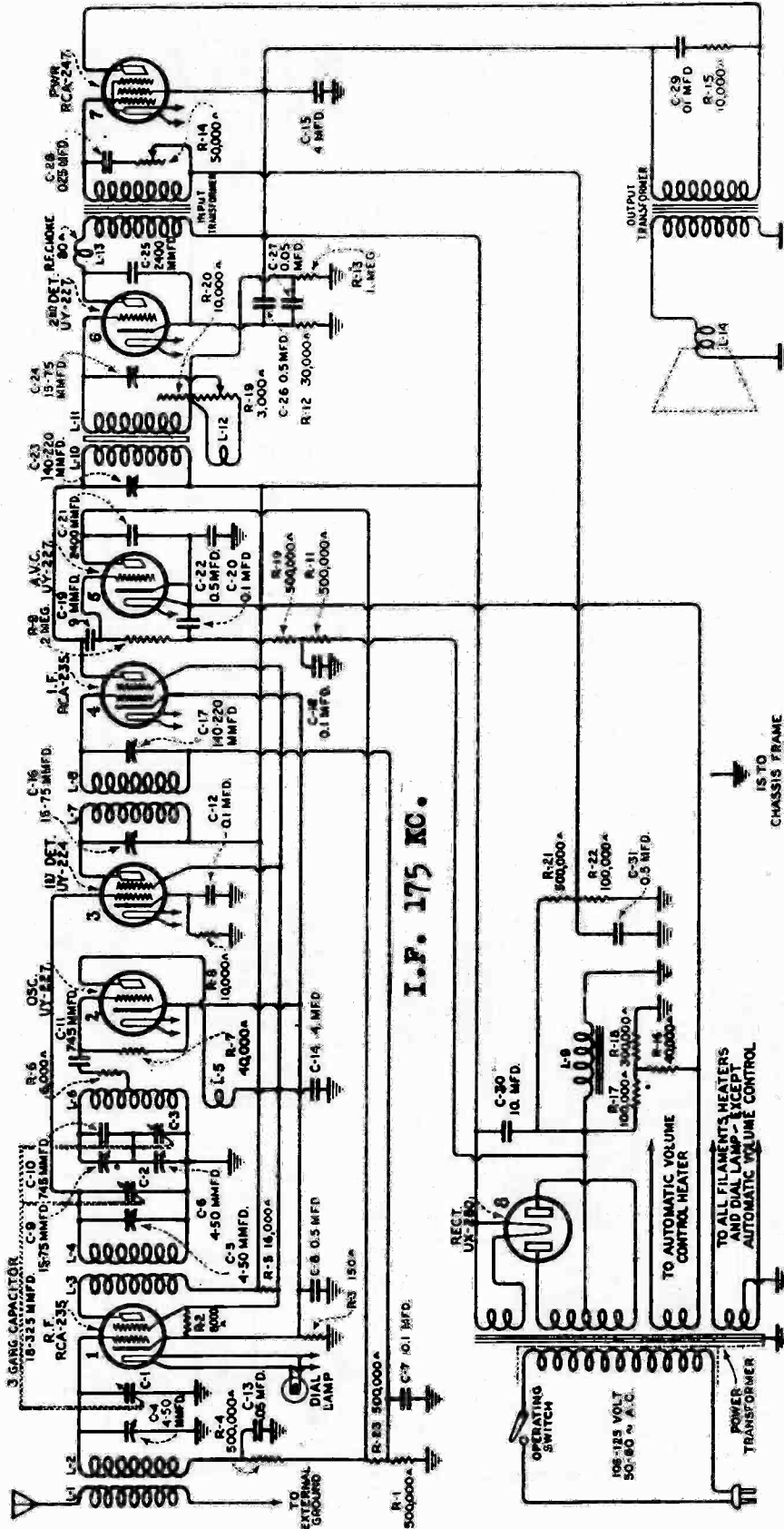






# MANUAL OF MOST-OFTEN-NEEDED RADIO DIAGRAMS

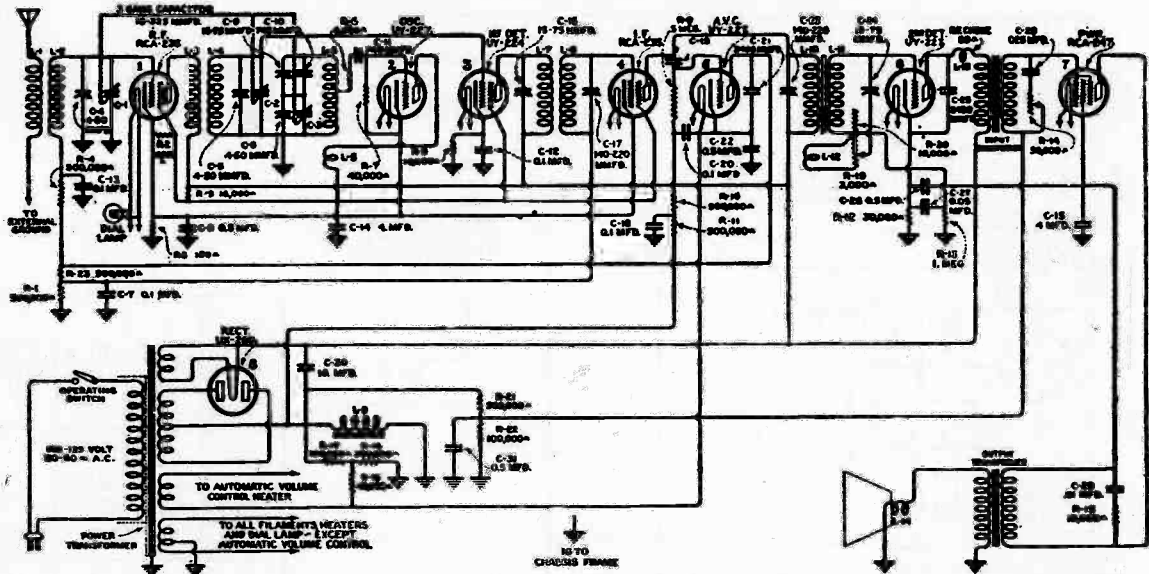
## RCA Models R-8, R-12 AC



I.F. 175 KC.

| Radioelectron No. | Cathode to Heater<br>Volts, D. C. | Cathode or<br>Filament to<br>Screen Grid<br>Volts, D. C. | Cathode or<br>Filament to<br>Phase Plate<br>Volts, D. C. | Plate<br>Current<br>M. A. | Screen<br>Current<br>M. A. | Heater or<br>Filament<br>Volts, A. C. |
|-------------------|-----------------------------------|--|--|---------------------------|----------------------------|---------------------------------------|
| 1. R. F.          | 4.0                               | 0.5  | 260  | 4.0                       | 0.5                        | 2.66                                  |
| 2. Osc.           | 4.0                               | 0  | 65   | 6.0                       | 0.1                        | 2.66                                  |
| 3. 1st Det.       | 7.0                               | 6.0  | 260  | 0.75                      | 0.1                        | 2.66                                  |
| 4. I. F.          | 4.0                               | 4.0  | 260  | 1.0                       | 0.5                        | 2.66                                  |
| 5. 2nd Det.       | 38.0                              | 10.0   | 250  | 1.0                       | 0                          | 2.66                                  |
| 6. A. V. C.       | 0                                 | 0  | 25   | 0                         | 0                          | 2.66                                  |
| 7. Power          | —                                 | 10.0   | 280  | 35.0                      | 0                          | 2.66                                  |

# MANUAL OF MOST-OFTEN-NEEDED RADIO DIAGRAMS



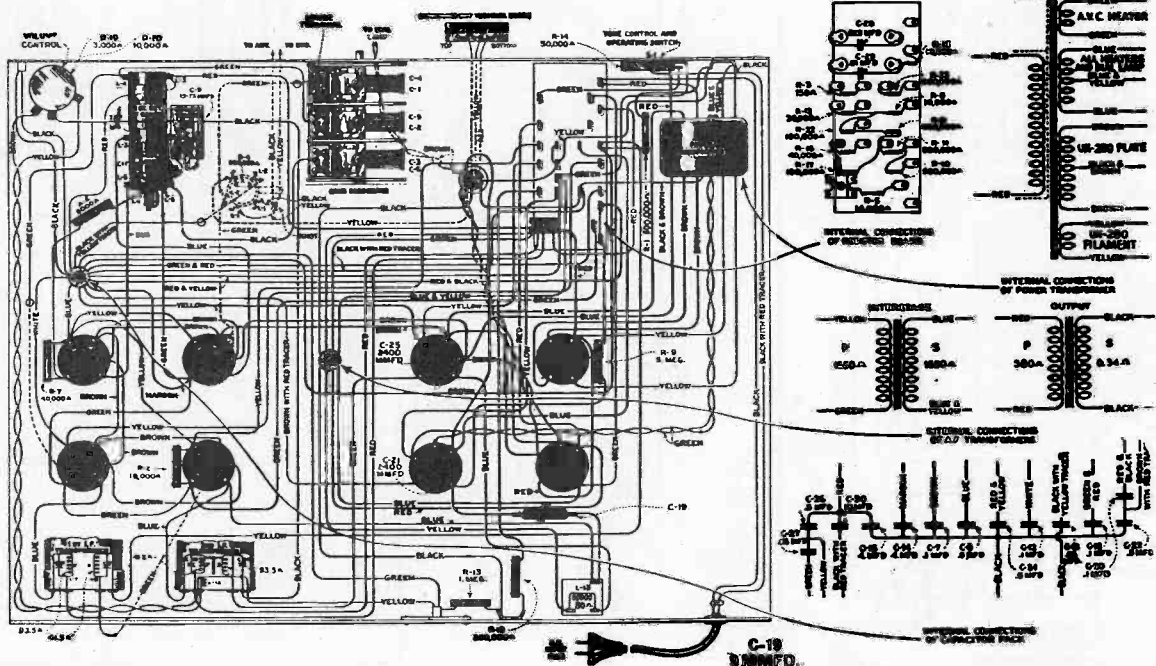
RCA Victor

Schematic Wiring Diagram R-10

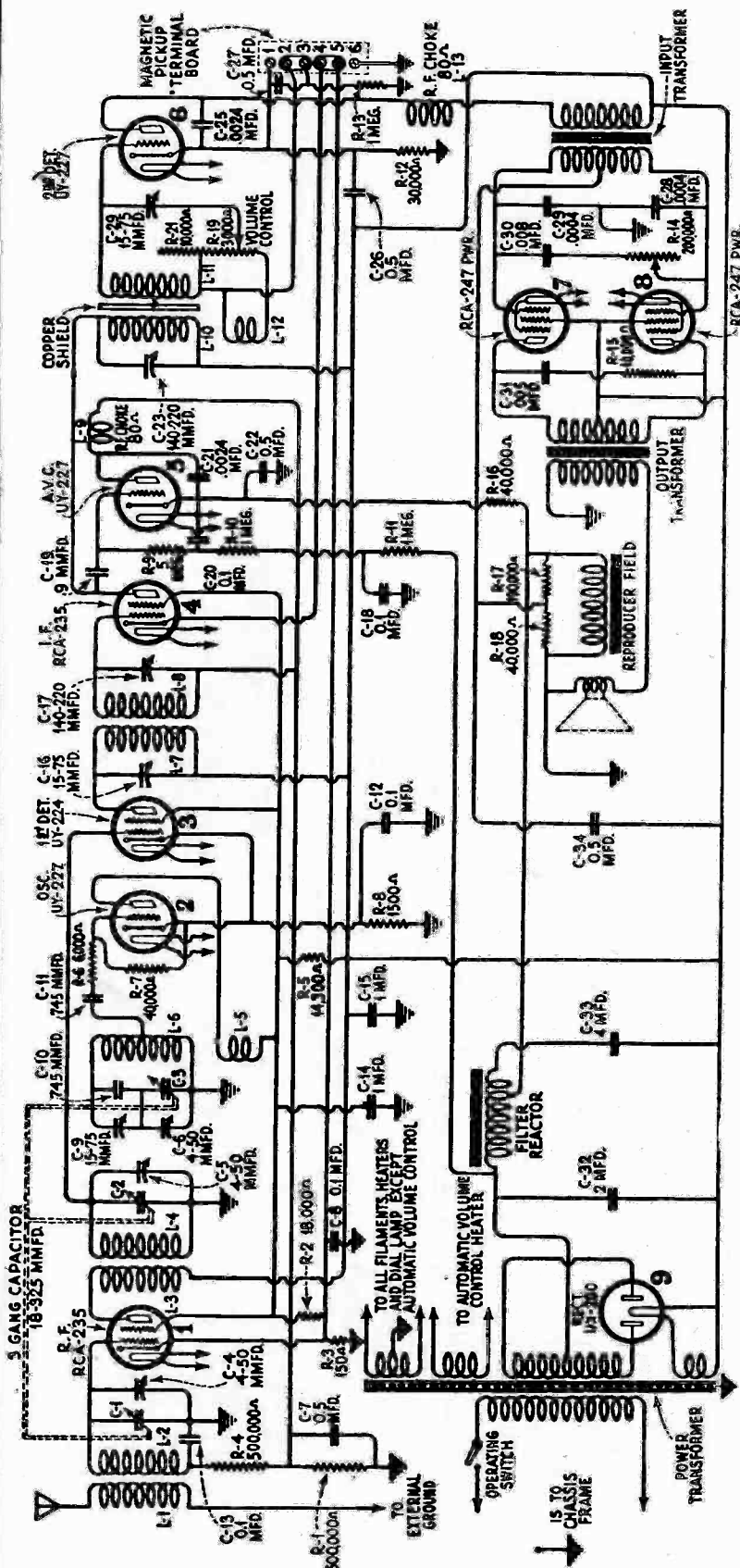
I.F. 175 KC.

| Radiatron No. | Cathode to Heater Volta, D. C. | Cathode or Filament to Control Grid Volta, D. C. | Cathode or Filament to Screen Grid Volta, D. C. | Cathode or Filament to Plate Volta, D. C. | Plate Current M. A. | Screen Current M. A. | Heater or Filament Volta, A. C. |
|---------------|--------------------------------|--|---|---|---------------------|----------------------|---------------------------------|
| 1             | 2                              | *0.1   | 75  | 210                                       | 5.0                 | 0.5                  | 2.2                             |
| 2             | 8                              | 0  | —   | 60  | 5.0                 | —                    | 2.2                             |
| 3             | 7                              | 7.0  | 70  | 205                                       | 0.5                 | 0.1                  | 2.2                             |
| 4             | 2                              | *0.1   | 75  | 210                                       | 5.0                 | 0.5                  | 2.2                             |
| 5             | 0                              | 0  | —   | 30  | 0                   | —                    | 2.2                             |
| 6             | 20                             | *8.0   | —   | 185                                       | 0.5                 | —                    | 2.2                             |
| 7             | —                              | 10   | 210   | 210                                       | 25                  | —                    | 2.2                             |

\*Not true reading due to resistance in circuit.



# MANUAL OF MOST-OFTEN-NEEDED RADIO DIAGRAMS



I.F. 175 KC.

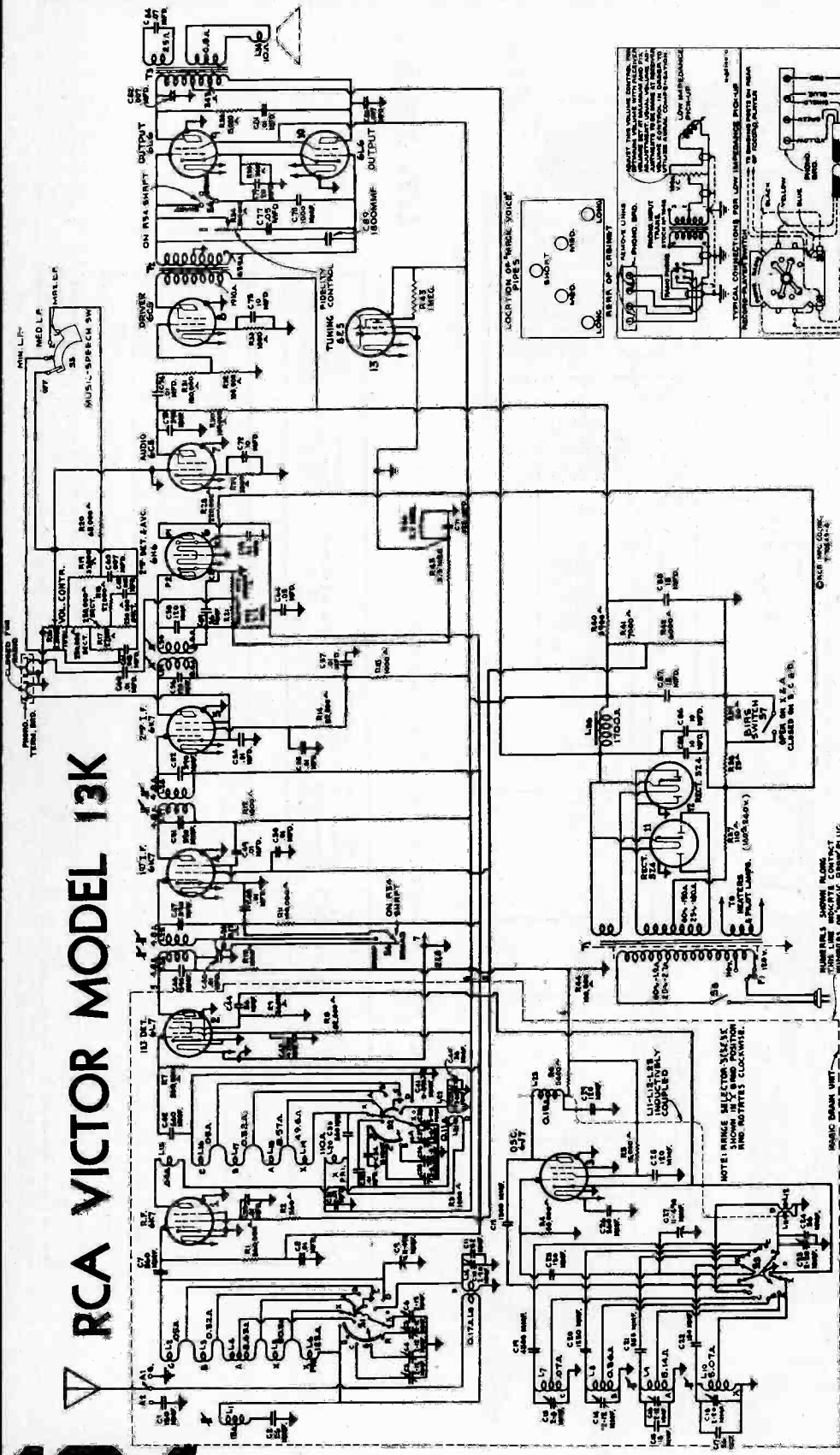
R.C.A. Schematic Circuit Diagram of Model R-11

| Radio-tube No. | Cathode to Heater Volts D. C. | Cathode or Filament to Control Grid Volts, D. C. | Cathode or Filament to Screen Grid Volts, D. C. | Cathode or Filament to Plate Volts, D. C. | Plate Current M. A. | Screen Current M. A. | Heater or Filament Volts, A. C. |
|----------------|-------------------------------|--|---|---|---------------------|----------------------|---------------------------------|
| 1              | 2                             | *0.1   | 75  | 205                                       | 5.0                 | 0.5                  | 2.2                             |
| 2              | 8                             | 0  | —   | 60  | 5.0                 | —                    | 2.2                             |
| 3              | 7                             | 7.0  | 70  | 200                                       | 0.5                 | 0.1                  | 2.2                             |
| 4              | 2                             | *0.1   | 75  | 205                                       | 5.0                 | 0.5                  | 2.2                             |
| 5              | 0                             | 0  | —   | 25  | 0                   | —                    | 2.2                             |
| 6              | 20                            | *8.0   | —   | 180                                       | 0.5                 | —                    | 2.2                             |
| 7              | —                             | 10   | 210   | 205                                       | 25                  | —                    | 2.2                             |
| 8              | —                             | 10   | 210   | 205                                       | 25                  | —                    | 2.2                             |

\* Not true reading due to resistance in circuit.

# MANUAL OF MOST-OFTEN-NEEDED RADIO DIAGRAMS

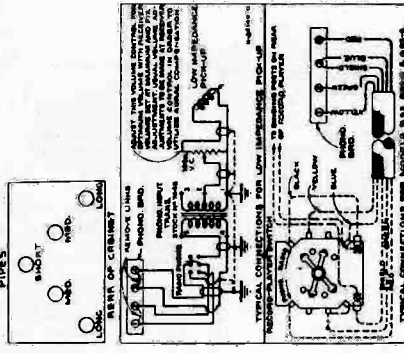
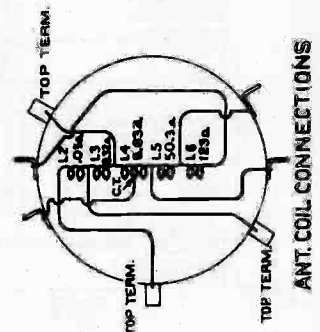
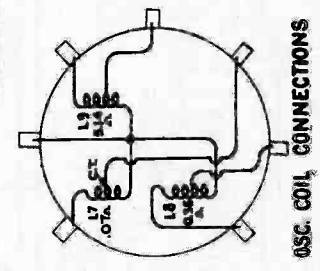
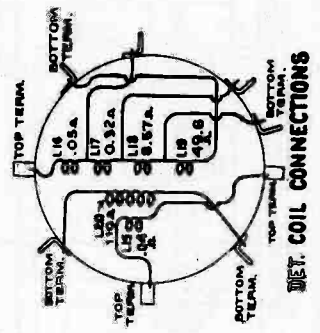
## RCA VICTOR MODEL 13K



### I.F. 460 KC

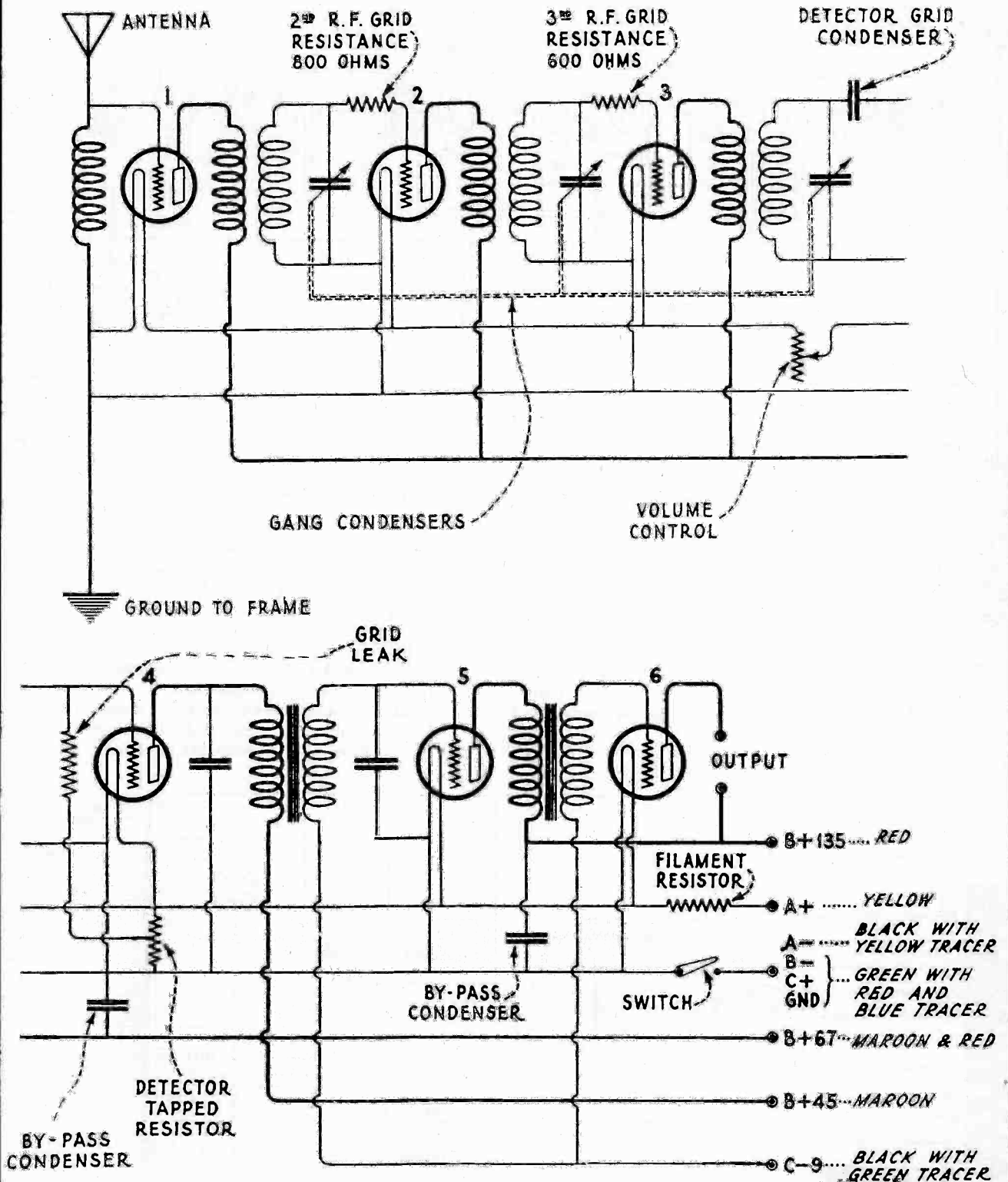
**SERVICE HINTS**

- (1) Excessive heating of the 6BE6 tube may be due to high cathode current—in excess of 7 ma. The tube should be replaced and the condition of the 5Z4 rectifier checked.
- (2) Low sensitivity or intermittent operation may be caused by C-48 or C-83 developing low-resistance leakage. Check both capacitors and replace if found defective.
- (3) Low sensitivity around 15—16 megacycles may be caused by dirty or poor contact of grounding contact finger on S-3.
- (4) Motorboating may be due to intermittent capacitor Stock No. 18026.



MANUAL OF MOST-OFTEN-NEEDED RADIO DIAGRAMS

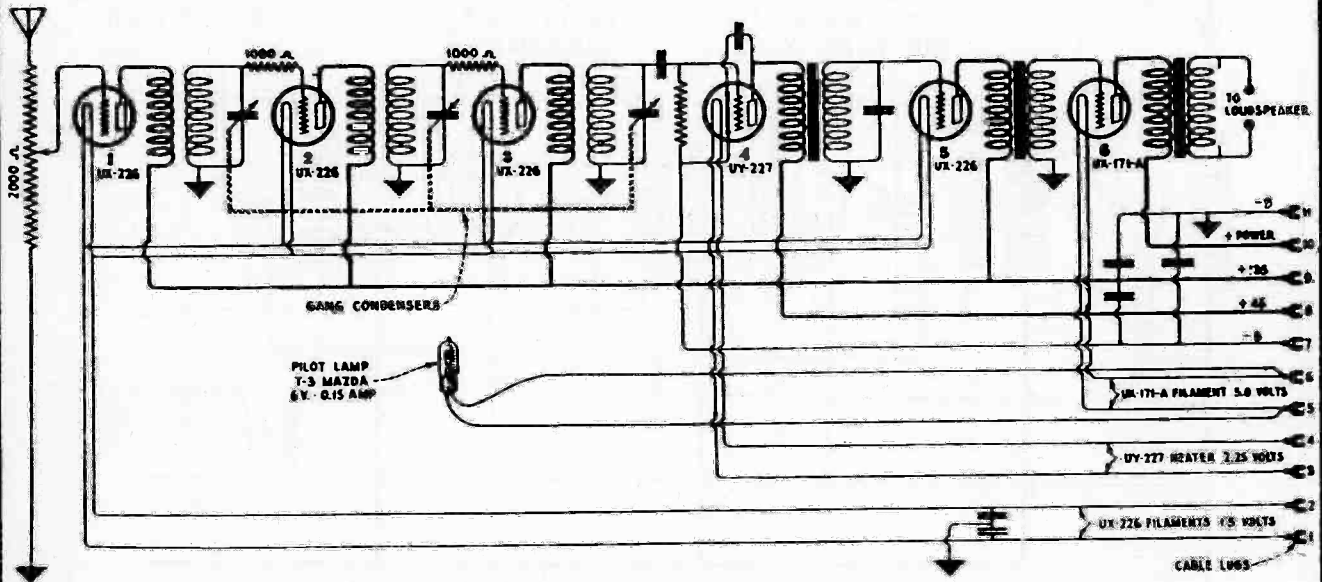
RCA RADIOLA 16





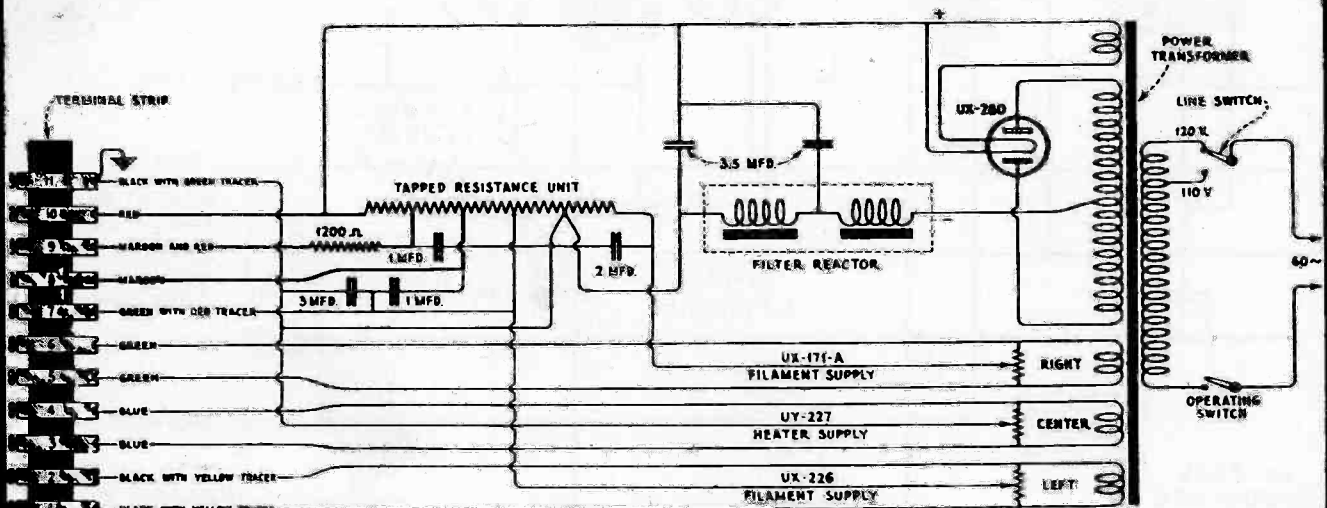
# MANUAL OF MOST-OFTEN-NEEDED RADIO DIAGRAMS

## RCA RADIOLA 17

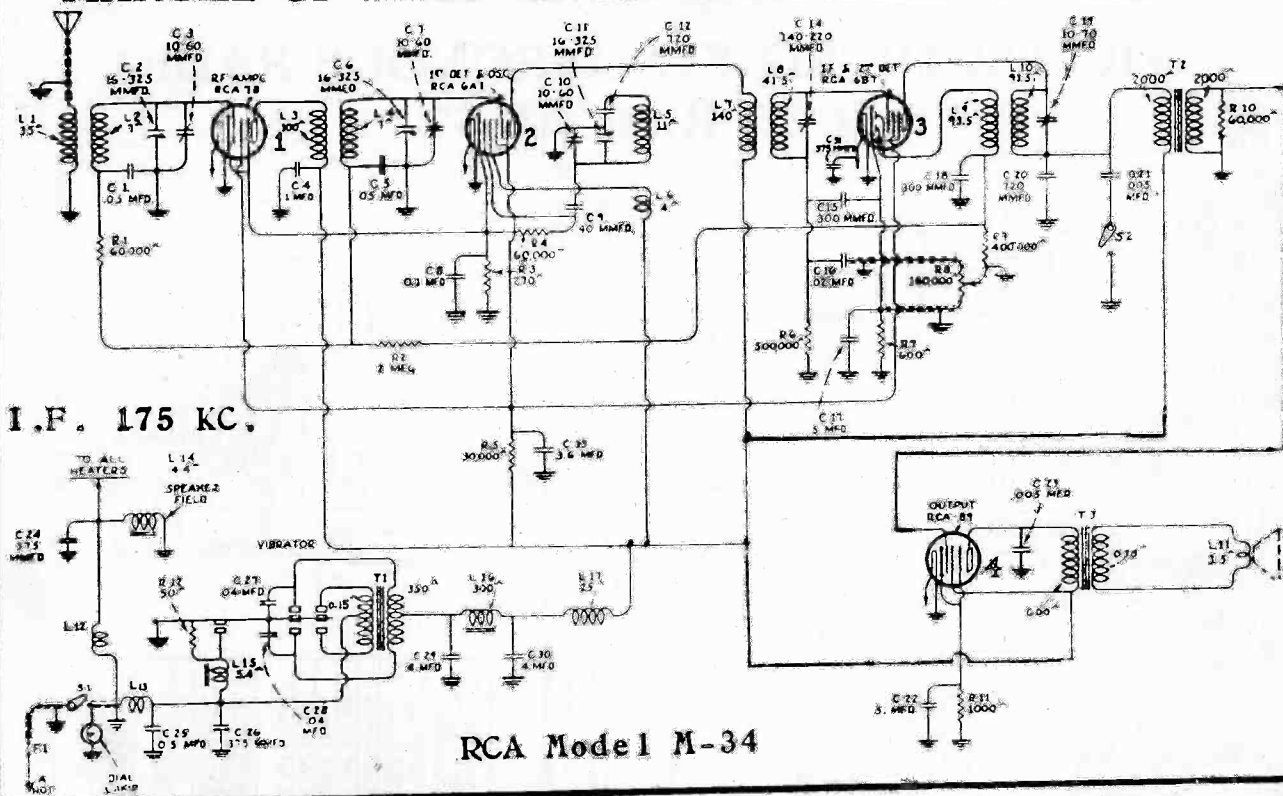


Schematic circuit diagram of receiver assembly.

| Indication | Cause   | Remedy   |
|------------|---|--|
| No signals | Defective operating switch<br>Loose volume control arm<br>Defective power cable<br>Defective R.F. transformer<br>Defective A.F. transformer<br>Defective By-pass condenser<br>Defective socket power unit | Repair or replace switch<br>Tighten volume control arm<br>Replace power cable<br>Replace R.F. transformer assembly<br>Replace A.F. transformer assembly<br>Replace By-pass condenser<br>Check socket power unit by means of continuity test and make any repairs or replacements necessary |

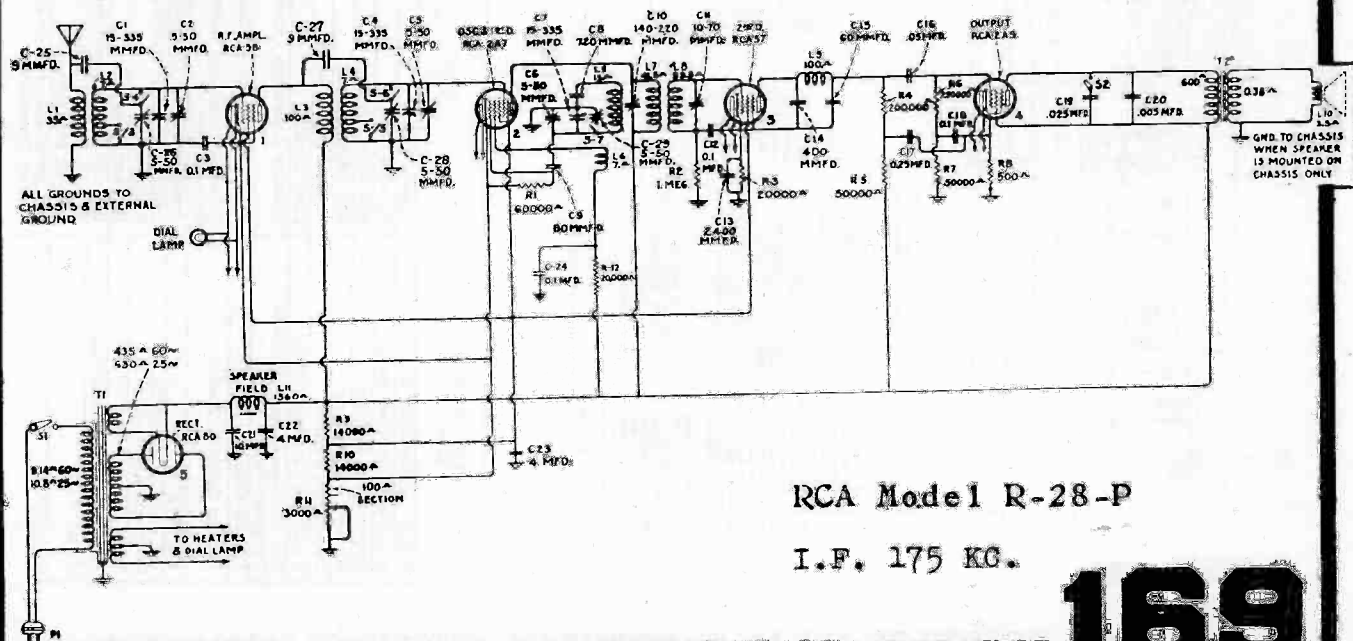


# MANUAL OF MOST-OFTEN-NEEDED RADIO DIAGRAMS



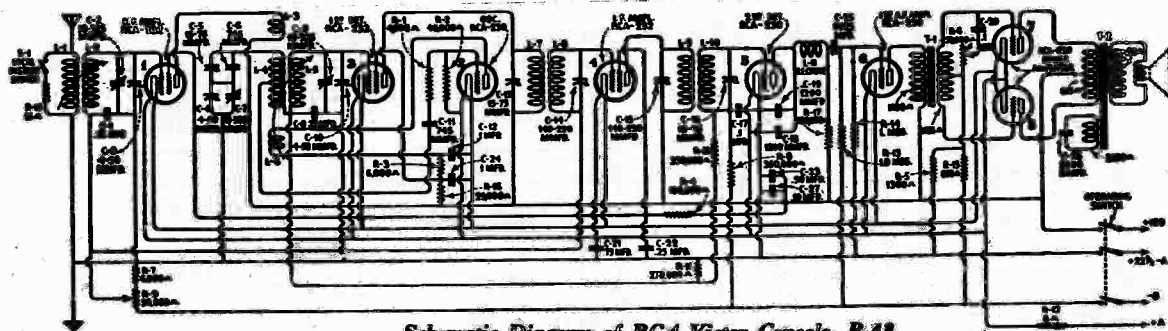
## MAXIMUM VOLUME CONTROL SETTING—NO SIGNAL

| Radiotron No.                           | Cathode to Control Grid, Volts | Cathode to Screen Grid, Volts | Cathode to Plate, Volts | Plate Current, M. A. | Heater Volts |
|---|--------------------------------|-------------------------------|-------------------------|----------------------|--------------|
| 1. RCA-58 R. F. Amplifier               | 3.0                            | 95                            | 250                     | 5.0                  | 2.33         |
| 2. RCA-2A7 First Detector Oscillator    | 3.0                            | 95                            | 250                     | 3.0                  | 2.33         |
| 3. RCA-57 Second Detector               | 6.0                            | 89                            | 170                     | 0.3                  | 2.33         |
| 4. RCA-2A5 Power Amplifier              | 18.0                           | 235                           | 220                     | 32.0                 | 2.33         |
| 5. RCA-80 Rectifier                     |                                |                               |                         |                      | 4.82         |
| 275 Volts PLATE TO PLATE—60 M. A. TOTAL |                                |                               |                         |                      |              |
| TOTAL CATHODE CURRENT—11 M. A.          |                                |                               |                         |                      |              |





# MANUAL OF MOST-OFTEN-NEEDED RADIO DIAGRAMS



Schematic Diagram of RCA Victor Console, R-48

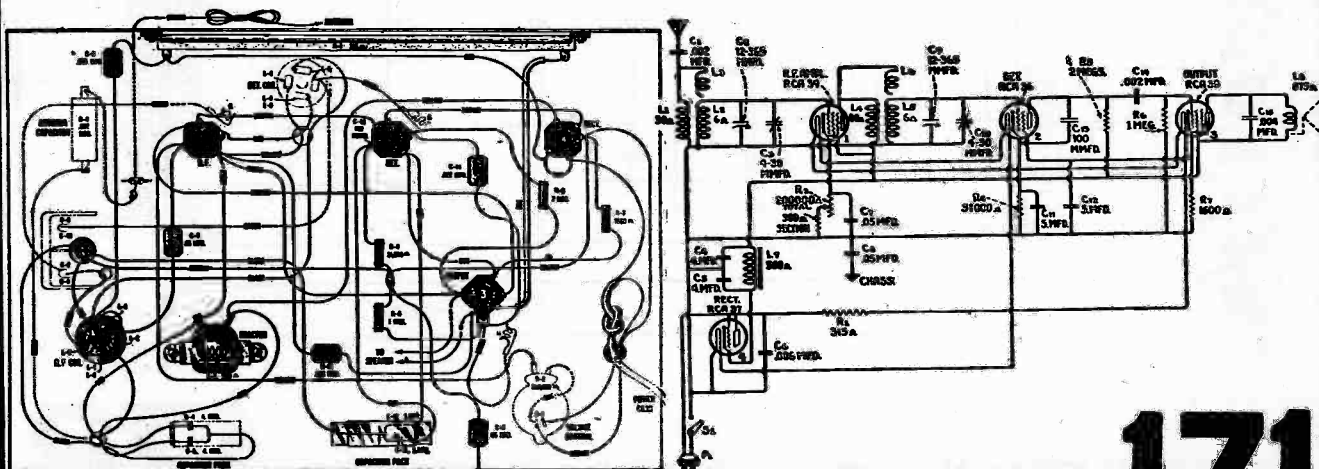
| VOLUME CONTROL AT MINIMUM |                                |                               |                         |                     |                |
|---------------------------|--------------------------------|-------------------------------|-------------------------|---------------------|----------------|
| Tube No.                  | Filament to Control Grid Volts | Filament to Screen Grid Volts | Filament to Plate Volts | Plate Current M. A. | Filament Volts |
| 1                         | 22                             | 55                            | 155                     | 0                   | 2.0            |
| 2                         | —                              | —                             | 50                      | 3.0                 | 2.0            |
| 3                         | 0.5                            | 65                            | 150                     | 0.5                 | 2.0            |
| 4                         | 22                             | 55                            | 155                     | 0                   | 2.0            |
| 5                         | 5.0                            | —                             | 90                      | 0                   | 2.0            |
| 6                         | 2.0                            | —                             | 150                     | 2.5                 | 2.0            |
| 7                         | 15.0                           | —                             | 150                     | 0.5                 | 2.0            |
| 8                         | 15.0                           | —                             | 150                     | 0.5                 | 2.0            |
| VOLUME CONTROL AT MAXIMUM |                                |                               |                         |                     |                |
| Tube No.                  | Filament to Control Grid Volts | Filament to Screen Grid Volts | Filament to Plate Volts | Plate Current M. A. | Filament Volts |
| 1                         | 1.5                            | 45                            | 150                     | 2.5                 | 2.0            |
| 2                         | —                              | —                             | 50                      | 3.0                 | 2.0            |
| 3                         | 0.5                            | 60                            | 150                     | 0.5                 | 2.0            |
| 4                         | 1.5                            | 45                            | 150                     | 2.5                 | 2.0            |
| 5                         | 5.0                            | —                             | 90                      | 0                   | 2.0            |
| 6                         | 2.0                            | —                             | 150                     | 2.5                 | 2.0            |
| 7                         | 15.0                           | —                             | 150                     | 0.5                 | 2.0            |
| 8                         | 15.0                           | —                             | 150                     | 0.5                 | 2.0            |

## RCA Victor R-17-M

| Radiotron No.       | Cathode or Filament to Control Grid Volts | Cathode or Filament to Screen Grid Volts | Cathode or Filament to Plate Volts | Plate Current M. A. | Filament or Heater Volts |
|---------------------|---|--|------------------------------------|---------------------|--------------------------|
| 1. RCA-39 R. F.     | 3.0                                       | 105.0                                    | 105                                | 7.0                 | 6.0                      |
| 2. RCA-36 Detector  | *0.75                                     | 11.0                                     | *60                                | 0.025               | 6.0                      |
| 3. RCA-38 Output    | 11.0                                      | 100.0                                    | 95                                 | 5.0                 | 6.0                      |
| 4. RCA-37 Rectifier | —   | —  | 115                                | 15.0                | 6.0                      |

\*Impossible to measure on ordinary voltmeter.

All Voltages on D. C. will be slightly lower

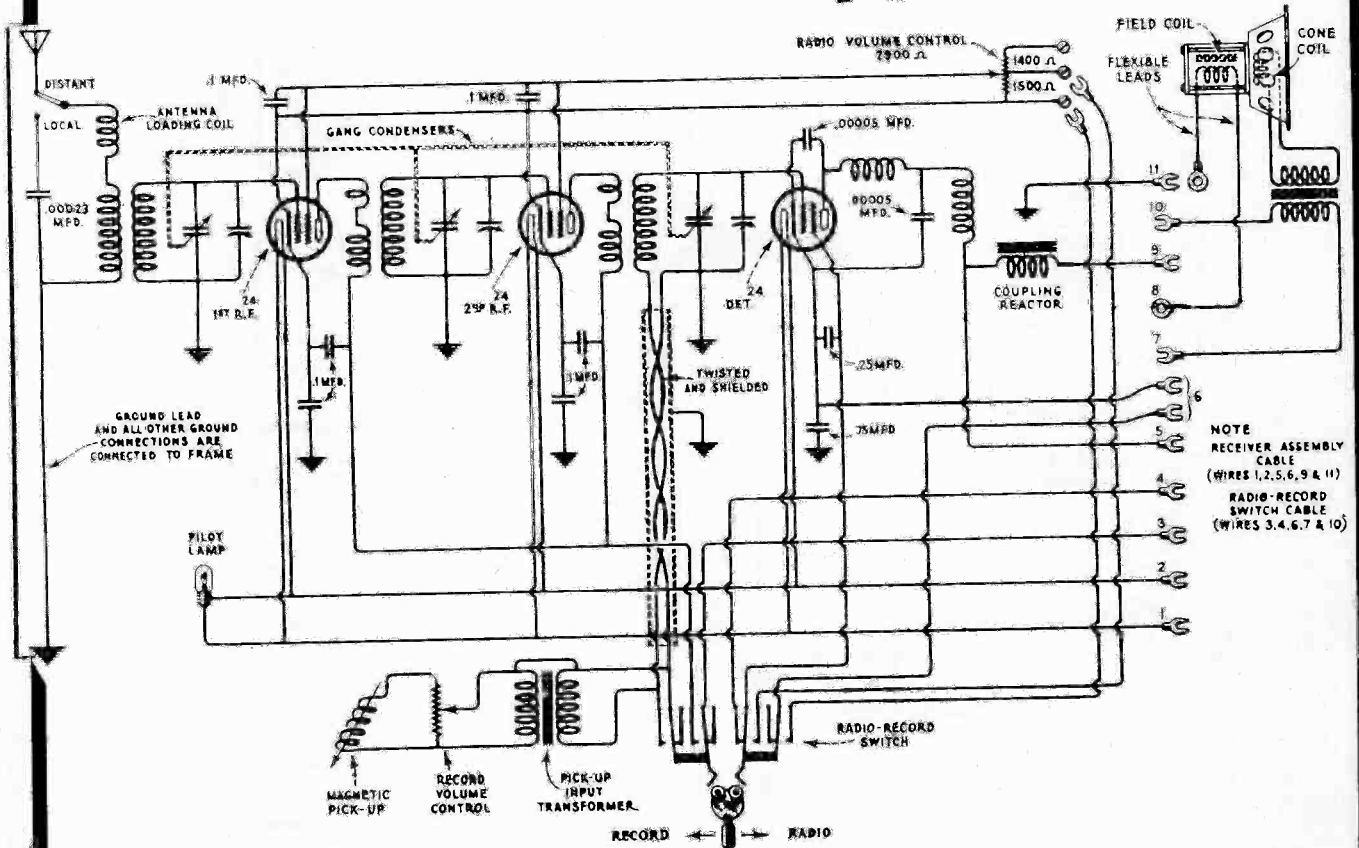




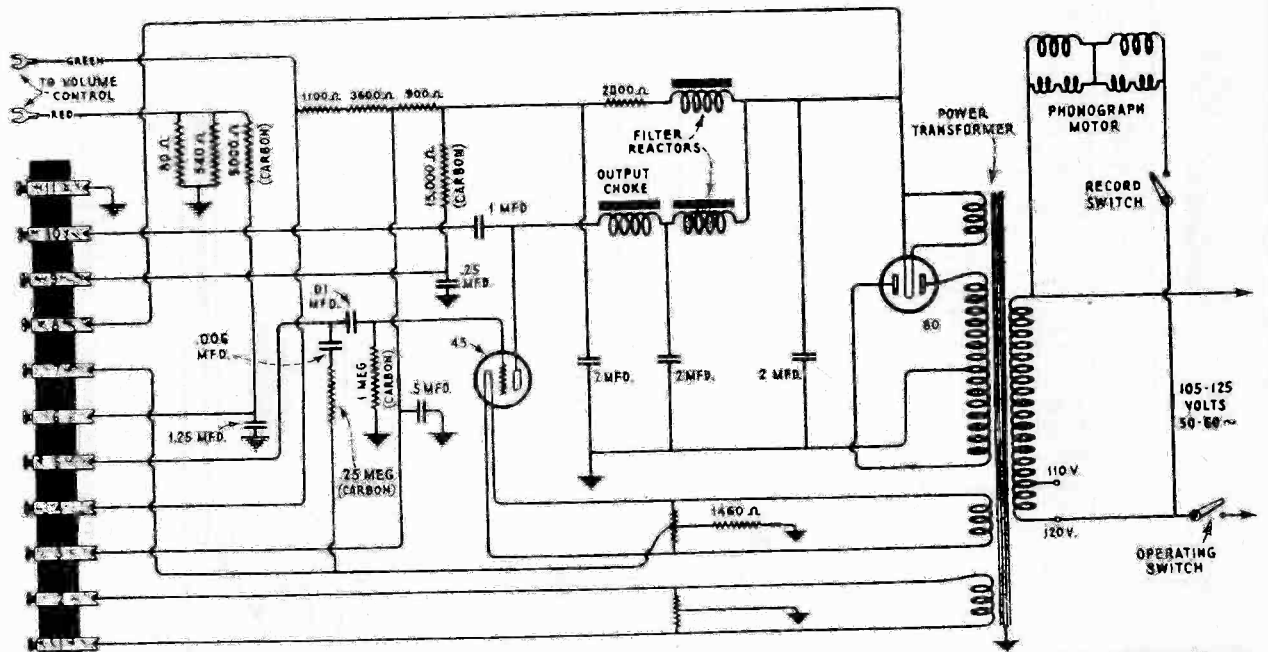




# Radiola 47



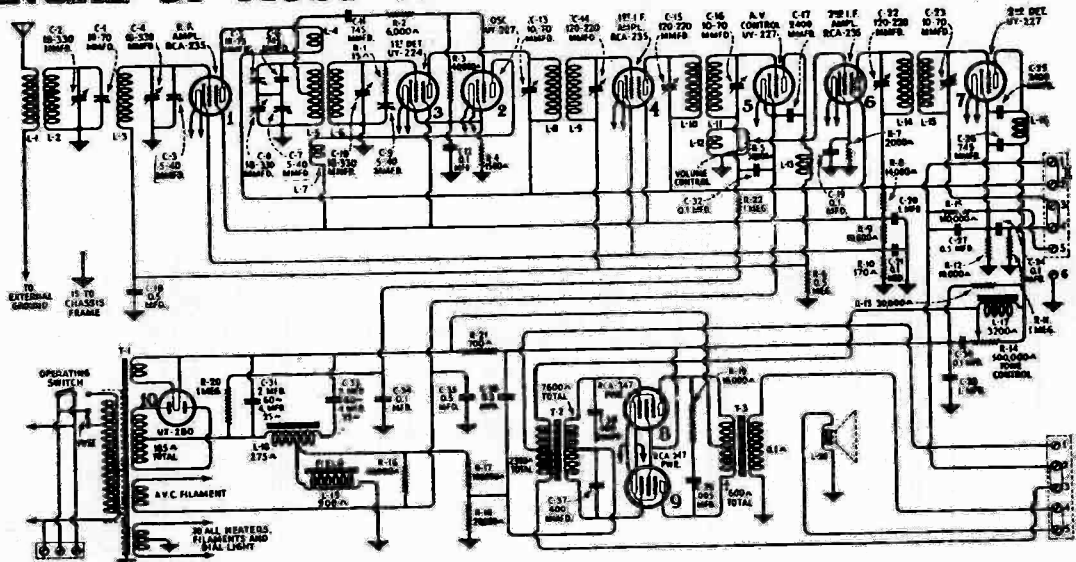
Schematic circuit diagram of receiver, phonograph pick-up and reproducer



Schematic circuit diagram of socket power unit



# MANUAL OF MOST-OFTEN-NEEDED RADIO DIAGRAMS

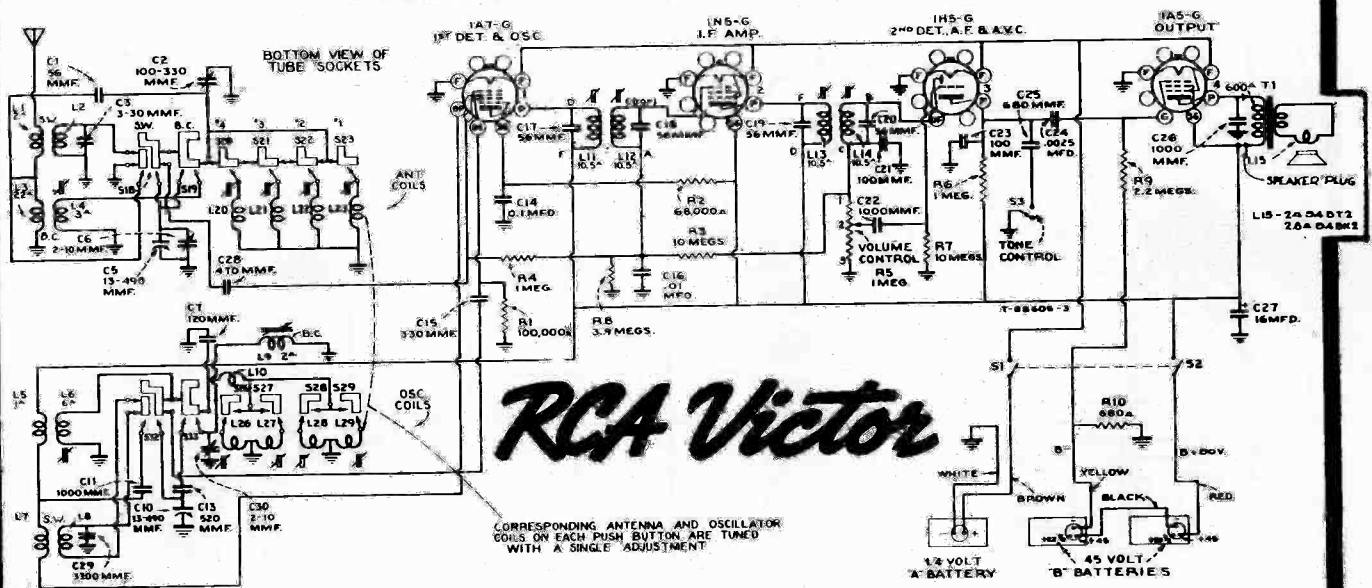


RCA Models R-50, R-55

I.F. 175 KC.

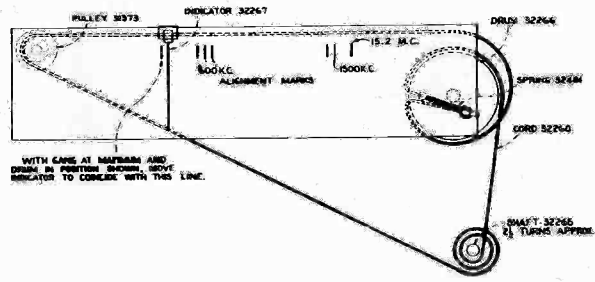
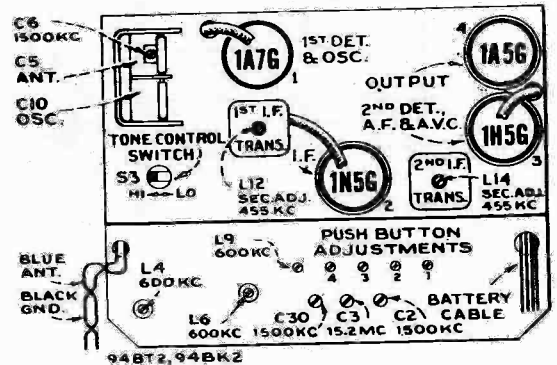
## MODELS 94BK2 and 94BT2

Chassis No. RC-390 RC-390



**RCA Victor**

CORRESPONDING ANTENNA AND OSCILLATOR COILS ON EACH PUSH BUTTON ARE TUNED WITH A SINGLE ADJUSTMENT



Dial Drive Hookup and Alignment Marks

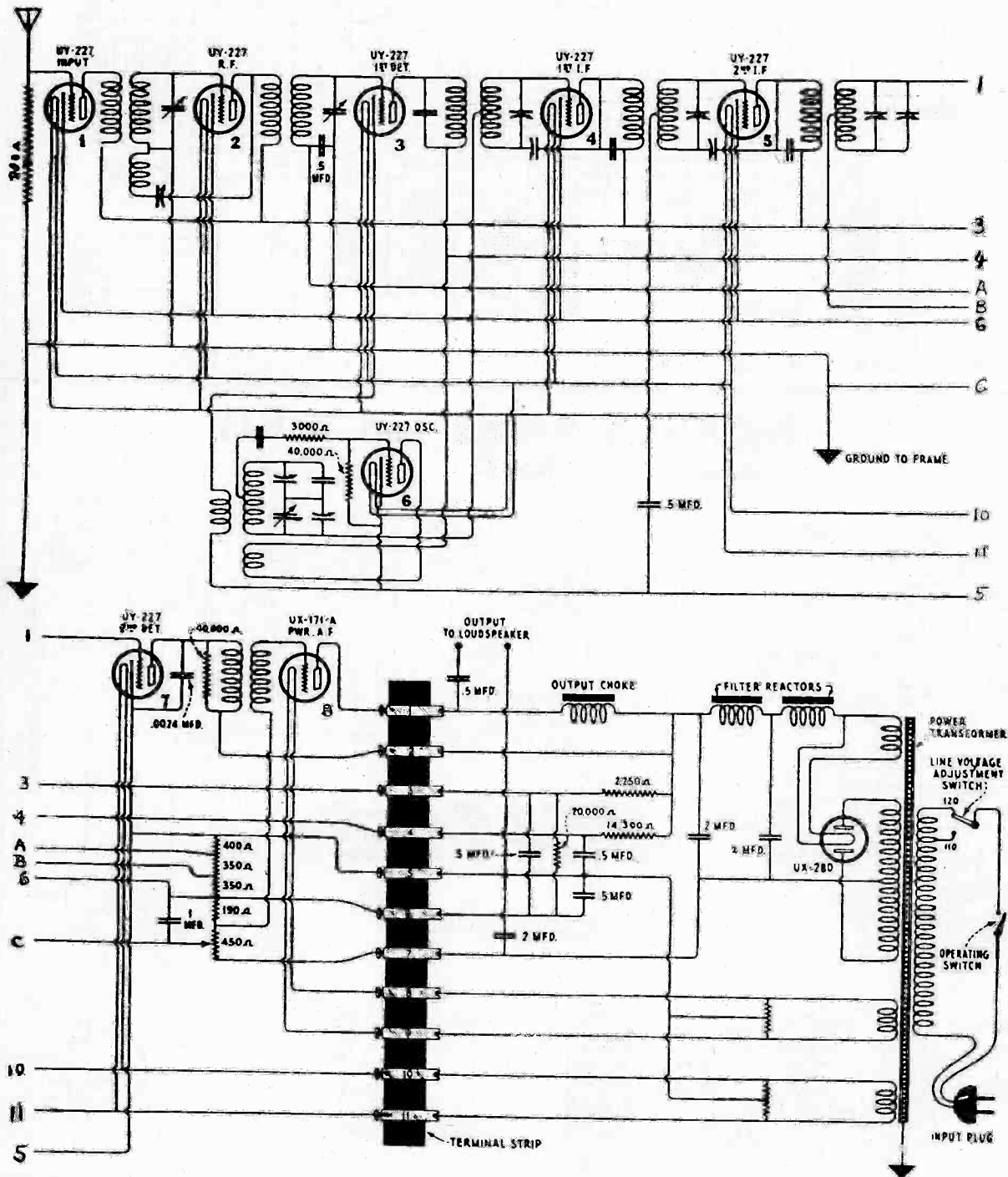
Tube and Trimmer Locations  
 COMPILED BY M. N. BETTMAN, SUPREME PUBLICATIONS

# 175

# MANUAL OF MOST-OFTEN-NEEDED RADIO DIAGRAMS

## RCA RADIOLA 60

(105-125 Volts, 50-60 Cycle A. C.)



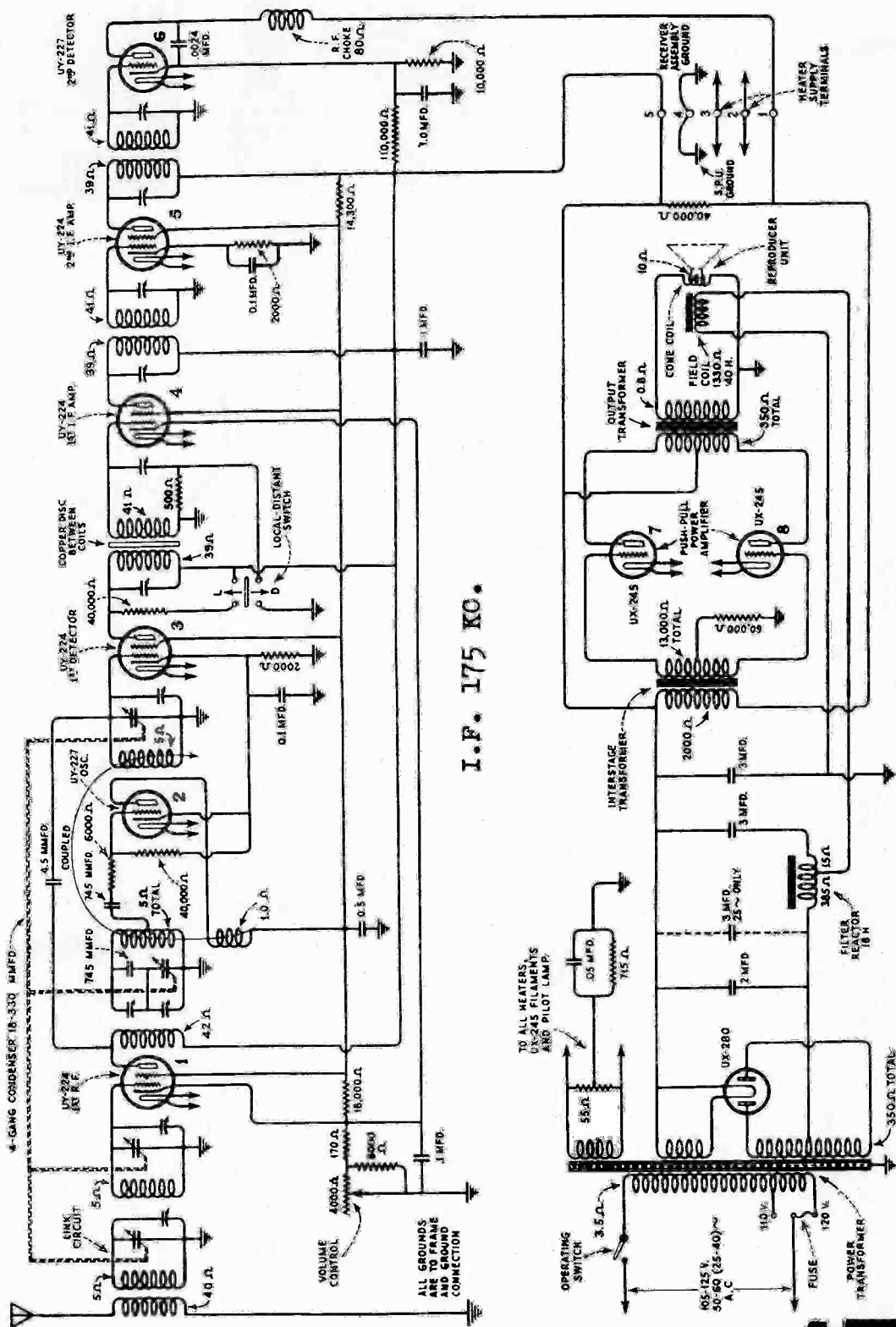
I.F. 180 KC.

# 176

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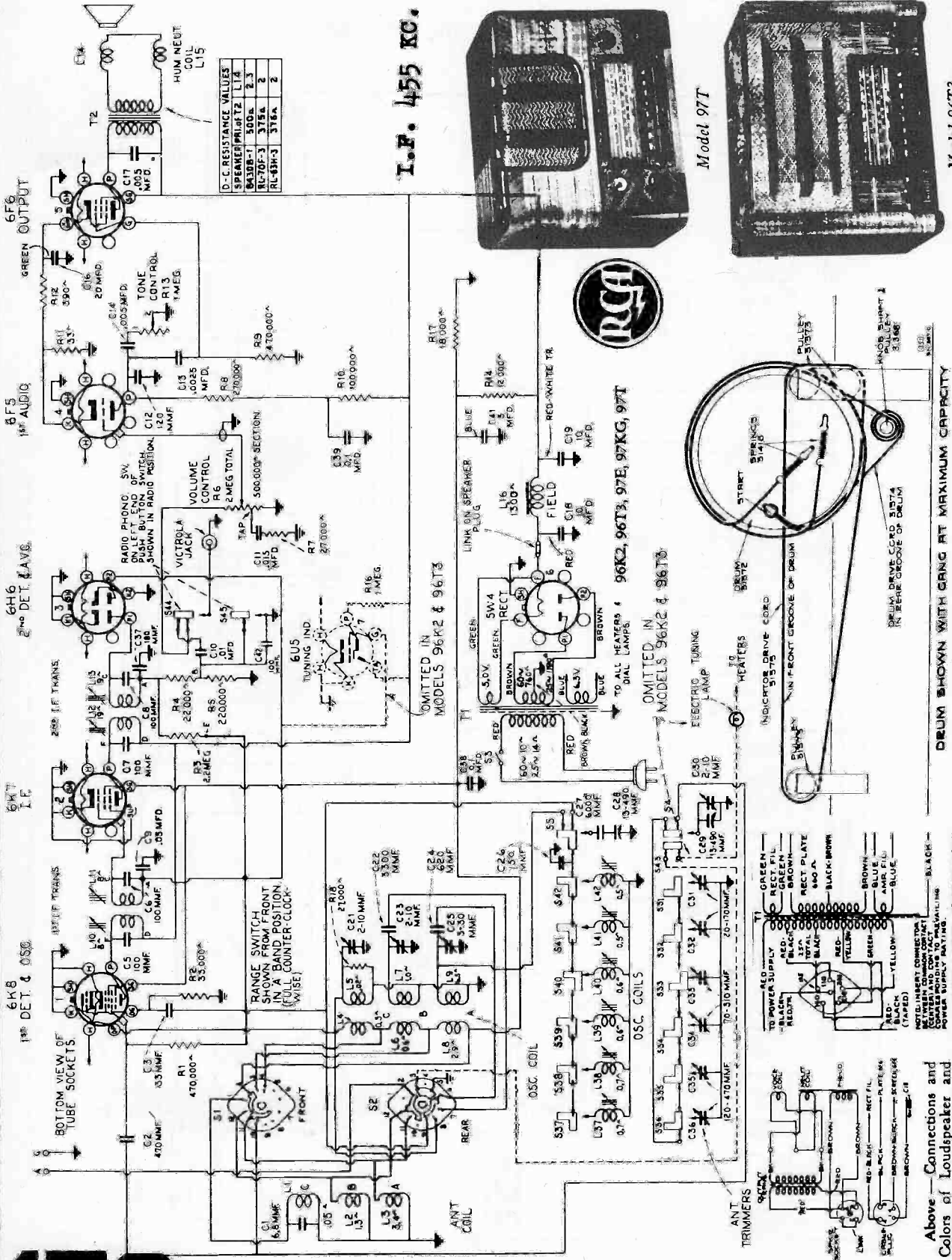
# MANUAL OF MOST-OFTEN-NEEDED RADIO DIAGRAMS

RCA Radiola 80, 82, 86

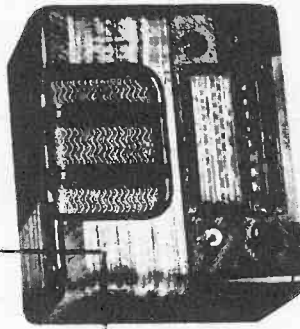




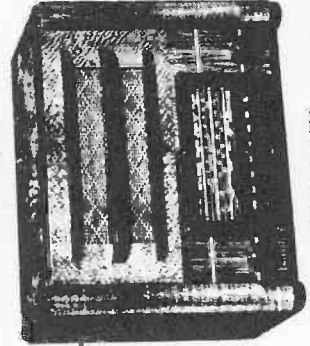
# MANUAL OF MOST-OFTEN-NEEDED RADIO DIAGRAMS



I.F. 455 KC.



Model 97T

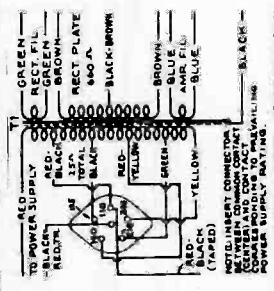
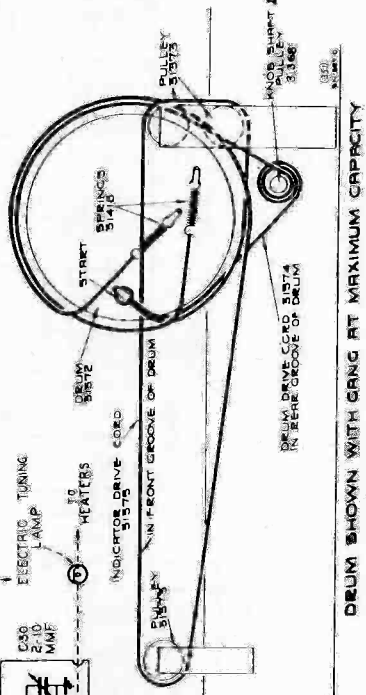


Model 96T3



OMITTED IN MODELS 96K2, 97E, 97KG, 97T

OMITTED IN MODELS 96K2 & 96T3

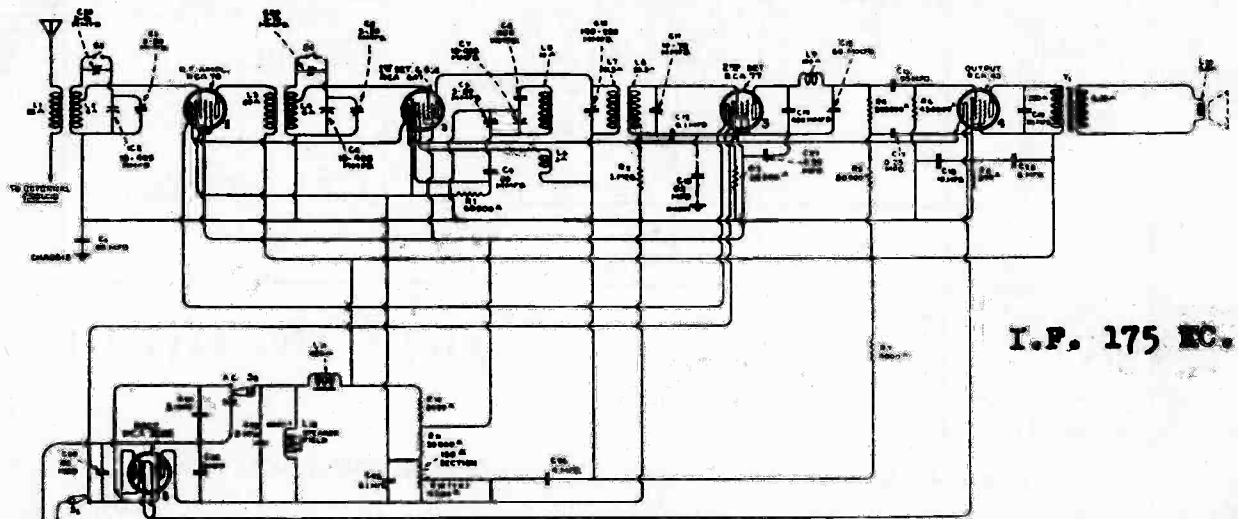


Above—Connections and Colors of Loudspeaker and Cable.

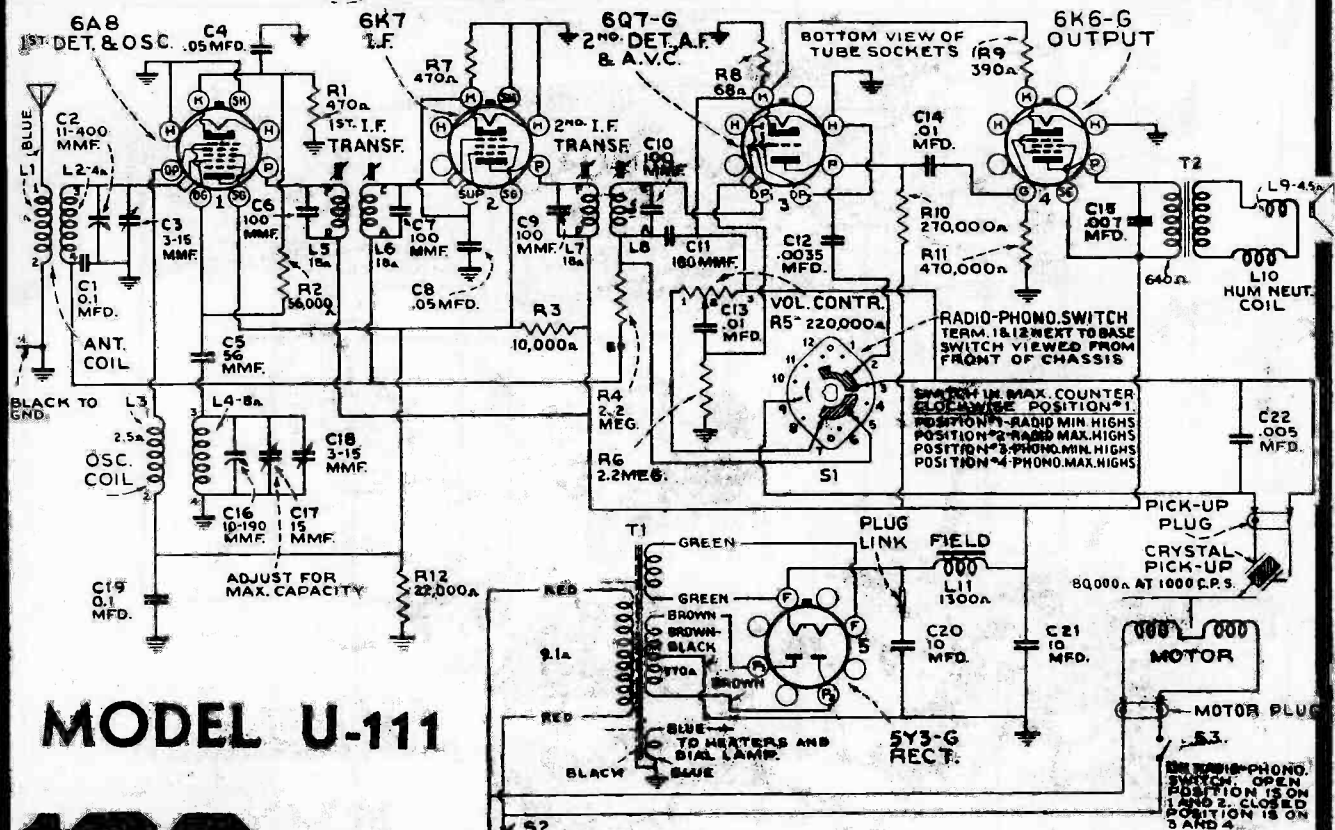
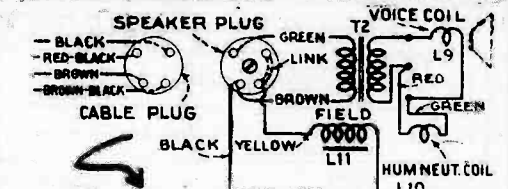
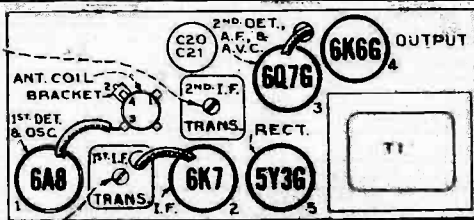


MANUAL OF MOST-OFTEN-NEEDED RADIO DIAGRAMS

# RCA Victor 114



I.P. 175 KC.



MODEL U-111

# 180

COMPILED BY M. N. BEITMAN, SUPREME PUBLICATIONS









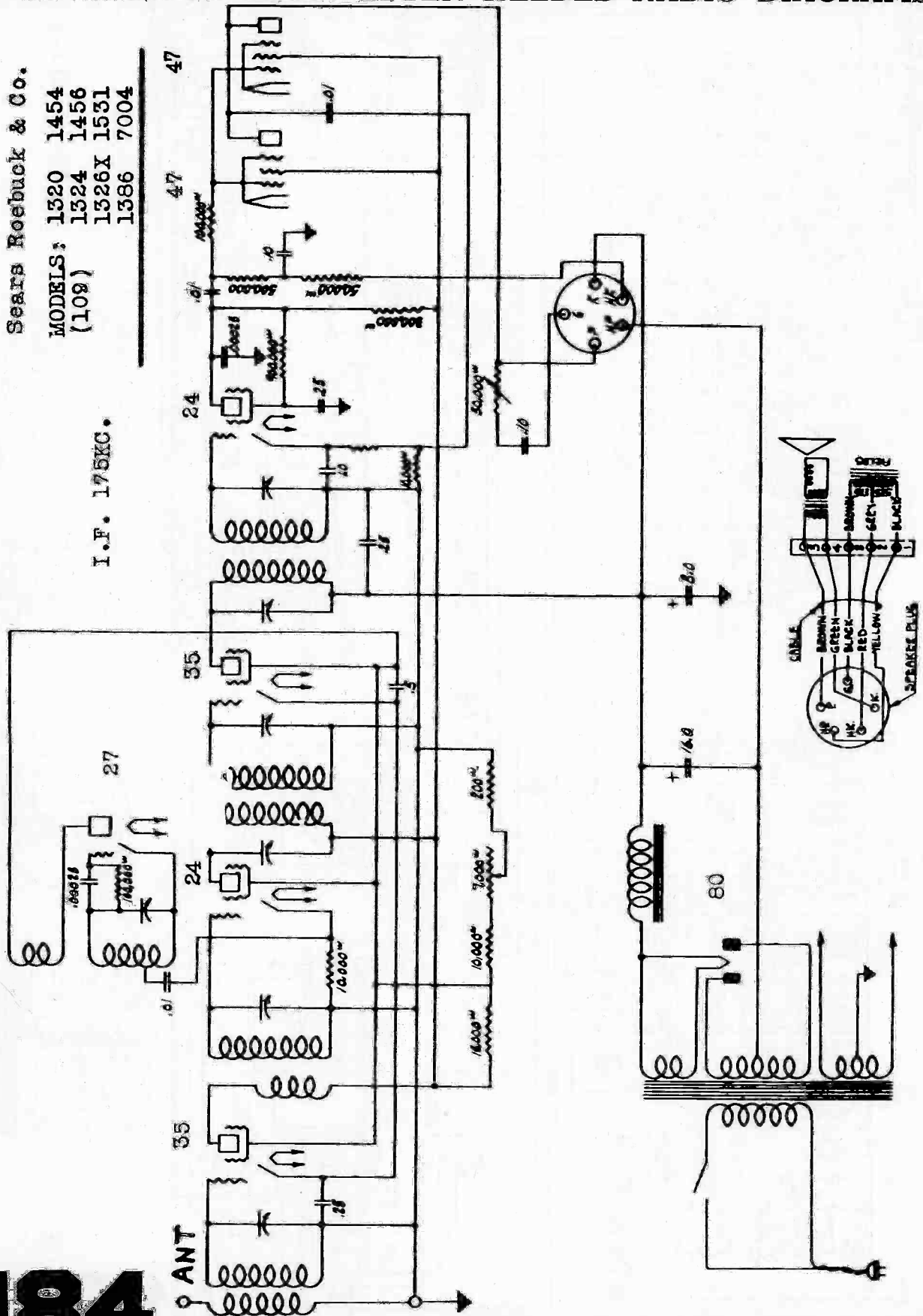


# MANUAL OF MOST-OFTEN-NEEDED RADIO DIAGRAMS

Sears Roebuck & Co.

MODELS: 1320 1454  
 (109) 1324 1456  
 1326X 1531  
 1386 7004

I.F. 175KC.



# MANUAL OF MOST-OFTEN-NEEDED RADIO DIAGRAMS

950

OUTPUT

232

DET.

1A4

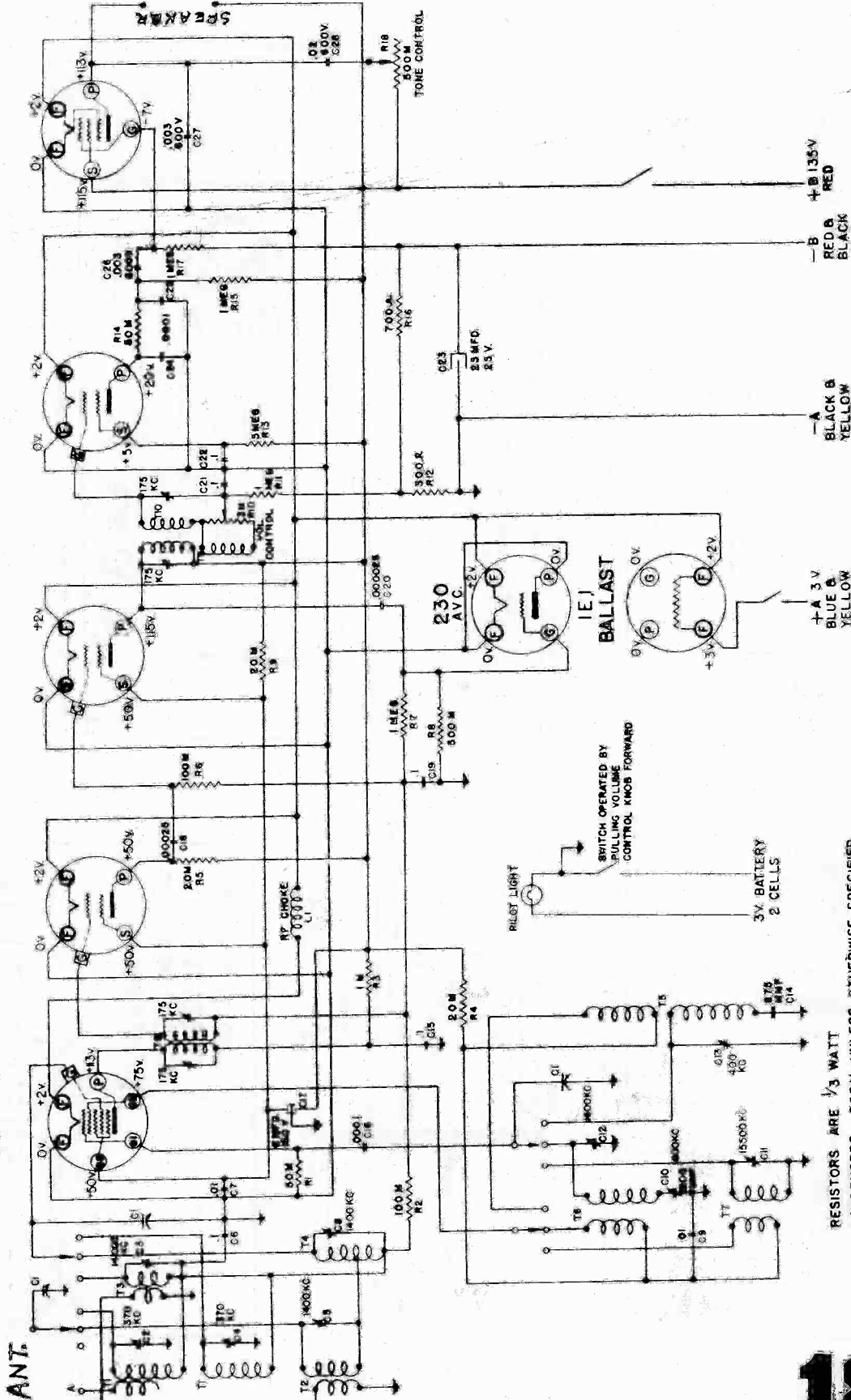
IF

1A4

IF

1C6

OSC.-TRANS.



SCHEMATIC - MODELS 1923-1933-1983-1993

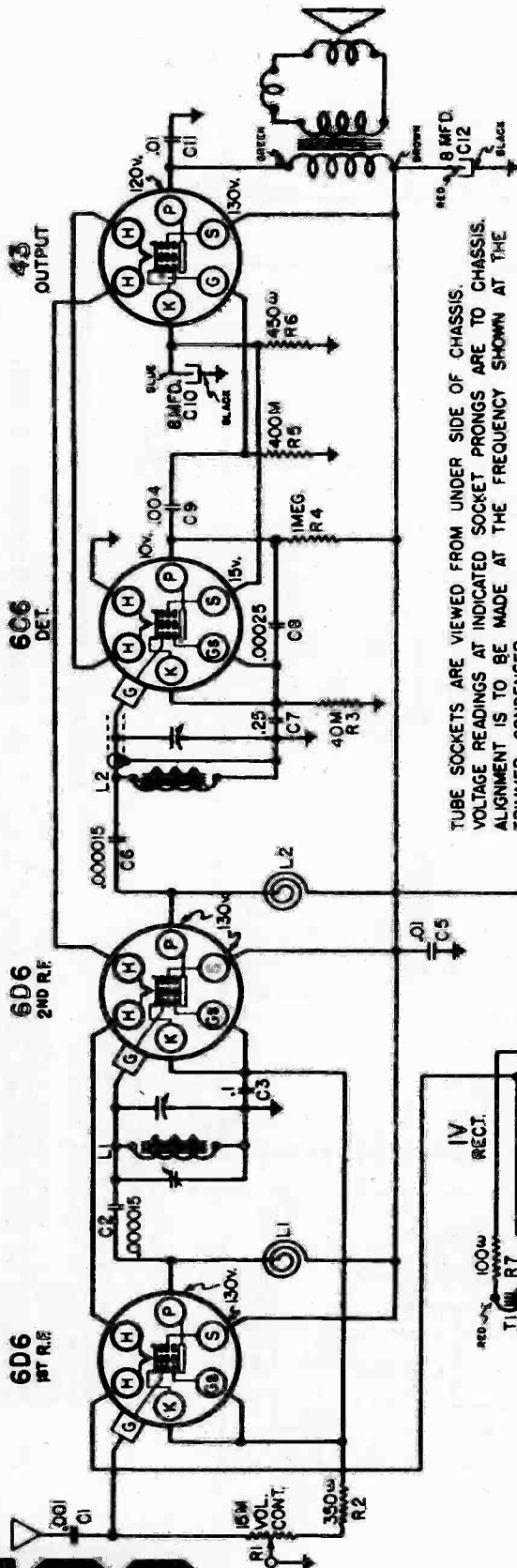
Sears, Roebuck & Co.

RESISTORS ARE 1/3 WATT  
 CONDENSERS 200V. UNLESS OTHERWISE SPECIFIED  
 VOLTAGE READINGS ARE TAKEN FROM CHASSIS TO  
 INDICATED PRONG OF EACH SOCKET. ALIGNMENT  
 IS TO BE MADE AT FREQUENCIES SHOWN AT  
 EACH TRIMMER.  
 WHERE NO VALUE IS SHOWN, READING IS VERY LOW  
 BECAUSE OF HIGH SERIES RESISTANCE IN CIRCUIT.  
 TUBE SOCKETS ARE VIEWED FROM UNDER SIDE OF CHASSIS.

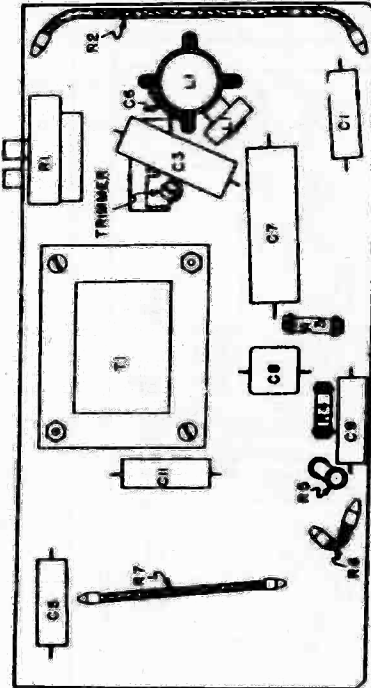
# MANUAL OF MOST-OFTEN-NEEDED RADIO DIAGRAMS

Sears Roebuck & Co.

Models: 4414, 4415,  
4500, 4505, 4506,  
4510, 4511

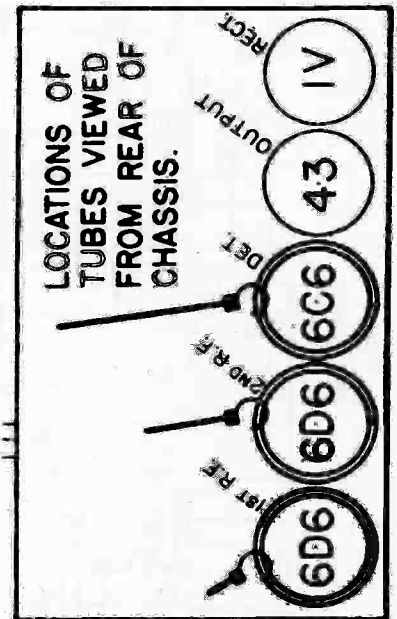


TUBE SOCKETS ARE VIEWED FROM UNDER SIDE OF CHASSIS. VOLTAGE READINGS AT INDICATED SOCKET PRONGS ARE TO CHASSIS. ALIGNMENT IS TO BE MADE AT THE FREQUENCY SHOWN AT THE TRIMMER CONDENSER. WHERE NO VOLTAGE READING IS SHOWN AT SOCKET PRONG, IT INDICATES A VERY LOW READING. VOLUME CONTROL TO BE ON FULL.



C4, C10, C12, & L1 ARE MOUNTED ON TOP OF CHASSIS.

LOCATIONS OF PARTS UNDER CHASSIS



LOCATIONS OF TUBES VIEWED FROM REAR OF CHASSIS.

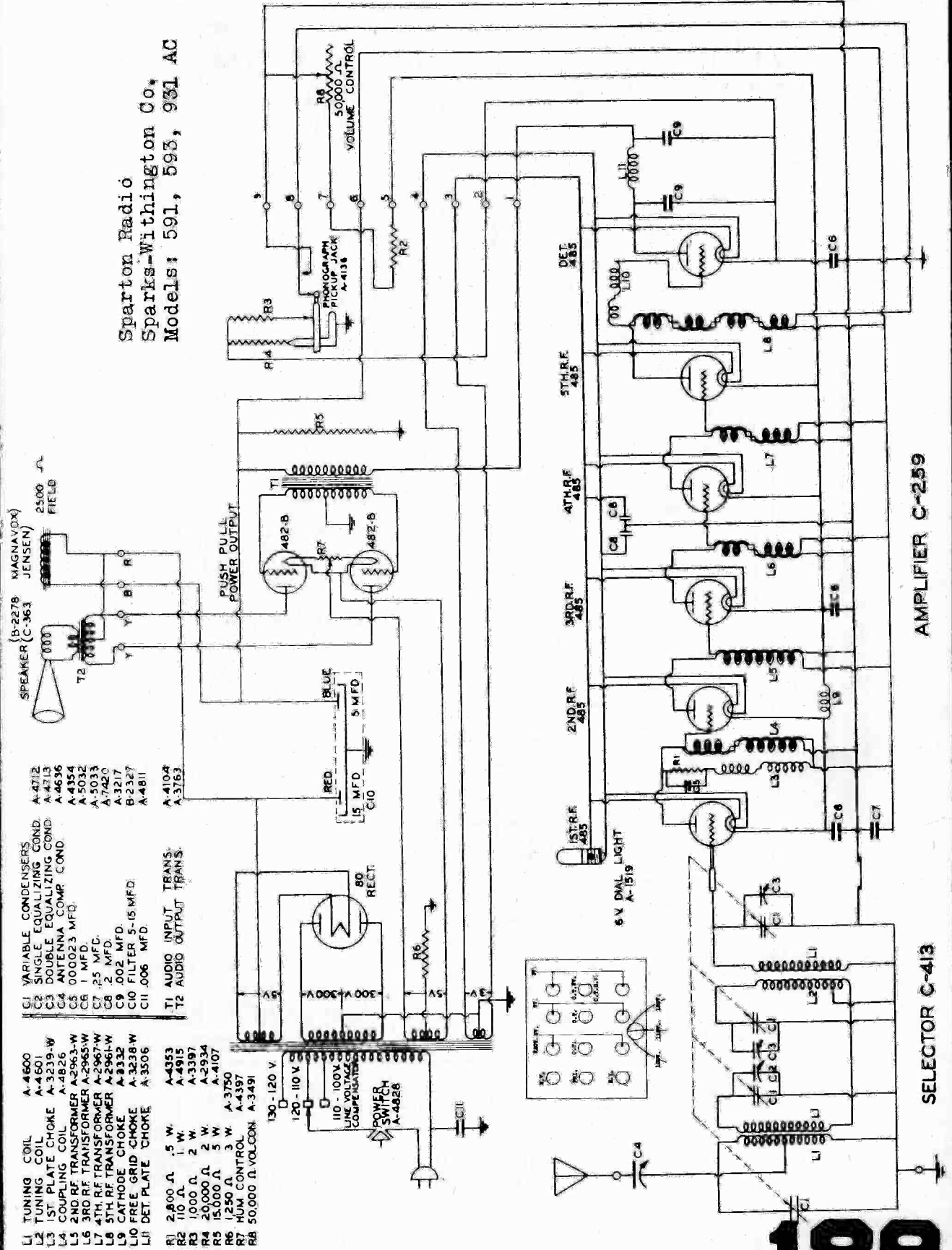






# MANUAL OF MOST-OFTEN-NEEDED RADIO DIAGRAMS

Sparton Radio  
Sparks-Withington Co.  
Models: 591, 593, 931 AC



- L1 TUNING COIL A-4500
- L2 TUNING COIL A-4501
- L3 PLATE CHOKER A-3319-W
- L4 COUPLING COILFORMER A-2965
- L5 2ND RF TRANSFORMER A-2965-W
- L6 3RD RF TRANSFORMER A-2967-W
- L7 4TH RF TRANSFORMER A-2967-W
- L8 5TH RF TRANSFORMER A-2967-W
- L9 CATHODE CHOKER A-3332
- L10 FREE GRID CHOKER A-3338-W
- L11 DET. PLATE CHOKER A-3506
- R1 2,500 Ω 5 W. A-4353
- R2 110 Ω 1 W. A-4915
- R3 1000 Ω 2 W. A-3397
- R4 20,000 Ω 2 W. A-2934
- R5 15,000 Ω 5 W. A-4107
- R6 1250 Ω 3 W. A-3750
- R7 HUM CONTROL A-4397
- R8 50,000 Ω VOLCON A-3491
- C1 VARIABLE CONDENSERS
- C2 SINGLE EQUALIZING COND.
- C3 DOUBLE EQUALIZING COND.
- C4 ANTENNA COMP. COND.
- C5 000,023 MFD.
- C6 1 MFD.
- C7 .25 MFD.
- C8 .2 MFD.
- C9 .002 MFD.
- C10 FILTER 5-15 MFD.
- C11 .006 MFD.
- T1 AUDIO INPUT TRANS.
- T2 AUDIO OUTPUT TRANS.

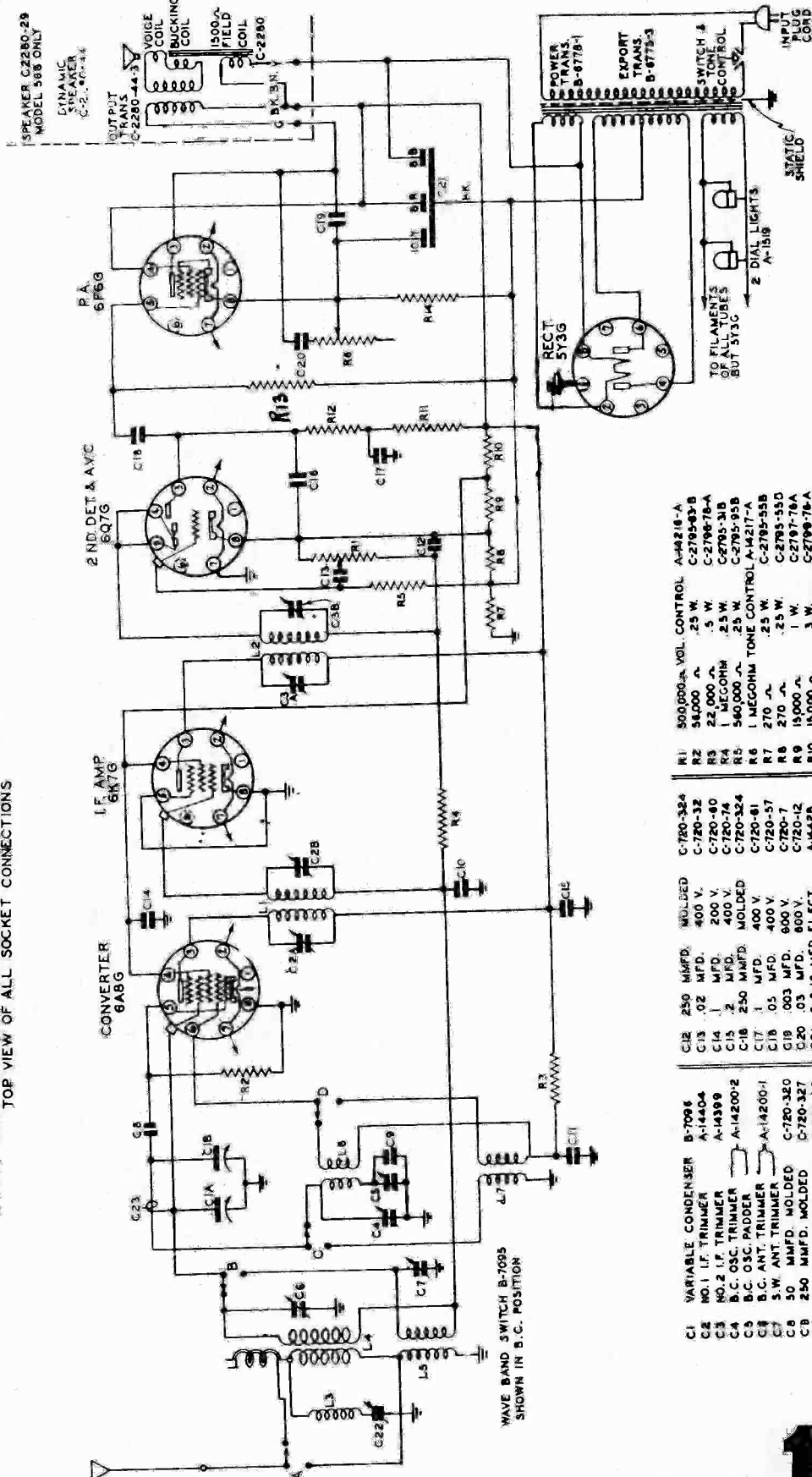
AMPLIFIER C-259

SELECTOR C-413



# MANUAL OF MOST-OFTEN-NEEDED RADIO DIAGRAMS

## SCHEMATIC DIAGRAM SPARTAN SUPERHETERODYNE MODEL 518, 518X, 558 & 558X 56.8 INTERMEDIATE FREQUENCY 456 K.C. TOP VIEW OF ALL SOCKET CONNECTIONS

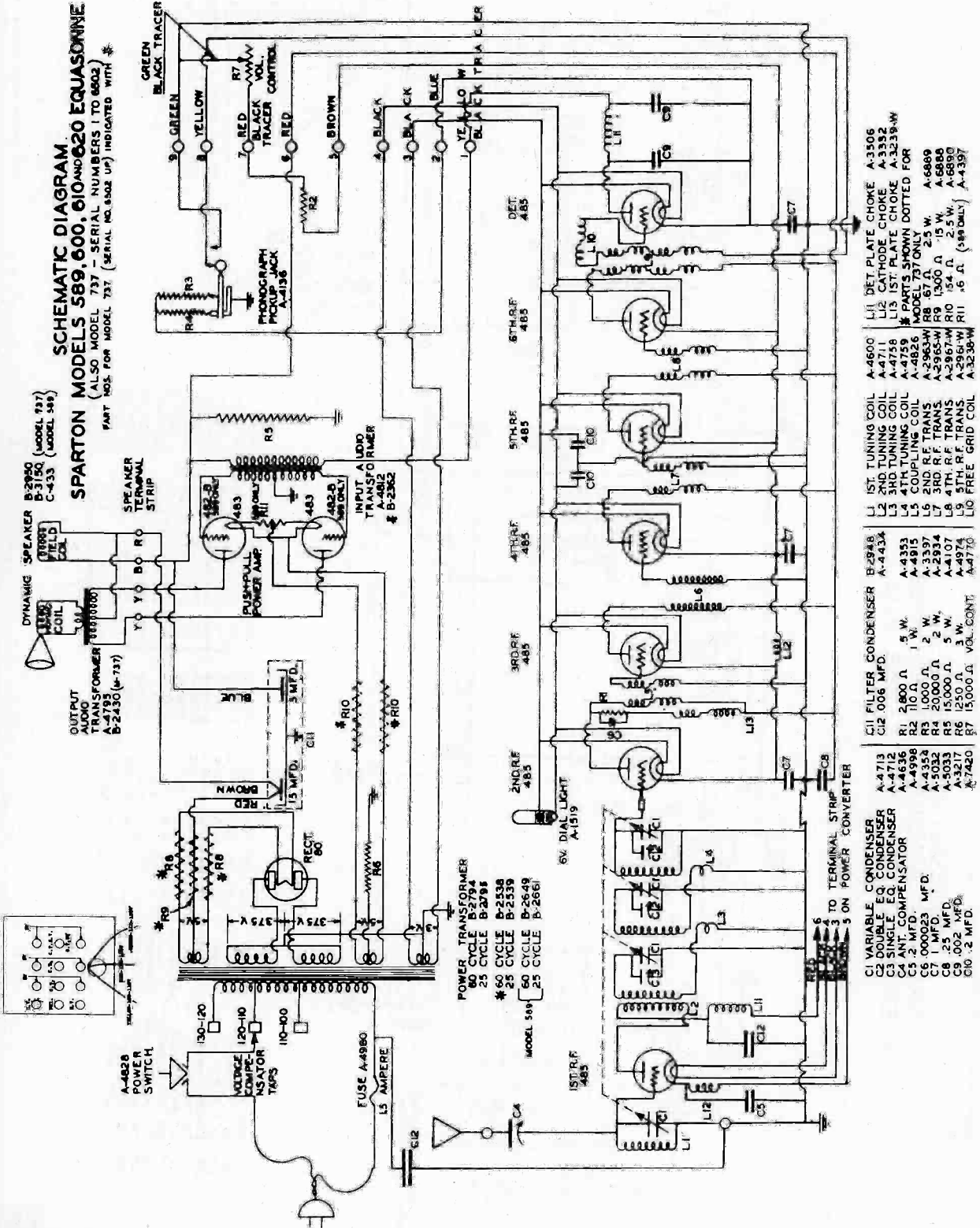


WAVE BAND SWITCH B-7095  
SHOWN IN B.C. POSITION

- |     |                                |             |
|-----|--------------------------------|-------------|
| C1  | VARIABLE CONDENSER             | B-7095      |
| C2  | NO. 1 I.F. TRIMMER             | A-14404     |
| C3  | NO. 2 I.F. TRIMMER             | A-14399     |
| C4  | B.C. OSC. TRIMMER              | A-14200-2   |
| C5  | B.C. OSC. PADDER               |             |
| C6  | B.C. ANT. TRIMMER              | A-14200-1   |
| C7  | S.W. ANT. TRIMMER              |             |
| C8  | 50 MMFD. MOLDED                | C-720-320   |
| C9  | 250 MMFD. MOLDED               | C-720-327   |
| C10 | .05 MFD. 200 V.                | C-720-52    |
| C11 | .05 MFD. 400 V.                | C-720-57    |
| C12 | 250 MMFD.                      | C-720-324   |
| C13 | .02 MFD.                       | C-720-32    |
| C14 | 1 MFD. 200 V.                  | C-720-60    |
| C15 | 2 MFD. 400 V.                  | C-720-74    |
| C16 | 250 MMFD. MOLDED               | C-720-324   |
| C17 | 1 MFD. 400 V.                  | C-720-61    |
| C18 | .05 MFD. 400 V.                | C-720-57    |
| C19 | .003 MFD. 600 V.               | C-720-7     |
| C20 | .03 MFD. 600 V.                | C-720-12    |
| C21 | 6-8-10 MFD. ELECT.             | A-4425      |
| C22 | I.F. REJECTOR TRIMMER          | A-4425      |
| C23 | 1 MMF. NEUTRALIZING COBD.      | A-4398      |
| R1  | 500,000- $\Omega$ VOL. CONTROL | A-44218-A   |
| R2  | 51,000 $\Omega$                | C-2795-83-B |
| R3  | 22,000 $\Omega$                | C-2796-76-A |
| R4  | 1 MEGOHM                       | C-2795-31B  |
| R5  | 540,000 $\Omega$               | C-2795-95B  |
| R6  | 1 MEGOHM TONE CONTROL          | A-14217-A   |
| R7  | 270 $\Omega$                   | C-2795-55B  |
| R8  | 270 $\Omega$                   | C-2795-55D  |
| R9  | 15,000 $\Omega$                | C-2797-76A  |
| R10 | 15,000 $\Omega$                | C-2799-76-A |
| R11 | 50,000 $\Omega$                | C-2795-83B  |
| R12 | 270,000 $\Omega$               | C-2795-91B  |
| R13 | 330,000 $\Omega$               | C-2795-28B  |
| R14 | 470 $\Omega$                   | C-2797-50-A |
| L1  | 500,000- $\Omega$ VOL. CONTROL | A-44218-A   |
| L2  | 51,000 $\Omega$                | C-2795-83-B |
| L3  | 22,000 $\Omega$                | C-2796-76-A |
| L4  | 1 MEGOHM                       | C-2795-31B  |
| L5  | 540,000 $\Omega$               | C-2795-95B  |
| L6  | 1 MEGOHM TONE CONTROL          | A-14217-A   |
| L7  | 270 $\Omega$                   | C-2795-55B  |
| L8  | 270 $\Omega$                   | C-2795-55D  |
| L9  | 15,000 $\Omega$                | C-2797-76A  |
| L10 | 15,000 $\Omega$                | C-2799-76-A |
| L11 | 50,000 $\Omega$                | C-2795-83B  |
| L12 | 270,000 $\Omega$               | C-2795-91B  |
| L13 | 330,000 $\Omega$               | C-2795-28B  |
| L14 | 470 $\Omega$                   | C-2797-50-A |

# MANUAL OF MOST-OFTEN-NEEDED RADIO DIAGRAMS

## SCHEMATIC DIAGRAM SPARTON MODELS 589, 600, 610 AND 620 EQUASONINE (ALSO MODEL 737 - SERIAL NUMBERS 1 TO 6002) PART NOS. FOR MODEL 737 (SERIAL NO. 6502 UP) INDICATED WITH \*



- C1 VARIABLE CONDENSER A-4713
- C2 DOUBLE EQ CONDENSER A-4712
- C3 ANT. COMPENSATOR A-4714
- C4 2 MFD. A-4998
- C5 1 MFD. A-4354
- C6 0.00023 MFD. A-5032
- C7 1 MFD. A-5033
- C8 .25 MFD. A-3217
- C9 .002 MFD. A-7420
- C10 .2 MFD.
- C11 FILTER CONDENSER B-2948
- C12 .006 MFD. A-4434
- R1 2800 Ω A-4135
- R2 10 Ω A-4135
- R3 1000 Ω A-3397
- R4 20,000 Ω A-2934
- R5 15,000 Ω A-4107
- R6 1250 Ω A-4974
- R7 15,000 Ω VOL. CONT. A-4770
- L1 1ST. TUNING COIL A-4600
- L2 2ND TUNING COIL A-4711
- L3 3RD TUNING COIL A-4756
- L4 COUPLING COIL A-4839
- L5 4TH TUNING COIL A-2963A
- L6 2ND R.F. TRANS. A-2965W
- L7 3RD R.F. TRANS. A-2967W
- L8 4TH R.F. TRANS. A-2965W
- L9 5TH R.F. TRANS. A-2966W
- L10 FREE GRID COIL A-3236W
- L11 DET. PLATE CHOKE A-3506
- L12 CATHODE CHOKE A-3352
- L13 1ST. PLATE CHOKE A-3239-W
- 12X6 PARTS SHOWN DOTTED FOR MODEL 737 ONLY
- 6X4 A-5689
- 6X5 A-5689
- 6X6 A-5689
- 6X7 A-5689
- 6X8 A-5689
- 6X9 A-5689
- 6X10 A-5689
- 6X11 A-5689
- 6X12 A-5689
- 6X13 A-5689
- 6X14 A-5689
- 6X15 A-5689
- 6X16 A-5689
- 6X17 A-5689
- 6X18 A-5689
- 6X19 A-5689
- 6X20 A-5689
- 6X21 A-5689
- 6X22 A-5689
- 6X23 A-5689
- 6X24 A-5689
- 6X25 A-5689
- 6X26 A-5689
- 6X27 A-5689
- 6X28 A-5689
- 6X29 A-5689
- 6X30 A-5689
- 6X31 A-5689
- 6X32 A-5689
- 6X33 A-5689
- 6X34 A-5689
- 6X35 A-5689
- 6X36 A-5689
- 6X37 A-5689
- 6X38 A-5689
- 6X39 A-5689
- 6X40 A-5689
- 6X41 A-5689
- 6X42 A-5689
- 6X43 A-5689
- 6X44 A-5689
- 6X45 A-5689
- 6X46 A-5689
- 6X47 A-5689
- 6X48 A-5689
- 6X49 A-5689
- 6X50 A-5689
- 6X51 A-5689
- 6X52 A-5689
- 6X53 A-5689
- 6X54 A-5689
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- 6X56 A-5689
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- 6X79 A-5689
- 6X80 A-5689
- 6X81 A-5689
- 6X82 A-5689
- 6X83 A-5689
- 6X84 A-5689
- 6X85 A-5689
- 6X86 A-5689
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- 6X88 A-5689
- 6X89 A-5689
- 6X90 A-5689
- 6X91 A-5689
- 6X92 A-5689
- 6X93 A-5689
- 6X94 A-5689
- 6X95 A-5689
- 6X96 A-5689
- 6X97 A-5689
- 6X98 A-5689
- 6X99 A-5689
- 6X100 A-5689

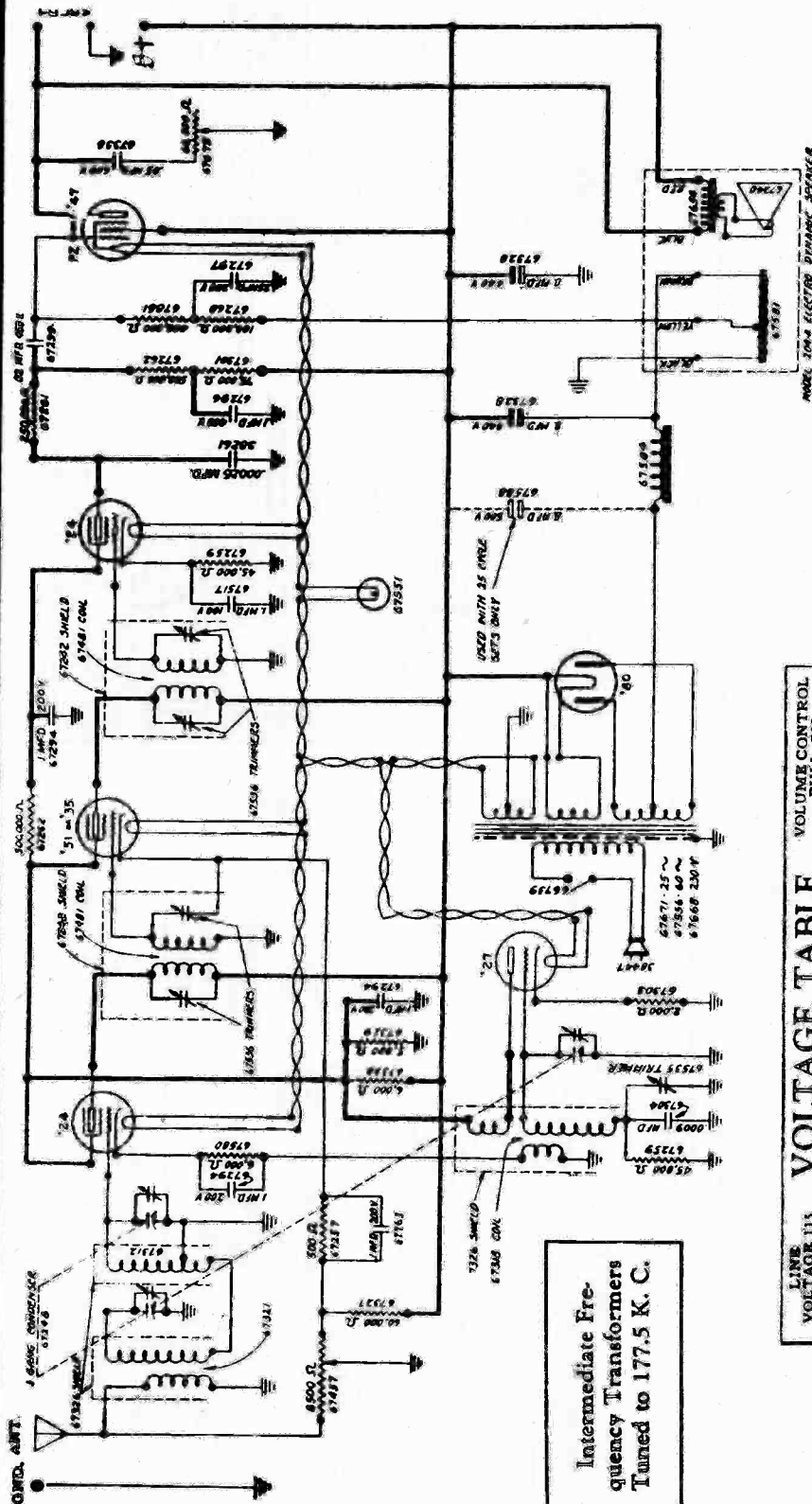




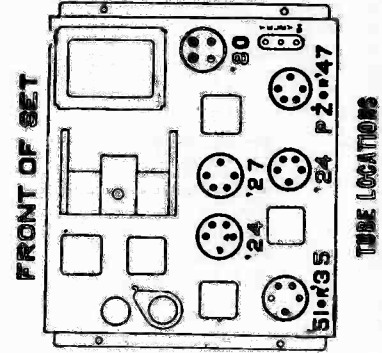


# MANUAL OF MOST-OFTEN-NEEDED RADIO-DIAGRAMS

## Circuit Data of Stewart-Warner Models R-102-A, B & E\*



Intermediate Frequency Transformers Tuned to 177.5 K. C.



**VOLUME CONTROL FULL ON**

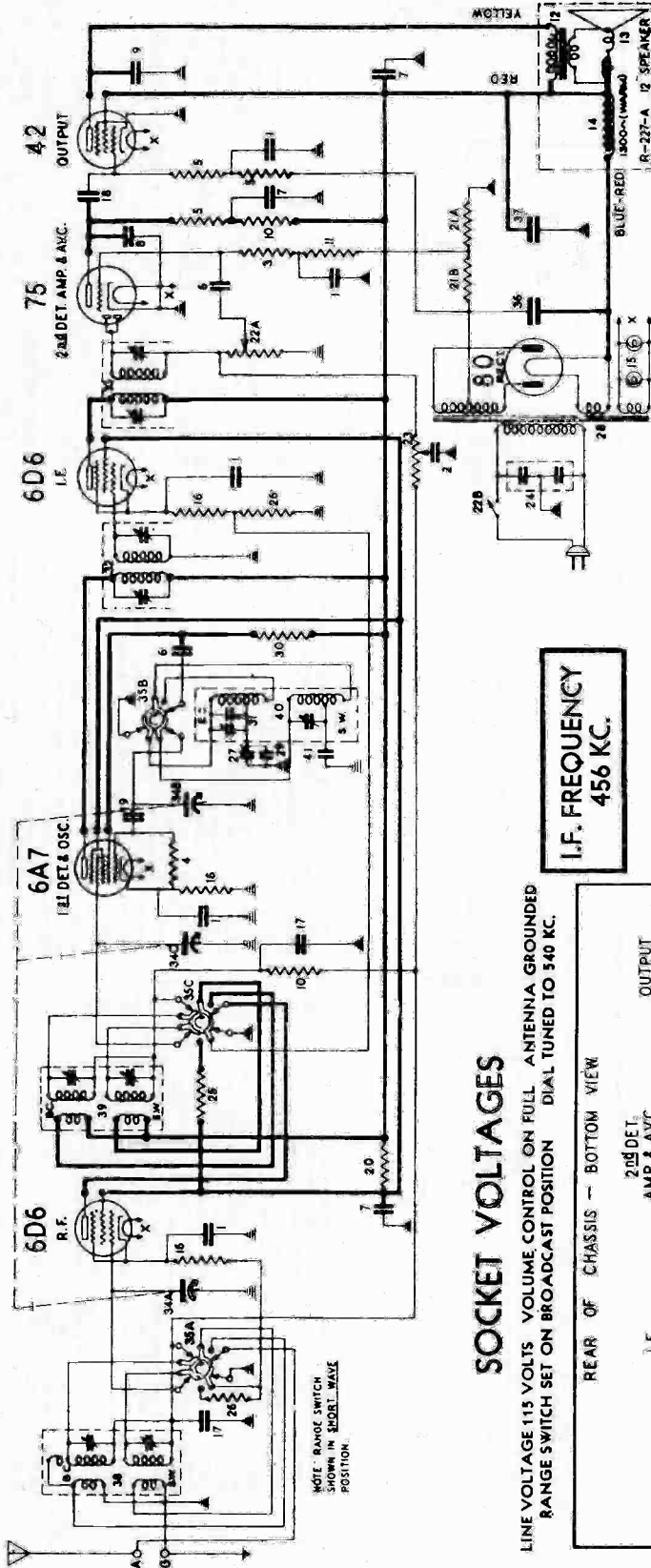
| LINE VOLTAGE 115 | Tube Circuit | Filament Voltage | Plate Voltage | Screen Grid Voltage | Bias Voltage |
|------------------|--------------|------------------|---------------|---------------------|--------------|
| '24              | 1st Det.     | 2.45             | 250           | 95                  | 6.5          |
| '27              | Osc.         | 2.45             | 95            |                     | 9            |
| '51              | I. F.        | 2.40             | 250           | 95                  | 3            |
| '24              | 2nd Det.     | 2.45             | 70            | 30                  | 7            |
| P. Z. or '47     | Output       | 2.45             | 230           | 250                 | 15†          |
| '80              | Rect.        | 4.8              | 170           |                     |              |

All D. C. voltages measured with respect to ground, using high resistance voltmeter of 1000 ohms per volt. Readings will vary, depending upon voltage range of meter, being higher for higher range instruments. This variation is most marked for second detector screen grid and plate voltages.  
 † This reading obtained between ground and yellow speaker lead. Direct reading from grid\* to ground or reading taken with a set tester will show about 3 volts because of high resistance in grid circuit.



# MANUAL OF MOST-OFTEN-NEEDED RADIO DIAGRAMS

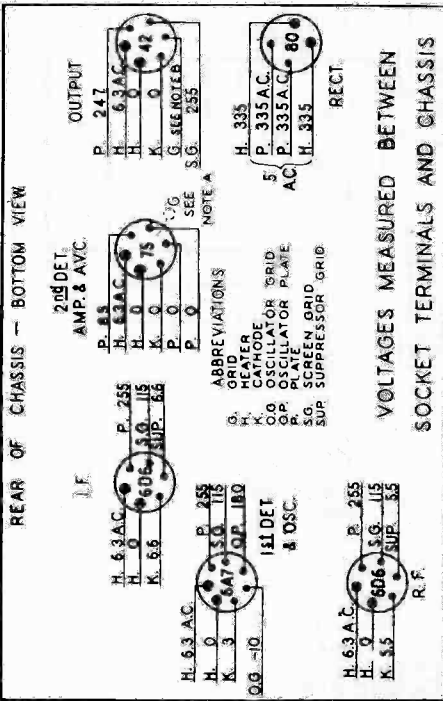
## STEWART-WARNER MODEL R-134 CHASSIS (RECEIVER MODELS 1341 to 1349)



I.F. FREQUENCY  
456 KC.

### SOCKET VOLTAGES

LINE VOLTAGE 115 VOLTS VOLUME CONTROL ON FULL ANTENNA GROUNDED RANGE SWITCH SET ON BROADCAST POSITION DIAL TUNED TO 540 KC.



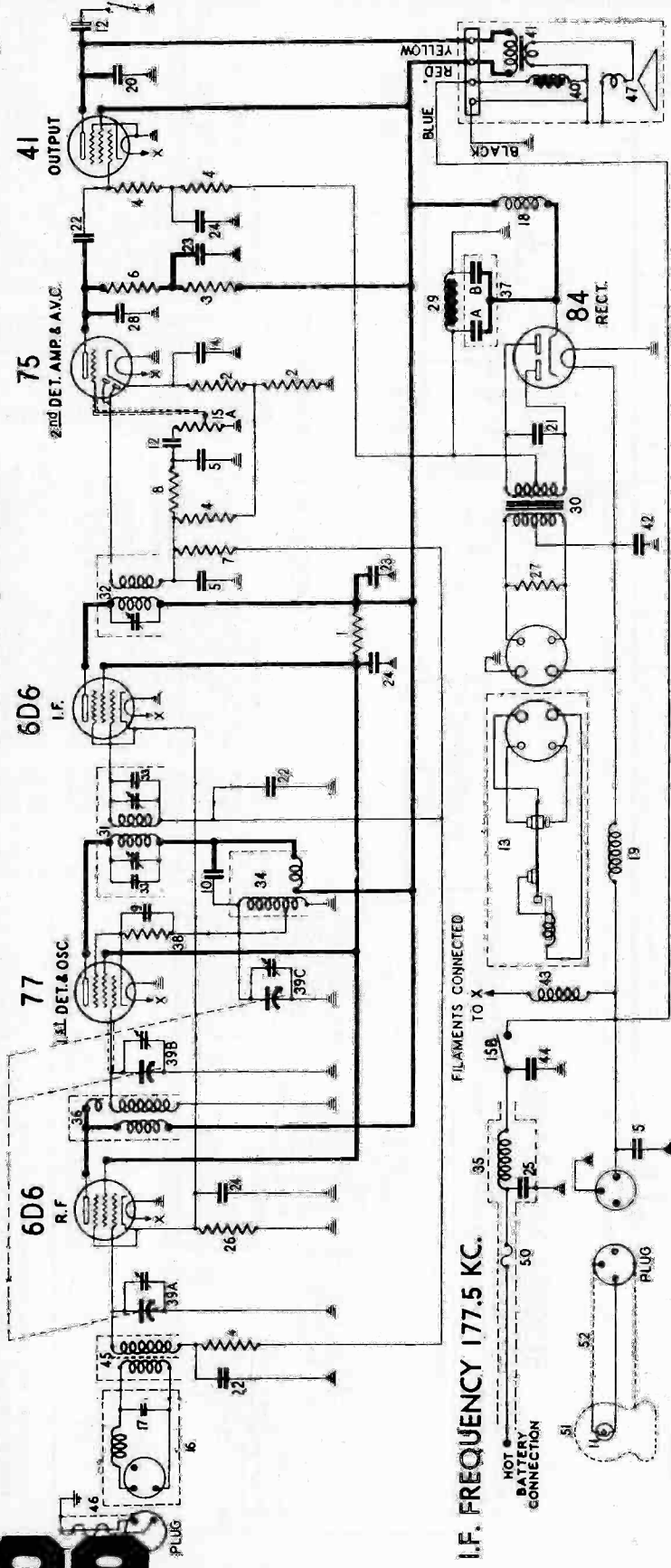
### MODEL R-134 PARTS LIST

| Diagram No. | Part No. | DESCRIPTION                                       |
|-------------|----------|---|
| 1           | 81650    | .1 mfd. 175 volt paper condenser.                 |
| 2           | 83011    | .004 mfd. 600 volt paper condenser.               |
| 3           | 83022    | 510,000 ohm 1/2 watt carbon resistor.             |
| 4           | 83092    | 240,000 ohm 1/2 watt carbon resistor.             |
| 5           | 83219    | .01 mfd. 600 volt paper condenser.                |
| 6           | 83440    | .1 mfd. 400 volt paper condenser.                 |
| 7           | 83539    | 260 mmfd. mica condenser.                         |
| 8           | 83706    | .006 mfd. 600 volt paper condenser.               |
| 9           | 84198    | 110,000 ohm 1/2 watt carbon resistor.             |
| 10          | 84235    | 1.1 megohm 1/2 watt carbon resistor.              |
| 11          | 84312    | Output transformer (on R-227-A Spkr.).            |
| 12          | 84506    | Diaphragm and shell assembly for (R-227-A Spkr.). |
| 13          | 84507    | Field coil and housing for (R-227-A Spkr.).       |
| 14          | 84759    | Pilot lamp, 6-8 volt.                             |
| 15          | 84888    | 300 ohm 1/2 watt W.W. resistor.                   |
| 16          | 85053    | .05 mfd. 300 volt paper condenser.                |
| 17          | 85059    | .05 mfd. 300 volt paper condenser.                |
| 18          | 85063    | 15,000 ohm 2 watt carbon resistor.                |
| 19          | 85067    | { 20 ohm } Bias resistor (wire wound)             |
| 20          | 85067    | { 220 ohm }                                       |
| 21A         |          |   |
| 21B         |          |   |
| 22A         |          |   |
| 22B         |          |   |
| 23          | 85073    | Volume Control (250,000 ohm)                      |
| 24          | 85074    | Line Switch (500,000 ohm)                         |
| 25          | 85075    | Diag. trimmer, 750 volt paper condenser.          |
| 26          | 85116    | 25,000 ohm 1/2 watt carbon resistor.              |
| 27          | 85117    | 1,000 ohm 1/2 watt carbon resistor.               |
| 28          | 85285    | Padding trimmer.                                  |
| 29          | 85428    | Power transformer, 115 volt 60 cycle.             |
| 30          | 85441    | 420 mmfd. mica condenser.                         |
| 31          | 85442    | 21,000 ohm 1/2 watt carbon resistor.              |
| 32          | 85454    | 11 mmfd. mica condenser.                          |
| 33          | 85788    | 1st I.F. transformer.                             |
| 34          | 85789    | 2nd I.F. transformer.                             |
| 35          | 85790    | Three gang condenser.                             |
| 36          | 85791    | Range switch                                      |
| 37          | 85792    | 10 mfd. 475 volt electrolytic condenser.          |
| 38          | 85829    | 10 mfd. 475 volt electrolytic condenser.          |
| 39          | 85830    | R.F. screen grid shield assembly.                 |
| 40          | 85831    | Oscillator coil and shield assembly.              |
| 41          | 85837    | .00194 mfd. mica condenser.                       |



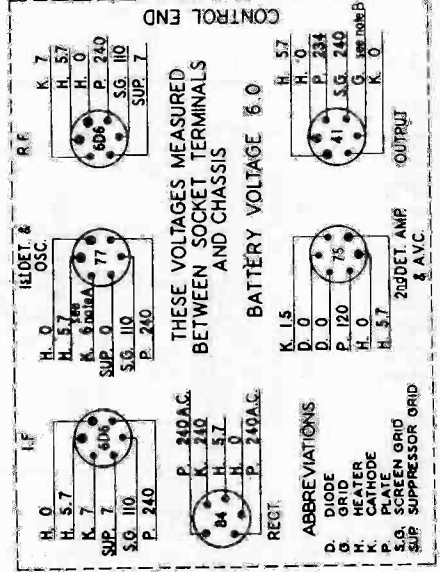
# MANUAL OF MOST-OFTEN-NEEDED RADIO DIAGRAMS

## STEWART-WARNER MODEL R-160 AUTO RADIO CHASSIS (RECEIVER MODELS 1601 to 1609)



- 1 66023 60,000 ohm 1 watt carbon resistor.....
- 2 67303 2,000 ohm 1/4 watt carbon resistor.....
- 3 83080 51,000 ohm 1/4 watt carbon resistor.....
- 4 83082 260,000 ohm 1/4 watt carbon resistor.....
- 5 83539 260 mfd mica condenser.....
- 6 83777 Battery cable and fuse housing.....
- 7 84198 110,000 ohm 1/4 watt carbon resistor.....
- 8 84235 1.1 megohm 1/4 watt carbon resistor.....
- 9 84238 11,000 ohm 1/4 watt carbon resistor.....
- 10 84282 601 mfd mica condenser.....
- 11 84833 70 mfd mica condenser.....
- 12 85296 Pilot lamp 6-8 volt (bayonet base).....
- 13 88026 .02 mfd 400 volt paper condenser.....
- 14 88054 Tone control switch.....
- 15 88170 10 mfd 25 volt electrolytic condenser.....
- 16 88171 (Volume) control switch.....
- 17 88172 Antenna filter.....
- 18 88173 50 mfd mica condenser.....
- 19 88181 R. F. choke coil.....
- 20 88182 R. F. choke coil (to vibrator).....
- 21 88185 .006 mfd 600 volt paper condenser.....
- 22 88187 .01 mfd 1500 volt paper condenser.....
- 23 88189 .05 mfd 600 volt paper condenser.....
- 24 88191 .1 mfd 300 volt paper condenser.....
- 25 88193 .25 mfd 150 volt paper condenser.....
- 26 88195 .5 mfd 150 volt paper condenser.....
- 27 88204 210 ohm 1/2 watt carbon resistor.....
- 28 88205 .0021 mfd mica condenser.....
- 29 88210 Filter choke.....
- 30 88213 Power transformer.....
- 31 88222 1st I.F. transformer.....
- 32 88223 2nd I.F. transformer.....
- 33 88233 110 mfd mica condenser.....
- 34 88234 Oscillator coil and shield assembly.....
- 35 88239 "A" filter.....
- 36 88250 R.F. coil and shield assembly.....
- 37 88256 {Electrolytic condenser 4 mfd 350 volt}.....
- 38 88257 {Electrolytic condenser 8 mfd 350 volt}.....
- 39 88258 Three gang variable condenser.....
- 40 88274 Field coil and housing (for R-245-A spkr.).....
- 41 88276 Output transformer.....
- 42 88285 1.25 mfd 150 volt paper condenser.....
- 43 88289 R.F. choke (to filaments).....
- 44 88298 .25 mfd 150 volt paper condenser (low reactance).....
- 45 88312 Antenna coil and shield assem. (iron core).....
- 46 88327 R. F. choke coil.....
- 47 88328 Diaphragm and shell assem. (R-245-A spkr.).....
- 48 83777 Battery cable and fuse housing.....
- 49 88054 Tone control switch.....
- 50 88365 Fuse, 10 ampere.....
- 51 88730 Control head less shafts.....
- 52 88738 Pilot light cable with plug 31"

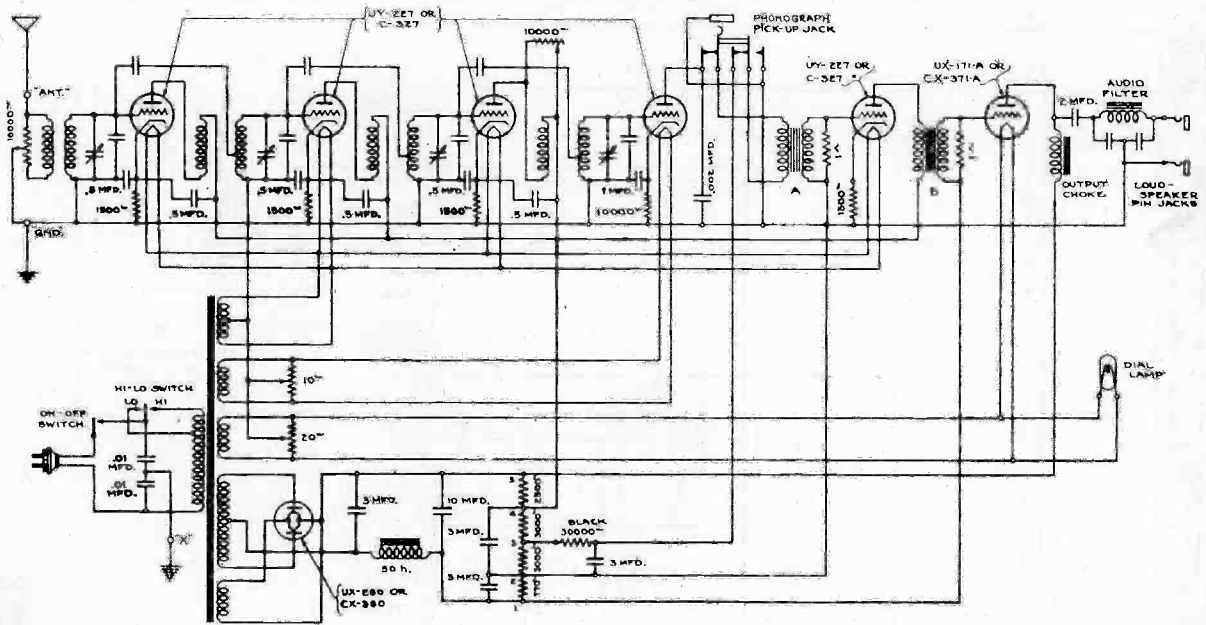
I.F. FREQUENCY 177.5 KC.





# MANUAL OF MOST-OFTEN-NEEDED RADIO DIAGRAMS

## SCHEMATIC DIAGRAM



### STROMBERG-CARLSON NOS. 635 AND 636 RECEIVERS

The following table shows how the filament, plate and grid voltages vary with different line voltages, in the No. 635 receiver. The plate voltages are measured between tube plates and Tap No. 2 of the voltage divider. The grid voltages of the heater type tubes are measured across the cathode resistors; and that of the audio output tube is measured between Taps No. 1 and No. 2 of the voltage divider.

| Line Voltage<br>"HI-LO" Switch | 105<br>"LO" | 110<br>"LO" | 115<br>"LO" | 115<br>"HI" | 120<br>"HI" | 125<br>"HI" |
|--------------------------------|-------------|-------------|-------------|-------------|-------------|-------------|
| <i>UX-280</i>                  |             |             |             |             |             |             |
| Filament Voltage (RMS)         | 4.5         | 4.75        | 5.0         | 4.5         | 4.7         | 4.93        |
| Voltage per anode (RMS)        | 236.0       | 248.0       | 259.0       | 236.0       | 248.0       | 258.0       |
| <i>Amplifiers</i>              |             |             |             |             |             |             |
| Heater Voltage (RMS)           | 2.17        | 2.27        | 2.38        | 2.16        | 2.26        | 2.35        |
| Plate Voltage                  | 106.0       | 110.0       | 115.0       | 106.0       | 110.0       | 115.0       |
| Grid Voltage                   | - 5.0       | - 5.5       | - 5.75      | - 4.7       | - 5.2       | - 5.6       |
| <i>Detector</i>                |             |             |             |             |             |             |
| Heater Voltage (RMS)           | 2.11        | 2.22        | 2.32        | 2.1         | 2.2         | 2.3         |
| Plate Voltage                  | 39.0        | 40.0        | 42.0        | 38.0        | 40.0        | 41.0        |
| Grid Voltage                   | - 3.25      | - 3.5       | - 3.75      | - 3.25      | - 3.5       | - 3.75      |
| <i>Audio Output Tube</i>       |             |             |             |             |             |             |
| Filament Voltage (RMS)         | 4.5         | 4.75        | 5.0         | 4.53        | 4.72        | 4.94        |
| Plate Voltage                  | 167.0       | 175.0       | 184.0       | 165.0       | 174.0       | 182.0       |
| Grid Voltage                   | -37.0       | -40.0       | -41.0       | -36.0       | -40.0       | -41.0       |

NOTE—The grid voltage on the 1st audio tube will be slightly lower than that on the R. F. amplifier tubes, due to the drop in the secondary of the 1st audio transformer.



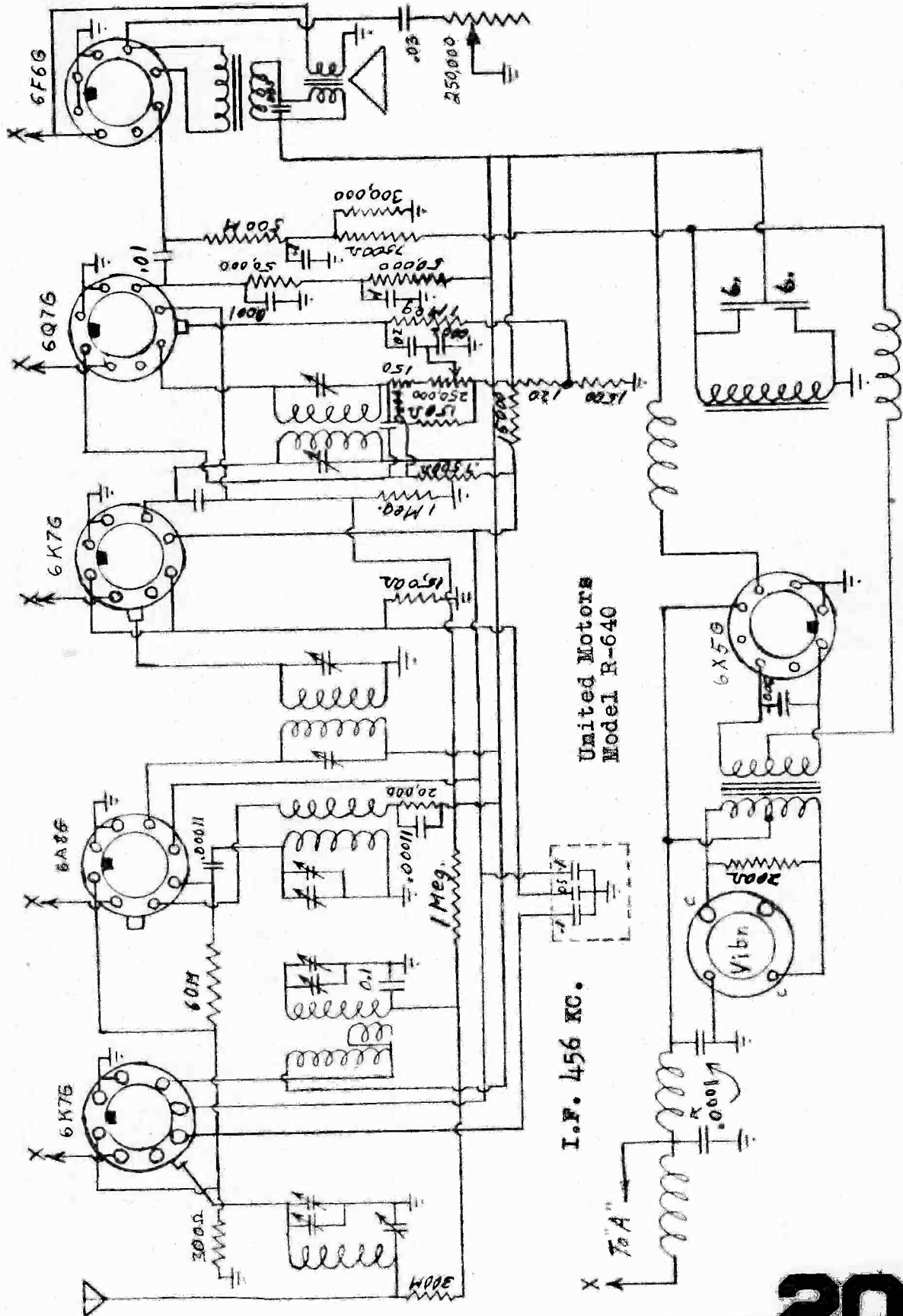




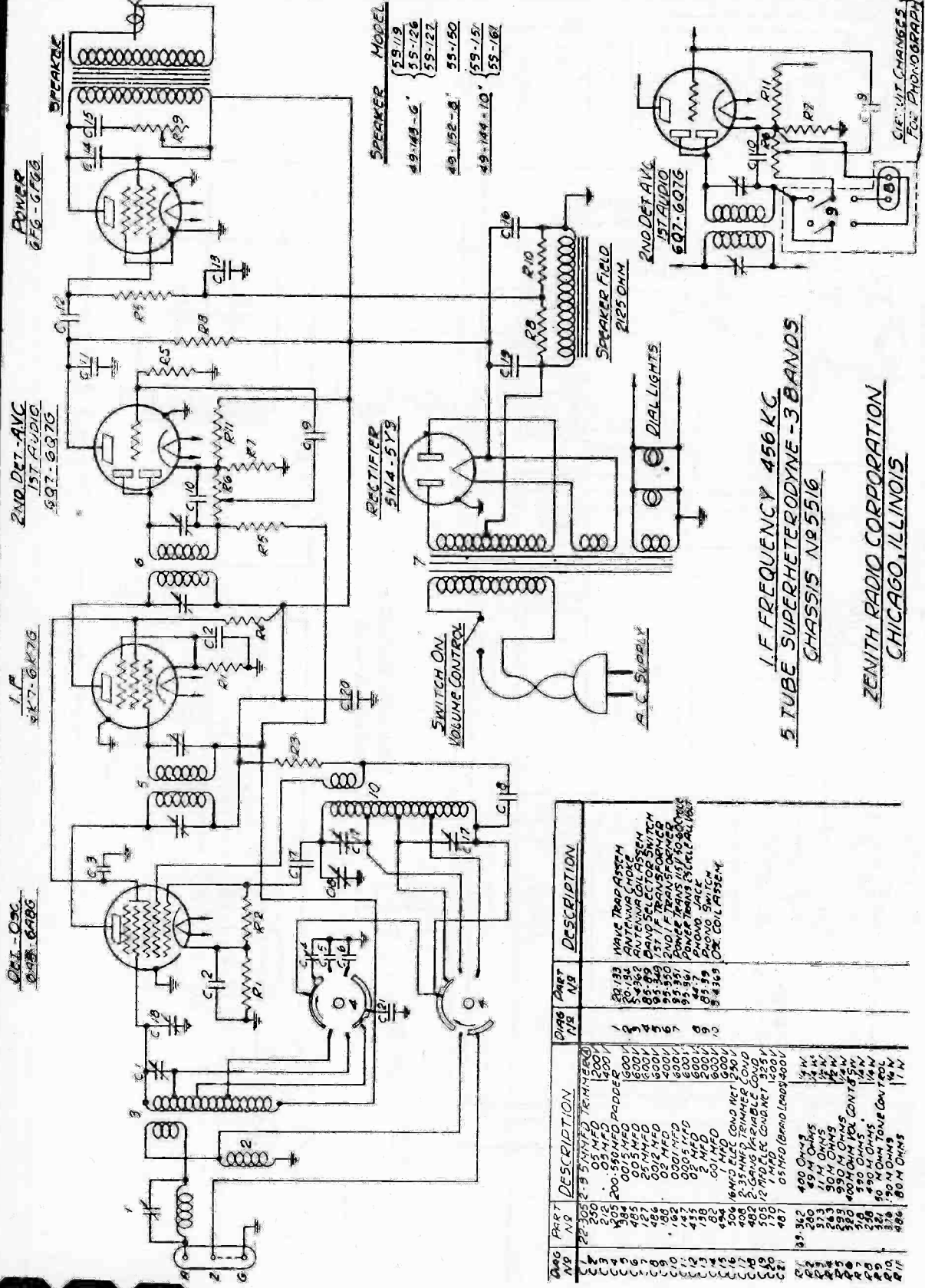




# MANUAL OF MOST-OFTEN-NEEDED RADIO DIAGRAMS



# MANUAL OF MOST-OFTEN-NEEDED RADIO DIAGRAMS



I.F. FREQUENCY 456 KC  
5 TUBE SUPERHETERODYNE - 3 BANDS  
CHASSIS NO 5516

ZENITH RADIO CORPORATION  
CHICAGO, ILLINOIS

SPEAKER MODEL

|          |          |           |        |        |
|----------|----------|-----------|--------|--------|
| 55-119   | 55-126   | 55-150    | 55-151 | 55-161 |
| 49-143-6 | 49-152-8 | 49-144-10 |        |        |

| DIAG. NO. | PART NO. | DESCRIPTION       | DIAG. NO. | PART NO. | DESCRIPTION        |
|-----------|----------|-------------------|-----------|----------|--------------------|
| 1         | 20-305   | 2.5 MFD 50V CAP   | 1         | 50-133   | WAVE TRAP ASSEMBLY |
| 2         | 250      | 0.05 MFD 50V CAP  | 2         | 50-134   | ANTENNA COIL       |
| 3         | 200      | 0.30 MFD 50V CAP  | 3         | 50-135   | 600 OHM COIL       |
| 4         | 185      | 0.05 MFD 50V CAP  | 4         | 50-136   | 600 OHM COIL       |
| 5         | 485      | 0.05 MFD 50V CAP  | 5         | 50-137   | 600 OHM COIL       |
| 6         | 127      | 25 MFD 50V CAP    | 6         | 50-138   | 600 OHM COIL       |
| 7         | 486      | 0.02 MFD 50V CAP  | 7         | 50-139   | 600 OHM COIL       |
| 8         | 483      | 0.02 MFD 50V CAP  | 8         | 50-140   | 600 OHM COIL       |
| 9         | 147      | 0.005 MFD 50V CAP | 9         | 50-141   | 600 OHM COIL       |
| 10        | 147      | 0.005 MFD 50V CAP | 10        | 50-142   | 600 OHM COIL       |
| 11        | 435      | 0.005 MFD 50V CAP | 11        | 50-143   | 600 OHM COIL       |
| 12        | 125      | 0.005 MFD 50V CAP | 12        | 50-144   | 600 OHM COIL       |
| 13        | 125      | 0.005 MFD 50V CAP | 13        | 50-145   | 600 OHM COIL       |
| 14        | 42       | 0.005 MFD 50V CAP | 14        | 50-146   | 600 OHM COIL       |
| 15        | 506      | 1/4 W 500 OHM RES | 15        | 50-147   | 600 OHM COIL       |
| 16        | 408      | 2.35 MFD 50V CAP  | 16        | 50-148   | 600 OHM COIL       |
| 17        | 408      | 2.35 MFD 50V CAP  | 17        | 50-149   | 600 OHM COIL       |
| 18        | 193      | 1/2 W 100 OHM RES | 18        | 50-150   | 600 OHM COIL       |
| 19        | 193      | 1/2 W 100 OHM RES | 19        | 50-151   | 600 OHM COIL       |
| 20        | 407      | 0.05 MFD 50V CAP  | 20        | 50-152   | 600 OHM COIL       |
| 21        | 382      | 400 OHM 1/2 W RES | 21        | 50-153   | 600 OHM COIL       |
| 22        | 382      | 400 OHM 1/2 W RES | 22        | 50-154   | 600 OHM COIL       |
| 23        | 382      | 400 OHM 1/2 W RES | 23        | 50-155   | 600 OHM COIL       |
| 24        | 382      | 400 OHM 1/2 W RES | 24        | 50-156   | 600 OHM COIL       |
| 25        | 382      | 400 OHM 1/2 W RES | 25        | 50-157   | 600 OHM COIL       |
| 26        | 382      | 400 OHM 1/2 W RES | 26        | 50-158   | 600 OHM COIL       |
| 27        | 382      | 400 OHM 1/2 W RES | 27        | 50-159   | 600 OHM COIL       |
| 28        | 382      | 400 OHM 1/2 W RES | 28        | 50-160   | 600 OHM COIL       |
| 29        | 382      | 400 OHM 1/2 W RES | 29        | 50-161   | 600 OHM COIL       |
| 30        | 382      | 400 OHM 1/2 W RES | 30        | 50-162   | 600 OHM COIL       |
| 31        | 382      | 400 OHM 1/2 W RES | 31        | 50-163   | 600 OHM COIL       |
| 32        | 382      | 400 OHM 1/2 W RES | 32        | 50-164   | 600 OHM COIL       |
| 33        | 382      | 400 OHM 1/2 W RES | 33        | 50-165   | 600 OHM COIL       |
| 34        | 382      | 400 OHM 1/2 W RES | 34        | 50-166   | 600 OHM COIL       |
| 35        | 382      | 400 OHM 1/2 W RES | 35        | 50-167   | 600 OHM COIL       |
| 36        | 382      | 400 OHM 1/2 W RES | 36        | 50-168   | 600 OHM COIL       |
| 37        | 382      | 400 OHM 1/2 W RES | 37        | 50-169   | 600 OHM COIL       |
| 38        | 382      | 400 OHM 1/2 W RES | 38        | 50-170   | 600 OHM COIL       |
| 39        | 382      | 400 OHM 1/2 W RES | 39        | 50-171   | 600 OHM COIL       |
| 40        | 382      | 400 OHM 1/2 W RES | 40        | 50-172   | 600 OHM COIL       |
| 41        | 382      | 400 OHM 1/2 W RES | 41        | 50-173   | 600 OHM COIL       |
| 42        | 382      | 400 OHM 1/2 W RES | 42        | 50-174   | 600 OHM COIL       |
| 43        | 382      | 400 OHM 1/2 W RES | 43        | 50-175   | 600 OHM COIL       |
| 44        | 382      | 400 OHM 1/2 W RES | 44        | 50-176   | 600 OHM COIL       |
| 45        | 382      | 400 OHM 1/2 W RES | 45        | 50-177   | 600 OHM COIL       |
| 46        | 382      | 400 OHM 1/2 W RES | 46        | 50-178   | 600 OHM COIL       |
| 47        | 382      | 400 OHM 1/2 W RES | 47        | 50-179   | 600 OHM COIL       |
| 48        | 382      | 400 OHM 1/2 W RES | 48        | 50-180   | 600 OHM COIL       |
| 49        | 382      | 400 OHM 1/2 W RES | 49        | 50-181   | 600 OHM COIL       |
| 50        | 382      | 400 OHM 1/2 W RES | 50        | 50-182   | 600 OHM COIL       |
| 51        | 382      | 400 OHM 1/2 W RES | 51        | 50-183   | 600 OHM COIL       |
| 52        | 382      | 400 OHM 1/2 W RES | 52        | 50-184   | 600 OHM COIL       |
| 53        | 382      | 400 OHM 1/2 W RES | 53        | 50-185   | 600 OHM COIL       |
| 54        | 382      | 400 OHM 1/2 W RES | 54        | 50-186   | 600 OHM COIL       |
| 55        | 382      | 400 OHM 1/2 W RES | 55        | 50-187   | 600 OHM COIL       |
| 56        | 382      | 400 OHM 1/2 W RES | 56        | 50-188   | 600 OHM COIL       |
| 57        | 382      | 400 OHM 1/2 W RES | 57        | 50-189   | 600 OHM COIL       |
| 58        | 382      | 400 OHM 1/2 W RES | 58        | 50-190   | 600 OHM COIL       |
| 59        | 382      | 400 OHM 1/2 W RES | 59        | 50-191   | 600 OHM COIL       |
| 60        | 382      | 400 OHM 1/2 W RES | 60        | 50-192   | 600 OHM COIL       |
| 61        | 382      | 400 OHM 1/2 W RES | 61        | 50-193   | 600 OHM COIL       |
| 62        | 382      | 400 OHM 1/2 W RES | 62        | 50-194   | 600 OHM COIL       |
| 63        | 382      | 400 OHM 1/2 W RES | 63        | 50-195   | 600 OHM COIL       |
| 64        | 382      | 400 OHM 1/2 W RES | 64        | 50-196   | 600 OHM COIL       |
| 65        | 382      | 400 OHM 1/2 W RES | 65        | 50-197   | 600 OHM COIL       |
| 66        | 382      | 400 OHM 1/2 W RES | 66        | 50-198   | 600 OHM COIL       |
| 67        | 382      | 400 OHM 1/2 W RES | 67        | 50-199   | 600 OHM COIL       |
| 68        | 382      | 400 OHM 1/2 W RES | 68        | 50-200   | 600 OHM COIL       |
| 69        | 382      | 400 OHM 1/2 W RES | 69        | 50-201   | 600 OHM COIL       |
| 70        | 382      | 400 OHM 1/2 W RES | 70        | 50-202   | 600 OHM COIL       |
| 71        | 382      | 400 OHM 1/2 W RES | 71        | 50-203   | 600 OHM COIL       |
| 72        | 382      | 400 OHM 1/2 W RES | 72        | 50-204   | 600 OHM COIL       |
| 73        | 382      | 400 OHM 1/2 W RES | 73        | 50-205   | 600 OHM COIL       |
| 74        | 382      | 400 OHM 1/2 W RES | 74        | 50-206   | 600 OHM COIL       |
| 75        | 382      | 400 OHM 1/2 W RES | 75        | 50-207   | 600 OHM COIL       |
| 76        | 382      | 400 OHM 1/2 W RES | 76        | 50-208   | 600 OHM COIL       |
| 77        | 382      | 400 OHM 1/2 W RES | 77        | 50-209   | 600 OHM COIL       |
| 78        | 382      | 400 OHM 1/2 W RES | 78        | 50-210   | 600 OHM COIL       |
| 79        | 382      | 400 OHM 1/2 W RES | 79        | 50-211   | 600 OHM COIL       |
| 80        | 382      | 400 OHM 1/2 W RES | 80        | 50-212   | 600 OHM COIL       |
| 81        | 382      | 400 OHM 1/2 W RES | 81        | 50-213   | 600 OHM COIL       |
| 82        | 382      | 400 OHM 1/2 W RES | 82        | 50-214   | 600 OHM COIL       |
| 83        | 382      | 400 OHM 1/2 W RES | 83        | 50-215   | 600 OHM COIL       |
| 84        | 382      | 400 OHM 1/2 W RES | 84        | 50-216   | 600 OHM COIL       |
| 85        | 382      | 400 OHM 1/2 W RES | 85        | 50-217   | 600 OHM COIL       |
| 86        | 382      | 400 OHM 1/2 W RES | 86        | 50-218   | 600 OHM COIL       |
| 87        | 382      | 400 OHM 1/2 W RES | 87        | 50-219   | 600 OHM COIL       |
| 88        | 382      | 400 OHM 1/2 W RES | 88        | 50-220   | 600 OHM COIL       |
| 89        | 382      | 400 OHM 1/2 W RES | 89        | 50-221   | 600 OHM COIL       |
| 90        | 382      | 400 OHM 1/2 W RES | 90        | 50-222   | 600 OHM COIL       |
| 91        | 382      | 400 OHM 1/2 W RES | 91        | 50-223   | 600 OHM COIL       |
| 92        | 382      | 400 OHM 1/2 W RES | 92        | 50-224   | 600 OHM COIL       |
| 93        | 382      | 400 OHM 1/2 W RES | 93        | 50-225   | 600 OHM COIL       |
| 94        | 382      | 400 OHM 1/2 W RES | 94        | 50-226   | 600 OHM COIL       |
| 95        | 382      | 400 OHM 1/2 W RES | 95        | 50-227   | 600 OHM COIL       |
| 96        | 382      | 400 OHM 1/2 W RES | 96        | 50-228   | 600 OHM COIL       |
| 97        | 382      | 400 OHM 1/2 W RES | 97        | 50-229   | 600 OHM COIL       |
| 98        | 382      | 400 OHM 1/2 W RES | 98        | 50-230   | 600 OHM COIL       |
| 99        | 382      | 400 OHM 1/2 W RES | 99        | 50-231   | 600 OHM COIL       |
| 100       | 382      | 400 OHM 1/2 W RES | 100       | 50-232   | 600 OHM COIL       |

Models 5-S-119, 5-S-126, 5-S-127, 5-S-150, 5-S-151, 5-S-161. (Chassis No. 5516)













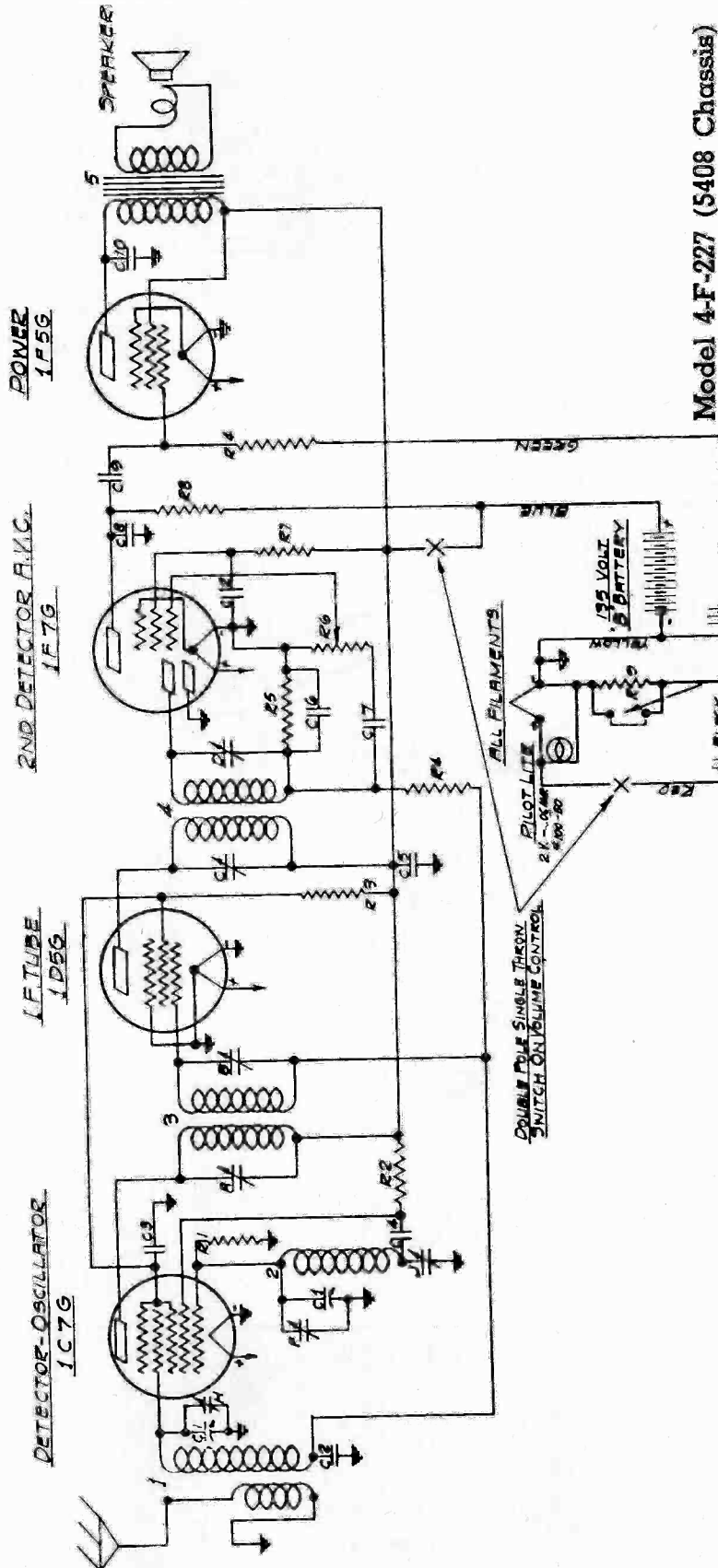








# MANUAL OF MOST-OFTEN-NEEDED RADIO DIAGRAMS

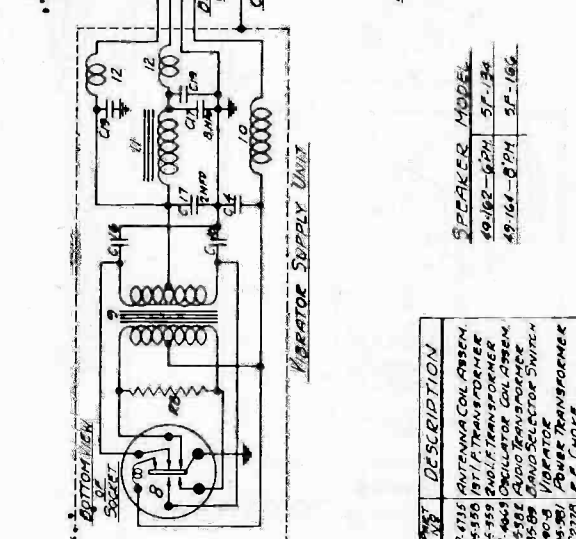
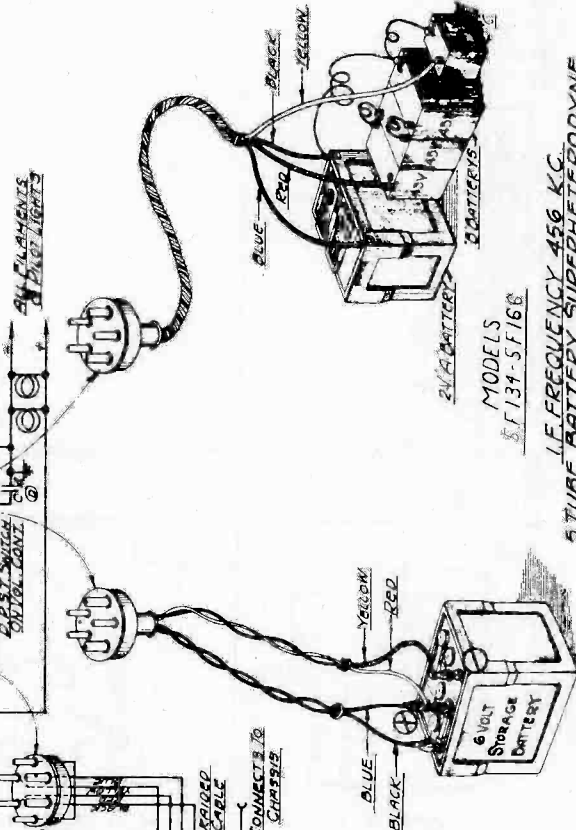
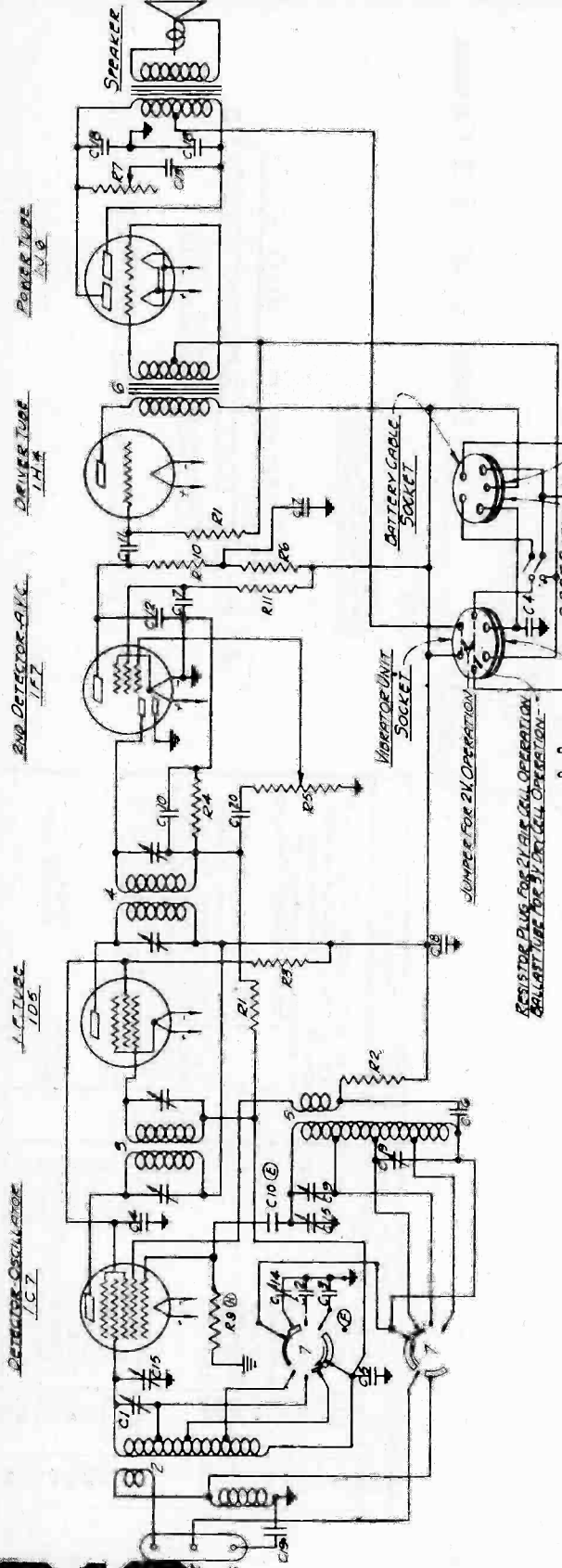


Model 4-F-227 (5408 Chassis)

**I.F. FREQUENCY 456 K.C.**  
**4-TUBE BATTERY SUPERHETERODYNE**  
**CHASSIS NO. 5408**  
**ZENITH RADIO CORPORATION**

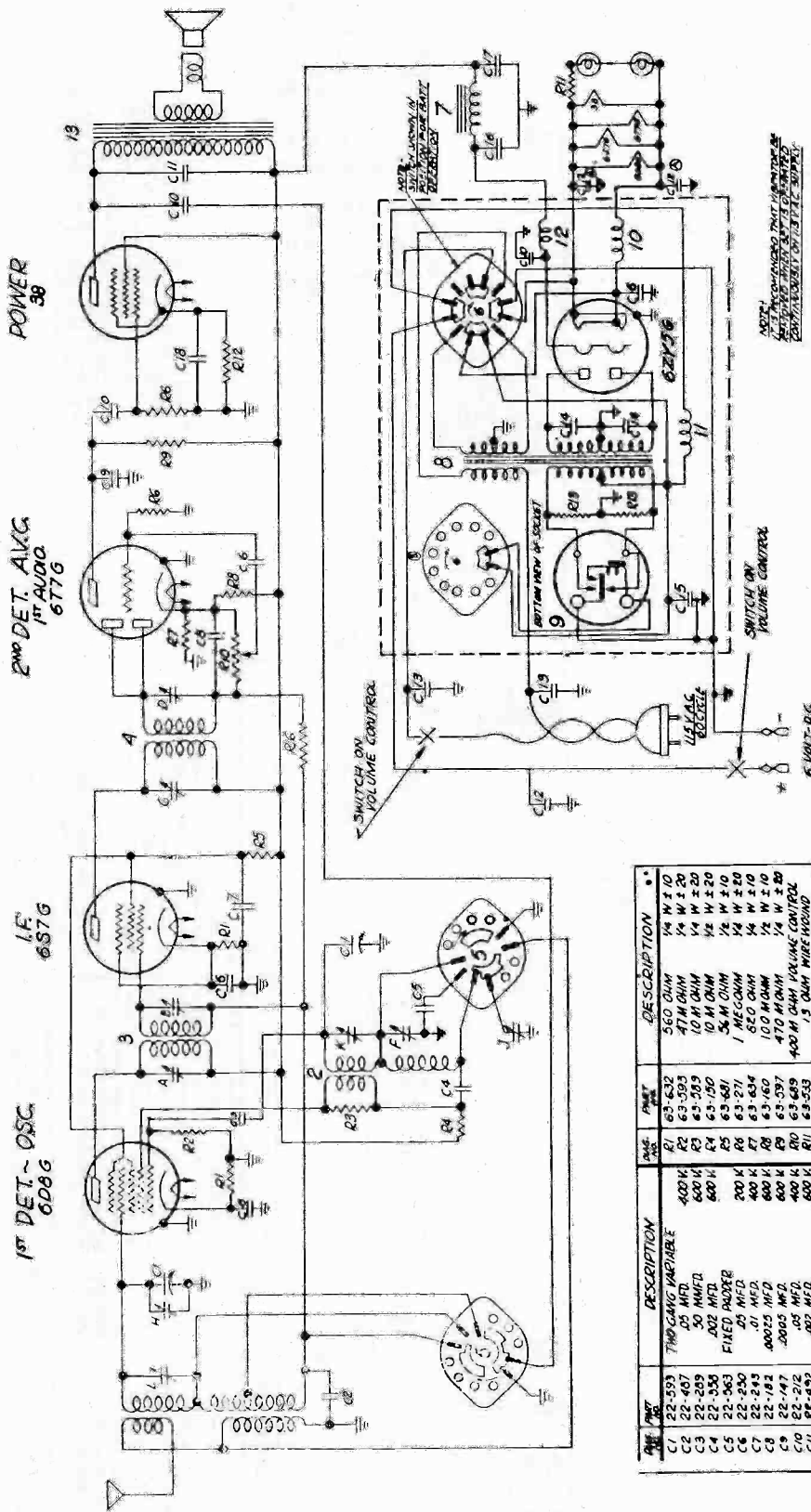
| Part No.      | Description                     | Part No.      | Description |
|---------------|---------------------------------|---------------|-------------|
| 1             | ANT. COIL & SHIELD ASSEMBLY     | 1             | 5 5100      |
| 2             | OSCILLATOR COIL ASSEMBLY        | 2             | 5 4662      |
| 3             | 1ST. I.F. TRANSFORMER           | 3             | 95-410      |
| 4             | 2ND. I.F. TRANSFORMER           | 4             | 95-420      |
| 5             | SPEAKER TRANS. (ON SPEAKER)     | 5             |             |
| A             | VARIABLE TUNING                 | A             |             |
| B             | 1ST. I.F. TRANSFORMER PRIMARY   | B             |             |
| C             | 1ST. I.F. TRANSFORMER SECONDARY | C             |             |
| D             | 2ND. I.F. TRANSFORMER PRIMARY   | D             |             |
| E             | 2ND. I.F. TRANSFORMER SECONDARY | E             |             |
| F             | BROADCAST OSCILLATOR (ON GANS)  | F             |             |
| G             | ANTENNA BROADCAST (ON GANS)     | G             |             |
| H             | #22-519 OSCILLATOR Padder.      | H             |             |
| I             |                                 | I             |             |
| Model 4-F-227 |                                 | Model 4-F-227 |             |
| 49-209        | SPEAKER                         | 49-209        | G           |

# MANUAL OF MOST-OFTEN-NEEDED RADIO DIAGRAMS



| Part No. | Description  | Part No. | Description  |
|----------|--|----------|--|
| C1       | 2-35 MFD. PAPER  | 10       | 500 OHM RESISTOR   |
| C2       | 600V   | 11       | 100 OHM RESISTOR   |
| C3       | 100V   | 12       | 10 OHM RESISTOR  |
| C4       | 200V   | 13       | 10 OHM RESISTOR  |
| C5       | 400V   | 14       | 10 OHM RESISTOR  |
| C6       | 800V   | 15       | 10 OHM RESISTOR  |
| C7       | 1600V  | 16       | 10 OHM RESISTOR  |
| C8       | 3200V  | 17       | 10 OHM RESISTOR  |
| C9       | 6400V  | 18       | 10 OHM RESISTOR  |
| C10      | 12800V   | 19       | 10 OHM RESISTOR  |
| C11      | 25600V   | 20       | 10 OHM RESISTOR  |
| C12      | 51200V   | 21       | 10 OHM RESISTOR  |
| C13      | 102400V  | 22       | 10 OHM RESISTOR  |
| C14      | 204800V  | 23       | 10 OHM RESISTOR  |
| C15      | 409600V  | 24       | 10 OHM RESISTOR  |
| C16      | 819200V  | 25       | 10 OHM RESISTOR  |
| C17      | 1638400V   | 26       | 10 OHM RESISTOR  |
| C18      | 3276800V   | 27       | 10 OHM RESISTOR  |
| C19      | 6553600V   | 28       | 10 OHM RESISTOR  |
| C20      | 13107200V  | 29       | 10 OHM RESISTOR  |
| R1       | 100K OHM   | 30       | 100K OHM   |
| R2       | 50K OHM  | 31       | 50K OHM  |
| R3       | 25K OHM  | 32       | 25K OHM  |
| R4       | 12.5K OHM  | 33       | 12.5K OHM  |
| R5       | 6.25K OHM  | 34       | 6.25K OHM  |
| R6       | 3.125K OHM   | 35       | 3.125K OHM   |
| R7       | 1.5625K OHM  | 36       | 1.5625K OHM  |
| R8       | 781.25 OHM   | 37       | 781.25 OHM   |
| R9       | 390.625 OHM  | 38       | 390.625 OHM  |
| R10      | 195.3125 OHM   | 39       | 195.3125 OHM   |
| R11      | 97.65625 OHM   | 40       | 97.65625 OHM   |
| R12      | 48.828125 OHM  | 41       | 48.828125 OHM  |
| R13      | 24.4140625 OHM   | 42       | 24.4140625 OHM   |
| R14      | 12.20703125 OHM  | 43       | 12.20703125 OHM  |
| R15      | 6.103515625 OHM  | 44       | 6.103515625 OHM  |
| R16      | 3.0517578125 OHM   | 45       | 3.0517578125 OHM   |
| R17      | 1.52587890625 OHM  | 46       | 1.52587890625 OHM  |
| R18      | .762939453125 OHM  | 47       | .762939453125 OHM  |
| R19      | .3814697265625 OHM   | 48       | .3814697265625 OHM   |
| R20      | .19073486328125 OHM  | 49       | .19073486328125 OHM  |
| R21      | .095367431640625 OHM   | 50       | .095367431640625 OHM   |
| R22      | .0476837158203125 OHM  | 51       | .0476837158203125 OHM  |
| R23      | .02384185791015625 OHM   | 52       | .02384185791015625 OHM   |
| R24      | .011920928955078125 OHM  | 53       | .011920928955078125 OHM  |
| R25      | .0059604644775390625 OHM   | 54       | .0059604644775390625 OHM   |
| R26      | .00298023223876953125 OHM  | 55       | .00298023223876953125 OHM  |
| R27      | .001490116119384765625 OHM   | 56       | .001490116119384765625 OHM   |
| R28      | .0007450580596923828125 OHM  | 57       | .0007450580596923828125 OHM  |
| R29      | .00037252902984619140625 OHM   | 58       | .00037252902984619140625 OHM   |
| R30      | .000186264514923095703125 OHM  | 59       | .000186264514923095703125 OHM  |
| R31      | .0000931322574615478515625 OHM   | 60       | .0000931322574615478515625 OHM   |
| R32      | .00004656612873077392578125 OHM  | 61       | .00004656612873077392578125 OHM  |
| R33      | .000023283064365386962890625 OHM   | 62       | .000023283064365386962890625 OHM   |
| R34      | .00001164153218269348481928125 OHM   | 63       | .00001164153218269348481928125 OHM   |
| R35      | .00000582076609134674242414640625 OHM  | 64       | .00000582076609134674242414640625 OHM  |
| R36      | .00000291038304567337121220723203125 OHM   | 65       | .00000291038304567337121220723203125 OHM   |
| R37      | .00000145519152283668560610561093765625 OHM  | 66       | .00000145519152283668560610561093765625 OHM  |
| R38      | .000000727595761418342803052828242928125 OHM   | 67       | .000000727595761418342803052828242928125 OHM   |
| R39      | .0000003637978807091714015264141414640625 OHM  | 68       | .0000003637978807091714015264141414640625 OHM  |
| R40      | .000000181898940354585700763207070723203125 OHM  | 69       | .000000181898940354585700763207070723203125 OHM  |
| R41      | .00000009094947017729285038160353535366015625 OHM                                      | 70       | .00000009094947017729285038160353535366015625 OHM                                      |
| R42      | .00000004547473508864642519067676768280078125 OHM                                      | 71       | .00000004547473508864642519067676768280078125 OHM                                      |
| R43      | .000000022737367544323212595338383841400390625 OHM                                     | 72       | .000000022737367544323212595338383841400390625 OHM                                     |
| R44      | .000000011368683772161606297676768280078125 OHM  | 73       | .000000011368683772161606297676768280078125 OHM  |
| R45      | .0000000056843418860803031488383841400390625 OHM                                       | 74       | .0000000056843418860803031488383841400390625 OHM                                       |
| R46      | .00000000284217094304015157441919192001953125 OHM                                      | 75       | .00000000284217094304015157441919192001953125 OHM                                      |
| R47      | .000000001421085471520075787209595960009765625 OHM                                     | 76       | .000000001421085471520075787209595960009765625 OHM                                     |
| R48      | .0000000007105427357600378936397979800048828125 OHM                                    | 77       | .0000000007105427357600378936397979800048828125 OHM                                    |
| R49      | .00000000035527136788001894681989899000244140625 OHM                                   | 78       | .00000000035527136788001894681989899000244140625 OHM                                   |
| R50      | .0000000001776356839400094734099494950001220723203125 OHM                              | 79       | .0000000001776356839400094734099494950001220723203125 OHM                              |
| R51      | .0000000000888178419700047367049747475000061093765625 OHM                              | 80       | .0000000000888178419700047367049747475000061093765625 OHM                              |
| R52      | .000000000044408920985002368353737375000030546878125 OHM                               | 81       | .000000000044408920985002368353737375000030546878125 OHM                               |
| R53      | .00000000002220446049250118417686868750000152734390625 OHM                             | 82       | .00000000002220446049250118417686868750000152734390625 OHM                             |
| R54      | .000000000011102230246250059208434343437500000763671953125 OHM                         | 83       | .000000000011102230246250059208434343437500000763671953125 OHM                         |
| R55      | .000000000005551115123125002960421717171875000003818359765625 OHM                      | 84       | .000000000005551115123125002960421717171875000003818359765625 OHM                      |
| R56      | .000000000002775557561562500148021088888937500000190917978125 OHM                      | 85       | .00000000000277555756156250014802108888937500000190917978125 OHM                       |
| R57      | .00000000000138777878078125000740104444444687500000095459890625 OHM                    | 86       | .0000000000013877787807812500074010444444687500000095459890625 OHM                     |
| R58      | .0000000000006938893903906250003700522222234375000000477299453125 OHM                  | 87       | .0000000000006938893903906250003700522222234375000000477299453125 OHM                  |
| R59      | .0000000000003469446951953125000185026111111718750000002386497265625 OHM               | 88       | .0000000000003469446951953125000185026111111718750000002386497265625 OHM               |
| R60      | .00000000000017347234759765625000092513055555875000000119324863125 OHM                 | 89       | .00000000000017347234759765625000092513055555875000000119324863125 OHM                 |
| R61      | .0000000000000867361737987812500004625652777743750000000596624315625 OHM               | 90       | .0000000000000867361737987812500004625652777743750000000596624315625 OHM               |
| R62      | .000000000000043368086899390625000023128263888937500000029831215625 OHM                | 91       | .000000000000043368086899390625000023128263888937500000029831215625 OHM                |
| R63      | .000000000000021684043449695312500001156413194446875000000149156078125 OHM             | 92       | .000000000000021684043449695312500001156413194446875000000149156078125 OHM             |
| R64      | .000000000000010842021724847656250000057820697222343750000000745780390625 OHM          | 93       | .000000000000010842021724847656250000057820697222343750000000745780390625 OHM          |
| R65      | .00000000000000542101086238125000002891034861117187500000003728901953125 OHM           | 94       | .00000000000000542101086238125000002891034861117187500000003728901953125 OHM           |
| R66      | .0000000000000027105054311906250000144551730555587500000018644509765625 OHM            | 95       | .0000000000000027105054311906250000144551730555587500000018644509765625 OHM            |
| R67      | .0000000000000013552527157597656250000072275867777437500000009322254863125 OHM         | 96       | .0000000000000013552527157597656250000072275867777437500000009322254863125 OHM         |
| R68      | .0000000000000006776263578939062500000361379388893750000004661127315625 OHM            | 97       | .0000000000000006776263578939062500000361379388893750000004661127315625 OHM            |
| R69      | .0000000000000003388131789476562500000180689694446875000000233056390625 OHM            | 98       | .0000000000000003388131789476562500000180689694446875000000233056390625 OHM            |
| R70      | .0000000000000001694065894731250000009034484722343750000001165281953125 OHM            | 99       | .0000000000000001694065894731250000009034484722343750000001165281953125 OHM            |
| R71      | .0000000000000000847032947365625000000451724236117187500000005826409765625 OHM         | 100      | .0000000000000000847032947365625000000451724236117187500000005826409765625 OHM         |
| R72      | .000000000000000042351647368125000000225862118058750000002913204863125 OHM             | 101      | .000000000000000042351647368125000000225862118058750000002913204863125 OHM             |
| R73      | .0000000000000000211758236840625000001129310552937500000014566024315625 OHM            | 102      | .0000000000000000211758236840625000001129310552937500000014566024315625 OHM            |
| R74      | .000000000000000010587911842031250000005645277668750000000728301215625 OHM             | 103      | .000000000000000010587911842031250000005645277668750000000728301215625 OHM             |
| R75      | .00000000000000000529395592101562500000028226388437500000003641506078125 OHM           | 104      | .00000000000000000529395592101562500000028226388437500000003641506078125 OHM           |
| R76      | .000000000000000002646977960507812500000141131942187500000018207530390625 OHM          | 105      | .000000000000000002646977960507812500000141131942187500000018207530390625 OHM          |
| R77      | .000000000000000001323488980253906250000007056597117187500000009103765625 OHM          | 106      | .000000000000000001323488980253906250000007056597117187500000009103765625 OHM          |
| R78      | .000000000000000000661744490126953125000000352829855875000000045518828125 OHM          | 107      | .000000000000000000661744490126953125000000352829855875000000045518828125 OHM          |
| R79      | .00000000000000000033087224506343750000001764149279375000000022759415625 OHM           | 108      | .00000000000000000033087224506343750000001764149279375000000022759415625 OHM           |
| R80      | .0000000000000000001654361225317187500000008820746139375000000113797078125 OHM         | 109      | .0000000000000000001654361225317187500000008820746139375000000113797078125 OHM         |
| R81      | .00000000000000000008271806126584375000000044103730693750000000568985390625 OHM        | 110      | .00000000000000000008271806126584375000000044103730693750000000568985390625 OHM        |
| R82      | .000000000000000000041359030632921875000000220518653468750000002844926953125 OHM       | 111      | .000000000000000000041359030632921875000000220518653468750000002844926953125 OHM       |
| R83      | .0000000000000000000206795153164593750000001102593273437500000014224634863125 OHM      | 112      | .0000000000000000000206795153164593750000001102593273437500000014224634863125 OHM      |
| R84      | .00000000000000000001033975765822968750000000551296636875000000071123174315625 OHM     | 113      | .00000000000000000001033975765822968750000000551296636875000000071123174315625 OHM     |
| R85      | .00000000000000000000516987882914434375000000275648318437500000003556158715625 OHM     | 114      | .00000000000000000000516987882914434375000000275648318437500000003556158715625 OHM     |
| R86      | .00000000000000000000258493941457221875000000137824159218750000001778079390625 OHM     | 115      | .00000000000000000000258493941457221875000000137824159218750000001778079390625 OHM     |
| R87      | .000000000000000000001292469707285937500000006891207960937500000008890396953125 OHM    | 116      | .000000000000000000001292469707285937500000006891207960937500000008890396953125 OHM    |
| R88      | .000000000000000000000646234853642968750000000344560398046875000000044451984863125 OHM | 117      | .000000000000000000000646234853642968750000000344560398046875000000044451984863125 OHM |
| R89      | .00000000000000  |          |  |

# MANUAL OF MOST-OFTEN-NEEDED RADIO DIAGRAMS



IF FREQUENCY 456 K.C.  
 5 TUBE BATTERY SUPERHETERODYNE  
 6 VOLT D.C. #115 VOLT A.C.  
 CHASSIS NO 5524

ZENITH RADIO CORP.

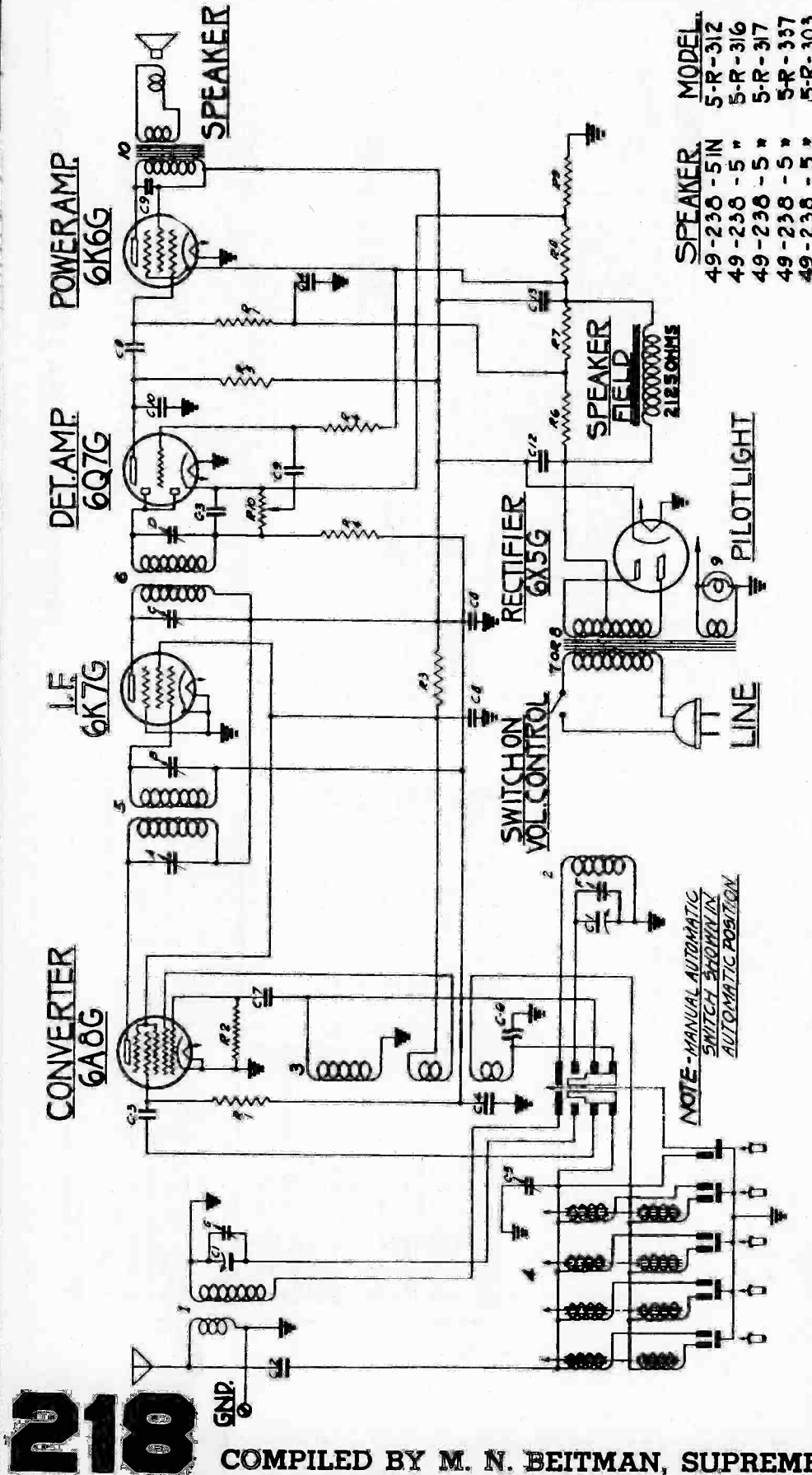
Models 5-J-217, 5-J-247, 5-J-255 (5524 Chassis)

| PART NO. | PART   | DESCRIPTION              | QTY        |
|----------|--------|--------------------------|------------|
| C1       | 22-593 | TRIMMING VARIABLE        | 1          |
| C2       | 22-407 | .05 MFD.                 | 1          |
| C3       | 22-209 | .50 MFD.                 | 1          |
| C4       | 22-536 | .002 MFD.                | 1          |
| C5       | 22-563 | FIXED PADDER             | 1          |
| C6       | 22-230 | .05 MFD.                 | 1          |
| C7       | 22-243 | .400 K.                  | 1          |
| C8       | 22-182 | .00025 MFD.              | 1          |
| C9       | 22-147 | .0005 MFD.               | 1          |
| C10      | 22-492 | .002 MFD.                | 1          |
| C11      | 22-350 | .25 MFD.                 | 1          |
| C12      | 22-433 | .02 MFD.                 | 1          |
| C13      | 22-374 | .02 MFD.                 | 1          |
| C14      | 22-159 | .5 MFD.                  | 1          |
| C15      | 22-577 | 10 MFD. ELECTROLYTIC     | 1          |
| C16      | 22-577 | 250 K.                   | 1          |
| C17      | 22-577 | 25 K.                    | 1          |
| C18      | 22-577 | 25 K.                    | 1          |
| R1       | 63-632 | 560 OHM                  | 1/4 W ± 10 |
| R2       | 63-393 | 47M OHM                  | 1/4 W ± 20 |
| R3       | 63-393 | 10 M OHM                 | 1/4 W ± 20 |
| R4       | 63-150 | 10 M OHM                 | 1/2 W ± 20 |
| R5       | 63-681 | 36M OHM                  | 1/4 W ± 10 |
| R6       | 63-271 | 1 MEG OHM                | 1/4 W ± 10 |
| R7       | 63-654 | 100 OHM                  | 1/4 W ± 10 |
| R8       | 63-654 | 100 OHM                  | 1/4 W ± 10 |
| R9       | 63-597 | 170 OHM                  | 1/4 W ± 10 |
| R10      | 63-549 | 400 M OHM VOLUME CONTROL | 1          |
| R11      | 63-533 | 400 M OHM WIRE WOUND     | 1          |
| R12      | 63-418 | 1500 OHM                 | 1/4 W ± 10 |
| R13      | 63-577 | 100 OHM                  | 1/4 W ± 20 |
| T1       | 5-5303 | ANT. 2ND & 3RD ASSEMBLY  | 1          |
| T2       | 5-3909 | OSCILLATOR CH. ASSEMBLY  | 1          |
| T3       | 95-443 | 1ST I.F. TRANSFORMER     | 1          |
| T4       | 95-444 | 2ND I.F. TRANSFORMER     | 1          |
| T5       | 05-104 | BAND SELECTOR SWITCH     | 1          |
| T6       | 05-425 | POWER SUPPLY SWITCH      | 1          |
| T7       | 95-258 | POWER CHOKER             | 1          |
| T8       | 95-485 | POWER TRANSFORMER        | 1          |
| T9       | 190-11 | VIBRATOR                 | 1          |
| T10      | 5-8778 | P.F. CHOKER ASSEMBLY     | 1          |
| T11      | 5-3040 | P.F. CHOKER ASSEMBLY     | 1          |
| T12      | 20-82  | 5 WATT D.C.              | 1          |
| T13      |        | SPEAKER TRANSFORMER      | 1          |

NOTE: ALL COMPONENTS THAT ARE NOT SHOWN IN THIS CIRCUIT ARE TO BE OBTAINED FROM THE SUPPLIER



# MANUAL OF MOST-OFTEN-NEEDED RADIO DIAGRAMS

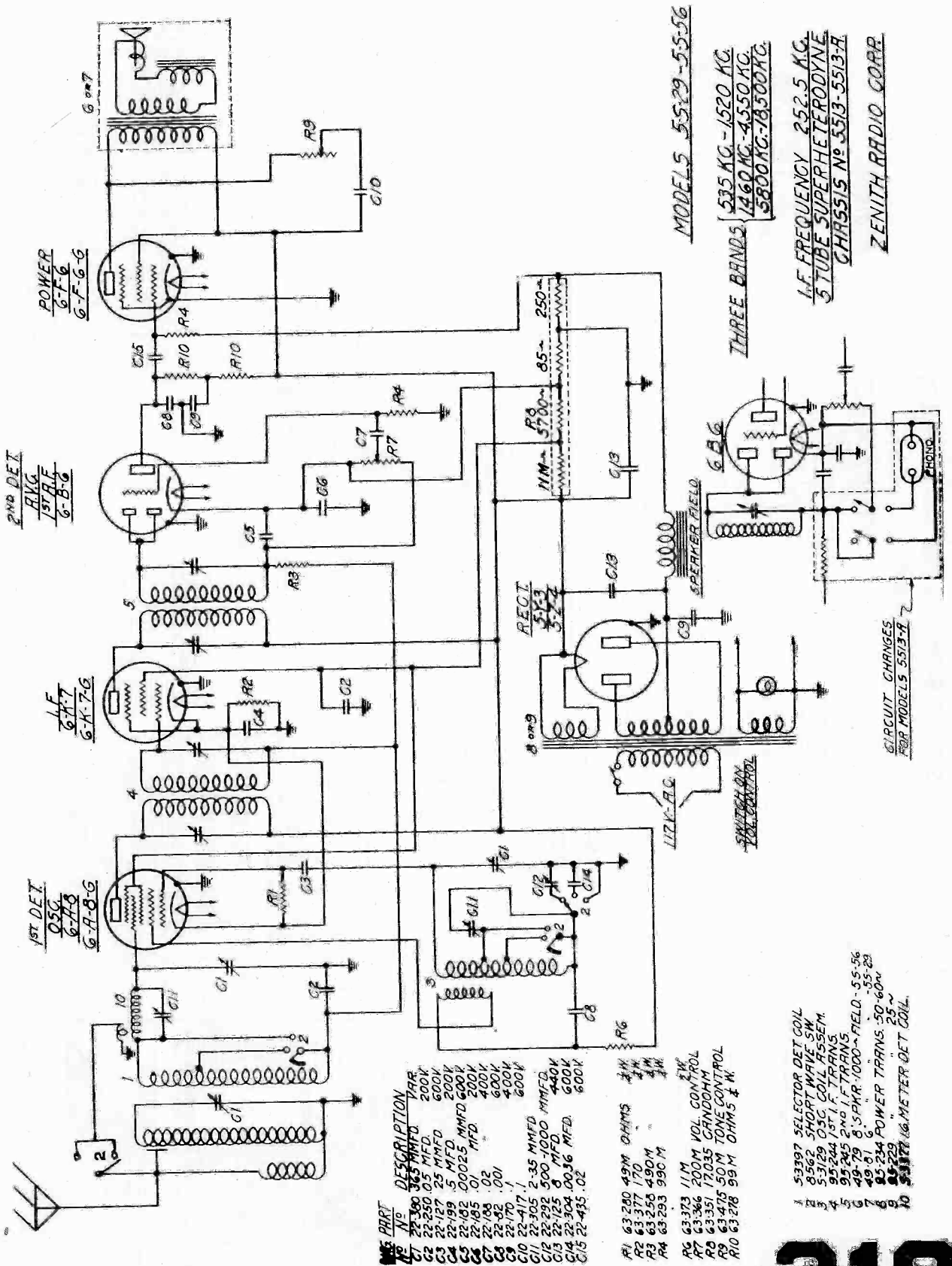


| SPEAKER     | MODEL   |
|-------------|---------|
| 49-238-5 IN | 5-R-312 |
| 49-238-5 *  | 5-R-316 |
| 49-238-5 *  | 5-R-317 |
| 49-238-5 *  | 5-R-337 |
| 49-238-5 *  | 5-R-303 |

**I.F. FREQUENCY 455 KC.**  
**5 TUBE SUPERHETERODYNE**  
**CHASSIS N° 5528 A.C.**  
**ZENITH RADIO CORPORATION**

| DIAG. PART NO. | DESCRIPTION             | DIAG. PART NO. | DESCRIPTION                  | DIAG. PART NO. | DESCRIPTION               |
|----------------|-------------------------|----------------|------------------------------|----------------|---------------------------|
| C-1 22-625     | 7ND GANG VAR COND.      | R-1 63-597     | 470 M OHM                    | 1              | 1ST I.F. TRANS.           |
| C-2 22-209     | 50 M MFD                | R-2 63-593     | 47 M OHM                     | 2              | 2ND I.F. TRANS.           |
| C-3 22-162     | .001 MFD                | R-3 63-204     | 12 M OHM                     | 3              | POWER TRANS. (I.F. 40-60) |
| C-4 22-250     | .05 MFD                 | R-4 63-271     | 1 MEG OHM                    | 4              | POWER TRANS. 2B ~         |
| C-5 22-519     | TRIMMER COND.           | R-5 63-296     | 220 M OHM                    | 5              | PILOT LIGHT .25A 6-3V     |
| C-6 22-729     | COMPENSATING COND.      | R-6 63-260     | 380 M OHM                    | 6              | 100-36                    |
| C-7 22-182     | .0025 MFD               | R-7 63-260     | 100 M OHM                    | 7              | 1ST I.F. TRANS. P.P.I.    |
| C-8 22-212     | .05 MFD                 | R-8 63-583     | 80 OHM WIRE WOUND            | 8              | 2ND I.F. TRANS. P.P.I.    |
| C-9 22-796     | .01 MFD                 | R-9 63-686     | 150 OHM WIRE WOUND           | 9              | 3RD I.F. TRANS. P.P.I.    |
| C-10 22-747    | .0005 MFD               | R-10 63-595    | 220 M OHM VOL. CONT.         | 10             | 4RD I.F. TRANS. P.P.I.    |
| C-12 22-691    | 8 MFD ELECTROLYTIC 450V | 1              | 5-5000 ANTENNA COIL ASSEMBLY |                |                           |
| C-13 22-692    | 8 MFD ELECTROLYTIC 350V | 2              | 15-6019 OSC. COIL ASSEMBLY   |                |                           |
|                |                         | 3              | 20-187 COMPENSATING COIL     |                |                           |

# MANUAL OF MOST-OFTEN-NEEDED RADIO DIAGRAMS



POWER  
6-F-6  
6-F-6

2ND DET  
6-F-6  
6-F-6

1ST AF  
6-K-7-G

1ST DET  
6-A-7  
6-A-7

MODELS 55129-5556

535 KC-1520 KC  
1460 KC-4550 KC  
5800 KC-18500 KC

THREE BANDS

I.F. FREQUENCY 252.5 KC.  
5 TUBE SUPERHETERODYNE  
CHR5515 No. 5513-R

ZENITH RADIO CORP.

CIRCUIT CHANGES  
FOR MODELS 5513-R

| PART No. | DESCRIPTION | VAR  |
|----------|-------------|------|
| R1       | 250K        | 200K |
| R2       | 500M        | 500M |
| R3       | 500M        | 500M |
| R4       | 500M        | 500M |
| R5       | 500M        | 500M |
| R6       | 500M        | 500M |
| R7       | 500M        | 500M |
| R8       | 500M        | 500M |
| R9       | 500M        | 500M |
| R10      | 500M        | 500M |
| C1       | 500M        | 500M |
| C2       | 500M        | 500M |
| C3       | 500M        | 500M |
| C4       | 500M        | 500M |
| C5       | 500M        | 500M |
| C6       | 500M        | 500M |
| C7       | 500M        | 500M |
| C8       | 500M        | 500M |
| C9       | 500M        | 500M |
| C10      | 500M        | 500M |
| C11      | 500M        | 500M |
| C12      | 500M        | 500M |
| C13      | 500M        | 500M |
| C14      | 500M        | 500M |
| C15      | 500M        | 500M |

| PART No. | DESCRIPTION     | VAR |
|----------|-----------------|-----|
| R1       | 63-250 49M OHMS | 4M  |
| R2       | 63-377 170      | 4M  |
| R3       | 63-250 490M     | 4M  |
| R4       | 63-293 99C 1M   | 4M  |
| R5       | 63-373 11M      | 4M  |
| R6       | 63-366 170.35   | 4M  |
| R7       | 63-351 15.0M    | 4M  |
| R8       | 63-415 50M OHMS | 4M  |
| R9       | 63-276 99M OHMS | 4M  |

- 1 53397 SELECTOR DET COIL
- 2 8562 SHORT WAVE SW
- 3 53129 OSC COIL ASSEM.
- 4 95244 1ST I.F. TRANS.
- 5 95245 2ND I.F. TRANS.
- 6 49-79 0-50K-1000-1000-55-56
- 7 49-81 0-50K-1000-1000-55-56
- 8 49-82 0-50K-1000-1000-55-56
- 9 49-83 0-50K-1000-1000-55-56
- 10 49-84 0-50K-1000-1000-55-56

# MANUAL OF MOST-OFTEN-NEEDED RADIO DIAGRAMS

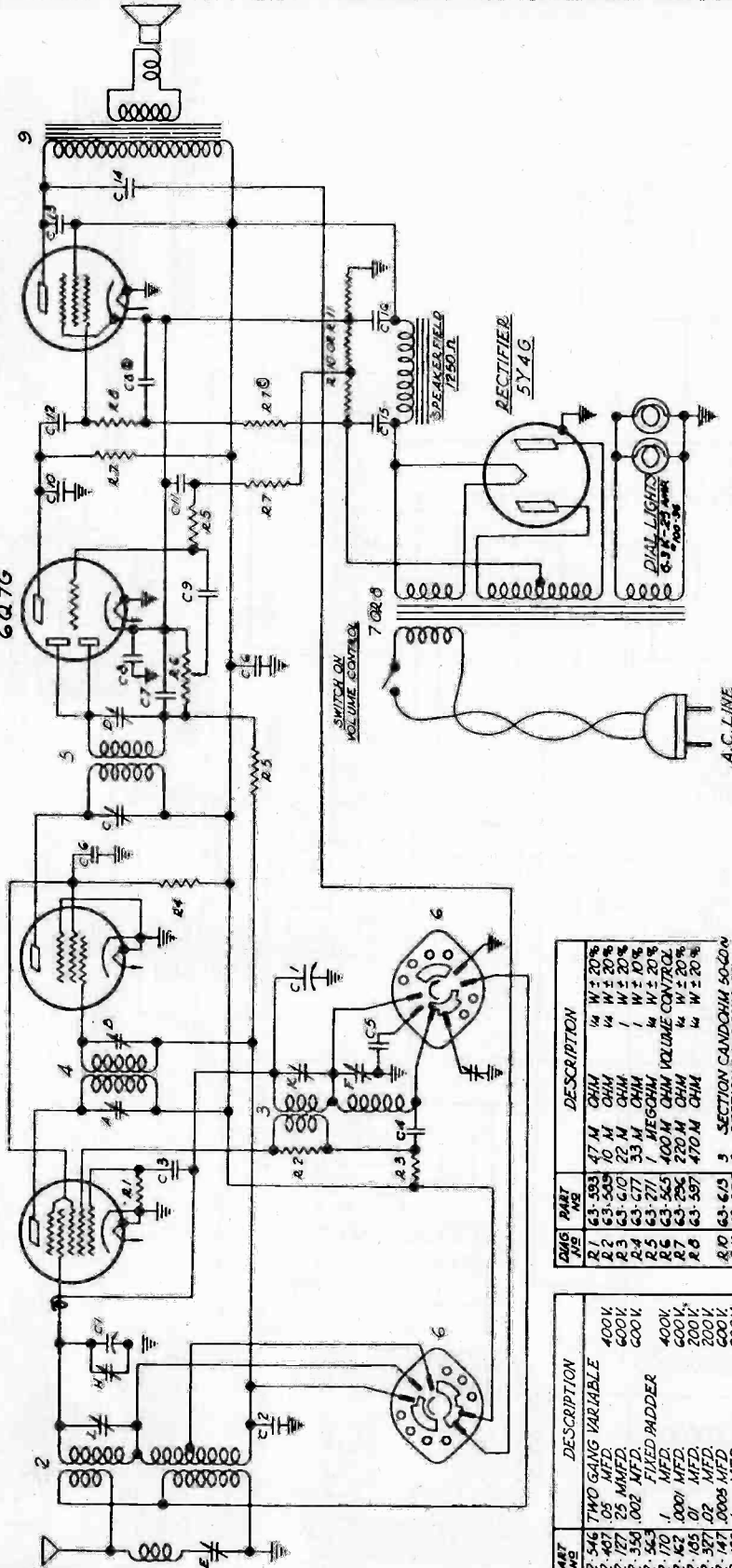
Models 5-S-201, 5-S-218, 5-S-220, 5-S-228, 5-S-237, 5-S-250, 5-S-252  
(5521 Chassis)

1ST DET. OSC.  
6A8G

I.F.  
6R7G

2ND DET.-A.V.C.  
6Q7G

POWER  
6F6G



**I.F.-FREQUENCY 456K.C.**  
**5TUBE SUPERHETERODYNE**  
**2 BAND**  
**CHASSIS NO. 5521**  
**ZENITH RADIO CORP.**

| MODEL   | SPEAKER    |
|---------|------------|
| 5-S-210 | 49-170 5"  |
| 5-S-220 | 49-170 5"  |
| 5-S-237 | 49-170 5"  |
| 5-S-250 | 49-170 5"  |
| 5-S-252 | 49-208 10" |

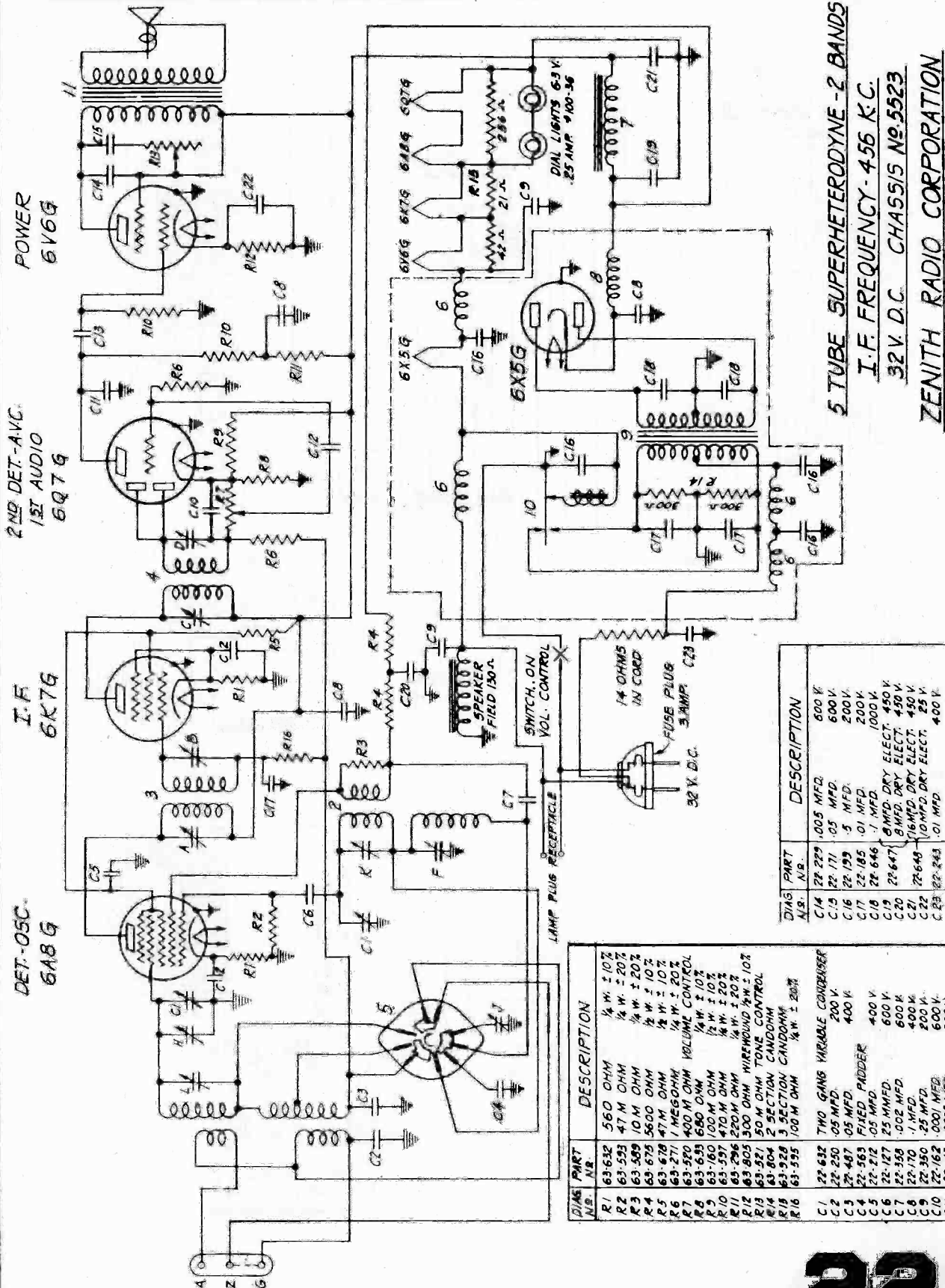
| DWG. NO. | PART NO. | DESCRIPTION   |
|----------|----------|---|
| R1       | 63-593   | 47 M OHM 1/4 W ± 20%                                |
| R2       | 63-569   | 10 M OHM 1/4 W ± 20%                                |
| R3       | 63-610   | 22 M OHM 1/4 W ± 20%                                |
| R4       | 63-271   | 33 M OHM 1/4 W ± 20%                                |
| R5       | 63-565   | 1 MEG OHM 1/4 W ± 20%                               |
| R6       | 63-284   | 400 M OHM VOLUME CONTROL                            |
| R7       | 63-284   | 220 M OHM 1/4 W ± 20%                               |
| R8       | 63-587   | 470 M OHM 1/4 W ± 20%                               |
| R10      | 63-615   | 5 SECTION CANDIDUM 50-000                           |
| R11      | 63-606   | 5 SECTION CANDIDUM 25-74                            |
| 1        |          | WAVE TRAP COIL MOUNTED ON ANTENNA COIL ASSEMBLY     |
| 2        |          | ANT COIL & SHIELD ASSEMBLY OSCILLATOR COIL ASSEMBLY |
| 3        | 51-493A  | 12T.F. TRANSFORMER                                  |
| 4        | 95-407   | 22T.F. TRANSFORMER                                  |
| 5        | 95-408   | BAND SELECTOR SWITCH                                |
| 6        | 95-104   | POWER TRANSFORMER                                   |
| 7        | 95-406   | 117 VOLT 50-CYCLE                                   |
| 8        | 95-452   | POWER TRANSFORMER ALL VOLTAGE 25-CYCLE              |
| 9        |          | SPEAKER TRANSFORMER                                 |

| DWG. NO.          | PART NO. | DESCRIPTION  |
|-------------------|----------|--|
| C1                | 22-546   | 7MO GANG VARIABLE                                      |
| C2                | 22-467   | 05 MFD. 400V.  |
| C3                | 22-127   | 25 MFD. 600V.  |
| C4                | 22-350   | 25 MFD. 600V.  |
| C5                | 22-563   | 002 MFD. FIXED PADDER                                  |
| C6                | 22-170   | 1.000 MFD. 400V.                                       |
| C7                | 22-162   | 0.001 MFD. 600V.                                       |
| C8                | 22-162   | 0.001 MFD. 600V.                                       |
| C9                | 22-391   | 02 MFD. 200V.  |
| C10               | 22-147   | 0005 MFD. 200V.  |
| C11               | 22-190   | 002 MFD. 200V.   |
| C12               | 22-435   | 02 MFD. 600V.  |
| C13               | 22-437   | 002 MFD. 600V.   |
| C14               | 22-171   | 05 MFD. 600V.  |
| C15               | 22-594   | 8 MFD. DRY ELECTROLYTIC 450V                           |
| C16               | 22-594   | 1/4 MFD. DRY ELECTROLYTIC 450V                         |
| VARIABLE TRIMMERS |          |  |
| A                 |          | 12T I.F. TRANS. PRIMARY                                |
| B                 |          | 12T I.F. TRANS. SECONDARY                              |
| C                 |          | 22T I.F. TRANS. PRIMARY                                |
| D                 |          | 22T I.F. TRANS. SECONDARY                              |
| E                 |          | # 22-570 WAVE TRAP                                     |
| F                 |          | BROADCAST OSCILLATOR (SEE NOTE)                        |
| G                 |          | ANTENNA BROADCAST (ON BAND)                            |
| H                 |          | # 22-519 BROADCAST PADDER                              |
| J                 |          | SHORT WAVE OSCILLATOR (SEE NOTE)                       |
| K                 |          | SHORT WAVE DETECTOR # 22-105                           |
| L                 |          | # TRIMMERS F & K MOUNTED ON PARALLELETT STRIP # 22-408 |

# 220

COMPILED BY M. N. BEITMAN, SUPREME PUBLICATIONS

# MANUAL OF MOST-OFTEN-NEEDED RADIO DIAGRAMS



5 TUBE SUPERHETERODYNE - 2 BANDS  
 I.F. FREQUENCY - 456 K.C.  
 32 V. D.C. CHASSIS NO. 5523  
 ZENITH RADIO CORPORATION

POWER  
 6Y6G

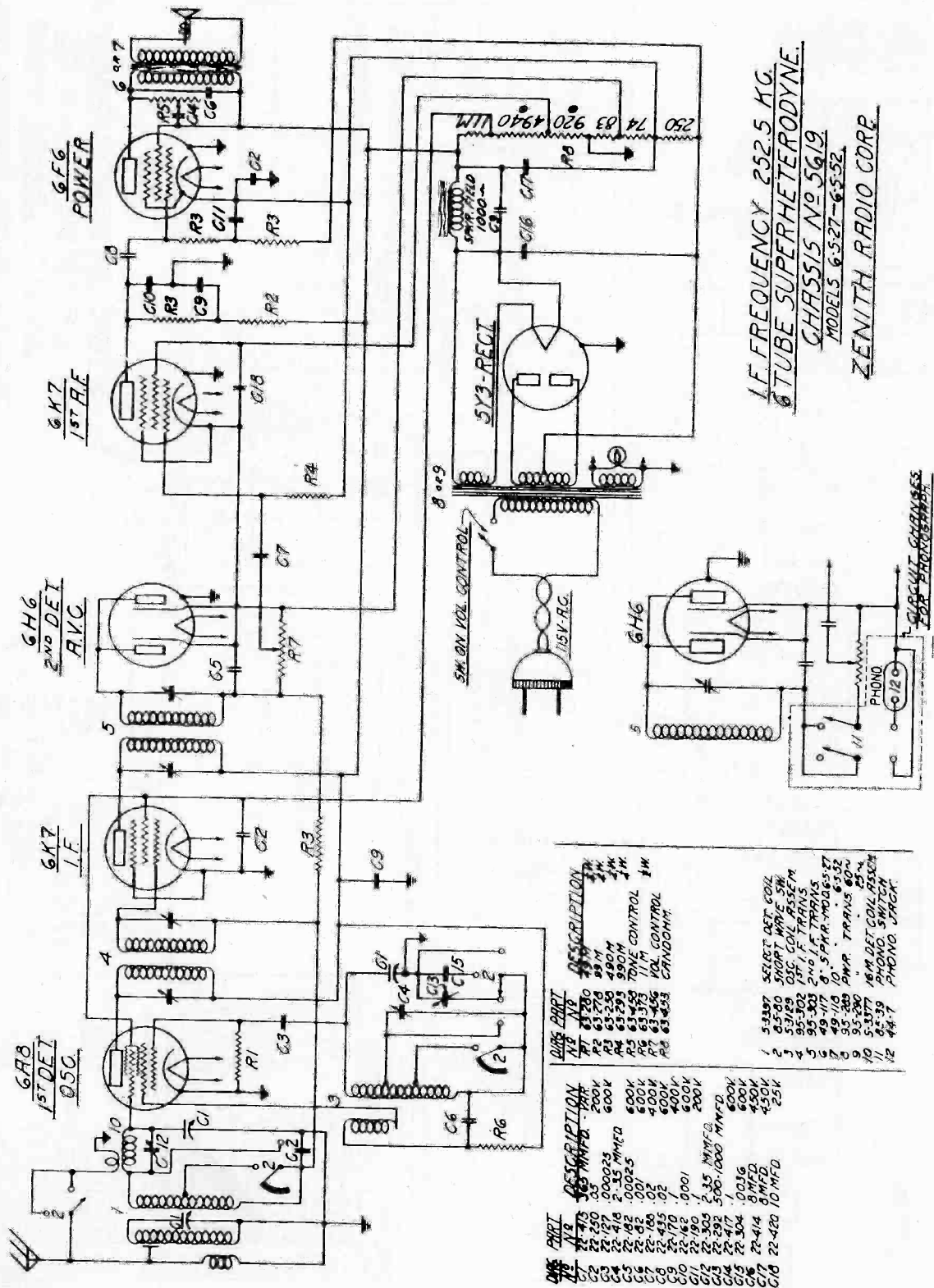
2<sup>ND</sup> DET.-AVC.  
 1<sup>ST</sup> AUDIO  
 6Q7G

I.F.  
 6K7G

DET.-OSC.  
 6A8G

| DIAG. PART N.B. | DESCRIPTION                                  | DIAG. PART N.B. | DESCRIPTION                       |
|-----------------|--|-----------------|-----------------------------------|
| R1              | 63-632 560 OHM 1/4 W. ± 10%                  | C14             | 22-229 .005 MFD. 600 V.           |
| R2              | 63-593 47 M OHM 1/4 W. ± 20%                 | C15             | 22-171 .05 MFD. 200 V.            |
| R3              | 63-569 10 M OHM 1/4 W. ± 20%                 | C16             | 22-193 .5 MFD. 200 V.             |
| R4              | 63-678 3600 OHM 1/4 W. ± 10%                 | C17             | 22-185 .01 MFD. 200 V.            |
| R5              | 63-678 47 M OHM 1/4 W. ± 10%                 | C18             | 22-646 .1 MFD. 1000 V.            |
| R6              | 63-271 1 MEG OHM 1/4 W. ± 20%                | C19             | 22-647 .5 MFD. DRY ELECT. 450 V.  |
| R7              | 63-520 400 M OHM VOLUME CONTROL 1/4 W. ± 10% | C20             | 22-185 .01 MFD. DRY ELECT. 450 V. |
| R8              | 63-653 680 OHM 1/4 W. ± 10%                  | C21             | 22-643 .1 MFD. DRY ELECT. 25 V.   |
| R9              | 63-160 100 M OHM 1/4 W. ± 10%                | C22             | 22-643 .10 MFD. DRY ELECT. 25 V.  |
| R10             | 63-597 470 M OHM 1/4 W. ± 20%                | C23             | 22-243 .01 MFD. 400 V.            |
| R11             | 63-296 220 M OHM 1/4 W. ± 20%                |                 |                                   |
| R12             | 63-803 300 OHM WIREWOUND 1/4 W. ± 10%        |                 |                                   |
| R13             | 63-521 50 M OHM TONE CONTROL                 |                 |                                   |
| R14             | 63-804 2 SECTION CHANGING                    |                 |                                   |
| R15             | 63-928 3 SECTION CHANGING                    |                 |                                   |
| R16             | 63-595 100 M OHM 1/4 W. ± 20%                |                 |                                   |
| C1              | 22-632 THO GANS VARIABLE CONDENSER           |                 |                                   |
| C2              | 22-250 .05 MFD. 200 V.                       |                 |                                   |
| C3              | 22-487 .05 MFD. 400 V.                       |                 |                                   |
| C4              | 22-563 FIXED PADDER                          |                 |                                   |
| C5              | 22-212 .05 MFD. 400 V.                       |                 |                                   |
| C6              | 22-127 25 MMFD. 600 V.                       |                 |                                   |
| C7              | 22-358 .002 MFD. 600 K.                      |                 |                                   |
| C8              | 22-170 .1 MFD. 200 V.                        |                 |                                   |
| C9              | 22-350 .25 MFD. 600 V.                       |                 |                                   |
| C10             | 22-152 .001 MFD. 600 V.                      |                 |                                   |
| C11             | 22-47 .0005 MFD. 200 V.                      |                 |                                   |
| C12             | 22-377 .02 MFD. 200 V.                       |                 |                                   |
| C13             | 22-135 .02 MFD. 600 V.                       |                 |                                   |

# MANUAL OF MOST-OFTEN-NEEDED RADIO DIAGRAMS



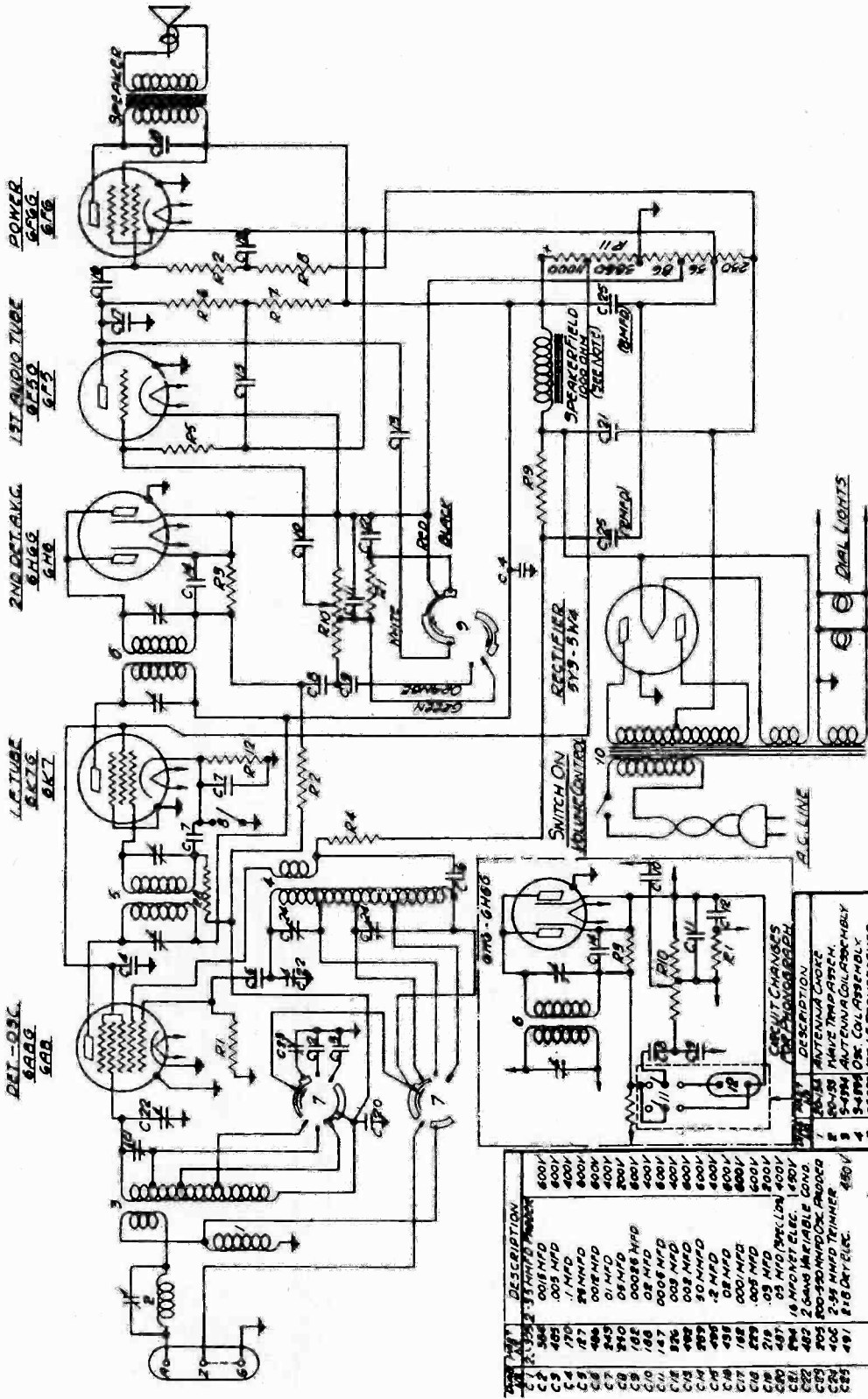
I.F. FREQUENCY 252.5 KC.  
 6-TUBE SUPERHETERODYNE.  
 CHASSIS NO. 5619.  
 MODELS 6-5-27-6-5-52.  
 ZENITH RADIO CORP.

| WIRE PART NO. | DESCRIPTION |
|---------------|-------------|
| R1            | 500K        |
| R2            | 500K        |
| R3            | 500K        |
| R4            | 500K        |
| R5            | 500K        |
| R6            | 500K        |
| R7            | 500K        |
| R8            | 500K        |
| C1            | 500K        |
| C2            | 500K        |
| C3            | 500K        |
| C4            | 500K        |
| C5            | 500K        |
| C6            | 500K        |
| C7            | 500K        |
| C8            | 500K        |
| C9            | 500K        |
| C10           | 500K        |
| C11           | 500K        |
| C12           | 500K        |
| C13           | 500K        |
| C14           | 500K        |
| C15           | 500K        |
| C16           | 500K        |
| C17           | 500K        |
| C18           | 500K        |
| G1            | 500K        |
| G2            | 500K        |
| G3            | 500K        |
| G4            | 500K        |
| G5            | 500K        |
| G6            | 500K        |
| G7            | 500K        |
| G8            | 500K        |
| G9            | 500K        |
| G10           | 500K        |
| G11           | 500K        |
| G12           | 500K        |
| G13           | 500K        |
| G14           | 500K        |
| G15           | 500K        |
| G16           | 500K        |
| G17           | 500K        |
| G18           | 500K        |



# MANUAL OF MOST-OFTEN-NEEDED RADIO DIAGRAMS

Models 6-S-128, 6-S-137, 6-S-147, 6-S-152, 6-S-157, (Chassis No. 5634)



DET.-OSC.  
6A4G  
6AB

I.C. TUBE  
6X7G  
6X7

2ND DET. A.K.G.  
6X4G  
6X4

1ST AUDIO TUBE  
6X5G  
6X5

POWER  
6A4G  
6AB

| NO. | DESCRIPTION  | VALUE  |
|-----|--------------|--------|
| 1   | ANTENNA COIL | 500 μH |
| 2   | ANTENNA COIL | 500 μH |
| 3   | ANTENNA COIL | 500 μH |
| 4   | ANTENNA COIL | 500 μH |
| 5   | ANTENNA COIL | 500 μH |
| 6   | ANTENNA COIL | 500 μH |
| 7   | ANTENNA COIL | 500 μH |
| 8   | ANTENNA COIL | 500 μH |
| 9   | ANTENNA COIL | 500 μH |
| 10  | ANTENNA COIL | 500 μH |
| 11  | ANTENNA COIL | 500 μH |
| 12  | ANTENNA COIL | 500 μH |
| 13  | ANTENNA COIL | 500 μH |
| 14  | ANTENNA COIL | 500 μH |
| 15  | ANTENNA COIL | 500 μH |
| 16  | ANTENNA COIL | 500 μH |
| 17  | ANTENNA COIL | 500 μH |
| 18  | ANTENNA COIL | 500 μH |
| 19  | ANTENNA COIL | 500 μH |
| 20  | ANTENNA COIL | 500 μH |
| 21  | ANTENNA COIL | 500 μH |
| 22  | ANTENNA COIL | 500 μH |
| 23  | ANTENNA COIL | 500 μH |
| 24  | ANTENNA COIL | 500 μH |
| 25  | ANTENNA COIL | 500 μH |
| 26  | ANTENNA COIL | 500 μH |
| 27  | ANTENNA COIL | 500 μH |
| 28  | ANTENNA COIL | 500 μH |
| 29  | ANTENNA COIL | 500 μH |
| 30  | ANTENNA COIL | 500 μH |
| 31  | ANTENNA COIL | 500 μH |
| 32  | ANTENNA COIL | 500 μH |
| 33  | ANTENNA COIL | 500 μH |
| 34  | ANTENNA COIL | 500 μH |
| 35  | ANTENNA COIL | 500 μH |
| 36  | ANTENNA COIL | 500 μH |
| 37  | ANTENNA COIL | 500 μH |
| 38  | ANTENNA COIL | 500 μH |
| 39  | ANTENNA COIL | 500 μH |
| 40  | ANTENNA COIL | 500 μH |
| 41  | ANTENNA COIL | 500 μH |
| 42  | ANTENNA COIL | 500 μH |
| 43  | ANTENNA COIL | 500 μH |
| 44  | ANTENNA COIL | 500 μH |
| 45  | ANTENNA COIL | 500 μH |
| 46  | ANTENNA COIL | 500 μH |
| 47  | ANTENNA COIL | 500 μH |
| 48  | ANTENNA COIL | 500 μH |
| 49  | ANTENNA COIL | 500 μH |
| 50  | ANTENNA COIL | 500 μH |

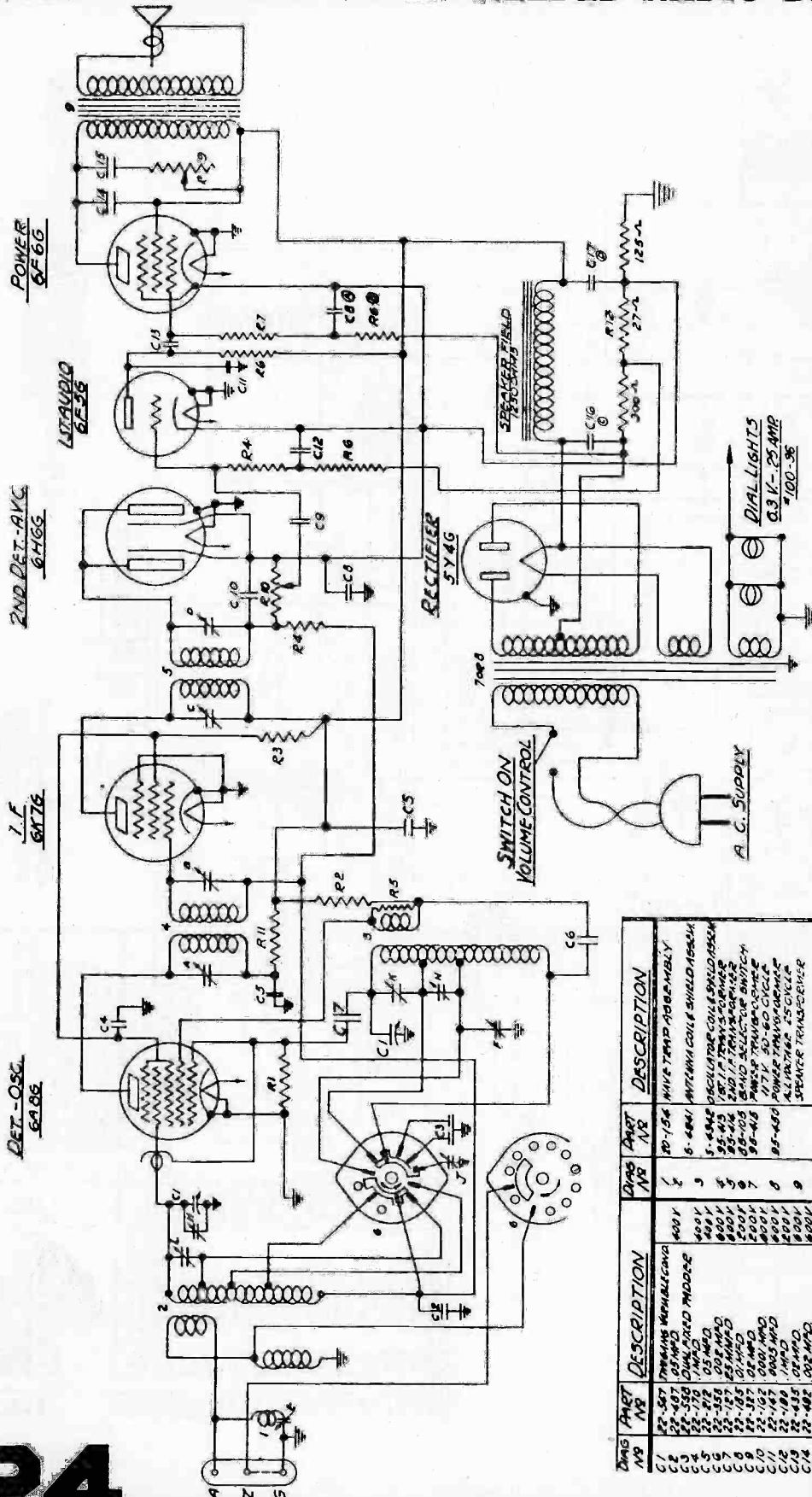
I.F. FREQUENCY 456 KC.  
6 TUBE SUPERHETERODYNE - 3 BAND  
CHASSIS NO 5634  
ZENITH RADIO CORPORATION  
CHICAGO, ILLINOIS

| SPEAKERS  | MODELS |
|-----------|--------|
| 49-117-8  | 65-128 |
| 49-118-10 | 65-127 |
|           | 65-127 |
|           | 65-127 |
|           | 65-127 |

NOTE: 1-22-39 16 WATT DET. ELEC.  
ALL SECTORS OF THE ELEC. COIL  
MODEL 6-S-147 USE THIS ELEC.

# MANUAL OF MOST-OFTEN-NEEDED RADIO DIAGRAMS

Models 6-S-203, 6-S-222, 6-S-223, 6-S-229, 6-S-239, 6-S-241 (5638 Chassis)



POWER  
6F6G

I.F. FREQUENCY 456 K.C.

6 TUBE SUPERHETERODYNE - 3 BANDS

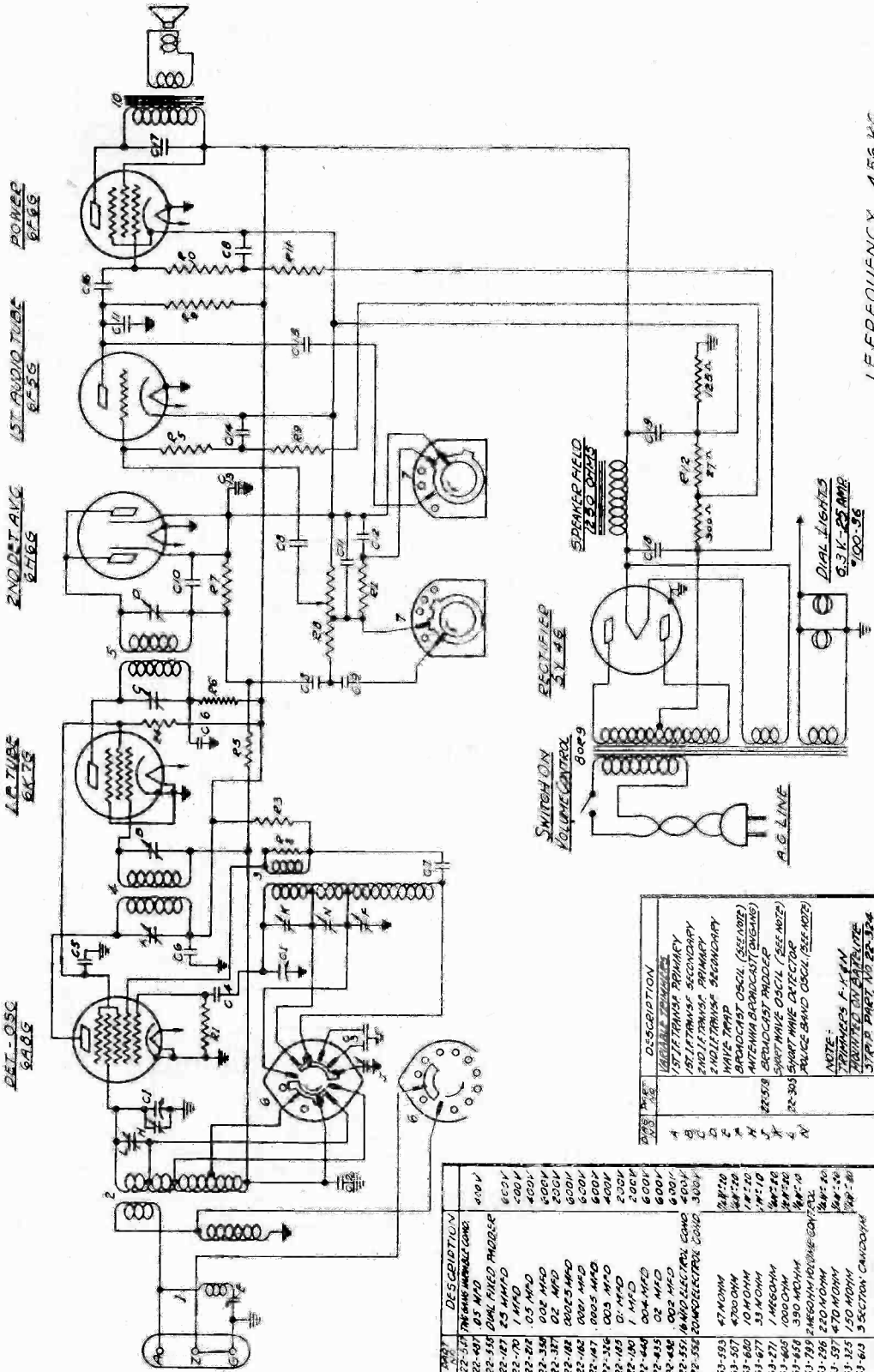
CHASSIS NR 5638

ZENITH RADIO CORPORATION

| DISG NO | PART NO | DESCRIPTION       | DISG NO | PART NO | DESCRIPTION                     |
|---------|---------|-------------------|---------|---------|---------------------------------|
| 1       | 22-57   | TREBLE REPLICATOR | 10      | 104     | WAVE TAMP ASSEMBLY              |
| 2       | 22-437  | 10MFD 50VDC       | 11      | 4841    | ANTENNA COIL & SHIELD ASSEMBLY  |
| 3       | 22-720  | 10MFD 50VDC       | 12      | 4842    | OSCILLATOR COIL SHIELD ASSEMBLY |
| 4       | 22-719  | 10MFD 50VDC       | 13      | 4843    | 1ST I.F. TRANSFORMER            |
| 5       | 22-718  | 10MFD 50VDC       | 14      | 4844    | 2ND I.F. TRANSFORMER            |
| 6       | 22-717  | 10MFD 50VDC       | 15      | 4845    | BAND SELECTOR SWITCH            |
| 7       | 22-716  | 10MFD 50VDC       | 16      | 4846    | WAVE TAMP                       |
| 8       | 22-715  | 10MFD 50VDC       | 17      | 4847    | POWER TRANSFORMER               |
| 9       | 22-714  | 10MFD 50VDC       | 18      | 4848    | ALLIANTHER 25-CV CELL           |
| 10      | 22-713  | 10MFD 50VDC       | 19      | 4849    | SPEAKER TRANSFORMER             |
| 11      | 22-712  | 10MFD 50VDC       | 20      | 4850    | SPRINGER TRANSFORMER            |
| 12      | 22-711  | 10MFD 50VDC       | 21      | 4851    | 1ST I.F. TRANSFORMER            |
| 13      | 22-710  | 10MFD 50VDC       | 22      | 4852    | 2ND I.F. TRANSFORMER            |
| 14      | 22-709  | 10MFD 50VDC       | 23      | 4853    | WAVE TAMP                       |
| 15      | 22-708  | 10MFD 50VDC       | 24      | 4854    | POWER TRANSFORMER               |
| 16      | 22-707  | 10MFD 50VDC       | 25      | 4855    | ALLIANTHER 25-CV CELL           |
| 17      | 22-706  | 10MFD 50VDC       | 26      | 4856    | SPEAKER TRANSFORMER             |
| 18      | 22-705  | 10MFD 50VDC       | 27      | 4857    | 1ST I.F. TRANSFORMER            |
| 19      | 22-704  | 10MFD 50VDC       | 28      | 4858    | 2ND I.F. TRANSFORMER            |
| 20      | 22-703  | 10MFD 50VDC       | 29      | 4859    | WAVE TAMP                       |
| 21      | 22-702  | 10MFD 50VDC       | 30      | 4860    | POWER TRANSFORMER               |
| 22      | 22-701  | 10MFD 50VDC       | 31      | 4861    | ALLIANTHER 25-CV CELL           |
| 23      | 22-700  | 10MFD 50VDC       | 32      | 4862    | SPEAKER TRANSFORMER             |
| 24      | 22-699  | 10MFD 50VDC       | 33      | 4863    | 1ST I.F. TRANSFORMER            |
| 25      | 22-698  | 10MFD 50VDC       | 34      | 4864    | 2ND I.F. TRANSFORMER            |
| 26      | 22-697  | 10MFD 50VDC       | 35      | 4865    | WAVE TAMP                       |
| 27      | 22-696  | 10MFD 50VDC       | 36      | 4866    | POWER TRANSFORMER               |
| 28      | 22-695  | 10MFD 50VDC       | 37      | 4867    | ALLIANTHER 25-CV CELL           |
| 29      | 22-694  | 10MFD 50VDC       | 38      | 4868    | SPEAKER TRANSFORMER             |
| 30      | 22-693  | 10MFD 50VDC       | 39      | 4869    | 1ST I.F. TRANSFORMER            |
| 31      | 22-692  | 10MFD 50VDC       | 40      | 4870    | 2ND I.F. TRANSFORMER            |
| 32      | 22-691  | 10MFD 50VDC       | 41      | 4871    | WAVE TAMP                       |
| 33      | 22-690  | 10MFD 50VDC       | 42      | 4872    | POWER TRANSFORMER               |
| 34      | 22-689  | 10MFD 50VDC       | 43      | 4873    | ALLIANTHER 25-CV CELL           |
| 35      | 22-688  | 10MFD 50VDC       | 44      | 4874    | SPEAKER TRANSFORMER             |
| 36      | 22-687  | 10MFD 50VDC       | 45      | 4875    | 1ST I.F. TRANSFORMER            |
| 37      | 22-686  | 10MFD 50VDC       | 46      | 4876    | 2ND I.F. TRANSFORMER            |
| 38      | 22-685  | 10MFD 50VDC       | 47      | 4877    | WAVE TAMP                       |
| 39      | 22-684  | 10MFD 50VDC       | 48      | 4878    | POWER TRANSFORMER               |
| 40      | 22-683  | 10MFD 50VDC       | 49      | 4879    | ALLIANTHER 25-CV CELL           |
| 41      | 22-682  | 10MFD 50VDC       | 50      | 4880    | SPEAKER TRANSFORMER             |
| 42      | 22-681  | 10MFD 50VDC       | 51      | 4881    | 1ST I.F. TRANSFORMER            |
| 43      | 22-680  | 10MFD 50VDC       | 52      | 4882    | 2ND I.F. TRANSFORMER            |
| 44      | 22-679  | 10MFD 50VDC       | 53      | 4883    | WAVE TAMP                       |
| 45      | 22-678  | 10MFD 50VDC       | 54      | 4884    | POWER TRANSFORMER               |
| 46      | 22-677  | 10MFD 50VDC       | 55      | 4885    | ALLIANTHER 25-CV CELL           |
| 47      | 22-676  | 10MFD 50VDC       | 56      | 4886    | SPEAKER TRANSFORMER             |
| 48      | 22-675  | 10MFD 50VDC       | 57      | 4887    | 1ST I.F. TRANSFORMER            |
| 49      | 22-674  | 10MFD 50VDC       | 58      | 4888    | 2ND I.F. TRANSFORMER            |
| 50      | 22-673  | 10MFD 50VDC       | 59      | 4889    | WAVE TAMP                       |
| 51      | 22-672  | 10MFD 50VDC       | 60      | 4890    | POWER TRANSFORMER               |
| 52      | 22-671  | 10MFD 50VDC       | 61      | 4891    | ALLIANTHER 25-CV CELL           |
| 53      | 22-670  | 10MFD 50VDC       | 62      | 4892    | SPEAKER TRANSFORMER             |
| 54      | 22-669  | 10MFD 50VDC       | 63      | 4893    | 1ST I.F. TRANSFORMER            |
| 55      | 22-668  | 10MFD 50VDC       | 64      | 4894    | 2ND I.F. TRANSFORMER            |
| 56      | 22-667  | 10MFD 50VDC       | 65      | 4895    | WAVE TAMP                       |
| 57      | 22-666  | 10MFD 50VDC       | 66      | 4896    | POWER TRANSFORMER               |
| 58      | 22-665  | 10MFD 50VDC       | 67      | 4897    | ALLIANTHER 25-CV CELL           |
| 59      | 22-664  | 10MFD 50VDC       | 68      | 4898    | SPEAKER TRANSFORMER             |
| 60      | 22-663  | 10MFD 50VDC       | 69      | 4899    | 1ST I.F. TRANSFORMER            |
| 61      | 22-662  | 10MFD 50VDC       | 70      | 4900    | 2ND I.F. TRANSFORMER            |
| 62      | 22-661  | 10MFD 50VDC       | 71      | 4901    | WAVE TAMP                       |
| 63      | 22-660  | 10MFD 50VDC       | 72      | 4902    | POWER TRANSFORMER               |
| 64      | 22-659  | 10MFD 50VDC       | 73      | 4903    | ALLIANTHER 25-CV CELL           |
| 65      | 22-658  | 10MFD 50VDC       | 74      | 4904    | SPEAKER TRANSFORMER             |
| 66      | 22-657  | 10MFD 50VDC       | 75      | 4905    | 1ST I.F. TRANSFORMER            |
| 67      | 22-656  | 10MFD 50VDC       | 76      | 4906    | 2ND I.F. TRANSFORMER            |
| 68      | 22-655  | 10MFD 50VDC       | 77      | 4907    | WAVE TAMP                       |
| 69      | 22-654  | 10MFD 50VDC       | 78      | 4908    | POWER TRANSFORMER               |
| 70      | 22-653  | 10MFD 50VDC       | 79      | 4909    | ALLIANTHER 25-CV CELL           |
| 71      | 22-652  | 10MFD 50VDC       | 80      | 4910    | SPEAKER TRANSFORMER             |
| 72      | 22-651  | 10MFD 50VDC       | 81      | 4911    | 1ST I.F. TRANSFORMER            |
| 73      | 22-650  | 10MFD 50VDC       | 82      | 4912    | 2ND I.F. TRANSFORMER            |
| 74      | 22-649  | 10MFD 50VDC       | 83      | 4913    | WAVE TAMP                       |
| 75      | 22-648  | 10MFD 50VDC       | 84      | 4914    | POWER TRANSFORMER               |
| 76      | 22-647  | 10MFD 50VDC       | 85      | 4915    | ALLIANTHER 25-CV CELL           |
| 77      | 22-646  | 10MFD 50VDC       | 86      | 4916    | SPEAKER TRANSFORMER             |
| 78      | 22-645  | 10MFD 50VDC       | 87      | 4917    | 1ST I.F. TRANSFORMER            |
| 79      | 22-644  | 10MFD 50VDC       | 88      | 4918    | 2ND I.F. TRANSFORMER            |
| 80      | 22-643  | 10MFD 50VDC       | 89      | 4919    | WAVE TAMP                       |
| 81      | 22-642  | 10MFD 50VDC       | 90      | 4920    | POWER TRANSFORMER               |
| 82      | 22-641  | 10MFD 50VDC       | 91      | 4921    | ALLIANTHER 25-CV CELL           |
| 83      | 22-640  | 10MFD 50VDC       | 92      | 4922    | SPEAKER TRANSFORMER             |
| 84      | 22-639  | 10MFD 50VDC       | 93      | 4923    | 1ST I.F. TRANSFORMER            |
| 85      | 22-638  | 10MFD 50VDC       | 94      | 4924    | 2ND I.F. TRANSFORMER            |
| 86      | 22-637  | 10MFD 50VDC       | 95      | 4925    | WAVE TAMP                       |
| 87      | 22-636  | 10MFD 50VDC       | 96      | 4926    | POWER TRANSFORMER               |
| 88      | 22-635  | 10MFD 50VDC       | 97      | 4927    | ALLIANTHER 25-CV CELL           |
| 89      | 22-634  | 10MFD 50VDC       | 98      | 4928    | SPEAKER TRANSFORMER             |
| 90      | 22-633  | 10MFD 50VDC       | 99      | 4929    | 1ST I.F. TRANSFORMER            |
| 91      | 22-632  | 10MFD 50VDC       | 100     | 4930    | 2ND I.F. TRANSFORMER            |
| 92      | 22-631  | 10MFD 50VDC       | 101     | 4931    | WAVE TAMP                       |
| 93      | 22-630  | 10MFD 50VDC       | 102     | 4932    | POWER TRANSFORMER               |
| 94      | 22-629  | 10MFD 50VDC       | 103     | 4933    | ALLIANTHER 25-CV CELL           |
| 95      | 22-628  | 10MFD 50VDC       | 104     | 4934    | SPEAKER TRANSFORMER             |
| 96      | 22-627  | 10MFD 50VDC       | 105     | 4935    | 1ST I.F. TRANSFORMER            |
| 97      | 22-626  | 10MFD 50VDC       | 106     | 4936    | 2ND I.F. TRANSFORMER            |
| 98      | 22-625  | 10MFD 50VDC       | 107     | 4937    | WAVE TAMP                       |
| 99      | 22-624  | 10MFD 50VDC       | 108     | 4938    | POWER TRANSFORMER               |
| 100     | 22-623  | 10MFD 50VDC       | 109     | 4939    | ALLIANTHER 25-CV CELL           |
| 101     | 22-622  | 10MFD 50VDC       | 110     | 4940    | SPEAKER TRANSFORMER             |
| 102     | 22-621  | 10MFD 50VDC       | 111     | 4941    | 1ST I.F. TRANSFORMER            |
| 103     | 22-620  | 10MFD 50VDC       | 112     | 4942    | 2ND I.F. TRANSFORMER            |
| 104     | 22-619  | 10MFD 50VDC       | 113     | 4943    | WAVE TAMP                       |
| 105     | 22-618  | 10MFD 50VDC       | 114     | 4944    | POWER TRANSFORMER               |
| 106     | 22-617  | 10MFD 50VDC       | 115     | 4945    | ALLIANTHER 25-CV CELL           |
| 107     | 22-616  | 10MFD 50VDC       | 116     | 4946    | SPEAKER TRANSFORMER             |
| 108     | 22-615  | 10MFD 50VDC       | 117     | 4947    | 1ST I.F. TRANSFORMER            |
| 109     | 22-614  | 10MFD 50VDC       | 118     | 4948    | 2ND I.F. TRANSFORMER            |
| 110     | 22-613  | 10MFD 50VDC       | 119     | 4949    | WAVE TAMP                       |
| 111     | 22-612  | 10MFD 50VDC       | 120     | 4950    | POWER TRANSFORMER               |
| 112     | 22-611  | 10MFD 50VDC       | 121     | 4951    | ALLIANTHER 25-CV CELL           |
| 113     | 22-610  | 10MFD 50VDC       | 122     | 4952    | SPEAKER TRANSFORMER             |
| 114     | 22-609  | 10MFD 50VDC       | 123     | 4953    | 1ST I.F. TRANSFORMER            |
| 115     | 22-608  | 10MFD 50VDC       | 124     | 4954    | 2ND I.F. TRANSFORMER            |
| 116     | 22-607  | 10MFD 50VDC       | 125     | 4955    | WAVE TAMP                       |
| 117     | 22-606  | 10MFD 50VDC       | 126     | 4956    | POWER TRANSFORMER               |
| 118     | 22-605  | 10MFD 50VDC       | 127     | 4957    | ALLIANTHER 25-CV CELL           |
| 119     | 22-604  | 10MFD 50VDC       | 128     | 4958    | SPEAKER TRANSFORMER             |
| 120     | 22-603  | 10MFD 50VDC       | 129     | 4959    | 1ST I.F. TRANSFORMER            |
| 121     | 22-602  | 10MFD 50VDC       | 130     | 4960    | 2ND I.F. TRANSFORMER            |
| 122     | 22-601  | 10MFD 50VDC       | 131     | 4961    | WAVE TAMP                       |
| 123     | 22-600  | 10MFD 50VDC       | 132     | 4962    | POWER TRANSFORMER               |
| 124     | 22-599  | 10MFD 50VDC       | 133     | 4963    | ALLIANTHER 25-CV CELL           |
| 125     | 22-598  | 10MFD 50VDC       | 134     | 4964    | SPEAKER TRANSFORMER             |
| 126     | 22-597  | 10MFD 50VDC       | 135     | 4965    | 1ST I.F. TRANSFORMER            |
| 127     | 22-596  | 10MFD 50VDC       | 136     | 4966    | 2ND I.F. TRANSFORMER            |
| 128     | 22-595  | 10MFD 50VDC       | 137     | 4967    | WAVE TAMP                       |
| 129     | 22-594  | 10MFD 50VDC       | 138     | 4968    | POWER TRANSFORMER               |
| 130     | 22-593  | 10MFD 50VDC       | 139     | 4969    | ALLIANTHER 25-CV CELL           |
| 131     | 22-592  | 10MFD 50VDC       | 140     | 4970    | SPEAKER TRANSFORMER             |
| 132     | 22-591  | 10MFD 50VDC       | 141     | 4971    | 1ST I.F. TRANSFORMER            |
| 133     | 22-590  | 10MFD 50VDC       | 142     | 4972    | 2ND I.F. TRANSFORMER            |
| 134     | 22-589  | 10MFD 50VDC       | 143     | 4973    | WAVE TAMP                       |
| 135     | 22-588  | 10MFD 50VDC       | 144     | 4974    | POWER TRANSFORMER               |
| 136     | 22-587  | 10MFD 50VDC       | 145     | 4975    | ALLIANTHER 25-CV CELL           |
| 137     | 22-586  | 10MFD 50VDC       | 146     | 4976    | SPEAKER TRANSFORMER             |
| 138     | 22-585  | 10MFD 50VDC       | 147     | 4977    | 1ST I.F. TRANSFORMER            |
| 139     | 22-584  | 10MFD 50VDC       | 148     | 4978    | 2ND I.F. TRANSFORMER            |
| 140     | 22-583  | 10MFD 50VDC       | 149     | 4979    | WAVE TAMP                       |
| 141     | 22-582  | 10MFD 50VDC       | 150     | 4980    | POWER TRANSFORMER               |
| 142     | 22-581  | 10MFD 50VDC       | 151     | 4981    | ALLIANTHER 25-CV CELL           |
| 143     | 22-580  | 10MFD 50VDC       | 152     | 4982    | SPEAKER TRANSFORMER             |
| 144     | 22-579  | 10MFD 50VDC       | 153     | 4983    | 1ST I.F. TRANSFORMER            |
| 145     | 22-578  | 10MFD 50VDC       | 154     | 4984    | 2ND I.F. TRANSFORMER            |
| 146     | 22-577  | 10MFD 50VDC       | 155     | 4985    | WAVE TAMP                       |
| 147     | 22-576  | 10MFD 50VDC       | 156     | 4986    | POWER TRANSFORMER               |
| 148     | 22-575  | 10MFD 50VDC       | 157     | 4987    | ALLIANTHER 25-CV CELL           |
| 149     | 22-574  | 10MFD 50VDC       | 158     | 4988    | SPEAKER TRANSFORMER             |
| 150     | 22-573  | 10MFD 50VDC       | 159     | 4989    | 1ST I.F. TRANSFORMER            |
| 151     | 22-572  | 10MFD 50VDC       | 160     | 4990    | 2ND I.F. TRANSFORMER            |
| 152     | 22-571  | 10MFD 50VDC       | 161     | 4991    | WAVE TAMP                       |
| 153     | 22-570  | 10MFD 50VDC       | 162     | 4992    | POWER TRANSFORMER               |
| 154     | 22-569  | 10MFD 50VDC       | 163     | 4993    | ALLIANTHER 25-CV CELL           |
| 155     | 22-568  | 10MFD 50VDC       | 164     | 4994    | SPEAKER TRANSFORMER             |
| 156     | 22-567  | 10MFD 50VDC       | 165     | 4995    | 1ST I.F. TRANSFORMER            |
| 157     | 22-566  | 10MFD 50VDC       | 166     | 4996    | 2ND I.F. TRANSFORMER            |
| 158     | 22-565  | 10MFD 50VDC       | 167     | 4997    | WAVE TAMP                       |
| 159     | 22-564  | 10MFD 50VDC       | 168     | 4998    | POWER TRANSFORMER               |
| 160     | 22-563  | 10MFD             |         |         |                                 |

# MANUAL OF MOST-OFTEN-NEEDED RADIO DIAGRAMS

## Models 6-S-254, 6-S-256 (5644 Chassis)



6X4 6S5 6S7 6S8  
 1ST AUDIO TUBE 6S5  
 2ND AUDIO TUBE 6S7  
 DET.-OSC 6S8

I.F. FREQUENCY 456 KC  
 6 TUBE SUPERHETERODYNE - 3 BAND  
 CHASSIS NO 5644

ZENITH RADIO CORPORATION

SPEAKERS MODELS  
 49-208-10 6-S-254  
 49-181-10 6-S-256

| POS. | NO. | DESCRIPTION                |
|------|-----|----------------------------|
| 1    | A   | 157T TRANSFORMER PRIMARY   |
| 2    | B   | 157T TRANSFORMER SECONDARY |
| 3    | C   | 6X4 TUBE                   |
| 4    | D   | 6S5 TUBE                   |
| 5    | E   | 6S7 TUBE                   |
| 6    | F   | 6S8 TUBE                   |
| 7    | G   | 500V AC LINE               |
| 8    | H   | 500V AC LINE               |
| 9    | I   | 500V AC LINE               |
| 10   | J   | 500V AC LINE               |

| POS. | NO. | DESCRIPTION  |
|------|-----|--------------|
| 1    | 1   | 500V AC LINE |
| 2    | 2   | 500V AC LINE |
| 3    | 3   | 500V AC LINE |
| 4    | 4   | 500V AC LINE |
| 5    | 5   | 500V AC LINE |
| 6    | 6   | 500V AC LINE |
| 7    | 7   | 500V AC LINE |
| 8    | 8   | 500V AC LINE |
| 9    | 9   | 500V AC LINE |
| 10   | 10  | 500V AC LINE |

# MANUAL OF MOST-OFTEN-NEEDED RADIO DIAGRAMS

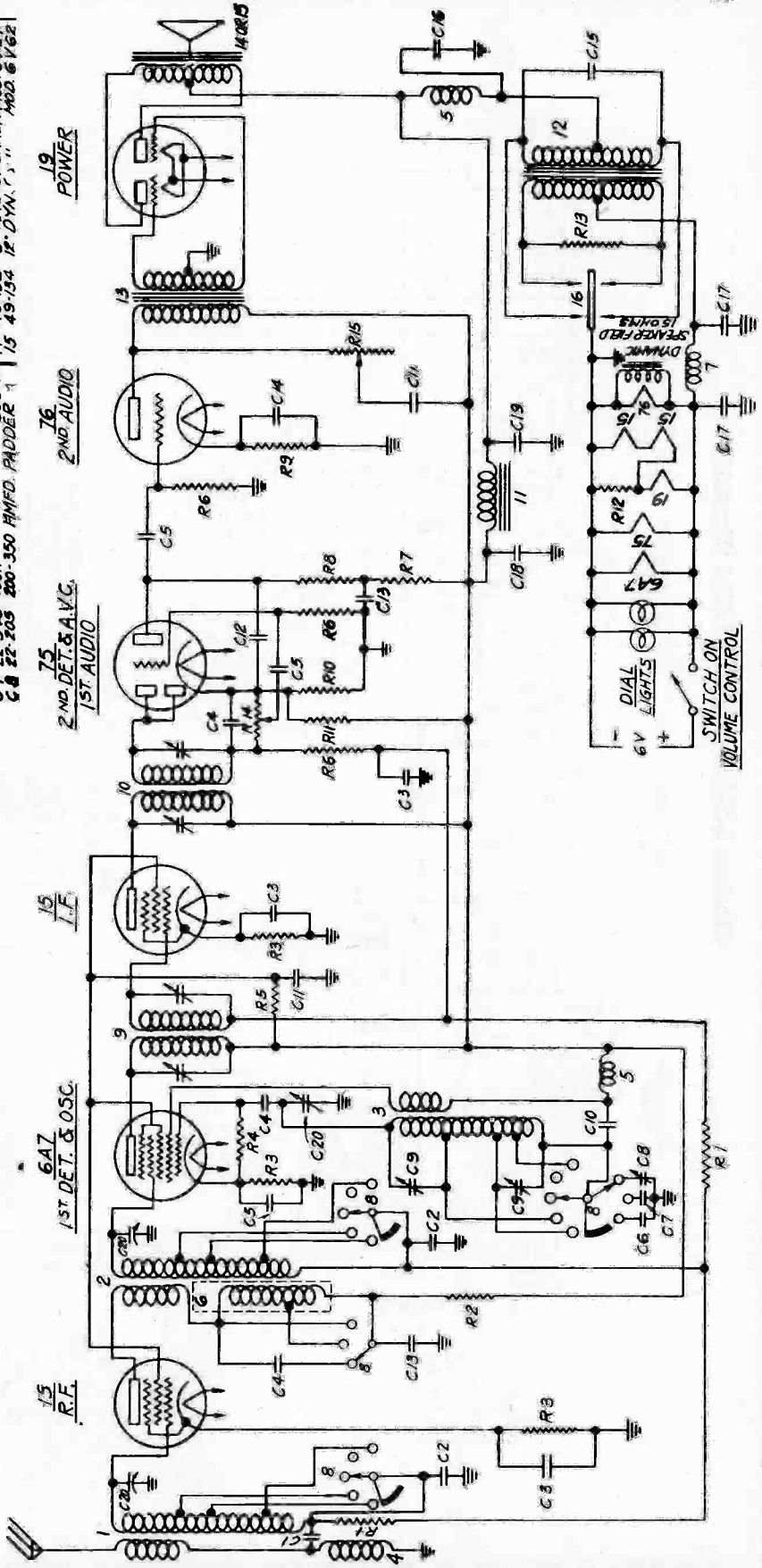
| DIAL NO. | WAVELENGTH | DESCRIPTION | DIAL NUMBER | DESCRIPTION               |
|----------|------------|-------------|-------------|---------------------------|
| A1       | 63-278     | 9.9 M       | C9          | 22-408 2.35 MF. PADDER    |
| A2       | 63-361     | 5 M         | C10         | 22-82 .001 MF.            |
| A3       | 63-362     | 400         | C11         | 22-272 .05                |
| A4       | 63-280     | 4.5 M       | C12         | 22-182 .00025             |
| A5       | 63-353     | 7.5 M       | C13         | 22-224 .1                 |
| A6       | 63-333     | 9.5 M       | C14         | 22-225 .5                 |
| A7       | 63-334     | 10 M        | C15         | 22-225 .5                 |
| A8       | 63-348     | 4.5 M       | C16         | 22-251 .5                 |
| A9       | 63-372     | 4 M         | C17         | 22-251 .5                 |
| A10      | 63-345     | 4 M         | C18         | 22-432 .2                 |
| A11      | 63-345     | 10 M        | C19         | 22-432 .2                 |
| A12      | 63-377     | 100         | C20         | 22-409 456 MF. VAR. COND. |
| A13      | 63-394     | 200         | S-3698      | ANT. COIL ASSEM.          |
| A14      | 63-456     | 200 M       | S-3699      | DET. COIL ASSEM.          |
| A15      | 63-458     | 50 M        | S-3699      | OSC. COIL ASSEM.          |
|          |            |             | 20-82       | ANT. CHOKE                |
|          |            |             | 20-119      | R.F. CHOKE                |
|          |            |             | 9-2778      | R.F. PLATE CHOKE          |
|          |            |             | 85-78       | BAND SELECTOR SWITCH      |
|          |            |             | 95-291      | 1ST I.F. TRANS.           |
|          |            |             | 95-292      | 2ND I.F. TRANS.           |
|          |            |             | 95-298      | POWER CHOKE               |
|          |            |             | 95-305      | RECTIFIER TRANS.          |
|          |            |             | 95-311      | AUDIO TRANS.              |
|          |            |             | 49-134      | 8" MAG. SPEAKER MOD. 6V27 |
|          |            |             | 49-134      | 12" DYN. " " MOD. 6V62    |

3 BAND { 550 KC. - 1780 KC.  
2100 KC. - 6800 KC.  
7000 KC. - 23000 KC.

I.F. FREQUENCY 456 KC.  
6 TUBE BATTERY SUPERHETERODYNE  
CHASSIS NO 5621

## ZENITH RADIO CORR.

MODELS - 6V27, 6V62

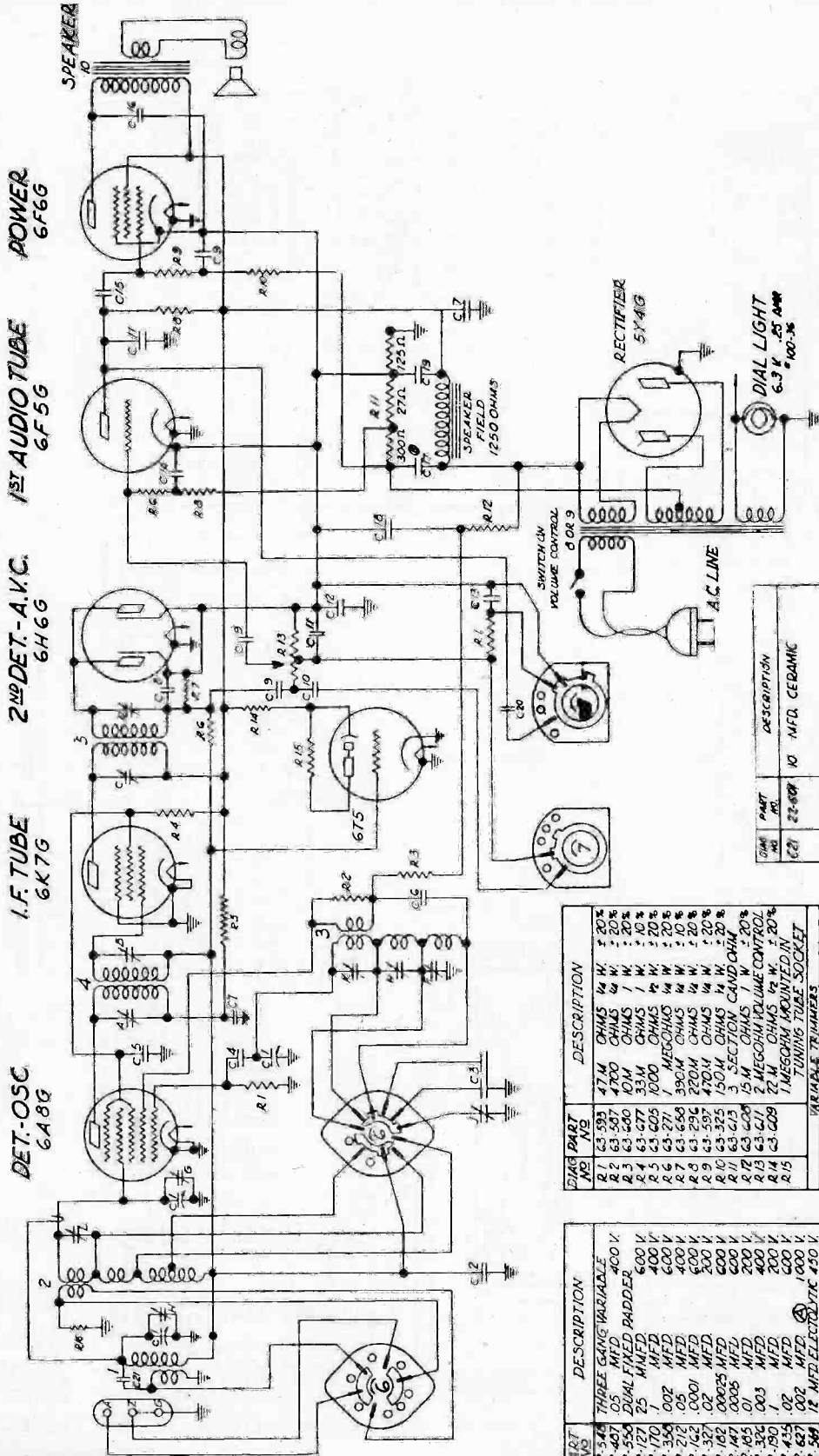






# MANUAL OF MOST-OFTEN-NEEDED RADIO DIAGRAMS

Models 7-S-204, 7-S-232, 7-S-240, 7-S-242, 7-S-258, 7-S-260, 7-S-261 (5709 Chassis)



DET.-OSC 6A8G  
 I.F. TUBE 6K7G  
 2<sup>ND</sup> DET.-A.V.C. 6H6G  
 1<sup>ST</sup> AUDIO TUBE 6F5G  
 POWER 6F6G

I.F. FREQUENCY 456 K.C.  
 7 TUBE SUPERHETERODYNE  
 3 BAND  
 CHASSIS NO 5709  
 ZENITH RADIO CORP.

| DIAL PART NO | DESCRIPTION             |
|--------------|-------------------------|
| R1           | 17M OHMS 1/4 W. ± 20%   |
| R2           | 63.5K OHMS 1/4 W. ± 20% |
| R3           | 63.5K OHMS 1/4 W. ± 20% |
| R4           | 63.5K OHMS 1/4 W. ± 20% |
| R5           | 63.5K OHMS 1/4 W. ± 20% |
| R6           | 63.5K OHMS 1/4 W. ± 20% |
| R7           | 63.5K OHMS 1/4 W. ± 20% |
| R8           | 63.5K OHMS 1/4 W. ± 20% |
| R9           | 63.5K OHMS 1/4 W. ± 20% |
| R10          | 63.5K OHMS 1/4 W. ± 20% |
| R11          | 63.5K OHMS 1/4 W. ± 20% |
| R12          | 63.5K OHMS 1/4 W. ± 20% |
| R13          | 63.5K OHMS 1/4 W. ± 20% |
| R14          | 63.5K OHMS 1/4 W. ± 20% |
| R15          | 63.5K OHMS 1/4 W. ± 20% |

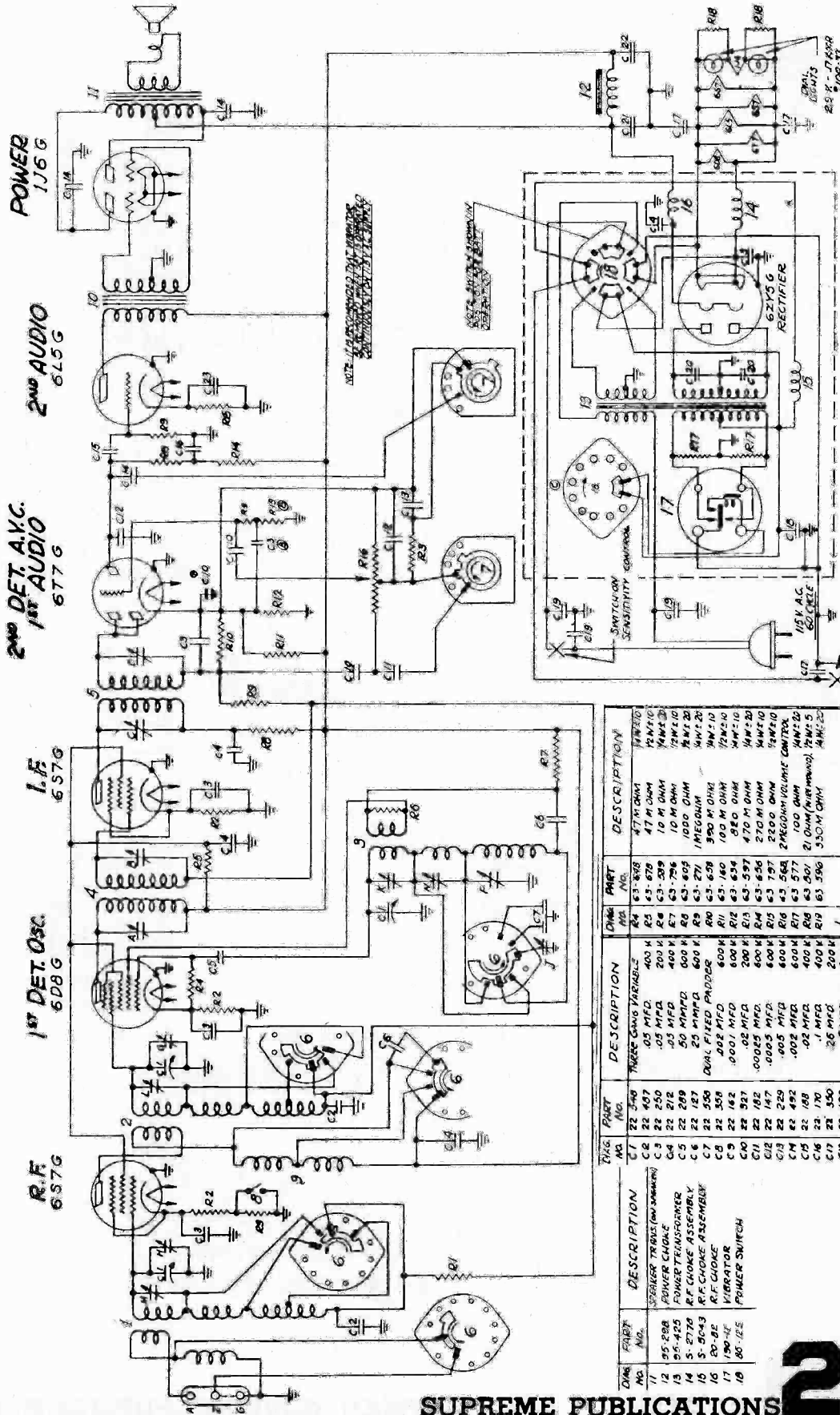
| DIAL PART NO | DESCRIPTION                          |
|--------------|--------------------------------------|
| A            | 1 <sup>ST</sup> I.F. TRANS. PRIMARY  |
| B            | 2 <sup>ND</sup> I.F. TRANS. PRIMARY  |
| C            | 3 <sup>RD</sup> I.F. TRANS. PRIMARY  |
| D            | 4 <sup>TH</sup> I.F. TRANS. PRIMARY  |
| E            | 5 <sup>TH</sup> I.F. TRANS. PRIMARY  |
| F            | 6 <sup>TH</sup> I.F. TRANS. PRIMARY  |
| G            | 7 <sup>TH</sup> I.F. TRANS. PRIMARY  |
| H            | 8 <sup>TH</sup> I.F. TRANS. PRIMARY  |
| I            | 9 <sup>TH</sup> I.F. TRANS. PRIMARY  |
| J            | 10 <sup>TH</sup> I.F. TRANS. PRIMARY |
| K            | 11 <sup>TH</sup> I.F. TRANS. PRIMARY |
| L            | 12 <sup>TH</sup> I.F. TRANS. PRIMARY |
| N            | 13 <sup>TH</sup> I.F. TRANS. PRIMARY |

| DIAL PART NO | DESCRIPTION                |
|--------------|----------------------------|
| C1           | THREE GANG VARIABLE 400 V. |
| C2           | DUAL FIXED PADDER 500 V.   |
| C3           | DUAL FIXED PADDER 500 V.   |
| C4           | DUAL FIXED PADDER 500 V.   |
| C5           | DUAL FIXED PADDER 500 V.   |
| C6           | DUAL FIXED PADDER 500 V.   |
| C7           | DUAL FIXED PADDER 500 V.   |
| C8           | DUAL FIXED PADDER 500 V.   |
| C9           | DUAL FIXED PADDER 500 V.   |
| C10          | DUAL FIXED PADDER 500 V.   |
| C11          | DUAL FIXED PADDER 500 V.   |
| C12          | DUAL FIXED PADDER 500 V.   |
| C13          | DUAL FIXED PADDER 500 V.   |
| C14          | DUAL FIXED PADDER 500 V.   |
| C15          | DUAL FIXED PADDER 500 V.   |
| C16          | DUAL FIXED PADDER 500 V.   |
| C17          | DUAL FIXED PADDER 500 V.   |
| C18          | DUAL FIXED PADDER 500 V.   |
| C19          | DUAL FIXED PADDER 500 V.   |
| C20          | DUAL FIXED PADDER 500 V.   |

| DIAL PART NO | DESCRIPTION     | MODELS  |
|--------------|-----------------|---------|
| R1           | 10 MFD. CERAMIC | 7-S-232 |
| R2           | 1000 OHMS       | 7-S-240 |
| R3           | 1000 OHMS       | 7-S-242 |
| R4           | 1000 OHMS       | 7-S-258 |
| R5           | 1000 OHMS       | 7-S-260 |
| R6           | 1000 OHMS       | 7-S-261 |

# MANUAL OF MOST-OFTEN-NEEDED RADIO DIAGRAMS

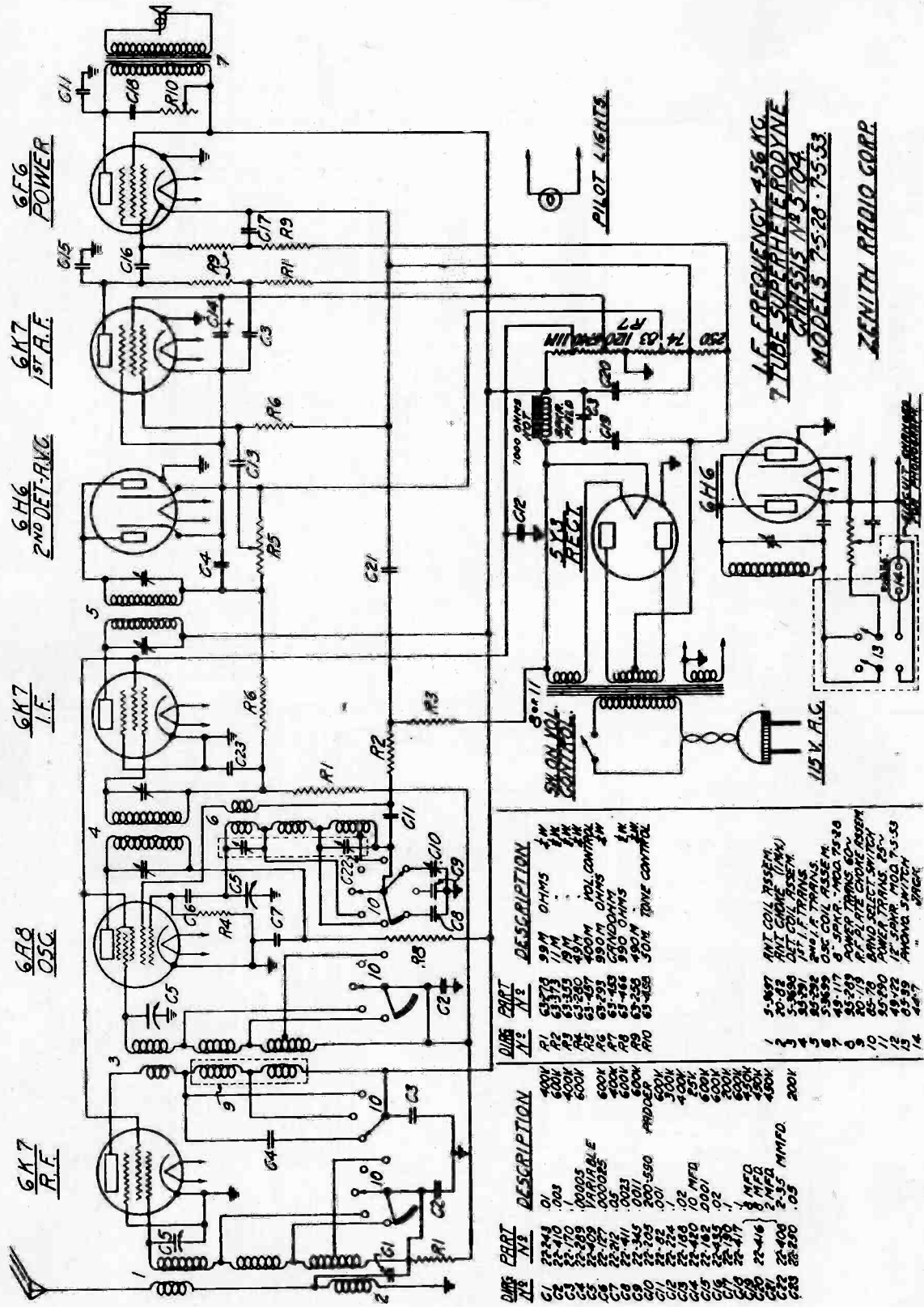
Models 7-1-232, 7-1-259 (5711 Chassis)



I.F. FREQUENCY 456 K.C.  
 7 TUBE SUPERHETERODYNE  
 CHASSIS NO. 5711  
 6 VOLT D.C. ~ 115 VOLT A.C.  
**ZENITH RADIO CORPORATION**

| PART NO. | DESCRIPTION              | QTY | PART NO. | DESCRIPTION | QTY |
|----------|--------------------------|-----|----------|-------------|-----|
| 11       | STEERING TRANS (ON MAIN) | 1   | 11       | 47 M OHM    | 1   |
| 12       | POWER TRANSFORMER        | 1   | 12       | 10 M OHM    | 1   |
| 13       | R.F. CHOKE ASSEMBLY      | 1   | 13       | 100 OHM     | 1   |
| 14       | R.F. CHOKE ASSEMBLY      | 1   | 14       | 100 OHM     | 1   |
| 15       | R.F. CHOKE ASSEMBLY      | 1   | 15       | 100 OHM     | 1   |
| 16       | R.F. CHOKE ASSEMBLY      | 1   | 16       | 100 OHM     | 1   |
| 17       | VIBRATOR                 | 1   | 17       | 100 OHM     | 1   |
| 18       | POWER SWITCH             | 1   | 18       | 100 OHM     | 1   |
| 19       | 100 M OHM                | 1   | 19       | 100 OHM     | 1   |
| 20       | 560 OHM                  | 1   | 20       | 100 OHM     | 1   |
| 21       | 47 M OHM                 | 1   | 21       | 100 OHM     | 1   |
| 22       | 47 M OHM                 | 1   | 22       | 100 OHM     | 1   |
| 23       | 47 M OHM                 | 1   | 23       | 100 OHM     | 1   |
| 24       | 47 M OHM                 | 1   | 24       | 100 OHM     | 1   |
| 25       | 47 M OHM                 | 1   | 25       | 100 OHM     | 1   |
| 26       | 47 M OHM                 | 1   | 26       | 100 OHM     | 1   |
| 27       | 47 M OHM                 | 1   | 27       | 100 OHM     | 1   |
| 28       | 47 M OHM                 | 1   | 28       | 100 OHM     | 1   |
| 29       | 47 M OHM                 | 1   | 29       | 100 OHM     | 1   |
| 30       | 47 M OHM                 | 1   | 30       | 100 OHM     | 1   |
| 31       | 47 M OHM                 | 1   | 31       | 100 OHM     | 1   |
| 32       | 47 M OHM                 | 1   | 32       | 100 OHM     | 1   |
| 33       | 47 M OHM                 | 1   | 33       | 100 OHM     | 1   |
| 34       | 47 M OHM                 | 1   | 34       | 100 OHM     | 1   |
| 35       | 47 M OHM                 | 1   | 35       | 100 OHM     | 1   |
| 36       | 47 M OHM                 | 1   | 36       | 100 OHM     | 1   |
| 37       | 47 M OHM                 | 1   | 37       | 100 OHM     | 1   |
| 38       | 47 M OHM                 | 1   | 38       | 100 OHM     | 1   |
| 39       | 47 M OHM                 | 1   | 39       | 100 OHM     | 1   |
| 40       | 47 M OHM                 | 1   | 40       | 100 OHM     | 1   |
| 41       | 47 M OHM                 | 1   | 41       | 100 OHM     | 1   |
| 42       | 47 M OHM                 | 1   | 42       | 100 OHM     | 1   |
| 43       | 47 M OHM                 | 1   | 43       | 100 OHM     | 1   |
| 44       | 47 M OHM                 | 1   | 44       | 100 OHM     | 1   |
| 45       | 47 M OHM                 | 1   | 45       | 100 OHM     | 1   |
| 46       | 47 M OHM                 | 1   | 46       | 100 OHM     | 1   |
| 47       | 47 M OHM                 | 1   | 47       | 100 OHM     | 1   |
| 48       | 47 M OHM                 | 1   | 48       | 100 OHM     | 1   |
| 49       | 47 M OHM                 | 1   | 49       | 100 OHM     | 1   |
| 50       | 47 M OHM                 | 1   | 50       | 100 OHM     | 1   |
| 51       | 47 M OHM                 | 1   | 51       | 100 OHM     | 1   |
| 52       | 47 M OHM                 | 1   | 52       | 100 OHM     | 1   |
| 53       | 47 M OHM                 | 1   | 53       | 100 OHM     | 1   |
| 54       | 47 M OHM                 | 1   | 54       | 100 OHM     | 1   |
| 55       | 47 M OHM                 | 1   | 55       | 100 OHM     | 1   |
| 56       | 47 M OHM                 | 1   | 56       | 100 OHM     | 1   |
| 57       | 47 M OHM                 | 1   | 57       | 100 OHM     | 1   |
| 58       | 47 M OHM                 | 1   | 58       | 100 OHM     | 1   |
| 59       | 47 M OHM                 | 1   | 59       | 100 OHM     | 1   |
| 60       | 47 M OHM                 | 1   | 60       | 100 OHM     | 1   |
| 61       | 47 M OHM                 | 1   | 61       | 100 OHM     | 1   |
| 62       | 47 M OHM                 | 1   | 62       | 100 OHM     | 1   |
| 63       | 47 M OHM                 | 1   | 63       | 100 OHM     | 1   |
| 64       | 47 M OHM                 | 1   | 64       | 100 OHM     | 1   |
| 65       | 47 M OHM                 | 1   | 65       | 100 OHM     | 1   |
| 66       | 47 M OHM                 | 1   | 66       | 100 OHM     | 1   |
| 67       | 47 M OHM                 | 1   | 67       | 100 OHM     | 1   |
| 68       | 47 M OHM                 | 1   | 68       | 100 OHM     | 1   |
| 69       | 47 M OHM                 | 1   | 69       | 100 OHM     | 1   |
| 70       | 47 M OHM                 | 1   | 70       | 100 OHM     | 1   |
| 71       | 47 M OHM                 | 1   | 71       | 100 OHM     | 1   |
| 72       | 47 M OHM                 | 1   | 72       | 100 OHM     | 1   |
| 73       | 47 M OHM                 | 1   | 73       | 100 OHM     | 1   |
| 74       | 47 M OHM                 | 1   | 74       | 100 OHM     | 1   |
| 75       | 47 M OHM                 | 1   | 75       | 100 OHM     | 1   |
| 76       | 47 M OHM                 | 1   | 76       | 100 OHM     | 1   |
| 77       | 47 M OHM                 | 1   | 77       | 100 OHM     | 1   |
| 78       | 47 M OHM                 | 1   | 78       | 100 OHM     | 1   |
| 79       | 47 M OHM                 | 1   | 79       | 100 OHM     | 1   |
| 80       | 47 M OHM                 | 1   | 80       | 100 OHM     | 1   |

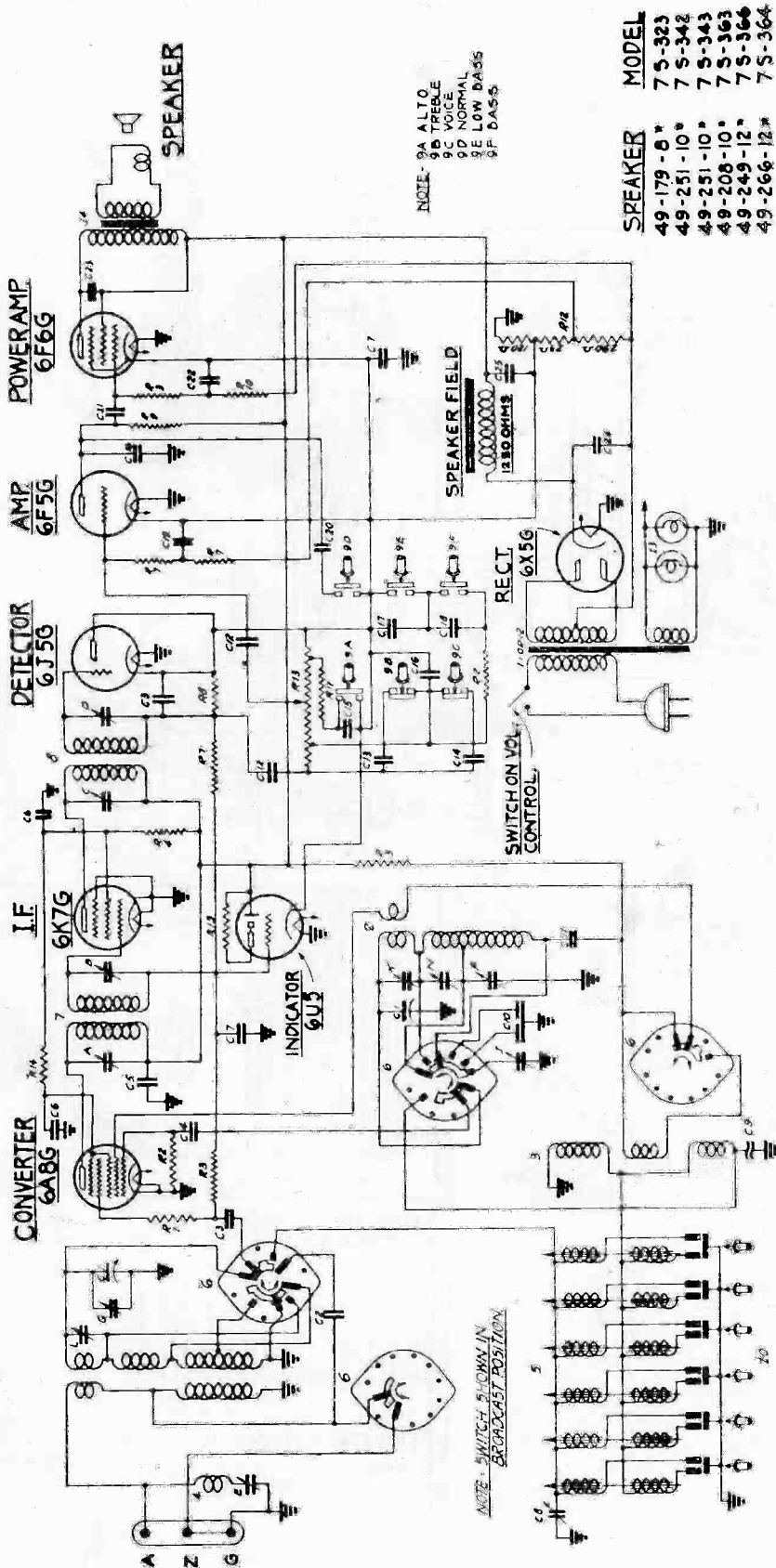
# MANUAL OF MOST-OFTEN-NEEDED RADIO DIAGRAMS



I.F. FREQUENCY 456 KC.  
 7 TUBE SUPERHETERODYNE  
 CHASSIS No. 5704  
 MODELS 7-528 - 7-533  
 ZENITH RADIO CORP.

| QWS No. | Part No. | Description         |
|---------|----------|---------------------|
| 1       | 5-397    | ANT. COIL ASSEM.    |
| 2       | 20-82    | ANT. COILS (12W)    |
| 3       | 53-281   | ANT. COILS (12W)    |
| 4       | 53-282   | ALL CAPACITORS      |
| 5       | 53-283   | 500 OHM PILOT LIGHT |
| 6       | 53-284   | 500 OHM 1/2 W. R.C. |
| 7       | 49-117   | 500 OHM TRAP        |
| 8       | 49-118   | 500 OHM TRAP        |
| 9       | 55-289   | 500 OHM TRAP        |
| 10      | 20-119   | 500 OHM TRAP        |
| 11      | 65-78    | ARMED SELECT SWITCH |
| 12      | 65-79    | ARMED SELECT SWITCH |
| 13      | 65-80    | ARMED SELECT SWITCH |
| 14      | 65-81    | ARMED SELECT SWITCH |
| 15      | 65-82    | ARMED SELECT SWITCH |
| 16      | 65-83    | ARMED SELECT SWITCH |
| 17      | 65-84    | ARMED SELECT SWITCH |
| 18      | 65-85    | ARMED SELECT SWITCH |
| 19      | 65-86    | ARMED SELECT SWITCH |
| 20      | 65-87    | ARMED SELECT SWITCH |
| 21      | 65-88    | ARMED SELECT SWITCH |
| 22      | 65-89    | ARMED SELECT SWITCH |
| 23      | 65-90    | ARMED SELECT SWITCH |
| 24      | 65-91    | ARMED SELECT SWITCH |
| 25      | 65-92    | ARMED SELECT SWITCH |
| 26      | 65-93    | ARMED SELECT SWITCH |
| 27      | 65-94    | ARMED SELECT SWITCH |
| 28      | 65-95    | ARMED SELECT SWITCH |
| 29      | 65-96    | ARMED SELECT SWITCH |
| 30      | 65-97    | ARMED SELECT SWITCH |
| 31      | 65-98    | ARMED SELECT SWITCH |
| 32      | 65-99    | ARMED SELECT SWITCH |
| 33      | 65-100   | ARMED SELECT SWITCH |
| 34      | 65-101   | ARMED SELECT SWITCH |
| 35      | 65-102   | ARMED SELECT SWITCH |
| 36      | 65-103   | ARMED SELECT SWITCH |
| 37      | 65-104   | ARMED SELECT SWITCH |
| 38      | 65-105   | ARMED SELECT SWITCH |
| 39      | 65-106   | ARMED SELECT SWITCH |
| 40      | 65-107   | ARMED SELECT SWITCH |
| 41      | 65-108   | ARMED SELECT SWITCH |
| 42      | 65-109   | ARMED SELECT SWITCH |
| 43      | 65-110   | ARMED SELECT SWITCH |
| 44      | 65-111   | ARMED SELECT SWITCH |
| 45      | 65-112   | ARMED SELECT SWITCH |
| 46      | 65-113   | ARMED SELECT SWITCH |
| 47      | 65-114   | ARMED SELECT SWITCH |
| 48      | 65-115   | ARMED SELECT SWITCH |
| 49      | 65-116   | ARMED SELECT SWITCH |
| 50      | 65-117   | ARMED SELECT SWITCH |
| 51      | 65-118   | ARMED SELECT SWITCH |
| 52      | 65-119   | ARMED SELECT SWITCH |
| 53      | 65-120   | ARMED SELECT SWITCH |
| 54      | 65-121   | ARMED SELECT SWITCH |
| 55      | 65-122   | ARMED SELECT SWITCH |
| 56      | 65-123   | ARMED SELECT SWITCH |
| 57      | 65-124   | ARMED SELECT SWITCH |
| 58      | 65-125   | ARMED SELECT SWITCH |
| 59      | 65-126   | ARMED SELECT SWITCH |
| 60      | 65-127   | ARMED SELECT SWITCH |
| 61      | 65-128   | ARMED SELECT SWITCH |
| 62      | 65-129   | ARMED SELECT SWITCH |
| 63      | 65-130   | ARMED SELECT SWITCH |
| 64      | 65-131   | ARMED SELECT SWITCH |
| 65      | 65-132   | ARMED SELECT SWITCH |
| 66      | 65-133   | ARMED SELECT SWITCH |
| 67      | 65-134   | ARMED SELECT SWITCH |
| 68      | 65-135   | ARMED SELECT SWITCH |
| 69      | 65-136   | ARMED SELECT SWITCH |
| 70      | 65-137   | ARMED SELECT SWITCH |
| 71      | 65-138   | ARMED SELECT SWITCH |
| 72      | 65-139   | ARMED SELECT SWITCH |
| 73      | 65-140   | ARMED SELECT SWITCH |
| 74      | 65-141   | ARMED SELECT SWITCH |
| 75      | 65-142   | ARMED SELECT SWITCH |
| 76      | 65-143   | ARMED SELECT SWITCH |
| 77      | 65-144   | ARMED SELECT SWITCH |
| 78      | 65-145   | ARMED SELECT SWITCH |
| 79      | 65-146   | ARMED SELECT SWITCH |
| 80      | 65-147   | ARMED SELECT SWITCH |
| 81      | 65-148   | ARMED SELECT SWITCH |
| 82      | 65-149   | ARMED SELECT SWITCH |
| 83      | 65-150   | ARMED SELECT SWITCH |
| 84      | 65-151   | ARMED SELECT SWITCH |
| 85      | 65-152   | ARMED SELECT SWITCH |
| 86      | 65-153   | ARMED SELECT SWITCH |
| 87      | 65-154   | ARMED SELECT SWITCH |
| 88      | 65-155   | ARMED SELECT SWITCH |
| 89      | 65-156   | ARMED SELECT SWITCH |
| 90      | 65-157   | ARMED SELECT SWITCH |
| 91      | 65-158   | ARMED SELECT SWITCH |
| 92      | 65-159   | ARMED SELECT SWITCH |
| 93      | 65-160   | ARMED SELECT SWITCH |
| 94      | 65-161   | ARMED SELECT SWITCH |
| 95      | 65-162   | ARMED SELECT SWITCH |
| 96      | 65-163   | ARMED SELECT SWITCH |
| 97      | 65-164   | ARMED SELECT SWITCH |
| 98      | 65-165   | ARMED SELECT SWITCH |
| 99      | 65-166   | ARMED SELECT SWITCH |
| 100     | 65-167   | ARMED SELECT SWITCH |
| 101     | 65-168   | ARMED SELECT SWITCH |
| 102     | 65-169   | ARMED SELECT SWITCH |
| 103     | 65-170   | ARMED SELECT SWITCH |
| 104     | 65-171   | ARMED SELECT SWITCH |
| 105     | 65-172   | ARMED SELECT SWITCH |
| 106     | 65-173   | ARMED SELECT SWITCH |
| 107     | 65-174   | ARMED SELECT SWITCH |
| 108     | 65-175   | ARMED SELECT SWITCH |
| 109     | 65-176   | ARMED SELECT SWITCH |
| 110     | 65-177   | ARMED SELECT SWITCH |
| 111     | 65-178   | ARMED SELECT SWITCH |
| 112     | 65-179   | ARMED SELECT SWITCH |
| 113     | 65-180   | ARMED SELECT SWITCH |
| 114     | 65-181   | ARMED SELECT SWITCH |
| 115     | 65-182   | ARMED SELECT SWITCH |
| 116     | 65-183   | ARMED SELECT SWITCH |
| 117     | 65-184   | ARMED SELECT SWITCH |
| 118     | 65-185   | ARMED SELECT SWITCH |
| 119     | 65-186   | ARMED SELECT SWITCH |
| 120     | 65-187   | ARMED SELECT SWITCH |
| 121     | 65-188   | ARMED SELECT SWITCH |
| 122     | 65-189   | ARMED SELECT SWITCH |
| 123     | 65-190   | ARMED SELECT SWITCH |
| 124     | 65-191   | ARMED SELECT SWITCH |
| 125     | 65-192   | ARMED SELECT SWITCH |
| 126     | 65-193   | ARMED SELECT SWITCH |
| 127     | 65-194   | ARMED SELECT SWITCH |
| 128     | 65-195   | ARMED SELECT SWITCH |
| 129     | 65-196   | ARMED SELECT SWITCH |
| 130     | 65-197   | ARMED SELECT SWITCH |
| 131     | 65-198   | ARMED SELECT SWITCH |
| 132     | 65-199   | ARMED SELECT SWITCH |
| 133     | 65-200   | ARMED SELECT SWITCH |

# MANUAL OF MOST-OFTEN-NEEDED RADIO DIAGRAMS



NOTE - 9A ALTO  
9B TREBLE  
9C VOICE  
9D NORMAL  
9E LOW BASS  
9F BASS

| SPEAKER    | MODEL   |
|------------|---------|
| 49-179-0*  | 7 S-323 |
| 49-251-10* | 7 S-342 |
| 49-251-10* | 7 S-343 |
| 49-208-10* | 7 S-363 |
| 49-249-12* | 7 S-366 |
| 49-266-12* | 7 S-364 |

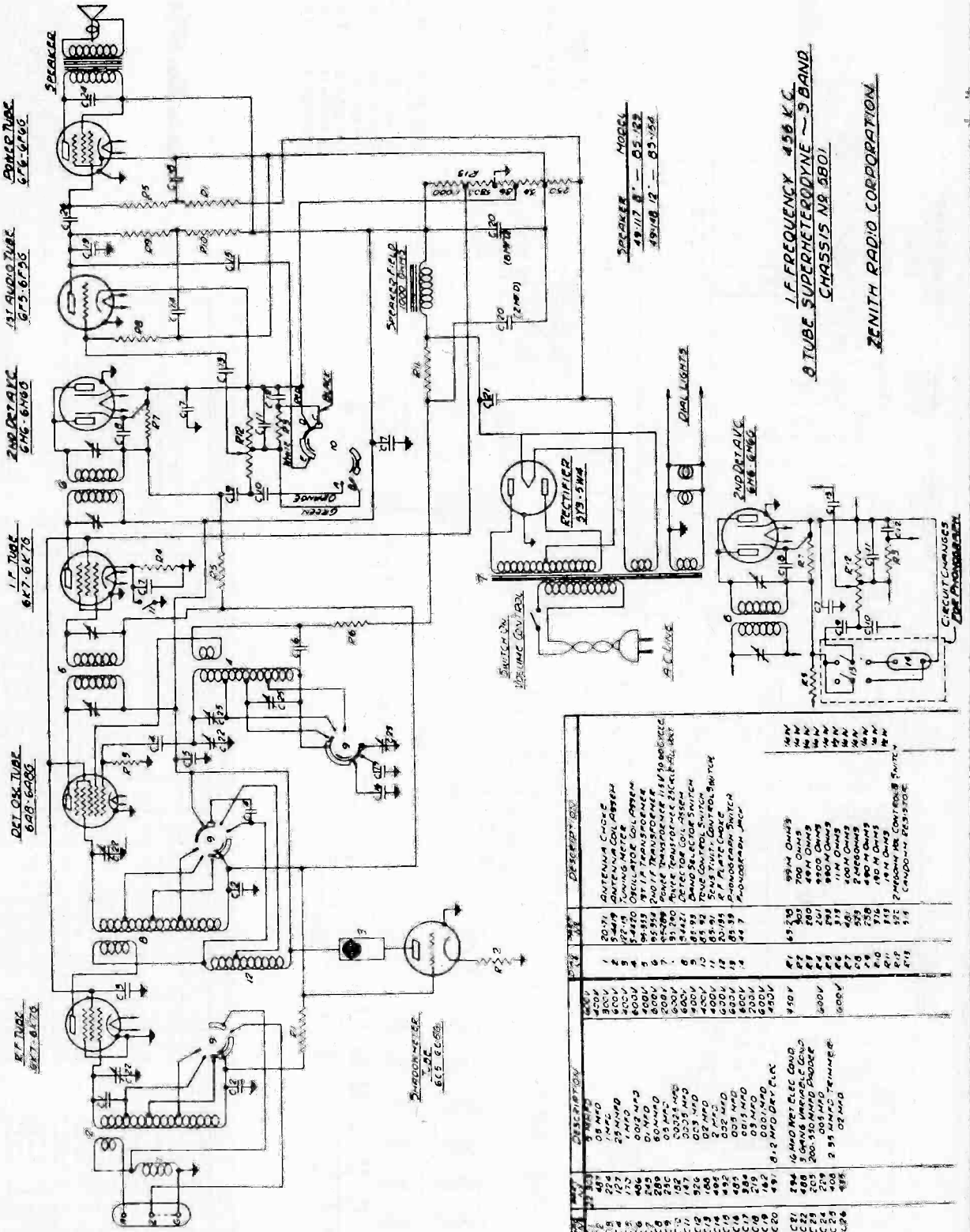
Chassis No. 5714

I.F. FREQUENCY 455 KC  
7 TUBE SUPERHETERODYNE  
CHASSIS NO 5714-A-C 3-BAND  
ZENITH RADIO CORPORATION

| COMPONENT | VALUE    | DESCRIPTION       | REMARKS |
|-----------|----------|-------------------|---------|
| C1        | 20-270   | TRIMMER CAPACITOR |         |
| C2        | 100-1000 | TRIMMER CAPACITOR |         |
| C3        | 100-1000 | TRIMMER CAPACITOR |         |
| C4        | 100-1000 | TRIMMER CAPACITOR |         |
| C5        | 100-1000 | TRIMMER CAPACITOR |         |
| C6        | 100-1000 | TRIMMER CAPACITOR |         |
| C7        | 100-1000 | TRIMMER CAPACITOR |         |
| C8        | 100-1000 | TRIMMER CAPACITOR |         |
| C9        | 100-1000 | TRIMMER CAPACITOR |         |
| C10       | 100-1000 | TRIMMER CAPACITOR |         |
| C11       | 100-1000 | TRIMMER CAPACITOR |         |
| C12       | 100-1000 | TRIMMER CAPACITOR |         |
| C13       | 100-1000 | TRIMMER CAPACITOR |         |
| C14       | 100-1000 | TRIMMER CAPACITOR |         |
| C15       | 100-1000 | TRIMMER CAPACITOR |         |
| C16       | 100-1000 | TRIMMER CAPACITOR |         |
| C17       | 100-1000 | TRIMMER CAPACITOR |         |
| C18       | 100-1000 | TRIMMER CAPACITOR |         |
| C19       | 100-1000 | TRIMMER CAPACITOR |         |
| C20       | 100-1000 | TRIMMER CAPACITOR |         |
| L1        | 100-1000 | TRIMMER INDUCTOR  |         |
| L2        | 100-1000 | TRIMMER INDUCTOR  |         |
| L3        | 100-1000 | TRIMMER INDUCTOR  |         |
| L4        | 100-1000 | TRIMMER INDUCTOR  |         |
| L5        | 100-1000 | TRIMMER INDUCTOR  |         |
| L6        | 100-1000 | TRIMMER INDUCTOR  |         |
| L7        | 100-1000 | TRIMMER INDUCTOR  |         |
| L8        | 100-1000 | TRIMMER INDUCTOR  |         |
| L9        | 100-1000 | TRIMMER INDUCTOR  |         |
| L10       | 100-1000 | TRIMMER INDUCTOR  |         |
| L11       | 100-1000 | TRIMMER INDUCTOR  |         |
| L12       | 100-1000 | TRIMMER INDUCTOR  |         |
| L13       | 100-1000 | TRIMMER INDUCTOR  |         |
| L14       | 100-1000 | TRIMMER INDUCTOR  |         |
| L15       | 100-1000 | TRIMMER INDUCTOR  |         |
| L16       | 100-1000 | TRIMMER INDUCTOR  |         |
| L17       | 100-1000 | TRIMMER INDUCTOR  |         |
| L18       | 100-1000 | TRIMMER INDUCTOR  |         |
| L19       | 100-1000 | TRIMMER INDUCTOR  |         |
| L20       | 100-1000 | TRIMMER INDUCTOR  |         |
| L21       | 100-1000 | TRIMMER INDUCTOR  |         |
| L22       | 100-1000 | TRIMMER INDUCTOR  |         |
| L23       | 100-1000 | TRIMMER INDUCTOR  |         |
| L24       | 100-1000 | TRIMMER INDUCTOR  |         |
| L25       | 100-1000 | TRIMMER INDUCTOR  |         |
| L26       | 100-1000 | TRIMMER INDUCTOR  |         |
| L27       | 100-1000 | TRIMMER INDUCTOR  |         |
| L28       | 100-1000 | TRIMMER INDUCTOR  |         |
| L29       | 100-1000 | TRIMMER INDUCTOR  |         |
| L30       | 100-1000 | TRIMMER INDUCTOR  |         |
| L31       | 100-1000 | TRIMMER INDUCTOR  |         |
| L32       | 100-1000 | TRIMMER INDUCTOR  |         |
| L33       | 100-1000 | TRIMMER INDUCTOR  |         |
| L34       | 100-1000 | TRIMMER INDUCTOR  |         |
| L35       | 100-1000 | TRIMMER INDUCTOR  |         |
| L36       | 100-1000 | TRIMMER INDUCTOR  |         |
| L37       | 100-1000 | TRIMMER INDUCTOR  |         |
| L38       | 100-1000 | TRIMMER INDUCTOR  |         |
| L39       | 100-1000 | TRIMMER INDUCTOR  |         |
| L40       | 100-1000 | TRIMMER INDUCTOR  |         |
| L41       | 100-1000 | TRIMMER INDUCTOR  |         |
| L42       | 100-1000 | TRIMMER INDUCTOR  |         |
| L43       | 100-1000 | TRIMMER INDUCTOR  |         |
| L44       | 100-1000 | TRIMMER INDUCTOR  |         |
| L45       | 100-1000 | TRIMMER INDUCTOR  |         |
| L46       | 100-1000 | TRIMMER INDUCTOR  |         |
| L47       | 100-1000 | TRIMMER INDUCTOR  |         |
| L48       | 100-1000 | TRIMMER INDUCTOR  |         |
| L49       | 100-1000 | TRIMMER INDUCTOR  |         |
| L50       | 100-1000 | TRIMMER INDUCTOR  |         |
| L51       | 100-1000 | TRIMMER INDUCTOR  |         |
| L52       | 100-1000 | TRIMMER INDUCTOR  |         |
| L53       | 100-1000 | TRIMMER INDUCTOR  |         |
| L54       | 100-1000 | TRIMMER INDUCTOR  |         |
| L55       | 100-1000 | TRIMMER INDUCTOR  |         |
| L56       | 100-1000 | TRIMMER INDUCTOR  |         |
| L57       | 100-1000 | TRIMMER INDUCTOR  |         |
| L58       | 100-1000 | TRIMMER INDUCTOR  |         |
| L59       | 100-1000 | TRIMMER INDUCTOR  |         |
| L60       | 100-1000 | TRIMMER INDUCTOR  |         |
| L61       | 100-1000 | TRIMMER INDUCTOR  |         |
| L62       | 100-1000 | TRIMMER INDUCTOR  |         |
| L63       | 100-1000 | TRIMMER INDUCTOR  |         |
| L64       | 100-1000 | TRIMMER INDUCTOR  |         |
| L65       | 100-1000 | TRIMMER INDUCTOR  |         |
| L66       | 100-1000 | TRIMMER INDUCTOR  |         |
| L67       | 100-1000 | TRIMMER INDUCTOR  |         |
| L68       | 100-1000 | TRIMMER INDUCTOR  |         |
| L69       | 100-1000 | TRIMMER INDUCTOR  |         |
| L70       | 100-1000 | TRIMMER INDUCTOR  |         |
| L71       | 100-1000 | TRIMMER INDUCTOR  |         |
| L72       | 100-1000 | TRIMMER INDUCTOR  |         |
| L73       | 100-1000 | TRIMMER INDUCTOR  |         |
| L74       | 100-1000 | TRIMMER INDUCTOR  |         |
| L75       | 100-1000 | TRIMMER INDUCTOR  |         |
| L76       | 100-1000 | TRIMMER INDUCTOR  |         |
| L77       | 100-1000 | TRIMMER INDUCTOR  |         |
| L78       | 100-1000 | TRIMMER INDUCTOR  |         |
| L79       | 100-1000 | TRIMMER INDUCTOR  |         |
| L80       | 100-1000 | TRIMMER INDUCTOR  |         |
| L81       | 100-1000 | TRIMMER INDUCTOR  |         |
| L82       | 100-1000 | TRIMMER INDUCTOR  |         |
| L83       | 100-1000 | TRIMMER INDUCTOR  |         |
| L84       | 100-1000 | TRIMMER INDUCTOR  |         |
| L85       | 100-1000 | TRIMMER INDUCTOR  |         |
| L86       | 100-1000 | TRIMMER INDUCTOR  |         |
| L87       | 100-1000 | TRIMMER INDUCTOR  |         |
| L88       | 100-1000 | TRIMMER INDUCTOR  |         |
| L89       | 100-1000 | TRIMMER INDUCTOR  |         |
| L90       | 100-1000 | TRIMMER INDUCTOR  |         |
| L91       | 100-1000 | TRIMMER INDUCTOR  |         |
| L92       | 100-1000 | TRIMMER INDUCTOR  |         |
| L93       | 100-1000 | TRIMMER INDUCTOR  |         |
| L94       | 100-1000 | TRIMMER INDUCTOR  |         |
| L95       | 100-1000 | TRIMMER INDUCTOR  |         |
| L96       | 100-1000 | TRIMMER INDUCTOR  |         |
| L97       | 100-1000 | TRIMMER INDUCTOR  |         |
| L98       | 100-1000 | TRIMMER INDUCTOR  |         |
| L99       | 100-1000 | TRIMMER INDUCTOR  |         |
| L100      | 100-1000 | TRIMMER INDUCTOR  |         |

# MANUAL OF MOST-OFTEN-NEEDED RADIO DIAGRAMS

## Models 8-S-129, 8-S-154. (Chassis No. 5801)



POWER TUBE  
6F6-6F50

3RD AUDIO TUBE  
6F5-6F50

2ND DET. TUBE  
6F6-6F50

1ST TUBE  
6F7-6K70

DET. OR TUBE  
6AB-6A00

DET. OR TUBE  
6AB-6A00

DET. OR TUBE  
6AB-6A00

DET. OR TUBE  
6AB-6A00

SPEAKER MODEL  
49-117 8 - 05-122  
49-148 12 - 05-122

I.F. FREQUENCY 456 K.C.  
8 TUBE SUPERHETERODYNE ~5 BAND  
CHASSIS NO. 5801

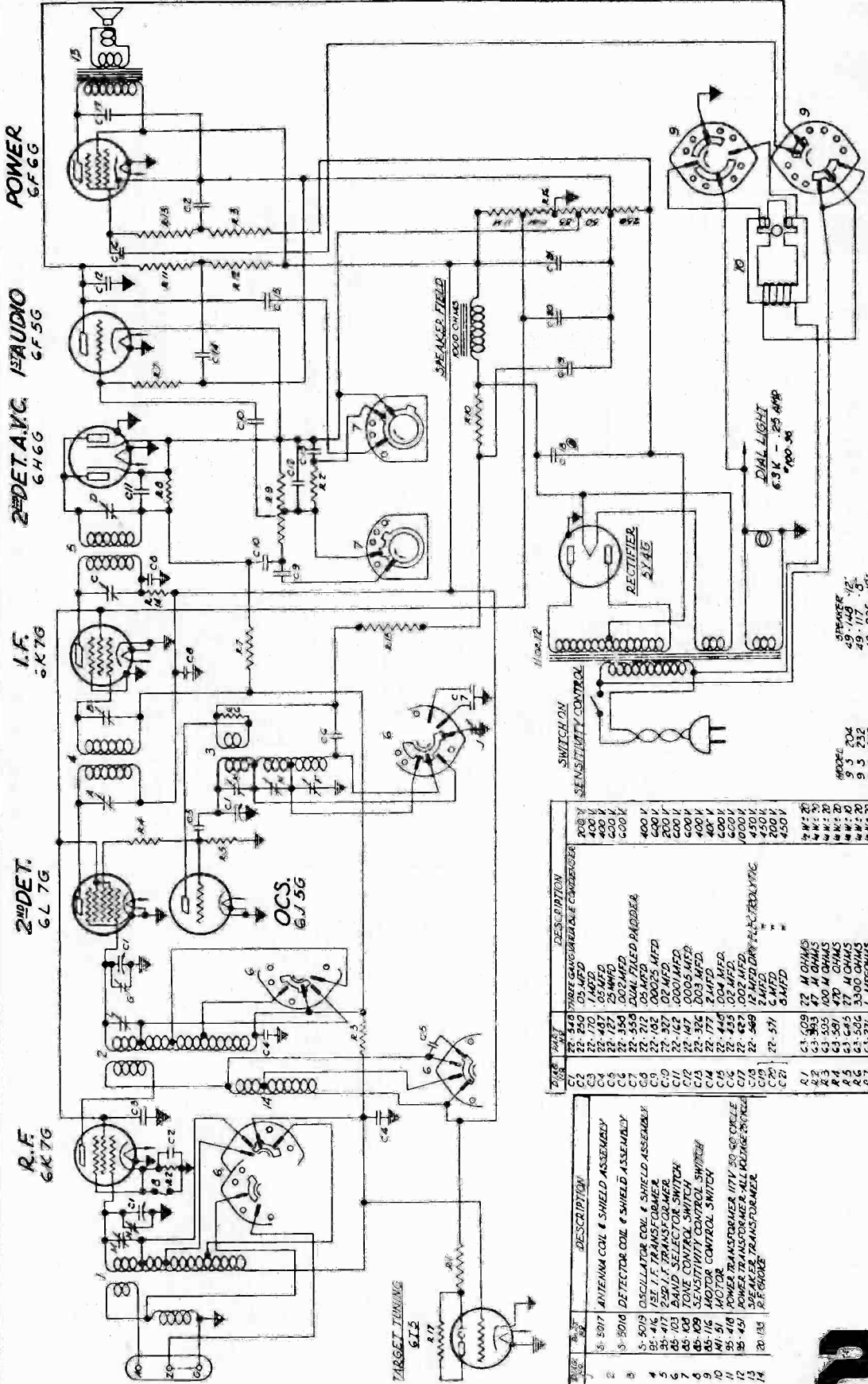
ZENITH RADIO CORPORATION

| NO. | DESCRIPTION               | VOLTS | RESISTANCE | DESCRIPTION | VOLTS                     | RESISTANCE |
|-----|---------------------------|-------|------------|-------------|---------------------------|------------|
| 1   | ANTENNA COIL              | 400V  |            | 20-71       | ANTENNA COIL              |            |
| 2   | 5M4                       | 300V  |            | 20-72       | 5M4                       |            |
| 3   | OSCILLATOR COIL           | 400V  |            | 20-73       | OSCILLATOR COIL           |            |
| 4   | 1F1A TRANSFORMER          | 400V  |            | 20-74       | 1F1A TRANSFORMER          |            |
| 5   | 2ND I.F. TRANSFORMER      | 400V  |            | 20-75       | 2ND I.F. TRANSFORMER      |            |
| 6   | 3RD I.F. TRANSFORMER      | 400V  |            | 20-76       | 3RD I.F. TRANSFORMER      |            |
| 7   | DET. COIL                 | 400V  |            | 20-77       | DET. COIL                 |            |
| 8   | DRUM SELECTOR SWITCH      | 400V  |            | 20-78       | DRUM SELECTOR SWITCH      |            |
| 9   | 500 OHMS CONTROL RESISTOR | 400V  |            | 20-79       | 500 OHMS CONTROL RESISTOR |            |
| 10  | 500 OHMS CONTROL RESISTOR | 400V  |            | 20-80       | 500 OHMS CONTROL RESISTOR |            |
| 11  | 500 OHMS CONTROL RESISTOR | 400V  |            | 20-81       | 500 OHMS CONTROL RESISTOR |            |
| 12  | 500 OHMS CONTROL RESISTOR | 400V  |            | 20-82       | 500 OHMS CONTROL RESISTOR |            |
| 13  | 500 OHMS CONTROL RESISTOR | 400V  |            | 20-83       | 500 OHMS CONTROL RESISTOR |            |
| 14  | 500 OHMS CONTROL RESISTOR | 400V  |            | 20-84       | 500 OHMS CONTROL RESISTOR |            |
| 15  | 500 OHMS CONTROL RESISTOR | 400V  |            | 20-85       | 500 OHMS CONTROL RESISTOR |            |
| 16  | 500 OHMS CONTROL RESISTOR | 400V  |            | 20-86       | 500 OHMS CONTROL RESISTOR |            |
| 17  | 500 OHMS CONTROL RESISTOR | 400V  |            | 20-87       | 500 OHMS CONTROL RESISTOR |            |
| 18  | 500 OHMS CONTROL RESISTOR | 400V  |            | 20-88       | 500 OHMS CONTROL RESISTOR |            |
| 19  | 500 OHMS CONTROL RESISTOR | 400V  |            | 20-89       | 500 OHMS CONTROL RESISTOR |            |
| 20  | 500 OHMS CONTROL RESISTOR | 400V  |            | 20-90       | 500 OHMS CONTROL RESISTOR |            |
| 21  | 500 OHMS CONTROL RESISTOR | 400V  |            | 20-91       | 500 OHMS CONTROL RESISTOR |            |
| 22  | 500 OHMS CONTROL RESISTOR | 400V  |            | 20-92       | 500 OHMS CONTROL RESISTOR |            |
| 23  | 500 OHMS CONTROL RESISTOR | 400V  |            | 20-93       | 500 OHMS CONTROL RESISTOR |            |
| 24  | 500 OHMS CONTROL RESISTOR | 400V  |            | 20-94       | 500 OHMS CONTROL RESISTOR |            |
| 25  | 500 OHMS CONTROL RESISTOR | 400V  |            | 20-95       | 500 OHMS CONTROL RESISTOR |            |
| 26  | 500 OHMS CONTROL RESISTOR | 400V  |            | 20-96       | 500 OHMS CONTROL RESISTOR |            |
| 27  | 500 OHMS CONTROL RESISTOR | 400V  |            | 20-97       | 500 OHMS CONTROL RESISTOR |            |
| 28  | 500 OHMS CONTROL RESISTOR | 400V  |            | 20-98       | 500 OHMS CONTROL RESISTOR |            |
| 29  | 500 OHMS CONTROL RESISTOR | 400V  |            | 20-99       | 500 OHMS CONTROL RESISTOR |            |
| 30  | 500 OHMS CONTROL RESISTOR | 400V  |            | 20-100      | 500 OHMS CONTROL RESISTOR |            |
| 31  | 500 OHMS CONTROL RESISTOR | 400V  |            | 20-101      | 500 OHMS CONTROL RESISTOR |            |
| 32  | 500 OHMS CONTROL RESISTOR | 400V  |            | 20-102      | 500 OHMS CONTROL RESISTOR |            |
| 33  | 500 OHMS CONTROL RESISTOR | 400V  |            | 20-103      | 500 OHMS CONTROL RESISTOR |            |
| 34  | 500 OHMS CONTROL RESISTOR | 400V  |            | 20-104      | 500 OHMS CONTROL RESISTOR |            |
| 35  | 500 OHMS CONTROL RESISTOR | 400V  |            | 20-105      | 500 OHMS CONTROL RESISTOR |            |
| 36  | 500 OHMS CONTROL RESISTOR | 400V  |            | 20-106      | 500 OHMS CONTROL RESISTOR |            |
| 37  | 500 OHMS CONTROL RESISTOR | 400V  |            | 20-107      | 500 OHMS CONTROL RESISTOR |            |
| 38  | 500 OHMS CONTROL RESISTOR | 400V  |            | 20-108      | 500 OHMS CONTROL RESISTOR |            |
| 39  | 500 OHMS CONTROL RESISTOR | 400V  |            | 20-109      | 500 OHMS CONTROL RESISTOR |            |
| 40  | 500 OHMS CONTROL RESISTOR | 400V  |            | 20-110      | 500 OHMS CONTROL RESISTOR |            |
| 41  | 500 OHMS CONTROL RESISTOR | 400V  |            | 20-111      | 500 OHMS CONTROL RESISTOR |            |
| 42  | 500 OHMS CONTROL RESISTOR | 400V  |            | 20-112      | 500 OHMS CONTROL RESISTOR |            |
| 43  | 500 OHMS CONTROL RESISTOR | 400V  |            | 20-113      | 500 OHMS CONTROL RESISTOR |            |
| 44  | 500 OHMS CONTROL RESISTOR | 400V  |            | 20-114      | 500 OHMS CONTROL RESISTOR |            |
| 45  | 500 OHMS CONTROL RESISTOR | 400V  |            | 20-115      | 500 OHMS CONTROL RESISTOR |            |
| 46  | 500 OHMS CONTROL RESISTOR | 400V  |            | 20-116      | 500 OHMS CONTROL RESISTOR |            |
| 47  | 500 OHMS CONTROL RESISTOR | 400V  |            | 20-117      | 500 OHMS CONTROL RESISTOR |            |
| 48  | 500 OHMS CONTROL RESISTOR | 400V  |            | 20-118      | 500 OHMS CONTROL RESISTOR |            |
| 49  | 500 OHMS CONTROL RESISTOR | 400V  |            | 20-119      | 500 OHMS CONTROL RESISTOR |            |
| 50  | 500 OHMS CONTROL RESISTOR | 400V  |            | 20-120      | 500 OHMS CONTROL RESISTOR |            |
| 51  | 500 OHMS CONTROL RESISTOR | 400V  |            | 20-121      | 500 OHMS CONTROL RESISTOR |            |
| 52  | 500 OHMS CONTROL RESISTOR | 400V  |            | 20-122      | 500 OHMS CONTROL RESISTOR |            |
| 53  | 500 OHMS CONTROL RESISTOR | 400V  |            | 20-123      | 500 OHMS CONTROL RESISTOR |            |
| 54  | 500 OHMS CONTROL RESISTOR | 400V  |            | 20-124      | 500 OHMS CONTROL RESISTOR |            |
| 55  | 500 OHMS CONTROL RESISTOR | 400V  |            | 20-125      | 500 OHMS CONTROL RESISTOR |            |
| 56  | 500 OHMS CONTROL RESISTOR | 400V  |            | 20-126      | 500 OHMS CONTROL RESISTOR |            |
| 57  | 500 OHMS CONTROL RESISTOR | 400V  |            | 20-127      | 500 OHMS CONTROL RESISTOR |            |
| 58  | 500 OHMS CONTROL RESISTOR | 400V  |            | 20-128      | 500 OHMS CONTROL RESISTOR |            |
| 59  | 500 OHMS CONTROL RESISTOR | 400V  |            | 20-129      | 500 OHMS CONTROL RESISTOR |            |
| 60  | 500 OHMS CONTROL RESISTOR | 400V  |            | 20-130      | 500 OHMS CONTROL RESISTOR |            |
| 61  | 500 OHMS CONTROL RESISTOR | 400V  |            | 20-131      | 500 OHMS CONTROL RESISTOR |            |
| 62  | 500 OHMS CONTROL RESISTOR | 400V  |            | 20-132      | 500 OHMS CONTROL RESISTOR |            |
| 63  | 500 OHMS CONTROL RESISTOR | 400V  |            | 20-133      | 500 OHMS CONTROL RESISTOR |            |
| 64  | 500 OHMS CONTROL RESISTOR | 400V  |            | 20-134      | 500 OHMS CONTROL RESISTOR |            |
| 65  | 500 OHMS CONTROL RESISTOR | 400V  |            | 20-135      | 500 OHMS CONTROL RESISTOR |            |
| 66  | 500 OHMS CONTROL RESISTOR | 400V  |            | 20-136      | 500 OHMS CONTROL RESISTOR |            |
| 67  | 500 OHMS CONTROL RESISTOR | 400V  |            | 20-137      | 500 OHMS CONTROL RESISTOR |            |
| 68  | 500 OHMS CONTROL RESISTOR | 400V  |            | 20-138      | 500 OHMS CONTROL RESISTOR |            |
| 69  | 500 OHMS CONTROL RESISTOR | 400V  |            | 20-139      | 500 OHMS CONTROL RESISTOR |            |
| 70  | 500 OHMS CONTROL RESISTOR | 400V  |            | 20-140      | 500 OHMS CONTROL RESISTOR |            |
| 71  | 500 OHMS CONTROL RESISTOR | 400V  |            | 20-141      | 500 OHMS CONTROL RESISTOR |            |
| 72  | 500 OHMS CONTROL RESISTOR | 400V  |            | 20-142      | 500 OHMS CONTROL RESISTOR |            |
| 73  | 500 OHMS CONTROL RESISTOR | 400V  |            | 20-143      | 500 OHMS CONTROL RESISTOR |            |
| 74  | 500 OHMS CONTROL RESISTOR | 400V  |            | 20-144      | 500 OHMS CONTROL RESISTOR |            |
| 75  | 500 OHMS CONTROL RESISTOR | 400V  |            | 20-145      | 500 OHMS CONTROL RESISTOR |            |
| 76  | 500 OHMS CONTROL RESISTOR | 400V  |            | 20-146      | 500 OHMS CONTROL RESISTOR |            |
| 77  | 500 OHMS CONTROL RESISTOR | 400V  |            | 20-147      | 500 OHMS CONTROL RESISTOR |            |
| 78  | 500 OHMS CONTROL RESISTOR | 400V  |            | 20-148      | 500 OHMS CONTROL RESISTOR |            |
| 79  | 500 OHMS CONTROL RESISTOR | 400V  |            | 20-149      | 500 OHMS CONTROL RESISTOR |            |
| 80  | 500 OHMS CONTROL RESISTOR | 400V  |            | 20-150      | 500 OHMS CONTROL RESISTOR |            |
| 81  | 500 OHMS CONTROL RESISTOR | 400V  |            | 20-151      | 500 OHMS CONTROL RESISTOR |            |
| 82  | 500 OHMS CONTROL RESISTOR | 400V  |            | 20-152      | 500 OHMS CONTROL RESISTOR |            |
| 83  | 500 OHMS CONTROL RESISTOR | 400V  |            | 20-153      | 500 OHMS CONTROL RESISTOR |            |
| 84  | 500 OHMS CONTROL RESISTOR | 400V  |            | 20-154      | 500 OHMS CONTROL RESISTOR |            |
| 85  | 500 OHMS CONTROL RESISTOR | 400V  |            | 20-155      | 500 OHMS CONTROL RESISTOR |            |
| 86  | 500 OHMS CONTROL RESISTOR | 400V  |            | 20-156      | 500 OHMS CONTROL RESISTOR |            |
| 87  | 500 OHMS CONTROL RESISTOR | 400V  |            | 20-157      | 500 OHMS CONTROL RESISTOR |            |
| 88  | 500 OHMS CONTROL RESISTOR | 400V  |            | 20-158      | 500 OHMS CONTROL RESISTOR |            |
| 89  | 500 OHMS CONTROL RESISTOR | 400V  |            | 20-159      | 500 OHMS CONTROL RESISTOR |            |
| 90  | 500 OHMS CONTROL RESISTOR | 400V  |            | 20-160      | 500 OHMS CONTROL RESISTOR |            |
| 91  | 500 OHMS CONTROL RESISTOR | 400V  |            | 20-161      | 500 OHMS CONTROL RESISTOR |            |
| 92  | 500 OHMS CONTROL RESISTOR | 400V  |            | 20-162      | 500 OHMS CONTROL RESISTOR |            |
| 93  | 500 OHMS CONTROL RESISTOR | 400V  |            | 20-163      | 500 OHMS CONTROL RESISTOR |            |
| 94  | 500 OHMS CONTROL RESISTOR | 400V  |            | 20-164      | 500 OHMS CONTROL RESISTOR |            |
| 95  | 500 OHMS CONTROL RESISTOR | 400V  |            | 20-165      | 500 OHMS CONTROL RESISTOR |            |
| 96  | 500 OHMS CONTROL RESISTOR | 400V  |            | 20-166      | 500 OHMS CONTROL RESISTOR |            |
| 97  | 500 OHMS CONTROL RESISTOR | 400V  |            | 20-167      | 500 OHMS CONTROL RESISTOR |            |
| 98  | 500 OHMS CONTROL RESISTOR | 400V  |            | 20-168      | 500 OHMS CONTROL RESISTOR |            |
| 99  | 500 OHMS CONTROL RESISTOR | 400V  |            | 20-169      | 500 OHMS CONTROL RESISTOR |            |
| 100 | 500 OHMS CONTROL RESISTOR | 400V  |            | 20-170      | 500 OHMS CONTROL RESISTOR |            |



# MANUAL OF MOST-OFTEN-NEEDED RADIO DIAGRAMS

**I.F.-FREQUENCY 456 K.C.**  
**9-TUBE SUPERHETERODYNE**  
**3-BAND**  
**CHASSIS NO. 5905**



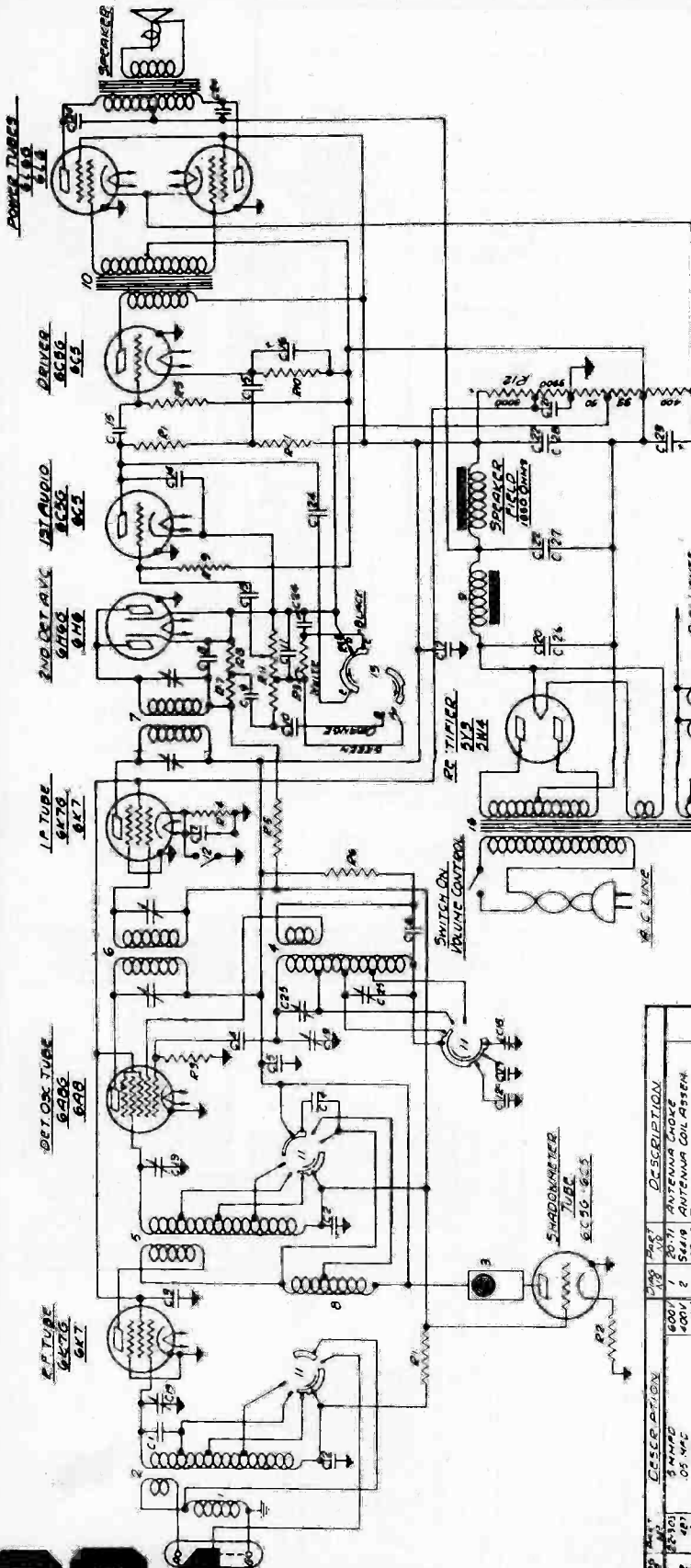
| WAVELENGTH | SPRINGER    |
|------------|-------------|
| 9.5 204    | 49-146 1/2" |
| 9.5 232    | 49-117 0"   |
| 9.5 242    | 49-205 10"  |
| 9.5 244    | 49-205 10"  |
| 9.5 262    | 49-146 1/2" |
| 9.5 263    | 49-146 1/2" |
| 9.5 264    | 49-146 1/2" |

| TYPE | VALUE  | DESCRIPTION |
|------|--------|-------------|
| C1   | 25-240 | 500V 20 MFD |
| C2   | 22-170 | 1 MFD       |
| C3   | 22-487 | 25 MFD      |
| C4   | 22-127 | 25 MFD      |
| C5   | 22-454 | 50 MFD      |
| C6   | 22-162 | 10 MFD      |
| C7   | 22-327 | 10 MFD      |
| C8   | 22-162 | 10 MFD      |
| C9   | 22-327 | 10 MFD      |
| C10  | 22-162 | 10 MFD      |
| C11  | 22-487 | 25 MFD      |
| C12  | 22-162 | 10 MFD      |
| C13  | 22-162 | 10 MFD      |
| C14  | 22-162 | 10 MFD      |
| C15  | 22-444 | 10 MFD      |
| C16  | 22-453 | 10 MFD      |
| C17  | 22-453 | 10 MFD      |
| C18  | 22-369 | 10 MFD      |
| C19  | 22-369 | 10 MFD      |
| C20  | 22-369 | 10 MFD      |
| C21  | 22-371 | 10 MFD      |
| C22  | 22-371 | 10 MFD      |
| C23  | 22-371 | 10 MFD      |
| C24  | 22-371 | 10 MFD      |
| C25  | 22-371 | 10 MFD      |
| C26  | 22-371 | 10 MFD      |
| C27  | 22-371 | 10 MFD      |
| C28  | 22-371 | 10 MFD      |
| C29  | 22-371 | 10 MFD      |
| C30  | 22-371 | 10 MFD      |
| C31  | 22-371 | 10 MFD      |
| C32  | 22-371 | 10 MFD      |
| C33  | 22-371 | 10 MFD      |
| C34  | 22-371 | 10 MFD      |
| C35  | 22-371 | 10 MFD      |
| C36  | 22-371 | 10 MFD      |
| C37  | 22-371 | 10 MFD      |
| C38  | 22-371 | 10 MFD      |
| C39  | 22-371 | 10 MFD      |
| C40  | 22-371 | 10 MFD      |
| C41  | 22-371 | 10 MFD      |
| C42  | 22-371 | 10 MFD      |
| C43  | 22-371 | 10 MFD      |
| C44  | 22-371 | 10 MFD      |
| C45  | 22-371 | 10 MFD      |
| C46  | 22-371 | 10 MFD      |
| C47  | 22-371 | 10 MFD      |
| C48  | 22-371 | 10 MFD      |
| C49  | 22-371 | 10 MFD      |
| C50  | 22-371 | 10 MFD      |
| C51  | 22-371 | 10 MFD      |
| C52  | 22-371 | 10 MFD      |
| C53  | 22-371 | 10 MFD      |
| C54  | 22-371 | 10 MFD      |
| C55  | 22-371 | 10 MFD      |
| C56  | 22-371 | 10 MFD      |
| C57  | 22-371 | 10 MFD      |
| C58  | 22-371 | 10 MFD      |
| C59  | 22-371 | 10 MFD      |
| C60  | 22-371 | 10 MFD      |
| C61  | 22-371 | 10 MFD      |
| C62  | 22-371 | 10 MFD      |
| C63  | 22-371 | 10 MFD      |
| C64  | 22-371 | 10 MFD      |
| C65  | 22-371 | 10 MFD      |
| C66  | 22-371 | 10 MFD      |
| C67  | 22-371 | 10 MFD      |
| C68  | 22-371 | 10 MFD      |
| C69  | 22-371 | 10 MFD      |
| C70  | 22-371 | 10 MFD      |
| C71  | 22-371 | 10 MFD      |
| C72  | 22-371 | 10 MFD      |
| C73  | 22-371 | 10 MFD      |
| C74  | 22-371 | 10 MFD      |
| C75  | 22-371 | 10 MFD      |
| C76  | 22-371 | 10 MFD      |
| C77  | 22-371 | 10 MFD      |
| C78  | 22-371 | 10 MFD      |
| C79  | 22-371 | 10 MFD      |
| C80  | 22-371 | 10 MFD      |
| C81  | 22-371 | 10 MFD      |
| C82  | 22-371 | 10 MFD      |
| C83  | 22-371 | 10 MFD      |
| C84  | 22-371 | 10 MFD      |
| C85  | 22-371 | 10 MFD      |
| C86  | 22-371 | 10 MFD      |
| C87  | 22-371 | 10 MFD      |
| C88  | 22-371 | 10 MFD      |
| C89  | 22-371 | 10 MFD      |
| C90  | 22-371 | 10 MFD      |
| C91  | 22-371 | 10 MFD      |
| C92  | 22-371 | 10 MFD      |
| C93  | 22-371 | 10 MFD      |
| C94  | 22-371 | 10 MFD      |
| C95  | 22-371 | 10 MFD      |
| C96  | 22-371 | 10 MFD      |
| C97  | 22-371 | 10 MFD      |
| C98  | 22-371 | 10 MFD      |
| C99  | 22-371 | 10 MFD      |
| C100 | 22-371 | 10 MFD      |

| TYPE   | VALUE | DESCRIPTION                           |
|--------|-------|---------------------------------------|
| S-3917 |       | ANTENNA COIL & SHIELD ASSEMBLY        |
| S-3918 |       | DETECTOR COIL & SHIELD ASSEMBLY       |
| S-3919 |       | OSCILLATOR COIL & SHIELD ASSEMBLY     |
| S-416  |       | 1ST I.F. TRANSFORMER                  |
| S-417  |       | 2ND I.F. TRANSFORMER                  |
| S-103  |       | BAND SELECTOR SWITCH                  |
| S-104  |       | TONE CONTROL SWITCH                   |
| S-105  |       | VOLUME CONTROL SWITCH                 |
| S-106  |       | MOTOR                                 |
| S-451  |       | POWER TRANSFORMER 117V 50 CYCLE       |
| S-452  |       | POWER TRANSFORMER - ALL HOUSE CURRENT |
| S-453  |       | SPEAKER TRANSFORMER                   |
| S-183  |       | REGRAB                                |
| S-184  |       | REGRAB                                |
| S-185  |       | REGRAB                                |
| S-186  |       | REGRAB                                |
| S-187  |       | REGRAB                                |
| S-188  |       | REGRAB                                |
| S-189  |       | REGRAB                                |
| S-190  |       | REGRAB                                |
| S-191  |       | REGRAB                                |
| S-192  |       | REGRAB                                |
| S-193  |       | REGRAB                                |
| S-194  |       | REGRAB                                |
| S-195  |       | REGRAB                                |
| S-196  |       | REGRAB                                |
| S-197  |       | REGRAB                                |
| S-198  |       | REGRAB                                |
| S-199  |       | REGRAB                                |
| S-200  |       | REGRAB                                |

Models 9-S-203, 9-S-232, 9-S-242, 9-S-244, 9-S-262, 9-S-263, 9-S-264 (5905 Chassis)

# MANUAL OF MOST-OFTEN-NEEDED RADIO DIAGRAMS

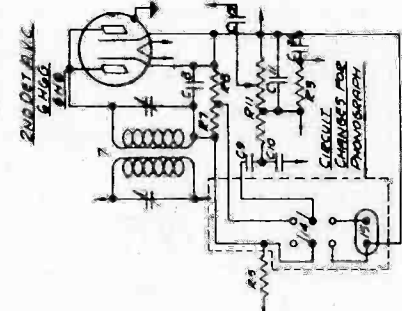


| SPEAKER | MODEL   |
|---------|---------|
| 58/106  | 103/150 |
| 48/147  | 102/155 |
| 48/156  | 103/147 |
|         | 103/153 |
|         | 103/157 |

(Chassis No. 1004)

I.F. FREQUENCY 450 KC  
10 TUBE SUPERHETERODYNE - 3 BAND  
CHASSIS NO. 1004

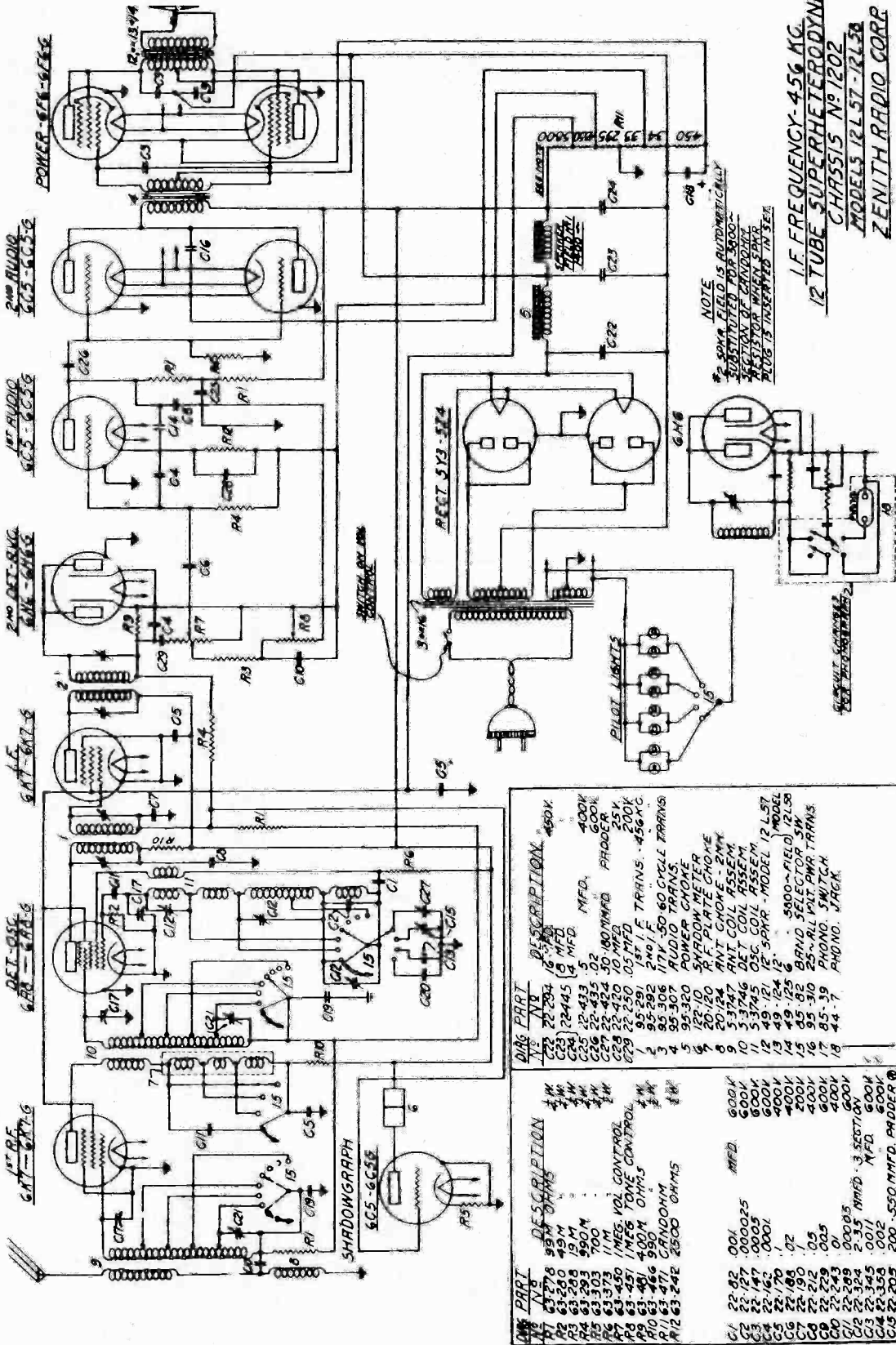
ZENITH RADIO CORPORATION



Models 10-S-30, 10-S-155, 10-S-156, 10-S-160, 10-S-147, 10-S-153, 10-S-157.

| Part No. | DESCRIPTION   | Part No. | DESCRIPTION   |
|----------|---|----------|---|
| 1        | ANTENNA COIL ASSEMBLY   | 20-71    | ANTENNA COIL ASSEMBLY   |
| 2        | TUNING METER  | 20-72    | TUNING METER  |
| 3        | DETECTOR COIL ASSEMBLY  | 20-73    | DETECTOR COIL ASSEMBLY  |
| 4        | TRANSFORMER   | 20-74    | TRANSFORMER   |
| 5        | 1ST I.F. TRANSFORMER  | 20-75    | 1ST I.F. TRANSFORMER  |
| 6        | 2ND I.F. TRANSFORMER  | 20-76    | 2ND I.F. TRANSFORMER  |
| 7        | P.A. PLATE CHOKE  | 20-77    | P.A. PLATE CHOKE  |
| 8        | GRID CHOKE  | 20-78    | GRID CHOKE  |
| 9        | 500 OHM RESISTOR  | 20-79    | 500 OHM RESISTOR  |
| 10       | 100 OHM RESISTOR  | 20-80    | 100 OHM RESISTOR  |
| 11       | 50 OHM RESISTOR   | 20-81    | 50 OHM RESISTOR   |
| 12       | 25 OHM RESISTOR   | 20-82    | 25 OHM RESISTOR   |
| 13       | 10 OHM RESISTOR   | 20-83    | 10 OHM RESISTOR   |
| 14       | 5 OHM RESISTOR  | 20-84    | 5 OHM RESISTOR  |
| 15       | 1 OHM RESISTOR  | 20-85    | 1 OHM RESISTOR  |
| 16       | 0.5 OHM RESISTOR  | 20-86    | 0.5 OHM RESISTOR  |
| 17       | 10 MFD 50V CAPACITOR  | 20-87    | 10 MFD 50V CAPACITOR  |
| 18       | 5 MFD 50V CAPACITOR   | 20-88    | 5 MFD 50V CAPACITOR   |
| 19       | 1 MFD 50V CAPACITOR   | 20-89    | 1 MFD 50V CAPACITOR   |
| 20       | 0.5 MFD 50V CAPACITOR   | 20-90    | 0.5 MFD 50V CAPACITOR   |
| 21       | 0.1 MFD 50V CAPACITOR   | 20-91    | 0.1 MFD 50V CAPACITOR   |
| 22       | 0.05 MFD 50V CAPACITOR  | 20-92    | 0.05 MFD 50V CAPACITOR  |
| 23       | 0.01 MFD 50V CAPACITOR  | 20-93    | 0.01 MFD 50V CAPACITOR  |
| 24       | 0.005 MFD 50V CAPACITOR                                       | 20-94    | 0.005 MFD 50V CAPACITOR                                       |
| 25       | 0.001 MFD 50V CAPACITOR                                       | 20-95    | 0.001 MFD 50V CAPACITOR                                       |
| 26       | 0.0005 MFD 50V CAPACITOR                                      | 20-96    | 0.0005 MFD 50V CAPACITOR                                      |
| 27       | 0.0001 MFD 50V CAPACITOR                                      | 20-97    | 0.0001 MFD 50V CAPACITOR                                      |
| 28       | 0.00005 MFD 50V CAPACITOR                                     | 20-98    | 0.00005 MFD 50V CAPACITOR                                     |
| 29       | 0.00001 MFD 50V CAPACITOR                                     | 20-99    | 0.00001 MFD 50V CAPACITOR                                     |
| 30       | 0.000005 MFD 50V CAPACITOR                                    | 20-100   | 0.000005 MFD 50V CAPACITOR                                    |
| 31       | 0.000001 MFD 50V CAPACITOR                                    | 20-101   | 0.000001 MFD 50V CAPACITOR                                    |
| 32       | 0.0000005 MFD 50V CAPACITOR                                   | 20-102   | 0.0000005 MFD 50V CAPACITOR                                   |
| 33       | 0.0000001 MFD 50V CAPACITOR                                   | 20-103   | 0.0000001 MFD 50V CAPACITOR                                   |
| 34       | 0.00000005 MFD 50V CAPACITOR                                  | 20-104   | 0.00000005 MFD 50V CAPACITOR                                  |
| 35       | 0.00000001 MFD 50V CAPACITOR                                  | 20-105   | 0.00000001 MFD 50V CAPACITOR                                  |
| 36       | 0.000000005 MFD 50V CAPACITOR                                 | 20-106   | 0.000000005 MFD 50V CAPACITOR                                 |
| 37       | 0.000000001 MFD 50V CAPACITOR                                 | 20-107   | 0.000000001 MFD 50V CAPACITOR                                 |
| 38       | 0.0000000005 MFD 50V CAPACITOR                                | 20-108   | 0.0000000005 MFD 50V CAPACITOR                                |
| 39       | 0.0000000001 MFD 50V CAPACITOR                                | 20-109   | 0.0000000001 MFD 50V CAPACITOR                                |
| 40       | 0.00000000005 MFD 50V CAPACITOR                               | 20-110   | 0.00000000005 MFD 50V CAPACITOR                               |
| 41       | 0.00000000001 MFD 50V CAPACITOR                               | 20-111   | 0.00000000001 MFD 50V CAPACITOR                               |
| 42       | 0.000000000005 MFD 50V CAPACITOR                              | 20-112   | 0.000000000005 MFD 50V CAPACITOR                              |
| 43       | 0.000000000001 MFD 50V CAPACITOR                              | 20-113   | 0.000000000001 MFD 50V CAPACITOR                              |
| 44       | 0.0000000000005 MFD 50V CAPACITOR                             | 20-114   | 0.0000000000005 MFD 50V CAPACITOR                             |
| 45       | 0.0000000000001 MFD 50V CAPACITOR                             | 20-115   | 0.0000000000001 MFD 50V CAPACITOR                             |
| 46       | 0.00000000000005 MFD 50V CAPACITOR                            | 20-116   | 0.00000000000005 MFD 50V CAPACITOR                            |
| 47       | 0.00000000000001 MFD 50V CAPACITOR                            | 20-117   | 0.00000000000001 MFD 50V CAPACITOR                            |
| 48       | 0.000000000000005 MFD 50V CAPACITOR                           | 20-118   | 0.000000000000005 MFD 50V CAPACITOR                           |
| 49       | 0.000000000000001 MFD 50V CAPACITOR                           | 20-119   | 0.000000000000001 MFD 50V CAPACITOR                           |
| 50       | 0.0000000000000005 MFD 50V CAPACITOR                          | 20-120   | 0.0000000000000005 MFD 50V CAPACITOR                          |
| 51       | 0.0000000000000001 MFD 50V CAPACITOR                          | 20-121   | 0.0000000000000001 MFD 50V CAPACITOR                          |
| 52       | 0.00000000000000005 MFD 50V CAPACITOR                         | 20-122   | 0.00000000000000005 MFD 50V CAPACITOR                         |
| 53       | 0.00000000000000001 MFD 50V CAPACITOR                         | 20-123   | 0.00000000000000001 MFD 50V CAPACITOR                         |
| 54       | 0.000000000000000005 MFD 50V CAPACITOR                        | 20-124   | 0.000000000000000005 MFD 50V CAPACITOR                        |
| 55       | 0.000000000000000001 MFD 50V CAPACITOR                        | 20-125   | 0.000000000000000001 MFD 50V CAPACITOR                        |
| 56       | 0.0000000000000000005 MFD 50V CAPACITOR                       | 20-126   | 0.0000000000000000005 MFD 50V CAPACITOR                       |
| 57       | 0.0000000000000000001 MFD 50V CAPACITOR                       | 20-127   | 0.0000000000000000001 MFD 50V CAPACITOR                       |
| 58       | 0.00000000000000000005 MFD 50V CAPACITOR                      | 20-128   | 0.00000000000000000005 MFD 50V CAPACITOR                      |
| 59       | 0.00000000000000000001 MFD 50V CAPACITOR                      | 20-129   | 0.00000000000000000001 MFD 50V CAPACITOR                      |
| 60       | 0.000000000000000000005 MFD 50V CAPACITOR                     | 20-130   | 0.000000000000000000005 MFD 50V CAPACITOR                     |
| 61       | 0.000000000000000000001 MFD 50V CAPACITOR                     | 20-131   | 0.000000000000000000001 MFD 50V CAPACITOR                     |
| 62       | 0.0000000000000000000005 MFD 50V CAPACITOR                    | 20-132   | 0.0000000000000000000005 MFD 50V CAPACITOR                    |
| 63       | 0.0000000000000000000001 MFD 50V CAPACITOR                    | 20-133   | 0.0000000000000000000001 MFD 50V CAPACITOR                    |
| 64       | 0.00000000000000000000005 MFD 50V CAPACITOR                   | 20-134   | 0.00000000000000000000005 MFD 50V CAPACITOR                   |
| 65       | 0.00000000000000000000001 MFD 50V CAPACITOR                   | 20-135   | 0.00000000000000000000001 MFD 50V CAPACITOR                   |
| 66       | 0.000000000000000000000005 MFD 50V CAPACITOR                  | 20-136   | 0.000000000000000000000005 MFD 50V CAPACITOR                  |
| 67       | 0.000000000000000000000001 MFD 50V CAPACITOR                  | 20-137   | 0.000000000000000000000001 MFD 50V CAPACITOR                  |
| 68       | 0.0000000000000000000000005 MFD 50V CAPACITOR                 | 20-138   | 0.0000000000000000000000005 MFD 50V CAPACITOR                 |
| 69       | 0.0000000000000000000000001 MFD 50V CAPACITOR                 | 20-139   | 0.0000000000000000000000001 MFD 50V CAPACITOR                 |
| 70       | 0.00000000000000000000000005 MFD 50V CAPACITOR                | 20-140   | 0.00000000000000000000000005 MFD 50V CAPACITOR                |
| 71       | 0.00000000000000000000000001 MFD 50V CAPACITOR                | 20-141   | 0.00000000000000000000000001 MFD 50V CAPACITOR                |
| 72       | 0.000000000000000000000000005 MFD 50V CAPACITOR               | 20-142   | 0.000000000000000000000000005 MFD 50V CAPACITOR               |
| 73       | 0.000000000000000000000000001 MFD 50V CAPACITOR               | 20-143   | 0.000000000000000000000000001 MFD 50V CAPACITOR               |
| 74       | 0.0000000000000000000000000005 MFD 50V CAPACITOR              | 20-144   | 0.0000000000000000000000000005 MFD 50V CAPACITOR              |
| 75       | 0.0000000000000000000000000001 MFD 50V CAPACITOR              | 20-145   | 0.0000000000000000000000000001 MFD 50V CAPACITOR              |
| 76       | 0.00000000000000000000000000005 MFD 50V CAPACITOR             | 20-146   | 0.00000000000000000000000000005 MFD 50V CAPACITOR             |
| 77       | 0.00000000000000000000000000001 MFD 50V CAPACITOR             | 20-147   | 0.00000000000000000000000000001 MFD 50V CAPACITOR             |
| 78       | 0.000000000000000000000000000005 MFD 50V CAPACITOR            | 20-148   | 0.000000000000000000000000000005 MFD 50V CAPACITOR            |
| 79       | 0.000000000000000000000000000001 MFD 50V CAPACITOR            | 20-149   | 0.000000000000000000000000000001 MFD 50V CAPACITOR            |
| 80       | 0.0000000000000000000000000000005 MFD 50V CAPACITOR           | 20-150   | 0.0000000000000000000000000000005 MFD 50V CAPACITOR           |
| 81       | 0.0000000000000000000000000000001 MFD 50V CAPACITOR           | 20-151   | 0.0000000000000000000000000000001 MFD 50V CAPACITOR           |
| 82       | 0.00000000000000000000000000000005 MFD 50V CAPACITOR          | 20-152   | 0.00000000000000000000000000000005 MFD 50V CAPACITOR          |
| 83       | 0.00000000000000000000000000000001 MFD 50V CAPACITOR          | 20-153   | 0.00000000000000000000000000000001 MFD 50V CAPACITOR          |
| 84       | 0.000000000000000000000000000000005 MFD 50V CAPACITOR         | 20-154   | 0.000000000000000000000000000000005 MFD 50V CAPACITOR         |
| 85       | 0.000000000000000000000000000000001 MFD 50V CAPACITOR         | 20-155   | 0.000000000000000000000000000000001 MFD 50V CAPACITOR         |
| 86       | 0.0000000000000000000000000000000005 MFD 50V CAPACITOR        | 20-156   | 0.0000000000000000000000000000000005 MFD 50V CAPACITOR        |
| 87       | 0.0000000000000000000000000000000001 MFD 50V CAPACITOR        | 20-157   | 0.0000000000000000000000000000000001 MFD 50V CAPACITOR        |
| 88       | 0.00000000000000000000000000000000005 MFD 50V CAPACITOR       | 20-158   | 0.00000000000000000000000000000000005 MFD 50V CAPACITOR       |
| 89       | 0.00000000000000000000000000000000001 MFD 50V CAPACITOR       | 20-159   | 0.00000000000000000000000000000000001 MFD 50V CAPACITOR       |
| 90       | 0.000000000000000000000000000000000005 MFD 50V CAPACITOR      | 20-160   | 0.000000000000000000000000000000000005 MFD 50V CAPACITOR      |
| 91       | 0.000000000000000000000000000000000001 MFD 50V CAPACITOR      | 20-161   | 0.000000000000000000000000000000000001 MFD 50V CAPACITOR      |
| 92       | 0.0000000000000000000000000000000000005 MFD 50V CAPACITOR     | 20-162   | 0.0000000000000000000000000000000000005 MFD 50V CAPACITOR     |
| 93       | 0.0000000000000000000000000000000000001 MFD 50V CAPACITOR     | 20-163   | 0.0000000000000000000000000000000000001 MFD 50V CAPACITOR     |
| 94       | 0.00000000000000000000000000000000000005 MFD 50V CAPACITOR    | 20-164   | 0.00000000000000000000000000000000000005 MFD 50V CAPACITOR    |
| 95       | 0.00000000000000000000000000000000000001 MFD 50V CAPACITOR    | 20-165   | 0.00000000000000000000000000000000000001 MFD 50V CAPACITOR    |
| 96       | 0.000000000000000000000000000000000000005 MFD 50V CAPACITOR   | 20-166   | 0.000000000000000000000000000000000000005 MFD 50V CAPACITOR   |
| 97       | 0.000000000000000000000000000000000000001 MFD 50V CAPACITOR   | 20-167   | 0.000000000000000000000000000000000000001 MFD 50V CAPACITOR   |
| 98       | 0.0000000000000000000000000000000000000005 MFD 50V CAPACITOR  | 20-168   | 0.0000000000000000000000000000000000000005 MFD 50V CAPACITOR  |
| 99       | 0.0000000000000000000000000000000000000001 MFD 50V CAPACITOR  | 20-169   | 0.0000000000000000000000000000000000000001 MFD 50V CAPACITOR  |
| 100      | 0.005 MFD 50V CAPACITOR | 20-170   | 0.005 MFD 50V CAPACITOR |

# MANUAL OF MOST-OFTEN-NEEDED RADIO DIAGRAMS

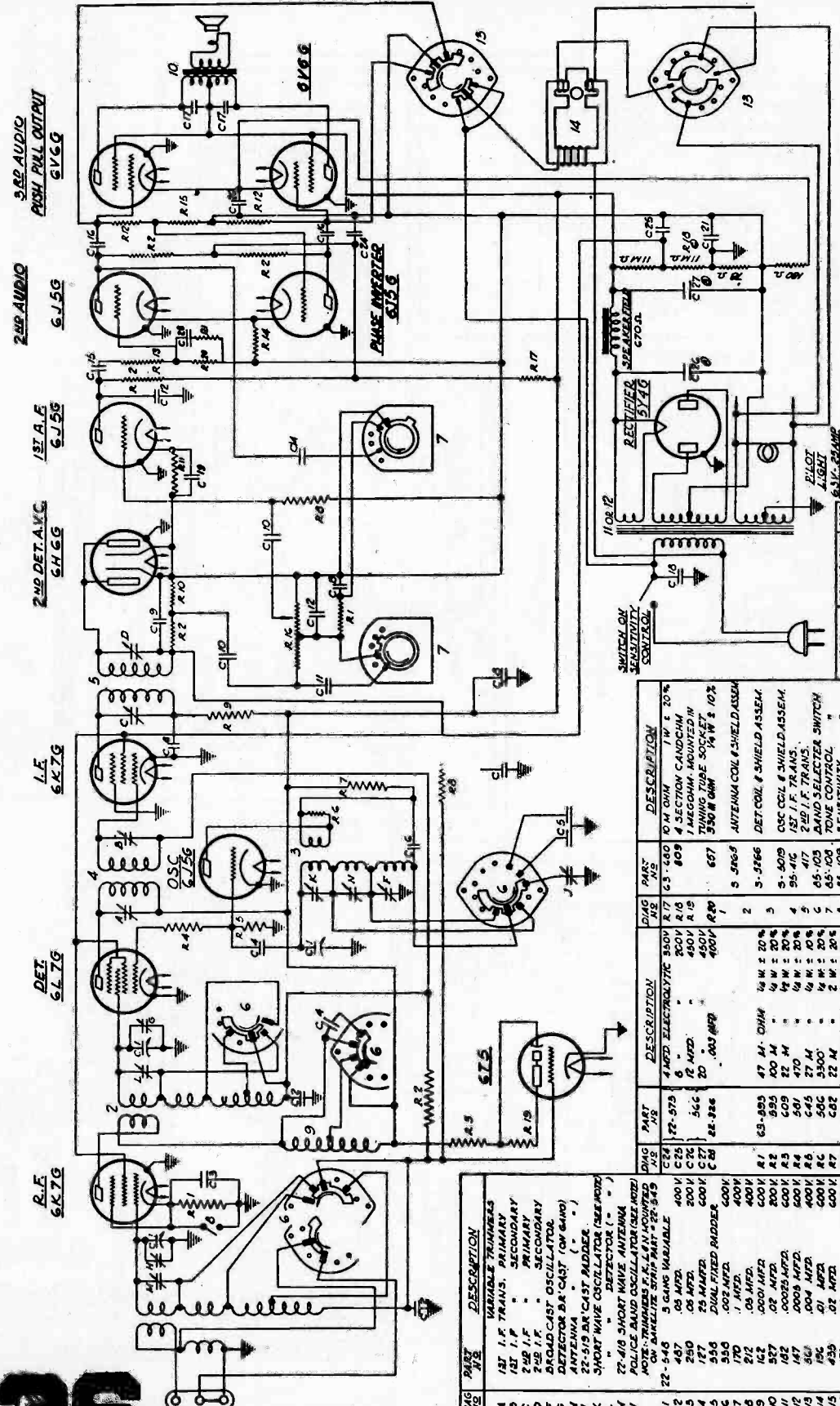


I.F. FREQUENCY - 456 KC.  
 12 TUBE SUPERHETERODYNE  
 CHRS515 No 1202  
 MODELS 12L57-RL38  
 ZENITH RADIO CORP.

| Q18 PART | Q19 PART | DESCRIPTION         |
|----------|----------|---------------------|
| 1        | 22-234   | 16 MFD. 450V.       |
| 2        | 22-234   | 14 MFD.             |
| 3        | 22-415   | 14 MFD.             |
| 4        | 22-433   | 5 MFD.              |
| 5        | 22-433   | 5 MFD.              |
| 6        | 22-433   | 5 MFD.              |
| 7        | 22-424   | 50 100MMFD. PHOONER |
| 8        | 22-420   | 10 MFD.             |
| 9        | 22-420   | 10 MFD.             |
| 10       | 22-420   | 10 MFD.             |
| 11       | 22-420   | 10 MFD.             |
| 12       | 22-420   | 10 MFD.             |
| 13       | 22-420   | 10 MFD.             |
| 14       | 22-420   | 10 MFD.             |
| 15       | 22-420   | 10 MFD.             |
| 16       | 22-420   | 10 MFD.             |
| 17       | 22-420   | 10 MFD.             |
| 18       | 22-420   | 10 MFD.             |
| 19       | 22-420   | 10 MFD.             |
| 20       | 22-420   | 10 MFD.             |
| 21       | 22-420   | 10 MFD.             |
| 22       | 22-420   | 10 MFD.             |
| 23       | 22-420   | 10 MFD.             |
| 24       | 22-420   | 10 MFD.             |
| 25       | 22-420   | 10 MFD.             |
| 26       | 22-420   | 10 MFD.             |
| 27       | 22-420   | 10 MFD.             |
| 28       | 22-420   | 10 MFD.             |
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| 30       | 22-420   | 10 MFD.             |
| 31       | 22-420   | 10 MFD.             |
| 32       | 22-420   | 10 MFD.             |
| 33       | 22-420   | 10 MFD.             |
| 34       | 22-420   | 10 MFD.             |
| 35       | 22-420   | 10 MFD.             |
| 36       | 22-420   | 10 MFD.             |
| 37       | 22-420   | 10 MFD.             |
| 38       | 22-420   | 10 MFD.             |
| 39       | 22-420   | 10 MFD.             |
| 40       | 22-420   | 10 MFD.             |
| 41       | 22-420   | 10 MFD.             |
| 42       | 22-420   | 10 MFD.             |
| 43       | 22-420   | 10 MFD.             |
| 44       | 22-420   | 10 MFD.             |
| 45       | 22-420   | 10 MFD.             |
| 46       | 22-420   | 10 MFD.             |
| 47       | 22-420   | 10 MFD.             |
| 48       | 22-420   | 10 MFD.             |
| 49       | 22-420   | 10 MFD.             |
| 50       | 22-420   | 10 MFD.             |
| 51       | 22-420   | 10 MFD.             |
| 52       | 22-420   | 10 MFD.             |
| 53       | 22-420   | 10 MFD.             |
| 54       | 22-420   | 10 MFD.             |
| 55       | 22-420   | 10 MFD.             |
| 56       | 22-420   | 10 MFD.             |
| 57       | 22-420   | 10 MFD.             |
| 58       | 22-420   | 10 MFD.             |
| 59       | 22-420   | 10 MFD.             |
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| 61       | 22-420   | 10 MFD.             |
| 62       | 22-420   | 10 MFD.             |
| 63       | 22-420   | 10 MFD.             |
| 64       | 22-420   | 10 MFD.             |
| 65       | 22-420   | 10 MFD.             |
| 66       | 22-420   | 10 MFD.             |
| 67       | 22-420   | 10 MFD.             |
| 68       | 22-420   | 10 MFD.             |
| 69       | 22-420   | 10 MFD.             |
| 70       | 22-420   | 10 MFD.             |
| 71       | 22-420   | 10 MFD.             |
| 72       | 22-420   | 10 MFD.             |
| 73       | 22-420   | 10 MFD.             |
| 74       | 22-420   | 10 MFD.             |
| 75       | 22-420   | 10 MFD.             |
| 76       | 22-420   | 10 MFD.             |
| 77       | 22-420   | 10 MFD.             |
| 78       | 22-420   | 10 MFD.             |
| 79       | 22-420   | 10 MFD.             |
| 80       | 22-420   | 10 MFD.             |
| 81       | 22-420   | 10 MFD.             |
| 82       | 22-420   | 10 MFD.             |
| 83       | 22-420   | 10 MFD.             |
| 84       | 22-420   | 10 MFD.             |
| 85       | 22-420   | 10 MFD.             |
| 86       | 22-420   | 10 MFD.             |
| 87       | 22-420   | 10 MFD.             |
| 88       | 22-420   | 10 MFD.             |
| 89       | 22-420   | 10 MFD.             |
| 90       | 22-420   | 10 MFD.             |
| 91       | 22-420   | 10 MFD.             |
| 92       | 22-420   | 10 MFD.             |
| 93       | 22-420   | 10 MFD.             |
| 94       | 22-420   | 10 MFD.             |
| 95       | 22-420   | 10 MFD.             |
| 96       | 22-420   | 10 MFD.             |
| 97       | 22-420   | 10 MFD.             |
| 98       | 22-420   | 10 MFD.             |
| 99       | 22-420   | 10 MFD.             |
| 100      | 22-420   | 10 MFD.             |

# MANUAL OF MOST-OFTEN-NEEDED RADIO DIAGRAMS

Models 12-S-205, 12-S-232, 12-S-245, 12-S-265, 12-S-266, 12-S-267, 12-S-268 (1204 Chassis)



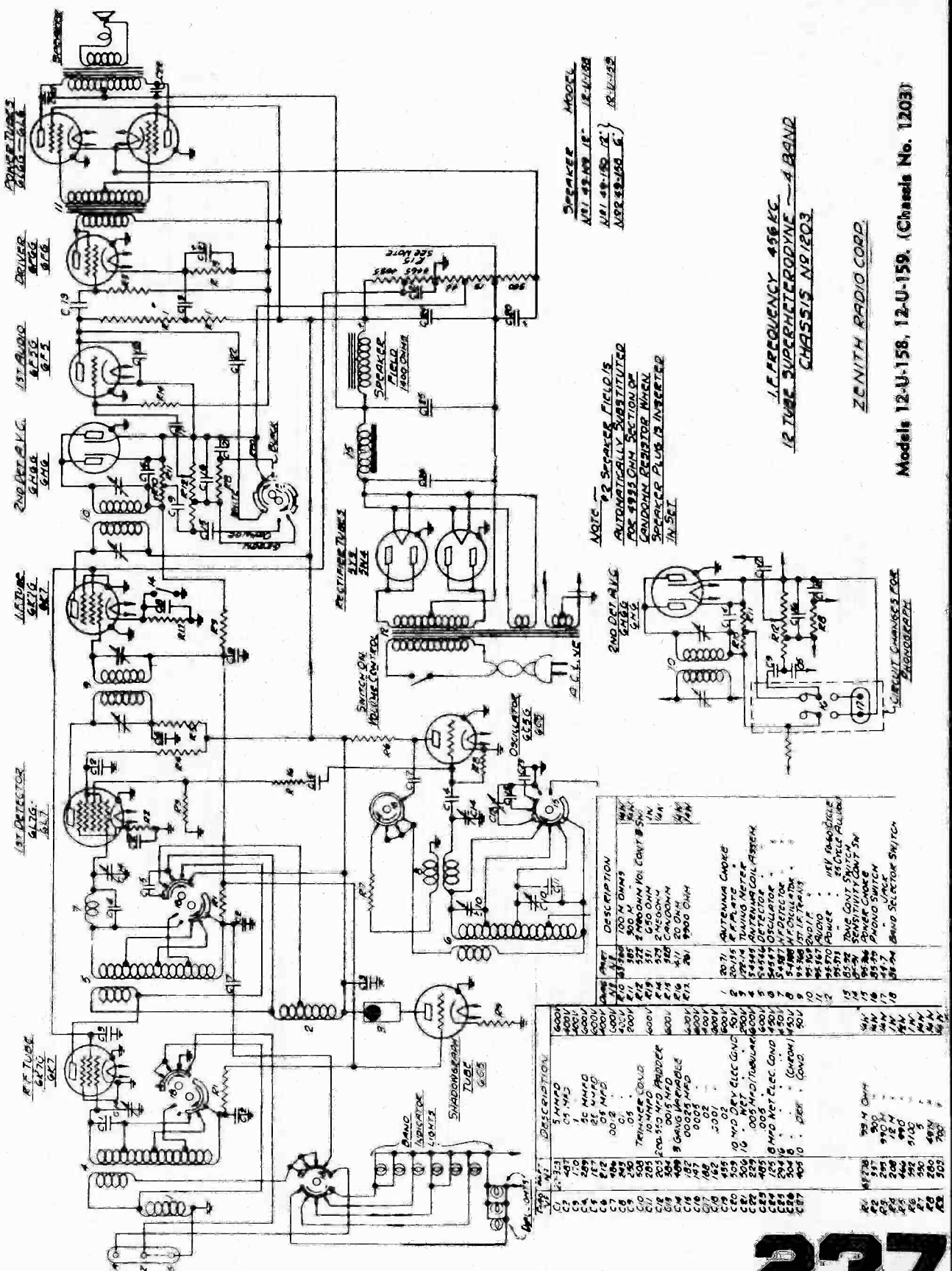
I.F. FREQUENCY 456 K.C.  
 12 TUBE SUPERHETERODYNE  
 3 BAND  
 CHASSIS NO. 1204  
 ZENITH RADIO CORP.

| MODEL     | SPEAKER SIZE    |
|-----------|-----------------|
| 12 S. 205 | 4 1/2" x 6 1/2" |
| 12 S. 232 | 4 1/2" x 6 1/2" |
| 12 S. 245 | 4 1/2" x 6 1/2" |
| 12 S. 265 | 4 1/2" x 6 1/2" |
| 12 S. 266 | 4 1/2" x 6 1/2" |
| 12 S. 267 | 4 1/2" x 6 1/2" |
| 12 S. 268 | 4 1/2" x 6 1/2" |

| DIAG | PART NO. | DESCRIPTION                       | DIAG | PART NO. | DESCRIPTION                            |
|------|----------|-----------------------------------|------|----------|--|
| A    | 1A1      | VARIABLE TUNING                   | 17   | 63-180   | 10 M OHM 1W ± 20%                      |
| B    | 1A2      | I.F. TRANS. PRIMARY               | 18   | 809      | 4 SECTION CANDIDUM                     |
| C    | 1A3      | I.F. TRANS. SECONDARY             | 19   | 810      | 1 MEGOHM MOUNTED IN TUNING TUBE SOCKET |
| D    | 1A4      | I.F. TRANS. PRIMARY               | 20   | 657      | 550 M OHM 1/4 W ± 10%                  |
| E    | 1A5      | I.F. TRANS. SECONDARY             | 21   | 5-5765   | ANTENNA COIL & SHIELD ASSEMBLY         |
| F    | 1A6      | OSC. CAST OSCILLATOR (OH BAND)    | 22   | 5-5019   | DET. COIL & SHIELD ASSEMBLY            |
| G    | 1A7      | ANTENNA                           | 23   | 95-417   | OSC. COIL & SHIELD ASSEMBLY            |
| H    | 1A8      | SHORT WAVE OSCILLATOR (SEE NOTE)  | 24   | 65-103   | 1ST I.F. TRANS.                        |
| I    | 1A9      | POLICE BAND OSCILLATOR (SEE NOTE) | 25   | 65-103   | 2ND I.F. TRANS.                        |
| J    | 1A10     | 10 MFD. ELECTROLYTIC 25V          | 26   | 85-103   | BAND SELECTOR SWITCH                   |
| K    | 1A11     | 10 MFD. ELECTROLYTIC 25V          | 27   | 85-103   | 100 OHM CONTROL                        |
| L    | 1A12     | 10 MFD. ELECTROLYTIC 25V          | 28   | 20-155   | 500 OHM CONTROL                        |
| M    | 1A13     | 10 MFD. ELECTROLYTIC 25V          | 29   | 55-421   | 300 OHM CONTROL                        |
| N    | 1A14     | 10 MFD. ELECTROLYTIC 25V          | 30   | 55-421   | 500 OHM CONTROL                        |
| O    | 1A15     | 10 MFD. ELECTROLYTIC 25V          | 31   | 55-421   | 500 OHM CONTROL                        |
| P    | 1A16     | 10 MFD. ELECTROLYTIC 25V          | 32   | 55-421   | 500 OHM CONTROL                        |
| Q    | 1A17     | 10 MFD. ELECTROLYTIC 25V          | 33   | 55-421   | 500 OHM CONTROL                        |
| R    | 1A18     | 10 MFD. ELECTROLYTIC 25V          | 34   | 55-421   | 500 OHM CONTROL                        |
| S    | 1A19     | 10 MFD. ELECTROLYTIC 25V          | 35   | 55-421   | 500 OHM CONTROL                        |
| T    | 1A20     | 10 MFD. ELECTROLYTIC 25V          | 36   | 55-421   | 500 OHM CONTROL                        |
| U    | 1A21     | 10 MFD. ELECTROLYTIC 25V          | 37   | 55-421   | 500 OHM CONTROL                        |
| V    | 1A22     | 10 MFD. ELECTROLYTIC 25V          | 38   | 55-421   | 500 OHM CONTROL                        |
| W    | 1A23     | 10 MFD. ELECTROLYTIC 25V          | 39   | 55-421   | 500 OHM CONTROL                        |
| X    | 1A24     | 10 MFD. ELECTROLYTIC 25V          | 40   | 55-421   | 500 OHM CONTROL                        |
| Y    | 1A25     | 10 MFD. ELECTROLYTIC 25V          | 41   | 55-421   | 500 OHM CONTROL                        |
| Z    | 1A26     | 10 MFD. ELECTROLYTIC 25V          | 42   | 55-421   | 500 OHM CONTROL                        |
| AA   | 1A27     | 10 MFD. ELECTROLYTIC 25V          | 43   | 55-421   | 500 OHM CONTROL                        |
| AB   | 1A28     | 10 MFD. ELECTROLYTIC 25V          | 44   | 55-421   | 500 OHM CONTROL                        |
| AC   | 1A29     | 10 MFD. ELECTROLYTIC 25V          | 45   | 55-421   | 500 OHM CONTROL                        |
| AD   | 1A30     | 10 MFD. ELECTROLYTIC 25V          | 46   | 55-421   | 500 OHM CONTROL                        |
| AE   | 1A31     | 10 MFD. ELECTROLYTIC 25V          | 47   | 55-421   | 500 OHM CONTROL                        |
| AF   | 1A32     | 10 MFD. ELECTROLYTIC 25V          | 48   | 55-421   | 500 OHM CONTROL                        |
| AG   | 1A33     | 10 MFD. ELECTROLYTIC 25V          | 49   | 55-421   | 500 OHM CONTROL                        |
| AH   | 1A34     | 10 MFD. ELECTROLYTIC 25V          | 50   | 55-421   | 500 OHM CONTROL                        |
| AI   | 1A35     | 10 MFD. ELECTROLYTIC 25V          | 51   | 55-421   | 500 OHM CONTROL                        |
| AJ   | 1A36     | 10 MFD. ELECTROLYTIC 25V          | 52   | 55-421   | 500 OHM CONTROL                        |
| AK   | 1A37     | 10 MFD. ELECTROLYTIC 25V          | 53   | 55-421   | 500 OHM CONTROL                        |
| AL   | 1A38     | 10 MFD. ELECTROLYTIC 25V          | 54   | 55-421   | 500 OHM CONTROL                        |
| AM   | 1A39     | 10 MFD. ELECTROLYTIC 25V          | 55   | 55-421   | 500 OHM CONTROL                        |
| AN   | 1A40     | 10 MFD. ELECTROLYTIC 25V          | 56   | 55-421   | 500 OHM CONTROL                        |
| AO   | 1A41     | 10 MFD. ELECTROLYTIC 25V          | 57   | 55-421   | 500 OHM CONTROL                        |
| AP   | 1A42     | 10 MFD. ELECTROLYTIC 25V          | 58   | 55-421   | 500 OHM CONTROL                        |
| AQ   | 1A43     | 10 MFD. ELECTROLYTIC 25V          | 59   | 55-421   | 500 OHM CONTROL                        |
| AR   | 1A44     | 10 MFD. ELECTROLYTIC 25V          | 60   | 55-421   | 500 OHM CONTROL                        |
| AS   | 1A45     | 10 MFD. ELECTROLYTIC 25V          | 61   | 55-421   | 500 OHM CONTROL                        |
| AT   | 1A46     | 10 MFD. ELECTROLYTIC 25V          | 62   | 55-421   | 500 OHM CONTROL                        |
| AU   | 1A47     | 10 MFD. ELECTROLYTIC 25V          | 63   | 55-421   | 500 OHM CONTROL                        |
| AV   | 1A48     | 10 MFD. ELECTROLYTIC 25V          | 64   | 55-421   | 500 OHM CONTROL                        |
| AW   | 1A49     | 10 MFD. ELECTROLYTIC 25V          | 65   | 55-421   | 500 OHM CONTROL                        |
| AX   | 1A50     | 10 MFD. ELECTROLYTIC 25V          | 66   | 55-421   | 500 OHM CONTROL                        |
| AY   | 1A51     | 10 MFD. ELECTROLYTIC 25V          | 67   | 55-421   | 500 OHM CONTROL                        |
| AZ   | 1A52     | 10 MFD. ELECTROLYTIC 25V          | 68   | 55-421   | 500 OHM CONTROL                        |
| BA   | 1A53     | 10 MFD. ELECTROLYTIC 25V          | 69   | 55-421   | 500 OHM CONTROL                        |
| BB   | 1A54     | 10 MFD. ELECTROLYTIC 25V          | 70   | 55-421   | 500 OHM CONTROL                        |
| BC   | 1A55     | 10 MFD. ELECTROLYTIC 25V          | 71   | 55-421   | 500 OHM CONTROL                        |
| BD   | 1A56     | 10 MFD. ELECTROLYTIC 25V          | 72   | 55-421   | 500 OHM CONTROL                        |
| BE   | 1A57     | 10 MFD. ELECTROLYTIC 25V          | 73   | 55-421   | 500 OHM CONTROL                        |
| BF   | 1A58     | 10 MFD. ELECTROLYTIC 25V          | 74   | 55-421   | 500 OHM CONTROL                        |
| BG   | 1A59     | 10 MFD. ELECTROLYTIC 25V          | 75   | 55-421   | 500 OHM CONTROL                        |
| BH   | 1A60     | 10 MFD. ELECTROLYTIC 25V          | 76   | 55-421   | 500 OHM CONTROL                        |
| BI   | 1A61     | 10 MFD. ELECTROLYTIC 25V          | 77   | 55-421   | 500 OHM CONTROL                        |
| BJ   | 1A62     | 10 MFD. ELECTROLYTIC 25V          | 78   | 55-421   | 500 OHM CONTROL                        |
| BK   | 1A63     | 10 MFD. ELECTROLYTIC 25V          | 79   | 55-421   | 500 OHM CONTROL                        |
| BL   | 1A64     | 10 MFD. ELECTROLYTIC 25V          | 80   | 55-421   | 500 OHM CONTROL                        |
| BM   | 1A65     | 10 MFD. ELECTROLYTIC 25V          | 81   | 55-421   | 500 OHM CONTROL                        |
| BN   | 1A66     | 10 MFD. ELECTROLYTIC 25V          | 82   | 55-421   | 500 OHM CONTROL                        |
| BO   | 1A67     | 10 MFD. ELECTROLYTIC 25V          | 83   | 55-421   | 500 OHM CONTROL                        |
| BP   | 1A68     | 10 MFD. ELECTROLYTIC 25V          | 84   | 55-421   | 500 OHM CONTROL                        |
| BQ   | 1A69     | 10 MFD. ELECTROLYTIC 25V          | 85   | 55-421   | 500 OHM CONTROL                        |
| BR   | 1A70     | 10 MFD. ELECTROLYTIC 25V          | 86   | 55-421   | 500 OHM CONTROL                        |
| BS   | 1A71     | 10 MFD. ELECTROLYTIC 25V          | 87   | 55-421   | 500 OHM CONTROL                        |
| BT   | 1A72     | 10 MFD. ELECTROLYTIC 25V          | 88   | 55-421   | 500 OHM CONTROL                        |
| BU   | 1A73     | 10 MFD. ELECTROLYTIC 25V          | 89   | 55-421   | 500 OHM CONTROL                        |
| BV   | 1A74     | 10 MFD. ELECTROLYTIC 25V          | 90   | 55-421   | 500 OHM CONTROL                        |
| BW   | 1A75     | 10 MFD. ELECTROLYTIC 25V          | 91   | 55-421   | 500 OHM CONTROL                        |
| BX   | 1A76     | 10 MFD. ELECTROLYTIC 25V          | 92   | 55-421   | 500 OHM CONTROL                        |
| BY   | 1A77     | 10 MFD. ELECTROLYTIC 25V          | 93   | 55-421   | 500 OHM CONTROL                        |
| BZ   | 1A78     | 10 MFD. ELECTROLYTIC 25V          | 94   | 55-421   | 500 OHM CONTROL                        |
| CA   | 1A79     | 10 MFD. ELECTROLYTIC 25V          | 95   | 55-421   | 500 OHM CONTROL                        |
| CB   | 1A80     | 10 MFD. ELECTROLYTIC 25V          | 96   | 55-421   | 500 OHM CONTROL                        |
| CC   | 1A81     | 10 MFD. ELECTROLYTIC 25V          | 97   | 55-421   | 500 OHM CONTROL                        |
| CD   | 1A82     | 10 MFD. ELECTROLYTIC 25V          | 98   | 55-421   | 500 OHM CONTROL                        |
| CE   | 1A83     | 10 MFD. ELECTROLYTIC 25V          | 99   | 55-421   | 500 OHM CONTROL                        |
| CF   | 1A84     | 10 MFD. ELECTROLYTIC 25V          | 100  | 55-421   | 500 OHM CONTROL                        |
| CG   | 1A85     | 10 MFD. ELECTROLYTIC 25V          | 101  | 55-421   | 500 OHM CONTROL                        |
| CH   | 1A86     | 10 MFD. ELECTROLYTIC 25V          | 102  | 55-421   | 500 OHM CONTROL                        |
| CI   | 1A87     | 10 MFD. ELECTROLYTIC 25V          | 103  | 55-421   | 500 OHM CONTROL                        |
| CJ   | 1A88     | 10 MFD. ELECTROLYTIC 25V          | 104  | 55-421   | 500 OHM CONTROL                        |
| CK   | 1A89     | 10 MFD. ELECTROLYTIC 25V          | 105  | 55-421   | 500 OHM CONTROL                        |
| CL   | 1A90     | 10 MFD. ELECTROLYTIC 25V          | 106  | 55-421   | 500 OHM CONTROL                        |
| CM   | 1A91     | 10 MFD. ELECTROLYTIC 25V          | 107  | 55-421   | 500 OHM CONTROL                        |
| CN   | 1A92     | 10 MFD. ELECTROLYTIC 25V          | 108  | 55-421   | 500 OHM CONTROL                        |
| CO   | 1A93     | 10 MFD. ELECTROLYTIC 25V          | 109  | 55-421   | 500 OHM CONTROL                        |
| CP   | 1A94     | 10 MFD. ELECTROLYTIC 25V          | 110  | 55-421   | 500 OHM CONTROL                        |
| CQ   | 1A95     | 10 MFD. ELECTROLYTIC 25V          | 111  | 55-421   | 500 OHM CONTROL                        |
| CR   | 1A96     | 10 MFD. ELECTROLYTIC 25V          | 112  | 55-421   | 500 OHM CONTROL                        |
| CS   | 1A97     | 10 MFD. ELECTROLYTIC 25V          | 113  | 55-421   | 500 OHM CONTROL                        |
| CT   | 1A98     | 10 MFD. ELECTROLYTIC 25V          | 114  | 55-421   | 500 OHM CONTROL                        |
| CU   | 1A99     | 10 MFD. ELECTROLYTIC 25V          | 115  | 55-421   | 500 OHM CONTROL                        |
| CV   | 1A100    | 10 MFD. ELECTROLYTIC 25V          | 116  | 55-421   | 500 OHM CONTROL                        |
| CW   | 1A101    | 10 MFD. ELECTROLYTIC 25V          | 117  | 55-421   | 500 OHM CONTROL                        |
| CX   | 1A102    | 10 MFD. ELECTROLYTIC 25V          | 118  | 55-421   | 500 OHM CONTROL                        |
| CY   | 1A103    | 10 MFD. ELECTROLYTIC 25V          | 119  | 55-421   | 500 OHM CONTROL                        |
| CZ   | 1A104    | 10 MFD. ELECTROLYTIC 25V          | 120  | 55-421   | 500 OHM CONTROL                        |
| DA   | 1A105    | 10 MFD. ELECTROLYTIC 25V          | 121  | 55-421   | 500 OHM CONTROL                        |
| DB   | 1A106    | 10 MFD. ELECTROLYTIC 25V          | 122  | 55-421   | 500 OHM CONTROL                        |
| DC   | 1A107    | 10 MFD. ELECTROLYTIC 25V          | 123  | 55-421   | 500 OHM CONTROL                        |
| DD   | 1A108    | 10 MFD. ELECTROLYTIC 25V          | 124  | 55-421   | 500 OHM CONTROL                        |
| DE   | 1A109    | 10 MFD. ELECTROLYTIC 25V          | 125  | 55-421   | 500 OHM CONTROL                        |
| DF   | 1A110    | 10 MFD. ELECTROLYTIC 25V          | 126  | 55-421   | 500 OHM CONTROL                        |
| DG   | 1A111    | 10 MFD. ELECTROLYTIC 25V          | 127  | 55-421   | 500 OHM CONTROL                        |
| DH   | 1A112    | 10 MFD. ELECTROLYTIC 25V          | 128  | 55-421   | 500 OHM CONTROL                        |
| DI   | 1A113    | 10 MFD. ELECTROLYTIC 25V          | 129  | 55-421   | 500 OHM CONTROL                        |
| DJ   | 1A114    | 10 MFD. ELECTROLYTIC 25V          | 130  | 55-421   | 500 OHM CONTROL                        |
| DK   | 1A115    | 10 MFD. ELECTROLYTIC 25V          | 131  | 55-421   | 500 OHM CONTROL                        |
| DL   | 1A116    | 10 MFD. ELECTROLYTIC 25V          | 132  | 55-421   | 500 OHM CONTROL                        |
| DM   | 1A117    | 10 MFD. ELECTROLYTIC 25V          | 133  | 55-421   | 500 OHM CONTROL                        |
| DN   | 1A118    | 10 MFD. ELECTROLYTIC 25V          | 134  | 55-421   | 500 OHM CONTROL                        |
| DO   | 1A119    | 10 MFD. ELECTROLYTIC 25V          | 135  | 55-421   | 500 OHM CONTROL                        |
| DP   | 1A120    | 10 MFD. ELECTROLYTIC 25V          | 136  | 55-421   | 500 OHM CONTROL                        |
| DQ   | 1A121    | 10 MFD. ELECTROLYTIC 25V          | 137  | 55-421   | 500 OHM CONTROL                        |
| DR   | 1A122    | 10 MFD. ELECTROLYTIC 25V          | 138  | 55-421   | 500 OHM CONTROL                        |
| DS   | 1A123    | 10 MFD. ELECTROLYTIC 25V          | 139  | 55-421   | 500 OHM CONTROL                        |
| DT   | 1A124    | 10 MFD. ELECTROLYTIC 25V          | 140  | 55-421   | 500 OHM CONTROL                        |
| DU   | 1A125    | 10 MFD. ELECTROLYTIC 25V          | 141  | 55-421   | 500 OHM CONTROL                        |
| DV   | 1A126    | 10 MFD. ELECTROLYTIC 25V          | 142  | 55-421   | 500 OHM CONTROL                        |
| DW   | 1A127    | 10 MFD. ELECTROLYTIC 25V          | 143  | 55-421   | 500 OHM CONTROL                        |
| DX   | 1A128    | 10 MFD. ELECTROLYTIC 25V          | 144  | 55-421   | 500 OHM CONTROL                        |
| DY   | 1A129    | 10 MFD. ELECTROLYTIC 25V          | 145  | 55-421   | 500 OHM CONTROL                        |
| DZ   | 1A130    | 10 MFD. ELECTROLYTIC 25V          | 146  | 55-421   | 500 OHM CONTROL                        |
| EA   | 1A131    | 10 MFD. ELECTROLYTIC 25V          | 147  | 55-421   | 500 OHM CONTROL                        |
| EB   | 1A132    | 10 MFD. ELECTROLYTIC 25V          | 148  | 55-421   | 500 OHM CONTROL                        |
| EC   | 1A133    | 10 MFD. ELECTROLYTIC 25V          | 149  | 55-421   | 500 OHM CONTROL                        |
| ED   | 1A134    | 10 MFD. ELECTROLYTIC 25V          | 150  | 55-421   | 500 OHM CONTROL                        |
| EE   | 1A135    | 10 MFD. ELECTROLYTIC 25V          | 151  | 55-421   | 500 OHM CONTROL                        |
| EF   | 1A136    | 10 MFD. ELECTROLYTIC 25V          | 152  | 55-421   | 500 OHM CONTROL                        |
| EG   | 1A137    | 10 MFD. ELECTROLYTIC 25V          | 153  | 55-421   | 500 OHM CONTROL                        |
| EH   | 1A138    | 10 MFD. ELECTROLYTIC 25V          | 154  | 55-421   | 500 OHM CONTROL                        |
| EI   | 1A139    | 10 MFD. ELECTROLYTIC 25V          | 155  | 55-421   | 500 OHM CONTROL                        |
| EJ   | 1A140    | 10 MFD. ELECTROLYTIC 25V          | 156  | 55-421   | 500 OHM CONTROL                        |
| EK   | 1A141    | 10 MFD. ELECTROLYTIC 25V          | 157  | 55-421   | 500 OHM CONTROL                        |
| EL   | 1A142    | 10 MFD. ELECTROLYTIC 25V          | 158  | 55-421   | 500 OHM CONTROL                        |
| EM   | 1A143    | 10 MFD. ELECTROLYTIC 25V          | 159  | 55-421   | 500 OHM CONTROL                        |
| EN   | 1A144    | 10 MFD. ELECTROLYTIC 25V          | 160  | 55-421   | 500 OHM CONTROL                        |
| EO   | 1A145    | 10 MFD. ELECTROLYTIC 25V          | 161  | 55-421   | 500 OHM CONTROL                        |
| EP   | 1A146    | 10 MFD. ELECTROLYTIC 25V          | 162  | 55-421   | 500 OHM CONTROL                        |
| EQ   | 1A147    | 10 MFD. ELECTROLYTIC 25V          | 163  | 55-421   | 500 OHM CONTROL                        |
| ER   | 1A148    | 10 MFD. ELECTROLYTIC 25V          | 164  | 55-421   | 500 OHM CONTROL                        |
| ES   | 1A149    | 10 MFD. ELECTROLYTIC 25V          | 165  | 55-421   | 500 OHM CONTROL                        |
| ET   | 1A150    | 10 MFD. ELECTROLYTIC 25V          | 166  | 55-421   | 500 OHM CONTROL                        |
| EU   | 1A151    | 10 MFD.                           |      |          |  |



# MANUAL OF MOST-OFTEN-NEEDED RADIO DIAGRAMS



**SPEAKER MODEL**  
 APT 48-150 (E) 12-U-158  
 APT 48-150 (E) 12-U-159

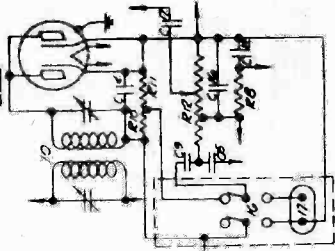
**NOTE: #2 SPEAKER FIELDS**  
 AUTOMATICALLY SUBSTITUTED  
 FOR #225 OHM SECTION OF  
 STANDARD RESISTOR WHEN  
 SPEAKER PLUG IS INSERTED  
 IN SET

**I.F. FREQUENCY 456 KC**  
**12 TUBE SUPERHETERODYNE - 4 BAND**  
**CHASSIS NO. 1203**

**ZENITH RADIO CORP.**

**Models 12-U-158, 12-U-159. (Chassis No. 1203)**

**2ND DET. & V.C.**  
 6X26  
 G.M.C.

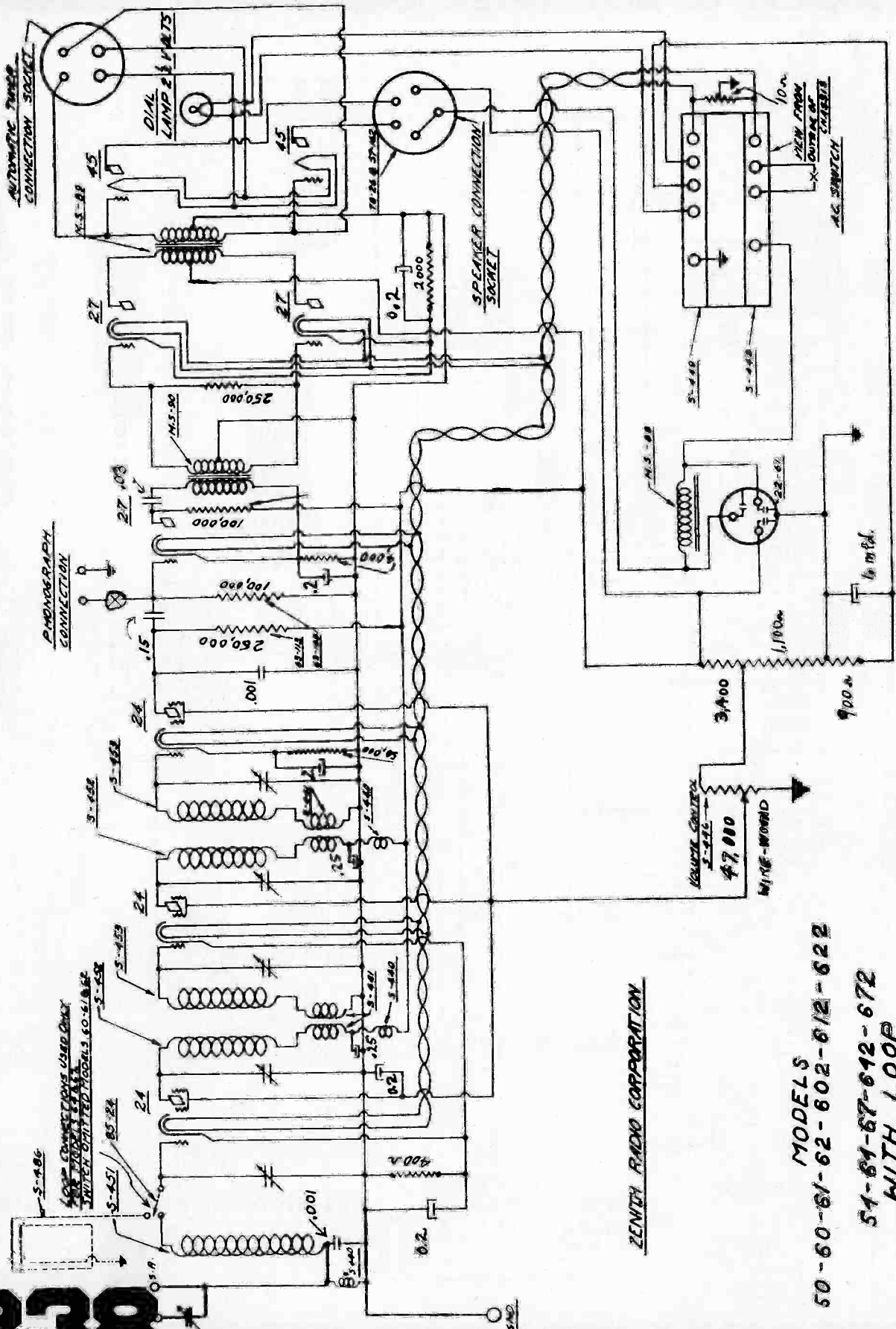


**WARRANTY CHANGES FOR**  
**2805082274**

| Part No. | Description | Value | Part No. | Description           | Value      |
|----------|-------------|-------|----------|-----------------------|------------|
| 1        | 5 MFD       | 500V  | 11       | ANTENNA COIL          | 100 M OHMS |
| 2        | 10 MFD      | 50V   | 12       | TUNING METER          | 200 M OHMS |
| 3        | 10 MFD      | 50V   | 13       | ANTENNA COIL ASSEMBLY | 200 M OHMS |
| 4        | 10 MFD      | 50V   | 14       | OSCILLATOR            | 200 M OHMS |
| 5        | 10 MFD      | 50V   | 15       | IF DETECTOR           | 200 M OHMS |
| 6        | 10 MFD      | 50V   | 16       | IF DETECTOR           | 200 M OHMS |
| 7        | 10 MFD      | 50V   | 17       | IF DETECTOR           | 200 M OHMS |
| 8        | 10 MFD      | 50V   | 18       | IF DETECTOR           | 200 M OHMS |
| 9        | 10 MFD      | 50V   | 19       | IF DETECTOR           | 200 M OHMS |
| 10       | 10 MFD      | 50V   | 20       | IF DETECTOR           | 200 M OHMS |
| 11       | 10 MFD      | 50V   | 21       | IF DETECTOR           | 200 M OHMS |
| 12       | 10 MFD      | 50V   | 22       | IF DETECTOR           | 200 M OHMS |
| 13       | 10 MFD      | 50V   | 23       | IF DETECTOR           | 200 M OHMS |
| 14       | 10 MFD      | 50V   | 24       | IF DETECTOR           | 200 M OHMS |
| 15       | 10 MFD      | 50V   | 25       | IF DETECTOR           | 200 M OHMS |
| 16       | 10 MFD      | 50V   | 26       | IF DETECTOR           | 200 M OHMS |
| 17       | 10 MFD      | 50V   | 27       | IF DETECTOR           | 200 M OHMS |
| 18       | 10 MFD      | 50V   | 28       | IF DETECTOR           | 200 M OHMS |
| 19       | 10 MFD      | 50V   | 29       | IF DETECTOR           | 200 M OHMS |
| 20       | 10 MFD      | 50V   | 30       | IF DETECTOR           | 200 M OHMS |
| 21       | 10 MFD      | 50V   | 31       | IF DETECTOR           | 200 M OHMS |
| 22       | 10 MFD      | 50V   | 32       | IF DETECTOR           | 200 M OHMS |
| 23       | 10 MFD      | 50V   | 33       | IF DETECTOR           | 200 M OHMS |
| 24       | 10 MFD      | 50V   | 34       | IF DETECTOR           | 200 M OHMS |
| 25       | 10 MFD      | 50V   | 35       | IF DETECTOR           | 200 M OHMS |
| 26       | 10 MFD      | 50V   | 36       | IF DETECTOR           | 200 M OHMS |
| 27       | 10 MFD      | 50V   | 37       | IF DETECTOR           | 200 M OHMS |
| 28       | 10 MFD      | 50V   | 38       | IF DETECTOR           | 200 M OHMS |
| 29       | 10 MFD      | 50V   | 39       | IF DETECTOR           | 200 M OHMS |
| 30       | 10 MFD      | 50V   | 40       | IF DETECTOR           | 200 M OHMS |
| 31       | 10 MFD      | 50V   | 41       | IF DETECTOR           | 200 M OHMS |
| 32       | 10 MFD      | 50V   | 42       | IF DETECTOR           | 200 M OHMS |
| 33       | 10 MFD      | 50V   | 43       | IF DETECTOR           | 200 M OHMS |
| 34       | 10 MFD      | 50V   | 44       | IF DETECTOR           | 200 M OHMS |
| 35       | 10 MFD      | 50V   | 45       | IF DETECTOR           | 200 M OHMS |
| 36       | 10 MFD      | 50V   | 46       | IF DETECTOR           | 200 M OHMS |
| 37       | 10 MFD      | 50V   | 47       | IF DETECTOR           | 200 M OHMS |
| 38       | 10 MFD      | 50V   | 48       | IF DETECTOR           | 200 M OHMS |
| 39       | 10 MFD      | 50V   | 49       | IF DETECTOR           | 200 M OHMS |
| 40       | 10 MFD      | 50V   | 50       | IF DETECTOR           | 200 M OHMS |



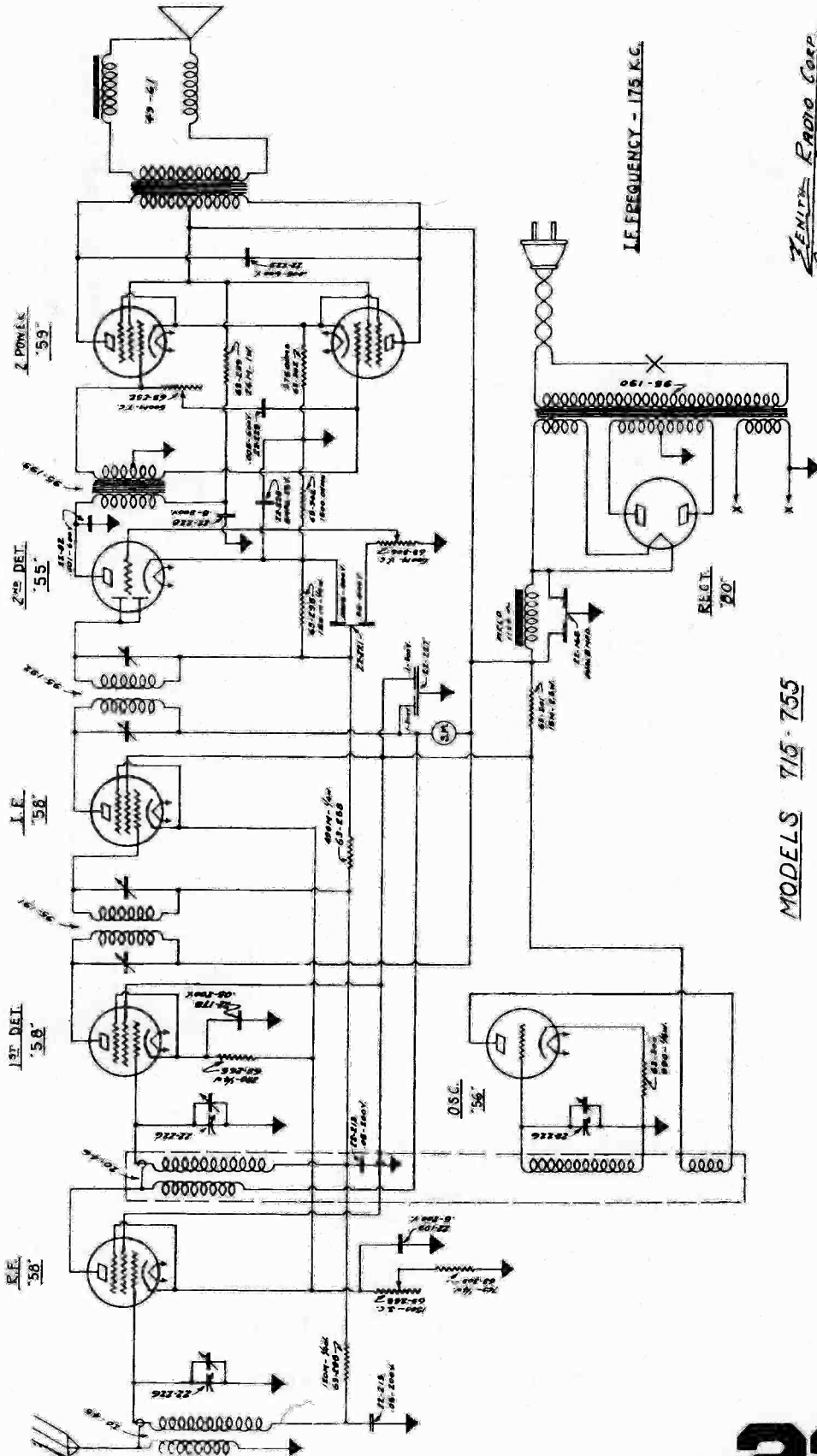
# MANUAL OF MOST-OFTEN-NEEDED RADIO DIAGRAMS



ZENITH RADIO CORPORATION

MODELS  
50-60-61-62-602-612-622  
54-64-67-642-672  
WITH LOOP

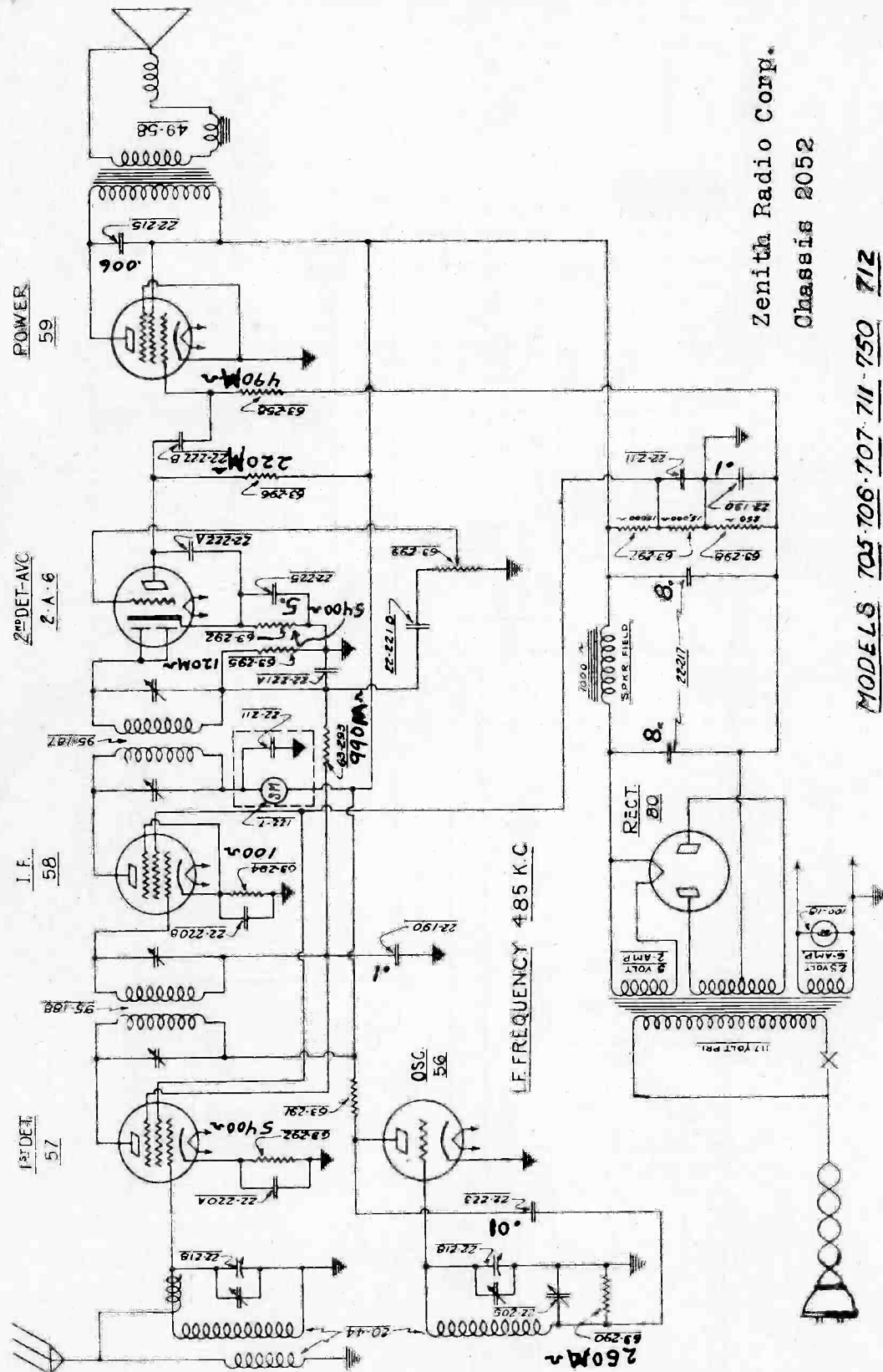
# MANUAL OF MOST-OFTEN-NEEDED RADIO DIAGRAMS



ZENITH Radio Corp.  
Chicago, Ill. U.S.A.  
2053 Chassey

MODELS 715-755

# MANUAL OF MOST-OFTEN-NEEDED RADIO DIAGRAMS



Zenitha Radio Corp.  
 Chassis 2052  
 MODELS 705-706-707-711-750-712





MODELS 1831-1839 incl. STEWART-WARNER CORP.  
 Chassis R-183  
 Alignment, Trimmers  
 Dial Data

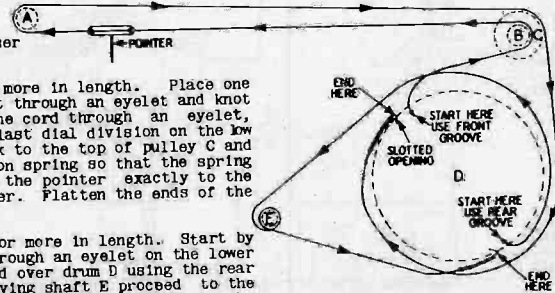
# MODEL R-183 CHASSIS (RECEIVER MODELS 1831 to 1839)

## HOW TO REPLACE THE DIAL CORD

Before attempting to replace either dial cord, fully mesh the gang condenser plates. The holes in drum D should be in the position shown in the diagram.

**REPLACING THE POINTER DRIVE CORD:** The pointer drive cord should be 40 inches or more in length. Place one end of the cord through the upper hole in the front groove of the drum. Put it through an eyelet and knot the end. Flatten the eyelet. Run the free end up over pulley B. Then thread the cord through an eyelet, the pointer slider, and another eyelet. (See diagram). Set the pointer to the last dial division on the low frequency end of the scale. After this run the cord up over pulley A and back to the top of pulley C and frequency end of the scale. Tie the cord to the end of the tension spring so that the end of the spring will be extended to 1-1/8 inches when hooked to the slot in the drum. Now set the pointer exactly to the last low frequency dial scale division and push the eyelets into the pointer slider. Flatten the ends of the eyelets to hold the slider in position on the cord.

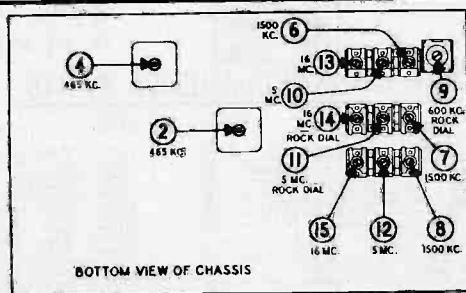
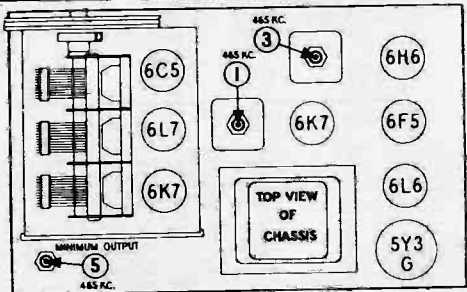
**CONDENSER DRIVE CORD:** The cord for the main condenser drive should be 19 inches or more in length. Start by placing an end of the cord through the lower hole in the rear groove. Put it through an eyelet on the lower side of the drum and tie a knot in the end. Run the loose end of the cord up and over drum D using the rear groove. Then take the cord down to shaft E and wind 1-1/2 turns around it. Leaving shaft E proceed to the lower side of drum D and place the tension spring on the end of the cord. Tie the cord to the end of the tension spring so that the spring will be extended 1-1/8 inches when hooked to the slot in the drum.



## ALIGNMENT EQUIPMENT & PROCEDURE

- With the gang condenser in full mesh the dial pointer should stop opposite the last low frequency scale division. If the pointer is off not more than one scale division, release the setscrew on the flexible coupler and keeping gang closed, turn the tuning knob until the pointer stops in the correct position. Then retighten the setscrew. If the pointer is off several dial divisions it will be necessary that you release the cord at the slider and reset it.
- Connect the output meter between the plate of the 6L6 and the chassis, or across the voice coil of the speaker, depending on the type of meter. The more sensitive type should be connected across the voice coil.
- Connect the ground lead of the signal generator to the chassis and leave it there throughout the entire alignment procedure.
- Turn the volume control to maximum volume position. Turn the tone control to the brilliant position.
- KEEP THE GROUND AND DOUBLET CONNECTIONS, ON THE ANTENNA TERMINAL STRIP, CONNECTED TOGETHER THROUGHOUT THE ENTIRE ALIGNMENT PROCEDURE.

| DUMMY AMP. IN SERIES WITH SIG. GEN. | CONNECTION OF SIG. GENERATOR OUTPUT TO RECEIVER | SIGNAL GENERATOR FREQUENCY | RANGE SWITCH POSITION          | RECEIVER DIAL SETTING                         | TRIMMER NUMBER | TRIMMER DESCRIPTION                | TYPE OF ADJUSTMENT   |
|-------------------------------------|---|----------------------------|--------------------------------|---|----------------|------------------------------------|--|
| .1 MFD. CONDENSER                   | CONTROL GRID OF 6L7 TUBE                        | 465 KC.                    | BROADCAST (Counter-clock-wise) | ANY POINT WHERE IT DOES NOT AFFECT THE SIGNAL | 1-2            | 1ST I.F.                           | ADJUST FOR MAXIMUM OUTPUT. THEN REPEAT ADJUSTMENT.   |
|                                     |   |                            |                                |   | 3-4            | 2ND I.F.                           |  |
| 400 OHM CARBON RESISTOR             | ANTENNA TERMINAL                                | 465 KC.                    | BROADCAST (Counter-clock-wise) | ANY POINT WHERE IT DOES NOT AFFECT THE SIGNAL | 5              | WAVE TRAP                          | ADJUST FOR MINIMUM OUTPUT WITH STRONG SIGNAL.  |
| 400 OHM CARBON RESISTOR             | ANTENNA TERMINAL                                | 1500 KC.                   | BROADCAST (Counter-clock-wise) | 1500 KC.                                      | 6              | BROADCAST OSCILLATOR (Shunt)       | ADJUST TRIMMER TO BRING IN SIGNAL.   |
| 400 OHM CARBON RESISTOR             | ANTENNA TERMINAL                                | 1500 KC.                   | BROADCAST (Counter-clock-wise) | TUNE TO 1500 KC. GENERATOR SIGNAL             | 7              | BROADCAST R.F. BROADCAST ANTENNA   | ADJUST FOR MAXIMUM OUTPUT.   |
|                                     |   |                            |                                |   | 8              | BROADCAST ANTENNA                  |  |
| 400 OHM CARBON RESISTOR             | ANTENNA TERMINAL                                | 600 KC.                    | BROADCAST (Counter-clock-wise) | TUNE TO 600 KC. GENERATOR SIGNAL              | 9              | BROADCAST OSCILLATOR SERIES PADDER | ADJUST FOR MAXIMUM OUTPUT. TRY TO INCREASE OUTPUT BY DETUNING TRIMMER AND RETUNING RECEIVER DIAL UNTIL MAXIMUM OUTPUT IS OBTAINED.   |
| 400 OHM CARBON RESISTOR             | ANTENNA TERMINAL                                | 5.0 MC.                    | POLICE (Center)                | 5.0 MC.                                       | 10             | POLICE OSCILLATOR (Shunt)          | ADJUST TO BRING IN SIGNAL. CHECK TO SEE IF PROPER PEAK WAS OBTAINED BY TUNING IN IMAGE AT APPROX. 4.1 MC. IF IMAGE DOES NOT APPEAR REALIGN AT 5.0 MC. WITH TRIMMER SCREW FARTHER OUT. RECHECK IMAGE. |
| 400 OHM CARBON RESISTOR             | ANTENNA TERMINAL                                | 5.0 MC.                    | POLICE (Center)                | TUNE TO 5.0 MC. GENERATOR SIGNAL              | 11             | POLICE R.F.                        | ADJUST FOR MAXIMUM OUTPUT. TRY TO INCREASE OUTPUT BY DETUNING TRIMMER AND RETUNING RECEIVER DIAL UNTIL MAXIMUM OUTPUT IS OBTAINED.   |
|                                     |   |                            |                                |   | 12             | POLICE ANTENNA                     |  |
| 400 OHM CARBON RESISTOR             | ANTENNA TERMINAL                                | 16.0 MC.                   | SHORT-WAVE (Clock-wise)        | 16.0 MC.                                      | 13             | SHORT-WAVE OSCILLATOR (Shunt)      | ADJUST TO BRING IN SIGNAL. CHECK TO SEE IF PROPER PEAK WAS OBTAINED BY TUNING IN IMAGE AT APPROX. 15.1 KC. IF IMAGE DOES NOT APPEAR REALIGN AT 16 MC. WITH TRIMMER SCREW FARTHER OUT. RECHECK IMAGE. |
| 400 OHM CARBON RESISTOR             | ANTENNA TERMINAL                                | 16.0 MC.                   | SHORT-WAVE (Clock-wise)        | TUNE TO 16.0 MC. GENERATOR SIGNAL             | 14             | SHORT-WAVE R.F.                    | ADJUST FOR MAXIMUM OUTPUT. TRY TO INCREASE OUTPUT BY DETUNING TRIMMER AND RETUNING RECEIVER DIAL UNTIL MAXIMUM OUTPUT IS OBTAINED.   |
|                                     |   |                            |                                |   | 15             | SHORT-WAVE ANTENNA                 |  |







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