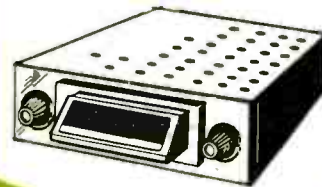


# SAMS PHOTOFACT<sup>®</sup> AUTO RADIO SERIES



AR-29  
**29**  
MAR. 1965



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**HOWARD W. SAMS & CO., INC.** Indianapolis 6, Indiana

\$2.95

Cat. No. AR-29

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# SAMS PHOTOFACT<sup>®</sup>

## AUTO RADIO SERIES

VOLUME

**29**

by the *Howard W. Sams* ENGINEERING STAFF

STU TYSON TV  
WEST BAY SHOPPING CENTER  
PH. 946-3880 - TRAVERSE CITY, MICH.



**HOWARD W. SAMS & CO., INC.**  
INDIANAPOLIS 6, INDIANA

**FIRST EDITION  
FIRST PRINTING—MARCH, 1965**

**PHOTOFACT®  
AUTO RADIO SERIES  
VOLUME 29**

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Library of Congress Catalog Card Number: 49-11493



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# REMOVAL INSTRUCTIONS

## GENERAL REMOVAL INFORMATION

Most radios and speakers can be removed for service by following the steps shown in this block of information. Check the Make, Model and Year of car listed below. If more specific instructions are required, they are shown.

Step 1 Disconnect power, speaker and antenna leads.  
Step 2 Remove knobs.  
Step 3 Remove nuts from control bushings and cabinet braces.

Step 4 Remove radio from under dash.  
Step 5 Remove nuts holding speaker and remove speaker from under dash.

### CHEVROLET - 1964/65

See General Removal Information.

### CHEVROLET TRUCK - 1965

See General Removal Information.

### CHEVY II - 1965

See General Removal Information.

### CHEVELLE - 1965

Step 1 Follow steps 1 thru 4 of General Removal Instructions.  
Step 2 Use phillips screw driver and remove glove box.  
Step 3 Remove speaker thru glove box opening.

### CORVAIR - 1964/65

See General Removal Information.

### COMET - 1965

Step 1 Follow steps 1 thru 4 of General Removal Instructions.  
Step 2 Use phillips screw driver and remove speaker grille.  
Step 3 Remove speaker out top of dash.

### DODGE - 1960

See General Removal Information.

### FORD - 1963

See General Removal Information.

### MERCURY - 1965

See General Removal Information.

### MUSTANG - 1965

Step 1 Follow steps 1 thru of General Removal Instructions.

### MUSTANG (Cont'd)

Step 2 Use phillips screw driver and remove speaker grille.

Step 3 Remove speaker thru top of dash.

Models With Console:

Step 1 Use phillips screw driver and remove glove box.

Step 2 Remove radio thru glove box opening.

### OLDSMOBILE - 1964/65

See General Removal Information.

### OLDSMOBILE F-85 - 1965

See General Removal Information.

### PONTIAC - 1964/65

See General Removal Information.

### TEMPEST - 1965

See General Removal Information.

### VOLKSWAGEN SEDAN,

KARMANN GHIA-1963 thru 1965

Step 1 Disconnect power, speaker and antenna leads.

Step 2 Remove knobs.

Step 3 Remove nuts from control bushings. From inside of luggage compartment, remove nut from rear brace.

Step 4 Remove radio thru luggage compartment opening.

Step 5 Remove nuts holding speaker and remove speaker thru luggage compartment opening.

### VOLKSWAGEN TRANSPORTER -1963 thru 1965

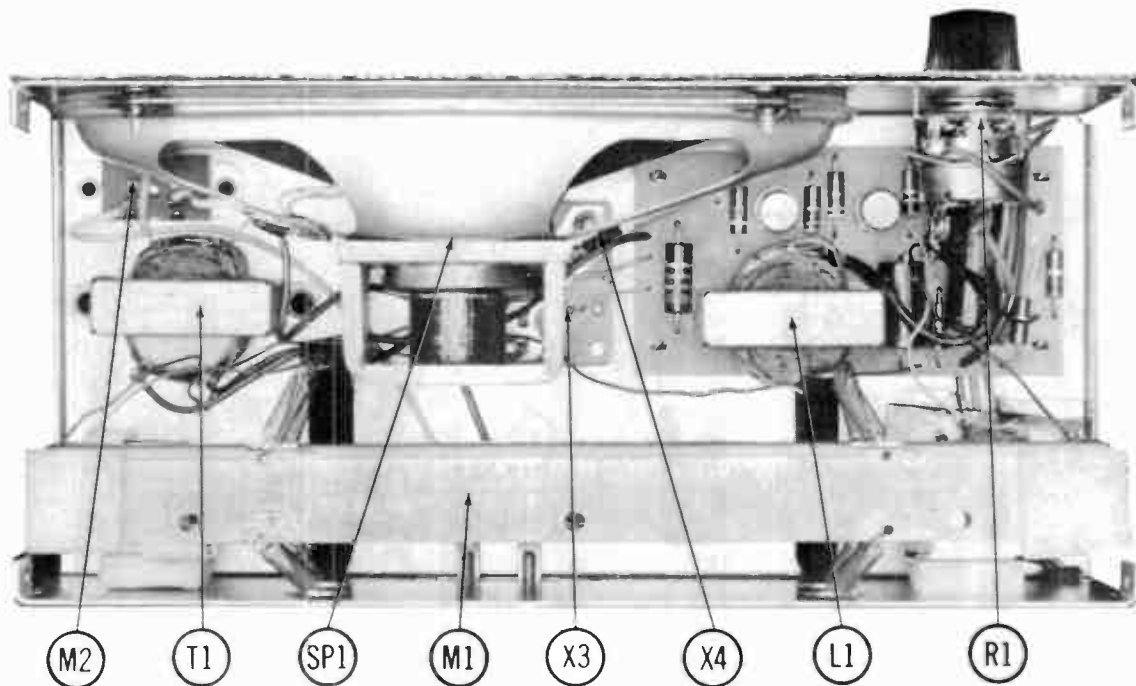
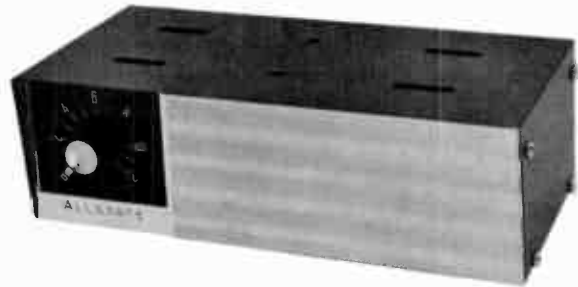
See General Removal Information.



PHOTOFACT<sup>®</sup> with

CIRCUITRACE<sup>®</sup>

TRADE NAME: Allstate Model 835, 62460  
SUPPLIER: For Current Address, See Master Index.  
TYPE SET: 3 Transistor Auto Reverberation Unit  
POWER SUPPLY: 12 Volt Storage Battery  
RATING: .55 Amp. @ 12.6 Volts DC

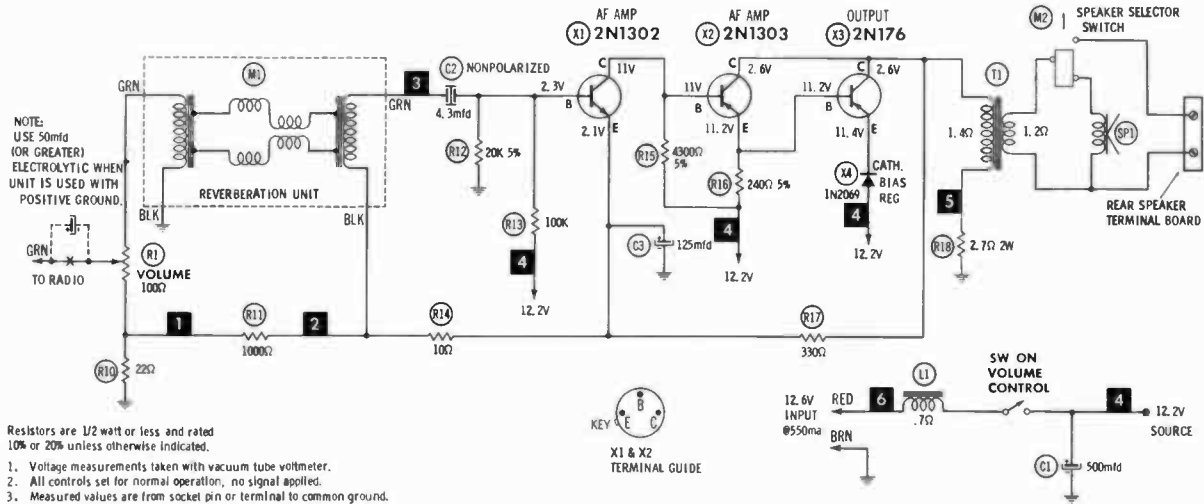


ALLSTATE MODEL 835.62460

HOWARD W. SAMS & CO., INC. Indianapolis 6, Indiana

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World Radio History



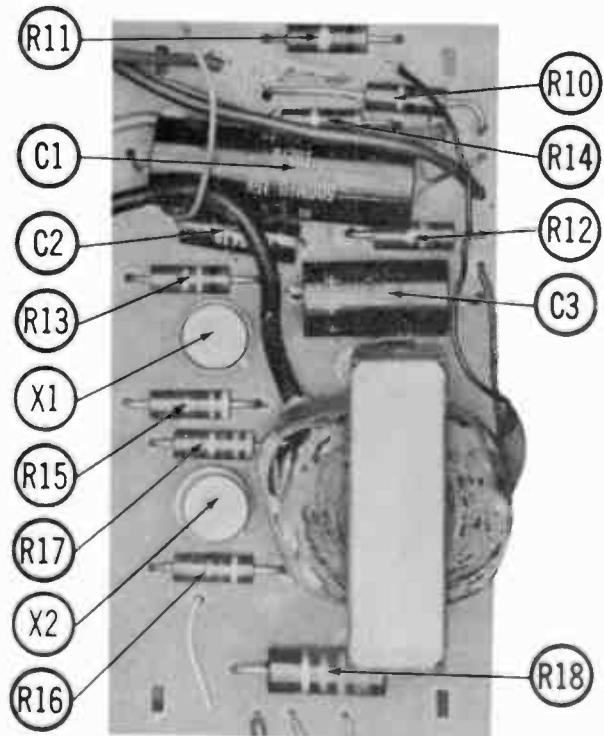
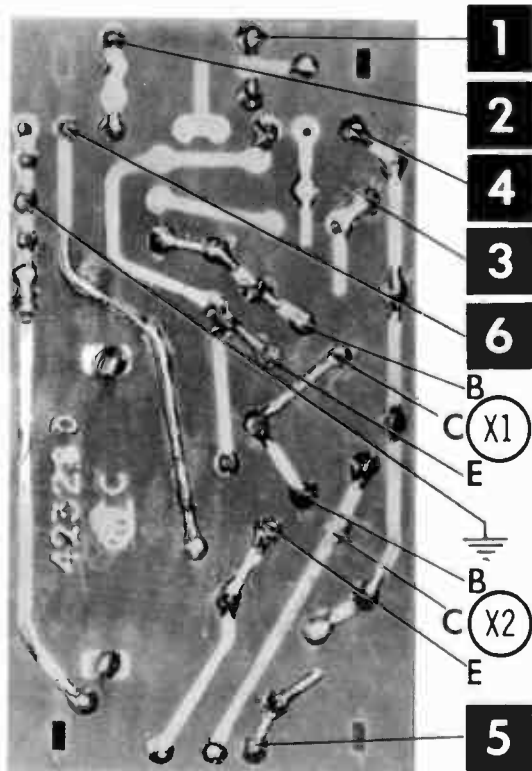
Resistors are 1/2 watt or less and rated 10% or 20% unless otherwise indicated.

1. Voltage measurements taken with vacuum tube voltmeter.
2. All controls set for normal operation, no signal applied.
3. Measured values are from socket pin or terminal to common ground.
4. All terminals viewed from bottom unless otherwise designated.
5. Numbers assigned to terminals may not be found on the unit.
6. Supply voltage maintained at rated value for voltage readings.
7. Resistance measurements not given because of the wide variation in internal resistance of transistor.

A PHOTOFACIT STANDARD NOTATION SCHEMATIC with **CIRCUITRACE**

© Howard W. Sams & Co., Inc. 1965

**ALLSTATE MODEL 835.62460**



A Howard W. Sams **CIRCUITRACE** Photo

# PARTS LIST AND DESCRIPTION

Replacement parts shown may be superseded by the availability of newly introduced replacements.  
Have your local distributor check Sams COUNTER FACTS for the most up-to-date replacement.

## TRANSISTORS

| ITEM No. | ORIG. TYPE | USE     | REPLACEMENT DATA |                           |              | NOTES |
|----------|------------|---------|------------------|---------------------------|--------------|-------|
|          |            |         | DELCO PART No.   | GENERAL ELECTRIC PART No. | RCA PART No. |       |
| X1       | 2N1302     | AF Amp. | D8-46            | GE-10                     | 2N649        | NPN   |
| X2       | 2N1303     | AF Amp. | D8-26            | GE-2                      | 2N591        | PNP   |
| X3       | 2N178      | Output  | D8-520           | GE-3                      | 2N301        | PNP*  |

\* When replacing, apply silicon grease to both sides of insulator. Tighten mounting screws securely. Check bias adjustment.

## POWER RECTIFIERS & SIGNAL DIODES

| ITEM No. | MEASURED CURRENT | ORIGINAL Part or Type No. | RECTIFIERS                |                  |              |                         | DIODES                    |
|----------|------------------|---------------------------|---------------------------|------------------|--------------|-------------------------|---------------------------|
|          |                  |                           | GENERAL ELECTRIC PART No. | MALLORY PART No. | RCA PART No. | SARKES TARZIAN PART No. | GENERAL ELECTRIC PART No. |
| X4       | Bias Reg.        | 1N2069                    |                           |                  |              |                         | 1N34AB                    |

## ELECTROLYTIC CAPACITORS

| ITEM No. | RATING |       | REPLACEMENT DATA  |                  |                           |                           |                             |                  |                  |
|----------|--------|-------|-------------------|------------------|---------------------------|---------------------------|-----------------------------|------------------|------------------|
|          | CAP.   | VOLT. | ALLSTATE PART No. | AEROVOX PART No. | CORNELL-DUBILIER PART No. | GENERAL ELECTRIC PART No. | GENERAL INSTRUMENT PART No. | MALLORY PART No. | SPRAGUE PART No. |
| C1       | 500    | 15    | 70278             | PRS1220          | BR500-15                  | QT1-30                    | BL2342                      | TC1505           | TVA-1182         |
| C2       | 4.3    | 10NP  | 70278             | NP-PRS1405       | BRNP5-400                 | NPQT-1                    |                             | TCN105           | TVANS-1110*      |
| C3       | 125    | 10    | 70277             | CRE426A          | NLW125-15                 | MT1-23                    | BL1830                      | TT12X150         | TE-1138          |

\* Not normally in distributor's stock. Available thru distributor on order to manufacturer.

## CONTROLS

All wattages 1/2 watt, or less, unless otherwise listed.

| ITEM No. | USE           | RESISTANCE | REPLACEMENT DATA  |                                  |                    |                 |   |  |
|----------|---------------|------------|-------------------|----------------------------------|--------------------|-----------------|---|--|
|          |               |            | ALLSTATE PART No. | CENTRALAB PART No.               | CLAROSTAT PART No. | CTS-RC PART No. | MALLORY PART No.                          |  |
| R1       | Volume/Switch | 100Ω       | 70280-1           | F1-100,SKK010, KR-4 or (B1, KR4) |                    |                 | BU-084, SK1, 76-1 or (BU1, CF1, SS1, GC)* | UA12L, SK1000, US41 or (RU12L, SL38, SK1000, US41) or (U1, US26) |

\* "SNAPTROL"

## FILTER CHOKE

| ITEM No. | RATINGS            |         |                              | REPLACEMENT DATA  |                |                  |                     |                | NOTES |
|----------|--------------------|---------|------------------------------|-------------------|----------------|------------------|---------------------|----------------|-------|
|          | CURRENT (Measured) | DC RES. | INDUCTANCE (0 CURRENT 1000~) | ALLSTATE PART No. | MERIT PART No. | STANCOR PART No. | THORDARSON PART No. | TRIAD PART No. |       |
| L1       | .550               | .7Ω     | 11MH                         | 70284             | C-4095         | TC-2             | TR-154              | TY17XT         |       |

## TRANSFORMER (AUDIO OUTPUT)

| ITEM No. | IMPEDANCE |      | REPLACEMENT DATA  |                |                  |                     |                | NOTES |
|----------|-----------|------|-------------------|----------------|------------------|---------------------|----------------|-------|
|          | PRI.      | SEC. | ALLSTATE PART No. | MERIT PART No. | STANCOR PART No. | THORDARSON PART No. | TRIAD PART No. |       |
|          |           |      |                   |                |                  |                     |                |       |
| T1       | 16Ω       | 8Ω   | 70285             |                |                  |                     |                |       |

## SPEAKER

| ITEM No. | TYPE       |    | REPLACEMENT DATA  |               | NOTES |
|----------|------------|----|-------------------|---------------|-------|
|          |            |    | ALLSTATE PART No. | QUAM PART No. |       |
| SP1      | 2" X 6" PM | 8Ω | 70282             | 26A07Z8       |       |

## MISCELLANEOUS

| ITEM No. | PART NAME      | ALLSTATE PART No. | NOTES |
|----------|----------------|-------------------|-------|
| M1       | Reverb Unit    | AO-24600-7        |       |
| M2       | Speaker-Switch | 70279             |       |

## CABINETS & CABINET PARTS

(When Ordering Specify Model, Chassis & Color)

| ITEM | PART No. | ITEM | PART No. |
|------|----------|------|----------|
| Knob | 70324    |      |          |

## WIRING DATA

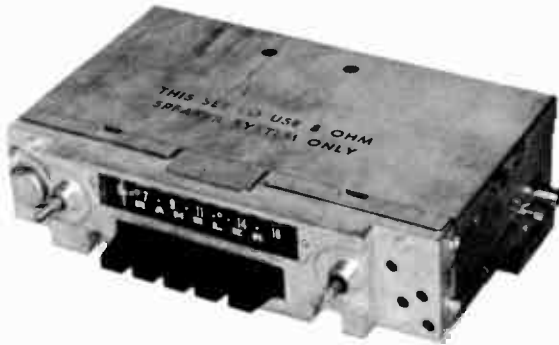
|   |   |
|---|---|
| General-use Unshielded Hook-up Wire ..... | Use BELDEN No. 8530 (Solid) Available in 12 Colors  |
|   | 8524 (Stranded) Available in 12 Colors              |
| Shielded Hook-up Wire .....               | Use BELDEN No. 8885                                 |
| Rear Seat Speaker Extension Cable .....   | Use BELDEN No. 8782 (Stranded) Coded Parallel Leads |
| Bonding Strap .....                       | Use BELDEN No. 8861 (3/8 in.) or 8670 (3/4 in.)     |

ALLSTATE MODEL 835.62460



PHOTOFACT<sup>®</sup> with

CIRCUITRACE<sup>®</sup>



TRADE NAME: American Motors Model 8990981 (2TMR)  
 1962 Rambler  
 SUPPLIER: For Current Address, See Master Index.  
 TYPE SET: 5 Transistor AM Receiver  
 POWER SUPPLY: 12 Volt Storage Battery  
 RATING: .62 Amp. @ 12.6 Volts DC  
 TUNING RANGE: BROADCAST 540-1600KC

AMERICAN MOTORS MODEL 8990981

## ALIGNMENT INSTRUCTIONS

Check for specified source voltage.  
 Use only enough generator output to provide a usable indication.  
 Suggested Alignment Tools:

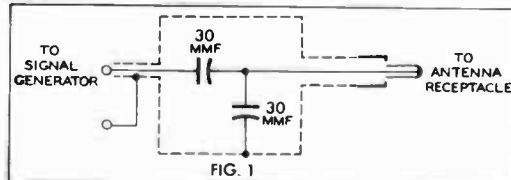
A1 thru A4      GENERAL CEMENT: 8282, 8606, 8606L      WALSCO: 2526, 2543, 2544  
 A5, A6, A7      GENERAL CEMENT: 5004, 5009, 8195      WALSCO: 2515, 2520, 2522

|  | SIGNAL GENERATOR COUPLING                  | SIGNAL GENERATOR FREQUENCY | RADIO DIAL SETTING   | INDICATOR                       | ADJUST         | REMARKS   |
|--|--|----------------------------|----------------------|---------------------------------|----------------|---|
| 1.   | Thru dummy (Fig. 1) to antenna receptacle. | 262.5KC (Unmod.)           | High Freq. End Stop. | Output Meter across voice coil. | A1, A2, A3, A4 | Adjust for maximum.   |
| 2.   | Thru dummy (Fig. 1) to antenna receptacle. | 1615KC                     | "                    | "                               | A5, A6, A7     | "   |
| Step 3 is not necessary unless tuner has been tampered with or associated components have been replaced. IF necessary, back tuning cores (A8, A9, A10) out of coils but not out of forms. Repeat step 2. |  |                            |                      |                                 |                |   |
| 3.   | Thru dummy (Fig. 1) to antenna receptacle. | 1020KC                     | Tune to Signal.      | Output Meter across voice coil. | A8, A9, A10    | Adjust for maximum. Repeat steps 2 & 3 until no further improvement is noted. |

With radio installed in car and antenna fully extended, tune in a weak station near 1200KC and adjust A7 for maximum output.

### PUSH-BUTTON ADJUSTMENT

1. Pull button out.
2. Tune manually to desired station.
3. Press button in firmly.
4. Repeat for remaining buttons.





# PARTS LIST AND DESCRIPTION

Replacement parts shown may be superseded by the availability of newly introduced replacements.  
Have your local distributor check Sams COUNTER FACTS for the most up-to-date replacement.

## TRANSISTORS

| ITEM No. | ORIG. TYPE      | USE          | REPLACEMENT DATA |                           |              | NOTES |
|----------|-----------------|--------------|------------------|---------------------------|--------------|-------|
|          |                 |              | DELCO PART No.   | GENERAL ELECTRIC PART No. | RCA PART No. |       |
| X1       | 2SA72<br>2N640* | RF Amplifier | D6-25            | GE-1                      | 2N1637       | PNP   |
| X2       | 2SA72<br>2N642* | Converter    | D6-25            | GE-1                      | 2N1639       | PNP   |
| X3       | 2SA72<br>2N641* | IF Amplifier | D6-25            | GE-1                      | 2N1638       | PNP   |
| X4       | 2N573           | Driver       | D6-26            | GE-2                      | 2N591        | PNP   |
| X5       | 2N176           | Power Output | D6-520           | GE-3                      | 2N301        | PNP*  |

\* When replacing, apply silicon grease to both sides of insulator. Tighten mounting screws securely.  
\* Alternate.

## POWER RECTIFIERS & SIGNAL DIODES

| ITEM No. | MEASURED CURRENT | ORIGINAL Part or Type No. | RECTIFIERS                |                  |              |                         | DIODES                    |
|----------|------------------|---------------------------|---------------------------|------------------|--------------|-------------------------|---------------------------|
|          |                  |                           | GENERAL ELECTRIC PART No. | MALLORY PART No. | RCA PART No. | SARKES TARZIAN PART No. | GENERAL ELECTRIC PART No. |
| X6       |                  | 48K134587                 |                           |                  |              |                         | 1N34AS                    |
| X7       |                  | 48K134587                 |                           |                  |              |                         | 1N34AS                    |

## ELECTROLYTIC CAPACITORS

| ITEM No. | RATING |       | REPLACEMENT DATA |                  |                           |                           |                             |                  |                  |
|----------|--------|-------|------------------|------------------|---------------------------|---------------------------|-----------------------------|------------------|------------------|
|          | CAP.   | VOLT. | PART No.         | AEROVOX PART No. | CORNELL-DUBILIER PART No. | GENERAL ELECTRIC PART No. | GENERAL INSTRUMENT PART No. | MALLORY PART No. | SPRAGUE PART No. |
| C1A      | 500    | 16    |                  |                  |                           |                           |                             |                  |                  |
| B        | 500    | 16    | 23C40516A02      | PWH3-00-95       |                           | XC3-48                    |                             | PPF300.18        | PCLS-3026.11*    |
| C        | 100    | 16    |                  |                  |                           |                           |                             |                  |                  |
| C2       | 25     | 6NP   | 23C40071A05      | PRS7200          | BBD25-25                  | NPQT-5                    |                             | TCN1025          | TVANS-1205.1*    |

\* Not normally in distributor's stock. Available thru distributor on order to manufacturer.

## FIXED CAPACITORS

| ITEM No. | RATING  | REMARKS    | REPLACEMENT DATA |                    |                           |                  |                  |                  |
|----------|---------|------------|------------------|--------------------|---------------------------|------------------|------------------|------------------|
|          |         |            | AEROVOX PART No. | CENTRALAB PART No. | CORNELL-DUBILIER PART No. | ELMENCO PART No. | MALLORY PART No. | SPRAGUE PART No. |
| C3       | .0033   |            | BPD-0033         | DD-332             | BYA10D33                  | CCD-332          | B233             | 5HK-D33          |
| C4       | 5-80    | #20K534810 |                  |                    |                           | 482              |                  |                  |
| C5       | .0027   | 10%        | DI-2700          |                    | PM6D27                    | CCD-272          | GEM1623          | 10T8-D27         |
| C6       | .05     | 100V       | P288N-05         | DD-503             | CUB285                    | 1DP-2-503        | GEM415           | 2TM-S50          |
| C7       | 1mfd    | 3V         |                  | UK-105             | HCC315P                   |                  |                  | HY-135           |
| C8       | .0039   | 10%        |                  |                    | PM6D39                    | CCD-392          | JL239            | 10T8-D39         |
| C9A      | 56-250  |            | #20C4025402      |                    |                           |                  |                  |                  |
| B        | 220-330 |            | †                |                    |                           |                  |                  |                  |
| C10      | .0068   | 10%        | DI-6800          |                    | PM6D68                    | CCD-682          |                  | 10T8-D68         |
| C11      | 500     | 5%         | 1469-0005        |                    | 5R5T5                     | CM-19B-50LJ      | MCE245           | MB-25            |
| C12      | 150     | N470       | 5%               |                    |                           |                  |                  |                  |
| C13      | .005    | 100V       | ①                |                    |                           |                  |                  |                  |
| C14      | .005    |            | P288N-005        | D6-502             | CUB8D5                    | 1DP-1-502        | GEM625           | 8TM-D50          |
| C15      | .1      | 100V       | BPD-005          | DD-502             | BYA10D5                   | CCD-502          | B250             | 5HK-D50          |
| C16      | 150     | 100V       | P288N-1          | DF-104             | CUB2P1                    | 1DP-2-104        | GEM201           | 2TM-P10          |
| C17      | .01     |            | DI-150           | DD-151             | L10T15                    | CCD-151          | GP315            | 10T8-T15         |
| C18      | .47mfd  | 3V         | BPD-01           | DD-103             | BYA1061                   | CCD-103          | B110             | 5HK-810          |
| C19      | 2.2mfd  | 30V        |                  | UK-474             | HCC3474P                  |                  |                  | HY-130           |
| C20      | .05     | 100V       |                  | UK-225             | HCC3225P                  |                  |                  | HY-150           |
| C21      | .1      | 100V       |                  | DD-503             | CUB285                    | 1DP-2-503        | GEM415           | 2TM-S50          |
|          |         |            | P288N-1          | DF-104             | CUB2P1                    | 1DP-2-104        | GEM201           | 2TM-P10          |

† In early versions C9A was 600mmf nominal value and C11 was not used. C9 replacement will be as listed and C11 must be added if necessary.

\* Not normally in distributor's stock. Available thru distributor on order to manufacturer.

† Motorola Part Number.

① Value may vary. Replace with Original Value.

## CONTROLS

All wattages 1/2 watt, or less, unless otherwise listed.

| ITEM No. | USE             | RESISTANCE       | REPLACEMENT DATA |                    |                    |                  |
|----------|-----------------|------------------|------------------|--------------------|--------------------|------------------|
|          |                 |                  | PART No.         | CENTRALAB PART No. | CLAROSTAT PART No. | CTS-IRC PART No. |
| RIA      | Tone            | 10K              | 18C40764A01      |                    |                    |                  |
| B        | Volume & Switch | 10K              |                  |                    |                    |                  |
|          | Fader           | 2500Ω Tap<br>50Ω | 18K565051        |                    |                    |                  |

## RESISTORS (Power and Special)

| ITEM No. | RATING | REPLACEMENT DATA |                  |                   | ITEM No. | RATING | REPLACEMENT DATA |                  |         |
|----------|--------|------------------|------------------|-------------------|----------|--------|------------------|------------------|---------|
|          |        | IRC PART No.     | WORKMAN PART No. | Motorola PART No. |          |        | IRC PART No.     | WORKMAN PART No. | REMARKS |
| R25      | .33Ω   | BWH.33           | WS.33Ω           | 17B40756A02       |          |        |                  |                  |         |

## COILS (RF-IF)

| ITEM No. | USE      | REPLACEMENT DATA |                |                 |                  | NOTES |
|----------|----------|------------------|----------------|-----------------|------------------|-------|
|          |          | PART No.         | MERIT PART No. | MILLER PART No. | STANCOR PART No. |       |
| L1       | Antenna  | 24B40790A02 ①    |                |                 |                  |       |
| L2       | RF       | 24B40790A01 ①    |                |                 |                  |       |
| L3       | RF Choke | 24K565053        |                |                 |                  |       |
| L4       | Osc.     | 24B40430A02 ①    |                |                 |                  |       |
| L5       | 1st IF   | 24D40074A05      |                |                 |                  |       |
| L6       | 2nd IF   | 24D40075A05      |                |                 |                  |       |

① Part of Tuner M2 or coil and mounting plate assembly Part #IV40500A97.

## FILTER CHOKE

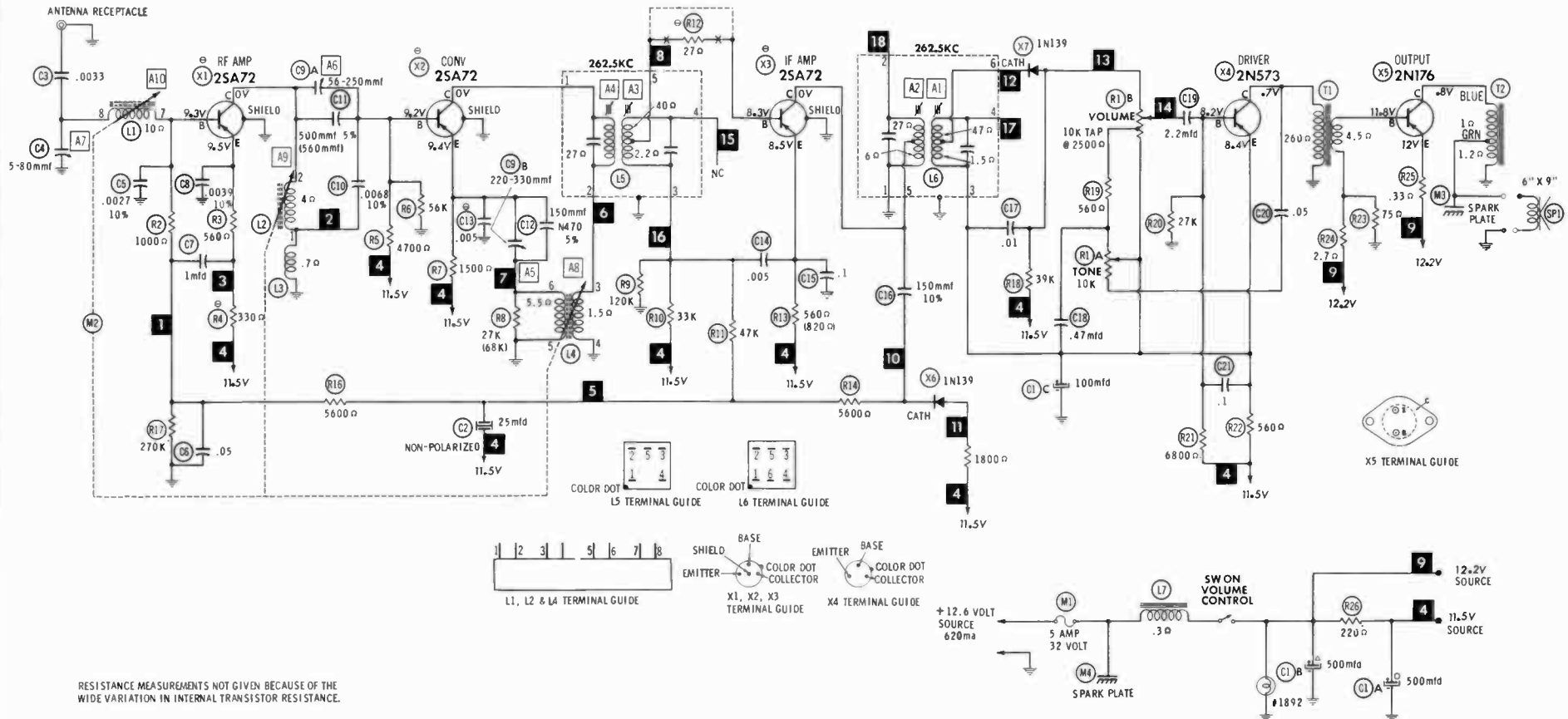
| ITEM No. | RATINGS            |         | REPLACEMENT DATA             |             |                |                  |                     | NOTES  |
|----------|--------------------|---------|------------------------------|-------------|----------------|------------------|---------------------|--------|
|          | CURRENT (Measured) | DC RES. | INDUCTANCE (0 CURRENT 1000~) | PART No.    | MERIT PART No. | STANCOR PART No. | THORDARSON PART No. |        |
| L7       | 12.6V @ .62A       | .3Ω     | 5MH                          | 25C40759A01 | C-4095         | TC-2             | TR-156              | TY17XT |

## TRANSFORMER (DRIVER)

| ITEM No. | TURNS RATIO |      | REPLACEMENT DATA |                |                  |                     |                | NOTES |
|----------|-------------|------|------------------|----------------|------------------|---------------------|----------------|-------|
|          | PRI.        | SEC. | PART No.         | MERIT PART No. | STANCOR PART No. | THORDARSON PART No. | TRIAD PART No. |       |
|          |             |      |                  |                |                  |                     |                |       |

## TRANSFORMER (AUDIO OUTPUT)

| ITEM No. | IMPEDANCE |      | REPLACEMENT DATA |                |                  |                     |                | NOTES |
|----------|-----------|------|------------------|----------------|------------------|---------------------|----------------|-------|
|          | PRI.      | SEC. | PART No.         | MERIT PART No. | STANCOR PART No. | THORDARSON PART No. | TRIAD PART No. |       |
|          |           |      |                  |                |                  |                     |                |       |



RESISTANCE MEASUREMENTS NOT GIVEN BECAUSE OF THE WIDE VARIATION IN INTERNAL TRANSISTOR RESISTANCE.

NUMBERS ASSIGNED TO COILS, SWITCHES, PLUGS, SOCKETS, AND TRANSFORMERS ARE TO FACILITATE CIRCUIT TRACING OR COMPONENT REPLACEMENT AND MAY NOT NECESSARILY BE FOUND ON THE UNIT.

- SEE PARTS LIST FOR ALTERNATE VALUE OR APPLICATION
1. DC voltage measurements taken with vacuum tube voltmeter.
  2. Socket connections shown as bottom views.
  3. Measured values are from socket pin to common ground.
  4. Battery voltage maintained at 12.6 volts for voltage readings.
  5. Nominal tolerance on component values makes possible a variation of  $\pm 15\%$  in voltage and resistance readings.
  6. Volume control at maximum, no signal applied for voltage measurements.

A PHOTOFACIT STANDARD NOTATION SCHEMATIC with **CIRCUITRACE**

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AMERICAN MOTORS MODEL 8990981

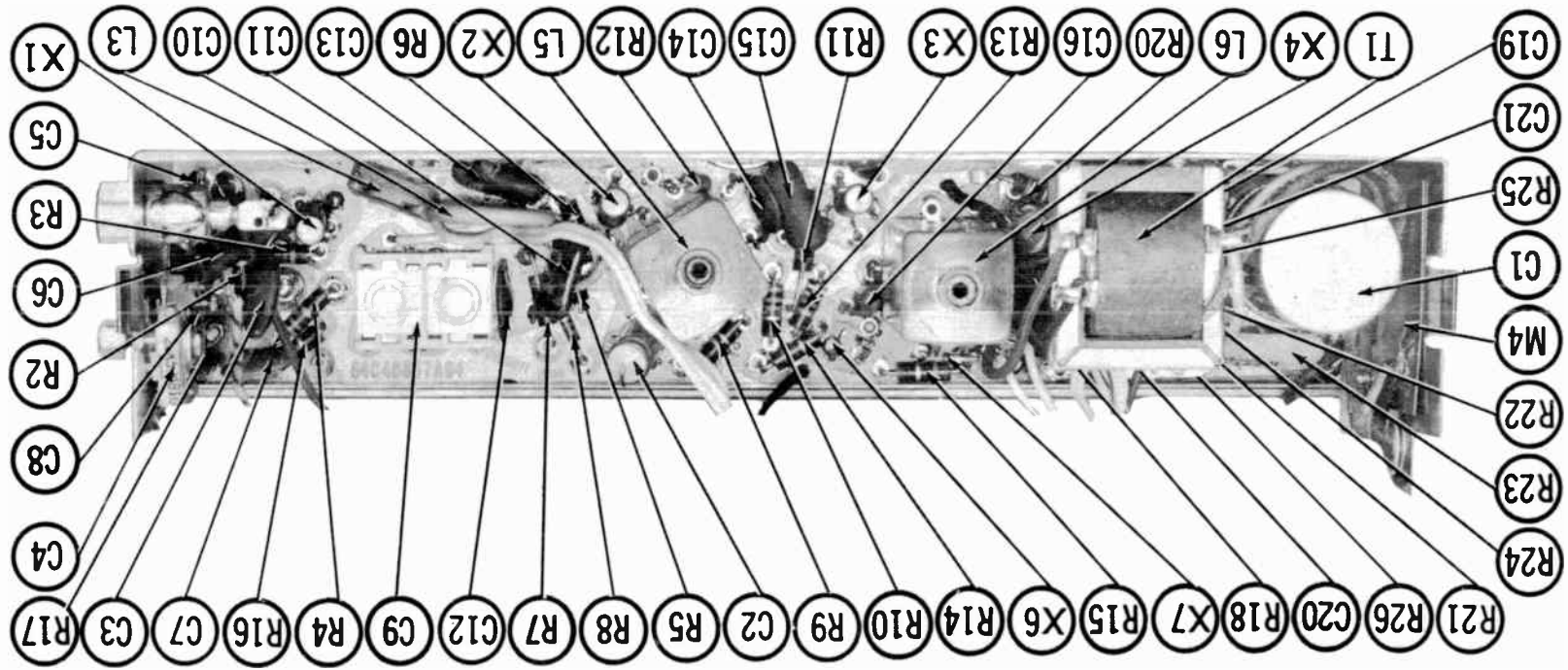
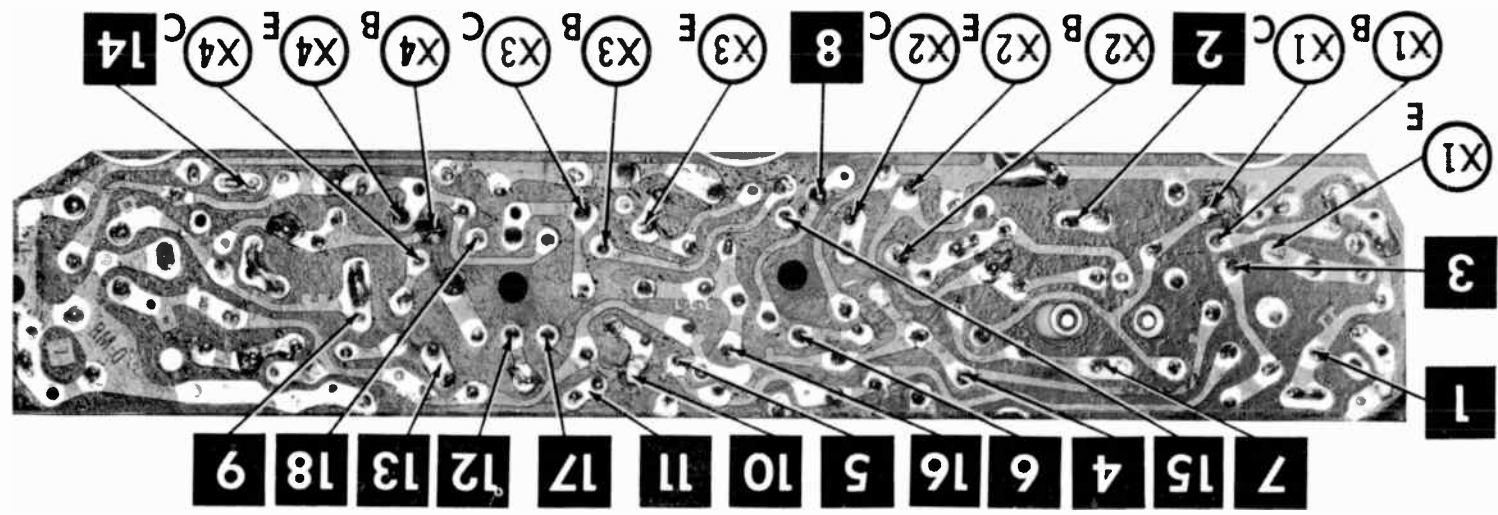


A Howard W. Sams CIRCUITRACE® Photo

PRINTED BOARD

E-EMITTER B-BASE C-COLLECTOR

AMERICAN MOTORS MODEL 8990981 1860668



# PARTS LIST AND DESCRIPTION (CONTINUED)

Replacement parts shown may be superseded by the availability of newly introduced replacements.  
 Have your local distributor check Sams COUNTER FACTS<sup>®</sup> for the most up-to-date replacement.

## SPEAKER

| ITEM No. | TYPE       | REPLACEMENT DATA |               | NOTES     |
|----------|------------|------------------|---------------|-----------|
|          |            | PART No.         | QUAM PART No. |           |
| SP1      | 6" X 9" PM | 6-8Ω             | 50C40780A01   | Rear Seat |
|          | 6" X 9" PM | 6-8Ω             | 50C40780A01   |           |

## FUSES

| ITEM No. | TYPE | RATING    | REPLACEMENT DATA |          |                        |        |               |        |
|----------|------|-----------|------------------|----------|------------------------|--------|---------------|--------|
|          |      |           | PART No.         |          | LITTELFUSE PART No.    |        | BUSS PART No. |        |
|          |      |           | FUSE             | HOLDER   | FUSE                   | HOLDER | FUSE          | HOLDER |
| M1       | 1AG  | 5A<br>32V | 85R122345        | 9K564858 | 301005<br>(LAG 5A 32V) | 155004 | AGA5          | HRF-B  |

## MISCELLANEOUS

| ITEM No. | PART NAME     | PART No.    | NOTES   |
|----------|---------------|-------------|---|
| M2       | Tuner         | 77D40323A02 | AT-347. Complete, including pushbuttons & tuning shaft. |
| M3       | Spark Plate   | 64A580176   |   |
| M4       | Spark Plate   | 84K585152   | Less all components.                                    |
|          | Printed Board | 84C40857A04 |   |
|          | Dial Pointer  | 1V582710    |   |

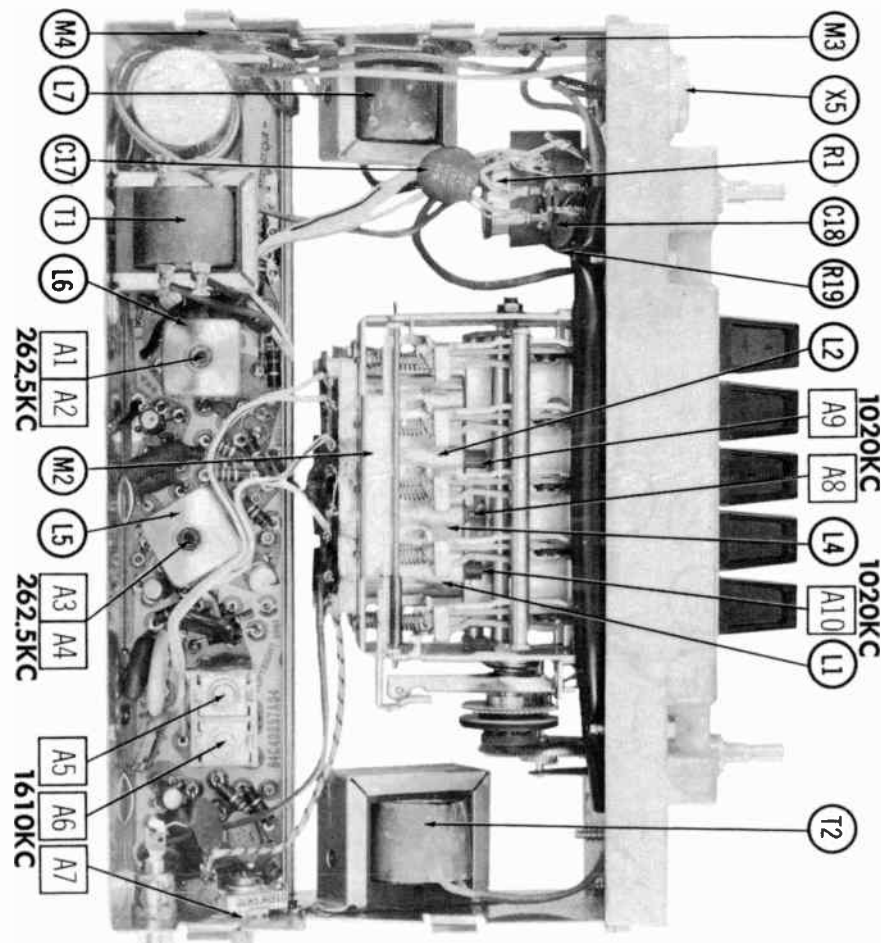
## CABINETS & CABINET PARTS

(When Ordering Specify Model, Chassis & Color)

| ITEM                    | PART No.   | ITEM                    | PART No.  |
|-------------------------|------------|-------------------------|-----------|
| Dial Scale              | 34B562544  | Knob, Tone and Dummy    | 36K540191 |
| Knob, Volume and Tuning | 1A40692A01 | Knob, Rear Seat Speaker | 36K564999 |

## WIRING DATA

|   |  |
|---|--|
| General-use Unshielded Hook-up Wire ..... | Use BELDEN No. 8530 (Solid) Available in 12 Colors<br>8524 (Stranded) Available in 12 Colors |
| Shielded Hook-up Wire .....               | Use BELDEN No. 8885  |
| Rear Seat Speaker Extension Cable .....   | Use BELDEN No. 8782 (Stranded) Coded Parallel Leads  |
| Bonding Strap .....                       | Use BELDEN No. 8661 (3/8 In.) or 8670 (3/4 In.)  |





# PHOTOFACT<sup>®</sup>

TRADE NAME : ATR KARADIO TR720N  
 SUPPLIER : For Current Address, See Master Index.  
 TYPE SET : 5 Transistor AM Receiver  
 POWER SUPPLY : 12 Volt Storage Battery  
 RATING : .67 Amp. @ 12.6 VDC  
 TUNING RANGE: BROADCAST 540 - 1615KC



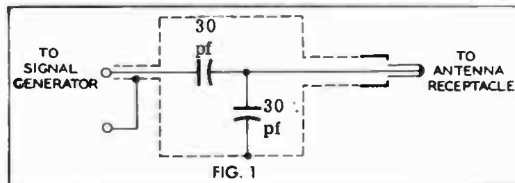
## ALIGNMENT INSTRUCTIONS

Check for specified source voltage.  
 Use only enough generator output to provide a usable indication.  
 Suggested Alignment Tools:

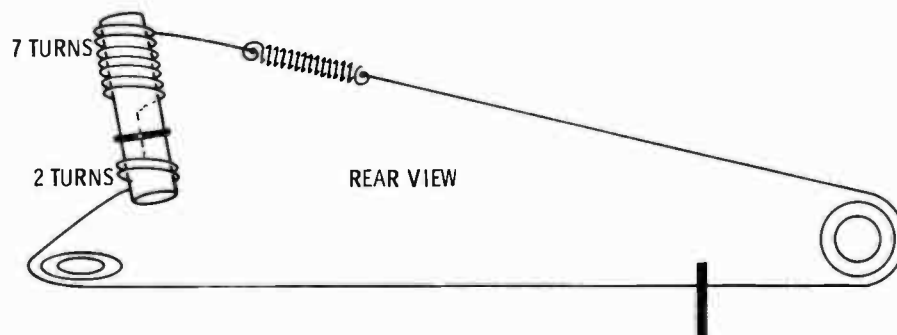
A1 thru A4..... GENERAL CEMENT #8606, 8606L, 8869  
 WALSCO #2543, 2544, 2588  
 A5, A6, A7..... GENERAL CEMENT #8290, 8868, 9087  
 WALSCO #2525, 2528, 2587

|    | SIGNAL GENERATOR COUPLING                                     | SIGNAL GENERATOR FREQUENCY | RADIO DIAL SETTING   | INDICATOR                       | ADJUST         | REMARKS             |
|----|---|----------------------------|----------------------|---------------------------------|----------------|---------------------|
| 1. | High side thru .1mfid to point $\Delta$ , low side to ground. | 262KC (400% Mod.)          | High Freq. End Stop. | Output Meter across voice coil. | A1, A2, A3, A4 | Adjust for maximum. |
| 2. | Thru dummy (Fig. 1) to antenna receptacle.                    | 1615KC                     | "                    | "                               | A5, A6, A7     | "                   |

With radio installed in car and antenna fully extended, tune in a weak station near 1000KC and adjust A7 for maximum output.



## DIAL CORD STRINGING

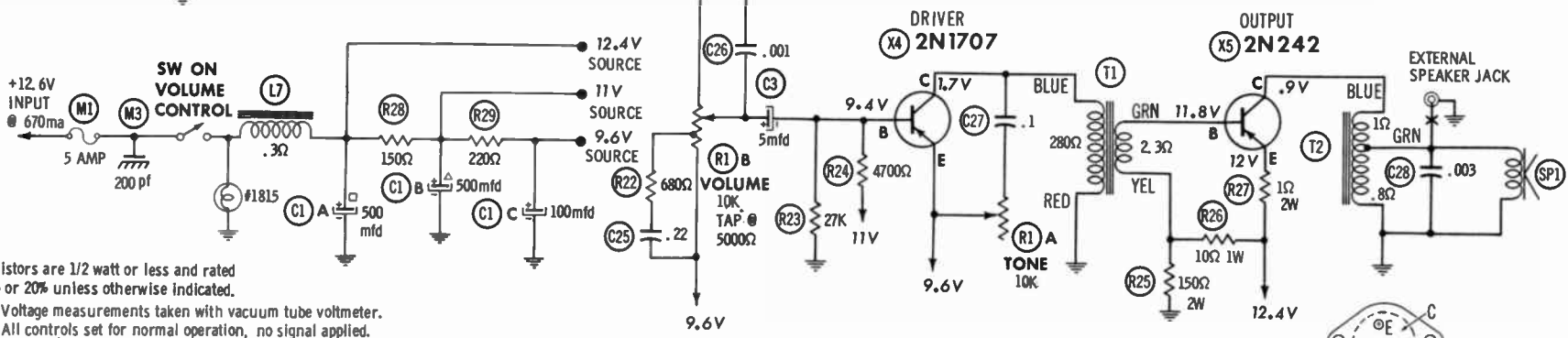
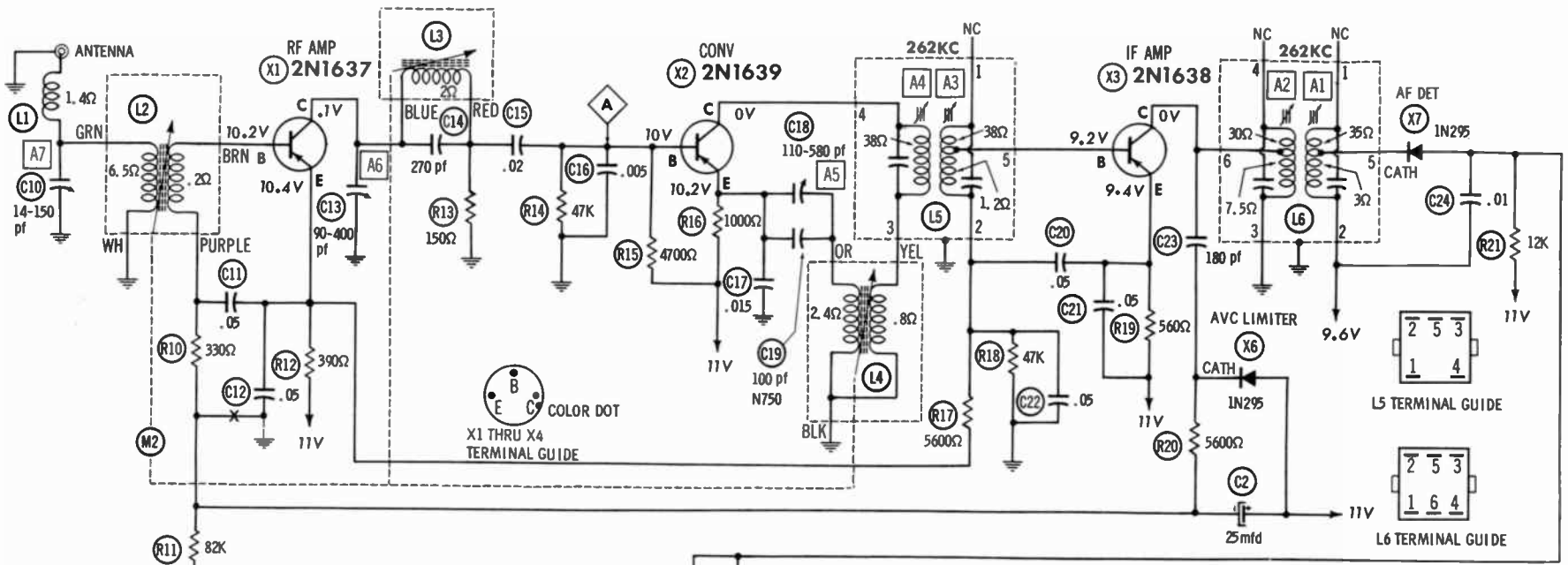


ATR KARADIO MODEL TR720N

**HOWARD W. SAMS & CO., INC.** Indianapolis 6, Indiana

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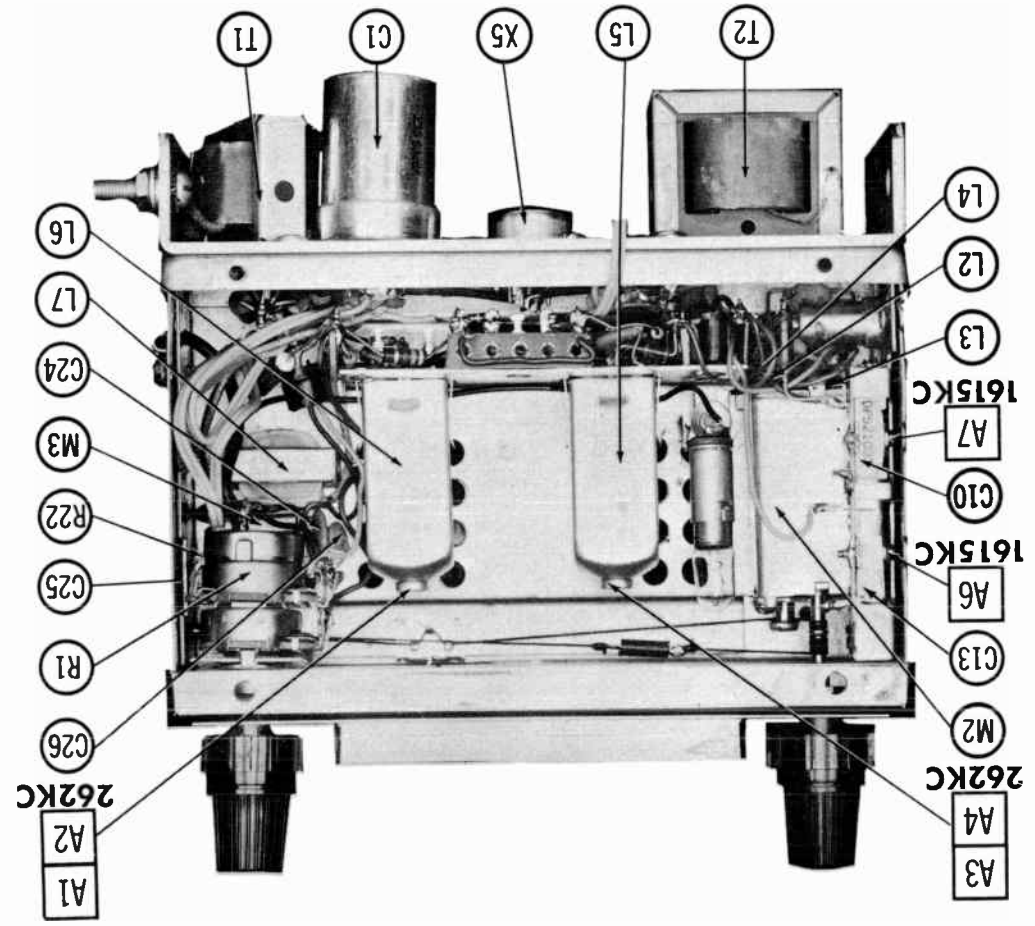
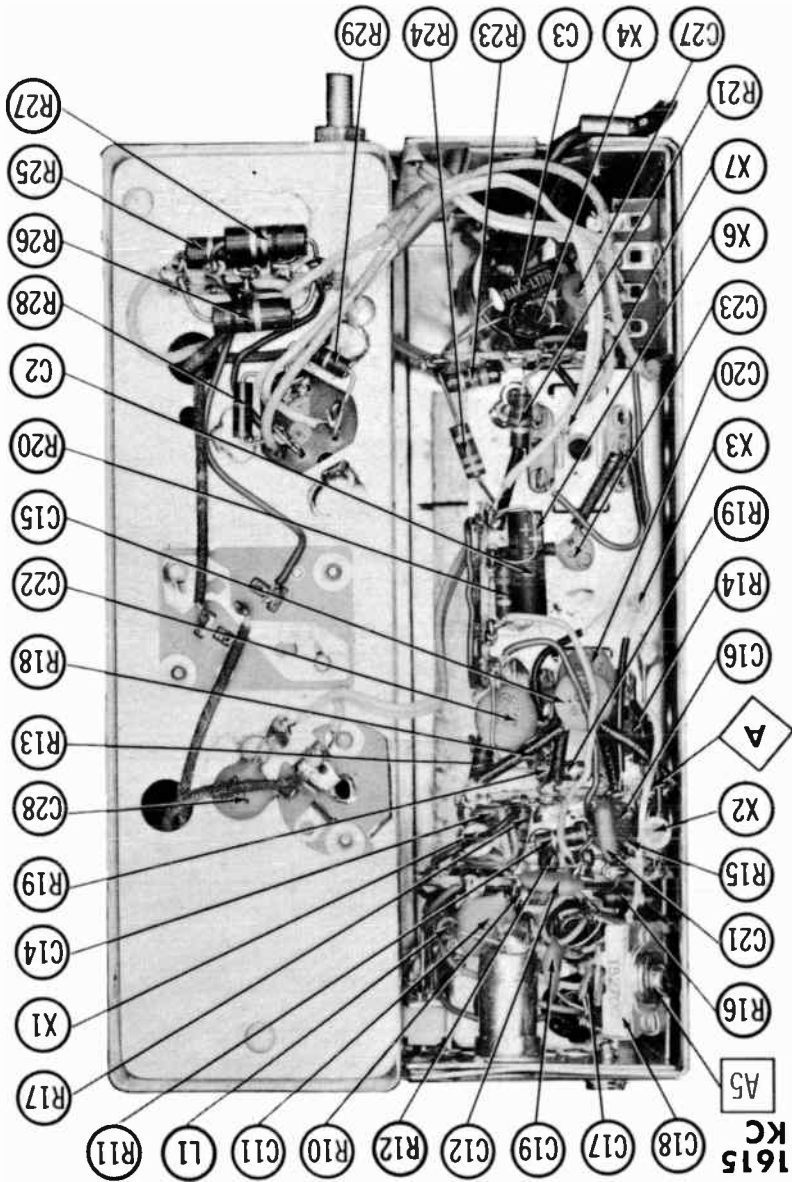


Resistors are 1/2 watt or less and rated 10% or 20% unless otherwise indicated.

1. Voltage measurements taken with vacuum tube voltmeter.
2. All controls set for normal operation, no signal applied.
3. Measured values are from socket pin or terminal to common ground.
4. All terminals viewed from bottom unless otherwise designated.
5. Numbers assigned to terminals may not be found on the unit.
6. Supply voltage maintained at rated value for voltage readings.
7. Resistance measurements not given because of the wide variation in internal resistance of transistor.

A PHOTOFAC STANDARD NOTATION SCHEMATIC  
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ATR KARADIO. MODEL TR720N



# PARTS LIST AND DESCRIPTION

Replacement parts shown may be superseded by the availability of newly introduced replacements.  
 Have your local distributor check Sams COUNTERFACTS<sup>®</sup> for the most up-to-date replacement.

## WIRING DATA

|   |   |
|---|---|
| General-use Unshielded Hook-up Wire ..... | Use BELDEN No. 8530 (Solid) Available in 12 Colors  |
| Shielded Hook-up Wire .....               | 8524 (Stranded) Available in 12 Colors              |
| Rear Seat Speaker Extension Cable .....   | Use BELDEN No. 8885                                 |
| Bonding Strap .....                       | Use BELDEN No. 8782 (Stranded) Coded Parallel Leads |
|   | Use BELDEN No. 8661 (3/8 in.) or 8670 (3/4 in.)     |

## TRANSISTORS

| ITEM No. | ORIG. TYPE | USE       | REPLACEMENT DATA |                           |              | NOTES        |
|----------|------------|-----------|------------------|---------------------------|--------------|--------------|
|          |            |           | DELCO PART No.   | GENERAL ELECTRIC PART No. | RCA PART No. |              |
| X1       | 2N1637     | RF Amp.   | D8-25            | GE-1                      | 2N1637       | PNP          |
| X2       | 2N1639     | Converter | D8-25            | GE-1                      | 2N1639       | PNP          |
| X3       | 2N1638     | IF Amp.   | D8-25            | GE-1                      | 2N1638       | PNP          |
| X4       | 2N1707     | Driver    | D8-26            | GE-2                      | 2N591        | PNP          |
| X5       | 2N242      | Output    | D8-520           | GE-3                      | 2N301        | PNP (Note 1) |

Note 1. When replacing, apply silicone grease to both sides of insulator. Tighten mounting screws securely.

## POWER RECTIFIERS & SIGNAL DIODES

| ITEM No. | MEASURED CURRENT | ORIGINAL Part or Type No. | RECTIFIERS                |                  |              |                         | DIODES |
|----------|------------------|---------------------------|---------------------------|------------------|--------------|-------------------------|--------|
|          |                  |                           | GENERAL ELECTRIC PART No. | MALLORY PART No. | RCA PART No. | SARKES TARZIAN PART No. |        |
| X6       |                  | 1N295                     |                           |                  |              |                         | 1N34A8 |
| X7       |                  | 1N295                     |                           |                  |              |                         | 1N34A8 |

## ELECTROLYTIC CAPACITORS

| ITEM No. | RATING |       | ATR PART No. | REPLACEMENT DATA |                           |                           |                             |                  |                  |
|----------|--------|-------|--------------|------------------|---------------------------|---------------------------|-----------------------------|------------------|------------------|
|          | CAP.   | VOLT. |              | AEROVOX PART No. | CORNELL-DUBILIER PART No. | GENERAL ELECTRIC PART No. | GENERAL INSTRUMENT PART No. | MALLORY PART No. | SPRAGUE PART No. |
| C1A      | 500    | 16    | }            | PWH3-00-95       | CCO012                    | XC3-48                    | TMT3002                     | WP300.85         | TVL-3026.8       |
| C1B      | 500    | 16    |              |                  |                           |                           |                             |                  |                  |
| C1C      | 100    | 16    |              |                  |                           |                           |                             |                  |                  |
| C2       | 25     | 16    |              | CRE612A          | NLW25-25                  | MT1-14                    | BL1550                      | TT25X25          | TL-1157.1        |
| C3       | 5      | 16    |              | CRE604A          | NLW6-25                   | MT1-3                     | BL1250                      | TT25X5           | TL-1152          |

## FIXED CAPACITORS

| ITEM No. | RATING   | REMARKS   | REPLACEMENT DATA |                    |                           |                  |                  |                  |           |
|----------|----------|-----------|------------------|--------------------|---------------------------|------------------|------------------|------------------|-----------|
|          |          |           | AEROVOX PART No. | CENTRALAB PART No. | CORNELL-DUBILIER PART No. | ELMENCO PART No. | MALLORY PART No. | SPRAGUE PART No. |           |
| C10      | 14-150   | #DP521033 |                  |                    |                           |                  |                  |                  |           |
| C11      | .05      | #T511110  | TTD-05           | CK-503             | H5                        |                  | TA-150           | TG-850           |           |
| C12      | .05      |           | TTD-05           | CK-503             | H5                        |                  | TA-150           | TG-850           |           |
| C13      | 90-400   |           |                  |                    |                           |                  |                  |                  |           |
| C14      | 270      | #T52701   | DI-270           | DD-271             | LA10T27-C4                | CCD-271          | GP327            | 5GA-T27          |           |
| C15      | .02      |           | BPD-02           | DD-203             | BYA882                    | CCD-203          | B-120            | 5HK-820          |           |
| C16      | .005     |           | BPD-005          | DD-502             | BYA10D5                   | CCD-502          | B-250            | 5HK-D50          |           |
| C17      | .015     |           | BPD-015          | DD-153             | BYA10B15                  | CCD-153          | GP115            | 10T8-S15         |           |
| C18      | 110-580  |           |                  |                    |                           |                  |                  |                  |           |
| C19      | 100 N750 |           |                  | N750-DI 100        | DTN-100                   | C10T1U           | CCTN-101         | CN7-310          | 10TCU-T10 |
| C20      | .05      |           |                  | TTD-05             | CK-503                    | H5               |                  | TA-150           | TG-850    |
| C21      | .05      |           | TTD-05           | CK-503             | H5                        |                  | TA-150           | TG-850           |           |
| C22      | .05      |           | TTD-05           | CK-503             | H5                        |                  | TA-150           | TG-850           |           |
| C23      | 180      |           | DI-180           | DD-181             | LA10T18-S3                | CCD-181          | QP318            | 5GA-T18          |           |
| C24      | .01      |           | BPD-01           | DD-103             | BYA10B1                   | CCD-103          | B-110            | 5HK-810          |           |
| C25      | .22      |           |                  | UK20-204           | HCC2524Z                  |                  |                  | 5HK-810          |           |
| C26      | .001     |           | BPD-001          | DD-102             | BYA10D1                   | CCD-102          | B-210            | HY-325           |           |
| C27      | .1       |           | TTD-1            | CK-104             | H6                        |                  | TA-010           | 5HK-D10          |           |
| C28      | .003     |           | BPD-0033         | DD-332             | BYA10D33                  | CCD-322          | B-233            | TG-F10           |           |
|          |          |           |                  |                    |                           |                  |                  | 5HK-D33          |           |

# ATR Part Number.

## CONTROLS

All wattages 1/2 watt, or less, unless otherwise listed.

| ITEM No. | USE                 | RESISTANCE             | REPLACEMENT DATA |  |                    |                  |                  |
|----------|---------------------|------------------------|------------------|--|--------------------|------------------|------------------|
|          |                     |                        | ATR PART No.     | CENTRALAB PART No.                                     | CLAROSTAT PART No. | CTS-IRC PART No. | MALLORY PART No. |
| R1       | Tone Volume, Switch | 10K<br>10K Tap @ 5000G | MB3560           | F2-10K ①<br>R16-10K,<br>FFS106, RFS200,<br>AK-31, KR-4 |                    | † QJ-1809A       | †† UE4567-8      |

† "CONCENTRIKIT" Equivalent: K8 Kit with Base Elements and Shafts: B13-116, P22-103 (Panel)  
 † "SNAPTROL" Equivalent: BU6, CF9, CR49T, SF7, SR41, GC. B19-116X, R26-112 (Rear)

†† "STA-LOC" Equivalent: FN14L, RU14T53, OS1062, IS1500, US41.

① Alter bushing to meet requirement.

## COILS (RF-IF)

| ITEM No. | USE              | REPLACEMENT DATA           |                |                 |                  |                  | NOTES        |
|----------|------------------|----------------------------|----------------|-----------------|------------------|------------------|--------------|
|          |                  | ATR PART No.               | MERIT PART No. | MILLER PART No. | STANCOR PART No. | WORKMAN PART No. |              |
| L1       | RF Choke (6.2ub) | ①<br>①<br>①<br>①<br>①<br>① | BC-865         | 4610            | RTC-8520         | T859             | ① Part of M2 |
| L2       | Ant.             |                            |                |                 |                  |                  |              |
| L3       | RF               |                            |                |                 |                  |                  |              |
| L4       | Osc.             |                            |                |                 |                  |                  |              |
| L5       | Input IF         |                            | E014897        | BC-690          |                  |                  |              |
| L6       | Output IF        |                            | E014922        | BC-691          |                  |                  |              |

## FILTER CHOKE

| ITEM No. | RATINGS            |         | REPLACEMENT DATA             |              |                |                  |                     | NOTES  |
|----------|--------------------|---------|------------------------------|--------------|----------------|------------------|---------------------|--------|
|          | CURRENT (Measured) | DC RES. | INDUCTANCE (0 CURRENT 1000-) | ATR PART No. | MERIT PART No. | STANCOR PART No. | THORDARSON PART No. |        |
| L7       | 670MA              | .3Ω     | 10MH                         | 454CB3       | C-4095         | TC-2             | TR-155              | TY17XT |

## TRANSFORMER (DRIVER)

| ITEM No. | TURNS RATIO | REPLACEMENT DATA |                |                  |                     |                | NOTES |
|----------|-------------|------------------|----------------|------------------|---------------------|----------------|-------|
|          |             | ATR PART No.     | MERIT PART No. | STANCOR PART No. | THORDARSON PART No. | TRIAD PART No. |       |
|          |             |                  |                |                  |                     |                |       |
| T1       | 15: 1       | 454AT1           |                |                  | TR-187              |                |       |

## TRANSFORMER (AUDIO OUTPUT)

| ITEM No. | IMPEDANCE      | REPLACEMENT DATA |                |                  |                     |                | NOTES |
|----------|----------------|------------------|----------------|------------------|---------------------|----------------|-------|
|          |                | ATR PART No.     | MERIT PART No. | STANCOR PART No. | THORDARSON PART No. | TRIAD PART No. |       |
| T2       | 30Ω Tap @ 3-4Ω | 454AT2           |                |                  |                     |                |       |

## FUSES

| ITEM No. | TYPE | RATING | REPLACEMENT DATA |        |                     |        | BUSS PART No. |        |
|----------|------|--------|------------------|--------|---------------------|--------|---------------|--------|
|          |      |        | ATR PART No.     |        | LITTELFUSE PART No. |        | FUSE          | HOLDER |
|          |      |        | FUSE             | HOLDER | FUSE                | HOLDER |               |        |
| M1       | AGC  | 5A     |                  |        | 311005              | 155020 | AGC 5         | HDJ    |

## MISCELLANEOUS

| ITEM No. | PART NAME                 | ATR PART No. |
|----------|---------------------------|--------------|
| M2       | Tuner Spark Plate (200px) | 830821       |

## SPEAKER

| ITEM No. | TYPE            | REPLACEMENT DATA |               |
|----------|-----------------|------------------|---------------|
|          |                 | ATR PART No.     | QUAM PART No. |
| SP1      | 3" x 5" PM 3-4Ω |                  | 35A05         |





# PHOTOFACT<sup>®</sup>

**TRADE NAME:** ATR Model TT-727 (Tractor Radio)  
**SUPPLIER:** For Current Address, See Master Index.  
**TYPE SET:** 5 Transistor AM Receiver  
**POWER SUPPLY:** 12 Volt Storage Battery  
**RATING:** .67 Amp. @ 12.6 Volts DC  
  
**TUNING RANGE:** BROADCAST 540-1615KC



ATR MODEL TT-727

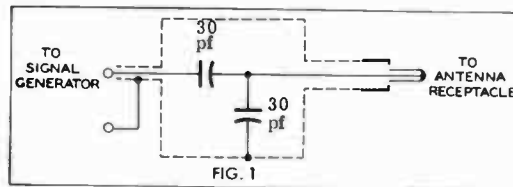
## ALIGNMENT INSTRUCTIONS

Check for specified source voltage.  
 Use only enough generator output to provide a usable indication.  
 Suggested Alignment Tools:

|            |                                   |                          |
|------------|-----------------------------------|--------------------------|
| A1 thru A4 | GENERAL CEMENT: 8606, 8606L, 8869 | WALSCO: 2543, 2544, 2588 |
| A5, A6, A7 | GENERAL CEMENT: 8290, 8868, 9087  | WALSCO: 2525, 2528, 2587 |

|    | SIGNAL GENERATOR COUPLING                                     | SIGNAL GENERATOR FREQUENCY | RADIO DIAL SETTING   | INDICATOR                       | ADJUST         | REMARKS             |
|----|---|----------------------------|----------------------|---------------------------------|----------------|---------------------|
| 1. | High side thru .1mfid to point $\Delta$ , low side to ground. | 262KC (400v Mod.)          | High Freq. End Stop. | Output Meter across voice coil. | A1, A2, A3, A4 | Adjust for maximum. |
| 2. | Thru dummy (Fig. 1) to antenna receptacle.                    | 1615KC                     | "                    | "                               | A5, A6, A7     | "                   |

With radio installed and antenna fully extended, tune in a weak station near 1000KC and adjust A7 for maximum output.

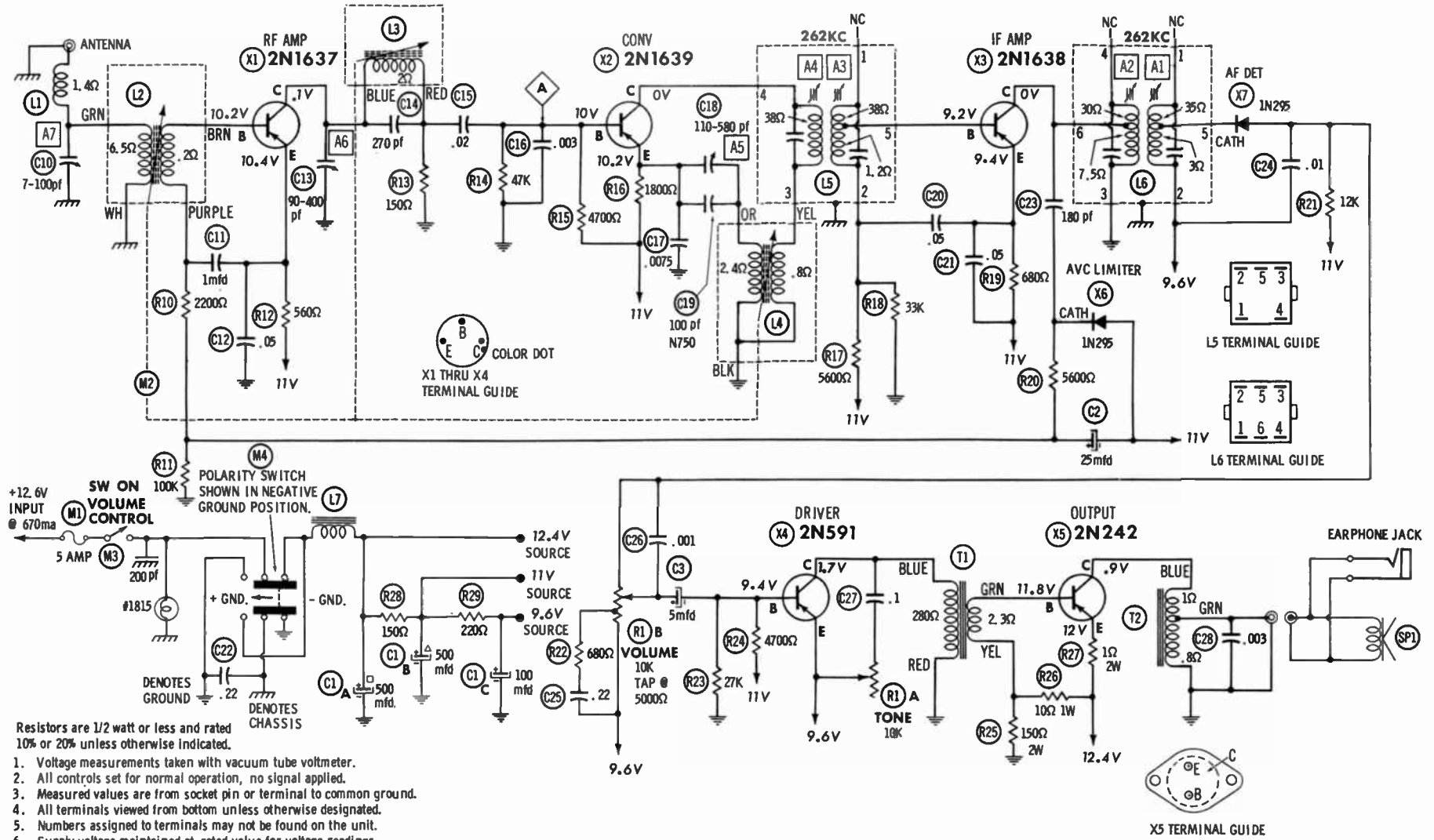


**HOWARD W. SAMS & CO., INC.** Indianapolis 6, Indiana

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World Radio History



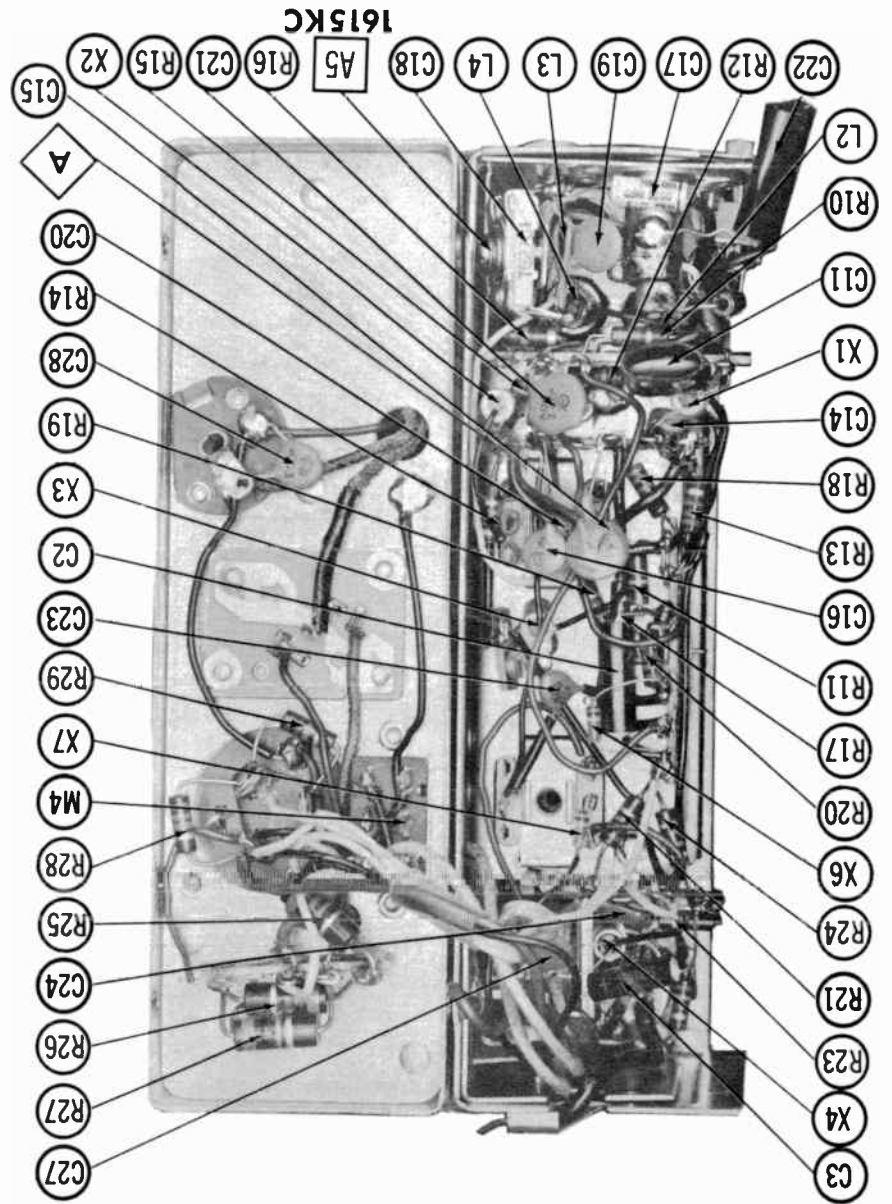
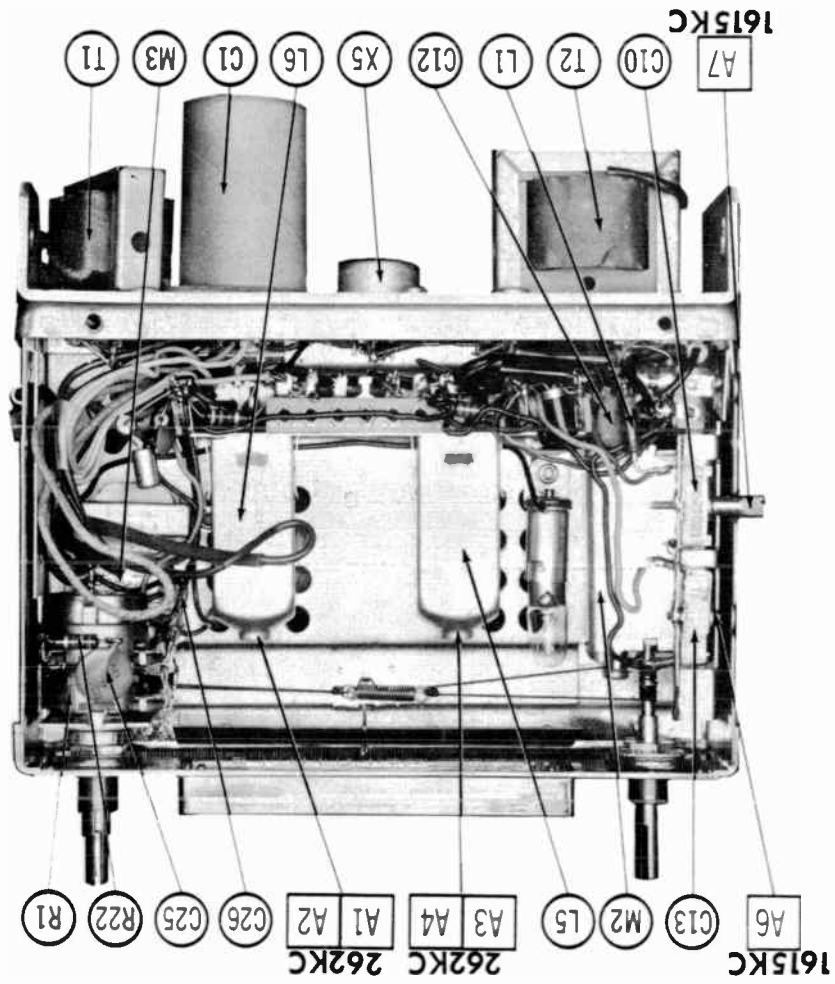


Resistors are 1/2 watt or less and rated 10% or 20% unless otherwise indicated.

1. Voltage measurements taken with vacuum tube voltmeter.
2. All controls set for normal operation, no signal applied.
3. Measured values are from socket pin or terminal to common ground.
4. All terminals viewed from bottom unless otherwise designated.
5. Numbers assigned to terminals may not be found on the unit.
6. Supply voltage maintained at rated value for voltage readings.
7. Resistance measurements not given because of the wide variation in internal resistance of transistor.

A PHOTOFACIT STANDARD NOTATION SCHEMATIC  
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ATR MODEL TT-727



# PARTS LIST AND DESCRIPTION

Replacement parts shown may be superseded by the availability of newly introduced replacements.  
 Have your local distributor check Sams COUNTER FACTS for the most up-to-date replacement.

## TRANSISTORS

| ITEM No. | ORIG. TYPE | USE     | REPLACEMENT DATA |                           |              | NOTES |
|----------|------------|---------|------------------|---------------------------|--------------|-------|
|          |            |         | DELCO PART No.   | GENERAL ELECTRIC PART No. | RCA PART No. |       |
| X1       | 2N1037     | RF Amp. | D6-25            | GE-1                      | 2N1037       | PNP   |
| X2       | 2N1039     | Conv.   | D6-25            | GE-1                      | 2N1039       | PNP   |
| X3       | 2N1036     | IF Amp. | D6-25            | GE-1                      | 2N1036       | PNP   |
| X4       | 2N501      | Driver  | D6-26            | GE-2                      | 2N501        | PNP   |
| X5       | 2N242      | Output  | D6-520           | GE-3                      | 2N301        | PNP*  |

\* When replacing, apply silicon grease to both sides of insulator. Tighten mounting screws securely.

## POWER RECTIFIERS & SIGNAL DIODES

| ITEM No. | MEASURED CURRENT | ORIGINAL Part or Type No. | RECTIFIERS                |                  |              |                         | DIODES                    |
|----------|------------------|---------------------------|---------------------------|------------------|--------------|-------------------------|---------------------------|
|          |                  |                           | GENERAL ELECTRIC PART No. | MALLORY PART No. | RCA PART No. | SARKES TARZIAN PART No. | GENERAL ELECTRIC PART No. |
| X6       |                  | 1N295                     |                           |                  |              |                         | 1N295                     |
| X7       |                  | 1N295                     |                           |                  |              |                         | 1N295                     |

## ELECTROLYTIC CAPACITORS

| ITEM No. | RATING |       | REPLACEMENT DATA |                  |                           |                           |                             |                  |                  |
|----------|--------|-------|------------------|------------------|---------------------------|---------------------------|-----------------------------|------------------|------------------|
|          | CAP.   | VOLT. | ATR PART No.     | AEROVOX PART No. | CORNELL-DUBILIER PART No. | GENERAL ELECTRIC PART No. | GENERAL INSTRUMENT PART No. | MALLORY PART No. | SPRAGUE PART No. |
| C1A      | 500    | 16    |                  | AFH3-00-95       | CC0012                    | XCS-48                    | TMT3002                     | WP300.65         | TVL-3026.6       |
| B        | 500    | 16    |                  |                  |                           |                           |                             |                  |                  |
| C        | 100    | 16    |                  |                  |                           |                           |                             |                  |                  |
| C2       | 25     | 16    |                  | CRE612A          | NLW25-25                  | MT1-14                    | BL1550                      | TT25X25          | TL-1157.1        |
| C3       | 5      | 16    |                  | CRE604A          | NLW6-25                   | MT1-3                     | BL1250                      | TT25X5           | TL-1152          |

## FIXED CAPACITORS

| ITEM No. | RATING     | REMARKS   | REPLACEMENT DATA |                    |                           |                  |                  |                  |           |
|----------|------------|-----------|------------------|--------------------|---------------------------|------------------|------------------|------------------|-----------|
|          |            |           | AEROVOX PART No. | CENTRALAB PART No. | CORNELL-DUBILIER PART No. | ELMENCO PART No. | MALLORY PART No. | SPRAGUE PART No. |           |
| C10      | 7-100      | #D0521021 |                  |                    |                           |                  |                  |                  |           |
| C11      | 1mfd       |           |                  |                    |                           |                  |                  |                  |           |
| C12      | .05        |           | TTD-05           | UK-105             | HCC3105P                  |                  | TA150            |                  | HY-135    |
| C13      | 90-400     | #T511111  |                  | CK-503             | H5                        |                  |                  |                  | TG-850    |
| C14      | 270        |           | DI-270           | DD-271             | LA10T27-C4                | CCD-271          | GP327            |                  | 5GA-T27   |
| C15      | .02        |           | BPF-02           | DD-203             | BYA882                    | CCD-203          | B120             |                  | 5HK-S20   |
| C16      | .003       |           | BPD-0033         | DD-332             | BYA10D33                  | CCD-332          | B233             |                  | 5HK-D33   |
| C17      | .0075 100V |           | DBE6D75          | CPR-7500J          | DPMS6D75                  | DDP-2-752        | PVC6275          |                  | 6PS-D75   |
| C18      | 110-580    | #T52701   |                  |                    |                           |                  |                  |                  |           |
| C19      | 100 N750   |           | N750-DI 100      | DTN-100            | C10T1U                    | CCTN-101         | CN7310           |                  | 10TCU-T10 |
| C20      | .05        |           | TTD-05           | CK-503             | H5                        |                  | TA150            |                  | TG-850    |
| C21      | .05        |           | TTD-05           | CK-503             | H5                        |                  | TA150            |                  | TG-850    |
| C22      | .22        |           |                  | UK20-204           | HCC25224Z                 |                  |                  |                  | HY-325    |
| C23      | 180        |           | DI-180           | DD-181             | LA10T18-S3                | CCD-181          | GP318            |                  | 5GA-T18   |
| C24      | .01        |           | BPD-01           | DD-103             | BYA1081                   | CCD-103          | B110             |                  | 5HK-S10   |
| C25      | .22        |           |                  | UK20-204           | HCC25224Z                 |                  |                  |                  | HY-325    |
| C26      | .001       |           | BPD-001          | DD-102             | BYA10D1                   | CCD-102          | B210             |                  | 5HK-D10   |
| C27      | .1         |           | TTD-1            | CK-104             | H6                        |                  | TA010            |                  | TG-P10    |
| C28      | .003       |           | BPD-0033         | DD-332             | BYA10D33                  | CCD-332          | B233             |                  | 5HK-D33   |

## CONTROLS

All wattages 1/2 watt, or less, unless otherwise listed.

| ITEM No. | USE    | RESIST-ANCE     | REPLACEMENT DATA |  |                    |                  |                  |             |
|----------|--------|-----------------|------------------|--|--------------------|------------------|------------------|-------------|
|          |        |                 | ATR PART No.     | CENTRALAB PART No.                         | CLAROSTAT PART No. | CTS-IRC PART No. | MALLORY PART No. |             |
| R1A      | Tone   | 10K             | MB3560           | F2-10K, R16-10K, FFS100, RFS200, KR4, AK31 |                    | † QJ-1869A       |                  | †† UE4567-8 |
| B        | Volume | 10K Tap @ 5000Ω |                  |  |                    |                  |                  |             |

† "CONCENTRIKIT" Equivalent: K8 Kit with Base Elements and Shafts:  
 "SNAPTROL" Equivalent: BU6, CF9, CR49T, S47, SR41, GC.  
 †† "STA-LOC" Equivalent: FN14L, RU14T53, OS1062, IS1500, US41.  
 † Alter Bushing to meet requirement.

## RESISTORS (Power and Special)

| ITEM No. | RATING | REPLACEMENT DATA |                  |         | ITEM No. | RATING | REPLACEMENT DATA |                  |         |
|----------|--------|------------------|------------------|---------|----------|--------|------------------|------------------|---------|
|          |        | IRC PART No.     | WORKMAN PART No. | REMARKS |          |        | IRC PART No.     | WORKMAN PART No. | REMARKS |
| R27      | 1Ω 2W  | BWH1             | WS1              |         |          |        |                  |                  |         |

## COILS (RF-IF)

| ITEM No. | USE              | REPLACEMENT DATA |                   |                |                 |                  |                  |
|----------|------------------|------------------|-------------------|----------------|-----------------|------------------|------------------|
|          |                  | ATR PART No.     | MEISSNER PART No. | MERIT PART No. | MILLER PART No. | STANCOR PART No. | WORKMAN PART No. |
| L1       | RF Choke (6.2uh) |                  |                   |                |                 |                  |                  |
| L2       | Ant.             |                  | 19-1004           | BC-565         | 4610            | RTC-6520         | T650             |
| L3       | RF               |                  |                   |                |                 |                  |                  |
| L4       | Osc.             |                  |                   |                |                 |                  |                  |
| L5       | Input IF         | E014897          | 18-6716           | BC-690         | 6570            |                  |                  |
| L6       | Output IF        | E014922          | 18-6719           | BC-691         | 6571            |                  |                  |

① Part of M2.

## FILTER CHOKE

| ITEM No. | RATINGS            |         | REPLACEMENT DATA             |              |                |                  |                     | NOTES  |
|----------|--------------------|---------|------------------------------|--------------|----------------|------------------|---------------------|--------|
|          | CURRENT (Measured) | DC RES. | INDUCTANCE (0 CURRENT 1000~) | ATR PART No. | MERIT PART No. | STANCOR PART No. | THORDARSON PART No. |        |
| L7       | 670ma              | .3Ω     | 10MH                         | 454CB3       | C-4095         | TC-2             | TR-186              | TY17XT |

## TRANSFORMER (DRIVER)

| ITEM No. | TURNS RATIO |      | REPLACEMENT DATA |                |                  |                     |                | NOTES |
|----------|-------------|------|------------------|----------------|------------------|---------------------|----------------|-------|
|          | PRI.        | SEC. | ATR PART No.     | MERIT PART No. | STANCOR PART No. | THORDARSON PART No. | TRIAD PART No. |       |
|          | T1          | 15:  | 1                | 454AT1         |                  |                     | TR-167         |       |

## TRANSFORMER (AUDIO OUTPUT)

| ITEM No. | IMPEDANCE |         | REPLACEMENT DATA |                |                  |                     |                | NOTES |
|----------|-----------|---------|------------------|----------------|------------------|---------------------|----------------|-------|
|          | PRI.      | SEC.    | ATR PART No.     | MERIT PART No. | STANCOR PART No. | THORDARSON PART No. | TRIAD PART No. |       |
|          | T2        | 30Ω Tap | @ 3-4Ω           | 454AT2         |                  |                     | TR-170         |       |

## SPEAKER

| ITEM No. | TYPE       | REPLACEMENT DATA |               | NOTES |
|----------|------------|------------------|---------------|-------|
|          |            | ATR PART No.     | QUAM PART No. |       |
| SP1      | 6" X 9" PM | 3-4Ω             | 69A3          |       |

## FUSES

| ITEM No. | TYPE | RATING | REPLACEMENT DATA |        |                     |        |               |        |
|----------|------|--------|------------------|--------|---------------------|--------|---------------|--------|
|          |      |        | ATR PART No.     |        | LITTELFUSE PART No. |        | BUSS PART No. |        |
|          |      |        | FUSE             | HOLDER | FUSE                | HOLDER | FUSE          | HOLDER |
| M1       | AGC  | 5A     |                  |        | 311005              | 155020 | AGC5          | HDJ    |

## MISCELLANEOUS

| ITEM No. | PART NAME           | ATR PART No. | NOTES |
|----------|---------------------|--------------|-------|
| M2       | Tuner               |              |       |
| M3       | Spark Plate (200pf) |              |       |
| M4       | Polarity Switch     |              |       |

## WIRING DATA

General-use Unshielded Hook-up Wire ..... Use BELDEN No. 8530 (Solid) Available in 12 Colors  
 6524 (Stranded) Available in 12 Colors  
 Shielded Hook-up Wire ..... Use BELDEN No. 6685  
 Rear Seat Speaker Extension Cable ..... Use BELDEN No. 8782 (Stranded) Coded Parallel Leads  
 Bonding Strap ..... Use BELDEN No. 6681 (3/6 In.) or 8670 (3/4 In.)



# PHOTOFACT<sup>®</sup>



**TRADE NAME:** Automatic Models C-5003, CP-5004  
 (1965 Chevrolet), CRP-5009 (1965 Corvair),  
 FPO-5033 (1965 Olds F-85), OE-5031  
 (1965 Oldsmobile), P-5040, PC-5041  
 (1965 Pontiac)  
**SUPPLIER:** For Current Address, See Master Index.  
**TYPE SET:** 5 Transistor AM Receiver  
**POWER SUPPLY:** 12 Volt Storage Battery  
**RATING:** .74 Amp. @ 12.6 Volts DC  
**TUNING RANGE:** BROADCAST 540-1615KC



AUTOMATIC GM CUSTOM SERIES

## ALIGNMENT INSTRUCTIONS

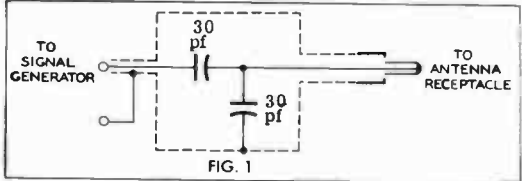
Check for specified source voltage.  
 Use only enough generator output to provide a usable indication.  
 Suggested Alignment Tools:  
 A1 thru A7      GENERAL CEMENT: 9440      WALSCO: 2501

|    | SIGNAL GENERATOR COUPLING                                   | SIGNAL GENERATOR FREQUENCY | RADIO DIAL SETTING      | INDICATOR                          | ADJUST            | REMARKS             |
|----|---|----------------------------|-------------------------|------------------------------------|-------------------|---------------------|
| 1. | High side thru .1mf to point $\Delta$ , low side to ground. | 262KC<br>(400v Mod.)       | High Freq.<br>End Stop. | Output Meter<br>across voice coil. | A1, A2,<br>A3, A4 | Adjust for maximum. |
| 2. | Thru dummy (Fig. 1) to antenna receptacle.                  | 1615KC                     | "                       | "                                  | A5, A6,<br>A7     | "                   |

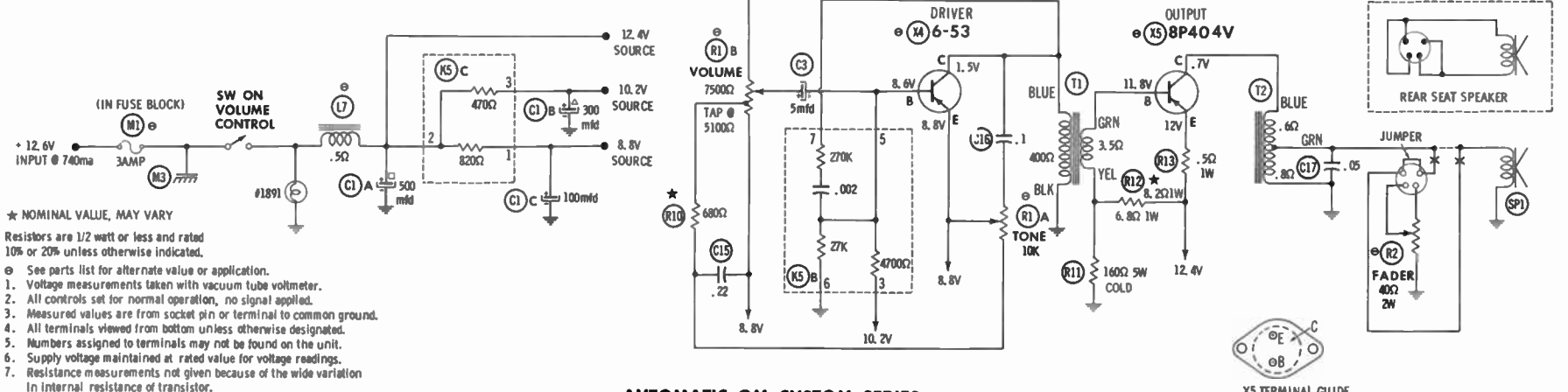
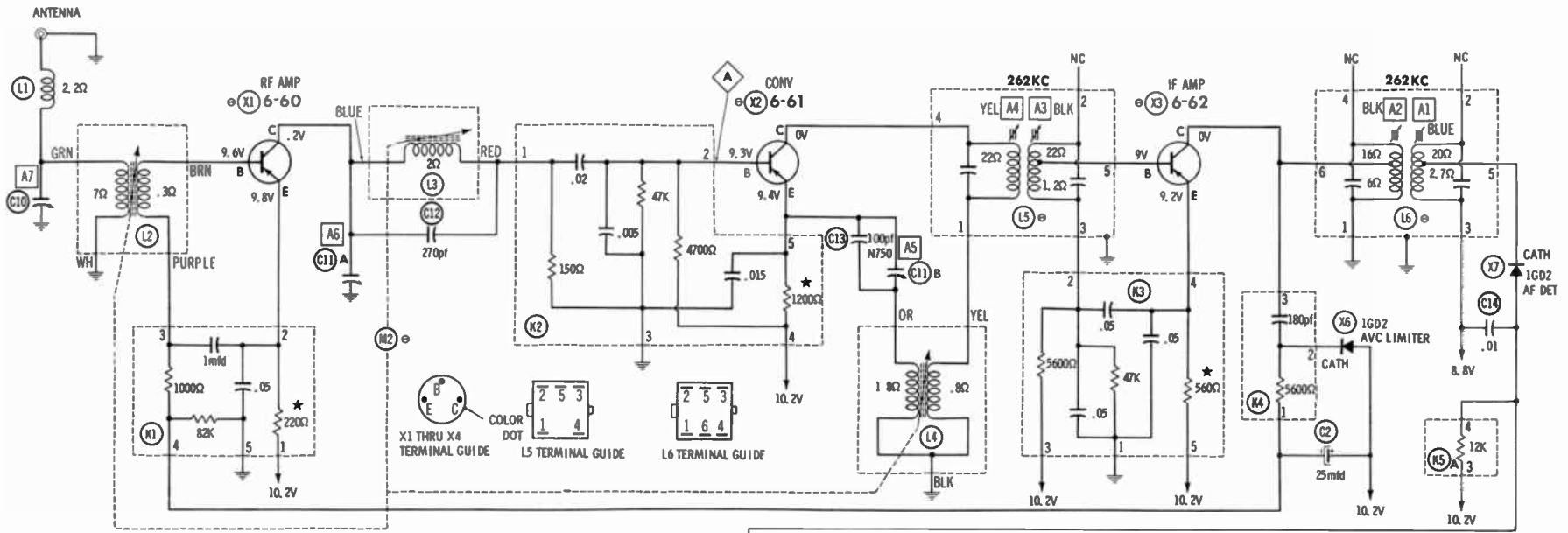
With radio installed in car and antenna fully extended, tune in a weak station near 1400KC and adjust A7 for maximum output.

**PUSH-BUTTON ADJUSTMENT**

1. Pull button out.
2. Tune manually to desired station.
3. Press button in firmly.
4. Repeat for remaining buttons.



**HOWARD W. SAMS & CO., INC.** Indianapolis 6, Indiana



★ NOMINAL VALUE, MAY VARY

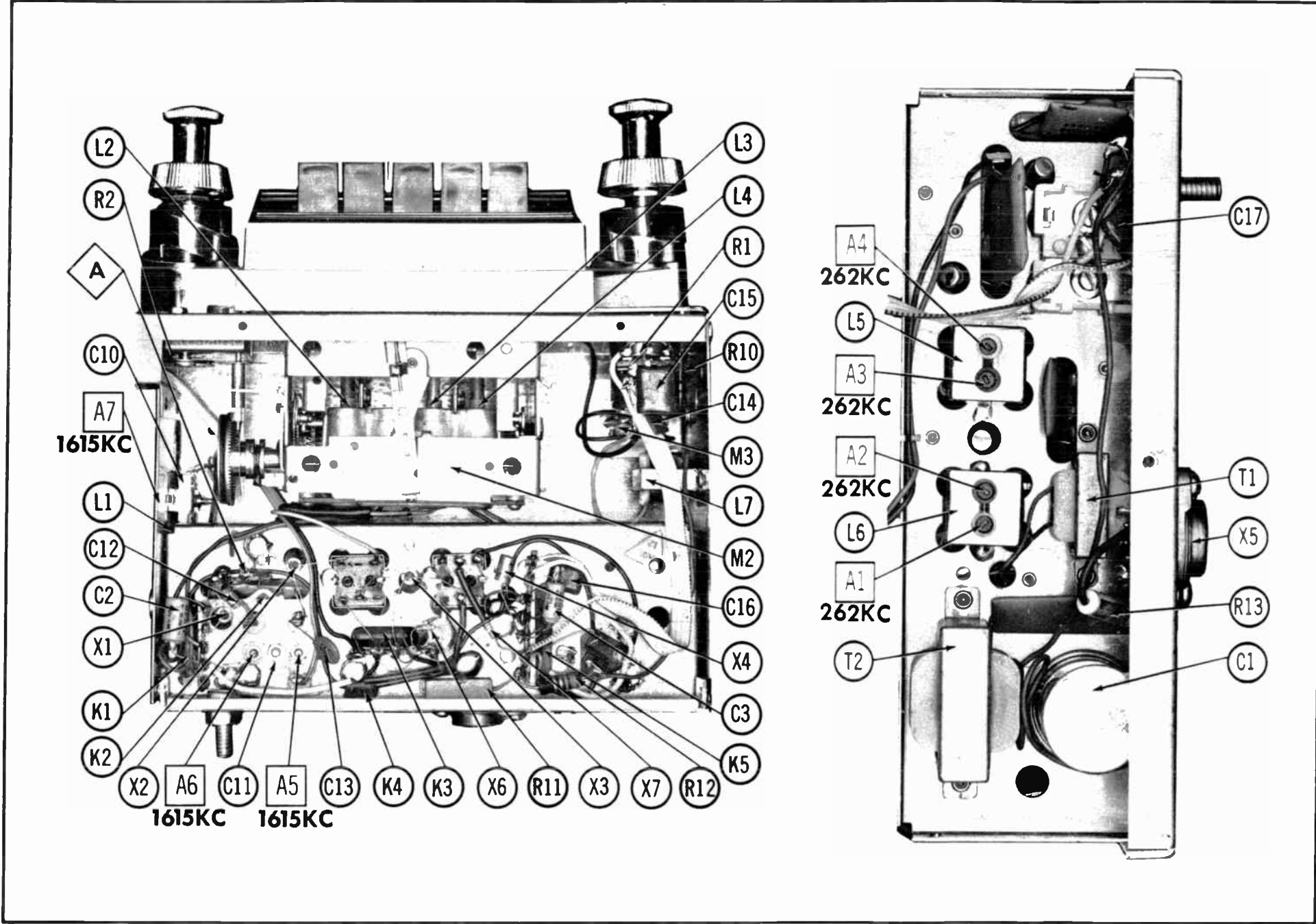
Resistors are 1/2 watt or less and rated 10% or 20% unless otherwise indicated.

⊖ See parts list for alternate value or application.

1. Voltage measurements taken with vacuum tube voltmeter.
2. All controls set for normal operation, no signal applied.
3. Measured values are from socket pin or terminal to common ground.
4. All terminals viewed from bottom unless otherwise designated.
5. Numbers assigned to terminals may not be found on the unit.
6. Supply voltage maintained at rated value for voltage readings.
7. Resistance measurements not given because of the wide variation in internal resistance of transistor.

A PHOTOFAC STANDARD NOTATION SCHEMATIC  
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**AUTOMATIC GM CUSTOM SERIES**



**AUTOMATIC GM CUSTOM SERIES**

# PARTS LIST AND DESCRIPTION

Replacement parts shown may be superseded by the availability of newly introduced replacements.

Have your local distributor check Sams COUNTER FACTS for the most up-to-date replacement.

## WIRING DATA

|   |  |
|---|--|
| General-use Unshielded Hook-up Wire ..... | Use BELDEN No. 6530 (Solid) Available in 12 Colors<br>8524 (Stranded) Available in 12 Colors |
| Shielded Hook-up Wire .....               | Use BELDEN No. 8885  |
| Rear Seat Speaker Extension Cable .....   | Use BELDEN No. 6762 (Stranded) Coded Parallel Leads  |
| Bonding Strap .....                       | Use BELDEN No. 8661 (3/8 in.) or 8670 (3/4 in.)  |

## TRANSISTORS

| ITEM No. | ORIG. TYPE        | USE     | REPLACEMENT DATA |                           |              | NOTES |
|----------|-------------------|---------|------------------|---------------------------|--------------|-------|
|          |                   |         | DELCO PART No.   | GENERAL ELECTRIC PART No. | RCA PART No. |       |
| X1       | 6-80<br>(2N1637)  | RF Amp. | DS-25            | GE-1                      | 2N1637       | PNP   |
| X2       | 6-61<br>(2N1639)  | Conv.   | DS-25            | GE-1                      | 2N1639       | PNP   |
| X3       | 6-62<br>(2N1636)  | IF Amp. | DS-25            | GE-1                      | 2N1636       | PNP   |
| X4       | 6-53<br>(2N591)   | Driver  | DS-26            | GE-2                      | 2N591        | PNP   |
| X5       | 6P404V<br>(2N176) | Output  | DS-520           | GE-3                      | 2N301        | PNP*  |

\* When replacing, apply silicon grease to both sides of insulator. Tighten mounting screws securely.

## POWER RECTIFIERS & SIGNAL DIODES

| ITEM No. | MEASURED CURRENT | ORIGINAL Part or Type No. | RECTIFIERS                |                  |              |                         | DIODES                    |
|----------|------------------|---------------------------|---------------------------|------------------|--------------|-------------------------|---------------------------|
|          |                  |                           | GENERAL ELECTRIC PART No. | MALLORY PART No. | RCA PART No. | SARKES TARZIAN PART No. | GENERAL ELECTRIC PART No. |
| X6       |                  | 1GD2                      |                           |                  |              |                         | 1N34AS                    |
| X7       |                  | 1GD2                      |                           |                  |              |                         | 1N34AS                    |

## ELECTROLYTIC CAPACITORS

| ITEM No. | RATING |       | REPLACEMENT DATA   |                  |                           |                           |                             |                  |                  |
|----------|--------|-------|--------------------|------------------|---------------------------|---------------------------|-----------------------------|------------------|------------------|
|          | CAP.   | VOLT. | Automatic PART No. | AEROVOX PART No. | CORNELL-DUBILIER PART No. | GENERAL ELECTRIC PART No. | GENERAL INSTRUMENT PART No. | MALLORY PART No. | SPRAGUE PART No. |
| C1A      | 500    | 16    | 20-2563            | AFH3-00-94.5     | CCOO12                    | XC3-46.1                  |                             | FP300, 83        | TVLS-3026.1*     |
| B        | 300    | 16    |                    |                  |                           |                           |                             |                  |                  |
| C        | 100    | 16    |                    |                  |                           |                           |                             |                  |                  |
| C2       | 25     | 15    | 20-256             | PJT69            | NLW25-15                  | MT1-10                    | MLV25-15                    | TT15X25          | TE-1157.1        |
| C3       | 5      | 15    | 20-505             | CRE454A          | NLW5-15                   | MT1-3                     | MLV5-15                     | TT25X5           | TE-1152          |

\* Not normally in distributor's stock. Available thru distributor on order to manufacturer.

## FIXED CAPACITORS

| ITEM No. | RATING | REMARKS    | REPLACEMENT DATA |                    |                           |                  |                  |                  |  |
|----------|--------|------------|------------------|--------------------|---------------------------|------------------|------------------|------------------|--|
|          |        |            | AEROVOX PART No. | CENTRALAB PART No. | CORNELL-DUBILIER PART No. | ELMENCO PART No. | MALLORY PART No. | SPRAGUE PART No. |  |
| C10      |        | #28-600-2L |                  |                    |                           |                  |                  |                  |  |
| C11A     |        | #28A1332   |                  |                    |                           |                  |                  |                  |  |
| C12      | 270    |            | DI-270           | DD-271             | LA10T27-C4                | CCD-271          | GP327            | 5GA-T25          |  |
| C13      | 100    | N750       | N750-DI100       | DTN-100            | C10T10                    | CCTN-101         | CN7310           | 10TCU-T10        |  |
| C14      | .01    |            | BPD-01           | DD-103             | BYA10E1                   | CCD-103          | B110             | 5HK-S10          |  |
| C15      | .22    |            |                  | UK20-204           | HCC25224Z                 |                  |                  | HY-325           |  |
| C16      | .1     |            | TTD-1            | CK-104             | H6                        |                  | TA010            | TG-P10           |  |
| C17      | .05    |            | TTD-05           | CK-503             | H5                        |                  | TA150            | TG-S50           |  |

# Automatic Part Number.

## CONTROLS

All wattages 1/2 watt, or less, unless otherwise listed.

| ITEM No. | USE           | RESISTANCE           | REPLACEMENT DATA   |   |                    |                  |                  |            |
|----------|---------------|----------------------|--------------------|---|--------------------|------------------|------------------|------------|
|          |               |                      | Automatic PART No. | CENTRALAB PART No.                                      | CLAROSTAT PART No. | CTS-IRC PART No. | MALLORY PART No. |            |
| R1A      | Tone          | 10K                  | 60A2772A ①         |   |                    |                  | † QJ-1821A       | ■ UE4459-S |
| B        | Volume/Switch | 7500Ω<br>Tap @ 5100Ω |                    |   |                    |                  |                  |            |
|          | Tone          | 10K                  | 60A3469 ②          | F1-10K,<br>R14-7500,<br>FFS110,<br>RFS201, AK26,<br>KR4 |                    |                  | †† QJ-1658A      | ▲ UE4543-S |
|          | Volume/Switch | 7500Ω<br>Tap @ 5100Ω |                    |   |                    |                  |                  |            |
| R2       | Fader         | 40Ω                  | 61A3916 ③          |   |                    |                  |                  |            |
|          | Fader         | 2W<br>40Ω<br>2W      | 60A3470 ②          |   |                    |                  |                  |            |

① Used in Models CP-5004, C-5003, CRP-5009.

② Used in Models FPO-5033, OE-5031, PC-5041, P-5040.

③ Used in Models CP-5004, C-5003.

† "CONCENTRIKIT" Equivalent: K8 Kit with Base Elements and Shafts: B11-116, P13-200 (Panel)  
B21-115X, R26-215 (Rear)  
S9 (Bushing)  
78-1 (Switch)

†† "CONCENTRIKIT" Equivalent: K8 Kit with Base Elements and Shafts: B11-116, P17-116 (Panel)  
B21-115X, R1-130 (Rear)  
S6 (Bushing)  
78-1 (Switch)

■ "STA-LOC" Equivalent: FG14L, RU752T53, OS2000, IS2437, US41

▲ "STA-LOC" Equivalent: FF142, RU752T53, OS1625, IS2167, US41

## RESISTORS (Power and Special)

| ITEM No. | RATING        | REPLACEMENT DATA |                  |                    | ITEM No. | RATING | REPLACEMENT DATA |                  |                    |
|----------|---------------|------------------|------------------|--------------------|----------|--------|------------------|------------------|--------------------|
|          |               | IRC PART No.     | WORKMAN PART No. | Automatic PART No. |          |        | IRC PART No.     | WORKMAN PART No. | Automatic PART No. |
| R11      | 180Ω 5W (PTC) |                  |                  | 61-161             | R13      | .5Ω    | BWH.51           | WT51             |                    |
| R12      | 6.8Ω 1W       | BWH6.6           | W86.6            |                    |          |        |                  |                  |                    |



# PARTS LIST AND DESCRIPTION (CONTINUED)

Replacement parts shown may be superseded by the availability of newly introduced replacements.  
Have your local distributor check Sams COUNTER FACTS for the most up-to-date replacement.

## COILS (RF-IF)

| ITEM No. | USE              | REPLACEMENT DATA                   |                |                 |                  |                  | NOTES                                    |
|----------|------------------|------------------------------------|----------------|-----------------|------------------|------------------|--|
|          |                  | Automatic PART No.                 | MERIT PART No. | MILLER PART No. | STANCOR PART No. | WORKMAN PART No. |  |
| L1       | RF Choke (6.2uh) | 14-6.2                             | BC-565         | 4810            | RTC-8520         | T859             | ① Part of M2.<br>② Alternate Part Number |
| L2       | Ant.             | ①                                  |                |                 |                  |                  |  |
| L3       | RF               | ①                                  |                |                 |                  |                  |  |
| L4       | Osc.             | ①                                  |                |                 |                  |                  |  |
| L5       | Input IF         | 14-3233A                           |                | 8570            |                  |                  |  |
| L8       | Output IF        | 14-2854 ②<br>14-3234A<br>14-2855 ② |                | 8571            |                  |                  |  |

## FILTER CHOKE

| ITEM No. | RATINGS            |            |                              | REPLACEMENT DATA     |                  |                  |                     | NOTES            |                |
|----------|--------------------|------------|------------------------------|----------------------|------------------|------------------|---------------------|------------------|----------------|
|          | CURRENT (Measured) | DC RES.    | INDUCTANCE (0 CURRENT 1000~) | Automatic PART No.   | MERIT PART No.   | STANCOR PART No. | THORDARSON PART No. |                  | TRIAD PART No. |
| L7       | 740ma              | .5Ω<br>.5Ω | 10MH<br>10MH                 | 75A3082<br>75A1269 * | C-4095<br>C-4095 | TC-2<br>TC-2     | TR-155<br>TR-155    | TY17XT<br>TY17XT | * Alternate.   |

## TRANSFORMER (DRIVER)

| ITEM No. | TURNS RATIO | REPLACEMENT DATA   |                |                  |                     |                | NOTES |
|----------|-------------|--------------------|----------------|------------------|---------------------|----------------|-------|
|          |             | Automatic PART No. | MERIT PART No. | STANCOR PART No. | THORDARSON PART No. | TRIAD PART No. |       |
| T1       | 8: 1        | 75A2635            |                |                  | TR-184              |                |       |

## TRANSFORMER (AUDIO OUTPUT)

| ITEM No. | IMPEDANCE |      | REPLACEMENT DATA   |                |                  |                     |                | NOTES |
|----------|-----------|------|--------------------|----------------|------------------|---------------------|----------------|-------|
|          | PRI.      | SEC. | Automatic PART No. | MERIT PART No. | STANCOR PART No. | THORDARSON PART No. | TRIAD PART No. |       |
| T2       | 24Ω Tap   | @ 8Ω | 75A2638            |                |                  | TR-189              |                |       |

## SPEAKER

| ITEM No. | TYPE           | REPLACEMENT DATA   |               | NOTES |
|----------|----------------|--------------------|---------------|-------|
|          |                | Automatic PART No. | QUAM PART No. |       |
| SP1      | 4" X 10" PM 8Ω | 75B2737            | 410A2Z8       |       |

## COMPONENT COMBINATIONS

| ITEM No. | USE           | DESCRIPTION                                       | Automatic PART No. | REPLACEMENT DATA |
|----------|---------------|---|--------------------|------------------|
| K1       | RF Network    | 220Ω, 1000Ω, 82K, .05mfd, 1mfd                    | 89A2582C           |                  |
| K2       | Conv. Network | 150Ω, 1200Ω, 4700Ω, 47K, .005mfd, .015mfd, .02mfd | 89A2583A           |                  |
| K3       | IF Network    | 580Ω, 5800Ω, 47K, .05mfd, .05mfd, .05mfd          | 89A2584B           |                  |
| K4       | AVC Network   | 5800Ω, 180pf                                      | 89A2701            |                  |
| K5       | Audio Network | 470Ω, 820Ω, 4700Ω, 12K, 27K, 270K, .002mfd        | 89A2585A           |                  |

## FUSES

| ITEM No. | TYPE | RATING   | REPLACEMENT DATA       |                                |                     |        |               |        |
|----------|------|----------|------------------------|--------------------------------|---------------------|--------|---------------|--------|
|          |      |          | Automatic PART No.     |                                | LITTELFUSE PART No. |        | BUSS PART No. |        |
|          |      |          | FUSE                   | HOLDER                         | FUSE                | HOLDER | FUSE          | HOLDER |
| M1       |      | 3A<br>4A | 108-303 ①<br>108-400 ② | In Fuse Block<br>In Fuse Block | 382003<br>303004    |        | AGC3<br>AGW4  |        |

① Used in Models CP-5004, C-5003, CRP-5009.  
② Used in Models FPO-5033, OE-5031, PC-5041, P-5040.

## MISCELLANEOUS

| ITEM No. | PART NAME   | Automatic PART No. | NOTES  |
|----------|-------------|--------------------|--|
| M2       | Tuner       | 78B3800<br>78B3837 | Model CP-5004, CRP-5009, FPO-5033, OE-5031, PC-5041. |
| M3       | Spark Plate | 43-218             | Model C-5003, P-5040.                                |

## CABINETS & CABINET PARTS

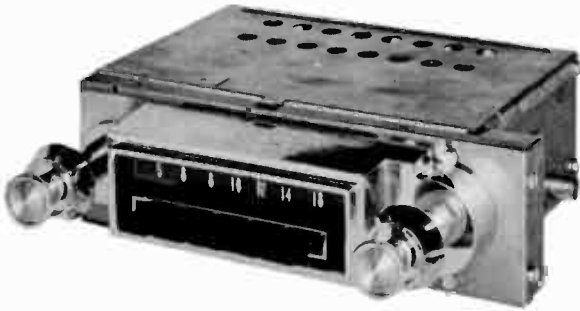
(When Ordering Specify Model, Chassis & Color)

| ITEM                   | Model    | PART No.  | ITEM             | Model    | PART No. |
|------------------------|----------|-----------|------------------|----------|----------|
| Escutcheon             | CP-5004  | 54C3858   | Dial Calibration | CP-5004  | 39-170   |
| Escutcheon             | C-5003   | 54C3858-1 | Dial Calibration | C-5003   | 39-88B   |
| Escutcheon             | FPO-5033 | 54C3337   | Dial Calibration | CRP-5009 | 39-170A  |
| Escutcheon             | OE-5031  | 54C3922   | Dial Calibration | FPO-5033 | 39-170B  |
| Escutcheon             | P-5040   | 54D4053-1 | Pushbuttons      | OE-5031  | 55A1748B |
| Escutcheon             | PC-5041  | 54D4053   | Pushbuttons      | CP-5004  | 55A2882A |
| Knob, Tuning or Volume | CP-5004  | 48A3921   | Pushbuttons      | CRP-5009 | 55A1827  |
| Knob, Tuning or Volume | C-5003   | 48A3982   | Pushbuttons      | FPO-5033 | 55A1827  |
| Knob, Tuning or Volume | CRP-5009 | 48A3415   | Pushbuttons      | OE-5031  | 55A4055  |
| Knob, Tuning or Volume | FPO-5033 | 48A4101   | Pushbuttons      | PC-5041  | 84A3902  |
| Knob, Tuning or Volume | OE-5031  | 48A3417   | Dial Pointer     | CP-5004  | 84A3846  |
| Knob, Tuning or Volume | PC-5041  | 48A3928   | Dial Pointer     | CRP-5009 | 84A3846  |
| Knob, Tone or Fader    | P-5040   | 48A3981   | Dial Pointer     | FPO-5033 | 84A3902  |
| Knob, Tone or Fader    | CP-5004  | 48A3412   | Dial Pointer     | OE-5031  | 84A3902  |
| Knob, Tone or Fader    | C-5003   | 48A4102   | Dial Pointer     | PC-5041  | 84A3902  |
| Knob, Tone or Fader    | CRP-5009 | 48A3416   |                  |          |          |
| Knob, Tone or Fader    | FPO-5033 |           |                  |          |          |
| Knob, Tone or Fader    | OE-5031  |           |                  |          |          |
| Knob, Tone or Fader    | PC-5041  |           |                  |          |          |
| Knob, Tone or Fader    | P-5040   |           |                  |          |          |

AUTOMATIC GM CUSTOM SERIES



# PHOTOFACT®



Automatic Models CPV-5007 (1965 Chevelle), CY-5006, CYP-5005 (1965 Chevy II), TCM-5014, TCX-5013 (1965 Chevrolet Truck)

**TRADE NAME :**  
**SUPPLIER :** For Current Address, See Master Index.  
**TYPE SET :** 5 Transistor AM Receiver  
**POWER SUPPLY :** 12 Volt Storage Battery  
**RATING :** .74 Amp. @ 12.6 Volts DC  
**TUNING RANGE :** BROADCAST 540-1615KC

AUTOMATIC MODELS CPV-5007, CY-5006, CYP-5005, TCM-5014, TCX-5013

## ALIGNMENT INSTRUCTIONS

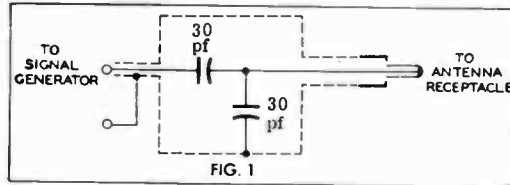
Check for specified source voltage.  
 Use only enough generator output to provide a usable indication.  
 Suggested Alignment Tools:  
 A1 thru A7      GENERAL CEMENT: 9440      WALSCO: 2501

|    | SIGNAL GENERATOR COUPLING                                    | SIGNAL GENERATOR FREQUENCY | RADIO DIAL SETTING   | INDICATOR                       | ADJUST         | REMARKS             |
|----|--|----------------------------|----------------------|---------------------------------|----------------|---------------------|
| 1. | High side thru .1mfd to point $\Delta$ , low side to ground. | 262KC (400v Mod.)          | High Freq. End Stop. | Output Meter across voice coil. | A1, A2, A3, A4 | Adjust for maximum. |
| 2. | Thru dummy (Fig. 1) to antenna receptacle.                   | 1615KC                     | "                    | "                               | A5, A6, A7     | "                   |

With radio installed in car and antenna fully extended, tune in a weak station near 1400KC and adjust A7 for maximum output.

### PUSH-BUTTON ADJUSTMENT

1. Pull button out.
2. Tune manually to desired station.
3. Press button in firmly.
4. Repeat for remaining buttons.



Thru dummy (Fig. 1) to antenna receptacle.

**HOWARD W. SAMS & CO., INC.** Indianapolis 6, Indiana

# PARTS LIST AND DESCRIPTION

Replacement parts shown may be superseded by the availability of newly introduced replacements.  
Have your local distributor check Sams COUNTER FACTS for the most up-to-date replacement.

## TRANSISTORS

| ITEM No. | ORIG. TYPE        | USE     | REPLACEMENT DATA |                           |              | NOTES |
|----------|-------------------|---------|------------------|---------------------------|--------------|-------|
|          |                   |         | DELCO PART No.   | GENERAL ELECTRIC PART No. | RCA PART No. |       |
| X1       | 6-60<br>(2N1637)  | RF Amp. | D8-25            | GE-1                      | 2N1637       | PNP   |
| X2       | 6-81<br>(2N1639)  | Conv.   | D8-25            | GE-1                      | 2N1639       | PNP   |
| X3       | 6-82<br>(2N1638)  | IF Amp. | D8-25            | GE-1                      | 2N1638       | PNP   |
| X4       | 6-63<br>(2N591)   | Driver  | D8-26            | GE-2                      | 2N591        | PNP   |
| X5       | 6P404V<br>(2N176) | Output  | D8-520           | GE-3                      | 2N301        | PNP   |

\* When replacing, apply silicon grease to both sides of insulator. Tighten mounting screws securely.

## POWER RECTIFIERS & SIGNAL DIODES

| ITEM No. | MEASURED CURRENT | ORIGINAL Part or Type No. | RECTIFIERS                |                  |              |                         | DIODES                    |
|----------|------------------|---------------------------|---------------------------|------------------|--------------|-------------------------|---------------------------|
|          |                  |                           | GENERAL ELECTRIC PART No. | MALLORY PART No. | RCA PART No. | SARKES TARZIAN PART No. | GENERAL ELECTRIC PART No. |
| X6       |                  | 1GD2                      |                           |                  |              |                         | 1N34AS                    |
| X7       |                  | 1GD2                      |                           |                  |              |                         | 1N34AS                    |

## ELECTROLYTIC CAPACITORS

| ITEM No. | RATING |       | REPLACEMENT DATA   |                  |                           |                           |                             |                  |                  |
|----------|--------|-------|--------------------|------------------|---------------------------|---------------------------|-----------------------------|------------------|------------------|
|          | CAP.   | VOLT. | Automatic PART No. | AEROVOX PART No. | CORNELL-DUBILIER PART No. | GENERAL ELECTRIC PART No. | GENERAL INSTRUMENT PART No. | MALLORY PART No. | SPRAGUE PART No. |
| C1A      | 500    | 16    | 20-2653            | AFH3-00-94.5     |                           | XC3-48.1                  |                             | FP300.83         | TVLS-3026.M*     |
| B        | 300    | 16    |                    |                  |                           |                           |                             |                  |                  |
| C        | 100    | 16    |                    |                  |                           |                           |                             |                  |                  |
| C2       | 25     | 15    | 20-256             | PTT69            | NLW25-15                  | MT1-10                    | MLV25-15                    | TT15X25          | TE-1157.1        |
| C3       | 5      | 15    | 20-505             | CRE454A          | NLW5-15                   | MT1-3                     | MLV5-15                     | TT25X5           | TE-1152          |

\* Not normally in distributor's stock. Available thru distributor on order to manufacturer.

## FIXED CAPACITORS

| ITEM No. | RATING | REMARKS    | REPLACEMENT DATA |                    |                           |                  |                  |                  |  |
|----------|--------|------------|------------------|--------------------|---------------------------|------------------|------------------|------------------|--|
|          |        |            | AEROVOX PART No. | CENTRALAB PART No. | CORNELL-DUBILIER PART No. | ELMENCO PART No. | MALLORY PART No. | SPRAGUE PART No. |  |
| C10      |        | #26-800-2L |                  |                    |                           |                  |                  |                  |  |
| C11A     |        | #28A1332   |                  |                    |                           |                  |                  |                  |  |
| C12      | 270    |            | DI-270           | DD-271             | LA10T27-C4                | CCD-271          | GP327            | 5GA-T25          |  |
| C13      | 100    | N750       | N750-DI100       | DTN-100            | C10T1U                    | CCTN-101         | CN7310           | 10TCU-T10        |  |
| C14      | .01    |            | BPD-01           | DD-103             | BYA1081                   | CCD-103          | B110             | 5HK-810          |  |
| C15      | .22    |            |                  | UK20-204           | HCC25224Z                 |                  |                  | HY-325           |  |
| C16      | .1     |            | TTD-1            | CK-104             | H6                        |                  | TA010            | TG-P10           |  |
| C17      | .05    |            | TTD-05           | CK-503             | H5                        |                  | TA150            | TG-S50           |  |

# Automatic Part Number.

## CONTROLS

All wattages 1/2 watt, or less, unless otherwise listed.

| ITEM No. | USE           | RESISTANCE              | REPLACEMENT DATA   |                    |                    |                  |                  |
|----------|---------------|-------------------------|--------------------|--------------------|--------------------|------------------|------------------|
|          |               |                         | Automatic PART No. | CENTRALAB PART No. | CLAROSTAT PART No. | CTS-IRC PART No. | MALLORY PART No. |
| R1A      | Tone          | 10K                     | 80A2772            |                    |                    | † QJ-1887A       | ■ UE4459-8       |
| B        | Volume/Switch | 7500Ω<br>Tap @<br>5100Ω |                    |                    |                    |                  |                  |
| R2       | Fader         | 40Ω 2W                  | 81A3916 ①          |                    |                    |                  |                  |

① Used in Model CPV-5007 only.

† "CONCENTRICKIT" Equivalent: K8 Kit with Base Elements and Shafts: B11-116, P17-129 (Panel)

"SNAFTROL" Equivalent: BU8, CFB, CR48T, 8P16, SR61, GC. B21-115X, R9-208 (Rear)

■ "STA-LOC" Equivalent: FG14L, RU752T53, O82000, JS2437, U841. B9 (Bushing)

76-1 (Switch)

## RESISTORS (Power and Special)

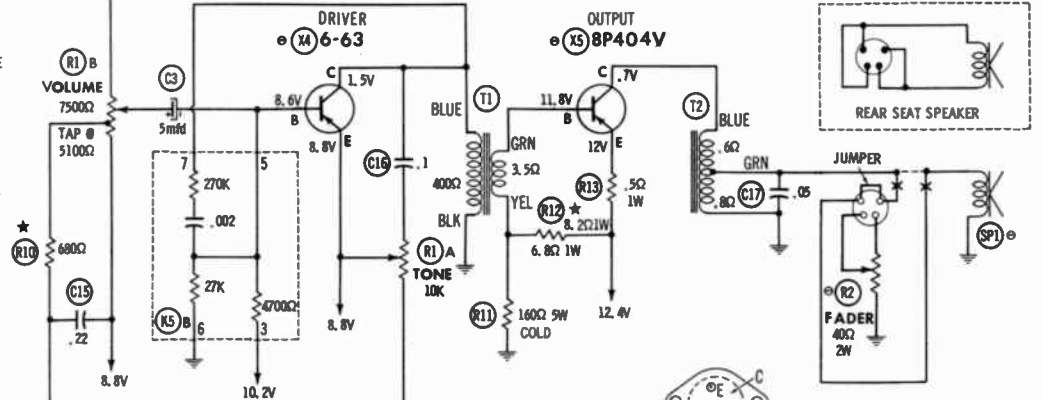
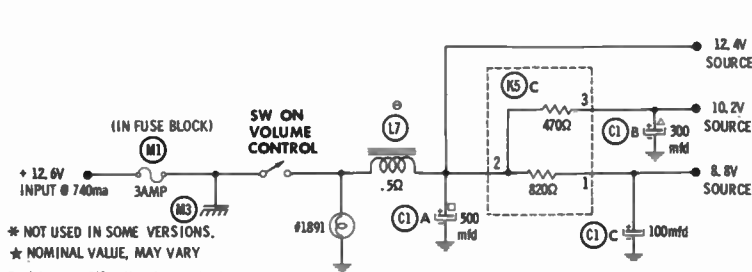
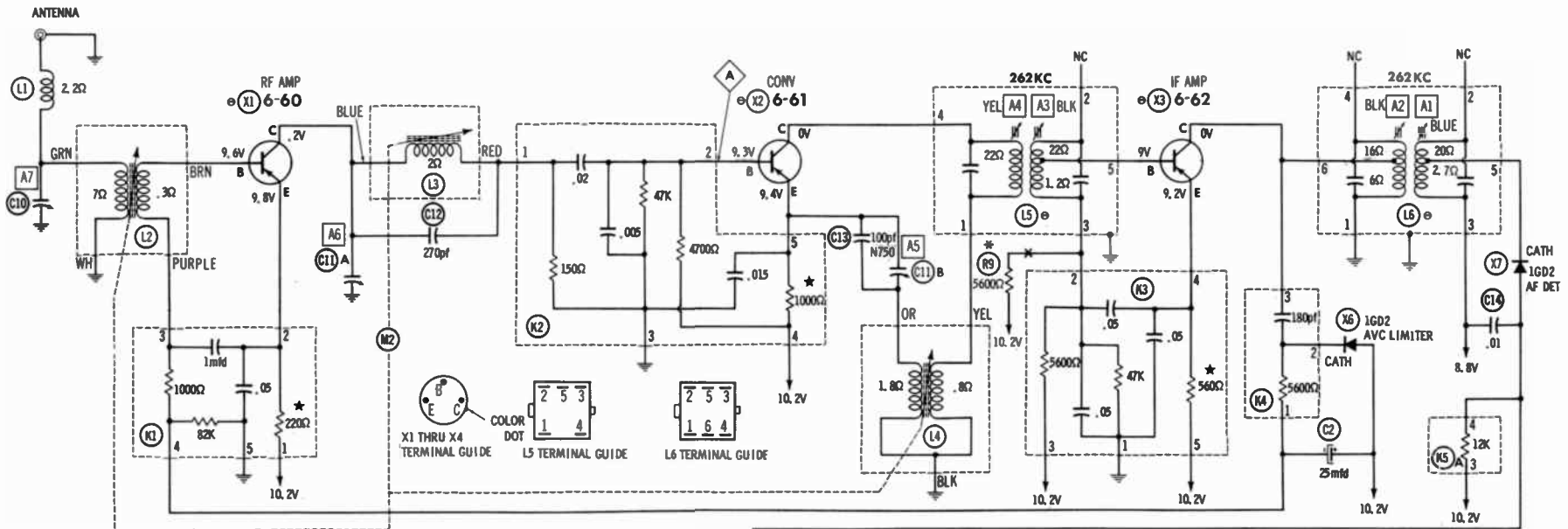
| ITEM No. | RATING  | REPLACEMENT DATA |                  |                    | ITEM No. | RATING | REPLACEMENT DATA |                  |                    |
|----------|---------|------------------|------------------|--------------------|----------|--------|------------------|------------------|--------------------|
|          |         | IRC PART No.     | WORKMAN PART No. | Automatic PART No. |          |        | IRC PART No.     | WORKMAN PART No. | Automatic PART No. |
| R11      | 160Ω 5W |                  |                  | 61-161             | R13      | .5Ω 1W | BWH.51           | WT51             |                    |
| R12      | 6.8Ω 1W | BWH6.8           | WS6.8            |                    |          |        |                  |                  |                    |

## COILS (RF-IF)

| ITEM No. | USE              | REPLACEMENT DATA   |                |                 |                  |                  | NOTES               |
|----------|------------------|--------------------|----------------|-----------------|------------------|------------------|---------------------|
|          |                  | Automatic PART No. | MERIT PART No. | MILLER PART No. | STANCOR PART No. | WORKMAN PART No. |                     |
| L1       | RF Choke (6.2uh) | 14-6.2             | BC-565         | 4810            | RTC-8520         | T859             | ① Part of M2.       |
| L2       | Ant.             | ①                  |                |                 |                  |                  | ② Alt. Part Number. |
| L3       | RF               | ①                  |                |                 |                  |                  |                     |
| L4       | Osc.             | ①                  |                |                 |                  |                  |                     |
| L5       | Input IF         | 14-3233A           |                | 6870            |                  |                  |                     |
|          |                  | 14-2654 ①          |                |                 |                  |                  |                     |
| L6       | Output IF        | 14-3234A           |                | 6871            |                  |                  |                     |
|          |                  | 14-2655 ②          |                |                 |                  |                  |                     |

CONTINUED PAGE 30

AUTOMATIC MODELS CPV-5007, CY-5006, CYP-5005, TCM-5014, TCX-5013



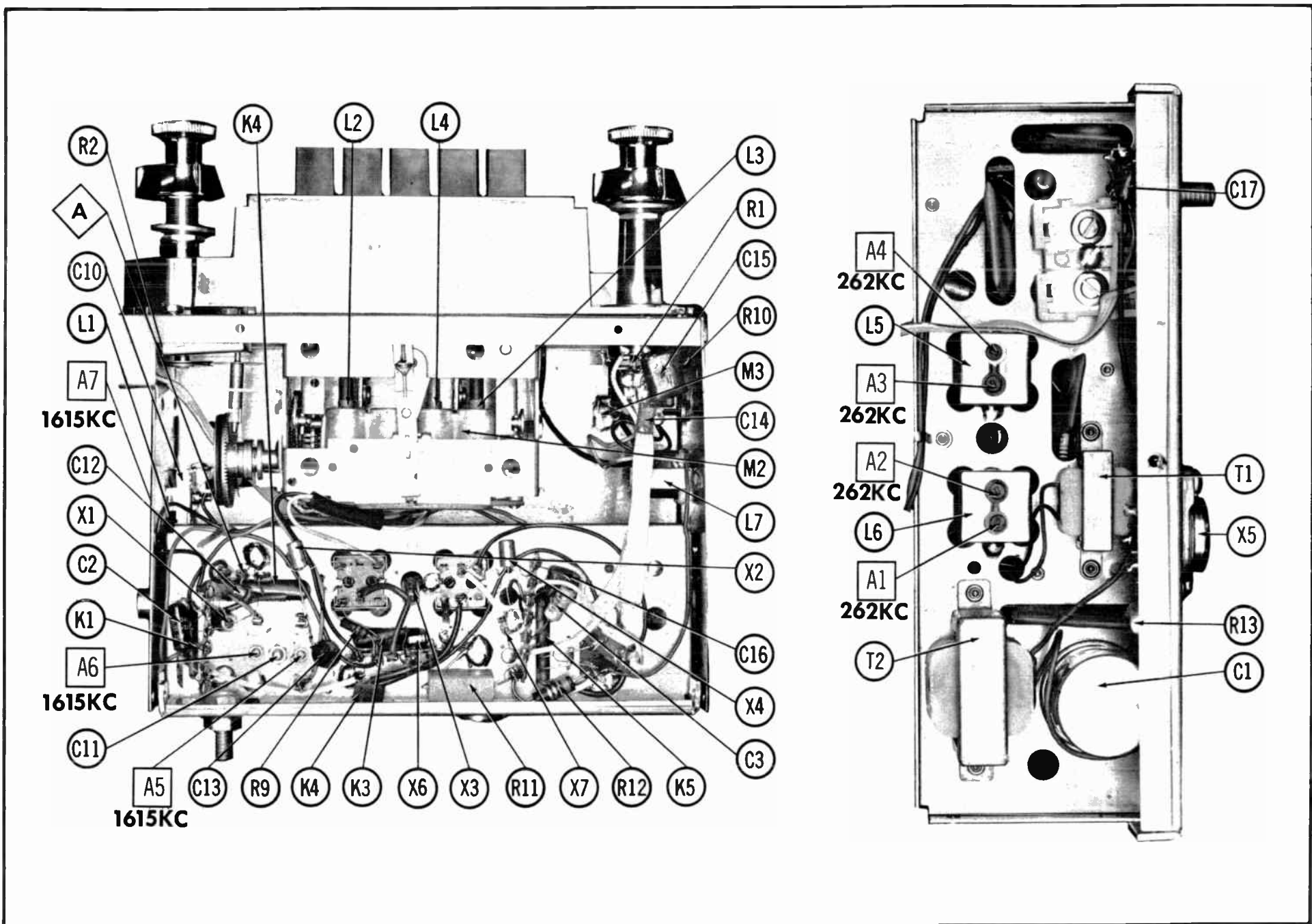
- \* NOT USED IN SOME VERSIONS.
- ★ NOMINAL VALUE, MAY VARY
- Resistors are 1/2 watt or less and rated 10% or 20% unless otherwise indicated.
- ⊙ See parts list for alternate value or application.
- 1. Voltage measurements taken with vacuum tube voltmeter.
- 2. All controls set for normal operation, no signal applied.
- 3. Measured values are from socket pin or terminal to common ground.
- 4. All terminals viewed from bottom unless otherwise designated.
- 5. Numbers assigned to terminals may not be found on the unit.
- 6. Supply voltage maintained at rated value for voltage readings.
- 7. Resistance measurements not given because of the wide variation in internal resistance of transistor.

**AUTOMATIC MODELS CPV-5007, CY-5006,  
CYP-5005, TCM-5014, TCX-5013**

A PHOTOFAC STANDARD NOTATION SCHEMATIC  
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AUTOMATIC MODELS CPV-5007, CY-5006, CYP-5005, TCM-5014, TCX-5013

# PARTS LIST AND DESCRIPTION (CONTINUED)

Replacement parts shown may be superseded by the availability of newly introduced replacements.  
Have your local distributor check Sams COUNTER FACTS for the most up-to-date replacement.

## FILTER CHOKE

| ITEM No. | RATINGS            |            |                               | REPLACEMENT DATA     |                  |                  |                     |                  | NOTES        |
|----------|--------------------|------------|-------------------------------|----------------------|------------------|------------------|---------------------|------------------|--------------|
|          | CURRENT (Measured) | DC RES.    | INDUCTANCE (0 CURRENT 1000--) | Automatic PART No.   | MERIT PART No.   | STANCOR PART No. | THORDARSON PART No. | TRIAD PART No.   |              |
| L7       | 740ma              | .5Ω<br>.5Ω | 10MH<br>10MH                  | 75A3082<br>75A1269 * | C-4095<br>C-4095 | TC-2<br>TC-2     | TR-155<br>TR-155    | TY17XT<br>TY17XT | * Alternate. |

## TRANSFORMER (DRIVER)

| ITEM No. | TURNS RATIO |      | REPLACEMENT DATA   |                |                  |                     |                | NOTES |
|----------|-------------|------|--------------------|----------------|------------------|---------------------|----------------|-------|
|          | PRI.        | SEC. | Automatic PART No. | MERIT PART No. | STANCOR PART No. | THORDARSON PART No. | TRIAD PART No. |       |
| T1       | 8:          | 1    | 75A2635            |                |                  |                     | TR-184         |       |

## TRANSFORMER (AUDIO OUTPUT)

| ITEM No. | IMPEDANCE |      | REPLACEMENT DATA   |                |                  |                     |                | NOTES |
|----------|-----------|------|--------------------|----------------|------------------|---------------------|----------------|-------|
|          | PRI.      | SEC. | Automatic PART No. | MERIT PART No. | STANCOR PART No. | THORDARSON PART No. | TRIAD PART No. |       |
| T2       | 24Ω Tap   | @ 8Ω | 75A2636            |                |                  |                     | TR-169         |       |

## SPEAKER

| ITEM No. | TYPE        | REPLACEMENT DATA   |               | NOTES   |
|----------|-------------|--------------------|---------------|---|
|          |             | Automatic PART No. | QUAM PART No. |   |
| SP1      | 4" X 10" PM | 8Ω                 | 73B2737       | Models CPV-5007, CY-5008, CYP-5005.<br>Models TCM-5014, TCX-5013. |
|          | 6" X 9" PM  | 8Ω                 | 73B2671       |   |

## COMPONENT COMBINATIONS

| ITEM No. | USE           | DESCRIPTION                                       | Automatic PART NO. | REPLACEMENT DATA |
|----------|---------------|---|--------------------|------------------|
| K1       | RF Network    | 220Ω, 1000Ω, 82K, .05mfd, 1mfd                    | 89A2582C           |                  |
| K2       | Conv. Network | 150Ω, 1000Ω, 4700Ω, 47K, .005mfd, .015mfd, .02mfd | 89A2583B           |                  |
| K3       | IF Network    | 580Ω, 5800Ω, 47K, .05mfd, .05mfd, .05mfd          | 89A2584B           |                  |
| K4       | AVC Network   | 5800Ω, 180pf                                      | 89A2701            |                  |
| K5       | Audio Network | 470Ω, 820Ω, 4700Ω, 12K, 27K, 270K, .002mfd        | 89A2585A           |                  |

## FUSES

| ITEM No. | TYPE | RATING | REPLACEMENT DATA   |               |                     |        |               |        |  |
|----------|------|--------|--------------------|---------------|---------------------|--------|---------------|--------|--|
|          |      |        | Automatic PART No. |               | LITTELFUSE PART No. |        | BUSS PART No. |        |  |
|          |      |        | FUSE               | HOLDER        | FUSE                | HOLDER | FUSE          | HOLDER |  |
| M1       | AGC  | 3A     | 108-303            | In Fuse Block | 312003              |        |               | AGC3   |  |

## MISCELLANEOUS

| ITEM No. | PART NAME   | Automatic PART No. | NOTES             |
|----------|-------------|--------------------|-------------------|
| M2       | Tuner       | 78B3700            | Pushbutton Manual |
|          | Tuner       | 78B3737            |                   |
| M3       | Spark Plate | 43-216             |                   |

## CABINETS & CABINET PARTS

(When Ordering Specify Model, Chassis & Color)

| ITEM                   | Model    | PART No.  | ITEM             | Model       | PART No. |
|------------------------|----------|-----------|------------------|-------------|----------|
| Escutcheon             | CPV-5007 | 54C333C   | Knob, Tone       | CYP-5005    | 48A1083  |
| Escutcheon             | CY-5006  | 54B845D-1 |                  | Knob, Dummy | CY-5006  |
| Escutcheon             | CYP-5005 | 54S845D   |                  |             | CYP-5005 |
| Escutcheon             | TCM-5014 | 54C2644-1 | Pushbutton       | CPV-5007    | 55A2682A |
| Escutcheon             | TCX-5013 | 54C2644   |                  | Pushbutton  | CYP-5005 |
| Knob, Tuning or Volume | CPV-5007 | 48A3982   | Pushbutton       | TCX-5013    | 55A2682  |
| Knob, Tuning or Volume | CYP-5005 |           | Dial Pointer     | CPV-5007    | 84A3746  |
|                        | CY-5006  |           | Dial Pointer     | CYP-5005    | 84A3901  |
| Knob, Tone or Fader    | TCX-5013 | 47A3368   | Dial Pointer     | CY-5006     |          |
|                        | TCM-5014 |           |                  |             | TCX-5013 |
| Knob, Tone or Dummy    | CPV-5007 | 48A3981   | Dial Calibration | TCM-5014    |          |
|                        | TCX-5013 | 48A2692   |                  |             | CPV-5007 |
|                        | TCM-5014 |           |                  | TCX-5013    | 39-86    |
|                        |          |           |                  | TCM-5014    |          |

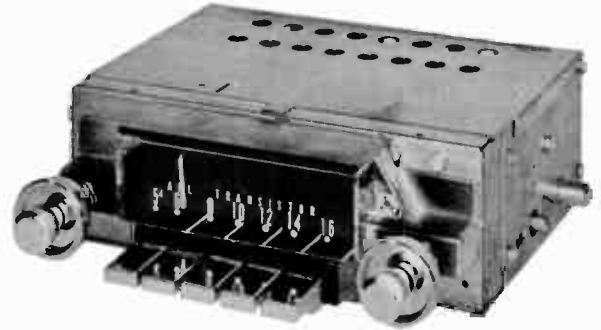
## WIRING DATA

|   |  |
|---|--|
| General-use Unshielded Hook-up Wire ..... | Use BELDEN No. 8530 (Solid) Available in 12 Colors<br>8524 (Stranded) Available in 12 Colors |
| Shielded Hook-up Wire .....               | Use BELDEN No. 8885  |
| Rear Seat Speaker Extension Cable .....   | Use BELDEN No. 8782 (Stranded) Coded Parallel Leads  |
| Bonding Strap .....                       | Use BELDEN No. 8661 (3/8 In.) or 8670 (3/4 In.)  |



# PHOTOFACT<sup>®</sup>

**TRADE NAME :** Automatic Models CTP-5071 (1965 Comet)  
 MT-5073 (1965 Mercury)  
**SUPPLIER :** MUS-5059 (1965 Mustang)  
 For Current Address, See Master Index.  
**TYPE SET :** 5 Transistor AM Receiver  
**POWER SUPPLY :** 12 Volt Storage Battery  
**RATING :** .74 Amp. @ 12.6 Volts DC  
  
**TUNING RANGE :** BROADCAST 540-1615KC



## ALIGNMENT INSTRUCTIONS

Check for specified source voltage.  
 Use only enough generator output to provide a usable indication.  
 Suggested Alignment Tools:

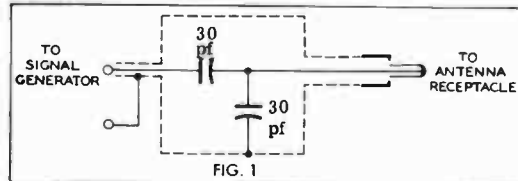
A1 thru A7      GENERAL CEMENT: 9440      WALSCO: 2501

|    | SIGNAL GENERATOR COUPLING                                    | SIGNAL GENERATOR FREQUENCY | RADIO DIAL SETTING   | INDICATOR                       | ADJUST         | REMARKS             |
|----|--|----------------------------|----------------------|---------------------------------|----------------|---------------------|
| 1. | High side thru .1mfd to point $\Delta$ , low side to ground. | 262KC (400v Mod.)          | High Freq. End Stop. | Output Meter across voice coil. | A1, A2, A3, A4 | Adjust for maximum. |
| 2. | Thru dummy (Fig. 1) to antenna receptacle.                   | 1615KC                     | "                    | "                               | A5, A6, A7     | "                   |

With radio installed in car and antenna fully extended, tune in a weak station near 1400KC and adjust A7 for maximum output.

### PUSH-BUTTON ADJUSTMENT

1. Pull button out.
2. Tune manually to desired station.
3. Press button in firmly.
4. Repeat for remaining buttons.



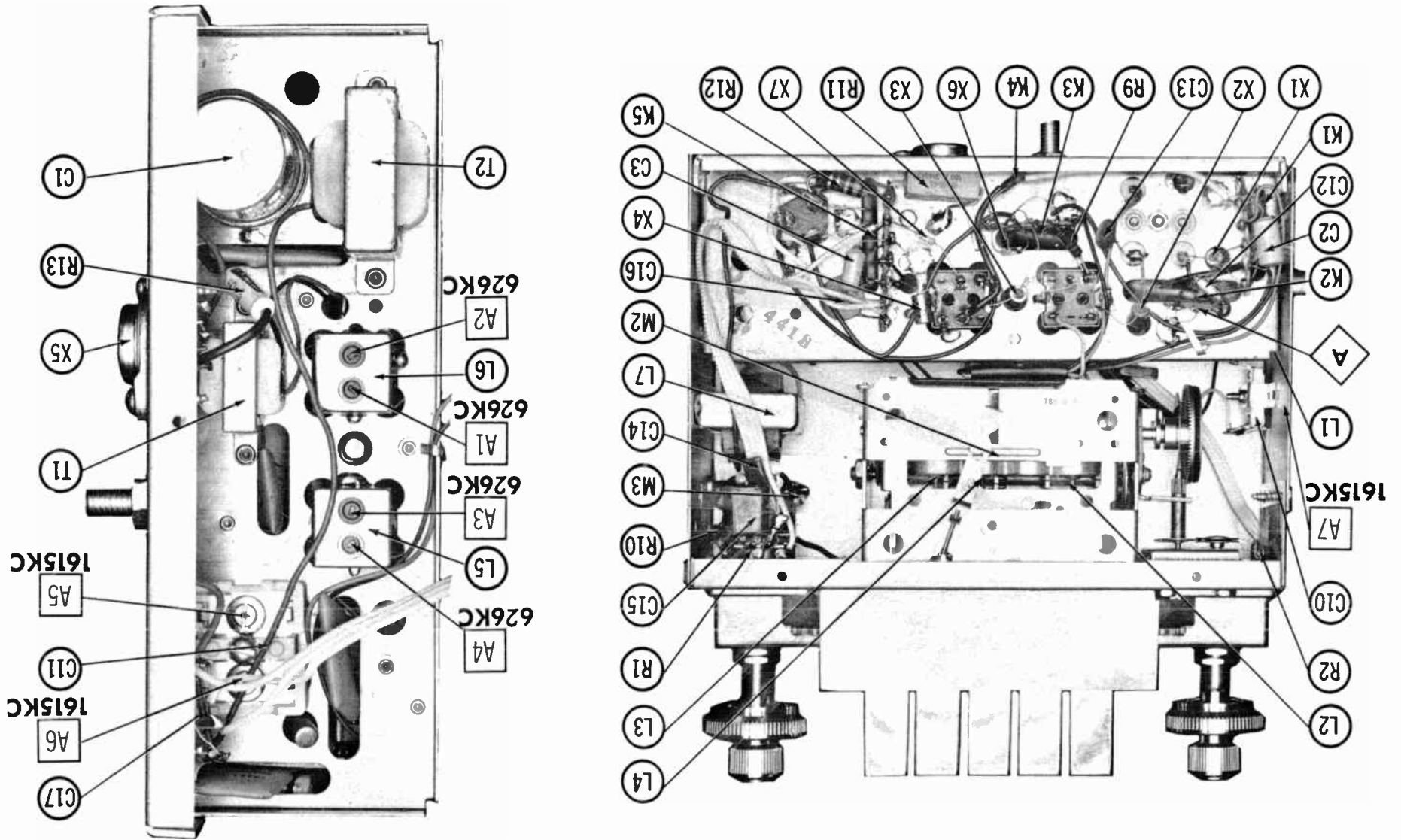
AUTOMATIC MODELS CTP-5071, MT-5073, MUS-5059

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# PARTS LIST AND DESCRIPTION

Replacement parts shown may be superseded by the availability of newly introduced replacements.  
Have your local distributor check Sams COUNTER FACTS for the most up-to-date replacement.

## WIRING DATA

|   |  |
|---|--|
| General-use Unshielded Hook-up Wire ..... | Use BELDEN No. 8530 (Solid) Available in 12 Colors<br>8524 (Stranded) Available in 12 Colors |
| Shielded Hook-up Wire .....               | Use BELDEN No. 8885  |
| Rear Seat Speaker Extension Cable .....   | Use BELDEN No. 8782 (Stranded) Coded Parallel Leads  |
| Bonding Strap .....                       | Use BELDEN No. 8661 (3/8 In.) or 8670 (3/4 In.)  |

## TRANSISTORS

| ITEM No. | ORIG. TYPE        | USE     | REPLACEMENT DATA |                           |              | NOTES |
|----------|-------------------|---------|------------------|---------------------------|--------------|-------|
|          |                   |         | DELCO PART No.   | GENERAL ELECTRIC PART No. | RCA PART No. |       |
| X1       | 6-60<br>(2N1637)  | RF Amp. | DS-25            | GE-1                      | 2N1637       | PNP   |
| X2       | 6-61<br>(2N1639)  | Conv.   | DS-25            | GE-1                      | 2N1639       | PNP   |
| X3       | 6-62<br>(2N1637)  | IF Amp. | DS-25            | GE-1                      | 2N1637       | PNP   |
| X4       | 6-53<br>(2N591)   | Drover  | DS-26            | GE-2                      | 2N591        | PNP   |
| X5       | 8P404V<br>(2N176) | Output  | DS-520           | GE-3                      | 2N301        | PNP*  |

\* When replacing, apply silicon grease to both sides of insulator. Tighten mounting screws securely.

## POWER RECTIFIERS & SIGNAL DIODES

| ITEM No. | MEASURED CURRENT | ORIGINAL Part or Type No. | RECTIFIERS                |                  |              |                         | DIODES GENERAL ELECTRIC PART No. |
|----------|------------------|---------------------------|---------------------------|------------------|--------------|-------------------------|----------------------------------|
|          |                  |                           | GENERAL ELECTRIC PART No. | MALLORY PART No. | RCA PART No. | SARKES TARZIAN PART No. |                                  |
| X6       |                  | 1GD2                      |                           |                  |              |                         | 1N34AS                           |
| X7       |                  | 1GD2                      |                           |                  |              |                         | 1N34AS                           |

## ELECTROLYTIC CAPACITORS

| ITEM No. | RATING |       | Automatic PART No. | REPLACEMENT DATA |                           |                           |                             |                  |                  |
|----------|--------|-------|--------------------|------------------|---------------------------|---------------------------|-----------------------------|------------------|------------------|
|          | CAP.   | VOLT. |                    | AEROVOX PART No. | CORNELL-DUBILIER PART No. | GENERAL ELECTRIC PART No. | GENERAL INSTRUMENT PART No. | MALLORY PART No. | SPRAGUE PART No. |
| C1A      | 500    | 16    | 20-2653            | AFH3-00-04.5     |                           | XC3-48.1                  |                             | FP300.83         | TVLS-3026.1*     |
| B        | 4300   | 16    |                    |                  |                           |                           |                             |                  |                  |
| C        | 100    | 16    |                    |                  |                           |                           |                             |                  |                  |
| C2       | 25     | 15    | 20-256             | PTT69            | NLW25-15                  | MT1-10                    | MLV25-15                    | TT15X25          | TE-1157.1        |
| C3       | 5      | 15    | 20-505             | CRE454A          | NLW5-15                   | MT1-3                     | MLV5-15                     | TT25X5           | TE-1152          |

\* Not normally in distributor's stock. Available thru distributor on order to manufacturer.

## FIXED CAPACITORS

| ITEM No. | RATING   | REMARKS    | REPLACEMENT DATA |                    |                           |                  |                  |                  |
|----------|----------|------------|------------------|--------------------|---------------------------|------------------|------------------|------------------|
|          |          |            | AEROVOX PART No. | CENTRALAB PART No. | CORNELL-DUBILIER PART No. | ELMENCO PART No. | MALLORY PART No. | SPRAGUE PART No. |
| C10      |          | #28-800-2L |                  |                    |                           |                  |                  |                  |
| C11A     |          | #28A1332   |                  |                    |                           |                  |                  |                  |
| B        | 270      |            | DI-270           | DD-271             | LA10T27-C4                | CCD-271          | GP327            | 5GA-T25          |
| C13      | 100 N750 |            | N750-DX100       | DTN-100            | C10T1U                    | CCTN-101         | CN7310           | 10TCU-T10        |
| C14      | .01      |            | BPD-01           | DD-103             | BYA10S1                   | CCD-103          | B110             | 5HK-810          |
| C15      | .22      |            |                  | UK20-204           | HCC25224Z                 |                  |                  | HY-325           |
| C16      | .1       |            | TTD-1            | CK104              | H8                        |                  | TA010            | TG-P10           |
| C17      | .05      |            | TTD-05           | CK-503             | H5                        |                  | TA150            | TG-850           |

# Automatic Part Number.

## CONTROLS

All wattages 1/2 watt, or less, unless otherwise listed.

| ITEM No. | USE                | RESISTANCE             | REPLACEMENT DATA   |                    |                    |                  |                  |
|----------|--------------------|------------------------|--------------------|--------------------|--------------------|------------------|------------------|
|          |                    |                        | Automatic PART No. | CENTRALAB PART No. | CLAROSTAT PART No. | CTS-IRC PART No. | MALLORY PART No. |
| R1A      | Tone Volume/Switch | 10K                    | 80A3257 ①          |                    |                    |                  |                  |
| B        | Tone Volume/Switch | 7500Ω Tap @ 5100Ω      | 80A3899 ②          |                    |                    |                  | ↑↑ UB4568-8      |
| R2       | Fader              | 10K Tap @ 5100Ω 40Ω 2W | 81A3924 ③          |                    |                    |                  |                  |

① Used in Models MT-5073, MUB-5059.

③ Used in Model MT-5073.

② Used in Model CTP-5071.

↑↑ "STA-LOC" Equivalent: FD14L, RU752T53, OB3125, IB3562, UB41.

## RESISTORS (Power and Special)

| ITEM No. | RATING  | REPLACEMENT DATA |                  |                    | ITEM No. | RATING | REPLACEMENT DATA |                  |                    |
|----------|---------|------------------|------------------|--------------------|----------|--------|------------------|------------------|--------------------|
|          |         | IRC PART No.     | WORKMAN PART No. | Automatic PART No. |          |        | IRC PART No.     | WORKMAN PART No. | Automatic PART No. |
| R11      | 160Ω 5W |                  |                  | 61-161             | R13      | .5Ω 1W | BWH.51           | WT51             |                    |
| R12      | 6.8Ω 1W | BWH6.8           | WS6.8            |                    |          |        |                  |                  |                    |

# PARTS LIST AND DESCRIPTION (CONTINUED)

Replacement parts shown may be superseded by the availability of newly introduced replacements.  
Have your local distributor check Sams COUNTER FACTS<sup>®</sup> for the most up-to-date replacement.

## COILS (RF-IF)

| ITEM No. | USE              | REPLACEMENT DATA      |                |                 |                  |                  | NOTES                                     |
|----------|------------------|-----------------------|----------------|-----------------|------------------|------------------|---|
|          |                  | Automatic PART No.    | MERIT PART No. | MILLER PART No. | STANCOR PART No. | WORKMAN PART No. |   |
| L1       | RF Choke (6.2uh) | 14-6.2                | BC-565         | 4610            | RTC-8520         | T859             | ① Part of M2.<br>② Alternate Part Number. |
| L2       | Ant.             | ①                     |                |                 |                  |                  |   |
| L3       | RF               | ①                     |                |                 |                  |                  |   |
| L4       | Osc.             | ①                     |                |                 |                  |                  |   |
| L5       | Input IF         | 14-3233A<br>14-2654 ② |                | 6570            |                  |                  |   |
| L6       | Output IF        | 14-3234A<br>14-2655 ② |                | 6571            |                  |                  |   |

## FILTER CHOKE

| ITEM No. | RATINGS            |         |                              | REPLACEMENT DATA   |                |                  |                     |                | NOTES |
|----------|--------------------|---------|------------------------------|--------------------|----------------|------------------|---------------------|----------------|-------|
|          | CURRENT (Measured) | DC RES. | INDUCTANCE (0 CURRENT 1000~) | Automatic PART No. | MERIT PART No. | STANCOR PART No. | THORDARSON PART No. | TRIAD PART No. |       |
| L7       | 740ma              | .5Ω     | 10MH                         | 75A1289            | C-4095         | TC-2             | TR-155              | TY17XT         |       |

## TRANSFORMER (DRIVER)

| ITEM No. | TURNS RATIO |      | REPLACEMENT DATA   |                |                  |                     |                | NOTES |
|----------|-------------|------|--------------------|----------------|------------------|---------------------|----------------|-------|
|          | PRI.        | SEC. | Automatic PART No. | MERIT PART No. | STANCOR PART No. | THORDARSON PART No. | TRIAD PART No. |       |
|          |             |      |                    |                |                  |                     |                |       |
| T1       | 8:          | 1    | 75A2635            |                |                  | TR-164              |                |       |

## TRANSFORMER (AUDIO OUTPUT)

| ITEM No. | IMPEDANCE |      | REPLACEMENT DATA   |                |                  |                     |                | NOTES |
|----------|-----------|------|--------------------|----------------|------------------|---------------------|----------------|-------|
|          | PRI.      | SEC. | Automatic PART No. | MERIT PART No. | STANCOR PART No. | THORDARSON PART No. | TRIAD PART No. |       |
|          |           |      |                    |                |                  |                     |                |       |
| T1       | 24Ω Tap   | @ 8Ω | 75A2636            |                |                  | TR-169              |                |       |

## SPEAKER

| ITEM No. | TYPE        |    | REPLACEMENT DATA   |               | NOTES  |
|----------|-------------|----|--------------------|---------------|--|
|          |             |    | Automatic PART No. | QUAM PART No. |  |
| SP1      | 4" X 10" PM | 8Ω | 73B2737            | 410A228       | Used in Models MT-5073, MUS-5059.<br>Used in Model CTP-5071. |
|          | 5" X 8" PM  | 8Ω | 73B2786            | 58A15Z8       |  |

## COMPONENT COMBINATIONS

| ITEM No. | USE           | DESCRIPTION                                       | Automatic PART No. | REPLACEMENT DATA |
|----------|---------------|---|--------------------|------------------|
| K1       | RF Network    | 220Ω, 1000Ω, 82K, .05mfd, 1mfd                    | 89A2582C           |                  |
| K2       | Conv. Network | 150Ω, 1000Ω, 4700Ω, 47K, .005mfd, .015mfd, .02mfd | 89A2583B           |                  |
| K3       | IF Network    | 560Ω, 5600Ω, 47K, .05mfd, .05mfd, .05mfd          | 89A2584B           |                  |
| K4       | AVC Network   | 5600Ω, 180pf                                      | 89A2701            |                  |
| K5       | Audio Network | 470Ω, 820Ω, 4700Ω, 12K, 27K, 270K, .002mfd        | 89A2585A           |                  |

## FUSES

| ITEM No. | TYPE | RATING | REPLACEMENT DATA   |               |                     |        |               |        |
|----------|------|--------|--------------------|---------------|---------------------|--------|---------------|--------|
|          |      |        | Automatic PART No. |               | LITTELFUSE PART No. |        | 6USS PART No. |        |
|          |      |        | FUSE               | HOLDER        | FUSE                | HOLDER | FUSE          | HOLDER |
| M1       |      | 4A     | 108-400            | In Fuse Block | 303004              |        | AGW4          |        |

## MISCELLANEOUS

| ITEM No. | PART NAME   | Automatic PART No. | NOTES |
|----------|-------------|--------------------|-------|
| M2       | Tuner       | 78B3700            |       |
|          | Tuner       | 78B3800            |       |
| M3       | Spark Plate | 43-216             |       |

## CABINETS & CABINET PARTS

(When Ordering Specify Model, Chassis & Color)

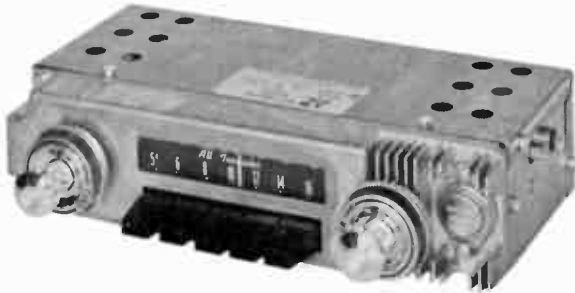
| ITEM                                    | PART No. | ITEM                                 | PART No. |
|---|----------|--------------------------------------|----------|
| Dial Calibration (Model MT-5073)        | 39-85C   | Knob, Tone or Fader (Model CTP-5071) | 48A3780  |
| Dial Calibration (Model MUS-5059)       | 39-125   | Knob, Tone or Fader (Model MUS-5059) | 48A3346  |
| Escutcheon (Models CTP-5071, MUS-5059)  | 54C3237  | Pushbuttons                          | 55A3882  |
| Knob, Tuning or Volume (Model MT-5073)  | 48A3770  | Dial Pointer (Model MT-5073)         | 84A3901  |
| Knob, Tuning or Volume (Model CTP-5071) | 47A3783  | Dial Pointer (Model MT-5059)         | 84A3902  |
| Knob, Tuning or Volume (Model MUS-5059) | 48A3347  | Dial Pointer (Model MT-5071)         | 84A3902  |
| Knob, Tone or Fader (Model MT-5073)     | 48A3771  |                                      |          |

AUTOMATIC MODELS CTP-5071, MT-5073, MUS-5059





# PHOTOFACT<sup>®</sup>



**TRADE NAME :** Automatic Model NP-5153 (1965 Rambler American)  
**SUPPLIER :** For Current Address, See Master Index.  
**TYPE SET :** 5 Transistor AM Receiver  
**POWER SUPPLY :** 12 Volt Storage Battery  
**RATING :** .56 Amp. @ 12.6 Volts DC  
  
**TUNING RANGE :** BROADCAST 540-1615KC

AUTOMATIC MODEL NP-5153

## ALIGNMENT INSTRUCTIONS

Check for specified source voltage.  
 Use only enough generator output to provide a usable indication.  
 Suggested Alignment Tools:

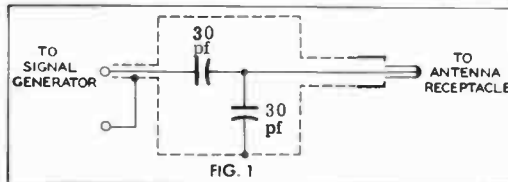
A1 thru A7      GENERAL CEMENT: 9440      WALSCO: 2501

|    | SIGNAL GENERATOR COUPLING                                     | SIGNAL GENERATOR FREQUENCY | RADIO DIAL SETTING   | INDICATOR                       | ADJUST         | REMARKS             |
|----|---|----------------------------|----------------------|---------------------------------|----------------|---------------------|
| 1. | High side thru .1mfid to point $\Delta$ , low side to ground. | 262KC (400% Mod.)          | High Freq. End Stop. | Output Meter across voice coil. | A1, A2, A3, A4 | Adjust for maximum. |
| 2. | Thru dummy (Fig. 1) to antenna receptacle.                    | 1615KC                     | "                    | "                               | A5, A6, A7     | "                   |

With radio installed in car and antenna fully extended, tune in a weak station near 1400KC and adjust A7 for maximum output.

### PUSH-BUTTON ADJUSTMENT

1. Pull button out.
2. Tune manually to desired station.
3. Press button in firmly.
4. Repeat for remaining buttons.



**HOWARD W. SAMS & CO., INC.** Indianapolis 6, Indiana



# PARTS LIST AND DESCRIPTION

Replacement parts shown may be superseded by the availability of newly introduced replacements.  
 Have your local distributor check Sams COUNTER FACTS for the most up-to-date replacement.

## TRANSISTORS

| ITEM No. | ORIG. TYPE        | USE     | REPLACEMENT DATA |                           |              | NOTES |
|----------|-------------------|---------|------------------|---------------------------|--------------|-------|
|          |                   |         | DELCO PART No.   | GENERAL ELECTRIC PART No. | RCA PART No. |       |
| X1       | 6-60<br>(2N1637)  | RF Amp. | DS-25            | GE-1                      | 2N1637       | PNP   |
| X2       | 6-61<br>(2N1639)  | Conv.   | DS-25            | GE-1                      | 2N1639       | PNP   |
| X3       | 6-62<br>(2N1638)  | IF Amp. | DS-25            | GE-1                      | 2N1638       | PNP   |
| X4       | 6-53<br>(2N591)   | Driver  | DS-26            | GE-2                      | 2N591        | PNP   |
| X5       | 8P404V<br>(2N176) | Output  | DS-520           | GE-3                      | 2N301        | PNP   |

• When replacing, apply silicon grease to both sides of insulator. Tighten mounting screws securely.

## POWER RECTIFIERS & SIGNAL DIODES

| ITEM No. | MEASURED CURRENT | ORIGINAL Part or Type No. | RECTIFIERS                |                  |              |                         | DIODES                    |
|----------|------------------|---------------------------|---------------------------|------------------|--------------|-------------------------|---------------------------|
|          |                  |                           | GENERAL ELECTRIC PART No. | MALLORY PART No. | RCA PART No. | SARKES TARZIAN PART No. | GENERAL ELECTRIC PART No. |
| X6       |                  | 1GD2                      |                           |                  |              |                         | 1N34AS                    |
| X7       |                  | 1GD2                      |                           |                  |              |                         | 1N34AB                    |

## ELECTROLYTIC CAPACITORS

| ITEM No.      | RATING              |          | Automatic PART No. | REPLACEMENT DATA |                           |                           |                             |                   | SPRAGUE PART No.     |
|---------------|---------------------|----------|--------------------|------------------|---------------------------|---------------------------|-----------------------------|-------------------|----------------------|
|               | CAP.                | VOLT.    |                    | AEROVOX PART No. | CORNELL-DUBILIER PART No. | GENERAL ELECTRIC PART No. | GENERAL INSTRUMENT PART No. | MALLORY PART No.  |                      |
| C1A<br>B<br>C | #500<br>#300<br>100 | 16<br>16 | 20-2653            | AFH3-00-04.5     |                           | XC3-48.1                  |                             | FP300.83          | TVLS-3026.14*        |
| C2<br>C3      | 25<br>5             | 15<br>15 | 20-256<br>20-505   | PTT69<br>CRE454A | NLW25-15<br>NLW5-15       | MT1-10<br>MT1-3           | MLV25-15<br>MLV5-15         | TT15X25<br>TT25X5 | TE-1157.1<br>TE-1152 |

\* Not normally in distributor's stock. Available thru distributor on order to manufacturer.

## FIXED CAPACITORS

| ITEM No.         | RATING | REMARKS                | REPLACEMENT DATA |                    |                           |                  |                  |                  |  |
|------------------|--------|------------------------|------------------|--------------------|---------------------------|------------------|------------------|------------------|--|
|                  |        |                        | AEROVOX PART No. | CENTRALAB PART No. | CORNELL-DUBILIER PART No. | ELMENCO PART No. | MALLORY PART No. | SPRAGUE PART No. |  |
| C10<br>C11A<br>B |        | #28-800-2L<br>#28A1332 |                  |                    |                           |                  |                  |                  |  |
| C12              | 270    |                        | DI-270           | DD-271             | LA10T27-C4                | CCD-271          | GP327            | 5GA-T25          |  |
| C13              | 100    |                        | N750-DI100       | DTN-100            | C10T1U                    | CCTN-101         | CN7310           | 10TCU-T10        |  |
| C14              | .01    |                        | BPD-01           | DD-103             | BYA1061                   | CCD-103          | B110             | 5HK-810          |  |
| C15              | .22    |                        |                  | UK20-204           | HCC25224Z                 |                  |                  | HY-325           |  |
| C16              | .1     |                        | TTD-1            | CK-104             | H6                        |                  | TA010            | TG-P10           |  |
| C17              | .05    |                        | TTD-05           | CK-503             | H5                        |                  | TA150            | TG-850           |  |

# Automatic Part Number.

## CONTROLS

All wattages 1/2 watt, or less, unless otherwise listed.

| ITEM No. | USE                | RESISTANCE                     | REPLACEMENT DATA   |  |                    |                  |                  |             |
|----------|--------------------|--------------------------------|--------------------|--|--------------------|------------------|------------------|-------------|
|          |                    |                                | Automatic PART No. | CENTRALAB PART No.                               | CLAROSTAT PART No. | CTS-IRC PART No. | MALLORY PART No. |             |
| R1A      | Tone Volume/Switch | 10K<br>7500Ω<br>Tap @<br>5100Ω | 80A3277            | F1-10K, R14-7500,<br>F8012, RFS104,<br>AK28, KR4 |                    |                  | † QJ-1850A       | †† UE4522-8 |

† "CONCENTRIKIT" Equivalent: K8 Kit with Base Elements and Shafts: B11-116, P22-021 (Panel)

"SNAPTROL" Equivalent: BU10 ①, CF9, CR48T, SF3, SR39, GC. B21-115X, R1-103 (Rear)

†† "STA-LOC" Equivalent: FM14L, RU752T53, OS750A, B1250, U841. S11 (Bushing)

78-1 (Switch)

① Cut bushing to required length.

## RESISTORS (Power and Special)

| ITEM No. | RATING        | REPLACEMENT DATA |                  |                    | ITEM No. | RATING | REPLACEMENT DATA |                  |                    |
|----------|---------------|------------------|------------------|--------------------|----------|--------|------------------|------------------|--------------------|
|          |               | IRC PART No.     | WORKMAN PART No. | Automatic PART No. |          |        | IRC PART No.     | WORKMAN PART No. | Automatic PART No. |
| R11      | 160Ω 5W (PTC) |                  |                  | 61-161             | R13      | .5Ω 1W | BWH.51           | WT51             |                    |
| R12      | 8.8Ω 1W       | BWH6.8           | WS6.8            |                    |          |        |                  |                  |                    |

## COILS (RF-IF)

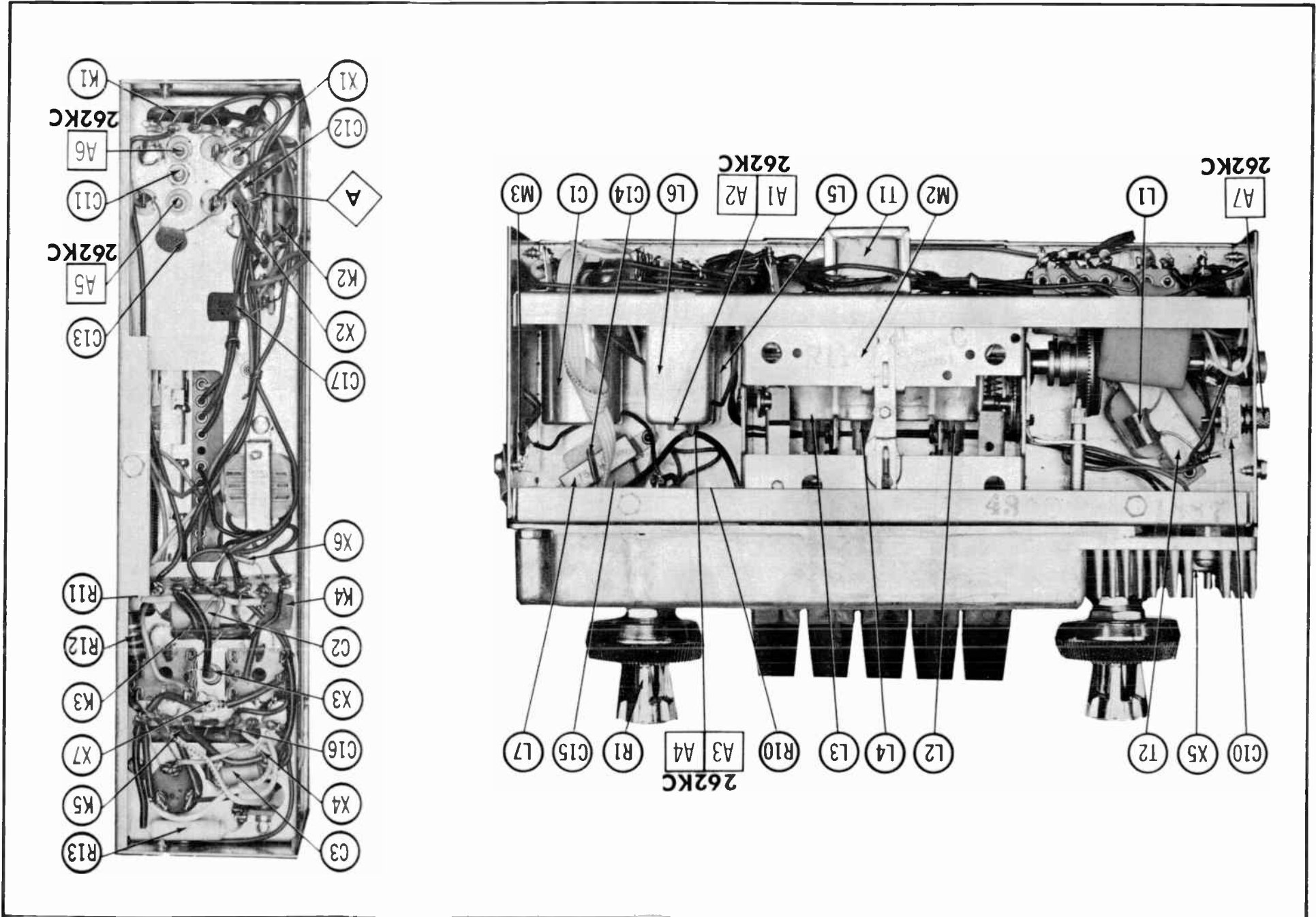
| ITEM No. | USE              | REPLACEMENT DATA   |                |                 |                  |                  | NOTES         |
|----------|------------------|--------------------|----------------|-----------------|------------------|------------------|---------------|
|          |                  | Automatic PART No. | MERIT PART No. | MILLER PART No. | STANCOR PART No. | WORKMAN PART No. |               |
| L1       | RF Choke (6.2uh) | 14-8.2             | BC-565         | 4610            | RTC-8620         | T859             | ① Part of M2. |
| L2       | Ant.             | ①                  |                |                 |                  |                  |               |
| L3       | RF               | ①                  |                |                 |                  |                  |               |
| L4       | Osc.             | ①                  |                |                 |                  |                  |               |
| L5       | Input IF         | 14-2654            |                | 6570            |                  |                  |               |
| L6       | Output IF        | 14-2655            |                | 6571            |                  |                  |               |

CONTINUED PAGE 40

AUTOMATIC MODEL NP-5153



AUTOMATIC MODEL NP-5153



## PARTS LIST AND DESCRIPTION (CONTINUED)

Replacement parts shown may be superseded by the availability of newly introduced replacements.  
Have your local distributor check Sams COUNTER FACTS for the most up-to-date replacement.

### FILTER CHOKE

| ITEM No. | RATINGS            |            |                              | REPLACEMENT DATA     |                  |                  |                     |                  | NOTES        |
|----------|--------------------|------------|------------------------------|----------------------|------------------|------------------|---------------------|------------------|--------------|
|          | CURRENT (Measured) | DC RES.    | INDUCTANCE (D CURRENT 1000~) | Automatic PART No.   | MERIT PART No.   | STANCOR PART No. | THORDARSON PART No. | TRIAD PART No.   |              |
| L7       | 580ma              | .5Ω<br>.5Ω | 10MH<br>10MH                 | 75A3082<br>75A1289 * | C-4095<br>C-4095 | TC-2<br>TC-2     | TR-155<br>TR-155    | TY17XT<br>TY17XT | * Alternate. |

### TRANSFORMER (DRIVER)

| ITEM No. | TURNS RATIO |   | REPLACEMENT DATA   |                |                  |                     |                | NOTES |
|----------|-------------|---|--------------------|----------------|------------------|---------------------|----------------|-------|
|          |             |   | Automatic PART No. | MERIT PART No. | STANCOR PART No. | THORDARSON PART No. | TRIAD PART No. |       |
| T1       | 8:          | 1 | 75A2635            |                |                  |                     | TR-184         |       |

### TRANSFORMER (AUDIO OUTPUT)

| ITEM No. | IMPEDANCE |      | REPLACEMENT DATA   |                |                  |                     |                | NOTES |
|----------|-----------|------|--------------------|----------------|------------------|---------------------|----------------|-------|
|          |           |      | Automatic PART No. | MERIT PART No. | STANCOR PART No. | THORDARSON PART No. | TRIAD PART No. |       |
| T2       | 24Ω Tap   | @ 8Ω | 75A2636            |                |                  |                     | TR-169         |       |

### SPEAKER

| ITEM No. | TYPE        | RATING | REPLACEMENT DATA   |               | NOTES |
|----------|-------------|--------|--------------------|---------------|-------|
|          |             |        | Automatic PART No. | QUAM PART No. |       |
| SP1      | 4" X 10" PM | 8Ω     | 73B3276            | 410A2Z8       |       |

### COMPONENT COMBINATIONS

| ITEM No. | USE           | DESCRIPTION                                       | Automatic PART NO. | REPLACEMENT DATA |
|----------|---------------|---|--------------------|------------------|
| K1       | RF Network    | 220Ω, 1000Ω, 82K, .05mfd, 1mfd                    | 89A2582C           |                  |
| K2       | Conv. Network | 150Ω, 1000Ω, 4700Ω, 47K, .005mfd, .015mfd, .02mfd | 89A2583            |                  |
| K3       | IF Network    | 560Ω, 5600Ω, 47K, .05mfd, .05mfd, .05mfd          | 89A2584B           |                  |
| K4       | AVC Network   | 5600Ω, 180pf                                      | 89A2701            |                  |
| K5       | Audio Network | 470Ω, 820Ω, 4700Ω, 12K, 27K, 270K, .002mfd        | 89A2585A           |                  |

### FUSES

| ITEM No. | TYPE | RATING | REPLACEMENT DATA   |         |                     |        |               |        |
|----------|------|--------|--------------------|---------|---------------------|--------|---------------|--------|
|          |      |        | Automatic PART No. |         | LITTELFUSE PART No. |        | BUSS PART No. |        |
|          |      |        | FUSE               | HOLDER  | FUSE                | HOLDER | FUSE          | HOLDER |
| M1       | AGW  | 4A     | 108-400            | 12A2864 | 303004              | 155004 | AGW4          | HDR    |

### MISCELLANEOUS

| ITEM No. | PART NAME   | Automatic PART No. | NOTES      |
|----------|-------------|--------------------|------------|
| M2       | Tuner       | 73B3274            | Pushbutton |
| M3       | Spark Plate | 43-216             |            |

### CABINETS & CABINET PARTS

(When Ordering Specify Model, Chassis & Color)

| ITEM  | PART No.                      | ITEM                      | PART No.           |
|---|-------------------------------|---------------------------|--------------------|
| Dial Calibration Knob, Tuning or Volume Knob, Dummy | 39-126A<br>55A3375<br>48A3299 | Knob, Dummy<br>Pushbutton | 48A3300<br>55A1566 |

### WIRING DATA

|   |  |
|---|--|
| General-use Unshielded Hook-up Wire ..... | Use BELDEN No. 8530 (Solid) Available in 12 Colors<br>8524 (Stranded) Available in 12 Colors |
| Shielded Hook-up Wire .....               | Use BELDEN No. 8885  |
| Rear Seat Speaker Extension Cable .....   | Use BELDEN No. 8782 (Stranded) Coded Parallel Leads  |
| Bonding Strap .....                       | Use BELDEN No. 8661 (3/8 in.) or 8670 (3/4 in.)  |





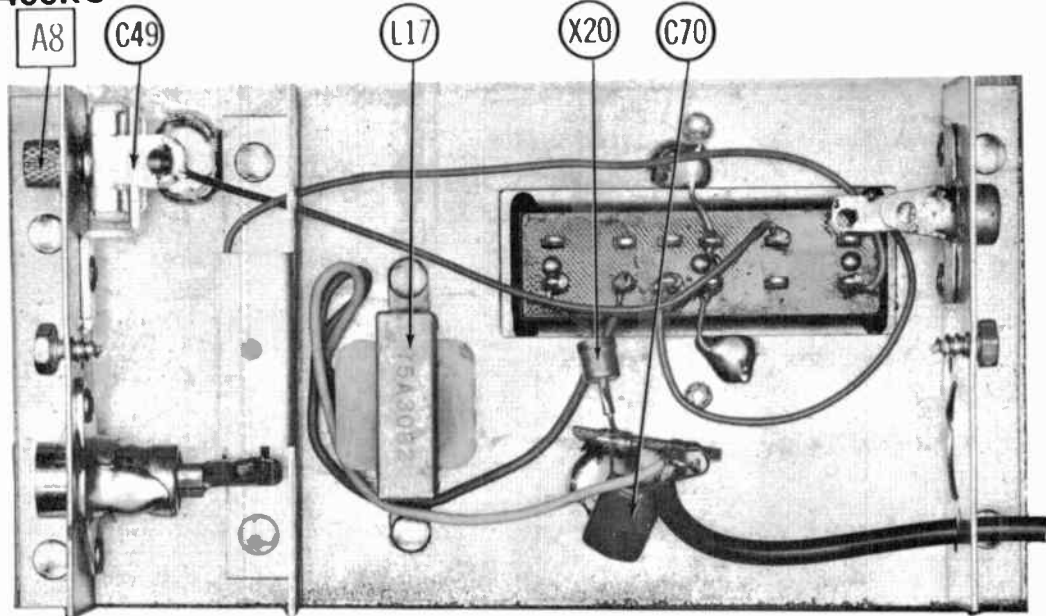
# PHOTOFACT<sup>®</sup> with

# CIRCUITRACE<sup>®</sup>

TRADE NAME : Automatic Model PAF-4340  
 SUPPLIER : For Current Address, See Master Index.  
 TYPE SET : 14 Transistor AM-FM Auto-Portable Receiver  
 POWER SUPPLY : 12 Volt Storage Battery or (6-"C" Battery)  
 RATING : .300 Amp. @ 12.6 Volts DC  
 (.026 Amp. @ 9 Volts DC)  
 TUNING RANGE: BROADCAST 535-1615KC  
 FREQ. MOD. 87.5-108.5MC

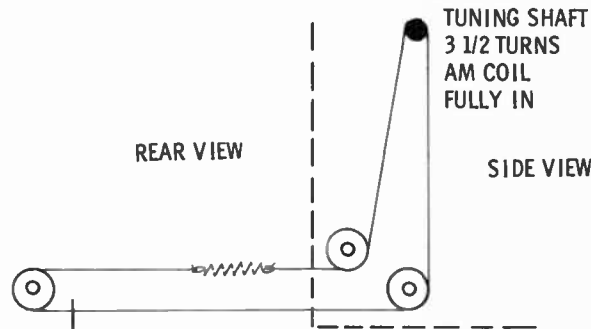


1400KC



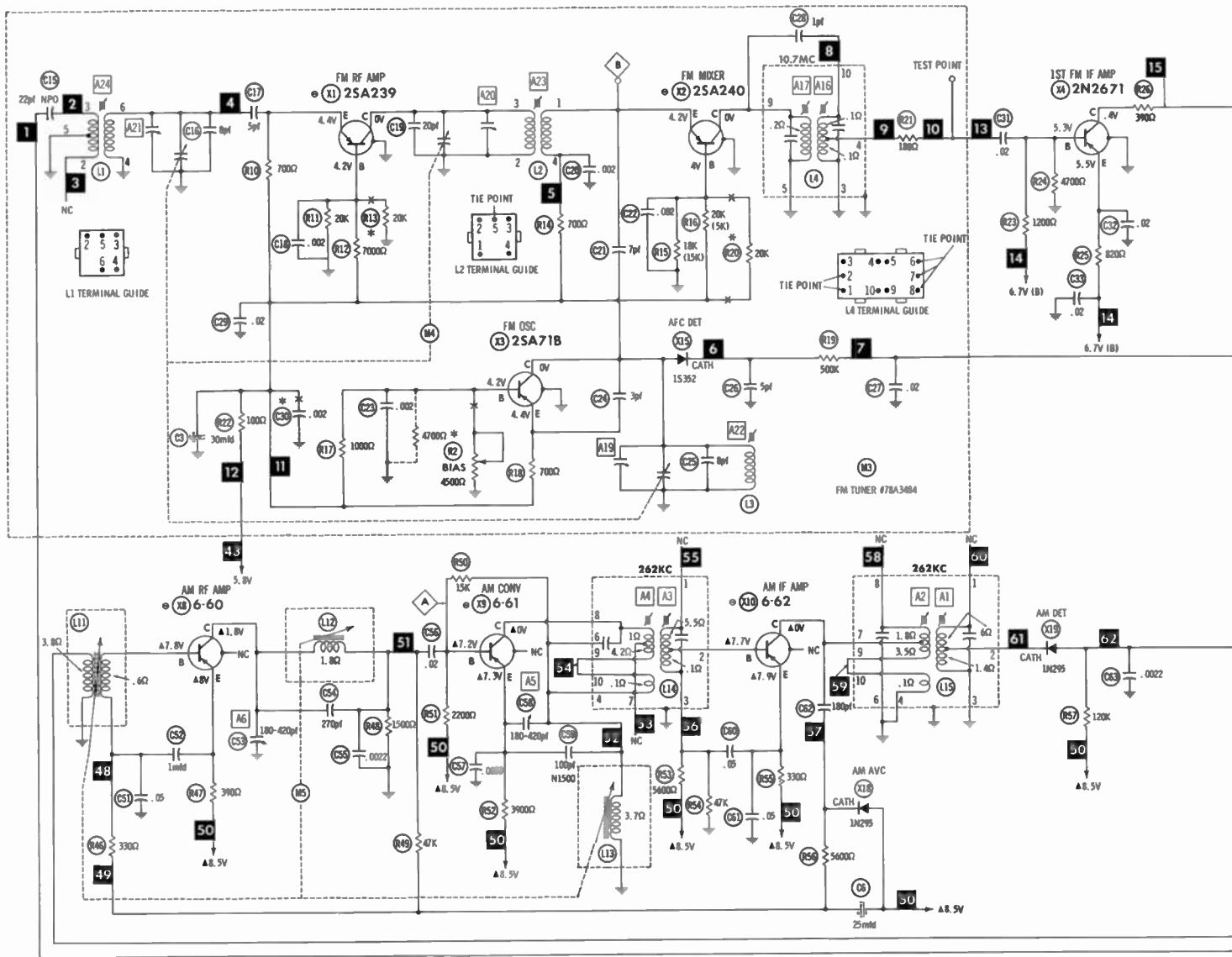
AUTOMATIC MODEL PAF-4340

## DIAL CORD STRINGING



**HOWARD W. SAMS & CO., INC.** Indianapolis 6, Indiana





MEASUREMENTS TAKEN IN "FM" POSITION UNLESS OTHERWISE DESIGNATED.

- ▲ MEASURED IN "AM" POSITION.
- MEASURED WITH 12.6V INPUT.
- \* NOT USED IN SOME VERSIONS.

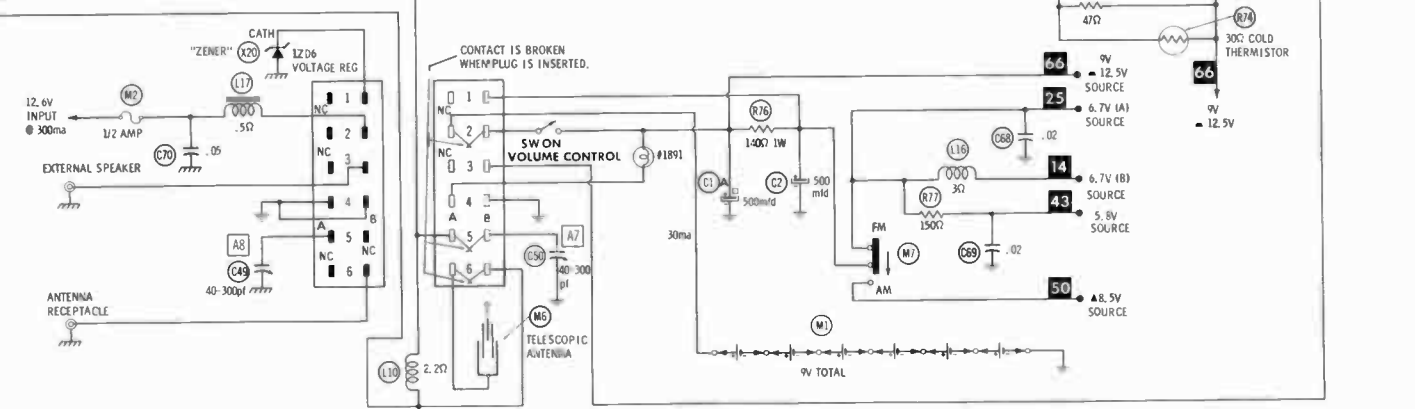
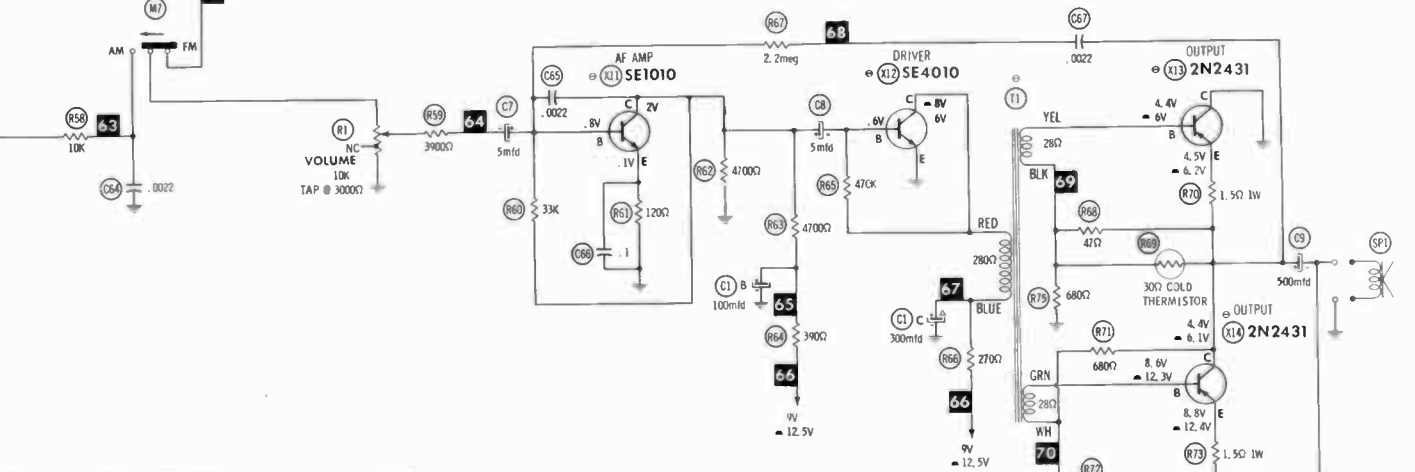
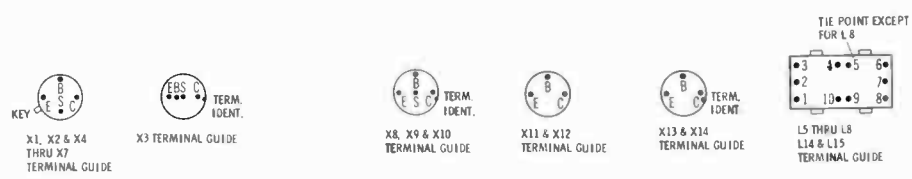
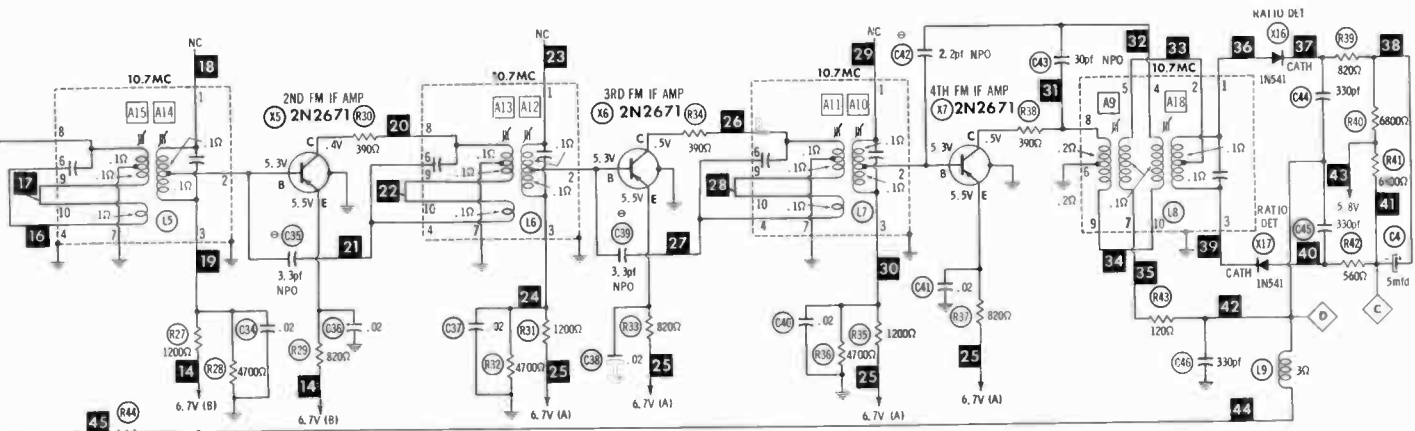
Resistors are 1/2 watt or less and rated 10% or 20% unless otherwise indicated.

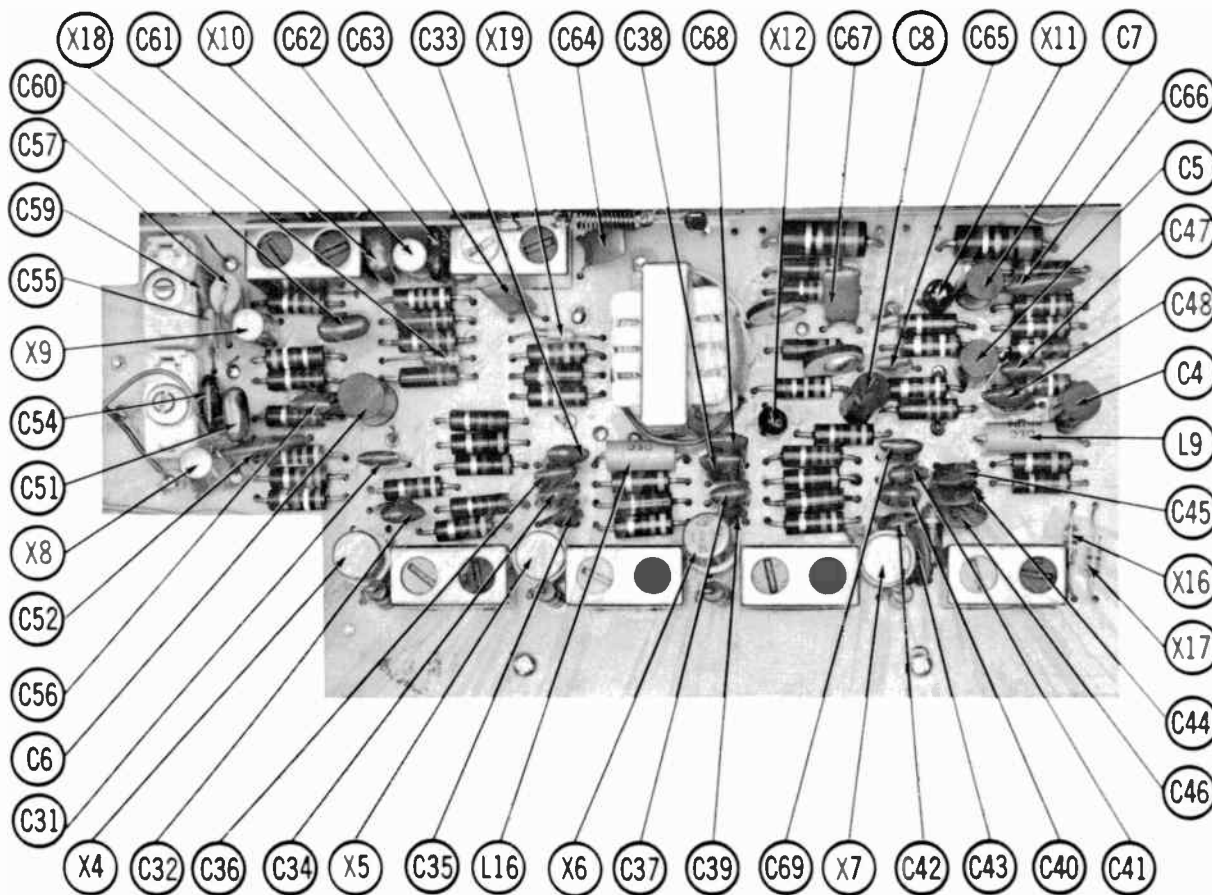
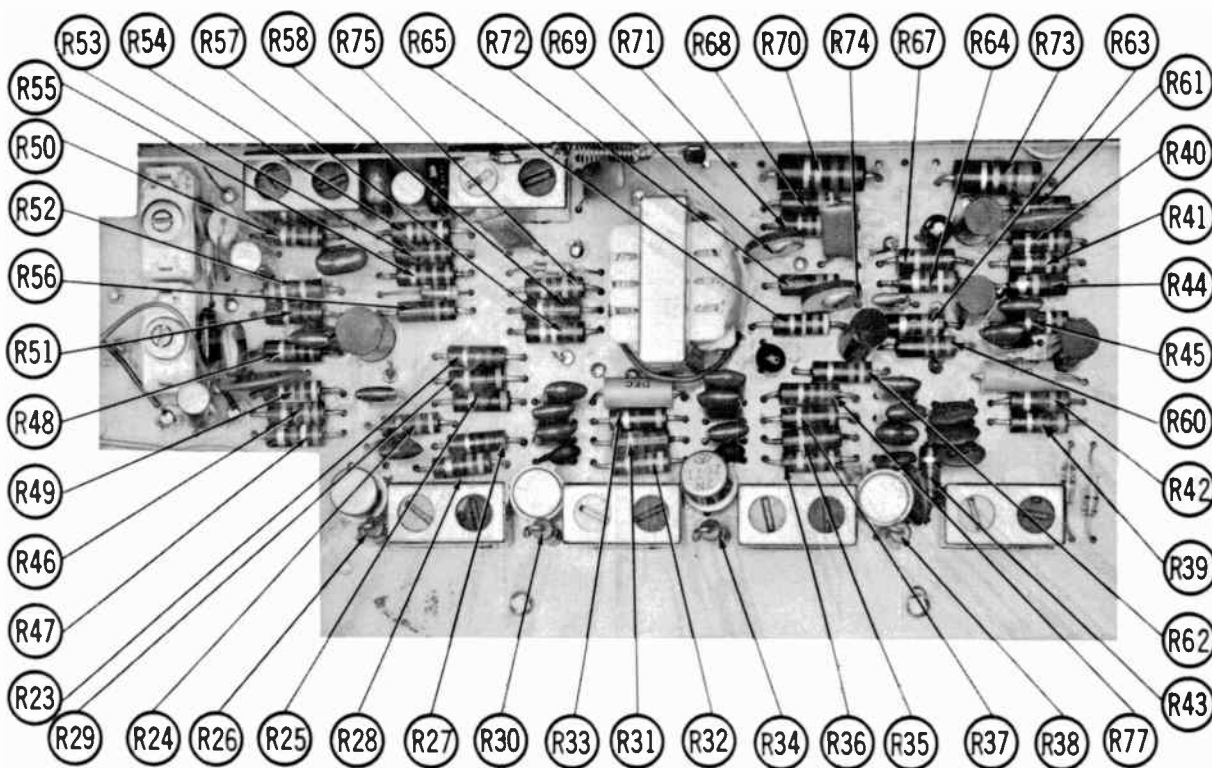
- See parts list for alternate value or application.
- 1. Voltage measurements taken with vacuum tube voltmeter.
- 2. All controls set for normal operation, no signal applied.
- 3. Measured values are from socket pin or terminal to common ground.
- 4. All terminals viewed from bottom unless otherwise designated.
- 5. Numbers assigned to terminals may not be found on the unit.
- 6. Supply voltage maintained at rated value for voltage readings.
- 7. Resistance measurements not given because of the wide variation in internal resistance of transistor.

A PHOTOFAC STANDARD NOTATION SCHEMATIC with CIRCUITRACE

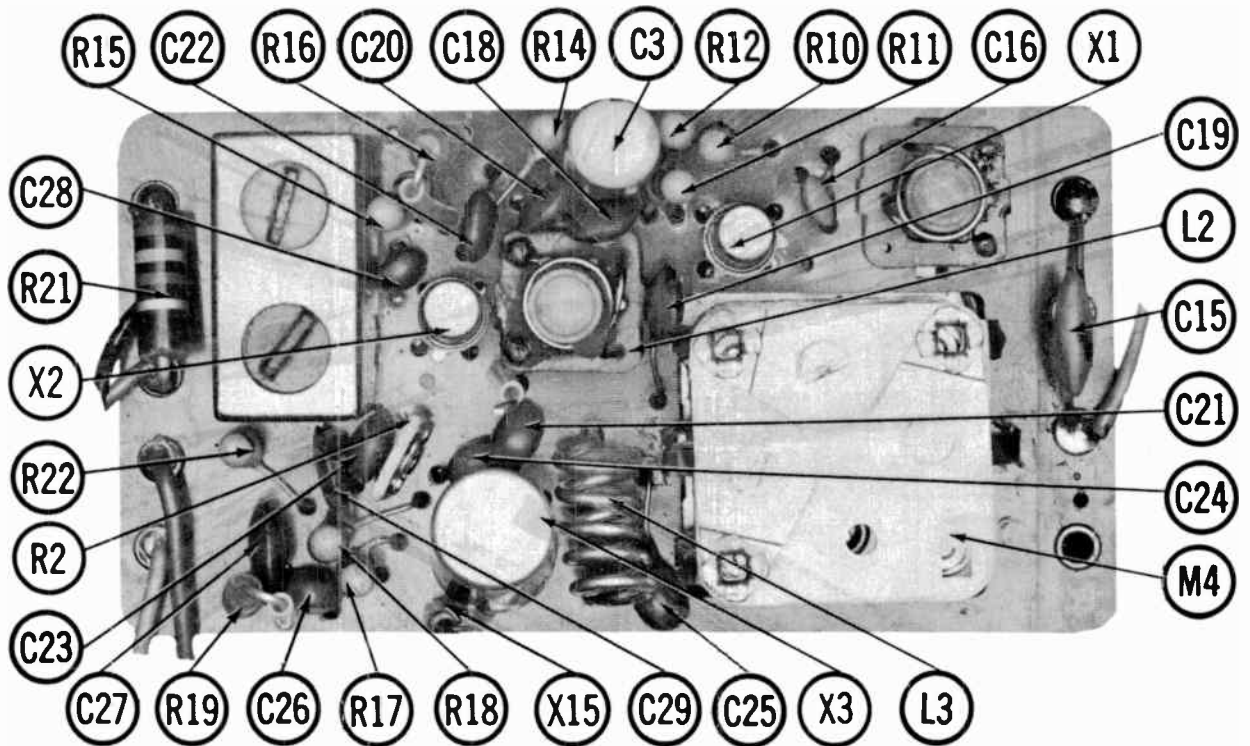
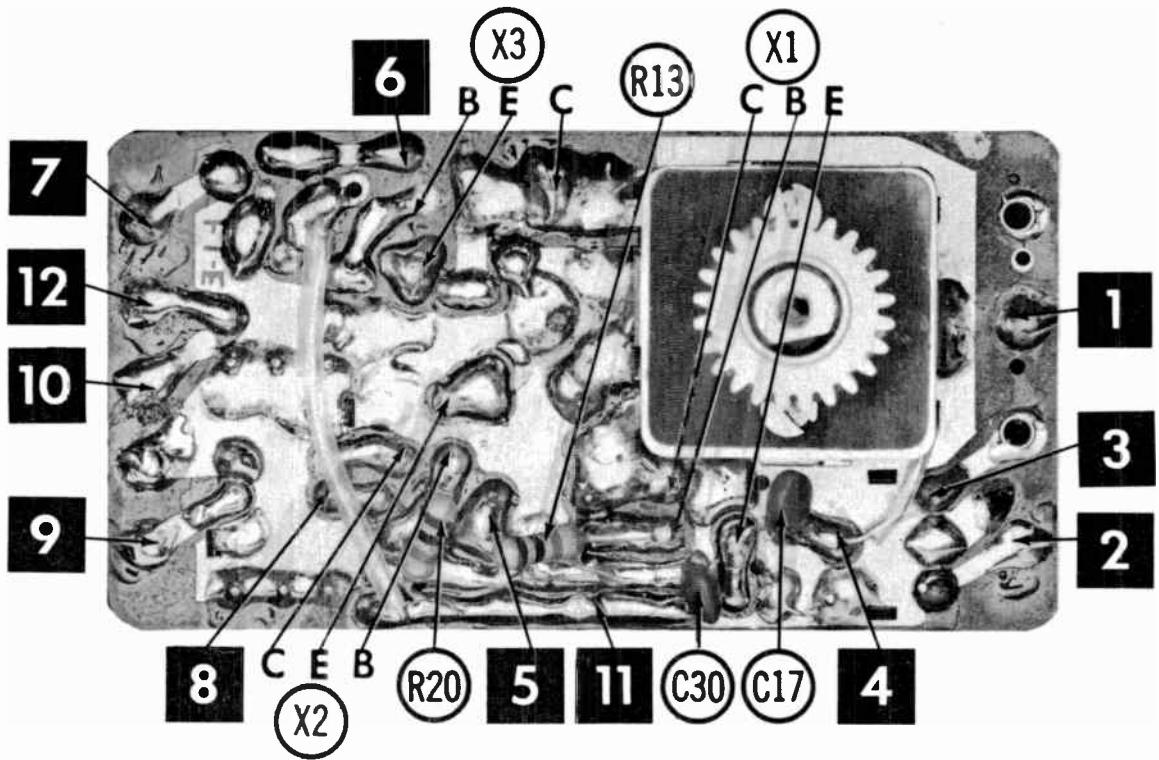
© Howard W Sams & Co., Inc 1965

**AUTOMATIC MODEL PAF-4340**



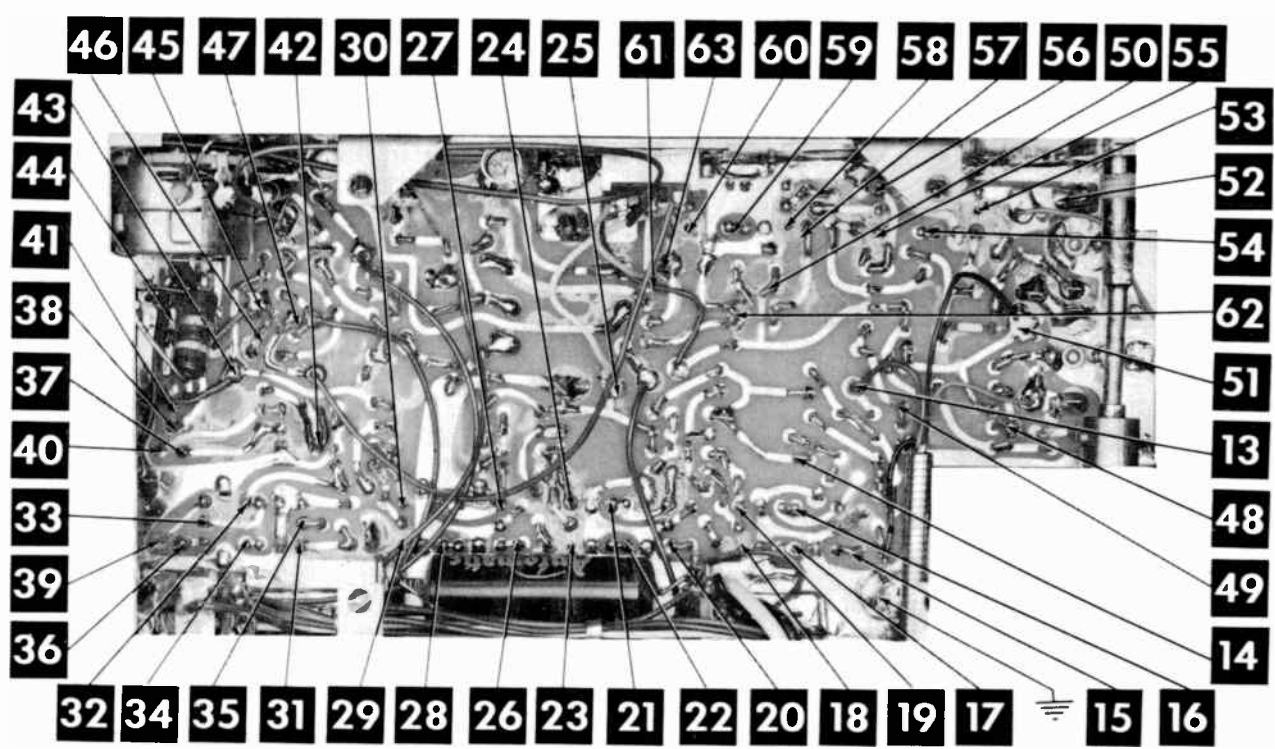
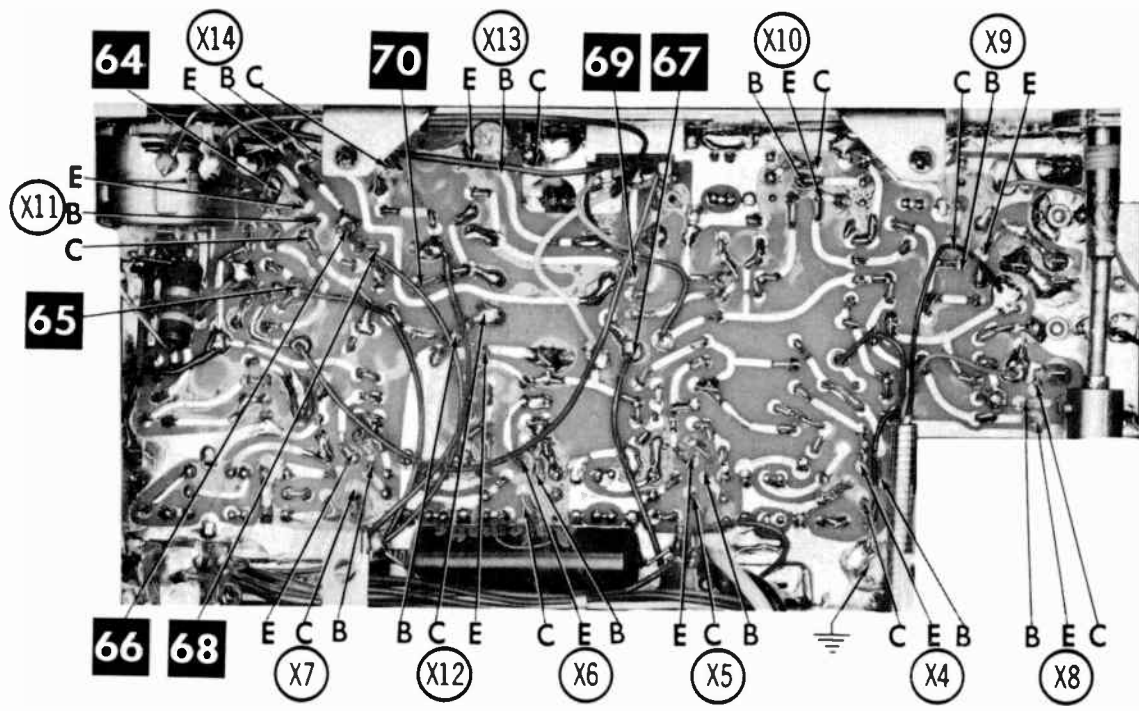




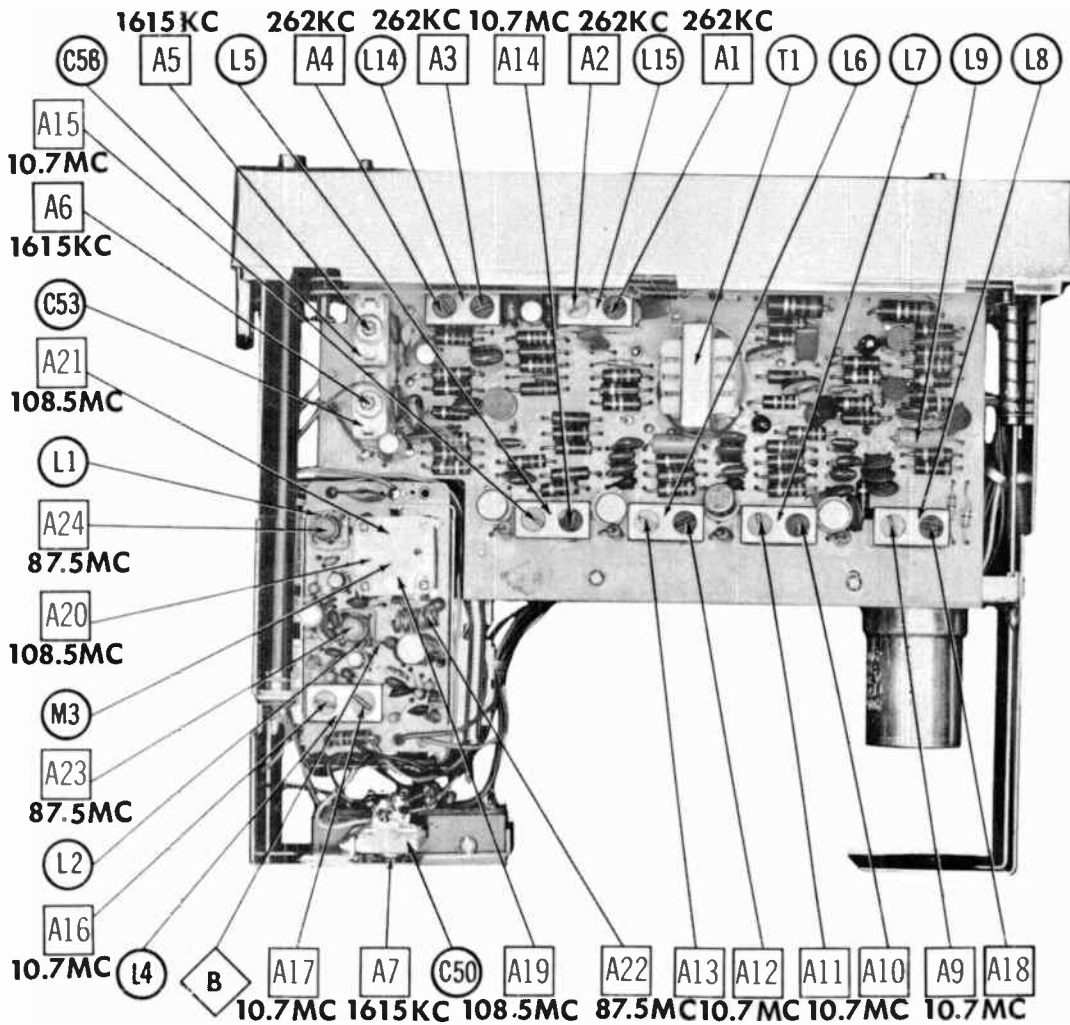
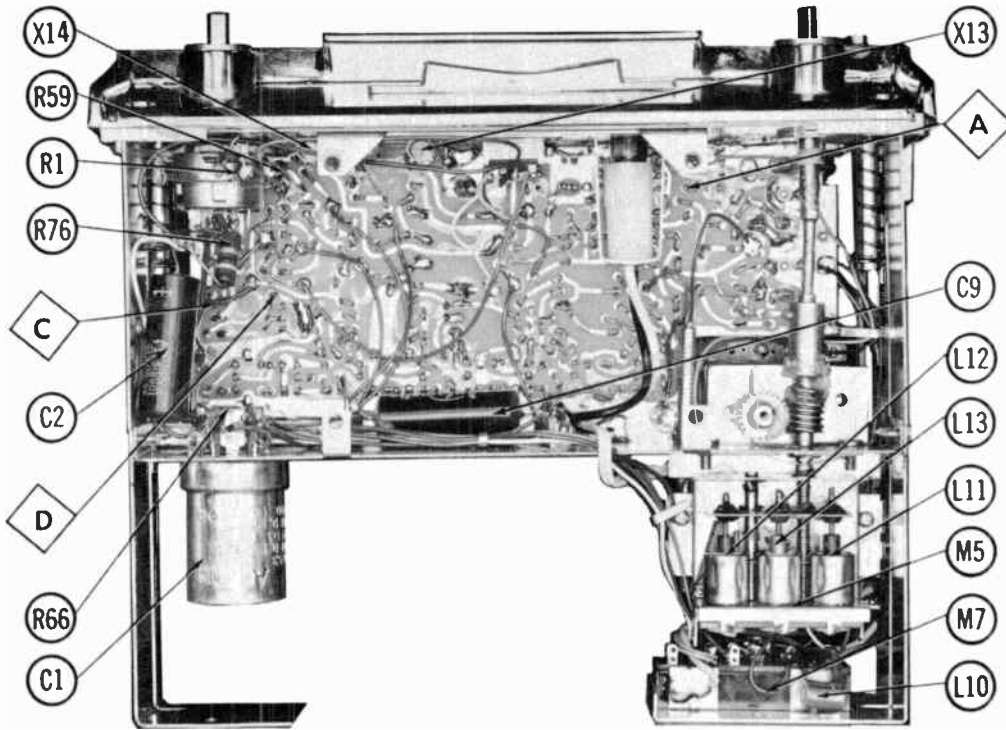


AUTOMATIC MODEL PAF-4340





A Howard W. Sams **CIRCUITRACE** Photo





# PARTS LIST AND DESCRIPTION

Replacement parts shown may be superseded by the availability of newly introduced replacements.  
Have your local distributor check Sams COUNTER FACTS for the most up-to-date replacement.

## WIRING DATA

|                                     |  |
|-------------------------------------|--|
| General-use Unshielded Hook-up Wire | Use BELDEN No. 8530 (Solid) Available in 12 Colors<br>8524 (Stranded) Available in 12 Colors |
| Shielded Hook-up Wire               | Use BELDEN No. 8885  |
| Rear Seat Speaker Extension Cable   | Use BELDEN No. 8782 (Stranded) Coded Parallel Leads  |
| Bonding Strap                       | Use BELDEN No. 8661 (3/8 In.) or 8670 (3/4 In.)  |

## TRANSISTORS

| ITEM No. | ORIG. TYPE | USE        | REPLACEMENT DATA |                           |              | NOTES | Automatic PART No. |
|----------|------------|------------|------------------|---------------------------|--------------|-------|--------------------|
|          |            |            | DELCO PART No.   | GENERAL ELECTRIC PART No. | RCA PART No. |       |                    |
| X1       | 2SA239     | FM RF Amp. | D8-41            |                           | 2N1177       | PNP   | 2SA71A Alt.        |
| X2       | 2SA240     | FM Mixer   | D8-42            |                           | 2N1179       | PNP   | 2SA71B Alt.        |
| X3       | 2SA71B     | FM Osc.    | D8-42            |                           | 2N1179       | PNP   |                    |
| X4       | 2N2871     | 1st FM IF  | D8-34            |                           | 2N1180       | PNP   |                    |
| X5       | 2N2871     | 2nd FM IF  | D8-34            |                           | 2N1180       | PNP   |                    |
| X6       | 2N2871     | 3rd FM IF  | D8-34            |                           | 2N1180       | PNP   |                    |
| X7       | 2N2871     | 4th FM IF  | D8-34            | 2N1180                    | PNP          |       |                    |
| X8       | 6-60       | AM RF Amp. | D8-25            | GE-1                      | 2N1637       | PNP   | 2N1637 Alt.        |
| X9       | 6-61       | AM Conv.   | D8-25            | GE-1                      | 2N1639       | PNP   | 2N1639 Alt.        |
| X10      | 6-62       | AM IF Amp. | D8-25            | GE-1                      | 2N1638       | PNP   | 2N1638 Alt.        |
| X11      | SE1010     | AF Amp.    | D8-46            | GE-10                     | 2N649        | PNP   | 6-93 Alt.          |
| X12      | SE4010     | Driver     | D8-46            | GE-10                     | 2N649        | PNP   | 6-93 Alt.          |
| X13      | 2N2431     | Output     | D8-26            | GE-2                      | 2N408        | PNP   | 6-31 Alt.          |
| X14      | 2N2431     | Output     | D8-28            | GE-2                      | 2N408        | PNP   | 6-31 Alt.          |

## POWER RECTIFIERS & SIGNAL DIODES

| ITEM No. | MEASURED CURRENT | ORIGINAL Part or Type No. | RECTIFIERS                |                  |              |                         | DIODES                    |
|----------|------------------|---------------------------|---------------------------|------------------|--------------|-------------------------|---------------------------|
|          |                  |                           | GENERAL ELECTRIC PART No. | MALLORY PART No. | RCA PART No. | SARKES TARZIAN PART No. | GENERAL ELECTRIC PART No. |
| X15      |                  | 1S352                     |                           |                  |              |                         | 1N34AS                    |
| X16      |                  | 1N541                     |                           |                  |              |                         | 1N34AS                    |
| X17      |                  | 1N541                     | (Matched Pr.)             |                  |              |                         | 1N34AS                    |
| X18      |                  | 1N295                     |                           |                  |              |                         | 1N34AS                    |
| X19      |                  | 1N295                     |                           |                  |              |                         | 1N34AS                    |
| X20      |                  | 1ZD6                      |                           |                  |              |                         | 1N34AS                    |

## ELECTROLYTIC CAPACITORS

| ITEM No. | RATING |       | REPLACEMENT DATA   |                  |                           |                           |                             |                  |                  |
|----------|--------|-------|--------------------|------------------|---------------------------|---------------------------|-----------------------------|------------------|------------------|
|          | CAP.   | VOLT. | Automatic PART No. | AEROVOX PART No. | CORNELL-DUBILIER PART No. | GENERAL ELECTRIC PART No. | GENERAL INSTRUMENT PART No. | MALLORY PART No. | SPRAGUE PART No. |
| C1A      | 500    | 16    | 20-2653            | AFR3-00-94.5     | CCOO12                    | XCS-48.1                  | TMT3002                     | FP300.83         | TWLS-3025.14*    |
| B        | 100    | 16    |                    |                  |                           |                           |                             |                  |                  |
| C        | 300    | 16    |                    |                  |                           |                           |                             |                  |                  |
| C2       | 500    | 15    | 20-507             | PRS1220          | BR500-15                  | QT1-30                    | BL2342                      | TC1505           | TVA-1162         |
| C3       | 30     | 6     |                    | BCD6035          | NLW30-6                   | MT1-13                    | BL1321                      | TT8X30           | VL-1092          |
| C4       | 5      | 15    | 20-505P            | BCD15005         | ECSP5-15                  | MT1-3                     | BL1141                      | PET1535          | VL-1164          |
| C5       | 5      | 15    | 20-505P            | BCD15005         | ECSP5-15                  | MT1-3                     | BL1141                      | PET1535          | VL-1164          |
| C6       | 25     | 10    | 20-256P            | BCD10025         | ECSP25-15                 | MT1-16                    | BL1331                      | TT10X25          | VL-1130          |
| C7       | 5      | 15    | 20-505P            | BCD15005         | ECSP5-15                  | MT1-3                     | BL1141                      | PET1535          | VL-1164          |
| C8       | 5      | 15    | 20-505P            | BCD15005         | ECSP5-15                  | MT1-3                     | BL1141                      | PET1535          | VL-1164          |
| C9       | 500    | 15    | 20-507             | PRS1220          | BR500-15                  | QT1-30                    | BL2342                      | TC1505           | TVA-1162         |

\* Not normally in distributor's stock. Available thru distributor on order to manufacturer.

## FIXED CAPACITORS

| ITEM No. | RATING | REMARKS | REPLACEMENT DATA |                    |                           |                  |                  |                  |
|----------|--------|---------|------------------|--------------------|---------------------------|------------------|------------------|------------------|
|          |        |         | AEROVOX PART No. | CENTRALAB PART No. | CORNELL-DUBILIER PART No. | ELMENC0 PART No. | MALLORY PART No. | SPRAGUE PART No. |
| C15      | 22     | NPO     | NPO-DI 20        | DTZ-20             | C10Q2C                    | CCTO-200         | CNO422           | 10TCC-Q20        |
| C16      | 8      |         | NPO-DI 8.2       |                    |                           |                  |                  | 10TCC-V82        |
| C17      | 5      |         | NPO-DI 5.0       | DTZ-4R7            | C10V47C                   | CCTO-050         | CNO547           | 10TCC-V50        |
| C18      | .002   |         | BPD-002          | DD-202             | BYA10D2                   | CCD-202          | B220             | 5HK-D20          |
| C19      | 20     |         | NPO-DI 20        | DTZ-20             | C10Q2C                    | CCTO-200         | CNO422           | 10TCC-Q20        |
| C20      | .002   |         | BPD-002          | DD-202             | BYA10D2                   | CCD-202          | B220             | 5HK-D20          |

## FIXED CAPACITORS (cont)

| ITEM No. | RATING     | REMARKS | REPLACEMENT DATA |                    |                           |                  |                  |                  |
|----------|------------|---------|------------------|--------------------|---------------------------|------------------|------------------|------------------|
|          |            |         | AEROVOX PART No. | CENTRALAB PART No. | CORNELL-DUBILIER PART No. | ELMENC0 PART No. | MALLORY PART No. | SPRAGUE PART No. |
| C21      | 7          |         | NPO-DI 8.8       | DTZ-6R8            | C10V68C                   | CCTO-6R8         | CNO586           | 10TCC-V68        |
| C22      | .002       |         | BPD-002          | DD-202             | BYA10D2                   | CCD-202          | B220             | 5HK-D20          |
| C23      | .002       |         | BPD-002          | DD-202             | BYA10D2                   | CCD-202          | B220             | 5HK-D20          |
| C28      | 3          |         | NPO-DI 3.0       | DTZ-3R3            | C10V33C                   | CCTO-3R3         | CNO533           | 10TCC-V30        |
| C25      | 8          |         | NPO-DI 8.2       |                    |                           |                  |                  | 10TCC-V82        |
| C28      | 5          |         | NPO-DI 5.0       | DTZ-4R7            | C10V47C                   | CCTO-050         | CNO547           | 10TCC-V50        |
| C27      | .02        |         | BPD-02           | DD-203             | BYA6S2                    | CCD-203          | B120             | 5HK-S20          |
| C28      | 1          |         | NPO-DI 1.0       | TCZ-1              |                           |                  | CNO510           | 10TCC-V10        |
| C29      | .02        |         | BPD-02           | DD-203             | BYA6S2                    | CCD-203          | B120             | 5HK-S20          |
| C30      | .002       |         | BPD-002          | DD-202             | BYA10D2                   | CCD-202          | B220             | 5HK-D20          |
| C31      | .02        |         | BPD-02           | DD-203             | BYA6S2                    | CCD-203          | B120             | 5HK-S20          |
| C32      | .02        |         | BPD-02           | DD-203             | BYA6S2                    | CCD-203          | B120             | 5HK-S20          |
| C33      | .02        |         | BPD-02           | DD-203             | BYA6S2                    | CCD-203          | B120             | 5HK-S20          |
| C34      | .02        |         | BPD-02           | DD-203             | BYA6S2                    | CCD-203          | B120             | 5HK-S20          |
| C35      | 3.3        | NPO     | NPO-DI 3.0       | DTZ-3R3            | C10V33C                   | CCTO-3R3         | CNO533           | 10TCC-V30        |
| C36      | .02        |         | BPD-02           | DD-203             | BYA6S2                    | CCD-203          | B120             | 5HK-S20          |
| C37      | .02        |         | BPD-02           | DD-203             | BYA6S2                    | CCD-203          | B120             | 5HK-S20          |
| C38      | .02        |         | BPD-02           | DD-203             | BYA6S2                    | CCD-203          | B120             | 5HK-S20          |
| C39      | 3.3        | NPO     | NPO-DI 3.0       | DTZ-3R3            | C10V33C                   | CCTO-3R3         | CNO533           | 10TCC-V30        |
| C40      | .02        |         | BPD-02           | DD-203             | BYA6S2                    | CCD-203          | B120             | 5HK-S20          |
| C41      | .02        |         | BPD-02           | DD-203             | BYA6S2                    | CCD-203          | B120             | 5HK-S20          |
| C42      | 2.2        | NPO     | NPO-DI 2.2       | DTZ-2R2            | C10V22C                   | CCTO-2R2         | CNO522           | 10TCC-V22        |
| C43      | 30         | NPO     | NPO-DI 33        | DTZ-33             | C10Q33C                   | CCTO-300         | CNO433           | 10TCC-Q30        |
| C44      | 330        |         | DI-330           | DD-331             | LA10T33-C4                | CCD-331          | GP333            | 10TS-T33         |
| C45      | 330        |         | DI-330           | DD-331             | LA10T33-C4                | CCD-331          | GP333            | 10TS-T33         |
| C46      | 330        |         | DI-330           | DD-331             | LA10T33-C4                | CCD-331          | GP333            | 10TS-T33         |
| C47      | .02        |         | BPD-02           | DD-203             | BYA6S2                    | CCD-203          | B120             | 5HK-S20          |
| C48      | .02        |         | BPD-02           | DD-203             | BYA6S2                    | CCD-203          | B120             | 5HK-S20          |
| C49      | 40-300     |         | #28A3044         |                    |                           |                  |                  |                  |
| C50      | 40-300     |         | #28A3044-1       |                    |                           |                  |                  |                  |
| C51      | .05        |         | TTD-05           | CK-503             | H5                        |                  | TA150            | TG-850           |
| C52      | 1mid 3V    |         |                  | UK-105             | HCC3105P                  |                  |                  | HY-135           |
| C53      | 180-420    |         | #28A2547         |                    |                           |                  |                  |                  |
| C54      | 270        |         |                  |                    |                           |                  |                  |                  |
| C55      | .0022      |         | DI-270           | DD-271             | LA10T27-C4                | CCD-271          | GP327            | 5GA-T270         |
| C56      | .02        |         | CF-222           | CF-222             | JB6D22                    | CCD-222          | GP222            | 10TS-D22         |
| C57      | .0033 400V |         | BPD-02           | DD-202             | BYA10D2                   | CCD-202          | B220             | 5HK-D20          |
| C58      | 180-420    |         | BPD-0033         | DD-332             | BYA10D33                  | CCD-332          | B233             | 5HK-D33          |
| C59      | 100 N1500  |         | #28A2547         |                    |                           |                  |                  |                  |
| C60      | .05        |         | TTD-05           | CK-503             | H5                        |                  | TA150            | TG-850           |
| C61      | .05        |         | TTD-05           | CK-503             | H5                        |                  | TA150            | TG-850           |
| C62      | 180        |         | DI-180           | DD-181             | LA10T18-S3                | CCD-181          | GP318            | 5GA-T18          |
| C63      | .0022      |         | DI-2200          | CF-222             | JB6D22                    | CCD-222          | GP222            | 10TS-D22         |
| C64      | .0022      |         | DI-2200          | CF-222             | JB6D22                    | CCD-222          | GP222            | 10TS-D22         |
| C65      | .0022      |         | DI-2200          | CF-222             | JB6D22                    | CCD-222          | GP222            | 10TS-D22         |
| C66      | .1 16V     |         | TTD-1            | CK-104             | H6                        |                  | TA010            | TG-P10           |
| C67      | .0022      |         | DI-2200          | CF-222             | JB6D22                    | CCD-222          | GP222            | 10TS-D22         |
| C68      | .02        |         | BPD-02           | DD-202             | BYA10D2                   | CCD-202          | B220             | 5HK-D20          |
| C69      | .02        |         | BPD-02           | DD-202             | BYA10D2                   | CCD-202          | B220             | 5HK-D20          |
| C70      | .05        |         | TTD-05           | CK-503             | H5                        |                  | TA150            | TG-850           |

① Not used in some versions.

\* Nominal value.

# Automatic Part Number.

## CONTROLS

All wattages 1/2 watt, or less, unless otherwise listed.

| ITEM No. | USE           | RESISTANCE      | REPLACEMENT DATA   |                    |                    |                  |                     |
|----------|---------------|-----------------|--------------------|--------------------|--------------------|------------------|---------------------|
|          |               |                 | Automatic PART No. | CENTRALAB PART No. | CLAROSTAT PART No. | CTS-IRC PART No. | MALLORY PART No.    |
| R1       | Volume/Switch | 10K Tap @ 3000Ω | 80A3849            |                    |                    |                  | QCB5①               |
| R2       | Bias          | 4500Ω           |                    |                    |                    |                  | B19-116X, TM8, 76-2 |

① Use instead of TM Plate in TM8.

## RESISTORS (Power and Special)

| ITEM No. | RATING   | REPLACEMENT DATA |                  |                    | ITEM No. | RATING   | REPLACEMENT DATA |                  |                    |
|----------|----------|------------------|------------------|--------------------|----------|----------|------------------|------------------|--------------------|
|          |          | IRC PART No.     | WORKMAN PART No. | Automatic PART No. |          |          | IRC PART No.     | WORKMAN PART No. | Automatic PART No. |
| R69      | 30Ω Cold |                  |                  | 5T91               | R74      | 30Ω Cold |                  |                  | 5T91               |

## PARTS LIST AND DESCRIPTION (CONTINUED)

Replacement parts shown may be superseded by the availability of newly introduced replacements.  
Have your local distributor check Sams COUNTER FACTS for the most up-to-date replacement.

### COILS (RF-IF)

| ITEM No. | USE              | REPLACEMENT DATA   |                |                 |                  |                  | NOTES                          |
|----------|------------------|--------------------|----------------|-----------------|------------------|------------------|--------------------------------|
|          |                  | Automatic PART No. | MERIT PART No. | MILLER PART No. | STANCOR PART No. | WORKMAN PART No. |                                |
| L1       | FM Ant           | ①                  |                |                 |                  |                  | ① Part of M3.<br>② Part of M5. |
| L2       | FM RF            | ①                  |                |                 |                  |                  |                                |
| L3       | FM Osc.          | ①                  |                |                 |                  |                  |                                |
| L4       | 1st FM IF        | ①                  |                |                 |                  |                  |                                |
| L5       | 2nd FM IF        | 14A3432            |                |                 |                  |                  |                                |
| L6       | 3rd FM IF        | 14A3433            |                |                 |                  |                  |                                |
| L7       | 4th FM IF        | 14A3434            |                |                 |                  |                  |                                |
| L8       | Ratio Det.       | 14A3435            |                |                 |                  |                  |                                |
| L9       | RF Choke (59uh)  | 14-590             | TV-193         | 6110            | RTC-8573         | T302             |                                |
| L10      | RF Choke (6.2uh) | 14-6.2             | BC-565         | 4610            | RTC-8520         | T859             |                                |
| L11      | AM Ant.          | ②                  |                |                 |                  |                  |                                |
| L12      | AM RF            | ②                  |                |                 |                  |                  |                                |
| L13      | AM Osc.          | ②                  |                |                 |                  |                  |                                |
| L14      | 1st AM IF        | 14A3436            |                |                 |                  |                  |                                |
| L15      | 2nd AM IF        | 14A3437            |                |                 |                  |                  |                                |
| L16      | RF Choke (59uh)  | 14-590             | TV-193         | 6110            | RTC-8573         | T302             |                                |

### FILTER CHOKE

| ITEM No. | RATINGS            |         |                              | REPLACEMENT DATA   |                |                  |                     |                | NOTES |
|----------|--------------------|---------|------------------------------|--------------------|----------------|------------------|---------------------|----------------|-------|
|          | CURRENT (Measured) | DC RES. | INDUCTANCE (0 CURRENT 1000~) | Automatic PART No. | MERIT PART No. | STANCOR PART No. | THORDARSON PART No. | TRIAD PART No. |       |
| L17      | 300ma              | .5Ω     | 10MH                         | 75A3082            | C-4095         | TC-2             | TR-155              | TY17XT         |       |

### TRANSFORMER (DRIVER)

| ITEM No. | TURNS RATIO |                | REPLACEMENT DATA   |                |                  |                     |                | NOTES                            |
|----------|-------------|----------------|--------------------|----------------|------------------|---------------------|----------------|----------------------------------|
|          | PRI.        | SEC.           | Automatic PART No. | MERIT PART No. | STANCOR PART No. | THORDARSON PART No. | TRIAD PART No. |                                  |
|          |             |                |                    |                |                  |                     |                |                                  |
| T1       | 5:          | 1<br>BXC1<br>1 | 75A1954 ①          |                |                  |                     |                | ①75A3885A Alternate Part Number. |

### BATTERIES

| ITEM No. | VOLTAGE | Automatic PART No. | REPLACEMENT DATA |             |                | NOTES       |
|----------|---------|--------------------|------------------|-------------|----------------|-------------|
|          |         |                    | BURGESS          | EVEREADY    | MALLORY        |             |
| M1       | 9V      |                    | 130 or AL1       | 1035 or E93 | M14R or Mn1400 | 6 Required. |

### FUSES

| ITEM No. | TYPE | RATING | REPLACEMENT DATA   |          |                     |        |               |        |
|----------|------|--------|--------------------|----------|---------------------|--------|---------------|--------|
|          |      |        | Automatic PART No. |          | LITTELFUSE PART No. |        | BUSS PART No. |        |
|          |      |        | FUSE               | HOLDER   | FUSE                | HOLDER | FUSE          | HOLDER |
| M2       | AGX  | 1A     | 108-500            | 12-1912B | 362.500             | 155014 | AGX           | HDI    |

### MISCELLANEOUS

| ITEM No. | PART NAME          | Automatic PART No. |
|----------|--------------------|--------------------|
| M3       | FM Tuner           | 78A3484            |
| M4       | FM Tuning Gang     | 78A3994            |
| M5       | AM Tuner           | 10A3558            |
| M6       | Telescopic Antenna |                    |
| M7       | Selector Switch    |                    |

### SPEAKER

| ITEM No. | TYPE          | REPLACEMENT DATA   |               |
|----------|---------------|--------------------|---------------|
|          |               | Automatic PART No. | QUAM PART No. |
| SP1      | 3" X 5" PM 8Ω | 73B4001            | 35A0528       |

### CABINETS & CABINET PARTS

(When Ordering Specify Model, Chassis & Color)

| ITEM                    | PART No. | ITEM         | PART No. |
|-------------------------|----------|--------------|----------|
| Knobs, Tuning or Volume | 47A3996  | Dial Pointer | 84A3405  |

## ALIGNMENT INSTRUCTIONS

Check for specified source voltage.  
Use only enough generator output to provide a usable indication.  
Suggested Alignment Tools:

A1 thru A24 GENERAL CEMENT: 9087 WALSCO: 2528

|    | SIGNAL GENERATOR COUPLING                                       | SIGNAL GENERATOR FREQUENCY | RADIO DIAL SETTING   | INDICATOR                       | ADJUST         | REMARKS             |
|----|---|----------------------------|----------------------|---------------------------------|----------------|---------------------|
| 1. | High side thru .1mf to point Ⓛ, low side to ground.             | 262KC (400% Mod.)          | High Freq. End Stop. | Output Meter across voice coil. | A1, A2, A3, A4 | Adjust for maximum. |
| 2. | High side thru -51pf to antenna receptacle, low side to ground. | 1615KC                     | "                    | "                               | A5, A6, A7     | "                   |

### FM ALIGNMENT USING AM SIGNAL GENERATOR - SELECTOR IN FM POSITION

High side thru .02 to Point Ⓛ, low side to ground.

|    | GENERATOR FREQUENCY | DIAL SETTING               | INDICATOR                                      | ADJUST      | REMARKS   |
|----|---------------------|----------------------------|--|-------------|---|
| 4. | 10.7MC (Unmod.)     | Point of non-interference. | DC probe of VTVM to point Ⓛ; common to ground. | A9 thru A17 | Adjust for maximum.   |
| 5. | "                   | "                          | DC probe to point Ⓛ; common to                 | A18         | Adjust for zero reading. A positive or negative reading will be obtained on either side of the correct setting. |

### FM IF ALIGNMENT USING FM SIGNAL GENERATOR - SELECTOR IN FM POSITION

High side thru .02 to Point Ⓛ, low side to ground. Use only enough marker signal to obtain indication. Use 80% frequency modulated signal with 450KC sweep. Use 120v sawtooth voltage in scope for horizontal deflection.

|    | GENERATOR FREQUENCY | DIAL SETTING              | INDICATOR   | ADJUST      | REMARKS  |
|----|---------------------|---------------------------|---|-------------|--|
| 4. | 10.7MC (450KC Swp.) | Point of non-interference | Vert. amp. of Scope to point Ⓛ; low side to ground. | A9 thru A17 | Disconnect stabilizing capacitor C 4. Adjust for maximum gain and symmetry of response similar to Fig. 1 with marker as shown. Reconnect C 4.                          |
| 5. | "                   | "                         | Vert. amp. to point Ⓛ; low side to                  | A18         | Adjust A18 (Secondary) to place marker at center of crossover lines similar to Fig. 2. Adjust A 9 (Primary) for maximum amplitude and straightness of crossover lines. |

### FM RF ALIGNMENT

Connect generator thru .02 to antenna, low side to ground.

|    | GENERATOR FREQUENCY | DIAL SETTING     | INDICATOR                                      | ADJUST        | REMARKS  |
|----|---------------------|------------------|--|---------------|--|
| 6. | 108.5MC             | Set at high end. | DC probe of VTVM to point Ⓛ; common to ground. | A19, A20, A21 | Adjust for maximum.  |
| 7. | 87.5MC              | Set at low end.  | "  | A22, A23, A24 | Rock tuning and adjust for maximum. Repeat steps and until no further improvement can be made. |

With radio installed in car and antenna fully extended, tune in a weak station near 1400KC and adjust A8 for maximum output.

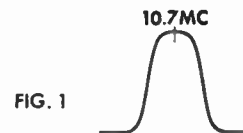


FIG. 1

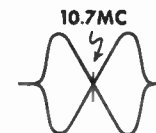


FIG. 2





# PHOTOFACT<sup>®</sup>



TRADE NAME : Automatic Model RP-5151 (1965 Rambler)  
 SUPPLIER : For Current Address, See Master Index.  
 TYPE SET : 5 Transistor AM Receiver  
 POWER SUPPLY : 12 Volt Storage Battery  
 RATING : .64 Amp. @ 12.6 Volts DC  
 TUNING RANGE: BROADCAST 540-1615KC

AUTOMATIC MODEL RP-5151

## ALIGNMENT INSTRUCTIONS

Check for specified source voltage.  
 Use only enough generator output to provide a usable indication.  
 Suggested Alignment Tools:

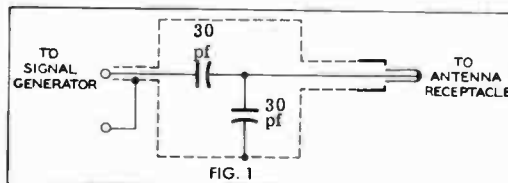
A1 thru A7      GENERAL CEMENT: 9440      WALSCO: 2501

|    | SIGNAL GENERATOR COUPLING                                    | SIGNAL GENERATOR FREQUENCY | RADIO DIAL SETTING   | INDICATOR                       | ADJUST         | REMARKS             |
|----|--|----------------------------|----------------------|---------------------------------|----------------|---------------------|
| 1. | High side thru .lmfd to point $\Delta$ , low side to ground. | 262KC (400v Mod.)          | High Freq. End Stop. | Output Meter across voice coil. | A1, A2, A3, A4 | Adjust for maximum. |
| 2. | Thru dummy (Fig. 1) to antenna receptacle.                   | 1615KC                     | "                    | "                               | A5, A6, A7     | "                   |

With radio installed in car and antenna fully extended, tune in a weak station near 1400KC and adjust A7 for maximum output.

### PUSH-BUTTON ADJUSTMENT

1. Pull button up.
2. Tune manually to desired station.
3. Press button down firmly.
4. Repeat for remaining buttons.



**HOWARD W. SAMS & CO., INC.** Indianapolis 6, Indiana

# PARTS LIST AND DESCRIPTION

Replacement parts shown may be superseded by the availability of newly introduced replacements.  
Have your local distributor check Sams COUNTER FACTS for the most up-to-date replacement.

## TRANSISTORS

| ITEM No. | ORIG. TYPE        | USE       | REPLACEMENT DATA |                           |              | NOTES |
|----------|-------------------|-----------|------------------|---------------------------|--------------|-------|
|          |                   |           | DELCO PART No.   | GENERAL ELECTRIC PART No. | RCA PART No. |       |
| X1       | 6-80<br>(2N1637)  | RF Amp.   | D8-25            | GE-1                      | 2N1637       | PNP   |
| X2       | 6-61<br>(2N1639)  | Converter | D8-25            | GE-1                      | 2N1639       | PNP   |
| X3       | 6-62<br>(2N1638)  | IF Amp.   | D8-25            | GE-1                      | 2N1638       | PNP   |
| X4       | 6-53<br>(2N591)   | Driver    | D8-26            | GE-2                      | 2N591        | PNP   |
| X5       | 8P404V<br>(2N176) | Output    | D8-520           | GE-3                      | 2N301        | PNP*  |

\* When replacing, apply silicon grease to both sides of insulator. Tighten mounting screws securely.

## POWER RECTIFIERS & SIGNAL DIODES

| ITEM No. | MEASURED CURRENT | ORIGINAL Port or Type No. | RECTIFIERS                |                  |              |                         | DIODES                    |
|----------|------------------|---------------------------|---------------------------|------------------|--------------|-------------------------|---------------------------|
|          |                  |                           | GENERAL ELECTRIC PART No. | MALLORY PART No. | RCA PART No. | SARKES TARZIAN PART No. | GENERAL ELECTRIC PART No. |
| X6<br>X7 |                  | 1GD2<br>1GD2              |                           |                  |              |                         | 1N34AS<br>1N34AS          |

## ELECTROLYTIC CAPACITORS

| ITEM No.      | RATING            |                | REPLACEMENT DATA   |                  |                           |                           |                             |                   |                      |
|---------------|-------------------|----------------|--------------------|------------------|---------------------------|---------------------------|-----------------------------|-------------------|----------------------|
|               | CAP.              | VOLT.          | Automatic PART No. | AEROVOX PART No. | CORNELL-DUBILIER PART No. | GENERAL ELECTRIC PART No. | GENERAL INSTRUMENT PART No. | MALLORY PART No.  | SPRAGUE PART No.     |
| C1A<br>B<br>C | 500<br>300<br>100 | 16<br>16<br>16 | 20-2653            | AFH3-00-94.5     | CCO012                    | XC3-48.1                  |                             | FP300.83          | TVL8-3026.14*        |
| C2<br>C3      | 25<br>5           | 15<br>15       | 20-256<br>20-505   | PTT69<br>CRE454A | NLW25-15<br>NLW5-15       | MT1-10<br>MT1-3           | MLV25-15<br>MLV5-15         | TT15X25<br>TT25X5 | TE-1157.1<br>TE-1152 |

\* Not normally in distributor's stock. Available thru distributor on order to manufacturer.

## FIXED CAPACITORS

| ITEM No.                               | RATING                                | REMARKS                | REPLACEMENT DATA                |   |  |                                |                         |   |  |
|--|---------------------------------------|------------------------|---------------------------------|---|--|--------------------------------|-------------------------|---|--|
|  |                                       |                        | AEROVOX PART No.                | CENTRALAB PART No.  | CORNELL-DUBILIER PART No.                                | ELMENCO PART No.               | MALLORY PART No.        | SPRAGUE PART No.  |  |
| C10<br>C11A<br>B                       |                                       | #28-800-2L<br>#28A1332 |                                 |   |  |                                |                         |   |  |
| C12<br>C13<br>C14<br>C15<br>C16<br>C17 | 270<br>100<br>.01<br>.22<br>.1<br>.05 | N750                   | DI-270<br>N750-DI 100<br>BPD-01 | DD-271<br>DTN-100<br>DD-103<br>UK20-204<br>CK-104<br>CK-503 | LA10T27-C4<br>C10T1U<br>BYA1081<br>HCC25224Z<br>H8<br>H5 | CCD-271<br>CCTN-101<br>CCD-103 | GF327<br>CN7310<br>B110 | bGA-T25<br>10TCU-T10<br>5HK-S10<br>HY-325<br>TG-P10<br>TG-S50 |  |

\* Automatic Part Number.

## CONTROLS

All wattages 1/2 watt, or less, unless otherwise listed.

| ITEM No. | USE                   | RESIST-ANCE                 | REPLACEMENT DATA   |  |                    |                  |                  |
|----------|-----------------------|-----------------------------|--------------------|--|--------------------|------------------|------------------|
|          |                       |                             | Automatic PART No. | CENTRALAB PART No.                               | CLAROSTAT PART No. | CTS-IRC PART No. | MALLORY PART No. |
| R1A<br>B | Tone<br>Volume/Switch | 10K<br>7500Ω Tap<br>@ 5100Ω | 80A2951A           | F1-10K, R14-7500<br>FFS011, RFS103,<br>AK28, KR4 |                    | † QJ-1636A       | ■ UE4522-8       |

† "CONCENTRIKIT" Equivalent: K8 Kit with Base Elements and Shafts: B11-116, P22-021 (Panel)  
"SNAPTROL" Equivalent: BU10, CP9, CR487, SF3, SR3, GC. B21-118X, R1-103 (Rear)  
■ "STA-LOC" Equivalent: FM14L, RU752T53, O8750A, IS1250, UB41. S11 (Bushings)  
76-1 (Switch)

## RESISTORS (Power and Special)

| ITEM No. | RATING           | REPLACEMENT DATA |                  |                    | ITEM No. | RATING | REPLACEMENT DATA |                  |                    |
|----------|------------------|------------------|------------------|--------------------|----------|--------|------------------|------------------|--------------------|
|          |                  | IRC PART No.     | WORKMAN PART No. | Automatic PART No. |          |        | IRC PART No.     | WORKMAN PART No. | Automatic PART No. |
| R11      | 180Ω 5W<br>(PTC) |                  |                  | 61-161             | R13      | .50 1W | BWH.51           | WT51             |                    |
| R12      | 6.8Ω 1W          | BWH6.8           | WS6.8            |                    |          |        |                  |                  |                    |

## COILS (RF-IF)

| ITEM No.                         | USE   | REPLACEMENT DATA  |                |                 |                  |                  | NOTES                                     |
|----------------------------------|---|---|----------------|-----------------|------------------|------------------|---|
|                                  |   | Automatic PART No.  | MERIT PART No. | MILLER PART No. | STANCOR PART No. | WORKMAN PART No. |   |
| L1<br>L2<br>L3<br>L4<br>L5<br>L6 | RF Choke (6.2uh)<br>Ant.<br>RF<br>Osc.<br>Input IF<br>Output IF | 14-6.2<br>①<br>①<br>①<br>14-3235A<br>14-2654 ②<br>14-3234A<br>14-2655 ② | BC-565         | 4610            | RTC-8520         | T859             | ① Part of M2.<br>② Used in some versions. |
|                                  |   |   |                | 6570            |                  | 6571             |   |

## FILTER CHOKE

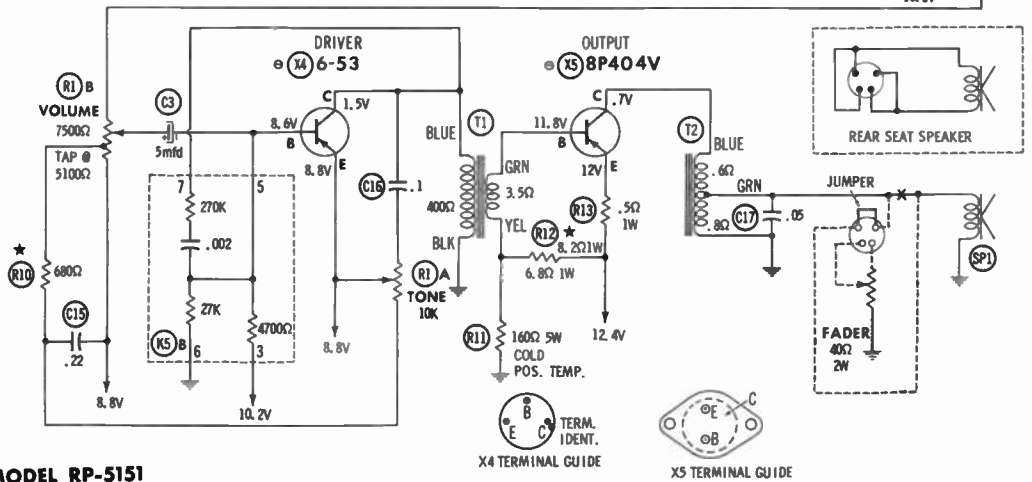
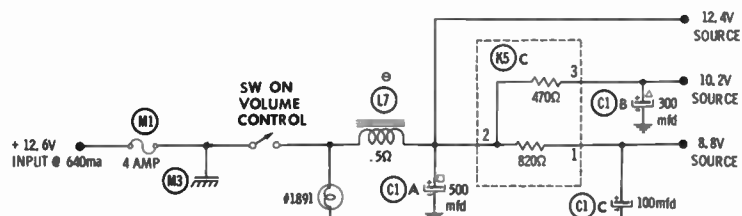
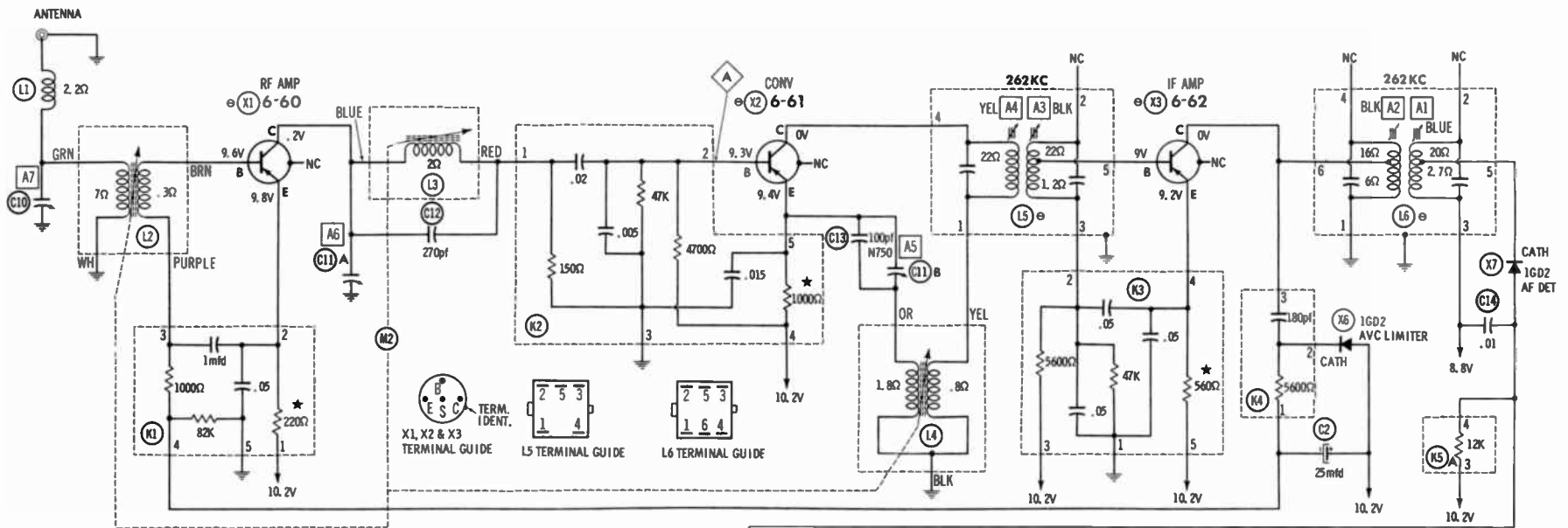
| ITEM No. | RATINGS            |            |                              | REPLACEMENT DATA    |                  |                  |                     | NOTES            |                      |
|----------|--------------------|------------|------------------------------|---------------------|------------------|------------------|---------------------|------------------|----------------------|
|          | CURRENT (Measured) | DC RES.    | INDUCTANCE (0 CURRENT 1000~) | Automatic PART No.  | MERIT PART No.   | STANCOR PART No. | THORDARSON PART No. |                  | TRIAD PART No.       |
| L7       | 640ma              | .5Ω<br>.5Ω | 10MH<br>10MH                 | 75A3082<br>75A1269* | C-4095<br>C-4095 | TC-2<br>TC-2     | TR-155<br>TR-155    | TY17XT<br>TY17XT | * Alternate Part No. |

## TRANSFORMER (DRIVER)

| ITEM No. | TURNS RATIO |      | REPLACEMENT DATA   |                |                  |                     |                | NOTES |
|----------|-------------|------|--------------------|----------------|------------------|---------------------|----------------|-------|
|          | PRI.        | SEC. | Automatic PART No. | MERIT PART No. | STANCOR PART No. | THORDARSON PART No. | TRIAD PART No. |       |
|          | T1          | 8:   | 1                  | 75A2635        |                  |                     | TR-184         |       |

## TRANSFORMER (AUDIO OUTPUT)

| ITEM No. | IMPEDANCE |        | REPLACEMENT DATA   |                |                  |                     |                | NOTES |
|----------|-----------|--------|--------------------|----------------|------------------|---------------------|----------------|-------|
|          | PRI.      | SEC.   | Automatic PART No. | MERIT PART No. | STANCOR PART No. | THORDARSON PART No. | TRIAD PART No. |       |
|          | T2        | 24 Tap | @ 8Ω               | 75A2636        |                  |                     | TR-169         |       |



★ NOMINAL VALUE, MAY VARY

Resistors are 1/2 watt or less and rated 10% or 20% unless otherwise indicated.

- ⊖ See parts list for alternate value or application.
- 1. Voltage measurements taken with vacuum tube voltmeter.
- 2. All controls set for normal operation, no signal applied.
- 3. Measured values are from socket pin or terminal to common ground.
- 4. All terminals viewed from bottom unless otherwise designated.
- 5. Numbers assigned to terminals may not be found on the unit.
- 6. Supply voltage maintained at rated value for voltage readings.
- 7. Resistance measurements not given because of the wide variation in internal resistance of transistor.

A PHOTOFAC STANDARD NOTATION SCHEMATIC  
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**AUTOMATIC MODEL RP-515**

## PARTS LIST AND DESCRIPTION (CONTINUED)

Replacement parts shown may be superseded by the availability of newly introduced replacements.  
Have your local distributor check Sams COUNTER FACTS for the most up-to-date replacement.

### SPEAKER

| ITEM No. | TYPE          | REPLACEMENT DATA   |               | NOTES |
|----------|---------------|--------------------|---------------|-------|
|          |               | Automatic PART No. | QUAM PART No. |       |
| SP1      | 6" X 9" PM 8Ω | 73B3456            | 69A128        |       |

### COMPONENT COMBINATIONS

| ITEM No. | USE            | DESCRIPTION                                       | Automatic PART No. | REPLACEMENT DATA |
|----------|----------------|---|--------------------|------------------|
| K1       | RF Network     | 220Ω, 1000Ω, 82K, .05mfd, 1mfd                    | 89A2582C           |                  |
| K2       | Conv. Network  | 150Ω, 1000Ω, 4700Ω, 47K, .005mfd, .015mfd, .02mfd | 89A2583A           |                  |
| K3       | IF Network     | 500Ω, 5000Ω, 47K, .05mfd, .05mfd, .05mfd          | 89A2584B           |                  |
| K4       | AVC Network    | 5000Ω, 180pf                                      | 89A2701            |                  |
| K5       | Audio Couplate | 470Ω, 820Ω, 4700Ω, 12K, 27K, 270K, .002mfd.       | 89A2585A           |                  |

### FUSES

| ITEM No. | TYPE | RATING | REPLACEMENT DATA   |         |                    |        |               |        |
|----------|------|--------|--------------------|---------|--------------------|--------|---------------|--------|
|          |      |        | Automatic PART No. |         | LITL FUSE PART No. |        | BUSS PART No. |        |
|          |      |        | FUSE               | HOLDER  | FUSE               | HOLDER | FUSE          | HOLDER |
| M1       | AGW  | 4A     | 108-400            | 12A2864 | 303004             | 155004 | AGW4          | HDE    |

### MISCELLANEOUS

| ITEM No. | PART NAME   | Automatic PART No. | NOTES      |
|----------|-------------|--------------------|------------|
| M2       | Tuner       | 78B4023            | Pushbutton |
| M3       | Spark Plate | 43-216             |            |

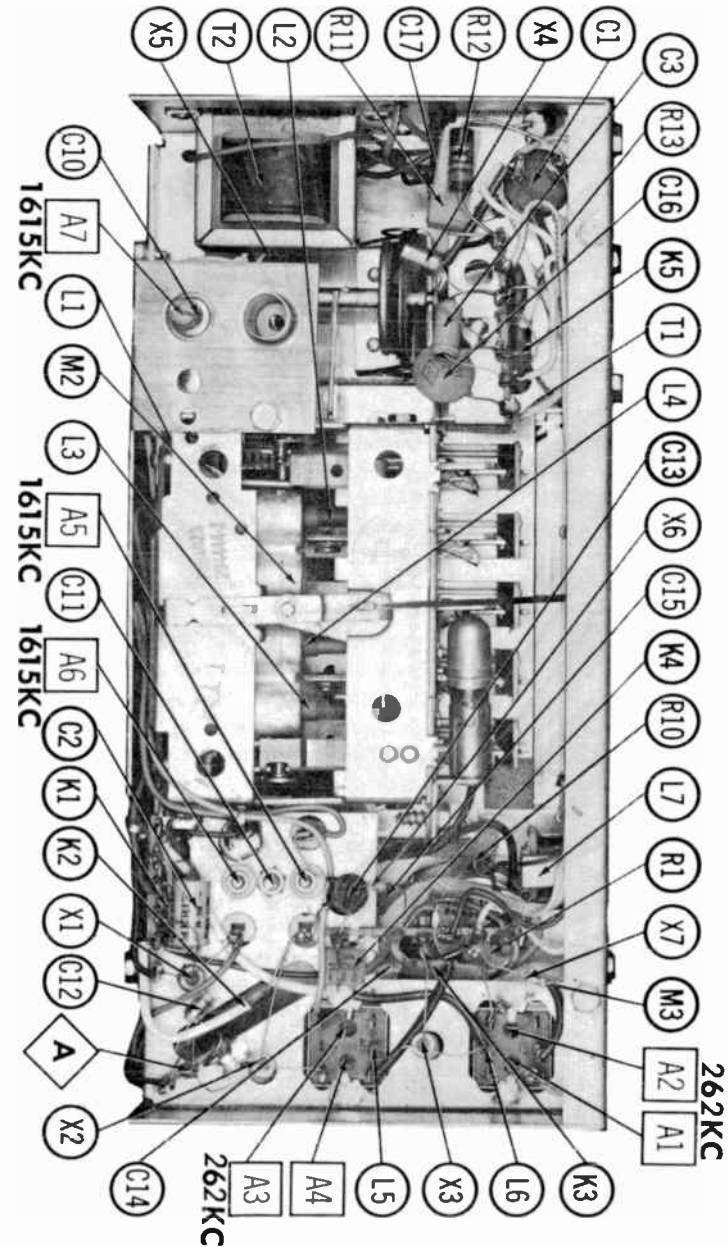
### CABINETS & CABINET PARTS

(When Ordering Specify Model, Chassis & Color)

| ITEM                   | PART No. | ITEM        | PART No. |
|------------------------|----------|-------------|----------|
| Escutcheon             | 54C3859  | Knob, Tone  | 48A3299  |
| Dial Calibration       | 39-115A  | Knob, Dummy | 48A3300  |
| Knob, Volume or Tuning | 48A3298  | Pushbuttons | 55B4006  |

### WIRING DATA

|                                     |   |
|-------------------------------------|---|
| General-use Unshielded Hook-up Wire | Use BELDEN No. 8530 (Solid) Available in 12 Colors  |
|                                     | 8524 (Stranded) Available in 12 Colors              |
| Shielded Hook-up Wire               | Use BELDEN No. 8685                                 |
| Rear Seat Speaker Extension Cable   | Use BELDEN No. 8782 (Stranded) Coded Parallel Leads |
| Bonding Strap                       | Use BELDEN No. 8661 (3/8 in.) or 8670 (3/4 in.)     |

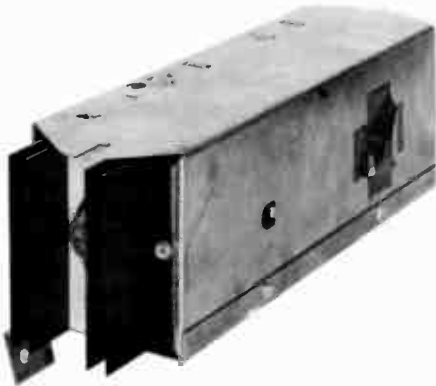


AUTOMATIC MODEL RP-5151



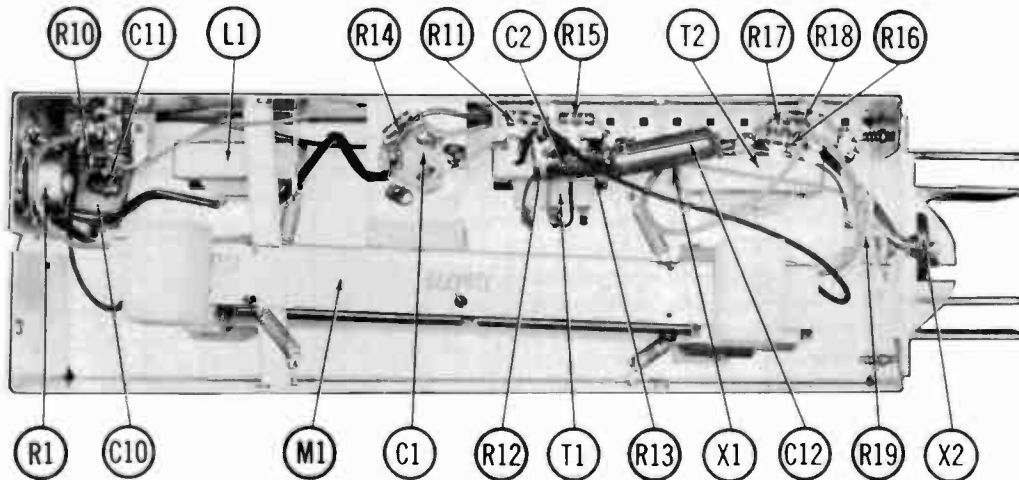
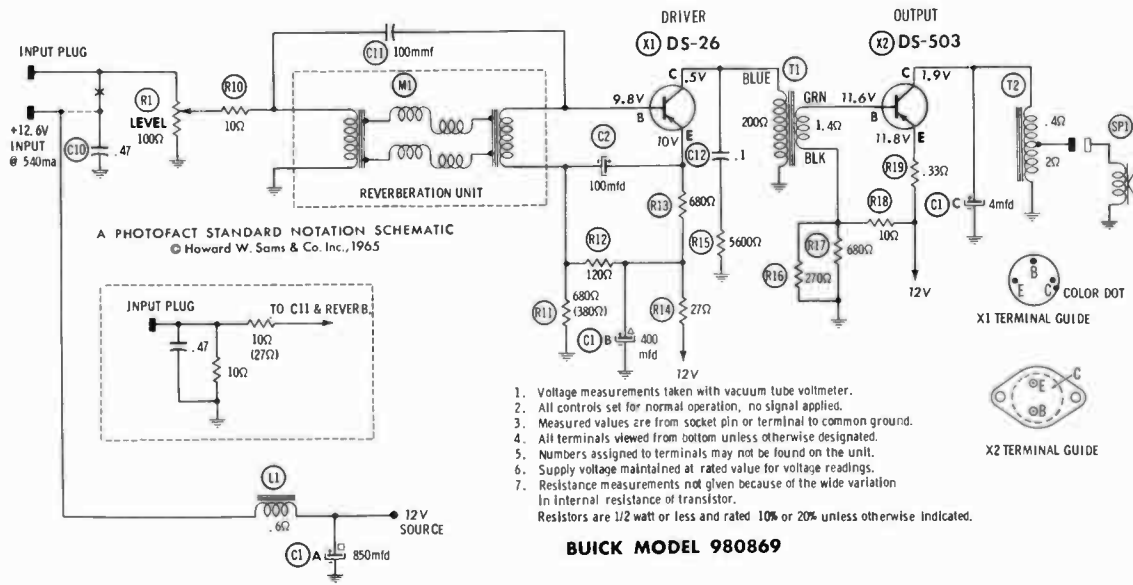


# PHOTOFACT<sup>®</sup>



**TRADE NAME :** Buick Model 980869  
**SUPPLIER :** For Current Address, See Master Index.  
**TYPE SET :** 2 Transistor Reverberation Unit  
**POWER SUPPLY :** 12 Volt Storage Battery  
**RATING :** .54 Amp. @ 12.6 Volts DC

BUICK MODEL 980869



**HOWARD W. SAMS & CO., INC.** Indianapolis 6, Indiana

# PARTS LIST AND DESCRIPTION

Replacement parts shown may be superseded by the availability of newly introduced replacements.  
Have your local distributor check Sams COUNTER FACTS for the most up-to-date replacement.

## TRANSISTORS

| ITEM No. | ORIG. TYPE | USE    | REPLACEMENT DATA |                           |              | NOTES               |
|----------|------------|--------|------------------|---------------------------|--------------|---------------------|
|          |            |        | DELCO PART No.   | GENERAL ELECTRIC PART No. | RCA PART No. |                     |
| X1       | DS-26      | Driver | DS-26            | GE-1                      | 2N591        | PNP<br>PNP (Note 1) |
| X2       | DS-503     | Output | DS-503           | GE-3                      | 2N301        |                     |

Note 1. When replacing, apply silicone grease to both sides of insulator. Tighten mounting screws securely.

## ELECTROLYTIC CAPACITORS

| ITEM No. | RATING |         | DELCO PART No. | AEROVOX PART No. | CORNELL-DUBILIER PART No. | GENERAL ELECTRIC PART No. | GENERAL INSTRUMENT PART No. | MALLORY PART No. | SPRAGUE PART No. |
|----------|--------|---------|----------------|------------------|---------------------------|---------------------------|-----------------------------|------------------|------------------|
|          | CAP.   | VOLT.   |                |                  |                           |                           |                             |                  |                  |
| C1A      | 850    | 16      | 7282272        | AFH3-54-30       |                           | XC3-6.1                   |                             | WP300.7A         | TVL-3021         |
| B        | 400    | 16      |                |                  |                           |                           |                             |                  |                  |
| C        | 4      | 11.5RMS |                |                  |                           |                           |                             |                  |                  |
| C2       | 100    | 3       | 7279888        | PTT13            | NLW100-3                  | MT1-18                    | MLV100-3                    | TT6X100          | TE-1059.5        |

## FIXED CAPACITORS

| ITEM No. | RATING   | REMARKS | REPLACEMENT DATA |                    |                           |                  |                  |                  |
|----------|----------|---------|------------------|--------------------|---------------------------|------------------|------------------|------------------|
|          |          |         | AEROVOX PART No. | CENTRALAB PART No. | CORNELL-DUBILIER PART No. | ELMENDO PART No. | MALLORY PART No. | SPRAGUE PART No. |
| C10      | .47 100V |         | P288N-47         |                    | CUB2P47                   | 1DP-4-474        | PVC-1047         | 3TM-P47          |
| C11      | 100      |         | P488N-1          | DM-101<br>DF-104   | PM4P1                     | 4DP-3-104        | GEM-401          | 4TM-P10          |
| C12      | .1 100V  |         |                  |                    |                           |                  |                  |                  |

## CONTROLS

All wattages 1/2 watt, or less, unless otherwise listed.

| ITEM No. | USE   | RESISTANCE | REPLACEMENT DATA |                         |                       |                   |                               |
|----------|-------|------------|------------------|-------------------------|-----------------------|-------------------|-------------------------------|
|          |       |            | DELCO PART No.   | CENTRALAB PART No.      | CLAROSTAT PART No.    | CTS-IRC PART No.  | MALLORY PART No.              |
| R1       | Level | 100Ω 1W    | 7284926          | WN-101 ① or<br>WW-101 ① | A43-100,<br>FKS-1/4 ① | W11-084,<br>SK5 ① | FL-100P or<br>VW-100 or R100L |

① Drill New Mounting Hole.

## FILTER CHOKE

| ITEM No. | RATINGS            |         |                              | REPLACEMENT DATA |                |                  |                     |                | NOTES |
|----------|--------------------|---------|------------------------------|------------------|----------------|------------------|---------------------|----------------|-------|
|          | CURRENT (Measured) | DC RES. | INDUCTANCE (0 CURRENT 1000~) | DELCO PART No.   | MERIT PART No. | STANCOR PART No. | THORDARSON PART No. | TRIAD PART No. |       |
| L1       | 540MA              | .8Ω     | 8MH                          | 1221623          | C-4095         | TC-2             | TR-154              | TY17XT         |       |

## TRANSFORMER (DRIVER)

| ITEM No. | TURNS RATIO |      | REPLACEMENT DATA |                |                  |                     |                | NOTES |
|----------|-------------|------|------------------|----------------|------------------|---------------------|----------------|-------|
|          | PRI.        | SEC. | DELCO PART No.   | MERIT PART No. | STANCOR PART No. | THORDARSON PART No. | TRIAD PART No. |       |
|          |             |      |                  |                |                  |                     |                |       |
| T1       | 10          | 1    | 7280915          | A-4094         | TA-51            | TR-186              | TY4XT          |       |

## TRANSFORMER (AUDIO OUTPUT)

| ITEM No. | TURNS RATIO |      | REPLACEMENT DATA |                |                  |                     |                | NOTES |
|----------|-------------|------|------------------|----------------|------------------|---------------------|----------------|-------|
|          | PRI.        | SEC. | DELCO PART No.   | MERIT PART No. | STANCOR PART No. | THORDARSON PART No. | TRIAD PART No. |       |
|          |             |      |                  |                |                  |                     |                |       |
| T2       | 1           | .9   | 7284983          |                |                  |                     |                |       |

## SPEAKER

| ITEM No. | TYPE                        | REPLACEMENT DATA   |               | NOTES |
|----------|-----------------------------|--------------------|---------------|-------|
|          |                             | DELCO PART No.     | QUAM PART No. |       |
| SPI      | 6" PM 10Ω<br>6" x 9" PM 10Ω | 7282511<br>7282782 | 6A15          |       |

## MISCELLANEOUS

| ITEM No. | PART NAME          | DELCO PART No. | NOTES |
|----------|--------------------|----------------|-------|
| M1       | Reverberation Unit | 7284778        |       |

## WIRING DATA

|   |  |
|---|--|
| General-use Unshielded Hook-up Wire ..... | Use BELDEN No. 8530 (Solid) Available in 12 Colors<br>8524 (Stranded) Available in 12 Colors |
| Shielded Hook-up Wire .....               | Use BELDEN No. 8885  |
| Rear Seat Speaker Extension Cable .....   | Use BELDEN No. 8782 (Stranded) Coded Parallel Leads  |
| Bonding Strap .....                       | Use BELDEN No. 8661 (3/8 In.) or 8670 (3/4 In.)  |

BUICK MODEL 980869



PHOTOFACT<sup>®</sup> with

CIRCUITRACE<sup>®</sup>



TRADE NAME :

SUPPLIER :

TYPE SET :

POWER SUPPLY :

RATING :

Chevrolet, GMC Models 986330 (1965 Chevrolet Truck), 986338 (1965 Chevrolet Truck), 986339 (1965 Chevrolet Truck) 7291556 (1965 GMC Truck) 7291576 (1965 GMC Truck)

For Current Address, See Master Index.  
6 Transistor AM Receiver

12 Volt Storage Battery

. 620 Amp. @ 12. 6 Volts DC (Less Lamp)

TUNING RANGE: BROADCAST 540-1615KC

## ALIGNMENT INSTRUCTIONS

Check for specified source voltage.  
Use only enough generator output to provide a usable indication.

Suggested Alignment Tools:

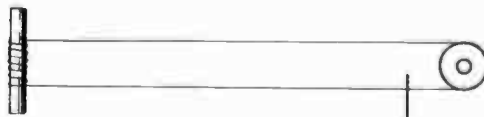
A1 thru A5, A9, A10  
A6, A7, A8

GENERAL CEMENT: 5009, 8728A, 8987  
GENERAL CEMENT: 9087, 8290, 8868

WALSCO: 2531-X, 2536  
WALSCO: 2525, 2528, 2587

|  | SIGNAL GENERATOR COUPLING                                       | SIGNAL GENERATOR FREQUENCY | RADIO DIAL SETTING   | INDICATOR                       | ADJUST         | REMARKS                            |
|--|---|----------------------------|----------------------|---------------------------------|----------------|------------------------------------|
| 1.   | High side thru .1mfd to point $\Delta$ , low side to ground.    | 262KC (400 $\nu$ Mod.)     | High Freq. End Stop. | Output Meter across voice coil. | A1, A2, A3, A4 | Adjust for maximum.                |
| Check setting of oscillator coil core (A5). Rear of core should be 1 3/8" from mounting end of coil form.                    |   |                            |                      |                                 |                |                                    |
| 2.   | High side thru 82 pf to antenna receptacle, low side to ground. | 1615KC                     | High Freq. End Stop. | Output Meter across voice coil. | A6, A7, A8     | Adjust for maximum.                |
| 3.   | "   | 600KC                      | 600KC Signal         | "                               | A9, A10        | Adjust for maximum. Repeat step 2. |
| With radio installed in car and antenna fully extended, tune in a weak station near 1400KC and adjust A8 for maximum output. |   |                            |                      |                                 |                |                                    |

## DIAL CORD STRINGING



TUNING SHAFT  
7TURNS  
(CORES FULLY IN)

REAR VIEW

HOWARD W. SAMS & CO., INC. Indianapolis 6, Indiana

# PARTS LIST AND DESCRIPTION

Replacement parts shown may be superseded by the availability of newly introduced replacements.  
 Have your local distributor check Sams COUNTER FACTS for the most up-to-date replacement.

## TRANSISTORS

| ITEM No. | ORIG. TYPE | USE         | REPLACEMENT DATA |                           |              | NOTES |
|----------|------------|-------------|------------------|---------------------------|--------------|-------|
|          |            |             | DELCO PART No.   | GENERAL ELECTRIC PART No. | RCA PART No. |       |
| X1       | DE-51      | RF Amp.     | DE-25            | GE-1                      |              | PNP   |
| X2       | DE-52      | Conv.       | DE-25            | GE-1                      |              | PNP   |
| X3       | DE-53      | IF Amp.     | DE-25            | GE-1                      |              | PNP   |
| X4       | DE-46      | 1st AF Amp. | DE-46            | GE-10                     |              | NPN   |
| X5       | DE-46      | 2nd AF Amp. | DE-46            | GE-10                     |              | NPN   |
| X6       | DE-503     | Output      | DE-503           | GE-3                      |              | PNP*  |

\* When replacing, apply silicon grease to both sides of insulator. Tighten mounting screws securely. Check bias adjustment.

## POWER RECTIFIERS & SIGNAL DIODES

| ITEM No. | MEASURED CURRENT | ORIGINAL Port or Type No. | RECTIFIERS                |                  |              |                         | DIODES GENERAL ELECTRIC PART No. |
|----------|------------------|---------------------------|---------------------------|------------------|--------------|-------------------------|----------------------------------|
|          |                  |                           | GENERAL ELECTRIC PART No. | MALLORY PART No. | RCA PART No. | SARKES TARZIAN PART No. |                                  |
| X7       |                  | DE-27                     |                           |                  |              |                         | 1N34AS                           |
| X8       |                  | DE-27                     |                           |                  |              |                         | 1N34AS                           |
| X9       |                  | DE-27                     |                           |                  |              |                         | 1N34AS                           |

## ELECTROLYTIC CAPACITORS

| ITEM No. | RATING |         | REPLACEMENT DATA |                  |                           |                           |                             |                  |                  |
|----------|--------|---------|------------------|------------------|---------------------------|---------------------------|-----------------------------|------------------|------------------|
|          | CAP.   | VOLT.   | DELCO PART No.   | AEROVOX PART No. | CORNELL-DUBILIER PART No. | GENERAL ELECTRIC PART No. | GENERAL INSTRUMENT PART No. | MALLORY PART No. | SPRAGUE PART No. |
| C1A      | 850    | 16      | 7282272 ①        | AFH3-54-30       | CC0002                    | XC3-6.1                   |                             | WP300.7A         | TVL-3021         |
| B        | 400    | 16      |                  |                  |                           |                           |                             |                  |                  |
| C        | 4      | 1L 5RME |                  |                  |                           |                           |                             |                  |                  |
| C2A      | 100    | 4       | 7286539 ②        | BCD4X100100      |                           |                           |                             | PET2150          | VLS-2120*        |
| B        | 100    | 4       |                  |                  |                           |                           |                             |                  |                  |
| C3       | 30     | 6       | 7279896          | PTT27            | NLW30-15                  | MT1-13                    | NLV30-6                     | TT6X30           | TE-1092          |
| C4       | 10     | 12      | 7292738          | PTT53            | NLW10-15                  | MT1-5                     | BL1241                      | TT12X10          | TL-1128          |

① Early production uses Part #7292515: 850-400 @ 16V, 4mfd @ 1L 5RME, 100mfd @ 4V.  
 ② Section A in C1 in early production. Single 100mfd @ 4V Part #7291810 for Sect "B".

\* Not normally in distributor's stock. Available thru distributor on order to manufacturer.

## FIXED CAPACITORS

| ITEM No. | RATING    | REMARKS  | REPLACEMENT DATA |                    |                           |                  |                  |                  |
|----------|-----------|----------|------------------|--------------------|---------------------------|------------------|------------------|------------------|
|          |           |          | AEROVOX PART No. | CENTRALAB PART No. | CORNELL-DUBILIER PART No. | ELMENCO PART No. | MALLORY PART No. | SPRAGUE PART No. |
| C10      |           | #7281971 |                  |                    |                           |                  |                  |                  |
| C11      | .047 75V  |          | DBE2847          |                    | WMF2847                   | 1DP-2-473        | PVC1147          | 2PB-847          |
| C12      | .047 75V  |          | DBE2847          |                    | WMF2847                   | 1DP-2-473        | PVC1147          | 2PB-847          |
| C13      |           | #7293277 |                  |                    |                           |                  |                  |                  |
| C14      | 200 N750  |          | N750-DI200       | DTN-200            | C10T2U                    | CCTN-201         | CN7320           | 10TCU-T20        |
| C15      | .0033 75V |          | DBE6D33          | CPR-3300J          | WMF1D33                   | 8DP-1-332        | PVC4233          | 6PB-D33          |
| C18      | .028 75V  |          | DBE2822          |                    | WMF1822                   | 1DP-1-223        | PVC1122          | 2PB-822          |
| C17      | .0047     |          | BPD-0047         | DD-472             | BYA10D47                  | CCD-472          | B247             | 5HK-D47          |
| C18      |           | #7282165 |                  |                    |                           |                  |                  |                  |
| C19      | 330 N330  |          |                  |                    |                           |                  |                  | 10TCB-T33        |
| C20      | .047 75V  |          | DBE2847          |                    | WMF2847                   | 1DP-2-473        | PVC1147          | 2PB-847          |
| C21      | .047 75V  |          | DBE2847          |                    | WMF2847                   | 1DP-2-473        | PVC1147          | 2PB-847          |
| C22      | 180 N80   |          |                  |                    |                           |                  |                  | 10TCN-T80        |
| C23      | .001      |          | BPD-001          | DD-100J            | BYA10D1                   | CCD-102          | B210             | 5HK-D10          |
| C24      | .0068 75V |          | DBE6D68          | CPR-6800J          | WMF4D68                   | 1DP-1-682        | PVC4268          | 6PB-D68          |
| C25      | .1 75V    |          | DBE2P1           |                    | WMF1P1                    | 1DP-2-104        | PVC101           | 2PB-P10          |

## FIXED CAPACITORS (cont)

| ITEM No. | RATING   | REMARKS | REPLACEMENT DATA |                    |                           |                  |                  |                  |
|----------|----------|---------|------------------|--------------------|---------------------------|------------------|------------------|------------------|
|          |          |         | AEROVOX PART No. | CENTRALAB PART No. | CORNELL-DUBILIER PART No. | ELMENCO PART No. | MALLORY PART No. | SPRAGUE PART No. |
| C26      | .002     |         | BPD-002          | DD-202             | BYA10D2                   | CCD-202          | B220             | 5HK-D20          |
| C27      | .1 75V   | ①       | DBE2P1           |                    | WMF1P1                    | 1DP-2-104        | PVC101           | 2PB-P10          |
| C28      | .15 75V  | ②       | DBE2P15          |                    | WMF1P15                   | 1DP-3-154        | PVC1015          | 2PB-P15          |
| C29      | .47 100V | ③       | DBE2P47          |                    | DPMS2P5                   | 1DP-4-504        | PV105            | 2PB-P50          |

# Delco Part Number  
 ① .047 75V used in Model 986338.  
 ② Not used in Model 986338

## CONTROLS

All wattages 1/2 watt, or less, unless otherwise listed.

| ITEM No. | USE                | RESISTANCE              | REPLACEMENT DATA |   |                    |                  |                  |
|----------|--------------------|-------------------------|------------------|---|--------------------|------------------|------------------|
|          |                    |                         | DELCO PART No.   | CENTRALAB PART No.                                  | CLAROSTAT PART No. | CTS-IRC PART No. | MALLORY PART No. |
| R1A      | Tone Volume/Switch | 100K<br>20K Tap @ 6000Ω | 7291775          | F1-100K, R14-25K<br>FFS103, RFB112,<br>AK-26 ② KR-4 |                    | † QJ-1877A       |                  |
| B        | Tone Volume/Switch | 100K<br>20K Tap @ 6000Ω | 7291771 ①        |   |                    |                  |                  |
| R2       | Bias               | 600Ω                    | 7286601          | V-600   | U39-600            | 110-600          | MR600P           |

① Used in Model 986338.  
 ② Alter bushing to meet requirement.  
 † "CONCENTRIKIT" Equivalent: K8 Kit with Base Elements and Shafts: B11-128, P17-105 (Panel)  
 B19-119X, R16-118 (Rear)  
 "SNAPTROL" Equivalent: BU8 ②, CF13, CR50T, SF8, SR9, GC.  
 851 ② (Bushing)  
 76-1 (Switch)

## RESISTORS (Power and Special)

| ITEM No. | RATING         | REPLACEMENT DATA |                  |                | ITEM No. | RATING | REPLACEMENT DATA |                  |         |
|----------|----------------|------------------|------------------|----------------|----------|--------|------------------|------------------|---------|
|          |                | IRC PART No.     | WORKMAN PART No. | DELCO PART No. |          |        | IRC PART No.     | WORKMAN PART No. | REMARKS |
| R28      | .68Ω (Fusible) | BWH. 68          | WS. 68Ω          | 7287480        |          |        |                  |                  |         |

## COILS (RF-IF)

| ITEM No. | USE              | REPLACEMENT DATA |                   |                |                 |                  |                  |
|----------|------------------|------------------|-------------------|----------------|-----------------|------------------|------------------|
|          |                  | DELCO PART No.   | MEISSNER PART No. | MERIT PART No. | MILLER PART No. | STANCOR PART No. | WORKMAN PART No. |
| L1       | RF Choke (8.2uh) | 7281946          | 19-1004           | BC-565         | 4610            | RTC-8520         | T859             |
| L2       | Ant.             |                  |                   |                |                 |                  |                  |
| L3       | RF               | ①                |                   |                |                 |                  |                  |
| L4       | Osc.             | ①                |                   |                |                 |                  |                  |
| L5       | Input IF         | 1221858          | 16-8704           |                | 6542            |                  | TA853            |
| L6       | Output IF        | 1221857          | 16-8705           |                | 8543            |                  | TA853            |

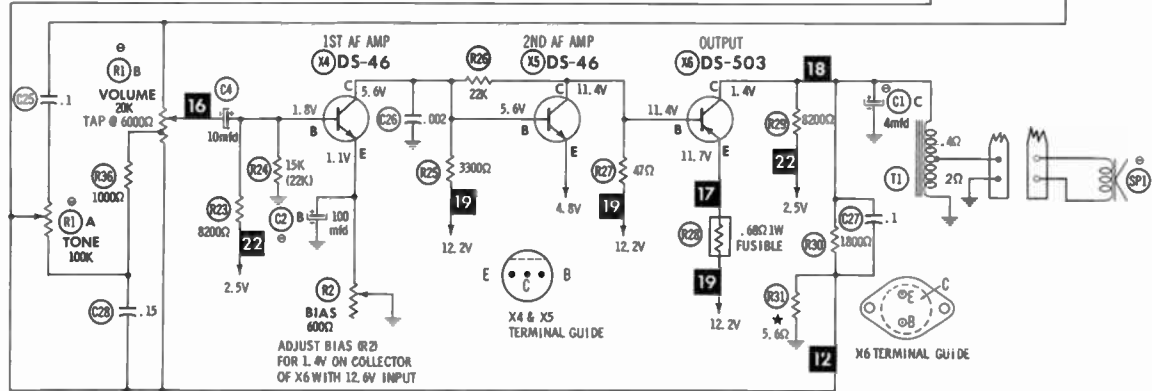
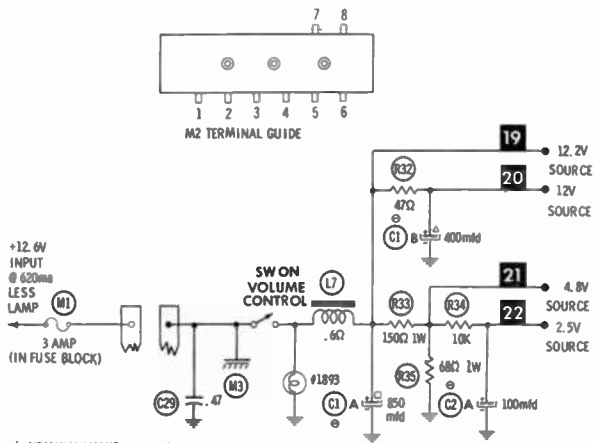
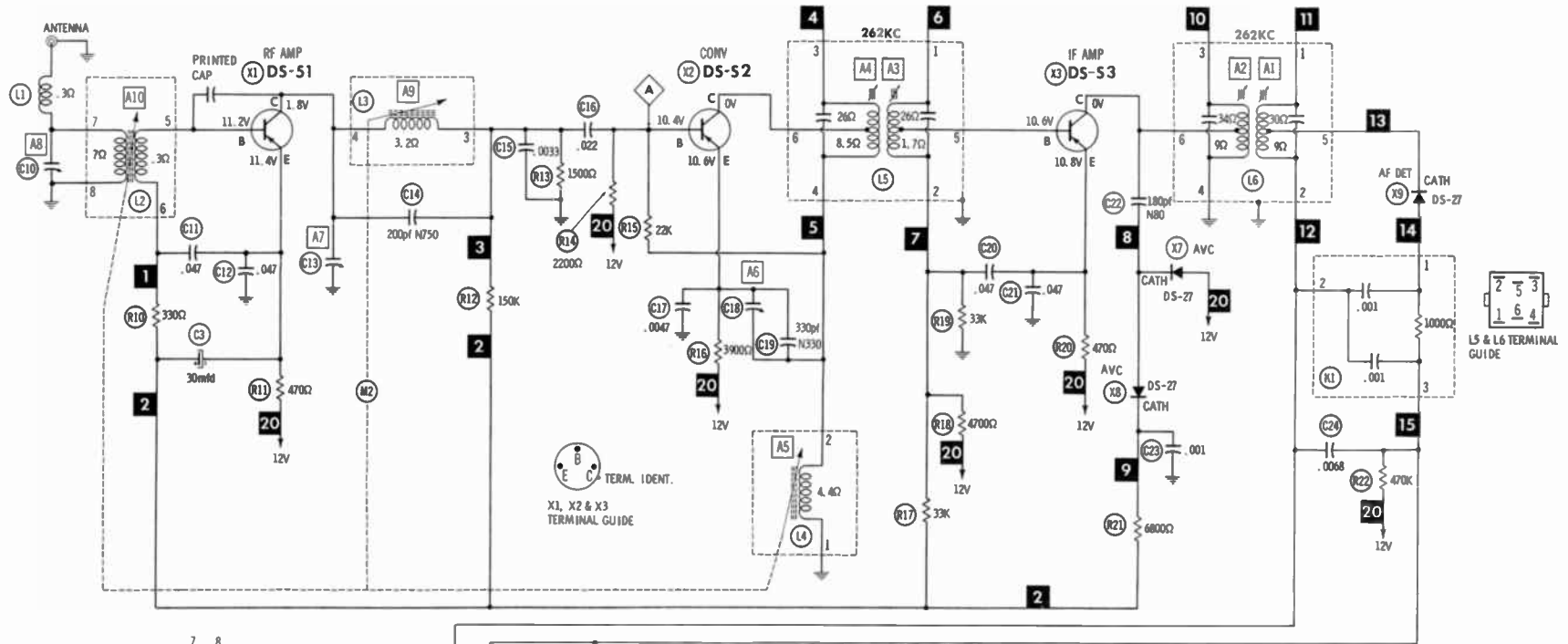
① Part of M2.

## FILTER CHOKE

| ITEM No. | RATINGS            |         | REPLACEMENT DATA             |                |                |                  |                     | NOTES  |
|----------|--------------------|---------|------------------------------|----------------|----------------|------------------|---------------------|--------|
|          | CURRENT (Measured) | DC RES. | INDUCTANCE (0 CURRENT 1000~) | DELCO PART No. | MERIT PART No. | STANCOR PART No. | THORDARSON PART No. |        |
| L7       | 620ma              | .6Ω     | 8MH                          | 1221823        | C-4095         | TC-2             | TR-154              | TY17XT |

CHEVROLET MODELS 986330/38/39, GMC 7291556/74





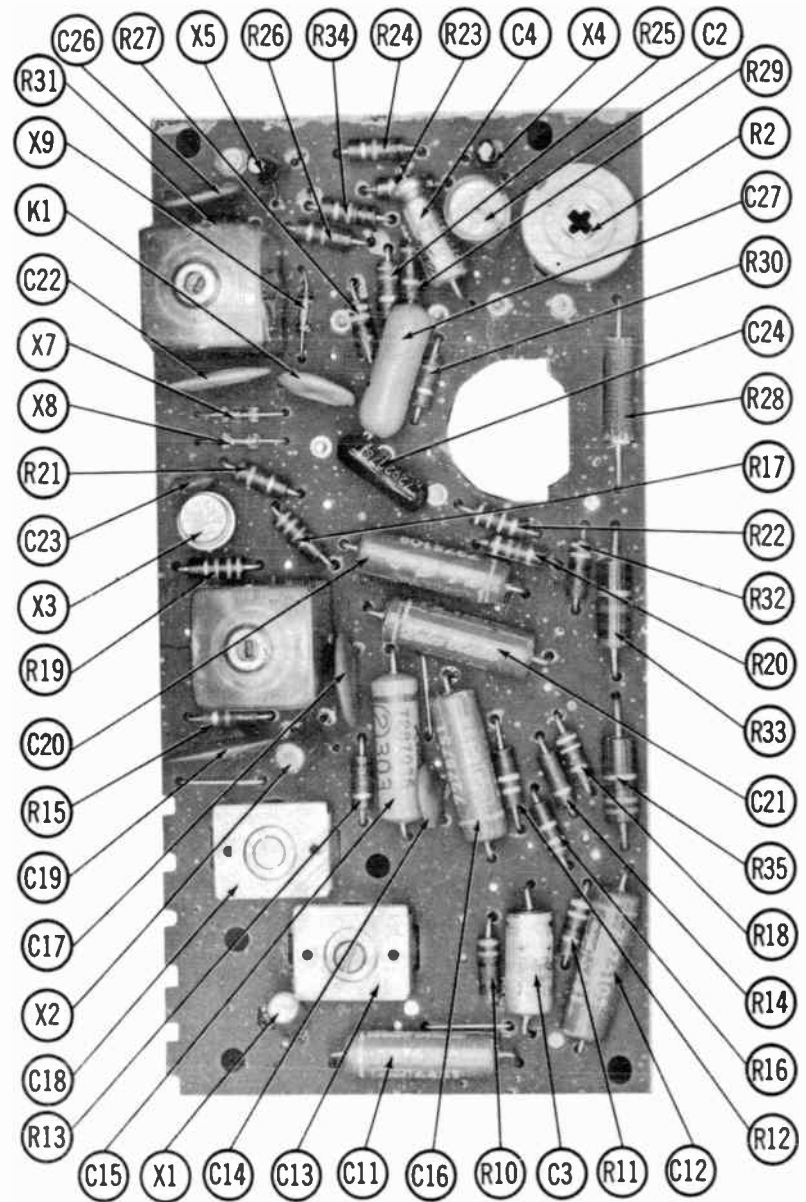
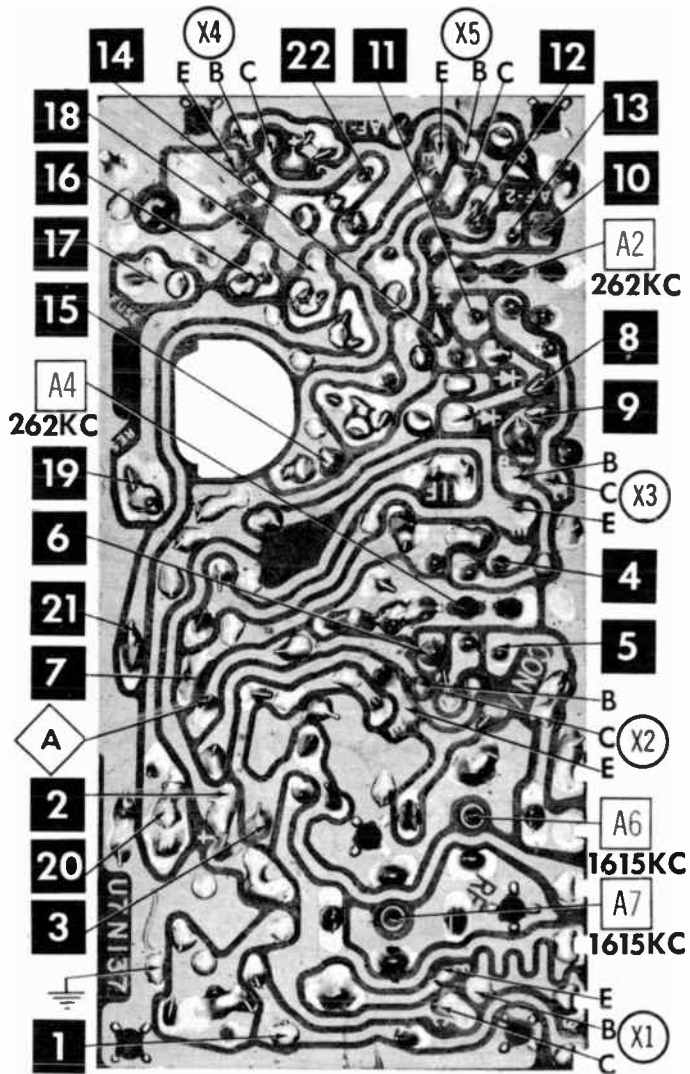
\* NOMINAL VALUE, MAY VARY.  
Resistors are 1/2 watt or less and rated 10% or 20% unless otherwise indicated.

A PHOTOFAC STANDARD NOTATION SCHEMATIC with CIRCUITRACE

© Howard W Sams & Co., Inc 1965

- ⊙ See parts list for alternate value or application.
- 1. Voltage measurements taken with vacuum tube voltmeter.
- 2. All controls set for normal operation, no signal applied.
- 3. Measured values are from socket pin or terminal to common ground.
- 4. All terminals viewed from bottom unless otherwise designated.
- 5. Numbers assigned to terminals may not be found on the unit.
- 6. Supply voltage maintained at rated value for voltage readings.
- 7. Resistance measurements not given because of the wide variation in internal resistance of transistor.

CHEVROLET MODELS 986330/38/39, GMC 7291556/76



# PARTS LIST AND DESCRIPTION (CONTINUED)

Replacement parts shown may be superseded by the availability of newly introduced replacements.  
 Have your local distributor check Sams COUNTER FACTS for the most up-to-date replacement.

## TRANSFORMER (AUDIO OUTPUT)

| ITEM No. | IMPEDANCE |       | REPLACEMENT DATA |                |                  |                     | NOTES |
|----------|-----------|-------|------------------|----------------|------------------|---------------------|-------|
|          |           |       | DELCO PART No.   | MERIT PART No. | STANCOR PART No. | THORDARSON PART No. |       |
|          | PRM.      | SEC.  |                  |                |                  |                     |       |
| T1       | 12Ω Tap   | @ 10Ω | 7282057          |                |                  |                     |       |

## SPEAKER

| ITEM No. | TYPE        |     |         | REPLACEMENT DATA |                         | NOTES |
|----------|-------------|-----|---------|------------------|-------------------------|-------|
|          |             |     |         | DELCO PART No.   | QUAM PART No.           |       |
| SP1      | 6" X 9" PM  | 10Ω | 7285671 | 69A18Z10         | Model 986330.           |       |
|          | 6" X 9" PM  | 10Ω | 7282160 | 69A2210          | Model 986338.           |       |
|          | 6" X 9" PM  | 10Ω | 7287661 |                  | Models 986339, 7291576. |       |
|          | 4" X 10" PM | 10Ω | 7282121 | 410A2210         | Model 7291556.          |       |

## COMPONENT COMBINATIONS

| ITEM No. | USE        | DESCRIPTION             | DELCO PART NO. | REPLACEMENT DATA |
|----------|------------|-------------------------|----------------|------------------|
| K1       | Det. Comp. | 1000Ω, .001mfd, .001mfd | 7287253        |                  |

## FUSES

| ITEM No. | TYPE | RATING | REPLACEMENT DATA |        |                     |        |               |        |  |
|----------|------|--------|------------------|--------|---------------------|--------|---------------|--------|--|
|          |      |        | DELCO PART No.   |        | LITTELFUSE PART No. |        | BUSS PART No. |        |  |
|          |      |        | FUSE             | HOLDER | FUSE                | HOLDER | FUSE          | HOLDER |  |
| M1       | AGC  | 3A     | In Fuse Block    |        | 312003              |        |               | AGC3   |  |

## MISCELLANEOUS

| ITEM No. | PART NAME            | DELCO PART No. | NOTES |
|----------|----------------------|----------------|-------|
| M2       | Tuning Coil Assembly | 7287957        |       |
| M3       | Spark Plate          | 7271564        |       |

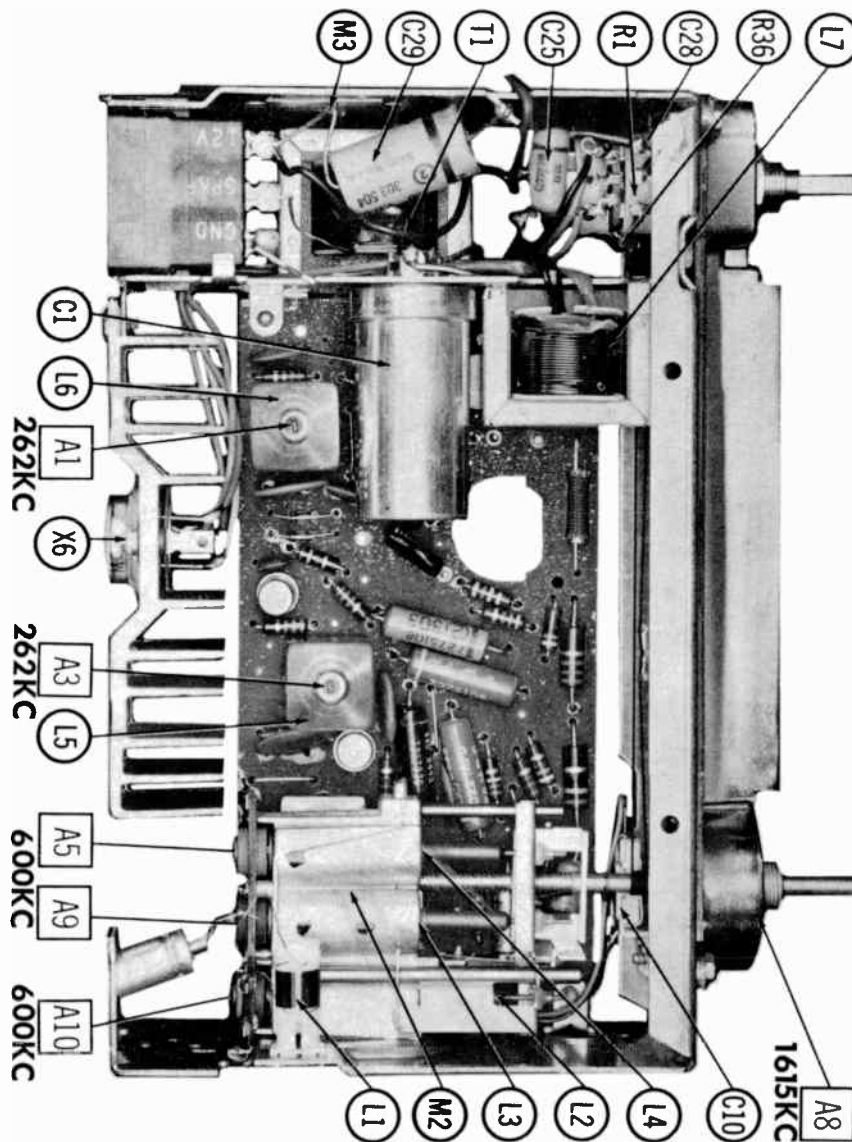
## CABINETS & CABINET PARTS

(When Ordering Specify Model, Chassis & Color)

| ITEM                   | Models         | PART No. | ITEM                   | Models         | PART No. |
|------------------------|----------------|----------|------------------------|----------------|----------|
| Escutcheon             | 986330, 986339 | 1222174  | Knob, Tuning or Volume | 986338, 986339 | 7277055  |
| Escutcheon             | 986338         | 1222201  |                        | 7291576        |          |
| Escutcheon             | 7291556        | 1222175  | Knob, Tuning or Volume | 7291556        | 1991012  |
|                        | 7291576        |          | Knob, Tone             |                | 3793636  |
| Dial Pointer           |                | 7282086  | Knob, Dummy            |                | 3825878  |
| Dial Pointer           | 986338         | 7284556  | Knob, Dummy            | 986338         | 3793635  |
| Knob, Tuning or Volume | 986330         | 1991037  |                        |                |          |

## WIRING DATA

|   |  |
|---|--|
| General-use Unshielded Hook-up Wire ..... | Use BELDEN No. 8530 (Solid) Available in 12 Colors<br>8524 (Stranded) Available in 12 Colors |
| Shielded Hook-up Wire .....               | Use BELDEN No. 8885  |
| Rear Seat Speaker Extension Cable .....   | Use BELDEN No. 8782 (Stranded) Coded Parallel Leads  |
| Bonding Strap .....                       | Use BELDEN No. 8661 (3/8 In.) or 8670 (3/4 In.)  |







# PHOTOFACT<sup>®</sup> with CIRCUITRACE<sup>®</sup>

TRADE NAME : Chevrolet Models 986096 (1965 Chevrolet)  
 986113 (1965 Corvair), 986201 (1965  
 Chevelle), 986248 (1965 Chevy II)  
 SUPPLIER : For Current Address, See Master Index.  
 TYPE SET : 6 Transistor AM Receiver  
 POWER SUPPLY : 12 Volt Storage Battery  
 RATING : .670 Amp. @ 12.6 Volts DC (Less Lamp)  
 TUNING RANGE : BROADCAST 540-1615KC



## ALIGNMENT INSTRUCTIONS

Check for specified source voltage.  
 Use only enough generator output to provide a usable indication.  
 Suggested Alignment Tools:

A1 thru A5, A9, A10    GENERAL CEMENT: 5009, 8728A, 8987    WALSCO: 2531-X, 2536  
 A6, A7, A8            GENERAL CEMENT: 8290, 8868, 9087            WALSCO: 2525, 2528, 2587

|   | SIGNAL GENERATOR COUPLING                                       | SIGNAL GENERATOR FREQUENCY | RADIO DIAL SETTING   | INDICATOR                       | ADJUST         | REMARKS                            |
|---|---|----------------------------|----------------------|---------------------------------|----------------|------------------------------------|
| 1.  | High side thru .1mf to point $\Delta$ , low side to ground.     | 262KC (400v Mod.)          | High Freq. End Stop. | Output Meter across voice coil. | A1, A2, A3, A4 | Adjust for maximum.                |
| Check setting of oscillator coil core (A5). Rear of core should be 1 3/8" from mounting end of coil form. |   |                            |                      |                                 |                |                                    |
| 2.  | High side thru 82mmf to antenna receptacle, low side to ground. | 1615KC                     | High Freq. End Stop. | Output Meter across voice coil. | A6, A7, A8     | Adjust for maximum.                |
| 3.  | "   | 600KC                      | 600KC Signal         | "                               | A9, A10        | Adjust for maximum. Repeat step 2. |

With radio installed in car and antenna fully extended, tune in a weak station near 1400KC and adjust A8 for maximum output.

CHEVROLET MODELS 986096/113/201/248

## DIAL CORD STRINGING



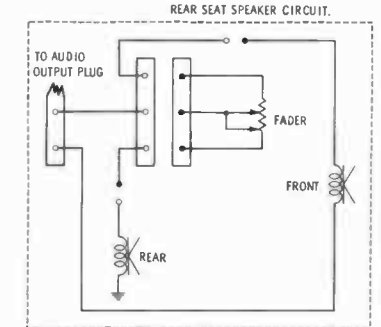
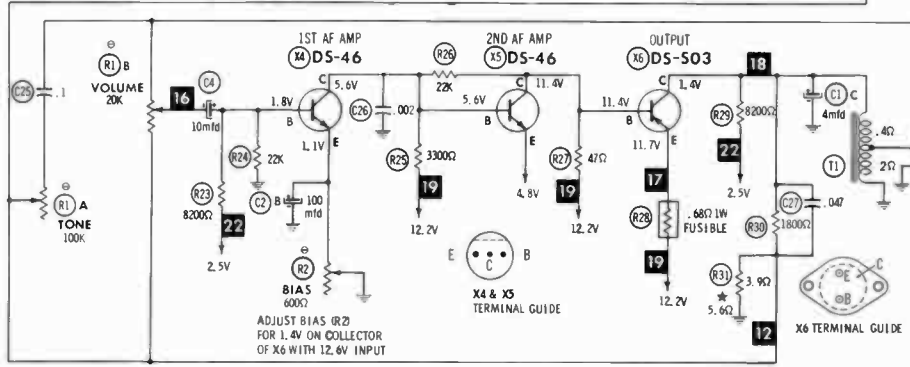
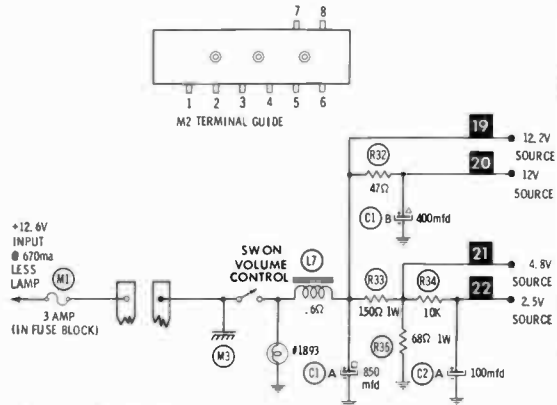
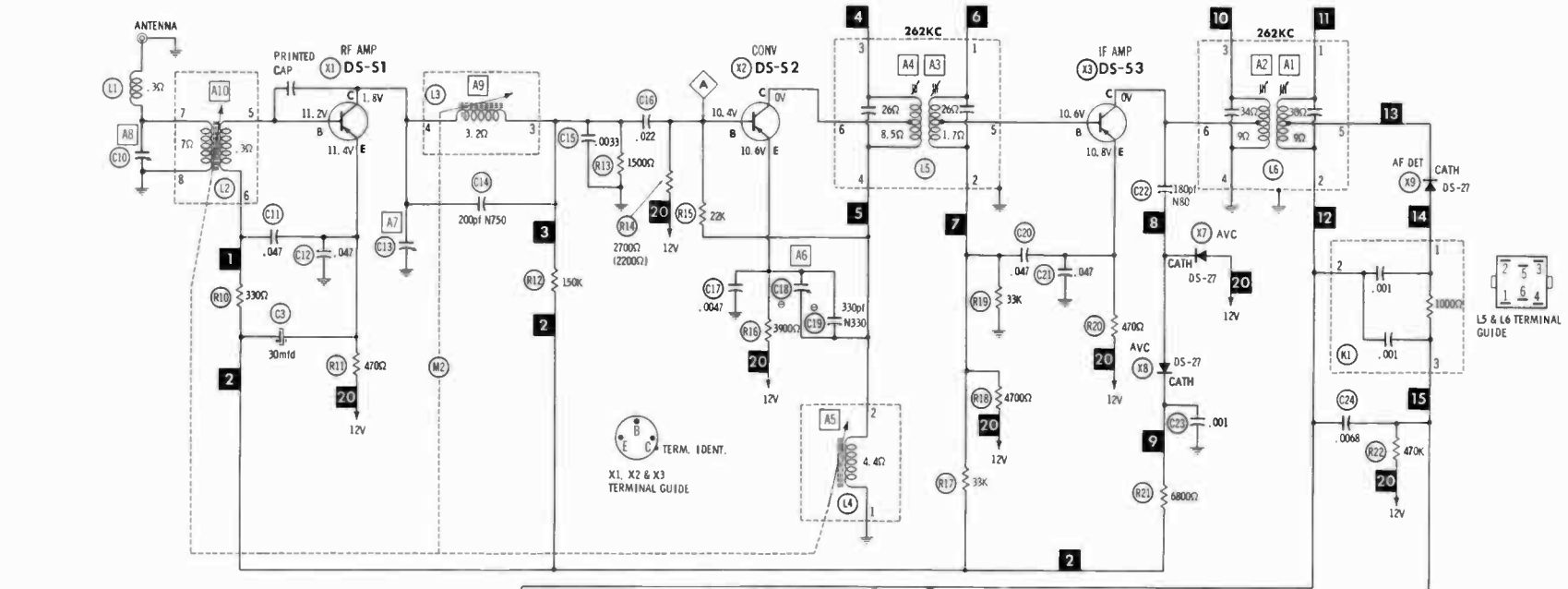
TUNING SHAFT  
 7TURNS  
 (CORES FULLY IN)

REAR VIEW

**HOWARD W. SAMS & CO., INC.** Indianapolis 6, Indiana

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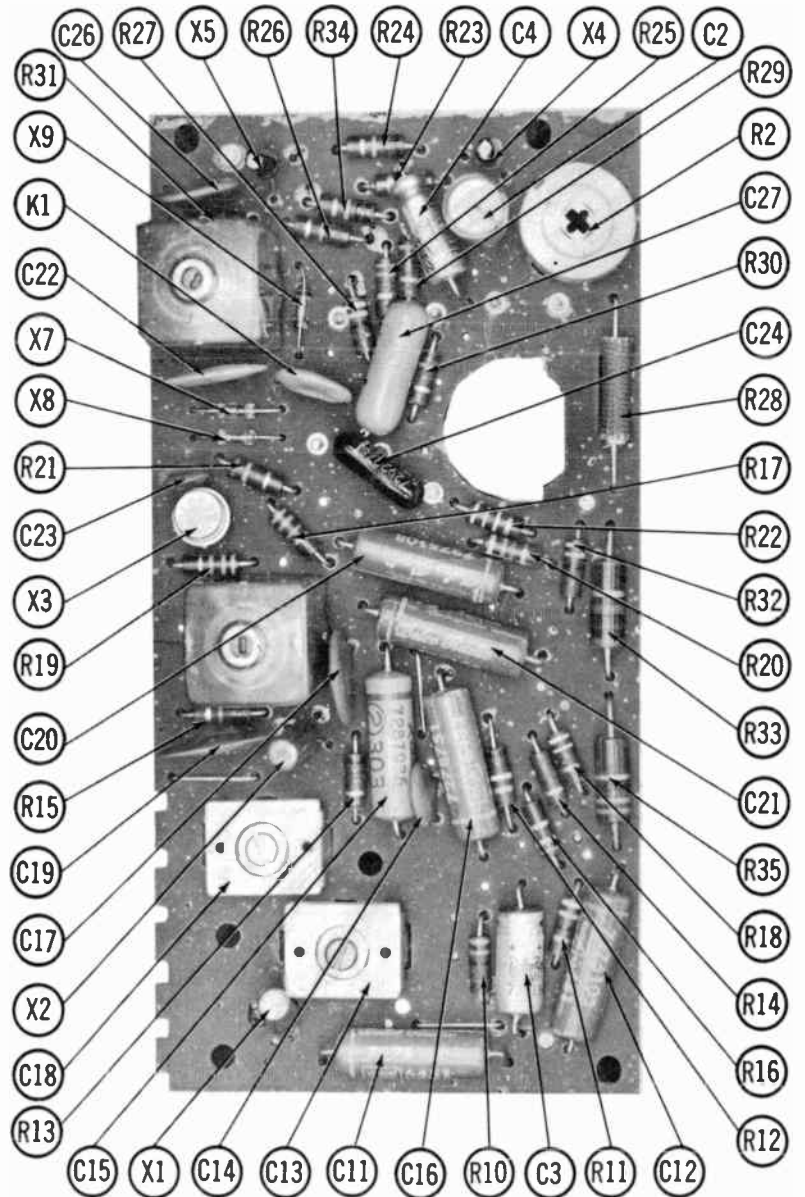
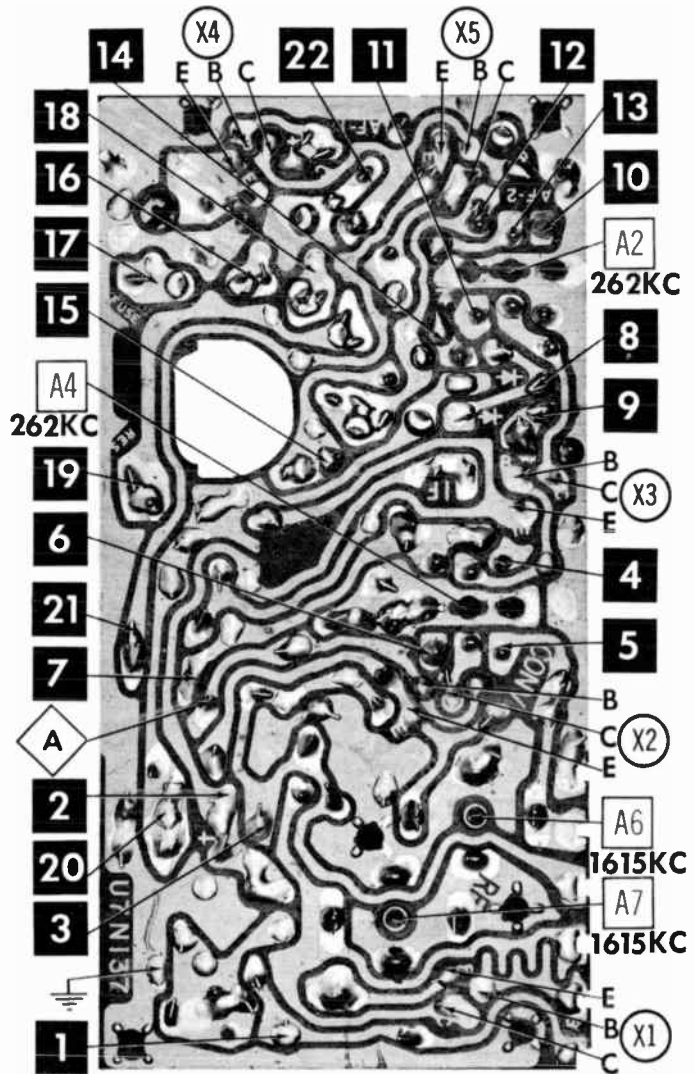
★ NOMINAL VALUE, MAY VARY.  
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A. PHOTOFACET STANDARD NOTATION SCHEMATIC with **CIRCUITRACE**

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- ⊙ See parts list for alternate value or application.
- 1. Voltage measurements taken with vacuum tube voltmeter.
- 2. All controls set for normal operation, no signal applied.
- 3. Measured values are from socket pin or terminal to common ground.
- 4. All terminals viewed from bottom unless otherwise designated.
- 5. Numbers assigned to terminals may not be found on the unit.
- 6. Supply voltage maintained at rated value for voltage readings.
- 7. Resistance measurements not given because of the wide variation in internal resistance of transistor.

CHEVROLET MODELS 986096/113/201/248



## PARTS LIST AND DESCRIPTION

Replacement parts shown may be superseded by the availability of newly introduced replacements.  
Have your local distributor check Sams COUNTER FACTS for the most up-to-date replacement.

### TRANSISTORS

| ITEM No. | ORIG. TYPE | USE         | REPLACEMENT DATA |                           |              | NOTES |
|----------|------------|-------------|------------------|---------------------------|--------------|-------|
|          |            |             | DELCO PART No.   | GENERAL ELECTRIC PART No. | RCA PART No. |       |
| X1       | D8-51      | RF Amp.     | D8-25            | GE-1                      |              | PNP   |
| X2       | D8-52      | Conv.       | D8-25            | GE-1                      |              |       |
| X3       | D8-53      | IF Amp.     | D8-25            | GE-1                      |              |       |
| X4       | D8-46      | 1st AF Amp. | D8-46            | GE-10                     |              |       |
| X5       | D8-46      | 2nd AF Amp. | D8-46            | GE-10                     |              |       |
| X6       | D8-503     | Output      | D8-503           | GE-3                      |              |       |

\*When replacing, apply silicon grease to both sides of insulator. Tighten mounting screws securely. Check bias adjustment.

### POWER RECTIFIERS & SIGNAL DIODES

| ITEM No. | MEASURED CURRENT | ORIGINAL Port or Type No. | RECTIFIERS                |                  |              |                         | DIODES                    |
|----------|------------------|---------------------------|---------------------------|------------------|--------------|-------------------------|---------------------------|
|          |                  |                           | GENERAL ELECTRIC PART No. | MALLORY PART No. | RCA PART No. | SARKES TARZIAN PART No. | GENERAL ELECTRIC PART No. |
| X7       |                  | D8-27                     |                           |                  |              |                         | 1N34AS                    |
| X8       |                  | D8-27                     |                           |                  |              |                         | 1N34AS                    |
| X9       |                  | D8-27                     |                           |                  |              |                         | 1N34AS                    |

### ELECTROLYTIC CAPACITORS

| ITEM No. | RATING |         | REPLACEMENT DATA |                  |                           |                           |                             |                  |                  |
|----------|--------|---------|------------------|------------------|---------------------------|---------------------------|-----------------------------|------------------|------------------|
|          | CAP.   | VOLT.   | DELCO PART No.   | AEROVOX PART No. | CORNELL-DUBILIER PART No. | GENERAL ELECTRIC PART No. | GENERAL INSTRUMENT PART No. | MALLORY PART No. | SPRAGUE PART No. |
| C1A      | 850    | 16      | 7282272 ①        | AFH3-54-30       | CC0002                    | XC3-6.1                   |                             | WP300.7A         | TVL-3021         |
| B        | 400    | 16      |                  |                  |                           |                           |                             |                  |                  |
| C        | 4      | 11.5RMS |                  |                  |                           |                           |                             |                  |                  |
| C2A      | 100    | 4       | 7286539 ②        | BCD4X100100      |                           |                           |                             | PET2150          | VL8-2120         |
| B        | 100    | 4       |                  |                  |                           |                           |                             |                  |                  |
| C3       | 30     | 6       | 7279896          | PTT27            | NLW30-15                  | MT1-13                    | MLV30-6                     | TT6X30           | TE-1092          |
| C4       | 10     | 12      | 7292738          | PTT53            | NLW10-15                  | MT1-5                     | BL1241                      | TT12X10          | TL-1128          |

① Early production uses Part #7292515: 650-400 @ 16V, 4mfd @ 11.5RMS, 100mfd @ 4V.  
② Section A in C1 in early production single 100mfd @ 4V Part #7291810 For Sect "B".

### FIXED CAPACITORS

| ITEM No. | RATING    | REMARKS  | REPLACEMENT DATA |                    |                           |                  |                  |                  |  |
|----------|-----------|----------|------------------|--------------------|---------------------------|------------------|------------------|------------------|--|
|          |           |          | AEROVOX PART No. | CENTRALAB PART No. | CORNELL-DUBILIER PART No. | ELMENCO PART No. | MALLORY PART No. | SPRAGUE PART No. |  |
| C10      |           | #7281971 |                  |                    |                           |                  |                  |                  |  |
| C11      | .047 75V  |          | DBE2847          |                    | WMF2847                   | 1DP-2-473        | PVC1147          | 2PS-847          |  |
| C12      | .047 75V  |          | DBE2847          |                    | WMF2847                   | 1DP-2-473        | PVC1147          | 2PS-847          |  |
| C13      |           | #7293277 |                  |                    |                           |                  |                  |                  |  |
| C14      | 200 N750  |          | N750-DI200       | DTN-200            | C10T2U                    | CCTN-201         | CN7320           | 10TCU-T20        |  |
| C15      | .0033 75V |          | DBE6D33          | CPR-3300J          | WMF1D33                   | 6DP-1-332        | PVC4233          | 6PS-D33          |  |
| C16      | .022 75V  |          | DBE2822          |                    | WMF1S22                   | 1DP-1-223        | PVC1122          | 2PS-822          |  |
| C17      | .0047     |          | BPD-0047         | DD-472             | BYA10D47                  | CCD-472          | B247             | 5HK-D47          |  |
| C18      |           | #7282165 |                  |                    |                           |                  |                  |                  |  |
| C19      | 330 N330  |          |                  |                    |                           |                  |                  | 10TCS-T33        |  |
| C20      | .047 75V  |          | DBE2847          |                    | WMF2847                   | 1DP-2-473        | PVC1147          | 2PS-847          |  |
| C21      | .047 75V  |          | DBE2847          |                    | WMF2847                   | 1DP-2-473        | PVC1147          | 2PS-847          |  |
| C22      | 180 N80   |          |                  |                    |                           |                  |                  | 10TCN-T80        |  |
| C23      | .001      |          | BPD-001          | DD-102             | BYA10D1                   | CCD-102          | B210             | 5HK-D10          |  |
| C24      | .0068 75V |          | DBE6D68          | CPR-6800J          | WMF4D68                   | 1DP-1-682        | PVC4268          | 6PS-D68          |  |
| C25      | .1 75V    |          | DBE2P1           |                    | WMF1P1                    | 1DP-2-104        | PVC101           | 2PS-P10          |  |
| C26      | .002      |          | BPD-002          | DD-202             | BYA10D2                   | CCD-202          | B220             | 5HK-D20          |  |
| C27      | .047 75V  |          | DBE2847          |                    | WMF2847                   | 1DP-2-473        | PVC1147          | 2PS-847          |  |

### CONTROLS

All wattages 1/2 watt, or less, unless otherwise listed.

| ITEM No. | USE                | RESISTANCE                | REPLACEMENT DATA |                               |                    |                  |                  |
|----------|--------------------|---------------------------|------------------|-------------------------------|--------------------|------------------|------------------|
|          |                    |                           | DELCO PART No.   | CENTRALAB PART No.            | CLAROSTAT PART No. | CTS-IRC PART No. | MALLORY PART No. |
| R1A<br>B | Tone Volume/Switch | 100K                      | 7289973 ①        | F1-100K, R2-25K               |                    | ↑ QJ-1870A       | ▲ UE4560-B       |
|          |                    | 20K                       |                  | FFS109, RFS205, AK-26 ⑤, KR-4 |                    |                  |                  |
|          | Tone Volume/Switch | 100K                      | 7290608 ②        |                               |                    |                  |                  |
|          |                    | 20K                       |                  |                               |                    |                  |                  |
| R2       | Tone Volume/Switch | 100K                      | 7290616 ③        | F1-100K, R2-25K               |                    | ↑↑ QJ-1874A      |                  |
|          |                    | 20K                       |                  | FFS014, RFS108, AK-26 ⑤, KR-4 |                    |                  |                  |
|          | Bias               | 100K<br>20K<br>800Ω<br>2W | 7285601          | V-600                         | U39-600            | 110-600          |                  |

① Used in Model 986096.  
② Used in Model 986113.  
③ Used in Model 986201.  
④ Used in Model 986248.  
⑤ Alter bushing to meet requirement.  
† "CONCENTRIKIT" Equivalent: K8 Kit with Base Elements and Shafts: B11-128, P22-151 (Panel) B13-120, R28-206 (Rear) B8 ⑤ (Bushing) 76-1 (Switch)  
†† "CONCENTRIKIT" Equivalent: K8 Kit with Base Elements and Shafts: B11-128, P22-027 (Panel) B13-120, R28-112 (Rear) B6 ⑤ (Bushing) 76-1 (Switch)  
"SNAPTROL" Equivalent: BU8, CF13, CR50T ⑥, SF12, SR15, GC.  
"SNAPTROL" Equivalent: BU8, CF13, CR50T ⑥, SF5, SR6, GC.  
⑥ Disregard 6K Tap.

### RESISTORS (Power and Special)

| ITEM No. | RATING         | REPLACEMENT DATA |                  |                | ITEM No. | RATING | REPLACEMENT DATA |                  |         |
|----------|----------------|------------------|------------------|----------------|----------|--------|------------------|------------------|---------|
|          |                | IRC PART No.     | WORKMAN PART No. | DELCO PART No. |          |        | IRC PART No.     | WORKMAN PART No. | REMARKS |
| R28      | .68Ω (Fusible) | BWH. 68          | WS. 68Ω          | 7287480        |          |        |                  |                  |         |

### COILS (RF-IF)

| ITEM No. | USE              | REPLACEMENT DATA |                   |                |                 |                  |                  |
|----------|------------------|------------------|-------------------|----------------|-----------------|------------------|------------------|
|          |                  | DELCO PART No.   | MEISSNER PART No. | MERIT PART No. | MILLER PART No. | STANCOR PART No. | WORKMAN PART No. |
| L1       | RF Choke (6.2uh) | 7281946          | 19-1004           | BC-565         | 4610            | RTC-8520         | T859             |
| L2       | AnL              | ①                |                   |                |                 |                  |                  |
| L3       | RF               | ①                |                   |                |                 |                  |                  |
| L4       | Osc.             | ①                |                   |                |                 |                  |                  |
| L5       | Input IF         | 1221856          | 16-6704           |                | 6542            |                  | TA653            |
| L6       | Output IF        | 1221857          | 16-6705           |                | 6543            |                  | TA653            |

① Part of M2.

### FILTER CHOKE

| ITEM No. | RATINGS            |         |                              | REPLACEMENT DATA |                |                  |                     |                | NOTES |
|----------|--------------------|---------|------------------------------|------------------|----------------|------------------|---------------------|----------------|-------|
|          | CURRENT (Measured) | DC RES. | INDUCTANCE (0 CURRENT 1000~) | DELCO PART No.   | MERIT PART No. | STANCOR PART No. | THORDARSON PART No. | TRIAD PART No. |       |
| L7       | 670ma              | .6Ω     | 8MH                          | 1221823          | C-4095         | TC-2             | TR-154              | TY17XT         |       |



# PARTS LIST AND DESCRIPTION (CONTINUED)

Replacement parts shown may be superseded by the availability of newly introduced replacements.  
Have your local distributor check Sams COUNTER FACTS for the most up-to-date replacement.

## TRANSFORMER (AUDIO OUTPUT)

| ITEM No. | IMPEDANCE |       | REPLACEMENT DATA |               |                  |                     |                | NOTES |
|----------|-----------|-------|------------------|---------------|------------------|---------------------|----------------|-------|
|          |           |       | DELCO PART No.   | MERT PART No. | STANCOR PART No. | THORDARSON PART No. | TRIAD PART No. |       |
|          | PR1.      | SEC.  |                  |               |                  |                     |                |       |
| T1       | 12Ω Tap   | @ 10Ω | 7282057          |               |                  |                     |                |       |

## SPEAKER

| ITEM No. | TYPE            | REPLACEMENT DATA |               | NOTES         |
|----------|-----------------|------------------|---------------|---------------|
|          |                 | DELCO PART No.   | QUAM PART No. |               |
| SP1      | 4" X 10" PM 10Ω | 7291711          |               | Model 986096. |
|          | 6" X 10" PM 10Ω | 7289731          |               | Model 986113. |
|          | 4" X 10" PM 10Ω | 7290081          |               | Model 986201. |
|          | 4" X 10" PM 10Ω | 7282159          | 410A2Z10      | Model 986248. |

## COMPONENT COMBINATIONS

| ITEM No. | USE        | DESCRIPTION             | DELCO PART NO. | REPLACEMENT DATA |
|----------|------------|-------------------------|----------------|------------------|
| K1       | Det. Comp. | 1000Ω, .001mfd, .001mfd | 7287253        |                  |

## FUSES

| ITEM No. | TYPE | RATING | REPLACEMENT DATA |               |                     |        |               |        |  |
|----------|------|--------|------------------|---------------|---------------------|--------|---------------|--------|--|
|          |      |        | DELCO PART No.   |               | LITTELFUSE PART No. |        | BUSS PART No. |        |  |
|          |      |        | FUSE             | HOLDER        | FUSE                | HOLDER | FUSE          | HOLDER |  |
| M1       | AGC  | 3A     |                  | In Fuse Block | 312003              |        |               | AGC3   |  |

## MISCELLANEOUS

| ITEM No. | PART NAME            | DELCO PART No. | NOTES |
|----------|----------------------|----------------|-------|
| M2       | Tuning Coil Assembly | 7287957        |       |
| M3       | Spark Plate          | 7271564        |       |

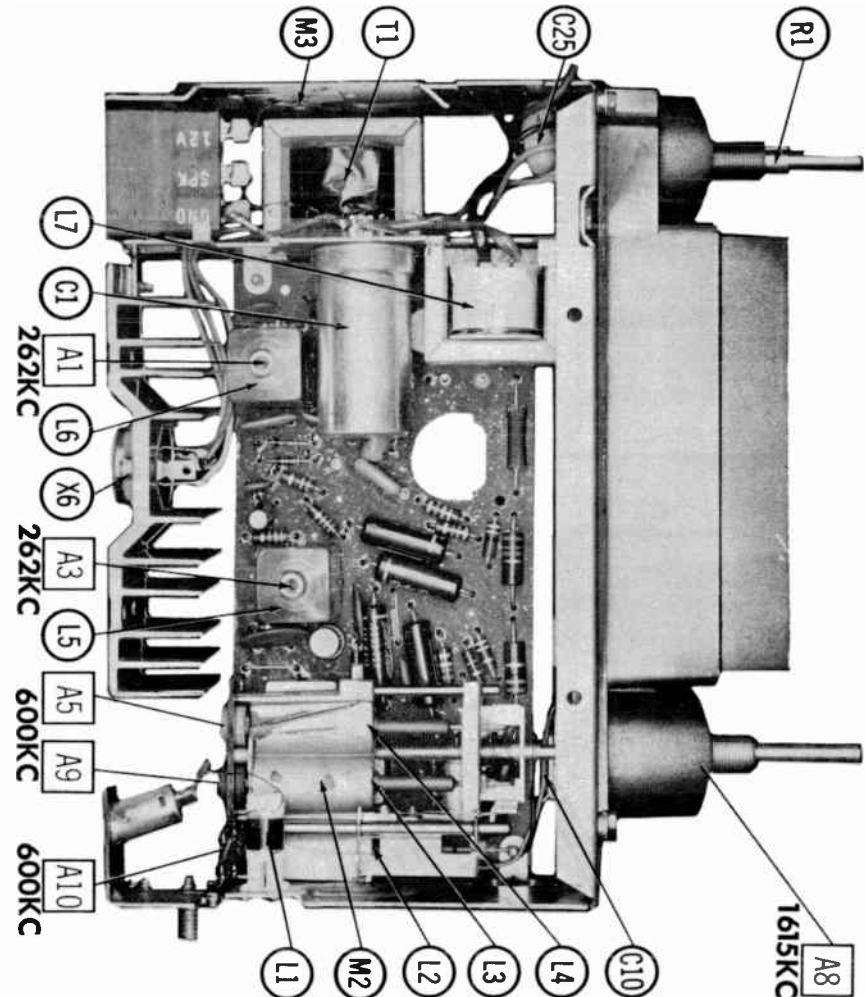
## CABINETS & CABINET PARTS

(When Ordering Specify Model, Chassis & Color)

| ITEM             | MODELS | PART No. | ITEM                   | MODELS     | PART No. |
|------------------|--------|----------|------------------------|------------|----------|
| Escutcheon       | 986096 | 7286346  | Knob, Volume or Tuning | All Models | 3860189  |
| Escutcheon       | 986113 | 1222146  | Knob, Tone             | 986096     | 3860187  |
| Escutcheon       | 986201 | 1222144  | Knob, Tone             | 986113     | 3860552  |
| Escutcheon       | 986248 | 1222201  | Knob, Tone             | 986201     | 3863269  |
| Dial, Calibrated | 986096 | 7289615  | Knob, Tone             | 986248     | 3793636  |
| Dial Pointer     | 986096 | 7289628  | Knob, Dummy            | 986096     | 3860188  |
| Dial Pointer     | 986113 | 7289309  | Knob, Dummy            | 986113     | 3860553  |
| Dial Pointer     | 986201 | 7282086  | Knob, Dummy            | 986201     | 3863270  |
| Dial Pointer     | 986248 | 7284556  | Knob, Dummy            | 986248     | 3793635  |

## WIRING DATA

|                                     |  |
|-------------------------------------|--|
| General-use Unshielded Hook-up Wire | Use BELDEN No. 8530 (Solid) Available in 12 Colors<br>8524 (Stranded) Available in 12 Colors |
| Shielded Hook-up Wire               | Use BELDEN No. 8885  |
| Rear Seat Speaker Extension Cable   | Use BELDEN No. 8782 (Stranded) Coded Parallel Leads  |
| Bonding Strap                       | Use BELDEN No. 8661 (3/8 In.) or 8670 (3/4 In.)  |



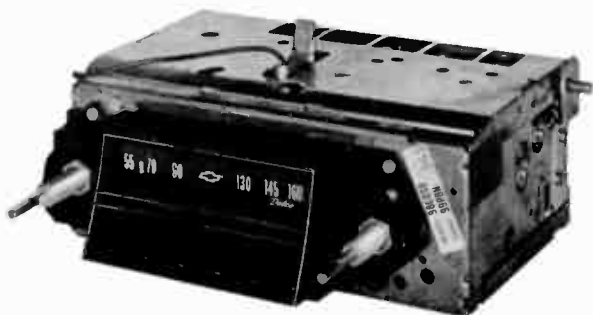
CHEVROLET MODELS 986096/113/201/248





# PHOTOFACT<sup>®</sup> with

# CIRCUITRACE<sup>®</sup>



TRADE NAME : Chevrolet Models 986099 (1965)  
 SUPPLIER : For Current Address, See Master Index.  
 TYPE SET : 6 Transistor AM Receiver  
 POWER SUPPLY : 12 Volt Storage Battery  
 RATING : 1.2Amp. @ 12.6 Volts DC (Less Lamp)  
 TUNING RANGE : BROADCAST 540-1615KC

CHEVROLET MODEL 986099

## ALIGNMENT INSTRUCTIONS

Check for specified source voltage.

Use only enough generator output to provide a usable indication.

Suggested Alignment Tools:

A1 thru A5, A9, A10  
A6, A7, A8

GENERAL CEMENT: 5009, 8728A, 8987

GENERAL CEMENT: 9087, 8290, 8868

WALSCO: 2531-X, 2536

WALSCO: 2525, 2528, 2587

|  | SIGNAL GENERATOR COUPLING                                       | SIGNAL GENERATOR FREQUENCY | RADIO DIAL SETTING   | INDICATOR                       | ADJUST         | REMARKS                            |
|--|---|----------------------------|----------------------|---------------------------------|----------------|------------------------------------|
| 1.   | High side thru .1mfd to point $\Delta$ , low side to ground.    | 262KC (400v Mod.)          | High Freq. End Stop. | Output Meter across voice coil. | A1, A2, A3, A4 | Adjust for maximum.                |
| Check setting of oscillator coil core (A5). Rear of core should be 1 3/8" from mounting end of coil form.                    |   |                            |                      |                                 |                |                                    |
| 2.   | High side thru 82 pf to antenna receptacle, low side to ground. | 1615KC                     | High Freq. End Stop. | Output Meter across voice coil. | A6, A7, A8     | Adjust for maximum.                |
| 3.   | "   | 600KC                      | 600KC Signal         | "                               | A9, A10        | Adjust for maximum. Repeat step 2. |
| With radio installed in car and antenna fully extended, tune in a weak station near 1400KC and adjust A8 for maximum output. |   |                            |                      |                                 |                |                                    |

### PUSH-BUTTON ADJUSTMENT

1. Pull button out.
2. Tune manually to desired station.
3. Press button in firmly.
4. Repeat for remaining buttons.

**HOWARD W. SAMS & CO., INC.** Indianapolis 6, Indiana

# PARTS LIST AND DESCRIPTION

Replacement parts shown may be superseded by the availability of newly introduced replacements.  
 Have your local distributor check Sams COUNTER FACTS for the most up-to-date replacement.

## WIRING DATA

|   |   |
|---|---|
| General-use Unshielded Hook-up Wire ..... | Use BELDEN No. 8530 (Solid) Available in 12 Colors  |
| Shielded Hook-up Wire .....               | Use BELDEN No. 8885                                 |
| Rear Seat Speaker Extension Cable .....   | Use BELDEN No. 8782 (Stranded) Coded Parallel Leads |
| Bonding Strap .....                       | Use BELDEN No. 8661 (3/8 In.) or 8670 (3/4 In.)     |

## TRANSISTORS

| ITEM No. | ORIG. TYPE | USE         | REPLACEMENT DATA |                           |              | NOTES |
|----------|------------|-------------|------------------|---------------------------|--------------|-------|
|          |            |             | DELCO PART No.   | GENERAL ELECTRIC PART No. | RCA PART No. |       |
| X1       | D8-51      | RF Amp.     | D8-25            | GE-1                      |              | PNP   |
| X2       | D8-52      | Conv.       | D8-25            | GE-1                      |              | PNP   |
| X3       | D8-53      | IF Amp.     | D8-25            | GE-1                      |              | PNP   |
| X4       | D8-46      | 1st AF Amp. | D8-46            | GE-10                     |              | NPN   |
| X5       | D8-67      | 2nd AF Amp. | D8-46            | GE-10                     |              | NPN   |
| X6       | D8-501     | Output      | D8-501           | GE-4                      |              | PNP*  |

\* Check bias adjustment. \* Alternate Type.

## POWER RECTIFIERS & SIGNAL DIODES

| ITEM No. | MEASURED CURRENT | ORIGINAL Part or Type No. | RECTIFIERS                |                  |              |                         | DIODES                    |
|----------|------------------|---------------------------|---------------------------|------------------|--------------|-------------------------|---------------------------|
|          |                  |                           | GENERAL ELECTRIC PART No. | MALLORY PART No. | RCA PART No. | SARKES TARZIAN PART No. | GENERAL ELECTRIC PART No. |
| X7       |                  | D8-27                     |                           |                  |              |                         | 1N34AS                    |
| X8       |                  | D8-27                     |                           |                  |              |                         | 1N34AS                    |
| X9       |                  | D8-27                     |                           |                  |              |                         | 1N34AS                    |

## ELECTROLYTIC CAPACITORS

| ITEM No. | RATING |         | DELCO PART No. | REPLACEMENT DATA |                           |                           |                             |                  |                  |           |
|----------|--------|---------|----------------|------------------|---------------------------|---------------------------|-----------------------------|------------------|------------------|-----------|
|          | CAP.   | VOLT.   |                | AEROVOX PART No. | CORNELL-DUBILIER PART No. | GENERAL ELECTRIC PART No. | GENERAL INSTRUMENT PART No. | MALLORY PART No. | SPRAGUE PART No. |           |
| C1A      | .850   | 16      | 7291786 ①      |                  |                           |                           |                             |                  |                  | TVL84206* |
| B        | .400   | 16      |                |                  |                           |                           |                             |                  |                  |           |
| C        | .100   | 4       |                |                  |                           |                           |                             |                  |                  |           |
| D        | 15     | 1.5 RMS |                |                  |                           |                           |                             |                  |                  |           |
| C2       | 100    | 4       | 7291810 ②      | PTT30            | NLW125-6                  | MT1-21                    | BL1720                      | TT6X100          | TE-1102          |           |
| C3       | 30     | 10      | 7279896        | PTT27            | NLW30-15                  | MT1-13                    | MLV30-6                     | TT6X30           | TE-1092          |           |
| C4       | 10     | 12      | 7292738        | PTT53            | NLW10-15                  | MT1-5                     | BL1241                      | TT12X10          | TL-1128          |           |

① C1 may be only 3 Sects. in some versions. ② C2 may be 2 Sects. in some versions.  
 Not normally in distributor's stock. Available thru distributor on order to manufacturer.

## FIXED CAPACITORS

| ITEM No. | RATING    | REMARKS  | REPLACEMENT DATA |                    |                           |                  |                  |                  |
|----------|-----------|----------|------------------|--------------------|---------------------------|------------------|------------------|------------------|
|          |           |          | AEROVOX PART No. | CENTRALAB PART No. | CORNELL-DUBILIER PART No. | ELMENCO PART No. | MALLORY PART No. | SPRAGUE PART No. |
| C10      | .047 75V  | #7281971 | DBE2S47          |                    | WMF2S47                   | 1DP-2-473        | PVC1147          | 2PS-847          |
| C11      | .047 75V  |          | DBE2S47          |                    | WMF2S47                   | 1DP-2-473        | PVC1147          | 2PS-847          |
| C12      | .047 75V  | #7293277 |                  |                    |                           |                  |                  |                  |
| C13      | .047 75V  |          |                  |                    |                           |                  |                  |                  |
| C14      | 200 N750  |          | N750-DE200       | DTN-200            | C10T2U                    | CCTN-201         | CN7320           | 10TCU-T20        |
| C15      | .0033 75V |          | DBE6D33          | CPR-3300J          | WMF1D33                   | 6DP-1-332        | PVC4233          | 6PS-D33          |
| C16      | .022 75V  |          | DBE2S22          |                    | WMF1S22                   | 1DP-1-223        | PVC1122          | 2PS-S22          |
| C17      | .0047     |          | BPD-0047         | DD-472             | BYA10D47                  | CCD-472          | B247             | 5HK-D47          |
| C18      |           | #7282165 |                  |                    |                           |                  |                  |                  |
| C19      | 330 N330  |          |                  |                    |                           |                  |                  |                  |
| C20      | .047 75V  |          | DBE2S47          |                    | WMF2S47                   | 1DP-2-473        | PVC1147          | 2PS-847          |
| C21      | .047 75V  |          | DBE2S47          |                    | WMF2S47                   | 1DP-2-473        | PVC1147          | 2PS-847          |
| C22      | 180 N80   |          |                  |                    |                           |                  |                  |                  |
| C23      | .001      |          | BPD-001          | DD-102             | BYA10D1                   | CCD-102          | B210             | 5HK-D10          |
| C24      | .0088 75V |          | DBE6D68          | CPR-6800J          | WMF4D68                   | 1DP-1-682        | PVC4268          | 6PS-D68          |
| C25      | .1 75V    |          | DBE2P1           |                    | WMF1P1                    | 1DP-2-104        | PVC101           | 2PS-P10          |
| C26      | .002      |          | BPD-002          | DD-202             | BYA10D2                   | CCD-202          | B220             | 5HK-D20          |
| C27      | .047 75V  |          | DBE2S47          |                    | WMF2S47                   | 1DP-2-473        | PVC1147          | 2PS-847          |

# Delco Part Number.

## CONTROLS

All wattages 1/2 watt, or less, unless otherwise listed.

| ITEM No. | USE           | RESISTANCE      | REPLACEMENT DATA |                              |                    |                  |                  |        |
|----------|---------------|-----------------|------------------|------------------------------|--------------------|------------------|------------------|--------|
|          |               |                 | DELCO PART No.   | CENTRALAB PART No.           | CLAROSTAT PART No. | CTS-IRC PART No. | MALLORY PART No. |        |
| R1A      | Tone          | 100K            | 7290093          | F1-100K, R14-25K             |                    |                  | ↑ QJ-1871A       |        |
| B        | Volume/Switch | 20K Tap @ 6000Ω |                  | FFS10, RFS208, AK-26 ①, KR-4 |                    |                  |                  |        |
| R2       | Bias          | 600Ω            | 7286601          | V-800                        | U39-600            |                  | 110-600          | MR600P |

① Alter bushing to meet requirement.

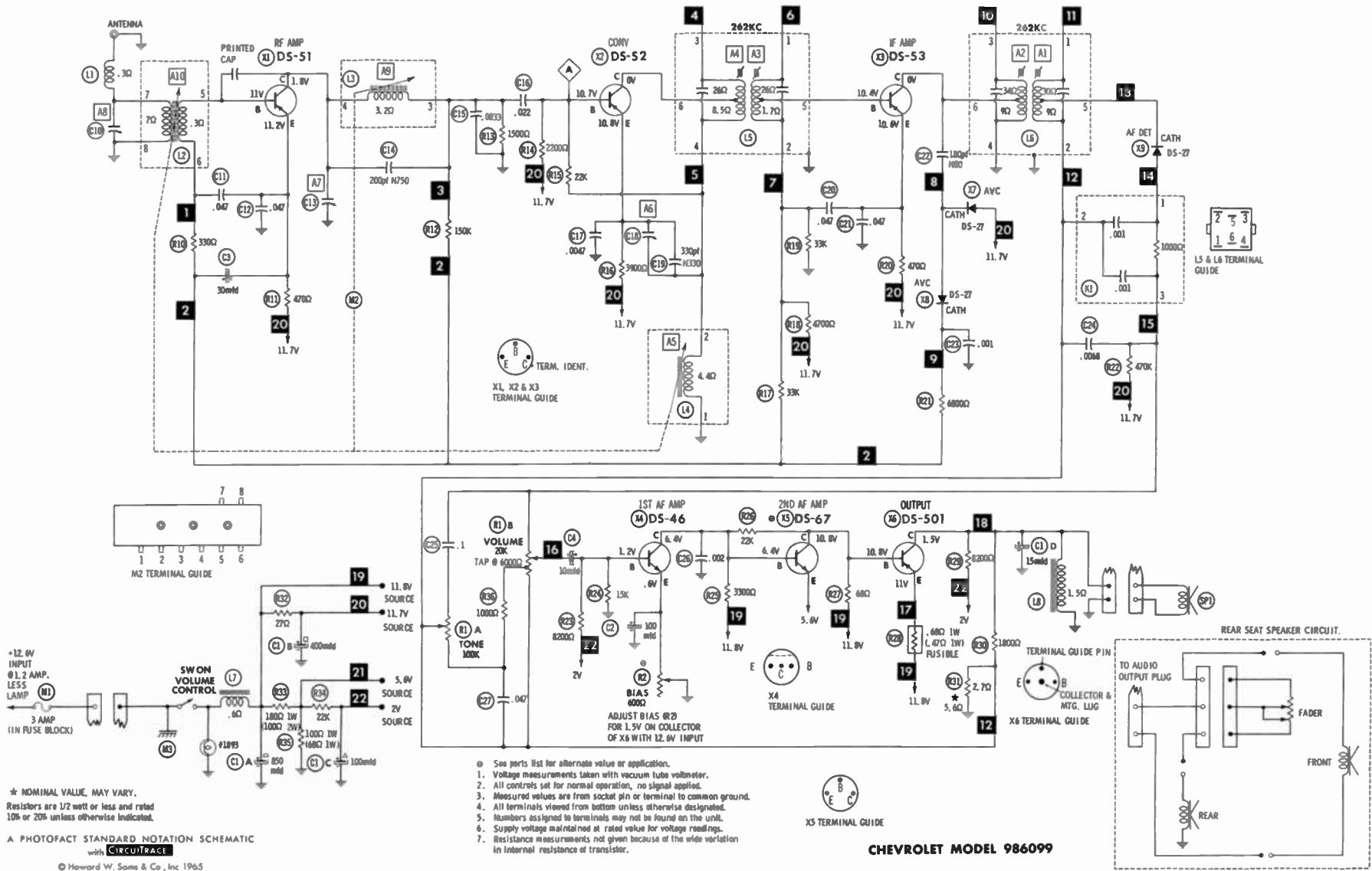
↑ "CONCENTRIKIT" Equivalent: K8 Kit with Base Elements and Shafts: B11-128, P17-118 (Panel)  
 "SNAPTROL" Equivalent: BU8 ①, CF13, CR50T, SF12, SR16, GC. B19-119X, R26-206 (Rear)  
 88 ① (Bushing)  
 76-1 (Switch)

## RESISTORS (Power and Special)

| ITEM No. | RATING         | REPLACEMENT DATA |                  |                | ITEM No. | RATING         | REPLACEMENT DATA |                  |                |
|----------|----------------|------------------|------------------|----------------|----------|----------------|------------------|------------------|----------------|
|          |                | IRC PART No.     | WORKMAN PART No. | DELCO PART No. |          |                | IRC PART No.     | WORKMAN PART No. | DELCO PART No. |
| R28      | .68Ω (Fusible) | BWH.68           | WS.68Ω           | 7286602        |          | .47Ω (Fusible) | BWH.47           | WS.47            | 7281890 (Alt.) |

CONTINUED PAGE 70

CHEVROLET MODEL 986099



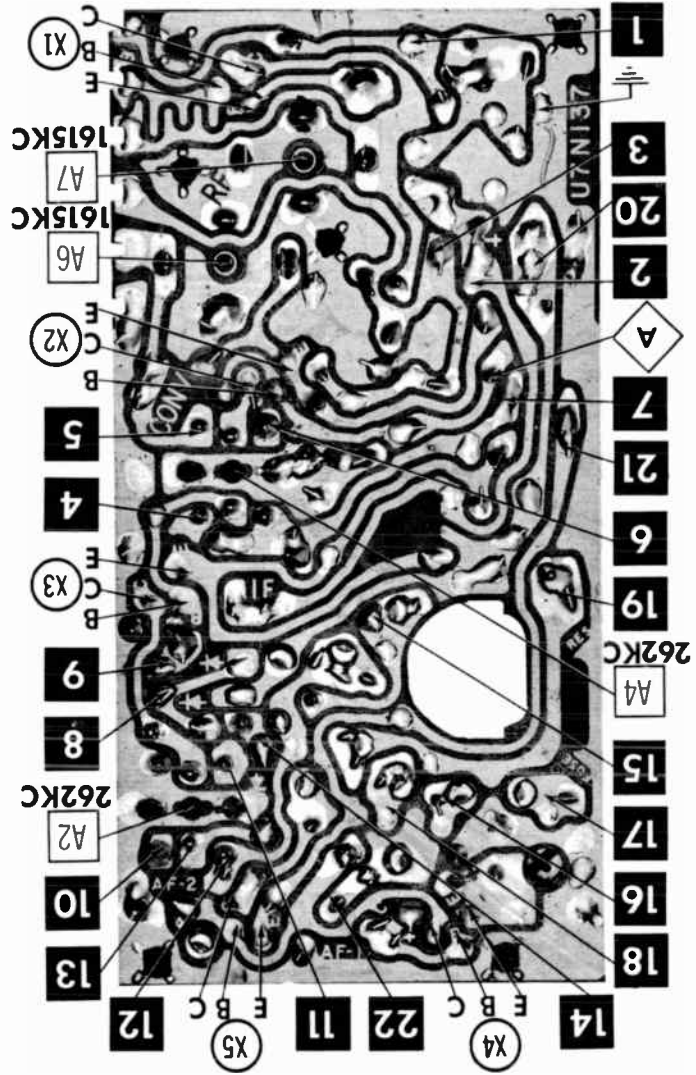
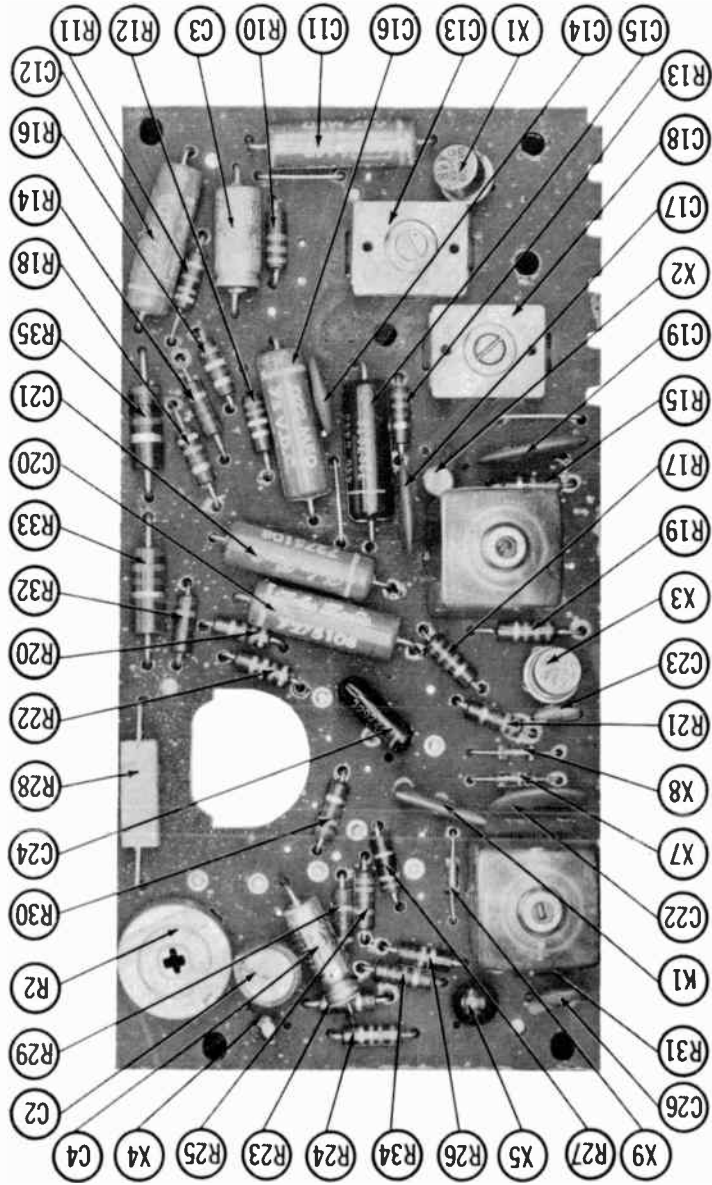
\* NOMINAL VALUE, MAY VARY.  
Resistors are 1/2 watt or less and rated 10% or 20% unless otherwise indicated.

A PHOTOFAC STANDARD NOTATION SCHEMATIC  
with CIRCUITRACE

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- ⊙ See parts list for alternate value or application.
- 1. Voltage measurements taken with vacuum tube voltmeter.
- 2. All controls set for normal operation, no signal applied.
- 3. Measured values are from socket pin or terminal to common ground.
- 4. All terminals viewed from bottom unless otherwise designated.
- 5. Numbers assigned to terminals may not be found on the unit.
- 6. Supply voltage maintained at rated value for voltage readings.
- 7. Resistance measurements not given because of the wide variation in internal resistance of transistor.

CHEVROLET MODEL 986099





## PARTS LIST AND DESCRIPTION (CONTINUED)

Replacement parts shown may be superseded by the availability of newly introduced replacements.  
Have your local distributor check Sams COUNTER FACTS for the most up-to-date replacement.

### COILS (RF-IF)

| ITEM No. | USE               | REPLACEMENT DATA |                   |                |                 |                  |                  |
|----------|-------------------|------------------|-------------------|----------------|-----------------|------------------|------------------|
|          |                   | DELCO PART No.   | MEISSNER PART No. | MERIT PART No. | MILLER PART No. | STANCOR PART No. | WORKMAN PART No. |
| L1       | RF Choke (6, 2ub) | 7281946          | 19-1004           | BC-995         | 4610            | RTC-8520         | T859             |
| L2       | Ant.              | Ⓢ                |                   |                |                 |                  |                  |
| L3       | RF                | Ⓢ                |                   |                |                 |                  |                  |
| L4       | Osc.              | Ⓢ                |                   |                |                 |                  |                  |
| L5       | Input IF          | 1221856          | 16-6704           |                | 6543            |                  | TA653            |
| L6       | Output IF         | 1221857          | 16-6705           |                | 6543            |                  | TA653            |

Ⓢ Part of M2.

### FILTER CHOKE

| ITEM No. | RATINGS            |         |                              | REPLACEMENT DATA |                |                  |                     |                | NOTES |
|----------|--------------------|---------|------------------------------|------------------|----------------|------------------|---------------------|----------------|-------|
|          | CURRENT (Measured) | DC RES. | INDUCTANCE (0 CURRENT 1000~) | DELCO PART No.   | MERIT PART No. | STANCOR PART No. | THORDARSON PART No. | TRIAD PART No. |       |
| L7       | 1.2 Amp.           | .6Ω     | 8MH                          | 1221623          | C-4095         | TC-2             | TR-154              | TY17XT         |       |

### CHOKE (AUDIO OUTPUT)

| ITEM No. | INDUCTANCE | REPLACEMENT DATA |                |                  |                     |                | NOTES |
|----------|------------|------------------|----------------|------------------|---------------------|----------------|-------|
|          |            | DELCO PART No.   | MERIT PART No. | STANCOR PART No. | THORDARSON PART No. | TRIAD PART No. |       |
| L8       | 29, 5MH    | 7282278          |                |                  |                     |                |       |

### SPEAKER

| ITEM No. | TYPE            | REPLACEMENT DATA | NOTES |
|----------|-----------------|------------------|-------|
|          |                 |                  |       |
| EP1      | 4" X 10" PM 10Q | 7291711          |       |

### COMPONENT COMBINATIONS

| ITEM No. | USE        | DESCRIPTION             | DELCO PART No. | REPLACEMENT DATA |
|----------|------------|-------------------------|----------------|------------------|
| K1       | Det. Comp. | 1000Ω, .001mfd, .001mfd | 7287253        |                  |

### FUSES

| ITEM No. | TYPE | RATING | REPLACEMENT DATA |        |                     |        |               |        |  |
|----------|------|--------|------------------|--------|---------------------|--------|---------------|--------|--|
|          |      |        | DELCO PART No.   |        | LITTELFUSE PART No. |        | BUSS PART No. |        |  |
|          |      |        | FUSE             | HOLDER | FUSE                | HOLDER | FUSE          | HOLDER |  |
| M1       | AGC  | 3A     | In Fuse Block    |        | 312003              |        |               | AGC3   |  |

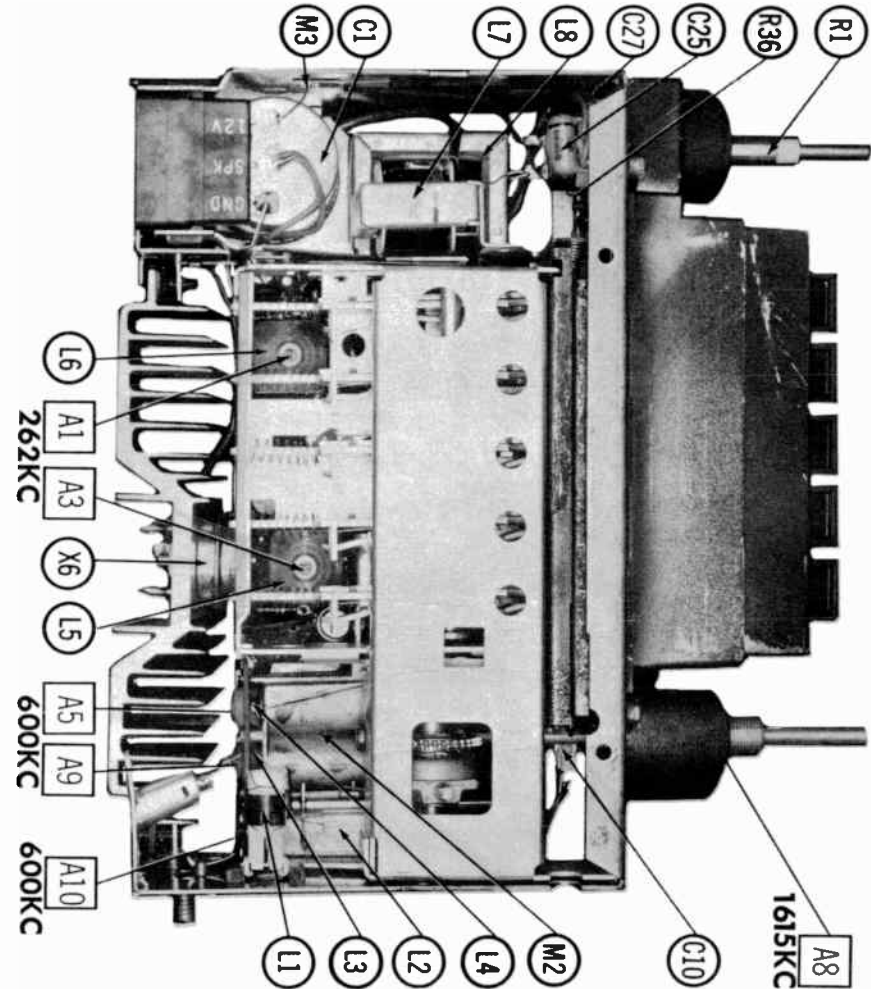
### MISCELLANEOUS

| ITEM No. | PART NAME         | DELCO PART No. | NOTES |
|----------|-------------------|----------------|-------|
| M2       | Tuning Coil Assy. | 7287957        |       |
| M3       | Spark Plate       | 7271584        |       |

### CABINETS & CABINET PARTS

(When Ordering Specify Model, Chassis & Color)

| ITEM         | PART No. | ITEM                   | PART No. |
|--------------|----------|------------------------|----------|
| Escutcheon   | 7290086  | Knob, Tuning ro Volume | 3860189  |
| Dial Glass   | 7290087  | Knob, Tone             | 3860187  |
| Pushbutton   | 1222136  | Knob, Dummy            | 3860188  |
| Dial Pointer | 7290082  |                        |          |

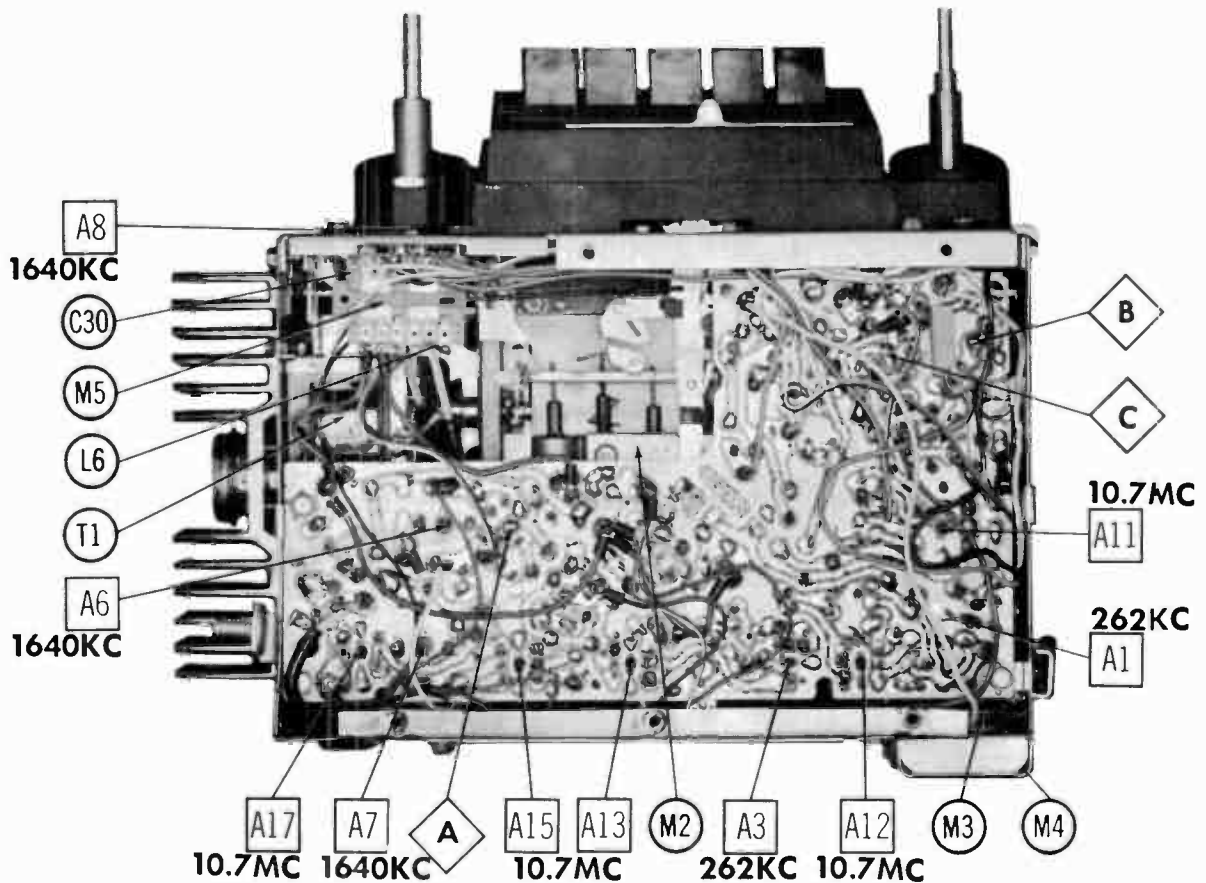




# PHOTOFACT<sup>®</sup> with

# CIRCUITRACE<sup>®</sup>

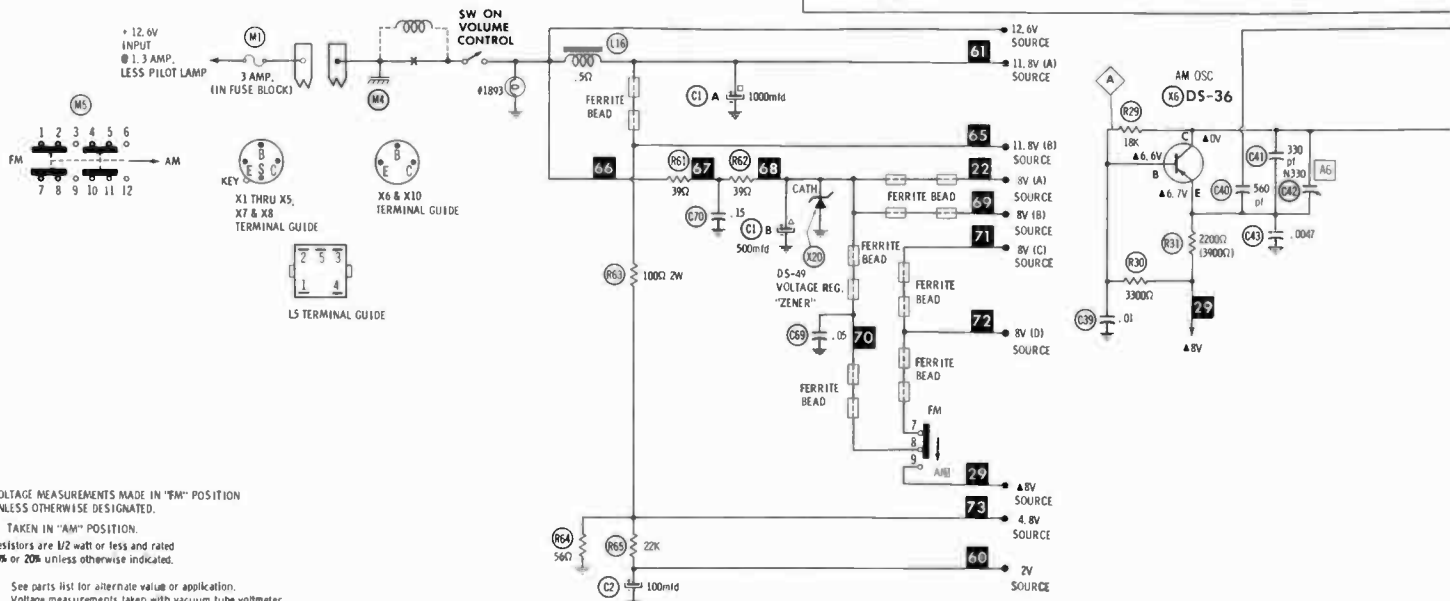
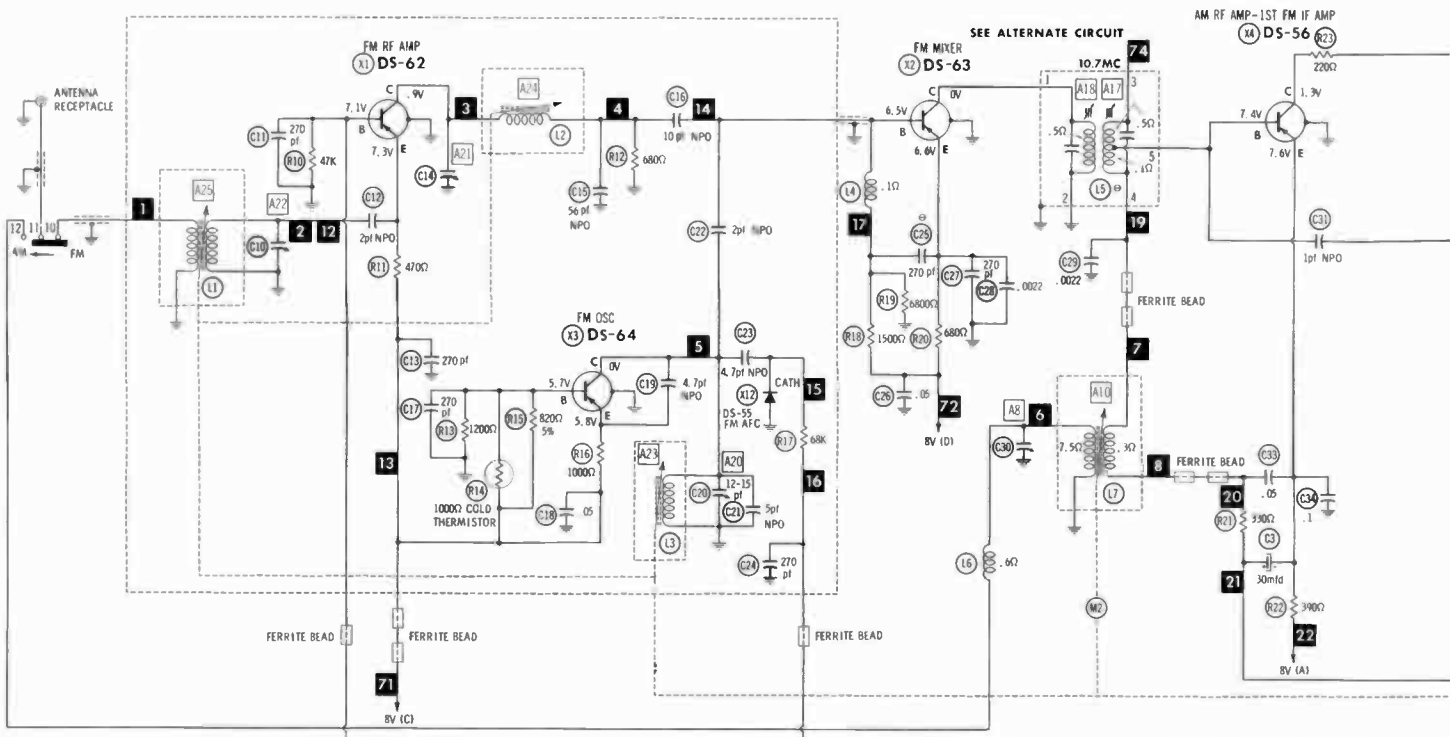
TRADE NAME : Chevrolet Models 986101 (1965 Chevrolet),  
 986118 (1965 Corvair), 986203 (1965  
 SUPPLIER : Chevelle), 986252 (1965 Chevy II)  
 For Current Address, See Master Index.  
 TYPE SET : 11 Transistor AM-FM Receiver  
 POWER SUPPLY : 12 Volt Storage Battery  
 RATING : 1.2 Amp. @ 12.6 Volts DC (Less Lamp)  
 TUNING RANGE: BROADCAST 540-1640KC  
 FREQ. MOD. 87.5-108.5MC



CHEVROLET MODELS 986101/118/203/252

**HOWARD W. SAMS & CO., INC.** Indianapolis 6, Indiana

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VOLTAGE MEASUREMENTS MADE IN "FM" POSITION UNLESS OTHERWISE DESIGNATED.

▲ TAKEN IN "AM" POSITION.

Resistors are 1/2-watt or less and rated 10% or 20% unless otherwise indicated.

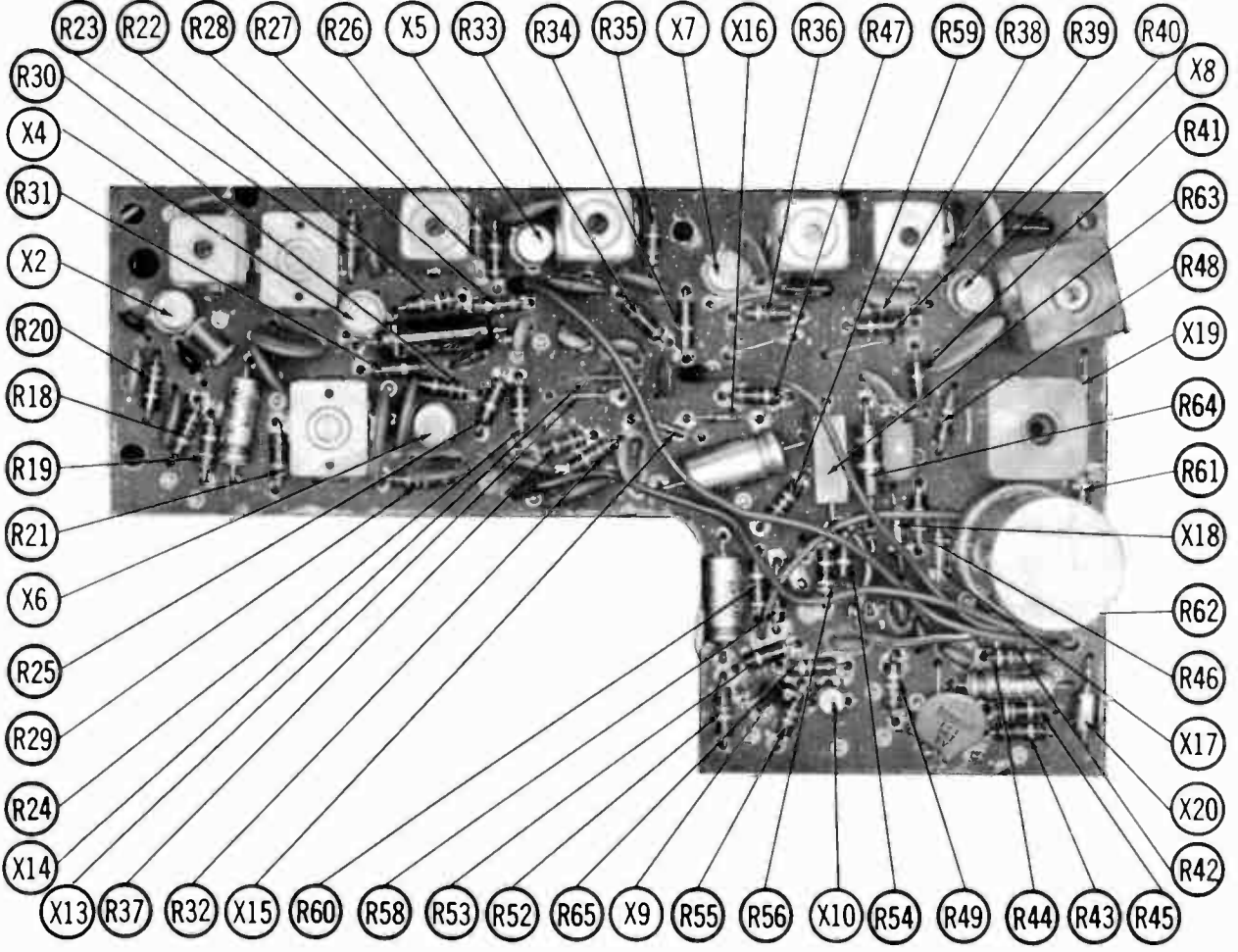
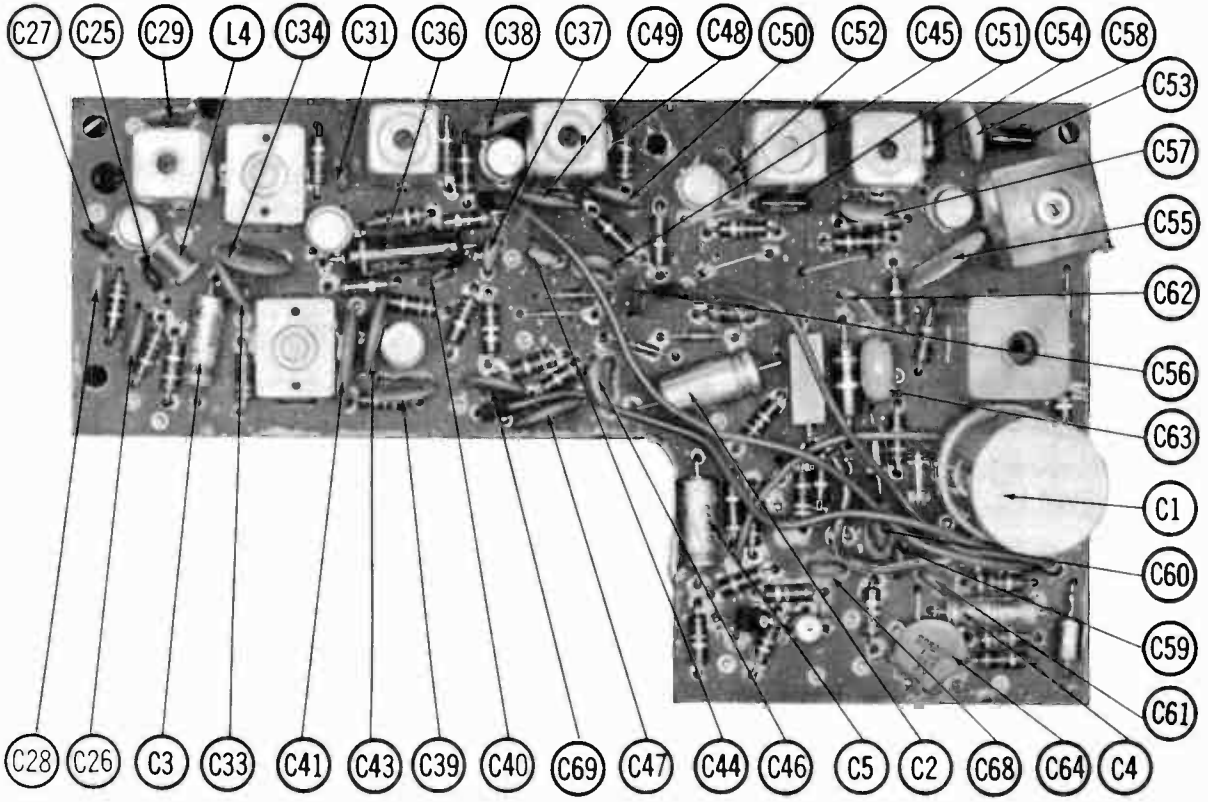
- ① See parts list for alternate value or application.
- 1. Voltage measurements taken with vacuum tube voltmeter.
- 2. All controls set for normal operation, no signal applied.
- 3. Measured values are from socket pin or terminal to common ground.
- 4. All terminals viewed from bottom unless otherwise designated.
- 5. Numbers assigned to terminals may not be found on the unit.
- 6. Supply voltage maintained at rated value for voltage readings.
- 7. Resistance measurements not given because of the wide variation in internal resistance of transistor.

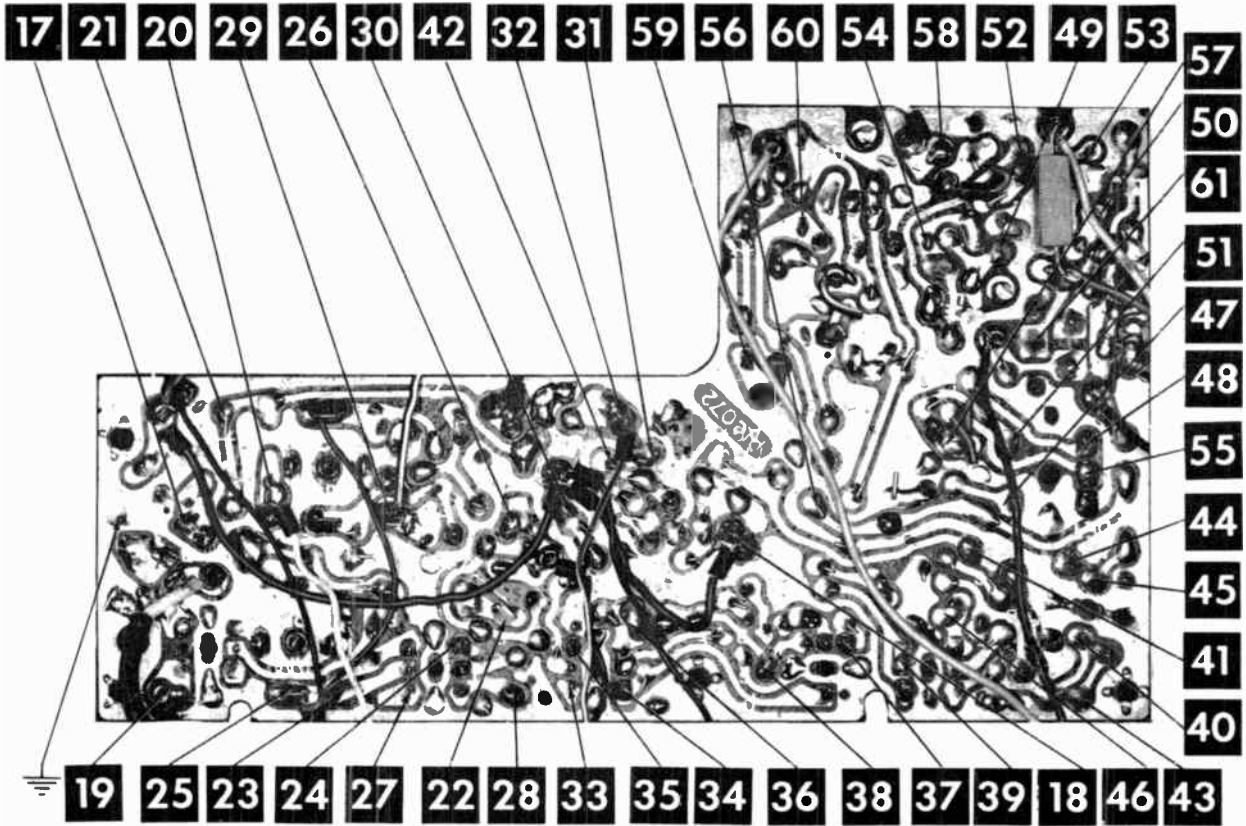
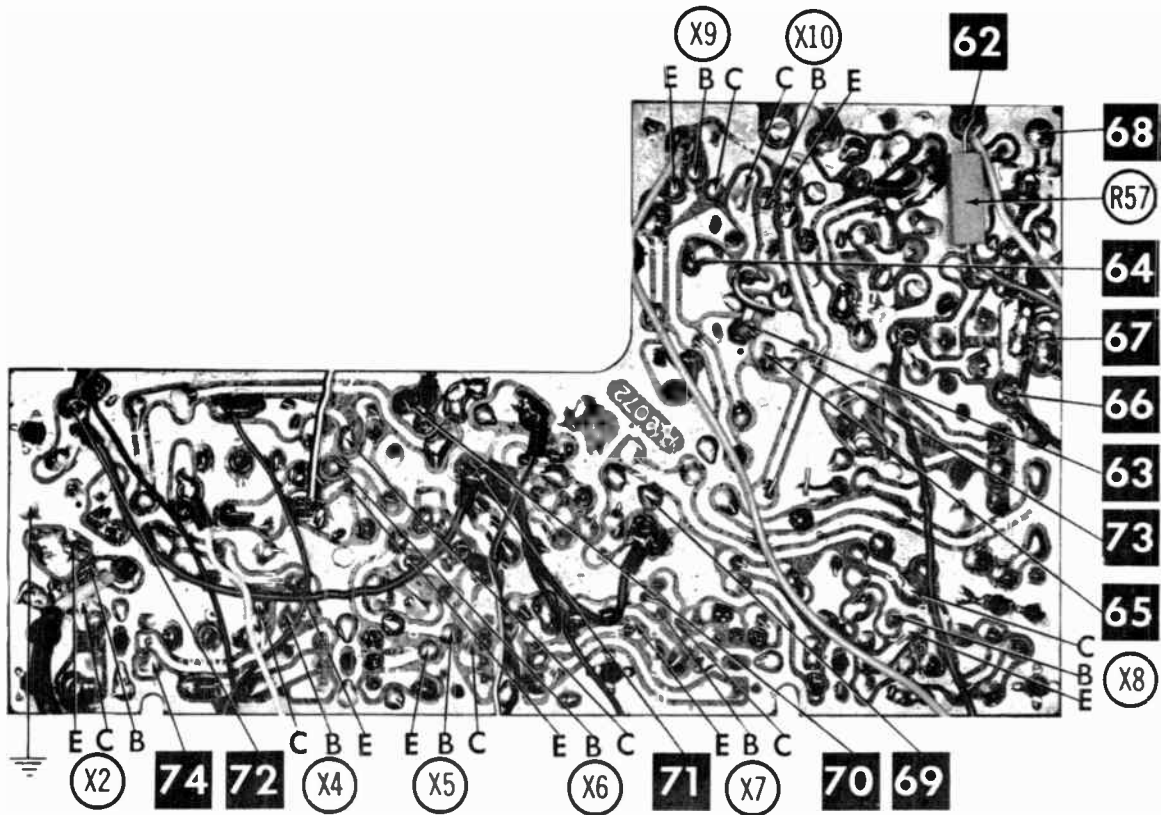
A PHOTOFAC STANDARD NOTATION SCHEMATIC with **Circuitrace**

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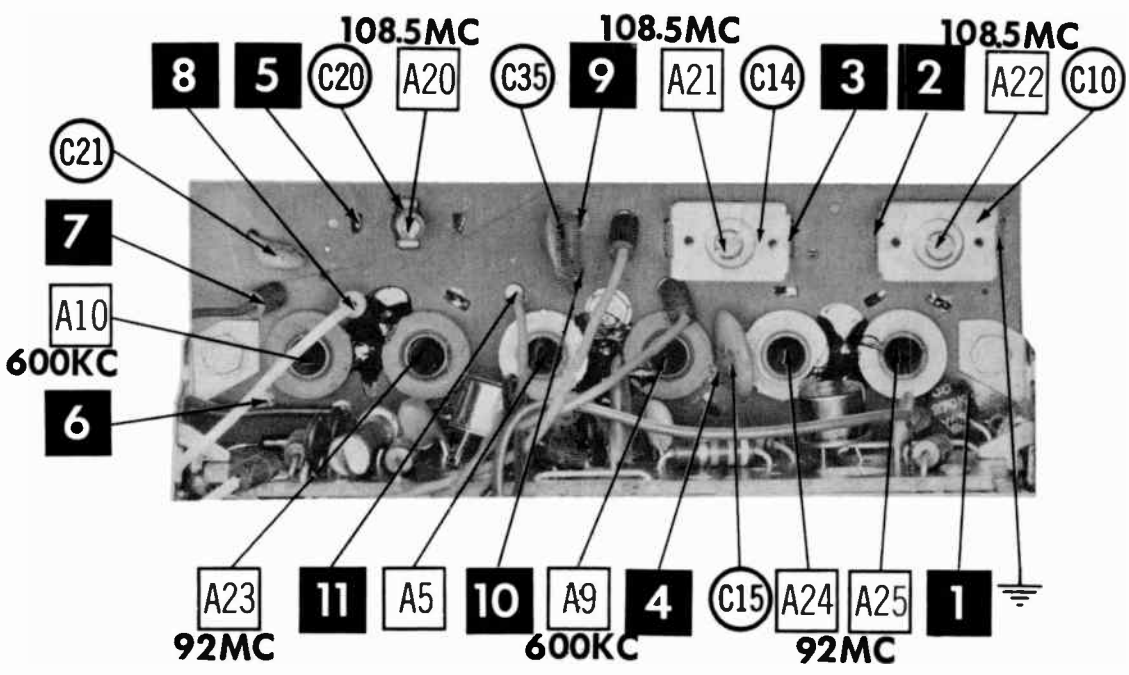
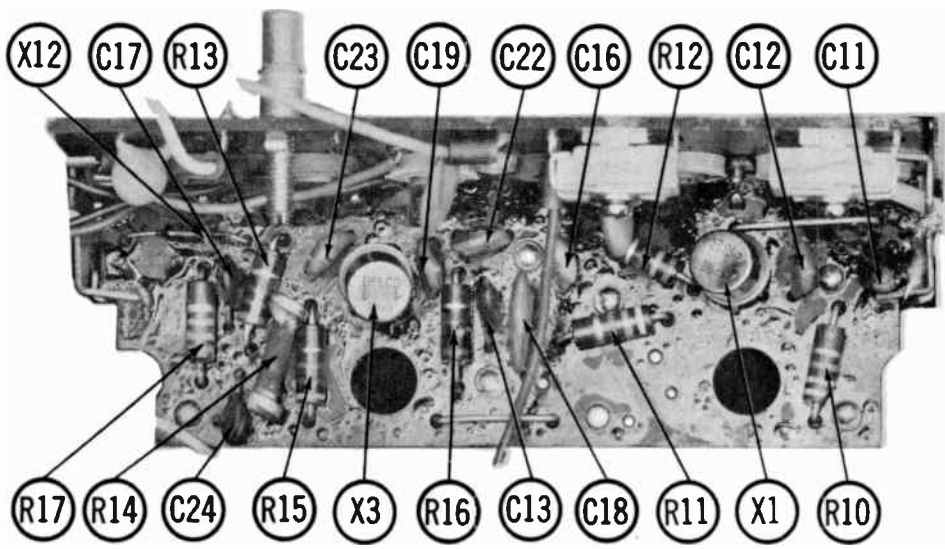
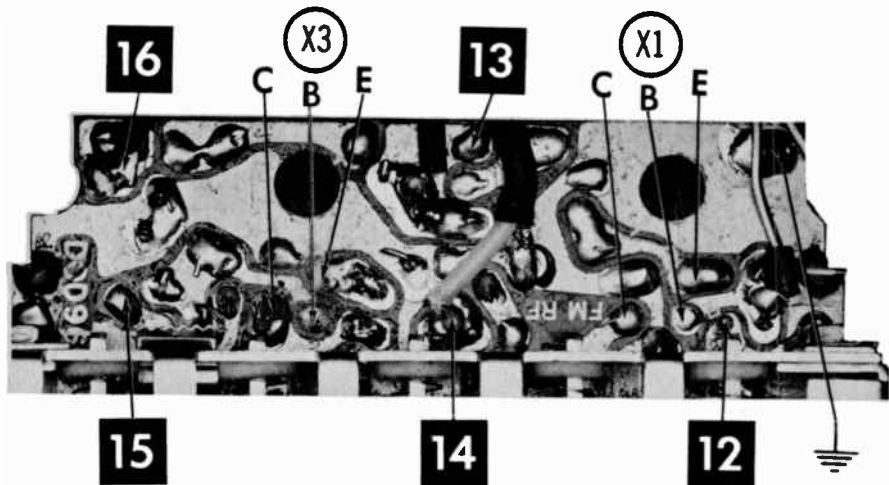






A Howard W. Sams **CIRCUITRACE** Photo





A Howard W. Sams CIRCUITRACE® Photo

# ALIGNMENT INSTRUCTIONS

Check for specified source voltage.  
 Use only enough generator output to provide a usable indication.  
 Suggested Alignment Tools: GENERAL CEMENT: 5009, 8728A, 8987  
 A1 thru A10, A12, thru A18 GENERAL CEMENT: 8606, 8606L, 8668  
 A11, A19 WALSCO: 2531-X, 2536  
 WALSCO: 2525, 2528, 2587

**PUSH-BUTTON ADJUSTMENT**

1. Pull button out.
2. Tune manually to desired station.
3. Press button in firmly.
4. Repeat for remaining buttons.

|  | SIGNAL GENERATOR COUPLING                                       | SIGNAL GENERATOR FREQUENCY | RADIO DIAL SETTING   | INDICATOR                       | ADJUST         | REMARKS                            |
|--|---|----------------------------|----------------------|---------------------------------|----------------|------------------------------------|
| 1.   | High side thru .1mfd to point $\diamond$ A, low side to ground. | 262KC (400v Mod.)          | High Freq. End Stop. | Output Meter across voice coil. | A1, A2, A3, A4 | Adjust for maximum.                |
| Check setting of oscillator coil core (A5). Rear of core should be 1 3/8" from mounting end of coil form.                  |   |                            |                      |                                 |                |                                    |
| 2.   | High side thru 82pf to antenna receptacle, low side to ground.  | 1640KC                     | High Freq. End Stop. | Output Meter across voice coil. | A6, A7, A8     | Adjust for maximum.                |
| 3.   | "   | 600KC                      | 600KC Signal         | "                               | A9, A10        | Adjust for maximum. Repeat step 2. |
| With radio installed in car and antenna extended 30", tune in a weak station near 1400KC and adjust A8 for maximum output. |   |                            |                      |                                 |                |                                    |

### FM ALIGNMENT USING AM SIGNAL GENERATOR - SELECTOR IN FM POSITION

High side thru 82pf to Antenna receptacle, low side to ground.

|    | GENERATOR FREQUENCY | DIAL SETTING               | INDICATOR   | ADJUST       | REMARKS   |
|----|---------------------|----------------------------|---|--------------|---|
| 4. | 10.7MC (Unmod.)     | Point of non-interference. | DC probe of VTVM to point $\diamond$ B; common to ground. | A11 thru A18 | Adjust for maximum.   |
| 5. | "                   | "                          | DC probe to point $\diamond$ C; common to                 | A19          | Adjust for zero reading. A positive or negative reading will be obtained on either side of the correct setting. |

### FM IF ALIGNMENT USING FM SIGNAL GENERATOR - SELECTOR IN FM POSITION

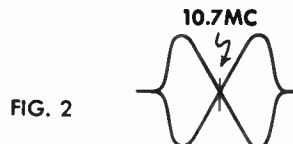
High side thru 82pf to Antenna receptacle, low side to ground. Use only enough marker signal to obtain indication. Use 60% frequency modulated signal with 450KC sweep. Use 120v sawtooth voltage in scope for horizontal deflection.

|    | GENERATOR FREQUENCY | DIAL SETTING              | INDICATOR  | ADJUST       | REMARKS  |
|----|---------------------|---------------------------|--|--------------|--|
| 4. | 10.7MC (450KC Swp.) | Point of non-interference | Vert. amp. of Scope to point $\diamond$ B; low side to ground. | A11 thru A18 | Disconnect stabilizing capacitor C4. Adjust for maximum gain and symmetry of response similar to Fig. 1 with marker as shown. Reconnect C4.                            |
| 5. | "                   | "                         | Vert. amp. to point $\diamond$ C; low side to                  | A19          | Adjust A19 (Secondary) to place marker at center of crossover lines similar to Fig. 2. Adjust A11 (Primary) for maximum amplitude and straightness of crossover lines. |

### FM RF ALIGNMENT

Connect generator thru 82pf to Antenna receptacle, low side to ground.

|    | GENERATOR FREQUENCY | DIAL SETTING     | INDICATOR   | ADJUST        | REMARKS  |
|----|---------------------|------------------|---|---------------|--|
| 6. | 108.5MC             | Set at high end. | DC probe of VTVM to point $\diamond$ B; common to ground. | A20, A21, A22 | Adjust for maximum.  |
| 7. | 92MC                | Tune to signal.  | "   | A23, A24, A25 | Rock tuning and adjust for maximum. Repeat steps 6 and 7 until no further improvement can be made. |



CHEVROLET MODELS 986101/118/203/252



# PARTS LIST AND DESCRIPTION

Replacement parts shown may be superseded by the availability of newly introduced replacements.  
 Have your local distributor check Sams COUNTER FACTS for the most up-to-date replacement.

## WIRING DATA

|   |  |
|---|--|
| General-use Unshielded Hook-up Wire ..... | Use BELDEN No. 8530 (Solid) Available in 12 Colors<br>8524 (Stranded) Available in 12 Colors |
| Shielded Hook-up Wire .....               | Use BELDEN No. 8885  |
| Rear Seat Speaker Extension Cable .....   | Use BELDEN No. 8782 (Stranded) Coded Parallel Leads  |
| Bonding Strap .....                       | Use BELDEN No. 8661 (3/8 in.) or 8670 (3/4 in.)  |

## TRANSISTORS

| ITEM No. | ORIG. TYPE | USE                 | REPLACEMENT DATA |                           |              | NOTES |
|----------|------------|---------------------|------------------|---------------------------|--------------|-------|
|          |            |                     | DELCO PART No.   | GENERAL ELECTRIC PART No. | RCA PART No. |       |
| X1       | DS-62      | FM RF Amp.          | DS-41            |                           |              | PNP   |
| X2       | DS-63      | FM Mixer            | DS-41            |                           |              | PNP   |
| X3       | DS-64      | FM Osc.             | DS-41            |                           |              | PNP   |
| X4       | DS-56      | AM RF Amp-1st FM IF | DS-56            |                           |              | PNP   |
| X5       | DS-63      | AM RF Amp-2nd FM IF | DS-56            |                           |              | PNP   |
| X6       | DS-38      | AM Osc.             | DS-25            | GE-1                      |              | PNP   |
| X7       | DS-63      | AM IF-3rd FM IF     | DS-58            |                           |              | PNP   |
| X8       | DS-38      | 4th FM IF           | DS-56            |                           |              | PNP   |
| X9       | DS-48      | 1st AF Amp.         | DS-48            | GE-10                     |              | NPN   |
| X10      | DS-88      | 2nd AF Amp.         | DS-68            |                           |              | NPN   |
| X11      | DS-501     | Output              | DS-501           | GE-4                      |              | PNP   |

♦ Check bias adjustment.

## POWER RECTIFIERS & SIGNAL DIODES

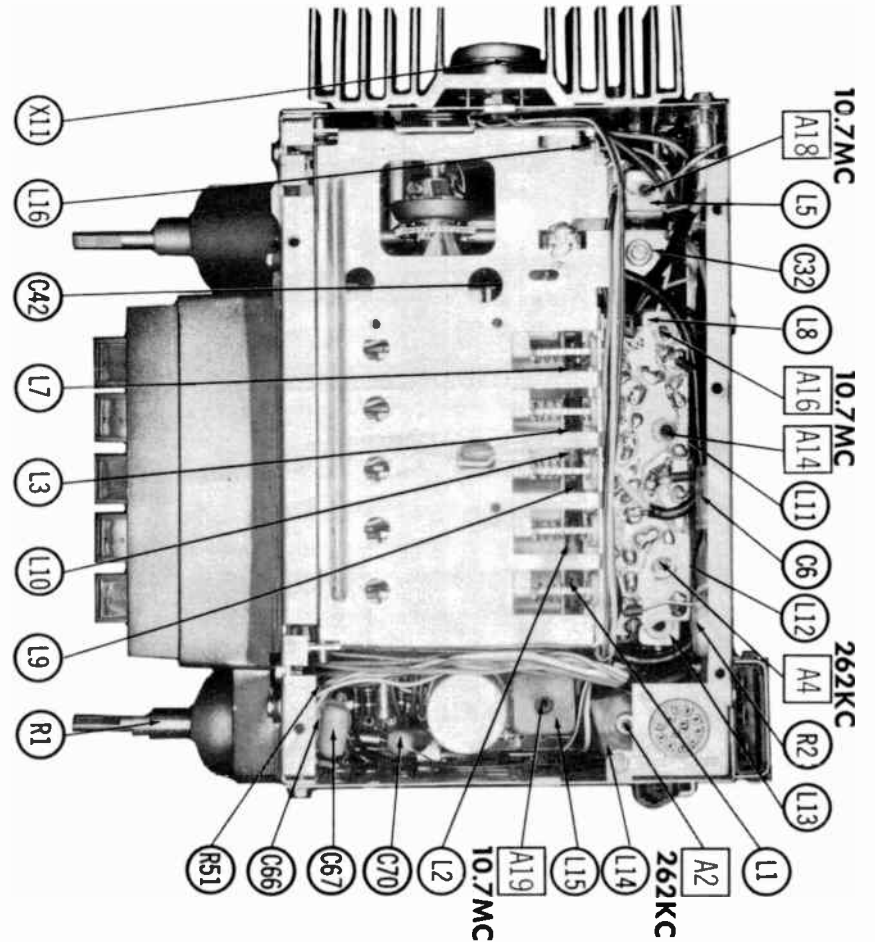
| ITEM No. | MEASURED CURRENT | ORIGINAL Part or Type No. | RECTIFIERS                |                  |              |                         | DIODES                    |
|----------|------------------|---------------------------|---------------------------|------------------|--------------|-------------------------|---------------------------|
|          |                  |                           | GENERAL ELECTRIC PART No. | MALLORY PART No. | RCA PART No. | SARKES TARZIAN PART No. | GENERAL ELECTRIC PART No. |
| X12      |                  | DS-55                     |                           |                  |              |                         | 1N34AS                    |
| X13      |                  | DS-27                     |                           |                  |              |                         | 1N34AS                    |
| X14      |                  | DS-27                     |                           |                  |              |                         | 1N34AS                    |
| X15      |                  | DS-27                     |                           |                  |              |                         | 1N34AS                    |
| X16      |                  | DS-27                     |                           |                  |              |                         | 1N34AS                    |
| X17      |                  | DS-39 ①                   |                           |                  |              |                         | 1N34AS                    |
| X18      |                  | DS-39 ①                   |                           |                  |              |                         | 1N34AS                    |
| X19      |                  | DS-27                     |                           |                  |              |                         | 1N34AS                    |
| X20      |                  | DS-49                     |                           |                  |              |                         | 1N34AS                    |

① Matched Pair.

## ELECTROLYTIC CAPACITORS

| ITEM No. | RATING |         | REPLACEMENT DATA |                  |                           |                           |                             |                  |                  |
|----------|--------|---------|------------------|------------------|---------------------------|---------------------------|-----------------------------|------------------|------------------|
|          | CAP.   | VOLT.   | DELCO PART No.   | AEROVOX PART No. | CORNELL-DUBILIER PART No. | GENERAL ELECTRIC PART No. | GENERAL INSTRUMENT PART No. | MALLORY PART No. | SPRAGUE PART No. |
| C1A      | 1000   | 16      | 7283675          | APH3-54-41       | CC0008                    |                           |                             | FPS300.91        | PCLS-3021.8*     |
| B        | 500    | 16      |                  |                  |                           |                           |                             |                  |                  |
| C        | 4      | 11.5RMS |                  |                  |                           |                           |                             |                  |                  |
| C2       | 100    | 4       | 7291785          | PTT30            | NLW125-6                  | MT1-21                    | BL1720                      | TT6X100          | TE-1102          |
| C3       | 30     | 6       | 7279896          | PTT27            | NLW30-15                  | MT1-13                    | MLV30-6                     | TT6X30           | TE-1092          |
| C4       | 3      | 12      | 7291860          | PTT50            | NLW3-15                   | MT1-3                     | BL1140                      | TT12X3           | TE-1122          |
| C5       | 10     | 12      | 7292738          | PTT53            | NLW10-15                  | MT1-5                     |                             |                  |                  |
| C6       | 100    | 4       | 7291785          | PTT30            | NLW125-6                  | MT1-21                    | BL1720                      | TT6X100          | TE-1102          |

\* Not normally in distributor's stock. Available thru distributor on order to manufacturer.



# PARTS LIST AND DESCRIPTION (CONTINUED)

Replacement parts shown may be superseded by the availability of newly introduced replacements.  
Have your local distributor check Sams COUNTER FACTS for the most up-to-date replacement.

## FIXED CAPACITORS

| ITEM No. | RATING | REMARKS  | REPLACEMENT DATA |                    |                           |                  |                  |                  |
|----------|--------|----------|------------------|--------------------|---------------------------|------------------|------------------|------------------|
|          |        |          | AEROVOX PART No. | CENTRALAB PART No. | CORNELL-DUBILIER PART No. | ELMENCO PART No. | MALLORY PART No. | SPRAGUE PART No. |
| C10      | 270    | #7293221 | DI-270           | DD-271             | LA10T27-C4                | CCD-271          | GPS27            | 5GA-T27          |
| C11      | 2      |          | NPO-DI 2.2       | DTZ-2R2            | C10V22C                   | CCTO-2R2         | CNO522           | 10TCC-V22        |
| C12      | 2      | NPO      | DI-270           | DD-271             | LA10T27-C4                | CCD-271          | GPS27            | 5GA-T27          |
| C13      | 270    | #7291003 |                  |                    |                           |                  |                  |                  |
| C14      | 56     | NPO      |                  | TCZ-56             |                           | CCTO-560         | CNO456           | 10TCC-Q56        |
| C15      | 10     | NPO      | NPO-DI 10        | DTZ-10             | C10Q1C                    | CCTO-100         | CNO410           | 10TCC-Q10        |
| C16      | 270    |          | DI-270           | DD-271             | LA10T27-C4                | CCD-271          | GPS27            | 5GA-T27          |
| C17      | .05    |          | TTD-05           | CK-503             | H5                        |                  | TA150            | TG-850           |
| C18      | 4.7    | NPO      | NPO-DI 5.0       | DTZ-4R7            | C10V47C                   | CCTO-050         | CNO547           | 10TCC-V50        |
| C19      | 12.15  | #7292611 |                  |                    |                           |                  |                  |                  |
| C20      | 5      | NPO      | NPO-DI 5.0       | DTZ-4R7            | C10V47C                   | CCTO-050         | CNO547           | 10TCC-V50        |
| C21      | 2      | NPO      | NPO-DI 2.2       | DTZ-2R2            | C10V22C                   | CCTO-2R2         | CNO522           | 10TCC-V22        |
| C22      | 4.7    | NPO      | NPO-DI 5.0       | DTZ-4R7            | C10V47C                   | CCTO-050         | CNO547           | 10TCC-V50        |
| C23      | 270    |          | DI-270           | DD-271             | LA10T27-C4                | CCD-271          | GPS27            | 5GA-T27          |
| C24      | 270    |          | DI-270           | DD-271             | LA10T27-C4                | CCD-271          | GPS27            | 5GA-T27          |
| C25      | .05    | ①        | TTD-05           | CK-503             | H5                        |                  | TA150            | TG-850           |
| C26      | 270    |          | DT-270           | DD-271             | LA10T27-C4                | CCD-271          | GPS27            | 5GA-T27          |
| C27      | .0022  |          | DI-2200          | CF-222             | JB6D22                    | CCD-222          | GP222            | 10T8-D22         |
| C28      | .0022  |          | DI-2200          | CF-222             | JB6D22                    | CCD-222          | GP222            | 10T8-D22         |
| C29      |        | #7265097 |                  |                    |                           |                  |                  |                  |
| C30      | 1      | NPO      | NPO-DI 1.0       | TCZ-1              |                           |                  | CNO510           | 10TCC-V10        |
| C31      |        | #7267935 |                  |                    |                           |                  |                  |                  |
| C32      | .05    |          | TTD-05           | CK-503             | H5                        |                  | TA150            | TG-850           |
| C33      | .1     |          | TTD-1            | CK-104             | H6                        |                  | TA010            | TG-P10           |
| C34      | 160    | N750     |                  |                    | C10T16U                   |                  | CN7316           | 10TCU-T16        |
| C35      | .0033  | 75V      | DBE8D33          | CPR-3300J          | WMF1D33                   | 6DP-1-332        | FVC4233          | 6P8-D33          |
| C36      | .02    |          | BPD-02           | DD-203             | BYA682                    | CCD-203          | B120             | 5HK-S20          |
| C37      | .07    | #7266631 |                  |                    |                           |                  |                  |                  |
| C38      | .01    |          | BPD-01           | DD-103             | BYA1081                   | CCD-103          | B110             | 5HK-S10          |
| C39      | 560    |          | DI-560           | DD-561             | LA10T56-C4                | CCD-561          | GP356            | 5GA-T56          |
| C40      | 330    | N330     |                  |                    |                           |                  |                  | 10TCS-T33        |
| C41      |        | #7262165 |                  |                    |                           |                  |                  |                  |
| C42      | .0047  |          | BPD-0047         | DD-472             | BYA10D47                  | CCD-472          | B247             | 5HK-D47          |
| C43      | 10     | NPO      | NPO-DI-10        | DTZ-10             | C10Q1C                    | CCTO-100         | CNO410           | 10TCC-Q10        |
| C44      | .02    |          | BPD-02           | DD-203             | BYA682                    | CCD-203          | B120             | 5HK-S20          |
| C45      | .0022  |          | BPD-0022         | DD-222             | LA10D22-C4                | CCD-222          | B222             | 10T8-D22         |
| C46      | .1     | ②        | TTD-1            | CK-104             | H6                        |                  | TA-010           | TG-P10           |
| C47      | .330   |          | DI-330           | DD-331             | LA10T33-C4                | CCD-331          | GP333            | 10T8-T33         |
| C48      | .05    |          | TTD-05           | CK-503             | H5                        |                  | TA150            | TG-850           |
| C49      | .05    |          | TTD-05           | CK-503             | H5                        |                  | TA150            | TG-850           |
| C50      | 150    |          | DI-150           | DD-151             | LA10T15-S3                | CCD-151          | GP315            | 5GA-T15          |
| C51      | .0022  |          | BPD-0022         | DD-222             | LA10D22-C4                | CCD-222          | B222             | 10T8-D22         |
| C52      | 110    |          | DI-100           | DD-101             | LA10T1-S3                 | CCD-101          | GP310            | 5GA-T10          |
| C53      | 470    |          | BPD-00047        | DD-471             | BYA10T47                  | CCD-471          | B347             | 10T8-T47         |
| C54      | 160    | N80      |                  |                    |                           |                  |                  | 10CN-T60         |
| C55      | .001   |          | BPD-001          | DD-102             | BYA10D1                   | CCD-102          | B210             | 5HK-D10          |
| C56      | .05    |          | TTD-05           | CK-503             | H5                        |                  | TA150            | TG-850           |
| C57      | .05    |          | TTD-05           | CK-503             | H5                        |                  | TA150            | TG-850           |
| C58      | .95    |          | DI-330           | DD-331             | LA10T33-C4                | CCD-331          | GP333            | 10T8-T33         |
| C59      | 330    |          | DI-330           | DD-331             | LA10T33-C4                | CCD-331          | GP333            | 10T8-T33         |
| C60      | 330    |          | DI-560           | DD-561             | LA10T56-C4                | CCD-561          | GP356            | 5GA-T56          |
| C61      | 560    |          | DI-560           | DD-561             | LA10T56-C4                | CCD-561          | GP356            | 5GA-T56          |
| C62      | .0022  |          | BPD-0022         | DD-222             | LA10D22-C4                | CCD-222          | B222             | 10T8-D22         |
| C63      | .012   | 75V      | DBE6612          |                    | PM4S12                    | 6DP-2-123        | FVC6112          | 6P8-S12          |
| C64      | 1mfd   |          |                  | UK-105             | HCC3105P                  |                  | HY-135           | 4P8-S12          |
| C65      | .033   |          | DBE4833          |                    | WMF1833                   | 1DP-1-333        | PVC1133          | 2TM-847          |
| C66      | .047   | 75V      | P266N-047        | DD-503             | PM2S47                    | 4DP-3-473        | GEM2147          | 2TM-847          |
| C67      | .1     |          | TTD-1            | CK-104             | H6                        |                  | TA010            | TG-P10           |
| C68      | 470    |          | BPD-00047        | DD-471             | BYA10T47                  | CCD-471          | B347             | 10T8-T47         |
| C69      | .05    |          | TTD-05           | CK-503             | H5                        |                  | TA150            | TG-850           |
| C70      | .15    | 75V      | DBE2P15          |                    | WMF1P15                   | 1DP-3-154        | FVC1015          | 2P8-P15          |

# Delco Part Number.  
① .0022 used in some versions.  
② .05 used in some versions.

## CONTROLS

All wattages 1/2 watt, or less, unless otherwise listed.

| ITEM No. | USE                | RESIST-ANCE                | REPLACEMENT DATA |   |                    |                  |                  |  |
|----------|--------------------|----------------------------|------------------|---|--------------------|------------------|------------------|--|
|          |                    |                            | DELCO PART No.   | CENTRALAB PART No.                                    | CLAROSTAT PART No. | CTS-IRC PART No. | MALLORY PART No. |  |
| R1A      | Tone Volume/Switch | 100K<br>20K Tap<br>@ 6000Ω | 7290633 ①        | F1-100K,<br>R14-25K,<br>FFS108, RFS204,<br>AK26⑤, KR4 |                    |                  | † QJ-1678A       |  |
|          | Tone Volume/Switch | 100K<br>20K Tap<br>@ 6000Ω | 7290641 ②        |   |                    |                  |                  |  |
|          | Tone Volume/Switch | 100K<br>20K Tap<br>@ 6000Ω | 7291126 ③        |   |                    |                  |                  |  |
|          | Tone Volume/Switch | 100K<br>20K Tap<br>@ 6000Ω | 7290744 ④        |   |                    |                  |                  |  |
| R2       | Bias               | 100K<br>20K Tap<br>@ 6000Ω | 7268864          | V-600   | U39-600            | 110-600          | MR850T           |  |

① Used in Model 966101.  
② Used in Model 966118.  
③ Used in Model 966203.  
④ Used in Model 966252.  
⑤ Alter bushing to meet requirement.  
† "CONCENTRIKIT" Equivalent: K6 Kit with Base Elements and Shafts: B11-126, P22-115 (Panel)  
B19-119X, R26-206 (Rear)  
851⑤ (Bushings)  
76-1 (Switch)

"SNAPTROL" Equivalent: BU6⑥ CF13, CR50T, SF11, SR15, GC.

CHEVROLET MODELS 986101/118/203/252

# PARTS LIST AND DESCRIPTION (CONTINUED)

Replacement parts shown may be superseded by the availability of newly introduced replacements.  
Have your local distributor check Sams COUNTER FACTS for the most up-to-date replacement.

## RESISTORS (Power and Special)

| ITEM No. | RATING          | REPLACEMENT DATA |                  |                | ITEM No. | RATING            | REPLACEMENT DATA |                  |                |
|----------|-----------------|------------------|------------------|----------------|----------|-------------------|------------------|------------------|----------------|
|          |                 | IRC PART No.     | WORKMAN PART No. | DELCO PART No. |          |                   | IRC PART No.     | WORKMAN PART No. | DELCO PART No. |
| R14      | 1000Ω<br>(Cold) |                  |                  | 7291750        | R57      | .47Ω<br>(Fusible) | BWH. 47Ω         | WS. 47Ω          | 7281890        |

## COILS (RF-IF)

| ITEM No. | USE              | REPLACEMENT DATA |                   |                |                 |                  |                  |
|----------|------------------|------------------|-------------------|----------------|-----------------|------------------|------------------|
|          |                  | PART No.         | MEISSNER PART No. | MERIT PART No. | MILLER PART No. | STANCOR PART No. | WORKMAN PART No. |
| L1       | FM Ant.          | ①                |                   |                |                 |                  |                  |
| L2       | FM RF            | ①                |                   |                |                 |                  |                  |
| L3       | FM Osc.          | ①                |                   |                |                 |                  |                  |
| L4       | RF Choke (1.8uh) | 7291800          |                   |                |                 |                  |                  |
| L5       | 1st FM IF        | 7292791 ②        |                   |                |                 |                  |                  |
| L6       | RF Choke (8uh)   | 7255738          | 19-1009           | BC-565         | 4611            | RTC-8521         | T822             |
| L7       | AM Ant.          | ①                |                   |                |                 |                  |                  |
| L8       | 2nd FM IF        | 7291358          |                   |                |                 |                  |                  |
| L9       | AM RF            | ①                |                   |                |                 |                  |                  |
| L10      | AM Osc.          | ①                |                   |                |                 |                  |                  |
| L11      | 3rd FM IF        | 7291359          |                   |                |                 |                  |                  |
| L12      | 1st AM IF        | 7288144          |                   |                |                 |                  |                  |
| L13      | 4th AM IF        | 7291360          |                   |                |                 |                  |                  |
| L14      | 2nd AM IF        | 1221859          |                   |                | 6545            |                  | TE638            |
| L15      | Ratio Detector   | 7289392          |                   |                |                 |                  |                  |

① Part of M2.

② Part #7291540 used in early production, replace with Part #7292791.

## FILTER CHOKE

| ITEM No. | RATINGS            |         |                              | REPLACEMENT DATA |                |                  |                     |                | NOTES |
|----------|--------------------|---------|------------------------------|------------------|----------------|------------------|---------------------|----------------|-------|
|          | CURRENT (Measured) | DC RES. | INDUCTANCE (0 CURRENT 1000~) | DELCO PART No.   | MERIT PART No. | STANCOR PART No. | THORDARSON PART No. | TRIAD PART No. |       |
| L16      | 1.3Amp.            | .5Ω     | 8MH                          | 1221623          | C-4095         | TC-2             | TR-154              | TY17XT         |       |

## TRANSFORMER (AUDIO OUTPUT)

| ITEM No. | IMPEDANCE |       | REPLACEMENT DATA |                |                  |                     |                | NOTES |
|----------|-----------|-------|------------------|----------------|------------------|---------------------|----------------|-------|
|          | PRI.      | SEC.  | DELCO PART No.   | MERIT PART No. | STANCOR PART No. | THORDARSON PART No. | TRIAD PART No. |       |
|          |           |       |                  |                |                  |                     |                |       |
| T1       | 12Ω Tap   | @ 10Ω | 7289634 ①        |                |                  |                     |                |       |

① Part #7289634 used in early production, replace with Part #1222297.

## SPEAKER

| ITEM No. | TYPE        | REPLACEMENT DATA |               | NOTES  |
|----------|-------------|------------------|---------------|--|
|          |             | DELCO PART No.   | QUAM PART No. |  |
| SP1      | 4" X 10" PM | 10Ω              | 7291711       | Used in Model 986101.<br>Used in Model 986118.<br>Used in Model 986203.<br>Used in Model 986252. |
|          | 6" X 9" PM  | 10Ω              | 7289731       |  |
|          | 4" X 10" PM | 10Ω              | 7290681       |  |
|          | 4" X 10" PM | 10Ω              | 7282159       |  |

## FUSES

| ITEM No. | TYPE | RATING | REPLACEMENT DATA |               |                     |        |               |        |  |
|----------|------|--------|------------------|---------------|---------------------|--------|---------------|--------|--|
|          |      |        | DELCO PART No.   |               | LITTELFUSE PART No. |        | BUSS PART No. |        |  |
|          |      |        | FUSE             | HOLDER        | FUSE                | HOLDER | FUSE          | HOLDER |  |
| M1       | AGC  | 3A     |                  | In Fuse Block | 312003              |        |               | AGC3   |  |

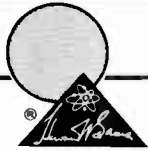
## MISCELLANEOUS

| ITEM No. | PART NAME             | DELCO PART No. | NOTES |
|----------|-----------------------|----------------|-------|
| M2       | Tuning Coils Assy.    | 7290996        |       |
| M3       | Sprak Plate           | 7271564        |       |
| M4       | Spark Plate           | 7271564        |       |
| M5       | Selector Switch       | 7292190        |       |
| M6       | Multiplex Jumper Plug | 7292164        |       |

## CABINETS & CABINET PARTS

(When Ordering Specify Model, Chassis & Color)

| ITEM                 | Models | PART No. | ITEM                   | Models     | PART No. |
|----------------------|--------|----------|------------------------|------------|----------|
| Escutcheon           | 986101 | 7290772  | Pushbuttons            | 986118     | 7289312  |
| Escutcheon           | 986118 | 1222303  | Pushbuttons            | 986203     | 7285473  |
| Escutcheon           | 986203 | 1222173  | Pushbuttons            | 986252     | 7270394  |
| Escutcheon           | 986252 | 1222302  | Knob, Tuning or Volume | All Models | 3860189  |
| Calibrated Dial Drum | 986101 | 7288742  | Knob, Tone             | 986101     | 3860187  |
| Calibrated Dial Drum | 986118 | 7290703  | Knob, Tone             | 986118     | 3860552  |
| Calibrated Dial Drum | 986203 | 7291129  | Knob, Tone             | 986203     | 3863269  |
| Calibrated Dial Drum | 986252 | 7290730  | Knob, Tone             | 986252     | 3793636  |
| Dial Pointer         | 986101 | 1222152  | Knob, Dummy            | 986101     | 3860188  |
| Dial Pointer         | 986118 | 1222162  | Knob, Dummy            | 986118     | 3860553  |
| Dial Pointer         | 986203 | 1222171  | Knob, Dummy            | 986203     | 3863270  |
| Dial Pointer         | 986252 | 1222026  | Knob, Dummy            | 986252     | 3793635  |
| Pushbuttons          | 986101 | 7290549  | Dial Glass             | 986252     | 7290746  |



# PHOTOFACT<sup>®</sup> with

# CIRCUITRACE<sup>®</sup>

TRADE NAME: Chevrolet Models 986374 (1965 Chevrolet),  
986376 (1965 Chevelle, Chevy II, Corvair)  
For Current Address, See Master Index.

SUPPLIER:

TYPE SET: 12 Transistor FM MPX Adapter

POWER SUPPLY: 12 Volt Storage Battery

RATING: 1.5 Amp. @ 12.6 Volts DC

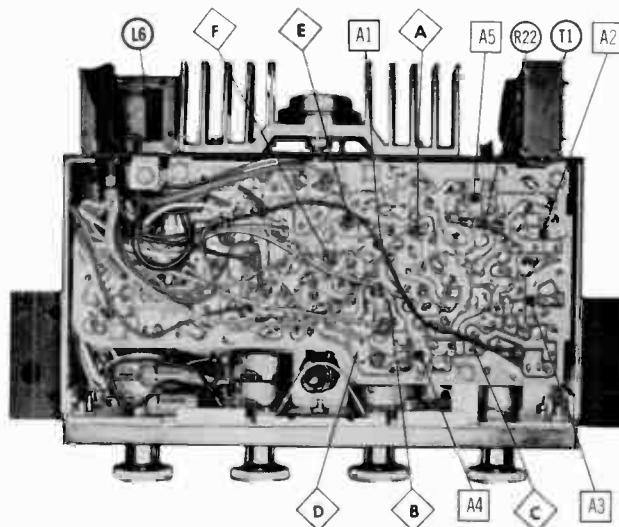


## ALIGNMENT INSTRUCTIONS

FM STEREO MULTIPLEX ALIGNMENT USING FM STEREO SIGNAL GENERATOR ( $\pm .0001\%$ ) ACCURACY

| Connect high side of generator to Point $\diamond A$ , low side to Chassis. |  |                     |  |
|---|--|---------------------|--|
| GENERATOR FREQUENCY   | INDICATOR  | ADJUST              | REMARKS  |
| 1. 67KC   | Vert. amp. of Scope thru a 1 meg to point $\diamond B$ ; low side to ground. | A1                  | Adjust for MINIMUM.  |
| 2. 19KC   | Vert. amp. thru 47K to point $\diamond C$ ; low side to ground.              | A2, A3              | Adjust for maximum.  |
| 3. "  | Vert. amp. thru 47K to point $\diamond D$ ; low side to ground.              | A4                  | Adjust maximum for 38KC response.  |
| 4. Modulated Left Channel   | Vert. amp. to point $\diamond E$ ; low side to ground.                       | A2, A3, A4, A5 & R3 | Adjust for MINIMUM. Should require only a slight adjustment.                                   |
| 5. Modulated Right Channel  | Vert. amp. to point $\diamond F$ ; low side to ground.                       |                     | Check for minimum. Make compromise adjustment, if necessary, by adjusting A2, A3, A4, A5 & R3. |

To align multiplex section using an air signal, first make sure FM section is properly aligned. Tune in a strong FM stereo signal. Follow steps 1 thru 5 above except in step 1 adjust to eliminate whistle or interference.

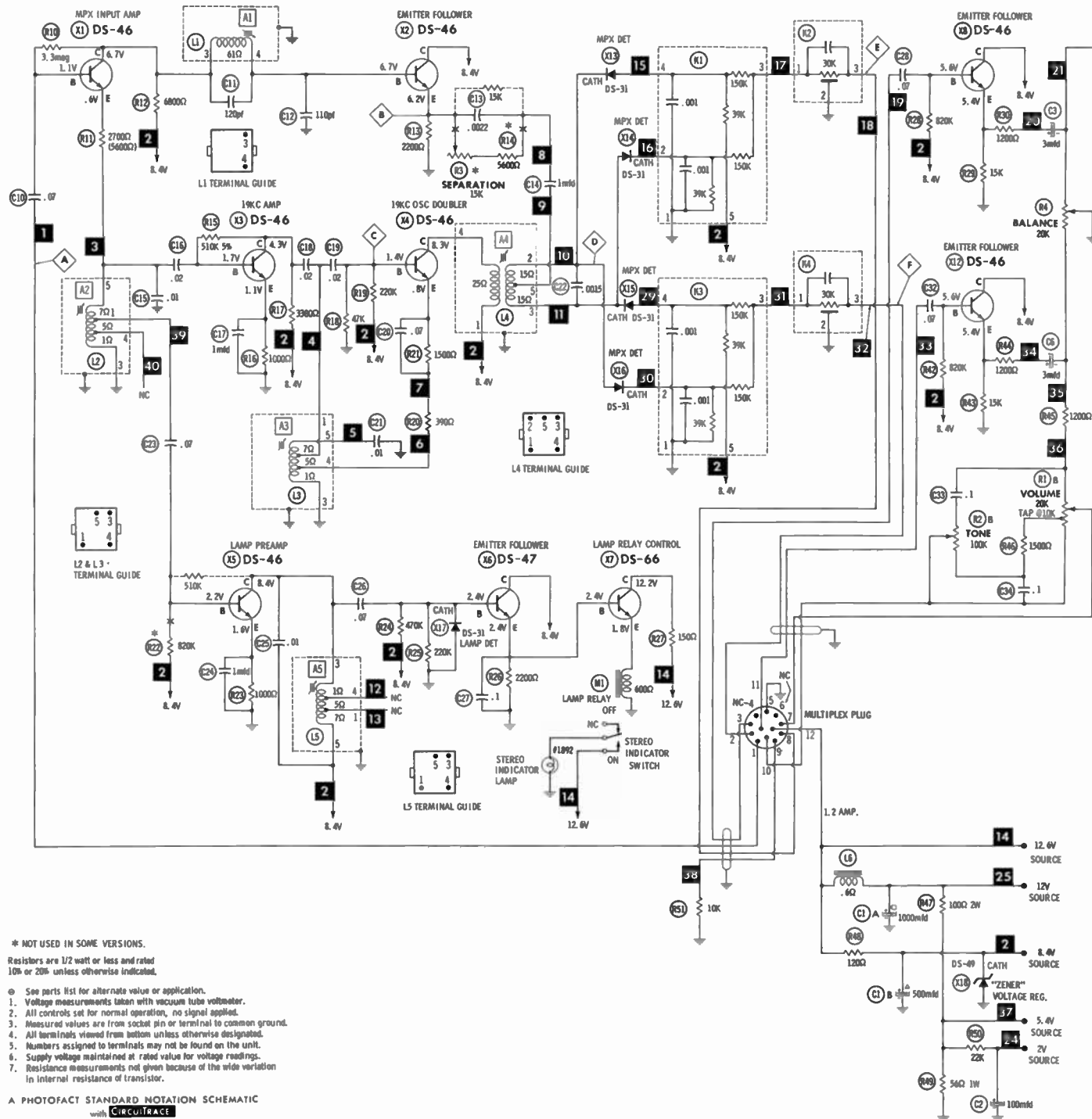


CHEVROLET MODELS 986374/376

**HOWARD W. SAMS & CO., INC.** Indianapolis 6, Indiana

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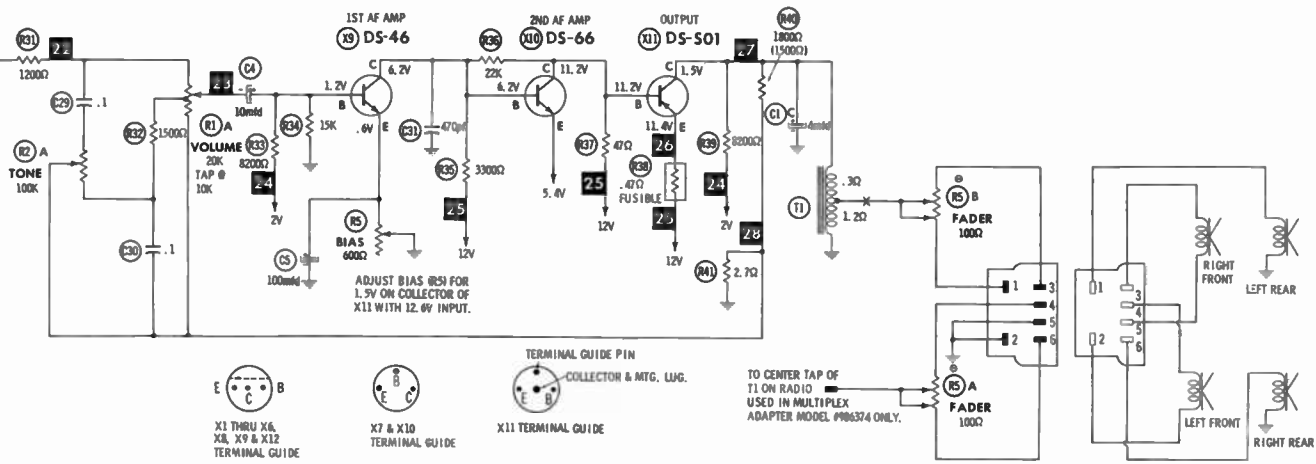
\* NOT USED IN SOME VERSIONS.

Resistors are 1/2 watt or less and rated 10% or 20% unless otherwise indicated.

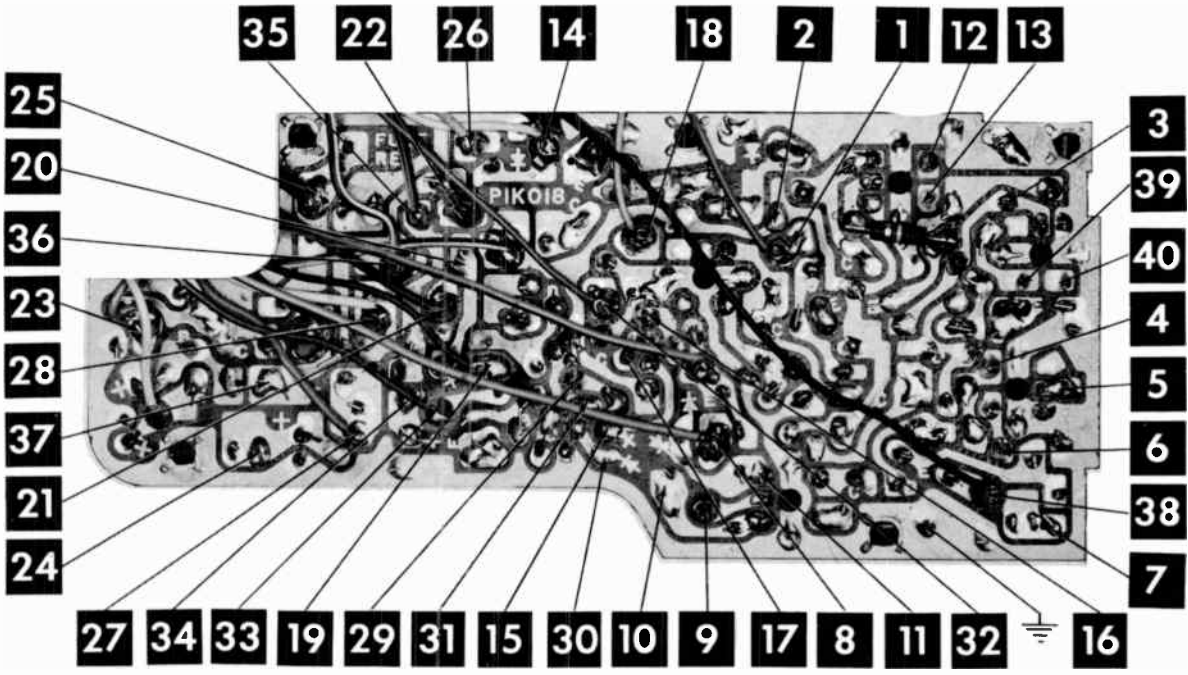
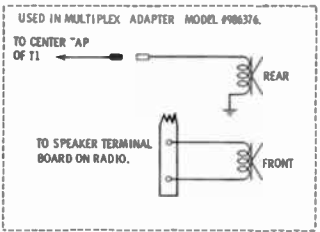
- ① See parts list for alternate value or application.
- 1. Voltage measurements taken with vacuum tube voltmeter.
- 2. All controls set for normal operation, no signal applied.
- 3. Measured values are from socket pin or terminal to common ground.
- 4. All terminals viewed from bottom unless otherwise designated.
- 5. Numbers assigned to terminals may not be found on the unit.
- 6. Supply voltage maintained at rated value for voltage readings.
- 7. Resistance measurements not given because of the wide variation in internal resistance of transistor.

A PHOTOFACIT STANDARD NOTATION SCHEMATIC  
with **CIRCUITRACE**

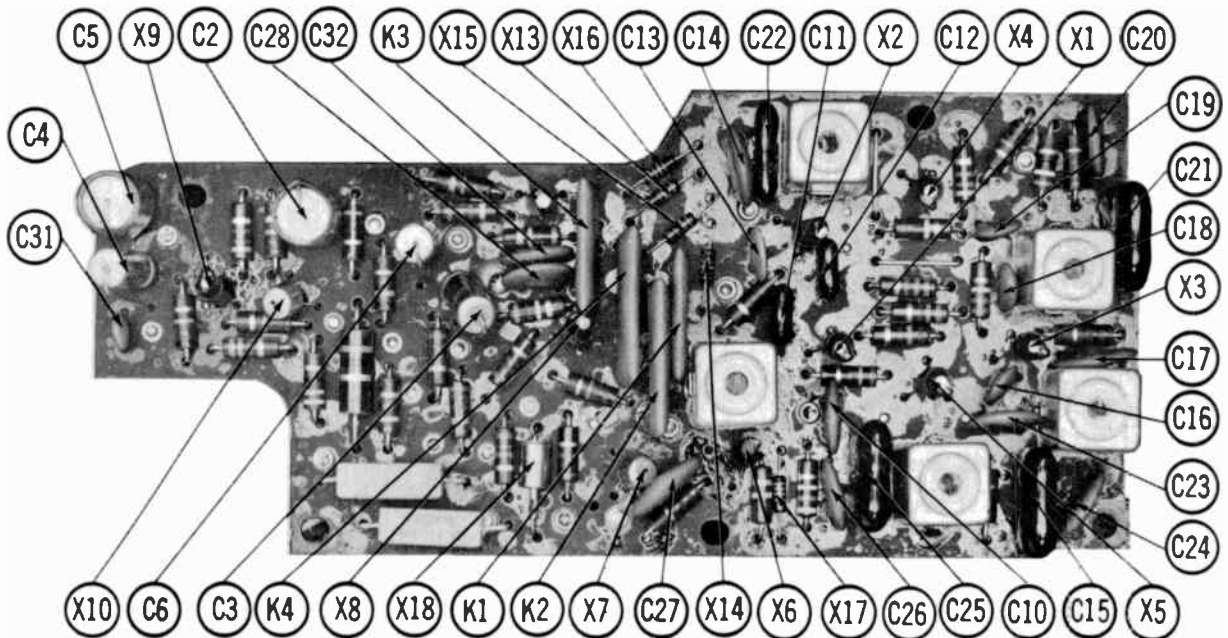
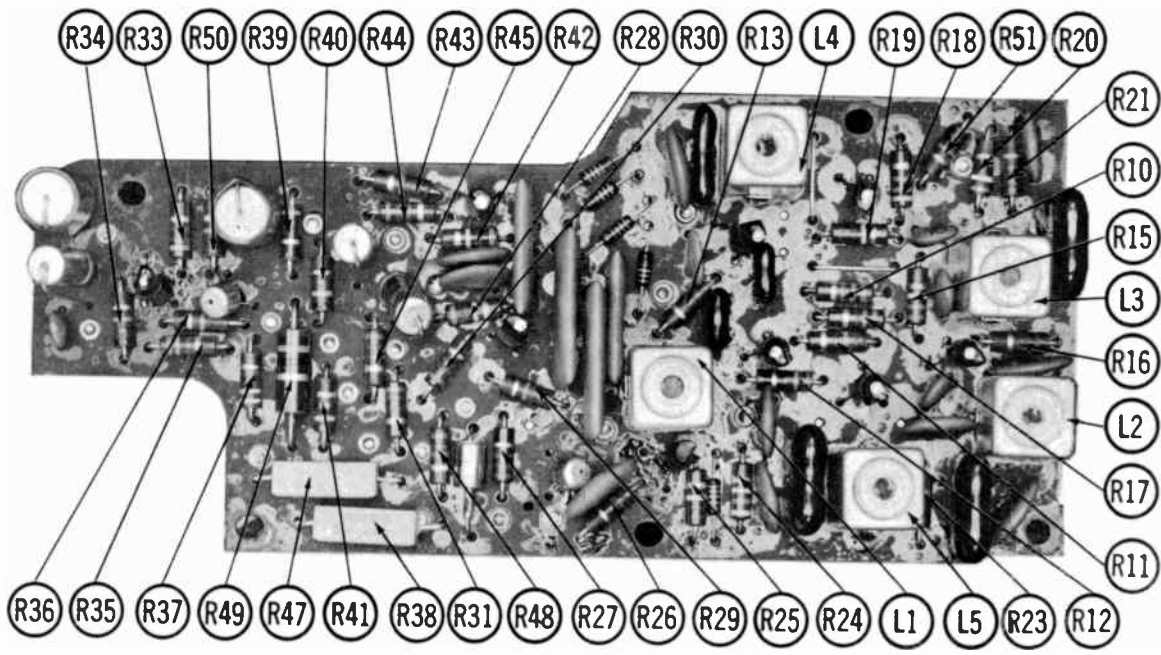
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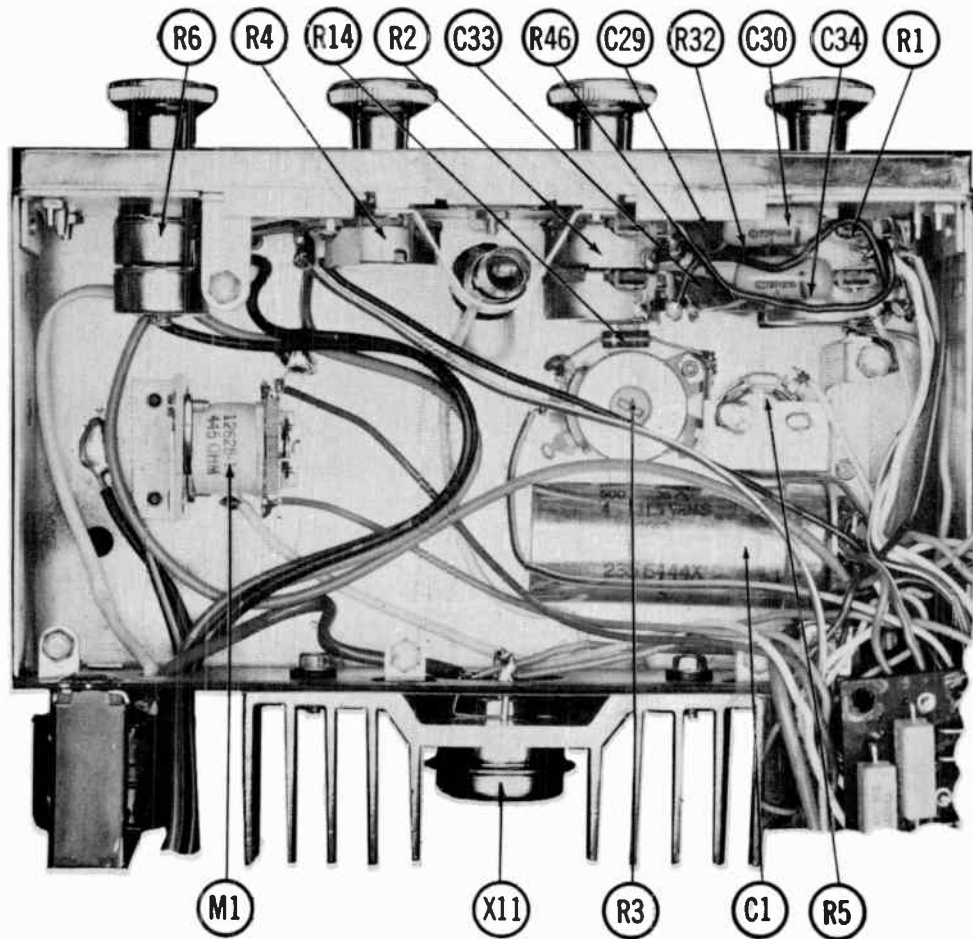
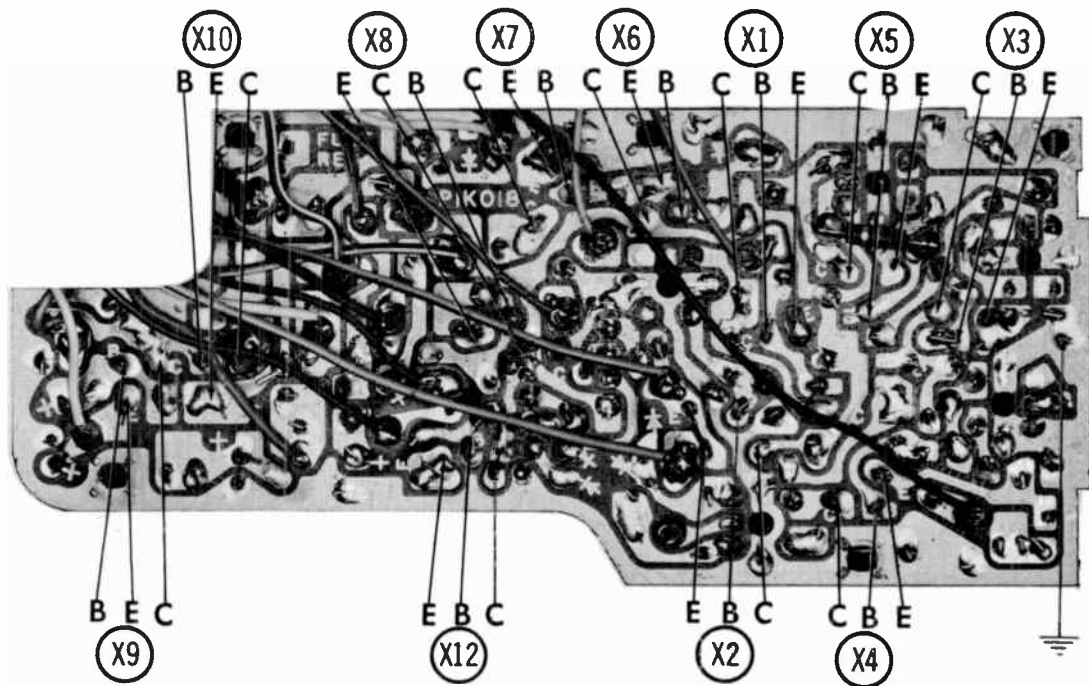
CHEVROLET MODELS 986374/376



A Howard W. Sams CIRCUITRACE Photo









# PARTS LIST AND DESCRIPTION

Replacement parts shown may be superseded by the availability of newly introduced replacements.

Have your local distributor check Sams COUNTER FACTS for the most up-to-date replacement.

## WIRING DATA

|   |  |
|---|--|
| General-use Unshielded Hook-up Wire ..... | Use BELDEN No. 8530 (Solid) Available in 12 Colors<br>8524 (Stranded) Available in 12 Colors |
| Shielded Hook-up Wire .....               | Use BELDEN No. 8885  |
| Rear Seat Speaker Extension Cable .....   | Use BELDEN No. 8782 (Stranded) Coded Parallel Leads  |
| Bonding Strap .....                       | Use BELDEN No. 8661 (3/8 In.) or 8670 (3/4 In.)  |

## CONTROLS

All wattages 1/2 watt, or less, unless otherwise listed.

## TRANSISTORS

| ITEM No. | ORIG. TYPE | USE                   | REPLACEMENT DATA |                           |              | NOTES |
|----------|------------|-----------------------|------------------|---------------------------|--------------|-------|
|          |            |                       | DELCO PART No.   | GENERAL ELECTRIC PART No. | RCA PART No. |       |
| X1       | DE-46      | MPX Input Amp.        | DE-46            | GE-10                     |              | NPN   |
| X2       | DE-46      | Emitter Follower      | DE-46            | GE-10                     |              | NPN   |
| X3       | DE-46      | 19KC Amp.             | DE-46            | GE-10                     |              | NPN   |
| X4       | DE-46      | 19KC Osc. Doubler     | DE-46            | GE-10                     |              | NPN   |
| X5       | DE-46      | Lamp Preamp           | DE-46            | GE-10                     |              | NPN   |
| X6       | DE-47      | Lamp Emitter Follower | DE-46            | GE-10                     |              | NPN   |
| X7       | DE-66      | Lamp Relay Control    | DE-66            | GE-10                     |              | NPN   |
| X8       | DE-46      | Emitter Follower      | DE-46            | GE-10                     |              | NPN   |
| X9       | DE-46      | 1st AF Amp.           | DE-46            | GE-10                     |              | NPN   |
| X10      | DE-66      | 2nd AF Amp.           | DE-66            | GE-10                     |              | NPN   |
| X11      | DE-501     | Output                | DE-501           | GE-4                      |              | PNP   |
| X12      | DE-46      | Emitter Follower      | DE-46            | GE-10                     |              | NPN   |

| ITEM No. | USE        | RESISTANCE    | REPLACEMENT DATA |                                  |                    |                  |  |
|----------|------------|---------------|------------------|----------------------------------|--------------------|------------------|--|
|          |            |               | DELCO PART No.   | CENTRALAB PART No.               | CLAROSTAT PART No. | CTS-IRC PART No. | MALLORY PART No.   |
| R1A      | Volume     | 20K Tap @ 10K | 7291461          |                                  |                    |                  | B19-119X, B19-119X, 5K9, QCM                                     |
| B        | Volume     | 20K Tap @ 10K |                  |                                  |                    |                  |  |
| R2A      | Tone       | 100K          | 7291468          | F2-100K, R2-100K, TFS212         |                    |                  | B13-128, B13-128, 5K9, QCM, or (BU8, CF13, CR8, 884, 887A, DC1)* |
| B        | Tone       | 100K          |                  |                                  |                    |                  | FA15A, RU15A, SL-45  |
| R3       | Separation | 15K           | 7293376          |                                  |                    |                  |  |
| R4       | Balance    | 20K           | 7291062          | F1-25K, SF8212 or (AB-22, AK-35) | A47-20K-8, R8-3/16 |                  | B11-119, 5K9, or (BU2, CF62, 884, DC1)*                          |
| R5       | Bias       | 800Ω          | 7286864          |                                  | V-600              | V39-600          | 112-600  |
| R6A      | Fader      | 100Ω          | 7292302          |                                  |                    |                  | UA24L, SD3500 or (RU253L, SL35, IS937) or (U26, DS37)            |
| B        | Fader      | 100Ω          |                  |                                  |                    |                  | MR850T   |

## POWER RECTIFIERS & SIGNAL DIODES

| ITEM No. | MEASURED CURRENT | ORIGINAL Part or Type No. | RECTIFIERS                |                  |              |                         | DIODES |
|----------|------------------|---------------------------|---------------------------|------------------|--------------|-------------------------|--------|
|          |                  |                           | GENERAL ELECTRIC PART No. | MALLORY PART No. | RCA PART No. | SARKES TARZIAN PART No. |        |
| X13      |                  | DE-31                     |                           |                  |              |                         | 1N295  |
| X14      |                  | DE-31                     |                           |                  |              |                         | 1N295  |
| X15      |                  | DE-31                     |                           |                  |              |                         | 1N295  |
| X16      |                  | DE-31                     |                           |                  |              |                         | 1N295  |
| X17      |                  | DE-31                     |                           |                  |              |                         | 1N295  |
| X18      |                  | DE-49                     |                           |                  |              |                         | 1N295  |

## RESISTORS (Power and Special)

\* "SNAPTROL"  
Ⓛ Not used in Model 986376.

| ITEM No. | RATING         | REPLACEMENT DATA |                  |                | ITEM No. | RATING | REPLACEMENT DATA |                  |         |
|----------|----------------|------------------|------------------|----------------|----------|--------|------------------|------------------|---------|
|          |                | IRC PART No.     | WORKMAN PART No. | DELCO PART No. |          |        | IRC PART No.     | WORKMAN PART No. | REMARKS |
| R38      | .47Ω (Fusible) | BWH.47Ω          | WS.47Ω           | 7261890        |          |        |                  |                  |         |

## COILS (RF-IF)

| ITEM No. | USE                   | REPLACEMENT DATA |                   |                |                 |                  |
|----------|-----------------------|------------------|-------------------|----------------|-----------------|------------------|
|          |                       | DELCO PART No.   | MEISSNER PART No. | MERIT PART No. | MILLER PART No. | STANCOR PART No. |
| L1       | 87KC Trap             | 7291023          |                   |                |                 |                  |
| L2       | 19KC Input            | 7291019          |                   |                |                 |                  |
| L3       | 19KC Osc.             | 7291019          |                   |                |                 |                  |
| L4       | 19KC Doubler          | 7291020          |                   |                |                 |                  |
| L5       | Lamp Preamp Collector | 7291019          |                   |                |                 |                  |

## ELECTROLYTIC CAPACITORS

| ITEM No. | RATING |         | REPLACEMENT DATA |                  |                           |                           |                             |                  |                  |
|----------|--------|---------|------------------|------------------|---------------------------|---------------------------|-----------------------------|------------------|------------------|
|          | CAP.   | VOLT.   | DELCO PART No.   | AEROVOX PART No. | CORNELL-DUBILIER PART No. | GENERAL ELECTRIC PART No. | GENERAL INSTRUMENT PART No. | MALLORY PART No. | SPRAGUE PART No. |
| C1A      | 1000   | 16      | 7292083          | AFH3-54-41       | CC0006                    |                           |                             | FPS300, 91       |                  |
| B        | 18     |         |                  |                  |                           |                           |                             |                  |                  |
| C        | 4      | 15.5RMS |                  |                  |                           |                           |                             |                  |                  |
| C2       | 100    | 4       | 7291810          | PTT30            | NLW125-6                  | MT1-21                    | BL1720                      | TT6X100          | TE-1102          |
| C3       | 3      | 12      | 7291860          | PTT50            | NLW3-15                   | MT1-3                     | BL1140                      | TT12X3           | TE-1122          |
| C4       | 10     | 12      | 7292738          | PTT33            | NLW10-15                  | MT1-5                     | BL1241                      | TT12X10          | TL-1128          |
| C5       | 100    | 4       | 7291810          | PTT30            | NLW125-6                  | MT1-21                    | BL1720                      | TT6X100          | TE-1102          |
| C6       | 3      | 12      | 7291860          | PTT50            | NLW3-15                   | MT1-3                     | BL1140                      | TT12X3           | TE-1122          |

## FILTER CHOKE

| ITEM No. | RATINGS            |         |                              | REPLACEMENT DATA |                |                  |                     |                | NOTES |
|----------|--------------------|---------|------------------------------|------------------|----------------|------------------|---------------------|----------------|-------|
|          | CURRENT (Measured) | DC RES. | INDUCTANCE (0 CURRENT 1000~) | DELCO PART No.   | MERIT PART No. | STANCOR PART No. | THORDARSON PART No. | TRIAD PART No. |       |
| L6       | 1.2Amp             | .6Ω     | 8MH                          | 1221623          | C-4095         | TC-2             | TR-154              | TY17XT         |       |

## FIXED CAPACITORS

| ITEM No. | RATING | REMARKS  | REPLACEMENT DATA |                    |                           |                  |                  |                  |
|----------|--------|----------|------------------|--------------------|---------------------------|------------------|------------------|------------------|
|          |        |          | AEROVOX PART No. | CENTRALAB PART No. | CORNELL-DUBILIER PART No. | ELMENDO PART No. | MALLORY PART No. | SPRAGUE PART No. |
| C10      | .07    | #7288631 |                  |                    |                           |                  |                  |                  |
| C11      | 120    |          | DI-120           | DD-121             | LA10T12-S3                | CCD-121          | GP312            | 5GA-T12          |
| C12      | 110    |          | DI-100           | DD-101             | LA10T1-S3                 | CCD-101          | GP310            | 5GA-T10          |
| C13      | .0022  |          | DI-2200          | CF-222             | JB8D22                    | CCD-222          | GP222            | 10TS-D22         |
| C14      | 1mfd   |          |                  | UK-105             | HCC3105P                  |                  |                  | HY-135           |
| C15      | .01    |          | BPD-01           | DD-103             | BYA10S1                   | CCD-103          | B110             | 5HK-810          |
| C16      | .02    |          | BPD-02           | DD-203             | BYA6S2                    | CCD-203          | B120             | 5HK-820          |
| C17      | 1mfd   |          |                  | UK-105             | HCC3105P                  |                  |                  | HY-135           |
| C18      | .02    |          | BPD-02           | DD-203             | BYA6S2                    | CCD-203          | B120             | 5HK-820          |
| C19      | .02    |          | BPD-02           | DD-203             | BYA6S2                    | CCD-203          | B120             | 5HK-820          |
| C20      | .07    |          |                  |                    |                           |                  |                  |                  |
| C21      | .01    | #7288631 | BPD-01           | DD-103             | BYA10S1                   | CCD-103          | B110             | 5HK-810          |
| C22      | .0016  |          | BPD-0015         | DD-152             | LA10D15-C4                | CCD-152          | B215             | 10TS-D15         |
| C23      | .07    | #7288631 |                  |                    |                           |                  |                  |                  |
| C24      | 1mfd   |          |                  | UK-105             | HCC3105P                  |                  |                  | HY-135           |
| C25      | .01    |          | BPD-01           | DD-103             | BYA10S1                   | CCD-103          | B110             | 5HK-810          |
| C26      | .07    | #7288631 |                  |                    |                           |                  |                  |                  |
| C27      | .1     |          | TTD-1            | CK-104             | H6                        |                  | TA010            | TG-P10           |
| C28      | .07    | #7288631 |                  |                    |                           |                  |                  |                  |
| C29      | .1     | 75V      | DBE2P1           |                    | WMF1P1                    | 1DP-2-104        | PVC101           | 2PS-P10          |
| C30      | .1     | 75V      | DBE2P1           |                    | WMF1P1                    | 1DP-2-104        | PVC101           | 2PS-P10          |
| C31      | 470    |          | BPD-00047        | DD-471             | BYA10T47                  | CCD-471          | B347             | 10TS-T47         |
| C32      | .07    | #7288631 |                  |                    |                           |                  |                  |                  |
| C33      | .1     |          | DBE2P1           |                    | WMF1P1                    | 1DP-2-104        | PVC101           | 2PS-P10          |
| C34      | 1      |          | DBE2P1           |                    | WMF1P1                    | 1DP-2-104        | PVC101           | 2PS-P10          |

## TRANSFORMER (AUDIO OUTPUT)

| ITEM No. | IMPEDANCE |         | REPLACEMENT DATA |                |                  |                     |                | NOTES |
|----------|-----------|---------|------------------|----------------|------------------|---------------------|----------------|-------|
|          | PRI.      | SEC.    | DELCO PART No.   | MERIT PART No. | STANCOR PART No. | THORDARSON PART No. | TRIAD PART No. |       |
|          | T1        | 12Ω Tap | @ 10Ω            | 1222297        |                  |                     |                |       |

## COMPONENT COMBINATIONS

| ITEM No. | USE               | DESCRIPTION                            | DELCO PART No. | REPLACEMENT DATA |
|----------|-------------------|--|----------------|------------------|
| K1       | Stereo Det. Comp. | 39K, 39K, 150K, 150K, .001mfd, .001mfd | 7291090        |                  |
| K2       | 38KC Notch Filter | 30K                                    | 7291089        | Centralab PC-410 |
| K3       | Stereo Det. Comp. | 39K, 39K, 150K, 150K, .001mfd, .001mfd | 7291090        |                  |
| K4       | 38KC Notch Filter | 30K                                    | 7291089        | Centralab PC-410 |

## MISCELLANEOUS

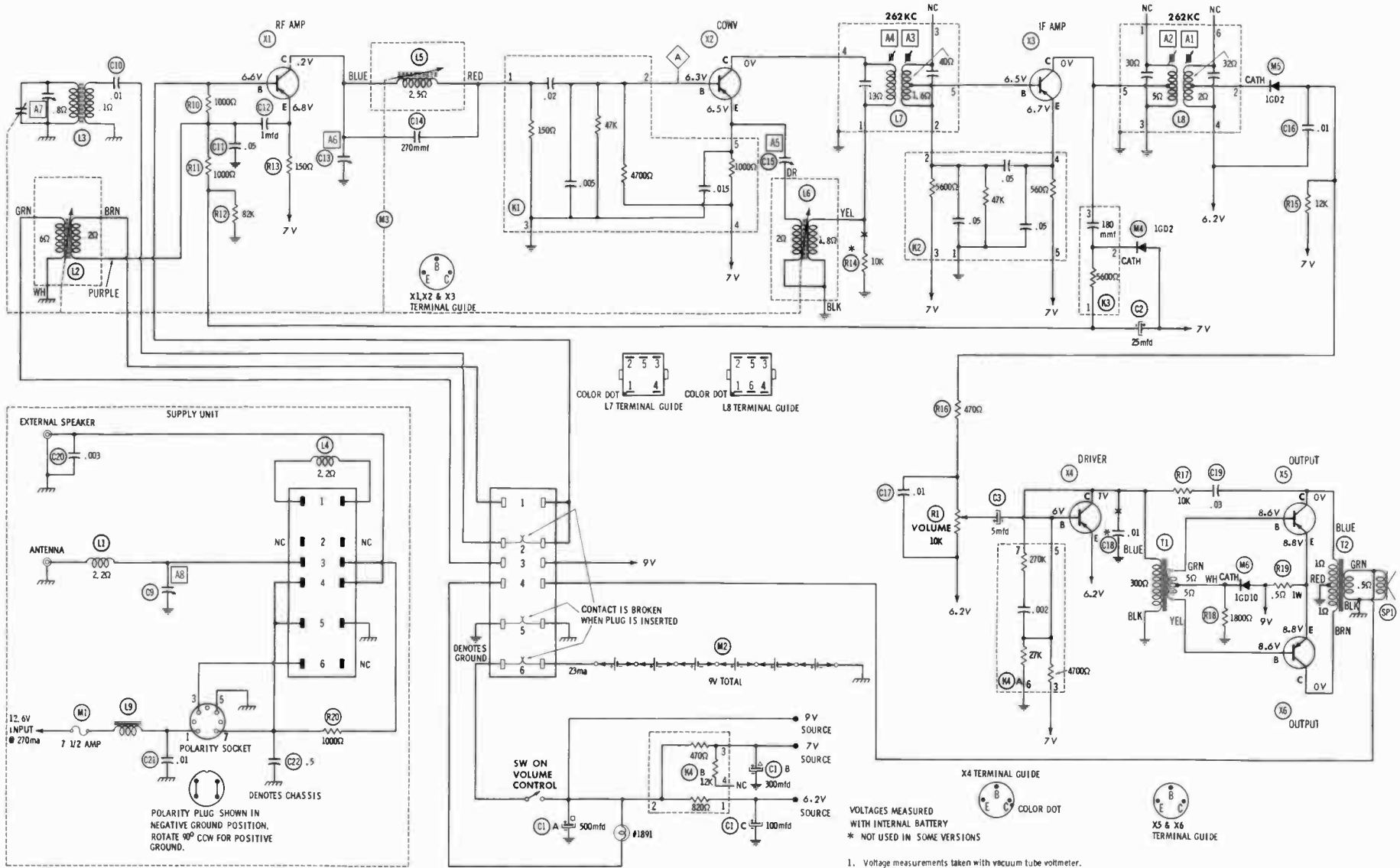
| ITEM No. | PART NAME  | DELCO PART No. | NOTES |
|----------|------------|----------------|-------|
| M1       | Lamp Relay | 1221457        |       |

## CABINETS & CABINET PARTS

(When Ordering Specify Model, Chassis & Color)

| ITEM                    | PART No. | ITEM | PART No. |
|-------------------------|----------|------|----------|
| Escutcheon-Model 986374 | 7292321  | Knob | 7292599  |
| Escutcheon-Model 986376 | 7292556  |      |          |





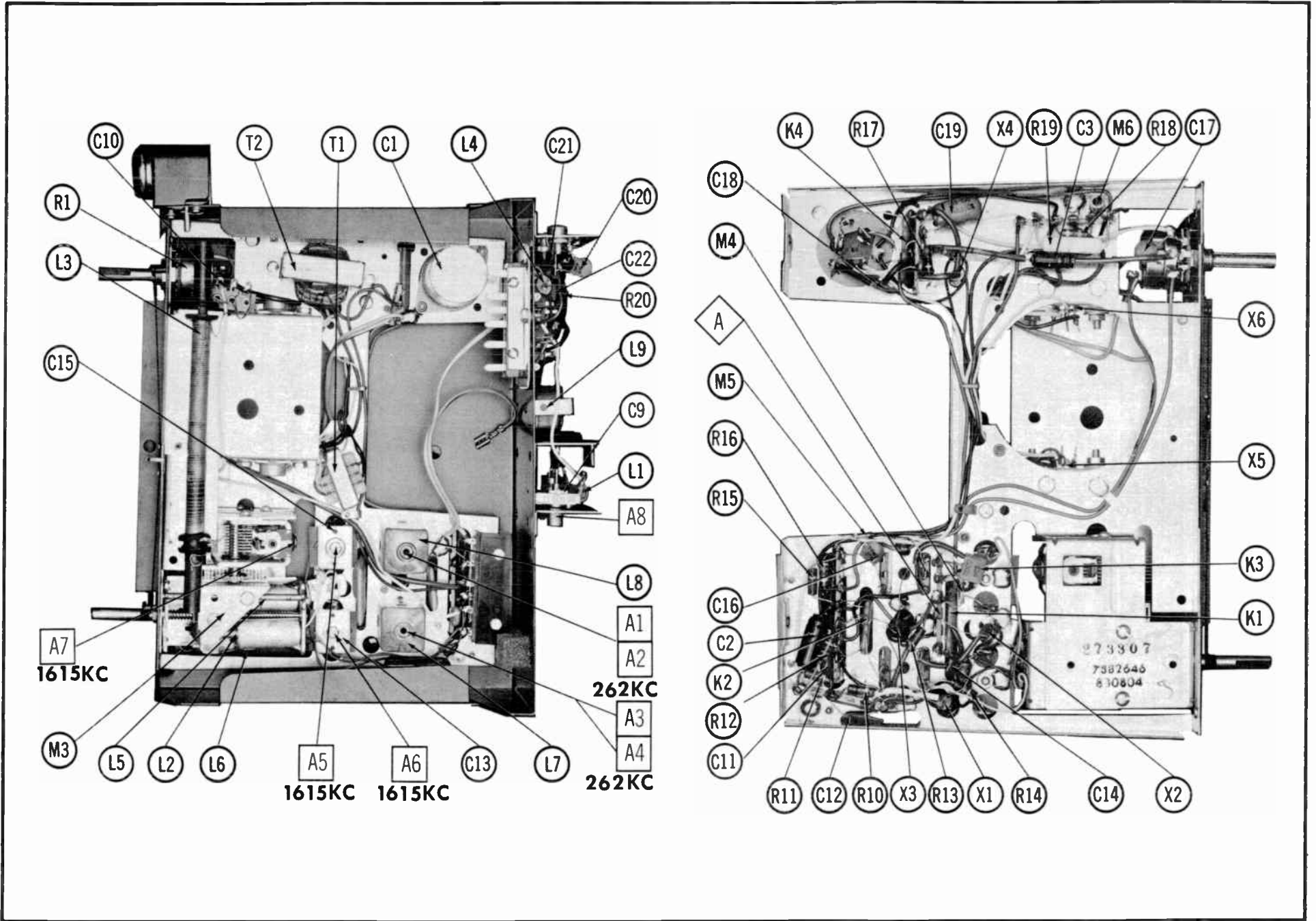
VOLTAGES MEASURED WITH INTERNAL BATTERY  
\* NOT USED IN SOME VERSIONS

1. Voltage measurements taken with vacuum tube voltmeter.
2. All controls set for normal operation, no signal applied.
3. Measured values are from socket pin or terminal to common ground.
4. All terminals viewed from bottom unless otherwise designated.
5. Numbers assigned to terminals may not be found on the unit.
6. Supply voltage maintained at rated value for voltage readings.
7. Resistance measurements not given because of the wide variation in internal resistance of transistor.

A PHOTOFAC STANDARD NOTATION SCHEMATIC  
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PENNEYS MODEL 3104 (984-8227)







# PARTS LIST AND DESCRIPTION

Replacement parts shown may be superseded by the availability of newly introduced replacements.  
Have your local distributor check Sams COUNTER FACTS for the most up-to-date replacement.

## TRANSISTORS

| ITEM No. | ORIG. TYPE | USE     | REPLACEMENT DATA |                           |              | AUTOMATIC PART No. | NOTES |
|----------|------------|---------|------------------|---------------------------|--------------|--------------------|-------|
|          |            |         | DELCO PART No.   | GENERAL ELECTRIC PART No. | RCA PART No. |                    |       |
| X1       |            | RF Amp. | D8-25            | GE-1                      | 2N1637       | 6-60               | PNP   |
| X2       |            | Conv.   | D8-25            | GE-1                      | 2N1639       | 6-61               | PNP   |
| X3       |            | IF Amp. | D8-25            | GE-1                      | 2N1638       | 6-62               | PNP   |
| X4       |            | Driver  | D8-26            | GE-2                      | 2N591        | 6-53               | PNP   |
| X5       |            | Output  |                  |                           |              | 6-88               | PNP   |
| X6       |            | Output  |                  |                           |              | 6-88               | PNP   |

## ELECTROLYTIC CAPACITORS

| ITEM No. | RATING |       | PART No. | REPLACEMENT DATA |                           |                           |                             |                  |                  |
|----------|--------|-------|----------|------------------|---------------------------|---------------------------|-----------------------------|------------------|------------------|
|          | CAP.   | VOLT. |          | AEROVOX PART No. | CORNELL-DUBILIER PART No. | GENERAL ELECTRIC PART No. | GENERAL INSTRUMENT PART No. | MALLORY PART No. | SPRAGUE PART No. |
| C1A      | 500    | 16    | 20-2853  | AFH3-00-94.5     |                           |                           |                             | FP-300.63        | PCLS-3026.11     |
| B        | 300    | 16    |          |                  |                           |                           |                             |                  |                  |
| C        | 100    | 16    |          |                  |                           |                           |                             |                  |                  |
| C2       | 25     | 15    | 20-256   | PTT89            | NLW25-15                  | MT1-10                    | MLV25-15                    | TT15X25          | TE-1157.1        |
| C3       | 5      | 15    | 20-505   | CRE454A          | NLW5-15                   | MT1-3                     | MLV5-15                     | TT25X5           | TE-1152          |

\* Not normally in distributor's stock. Available thru distributor on order to manufacturer.

## FIXED CAPACITORS

| ITEM No. | RATING   | REMARKS    | REPLACEMENT DATA |                    |                           |                  |                  |                  |
|----------|----------|------------|------------------|--------------------|---------------------------|------------------|------------------|------------------|
|          |          |            | AEROVOX PART No. | CENTRALAB PART No. | CORNELL-DUBILIER PART No. | ELMENCO PART No. | MALLORY PART No. | SPRAGUE PART No. |
| C9       |          | #28-800-1L |                  |                    |                           |                  |                  |                  |
| C10      | .01 50V  |            | BPD-01           | DD-103             | BYA10S1                   | CCD-103          | B-110            | 5HK-S10          |
| C11      | .05      |            | TTD-05           | CK-503             | H5                        |                  | TA-150           | TG-850           |
| C12      | 1mfd 3V  | #28-431A   |                  | UK-105             | HCC3105P                  |                  |                  | HY-135           |
| C13      |          | #28-461    |                  |                    |                           |                  |                  |                  |
| C14      | 270      |            | DI-270           | DD-271             | LA10T27-C4                | CCD-271          | GP327            | 5GA-T27          |
| C15      |          |            |                  |                    |                           |                  |                  |                  |
| C16      | .01 50V  |            | BPD-01           | DD-103             | BYA10S1                   | CCD-103          | B-110            | 5HK-S10          |
| C17      | .01 50V  |            | BPD-01           | DD-103             | BYA10S1                   | CCD-103          | B-110            | 5HK-S10          |
| C18      | .01 50V  |            | BPD-01           | DD-103             | BYA10S1                   | CCD-103          | B-110            | 5HK-S10          |
| C19      | .03 100V |            | P288N-03         | DD-303             | DPMS863                   | 1DP-1-303        | PVC-613          | 4P8-S30          |
| C20      | .003     |            | DI-3000          | DD-302             | LA10D3-C4                 | CCD-302          | GP230            | 5GA-D30          |
| C21      | .01 50V  |            | BPD-01           | DD-103             | BYA10S1                   | CCD-103          | B-110            | 5HK-S10          |
| C22      | .5 200V  |            | P288N-5          |                    | DPMS2P5                   | 2DP-5-504        | PVC-105          | 2TM-P50          |

# Penneys Part Number

## CONTROLS

All wattages 1/2 watt, or less, unless otherwise listed.

| ITEM No. | USE             | RESISTANCE | REPLACEMENT DATA |   |                            |  |  |
|----------|-----------------|------------|------------------|---|----------------------------|--|--|
|          |                 |            | PART No.         | CENTRALAB PART No.                            | CLAROSTAT PART No.         | CTS-IRC PART No.                             | MALLORY PART No.   |
| R1       | Volume & Switch | 10K        | 80A2647          | F2-10K, SFS212, KR-4, or (AB-15, AK-33, KR-4) | A47-10K-Z, RS-3/16, SWE-13 | B13-116, SK-9, 76-1 or (BU1, CF61, SS4, GC)* | UA14A, SD3500, US-41 or (RU14A, IS1312, SL35, US41) or (U18, D6-37, US-26) |

\* "SNAPTROL"

## COILS (RF-IF)

| ITEM No. | USE              | REPLACEMENT DATA |                |                 |                  |                  | NOTES        |
|----------|------------------|------------------|----------------|-----------------|------------------|------------------|--------------|
|          |                  | PART No.         | MERIT PART No. | MILLER PART No. | STANCOR PART No. | WORKMAN PART No. |              |
| L1       | RF Choke (6.2uh) | 14-6.2           | BC-565         | 4610            | RTC-8520         | T859             | ① Part of M3 |
| L2       | Ant.             | ①                |                |                 |                  |                  |              |
| L3       | Loopstick        | 10A2062          |                |                 |                  |                  |              |
| L4       | RF Choke (6.2uh) | 14-6.2           | BC-565         | 4610            | RTC-8520         | T859             |              |
| L5       | RF               | ①                |                |                 |                  |                  |              |
| L6       | Osc.             | ①                |                |                 |                  |                  |              |
| L7       | Input IF         | 14-2874          |                |                 |                  |                  |              |
| L8       | Output IF        | 14-2875          |                |                 |                  |                  |              |

## FILTER CHOKE

| ITEM No. | RATINGS            |         |                              | REPLACEMENT DATA |                |                  |                     |                | NOTES |
|----------|--------------------|---------|------------------------------|------------------|----------------|------------------|---------------------|----------------|-------|
|          | CURRENT (Measured) | DC RES. | INDUCTANCE (D CURRENT 1000~) | PART No.         | MERIT PART No. | STANCOR PART No. | THORDARSON PART No. | TRIAD PART No. |       |
| L9       | 270ma              | .5Ω     | 10MH                         | 75A6001          | C-4095         | TC-2             | TR-155              | TY17XT         |       |

## PARTS LIST AND DESCRIPTION (CONTINUED)

Replacement parts shown may be superseded by the availability of newly introduced replacements.  
Have your local distributor check Sams COUNTER FACTS for the most up-to-date replacement.

### TRANSFORMER (DRIVER)

| ITEM No. | TURNS RATIO |      | REPLACEMENT DATA |                |                  |                     |                | NOTES |
|----------|-------------|------|------------------|----------------|------------------|---------------------|----------------|-------|
|          |             |      | PART No.         | MERIT PART No. | STANCOR PART No. | THORDARSON PART No. | TRIAD PART No. |       |
|          | PRI.        | SEC. |                  |                |                  |                     |                |       |
| T1       | 5:          | 1    | 75A2796          |                |                  |                     |                |       |

### TRANSFORMER (AUDIO OUTPUT)

| ITEM No. | IMPEDANCE |      | REPLACEMENT DATA |                |                  |                     |                | NOTES |
|----------|-----------|------|------------------|----------------|------------------|---------------------|----------------|-------|
|          |           |      | PART No.         | MERIT PART No. | STANCOR PART No. | THORDARSON PART No. | TRIAD PART No. |       |
|          | PRI.      | SEC. |                  |                |                  |                     |                |       |
| T2       | 24Ω CT    | 6-8Ω | 25A2797          |                |                  |                     |                |       |

### SPEAKER

| ITEM No. | TYPE       | REPLACEMENT DATA |               | NOTES |
|----------|------------|------------------|---------------|-------|
|          |            | PART No.         | QUAM PART No. |       |
|          |            |                  |               |       |
| SP1      | 4" PM 6-8Ω | 73A2665          |               |       |

### COMPONENT COMBINATIONS

| ITEM No. | USE                | DESCRIPTION                                       | AUTOMATIC PART No. | REPLACEMENT DATA |
|----------|--------------------|---|--------------------|------------------|
| K1       | RF Coupling - Bias | 150Ω, 1000Ω, 4700Ω, 47K, .005mfd, .015mfd, .02mfd | 89A2583B           |                  |
| K2       | IF Amp. Bias       | 580Ω, 5800Ω, 47K, (3) .05mfd                      | 89A2584B           |                  |
| K3       | AVC                | 5800Ω, 180mmf                                     | 89A27D1            |                  |
| K4       | Audio Bias         | 470Ω, 820Ω, 4700Ω, 12K, 27K, 270K, .002mfd        | 89A2585A           |                  |

### FUSES

| ITEM No. | TYPE | RATING | REPLACEMENT DATA |          |                     |         |               |        |
|----------|------|--------|------------------|----------|---------------------|---------|---------------|--------|
|          |      |        | PART No.         |          | LITTELFUSE PART No. |         | BUSS PART No. |        |
|          |      |        | FUSE             | HOLDER   | FUSE                | HOLDER  | FUSE          | HOLDER |
| M1       | SFE  | 7 1/2  |                  | 12A1912B | 3D7D7.5             | 15507.5 | SFE 7 1/2     | HME    |

### BATTERIES

| ITEM No. | VOLTAGE | PART No. | REPLACEMENT DATA |              |                   | NOTES      |
|----------|---------|----------|------------------|--------------|-------------------|------------|
|          |         |          | BURGESS          | EVEREADY     | MALLORY           |            |
| M2       | 9V      |          | 13D (or AL-1)    | 635 (or E93) | M-14R (or MN1400) | 6 Required |

### MISCELLANEOUS

| ITEM No.             | PART NAME  | PART No. | NOTES                          |
|----------------------|--|----------|--------------------------------|
| M3<br>M4<br>M5<br>M6 | Tuner<br>AVC (1GD2)<br>Det. (1GD2)<br>Bias (1GD1D) | 78B2646  | Includes Tuning Coils and Gang |

### CABINETS & CABINET PARTS

(When Ordering Specify Model, Chassis & Color)

| ITEM                       | PART No.         | ITEM                  | PART No. |
|----------------------------|------------------|-----------------------|----------|
| Dial Glass<br>Dial Pointer | 39-99<br>84A2930 | Knob - Tuning, Volume | 47-50C   |

### WIRING DATA

|   |  |
|---|--|
| General-use Unshielded Hook-up Wire ..... | Use BELDEN No. 8530 (Solid) Available in 12 Colors<br>8524 (Stranded) Available in 12 Colors |
| Shielded Hook-up Wire .....               | Use BELDEN No. 8885  |
| Rear Seat Speaker Extension Cable .....   | Use BELDEN No. 8782 (Stranded) Coded Parallel Leads  |
| Bonding Strap .....                       | Use BELDEN No. 8661 (3/8 In.) or 8670 (3/4 In.)  |

PENNEY'S MODEL 3104 (984-8227)



# PARTS LIST AND DESCRIPTION

Replacement parts shown may be superseded by the availability of newly introduced replacements.  
Have your local distributor check Sams COUNTER FACTS for the most up-to-date replacement.

## WIRING DATA

|   |  |
|---|--|
| General-use Unshielded Hook-up Wire ..... | Use BELDEN No. 8530 (Solid) Available in 12 Colors<br>8524 (Stranded) Available in 12 Colors |
| Shielded Hook-up Wire .....               | Use BELDEN No. 8885  |
| Rear Seat Speaker Extension Cable .....   | Use BELDEN No. 8782 (Stranded) Coded Parallel Leads  |
| Bonding Strap .....                       | Use BELDEN No. 8661 (3/8 in.) or 8670 (3/4 in.)  |

## TRANSISTORS

| ITEM No. | ORIG. TYPE       | USE              | REPLACEMENT DATA |                           |              | NOTES |
|----------|------------------|------------------|------------------|---------------------------|--------------|-------|
|          |                  |                  | DELCO PART No.   | GENERAL ELECTRIC PART No. | RCA PART No. |       |
| X1       | 6-60<br>(2N640)  | RF Amp.          | D8-25            | GE-1                      | 2N1637       | PNP   |
| X2       | 6-61<br>(2N642)  | Conv.            | D8-25            | GE-1                      | 2N1639       | PNP   |
| X3       | 6-62<br>(2N641)  | IF Amp.          | D8-25            | GE-1                      | 2N1638       | PNP   |
| X4       | 6-53<br>(2N591)  | AF Amp.          | D8-26            | GE-2                      | 2N591        | PNP   |
| X5       | 6-53<br>(2N591)  | Emitter Follower | D8-26            | GE-2                      | 2N591        | PNP   |
| X6       | 8P404<br>(2N176) | Output           | D8-520           | GE-3                      | 2N301        | PNP*  |

\* When replacing, apply silicon grease to both sides of insulator. Tighten mounting screws securely.

## ELECTROLYTIC CAPACITORS

| ITEM No. | RATING |       | REPLACEMENT DATA  |                  |                           |                           |                             |                  |                  |
|----------|--------|-------|-------------------|------------------|---------------------------|---------------------------|-----------------------------|------------------|------------------|
|          | CAP.   | VOLT. | PENNEY'S PART No. | AEROVOX PART No. | CORNELL-DUBILIER PART No. | GENERAL ELECTRIC PART No. | GENERAL INSTRUMENT PART No. | MALLORY PART No. | SPRAGUE PART No. |
| C1A      | 250    | 15    | 20-328            | PWH3-00-94       | CCOO12                    | XC3-48.1                  |                             | PWP-300.4A       | PCL-3026.6       |
| C1B      | 250    | 15    |                   |                  |                           |                           |                             |                  |                  |
| C1C      | 500    | 15    |                   |                  |                           |                           |                             |                  |                  |
| C2       | 750    | 3     | 20-757-3          | PRS1130          | BR1000-6                  | QT1-32                    | BL2211                      | PETA190          | TVAB-1097*       |
| C3       | 25     | 15    | 20-256            | PTT69            | NLW25-15                  | MT1-10                    | MLV25-15                    | TE-1157.1        |                  |
| C4       | 25     | 15    | 20-256            | PTT69            | NLW25-15                  | MT1-10                    | MLV25-15                    | TT15X25          | TE-1157.1        |

\* Not normally in distributor's stock. Available thru distributor on order to manufacturer.

## FIXED CAPACITORS

| ITEM No. | RATING           | REMARKS    | REPLACEMENT DATA |                    |                           |                  |                  |                  |
|----------|------------------|------------|------------------|--------------------|---------------------------|------------------|------------------|------------------|
|          |                  |            | AEROVOX PART No. | CENTRALAB PART No. | CORNELL-DUBILIER PART No. | ELMENCO PART No. | MALLORY PART No. | SPRAGUE PART No. |
| C10      | .05 50V<br>1mfd  | #28-900-2L | TTD-05           | CK-503<br>UK-105   | H5<br>HCC3105P            |                  | TA-150           | TG-850<br>HY-135 |
| C11      |                  | #28A1332   |                  |                    |                           |                  |                  |                  |
| C12      | 270              |            | DI 270           | DD-271             | LA10T27-C4                | CCD-271          | GP327            | 5GA-T27          |
| C13A     |                  |            |                  |                    |                           |                  |                  |                  |
| C14      | .02 50V<br>.0047 |            | BPD-02           | DD-203             | BYA6S2                    | CCD-203          | B-120            | 5HK-820          |
| C15      |                  |            |                  |                    |                           |                  |                  |                  |
| C16      | .01 200V         |            | BPD-0047         | DD-472             | BYA10D47                  | CCD-472          | B-247            | 5HK-D47          |
| C17      |                  |            |                  |                    |                           |                  |                  |                  |
| C18      | 100 N750         |            | P288N-01         | CPR-10000J         | WMF281                    | 4DP-1-103        | PVC-211          | 2TM-810          |
| C19      |                  |            |                  |                    |                           |                  |                  |                  |
| C20      | .05 50V          |            | N750-D1 100      | DTN-100            | C10T1U                    | CCN-101          | CN7-310          | 10TCU-T10        |
| C21      |                  |            |                  |                    |                           |                  |                  |                  |
| C22      | .05 50V          |            | TTD-05           | CK-503             | H5                        | TA-150           | TG-850           | TG-850           |
| C23      |                  |            |                  |                    |                           |                  |                  |                  |
| C24      | .1 16V           |            | TTD-05           | CK-503             | H5                        | TA-150           | TG-850           | TG-850           |
| C25      |                  |            |                  |                    |                           |                  |                  |                  |
| C26      | .0047            |            | D1 180           | DD-181             | LA10T18-S3                | CCD-181          | GP318            | 5GA-T18          |
| C27      |                  |            |                  |                    |                           |                  |                  |                  |
| C28      | .0047            |            | TTD-05           | CK-503             | H5                        | TA-150           | TG-850           | TG-850           |
| C29      |                  |            |                  |                    |                           |                  |                  |                  |
| C30      | .47 3V           |            | BPD-0047         | DD-472             | BYA10D47                  | CCD-472          | B-247            | 5HK-D47          |
| C31      |                  |            |                  |                    |                           |                  |                  |                  |
| C32      | 1mfd 3V          |            |                  | UK10-404           | HCC10474Z                 |                  |                  | HY-330           |
| C33      |                  |            |                  |                    |                           |                  |                  |                  |
| C34      | .05 50V          |            |                  | UK-105             | HCC3105P                  |                  |                  | HY-135           |
| C35      |                  |            |                  |                    |                           |                  |                  |                  |
| C36      | .05 50V          |            |                  | UK-105             | HCC3105P                  |                  |                  | HY-135           |
| C37      |                  |            |                  |                    |                           |                  |                  |                  |
| C38      | .05 50V          |            |                  | CK-503             | H5                        |                  | TA-150           | TG-850           |
| C39      |                  |            |                  |                    |                           |                  |                  |                  |

# PENNEY'S Part Number.

## CONTROLS

All wattages 1/2 watt, or less, unless otherwise listed.

| ITEM No. | USE                     | RESIST-ANCE | REPLACEMENT DATA  |  |  |                  |                  |
|----------|-------------------------|-------------|-------------------|--|--|------------------|------------------|
|          |                         |             | PENNEY'S PART No. | CENTRALAB PART No.                                       | CLAROSTAT PART No.                                       | CTS-IRC PART No. | MALLORY PART No. |
| R1A      | Tone<br>Volume & Switch | 10K         | 80A1977           | F1-10K,<br>R1-100K,<br>FFS111,<br>RFS202, KR-4,<br>AK-26 | P-10K-8,<br>R-100K-8,<br>CP-110, FR-202,<br>SWE-13, XB-2 | † QJ-1844A       | ■ UE44588        |
| R1B      |                         | 100K        |                   |  |  |                  |                  |

† "CONCENTRIKIT" Equivalent: K-8 Kit with Base elements and shafts: B11-116, P17-116 (Panel)  
"SNAPTROL" Equivalent: BU8\*, CF9, CR8, SF13, SR13, GC B11-128, R1-130 (Rear)  
(\*Cut to required length) 88\* (Bushing)  
76-1 (Switch)

■ "BTA-LOC" Equivalent: FF14L, RU15L, OS1687, IS2125, US41

## COILS (RF-IF)

| ITEM No. | USE   | REPLACEMENT DATA                          |                |                 |                  |                  | NOTES         |
|----------|---|---|----------------|-----------------|------------------|------------------|---------------|
|          |   | PENNEY'S PART No.                         | MERIT PART No. | MILLER PART No. | STANCOR PART No. | WORKMAN PART No. |               |
| L1       | RF Choke (6.2uh)<br>Ant.<br>RF<br>Osc.<br>Input IF<br>Output IF | 14-6.2<br>⊙<br>⊙<br>⊙<br>14-274<br>14-275 | BC-565         | 4610            | RTC-8520         | T859             | ① Part of M2. |
| L2       |   |   |                |                 |                  |                  |               |
| L3       |   |   |                |                 |                  |                  |               |
| L4       |   |   |                |                 |                  |                  |               |
| L5       |   |   |                |                 |                  |                  |               |
| L6       |   |   |                |                 |                  |                  |               |

## FILTER CHOKE

| ITEM No. | RATINGS            |         |                              | REPLACEMENT DATA  |                |                  |                     |                | NOTES |
|----------|--------------------|---------|------------------------------|-------------------|----------------|------------------|---------------------|----------------|-------|
|          | CURRENT (Measured) | DC RES. | INDUCTANCE (0 CURRENT 1000~) | PENNEY'S PART No. | MERIT PART No. | STANCOR PART No. | THORDARSON PART No. | TRIAD PART No. |       |
| L7       | 1.2A               | .5Ω     | 10MH                         | 75A1269           | C-4095         | TC-2             | TR-155              | TY-17XT        |       |

## CHOKE (AUDIO OUTPUT)

| ITEM No. | INDUCTANCE | REPLACEMENT DATA  |                |                  |                     |                | NOTES |
|----------|------------|-------------------|----------------|------------------|---------------------|----------------|-------|
|          |            | PENNEY'S PART No. | MERIT PART No. | STANCOR PART No. | THORDARSON PART No. | TRIAD PART No. |       |
| L8       | 20MH       | 75A2043           |                |                  |                     |                |       |

## FUSES

| ITEM No. | TYPE | RATING | REPLACEMENT DATA  |        |                     |         |               |     |
|----------|------|--------|-------------------|--------|---------------------|---------|---------------|-----|
|          |      |        | PENNEY'S PART No. |        | LITTELFUSE PART No. |         | 6USS PART No. |     |
|          |      |        | FUSE              | HOLDER | FUSE                | HOLDER  |               |     |
| M1       | SFE  | 7 1/2  | 12A2079           |        | 30707.5             | 15507.5 | SFE 7 1/2     | HME |

## MISCELLANEOUS

| ITEM No. | PART NAME   | PENNEY'S PART No. | NOTES              |
|----------|-------------|-------------------|--------------------|
| M2       | Tuner       | 78B2406           | Push Button Manual |
| M3       | AVC         | 75A2512           | 1GD2/1N295         |
| M4       | AF Det.     |                   | 1GD2/1N295         |
| M5       | Spark Plate | 43-215            |                    |

## SPEAKER

| ITEM No. | TYPE         | REPLACEMENT DATA  |               |
|----------|--------------|-------------------|---------------|
|          |              | PENNEY'S PART No. | QUAM PART No. |
| SP1      | 6 1/2" PM 8Ω | 75A1982           | 6A2128        |

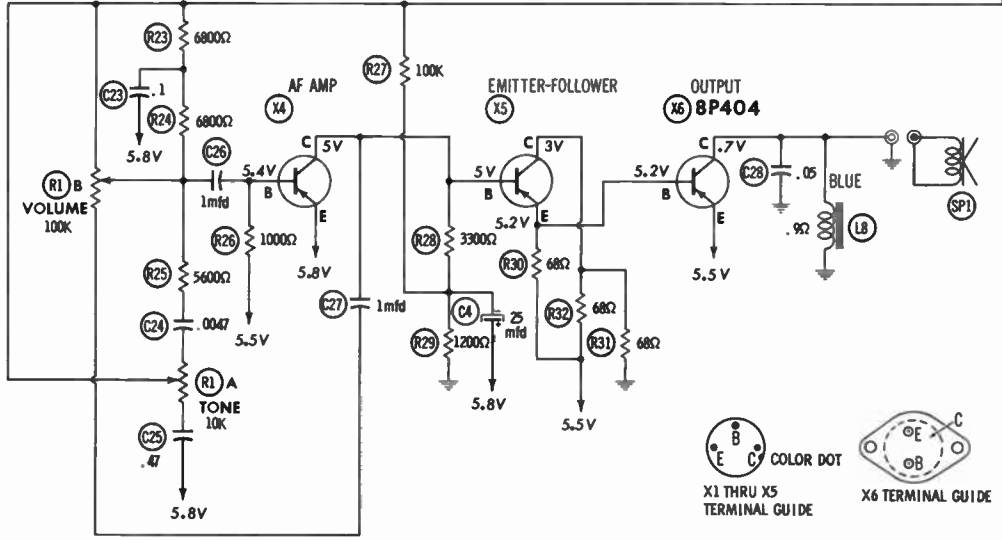
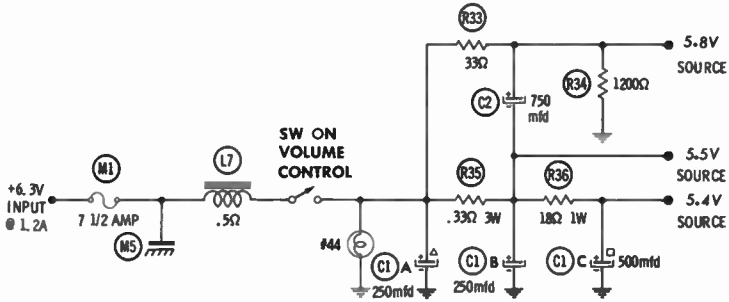
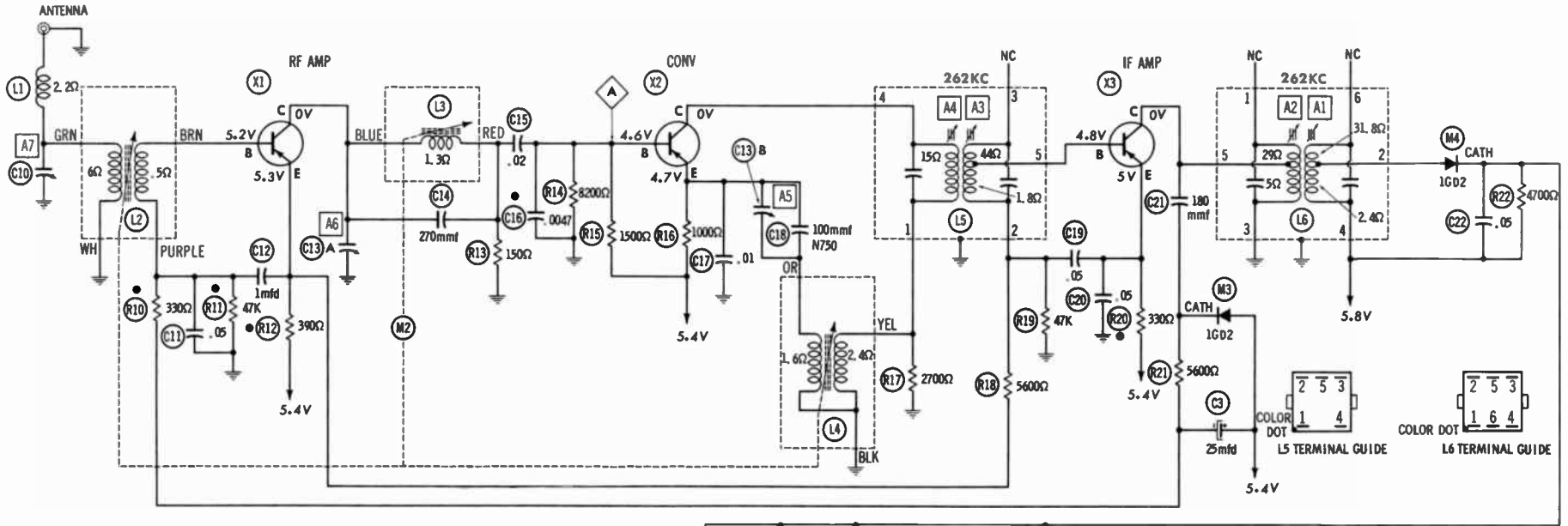
## CABINETS & CABINET PARTS

(When Ordering Specify Model, Chassis & Color)

| ITEM                  | PART No. | ITEM         | PART No.  |
|-----------------------|----------|--------------|-----------|
| Knob - Tuning, Volume | 47-50    | Knob - Dummy | 48A1063-1 |
| Knob - Tone           | 48A1063  | Push Button  | 55A1179   |

PENNEY'S MODEL 3108 (984-8219), 3120 (982-1992)

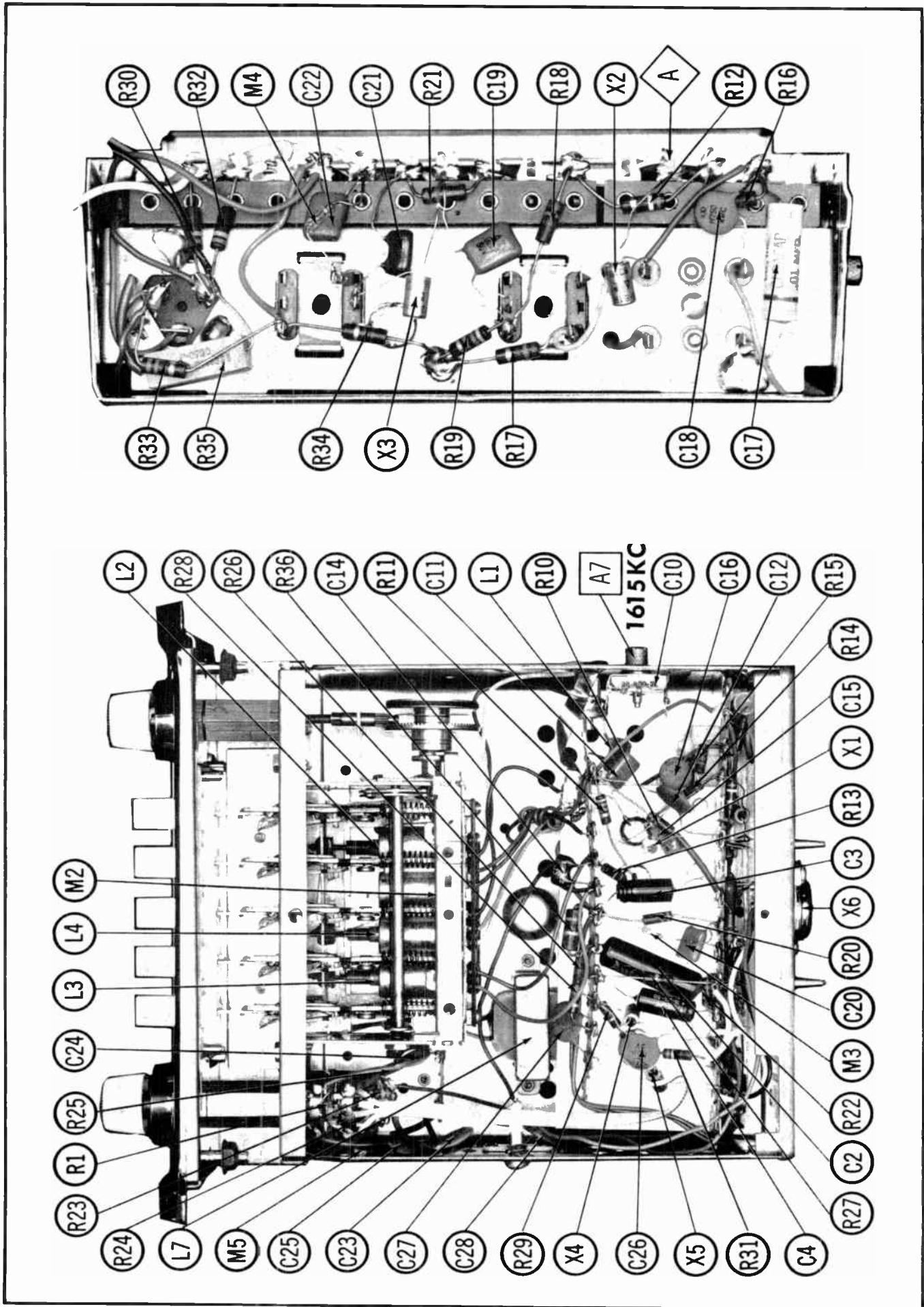




- NOMINAL VALUE MAY VARY
- 1. Voltage measurements taken with vacuum tube voltmeter.
- 2. All controls set for normal operation, no signal applied.
- 3. Measured values are from socket pin or terminal to common ground.
- 4. All terminals viewed from bottom unless otherwise designated.
- 5. Numbers assigned to terminals may not be found on the unit.
- 6. Supply voltage maintained at rated value for voltage readings.
- 7. Resistance measurements not given because of the wide variation in internal resistance of transistor.

**PENNEYS MODEL**

A PHOTOFAC STANDARD NOTATION SCHEMATIC 3108 (984-8219), 3120 (982-1992)  
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PENNEY'S MODEL 3108 (984-8219), 3120 (982-1992)



# PARTS LIST AND DESCRIPTION

Replacement parts shown may be superseded by the availability of newly introduced replacements.  
Have your local distributor check Sams COUNTER FACTS for the most up-to-date replacement.

## TRANSISTORS

| ITEM No. | ORIG. TYPE | USE       | REPLACEMENT DATA |                           |              | NOTES       |
|----------|------------|-----------|------------------|---------------------------|--------------|-------------|
|          |            |           | DELCO PART No.   | GENERAL ELECTRIC PART No. | RCA PART No. |             |
| X1       | 2N640      | RF Amp.   | D6-25            | GE-1                      | 2N1637       | PNP         |
| X2       | 2N642      | Converter | D6-25            | GE-1                      | 2N1639       | PNP         |
| X3       | 2N641      | IF Amp.   | D6-25            | GE-1                      | 2N1638       | PNP         |
| X4       | 2N591      | Driver    | D6-26            | GE-2                      | 2N591        | PNP         |
| X5       | 2N176      | Output    | D6-520           | GE-3                      | 2N301        | PNP(Note 1) |

Note 1. When replacing, apply silicone grease to both sides of insulator.  
Tighten mounting screws securely.

## ELECTROLYTIC CAPACITORS

| ITEM No. | RATING |       | REPLACEMENT DATA  |                  |                           |                           |                             |                  |                  |
|----------|--------|-------|-------------------|------------------|---------------------------|---------------------------|-----------------------------|------------------|------------------|
|          | CAP.   | VOLT. | PENNEY'S PART No. | AEROVOX PART No. | CORNELL-DUBILIER PART No. | GENERAL ELECTRIC PART No. | GENERAL INSTRUMENT PART No. | MALLORY PART No. | SPRAGUE PART No. |
| C1A      | 500    | 16    | 20-2653           | AFH3-00-94.5     |                           |                           |                             | FP-300.83        | PCLS-3026.11*    |
| B        | 300    | 16    |                   |                  |                           |                           |                             |                  |                  |
| C        | 100    | 16    |                   |                  |                           |                           |                             |                  |                  |
| C2       | 25     | 15    | 15025             | PTT69            | NLW25-15                  | MT1-10                    | MLV25-15                    | TT15X25          | TE-1157.1        |
| C3       | 5      | 15    | 15005             | CRE454A          | NLW5-15                   | MT1-3                     | MLV5-15                     | TT25X5           | TE-1152          |

\* Not normally in distributor's stock. Available thru distributor on order to manufacturer.

## FIXED CAPACITORS

| ITEM No. | RATING   | REMARKS    | REPLACEMENT DATA |                    |                           |                  |                  |                  |  |
|----------|----------|------------|------------------|--------------------|---------------------------|------------------|------------------|------------------|--|
|          |          |            | AEROVOX PART No. | CENTRALAB PART No. | CORNELL-DUBILIER PART No. | ELMENCO PART No. | MALLORY PART No. | SPRAGUE PART No. |  |
| C10      |          | #28-800-2L |                  |                    |                           |                  |                  |                  |  |
| C11A     |          | #28A-1332  |                  |                    |                           |                  |                  |                  |  |
| B        | 270      |            | D1-270           | DD-271             | LA10T27-C4                | CCD-271          | GP327            | 5GA-T25          |  |
| C13      | 100 N750 |            | N750-D1100       | DTN-100            | C10T1U                    | CCTN-101         | CNT-310          | 10TCU-T10        |  |
| C14      | .01      |            | BPD-01           | DD-103             | BYA10S1                   | CCD-103          | B-110            | 5HK-810          |  |
| C15      | .22 3V   |            |                  | UK20-204           | HCC25224Z                 |                  |                  | RY-325           |  |
| C16      | .1 16V   |            |                  | CK-104             | H6                        |                  | TA-010           | TG-P10           |  |
| C17      | .05 50V  |            | TTD-1            | CK-503             | H5                        |                  | TA-150           | TG-850           |  |

#PENNEY'S Part Number.

## CONTROLS

All wattages 1/2 watt, or less, unless otherwise listed.

| ITEM No. | USE                  | RESISTANCE                 | REPLACEMENT DATA  |                    |                    |                  |                  |
|----------|----------------------|----------------------------|-------------------|--------------------|--------------------|------------------|------------------|
|          |                      |                            | PENNEY'S PART No. | CENTRALAB PART No. | CLAROSTAT PART No. | CTS-IRC PART No. | MALLORY PART No. |
| R1       | Tone Volume & Switch | 10K<br>7500Ω<br>Tap@<br>5K | 80A2658           |                    |                    |                  |                  |
|          | Fader                | 40Ω                        | 80A2621 ①         |                    |                    |                  |                  |

① Not used in some versions.

## COILS (RF-IF)

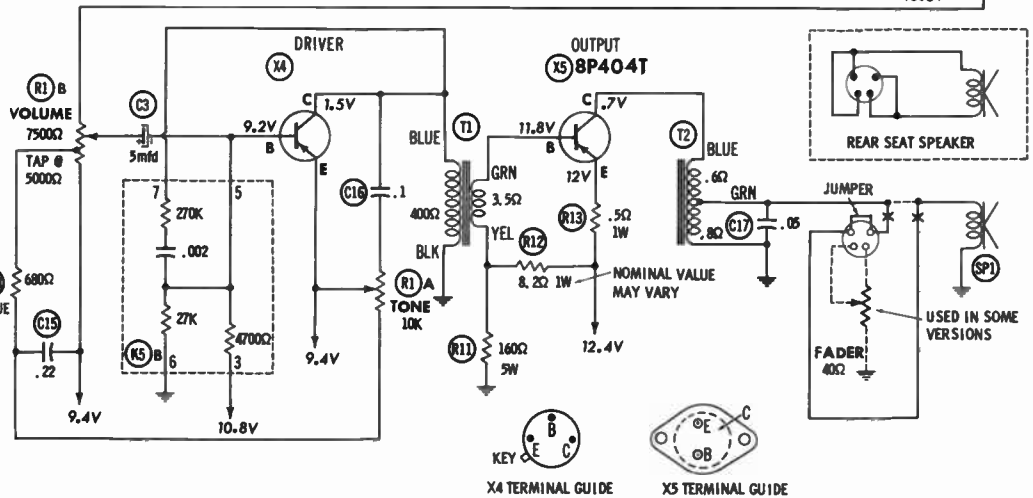
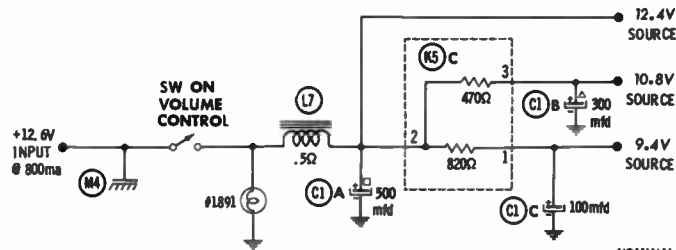
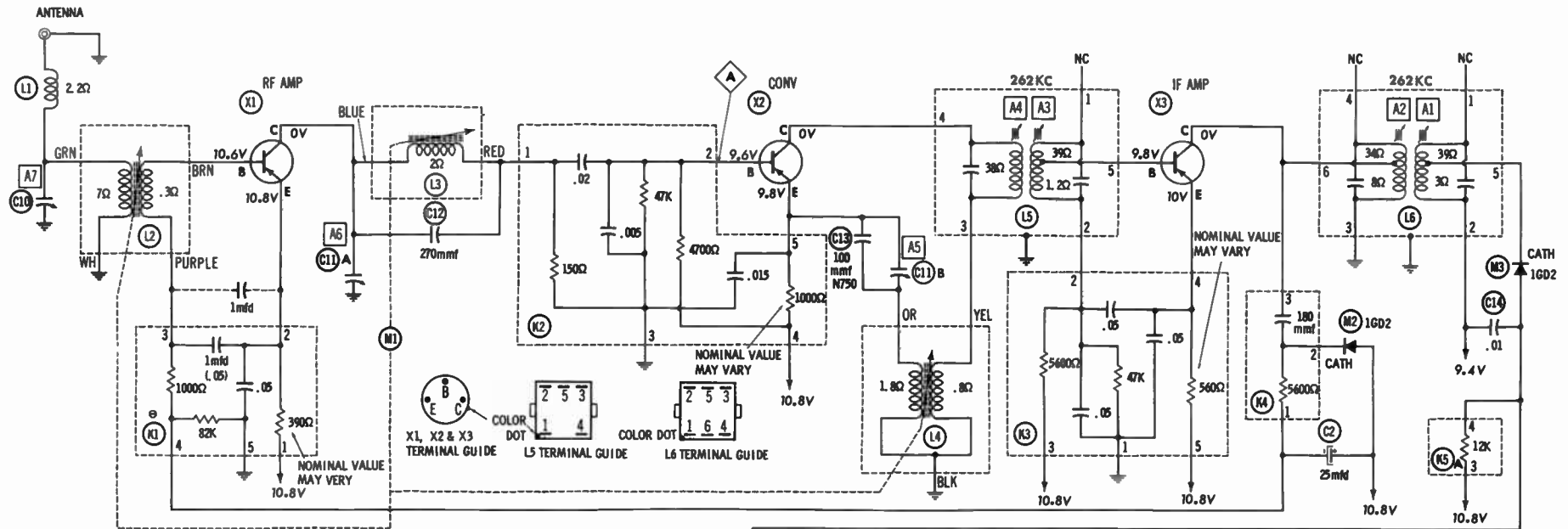
| ITEM No. | USE             | REPLACEMENT DATA  |                |                 |                  |                  | NOTES         |
|----------|-----------------|-------------------|----------------|-----------------|------------------|------------------|---------------|
|          |                 | PENNEY'S PART No. | MERIT PART No. | MILLER PART No. | STANCOR PART No. | WORKMAN PART No. |               |
| L1       | RF Choke(6.2uh) | 14-6.2            | BC-565         | 4610            | RTC-8520         | T859             | ① Part of M1. |
| L2       | Ant.            | ①                 |                |                 |                  |                  |               |
| L3       | RF              | ①                 |                |                 |                  |                  |               |
| L4       | Osc.            | ①                 |                |                 |                  |                  |               |
| L5       | Input IF        | 14-2654           | 6570           |                 |                  |                  |               |
| L6       | Output IF       | 14-2655           | 6571           |                 |                  |                  |               |

## FILTER CHOKE

| ITEM No. | RATINGS            |         |                              | REPLACEMENT DATA  |                |                  |                     | NOTES  |
|----------|--------------------|---------|------------------------------|-------------------|----------------|------------------|---------------------|--------|
|          | CURRENT (Measured) | DC RES. | INDUCTANCE (0 CURRENT 1000~) | PENNEY'S PART No. | MERIT PART No. | STANCOR PART No. | THORDARSON PART No. |        |
| L7       | 600ma              | .5Ω     | 10MH                         | 75A1269           | C-4095         | TC-2             | TR-155              | TY17XT |

PENNEY'S MODEL 3114 (984-1991)





- ⊙ See parts list for alternate value or application.
- 1. Voltage measurements taken with vacuum tube voltmeter.
- 2. All controls set for normal operation, no signal applied.
- 3. Measured values are from socket pin or terminal to common ground.
- 4. All terminals viewed from bottom unless otherwise designated.
- 5. Numbers assigned to terminals may not be found on the unit.
- 6. Supply voltage maintained at rated value for voltage readings.
- 7. Resistance measurements not given because of the wide variation in internal resistance of transistor.

A PHOTOFAC STANDARD NOTATION SCHEMATIC  
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PENNEYS MODEL 3114 (984-1991)



## PARTS LIST AND DESCRIPTION (CONTINUED)

Replacement parts shown may be superseded by the availability of newly introduced replacements.  
Have your local distributor check Sams COUNTER FACTS<sup>®</sup> for the most up-to-date replacement.

### TRANSFORMER (DRIVER)

| ITEM No. | TURNS RATIO |      | REPLACEMENT DATA  |                |                  |                     |                | NOTES |
|----------|-------------|------|-------------------|----------------|------------------|---------------------|----------------|-------|
|          | PRI.        | SEC. | PENNEY'S PART No. | MERIT PART No. | STANCOR PART No. | THORDARSON PART No. | TRIAD PART No. |       |
| T1       | 8:          | 1    | 75A2635           |                |                  |                     |                |       |

### TRANSFORMER (AUDIO OUTPUT)

| ITEM No. | IMPEDANCE            |      | REPLACEMENT DATA  |                |                  |                     |                | NOTES |
|----------|----------------------|------|-------------------|----------------|------------------|---------------------|----------------|-------|
|          | PRI.                 | SEC. | PENNEY'S PART No. | MERIT PART No. | STANCOR PART No. | THORDARSON PART No. | TRIAD PART No. |       |
| T2       | 24Ω Tap <sup>Ⓢ</sup> | 8Ω   | 75A2668           |                |                  |                     | TR-169         |       |

### SPEAKER

| ITEM No. | TYPE            | REPLACEMENT DATA  |               | NOTES |
|----------|-----------------|-------------------|---------------|-------|
|          |                 | PENNEY'S PART No. | QUAM PART No. |       |
| SP1      | 6" x 9" PM 6-8Ω | 73B2724           | 61QA1Z8       | Ford  |

### COMPONENT COMBINATIONS

| ITEM No. | USE        | DESCRIPTION                                       | PENNEY'S PART No.     | REPLACEMENT DATA |
|----------|------------|---|-----------------------|------------------|
| K1       | X1 Bias    | 390Ω, 1000Ω, 82K, .05mfd, .05mfd, 1mfd            | 89A2582C <sup>Ⓢ</sup> |                  |
| K2       | X2 Bias    | 150Ω, 1000Ω, 4700Ω, 47K, .005mfd, .015mfd, .02mfd | 89A2583               |                  |
| K3       | X3 Bias    | 560Ω, 5600Ω, 47K, .05mfd, .05mfd, .05mfd          | 89A2584B              |                  |
| K4       | AVC        | 5600Ω, 180mmf                                     | 89A2701               |                  |
| K5       | Audio Bias | 470Ω, 820Ω, 4700Ω, 12K, 27K, 270K, .002mfd        | 89A2585A              |                  |

<sup>Ⓢ</sup> Some versions may use Part #89A2582B

### MISCELLANEOUS

| ITEM No. | PART NAME   | PENNEY'S PART No. | NOTES                             |
|----------|-------------|-------------------|-----------------------------------|
| M1       | Tuner       | 78B2618           | Push Button, Ford<br>Manual, Ford |
| M2       | Tuner       | 78B2708           |                                   |
| M3       | AVC (1GD2)  |                   |                                   |
| M4       | Det. (1GD2) |                   |                                   |
|          | Spark Plate | 43-215            |                                   |

### CABINETS & CABINET PARTS

(When Ordering Specify Model, Chassis & Color)

| ITEM                  | PART No.  | ITEM               | PART No.  |
|-----------------------|-----------|--------------------|-----------|
| <b>KNOBS</b>          |           |                    |           |
| Tuning, Volume - Ford | 48B2650   | Push Button - Ford | 55A2183NV |
| Tone - Ford           | 48A1522   | Dial Glass - Ford  | 39-85     |
| Dummy - Ford          | 48A1522-1 |                    |           |

### WIRING DATA

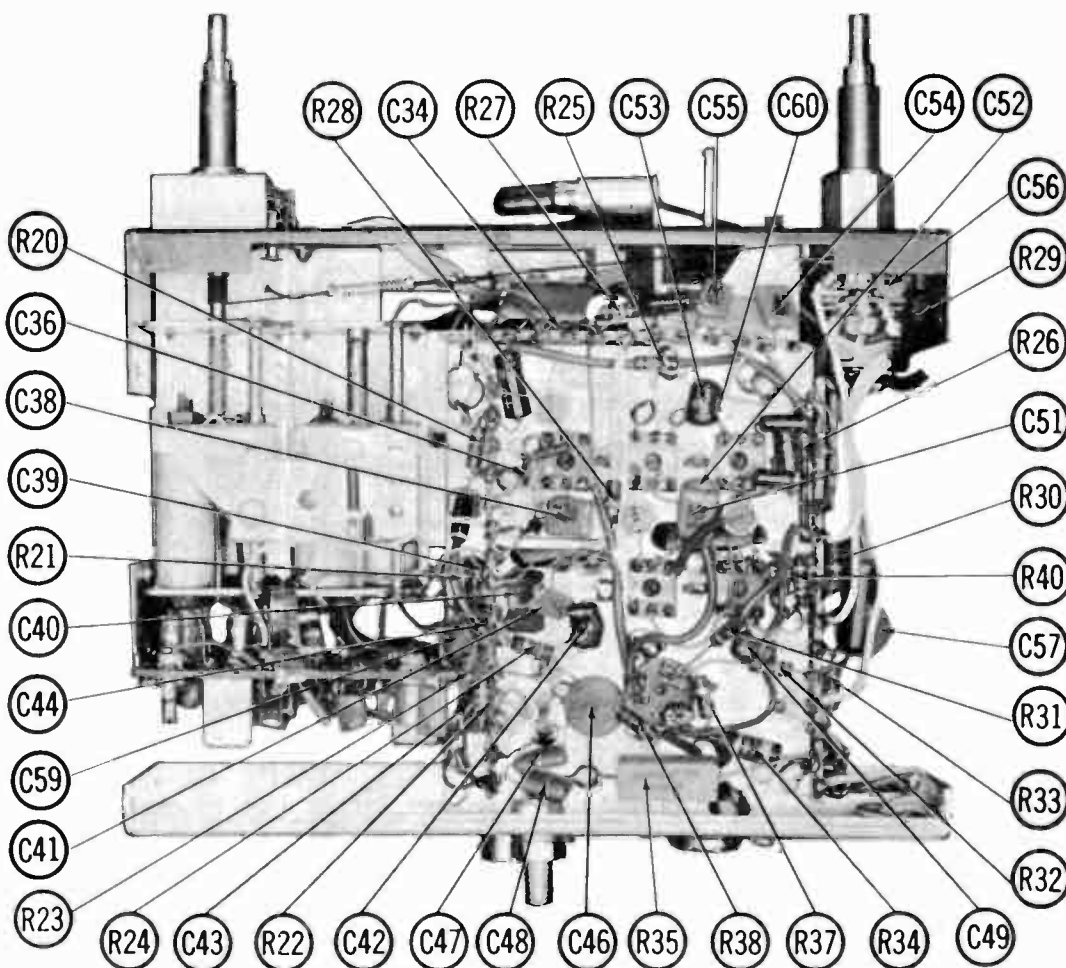
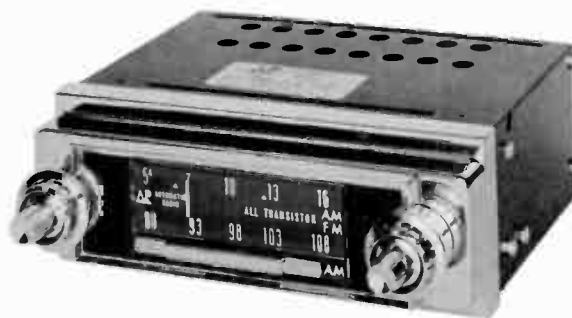
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|---|--|
| General-use Unshielded Hook-up Wire ..... | Use BELDEN No. 8530 (Solid) Available in 12 Colors<br>8524 (Stranded) Available in 12 Colors |
| Shielded Hook-up Wire .....               | Use BELDEN No. 8885  |
| Rear Seat Speaker Extension Cable .....   | Use BELDEN No. 8782 (Stranded) Coded Parallel Leads  |
| Bonding Strap .....                       | Use BELDEN No. 8861 (3/8 In.) or 8670 (3/4 In.)  |



# PHOTOFACT<sup>®</sup> with

# CIRCUITRACE<sup>®</sup>

TRADE NAME : Penneys Model 3138 (984-8243)  
 SUPPLIER : For Current Address, See Master Index.  
 TYPE SET : 9 Transistor AM-FM Receiver  
 POWER SUPPLY : 12 Volt Storage Battery  
 RATING : .75 Amp. @ 12.6 Volts DC  
 TUNING RANGE : BROADCAST 540-1615KC  
 FREQ. MOD. 88-108MC

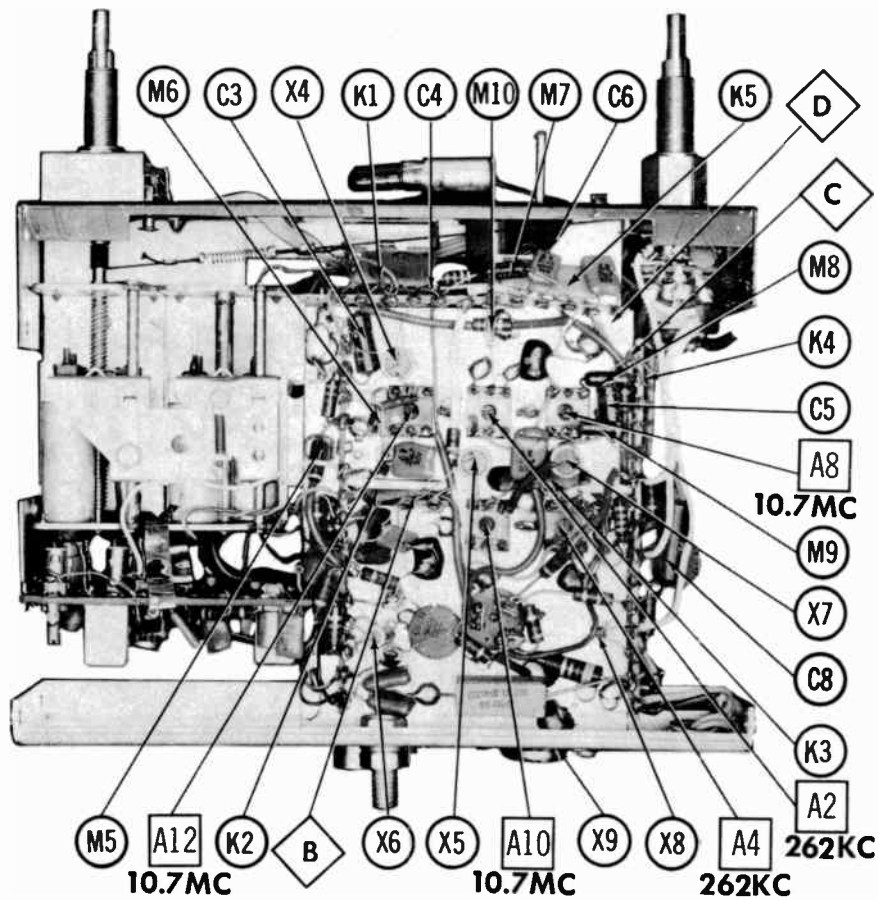
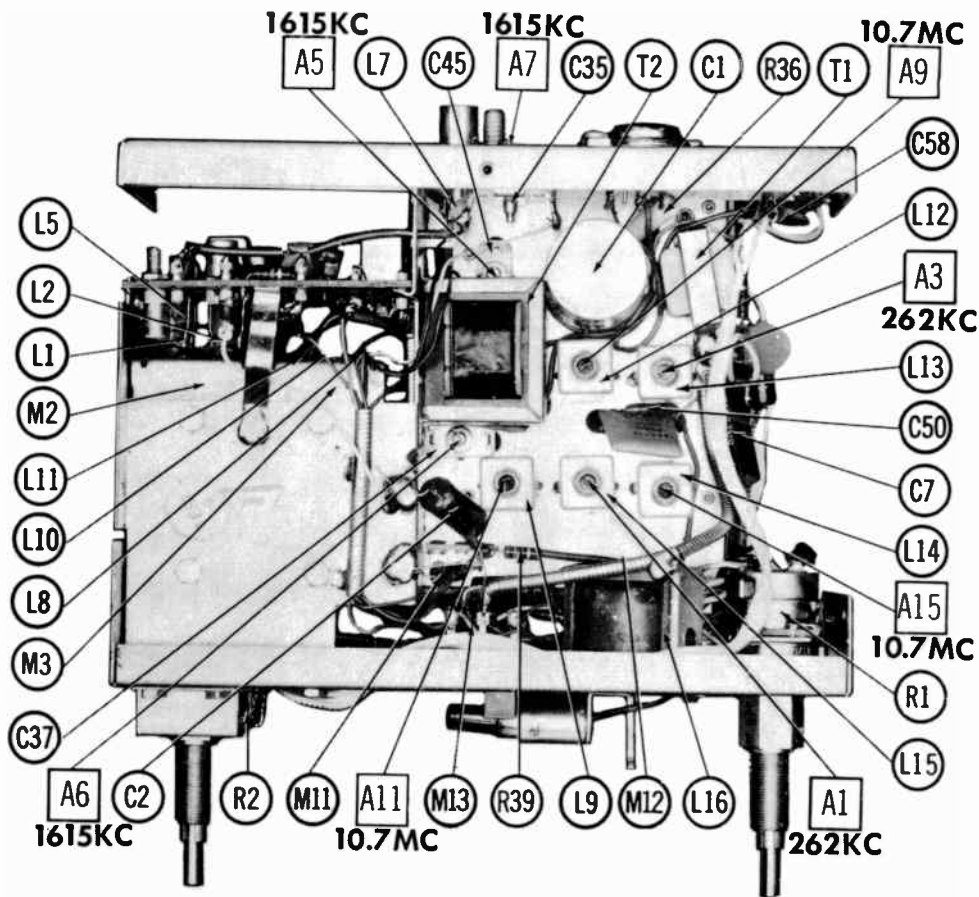


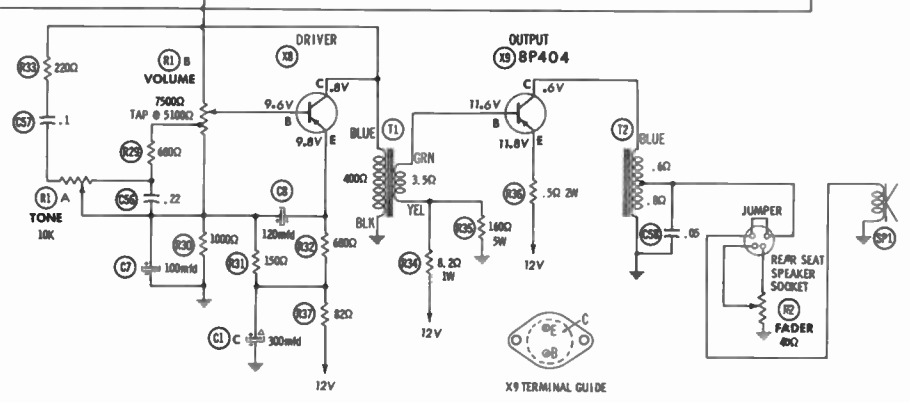
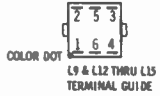
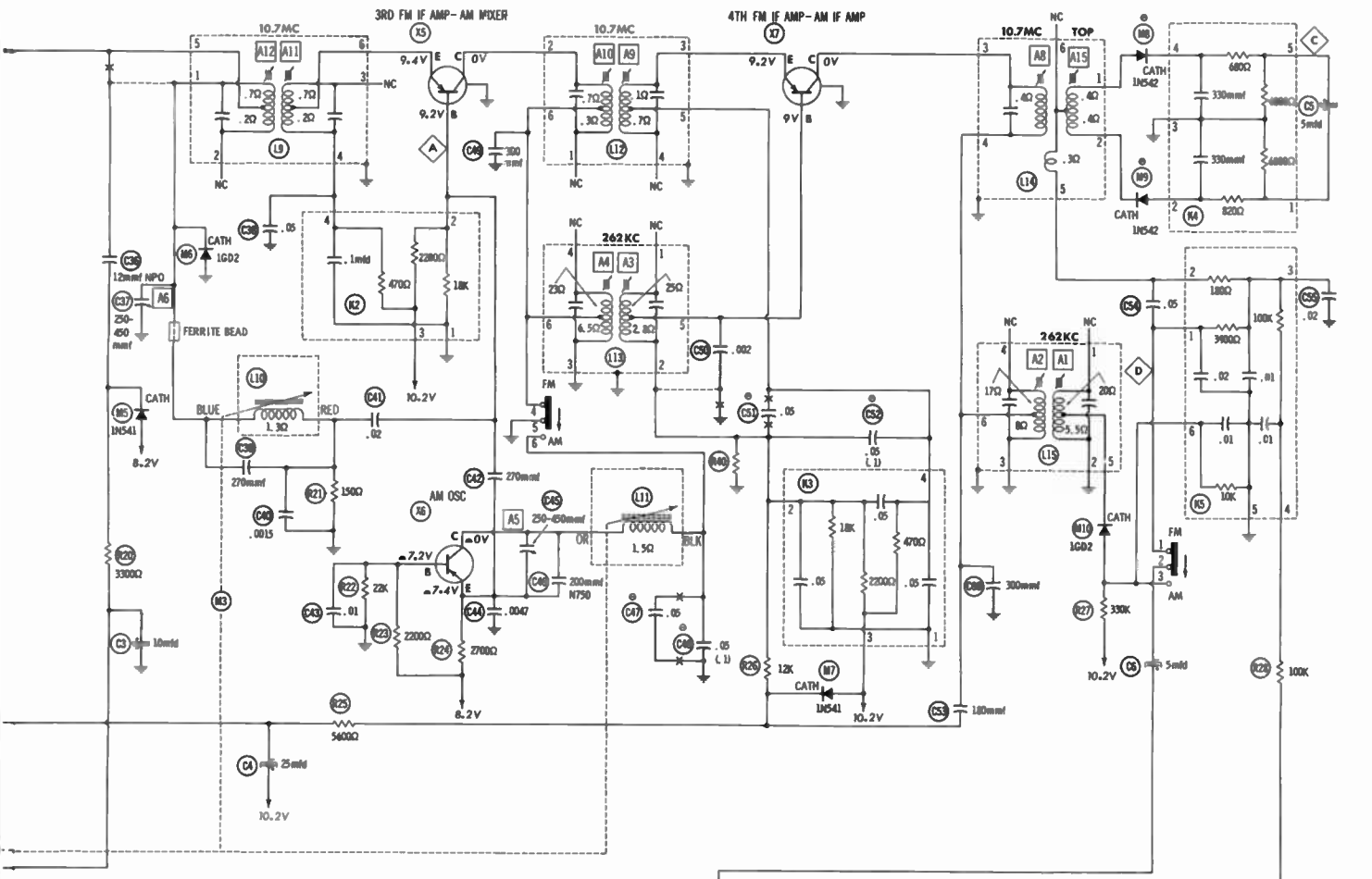
PENNEYS MODEL 3138 (984-8243)

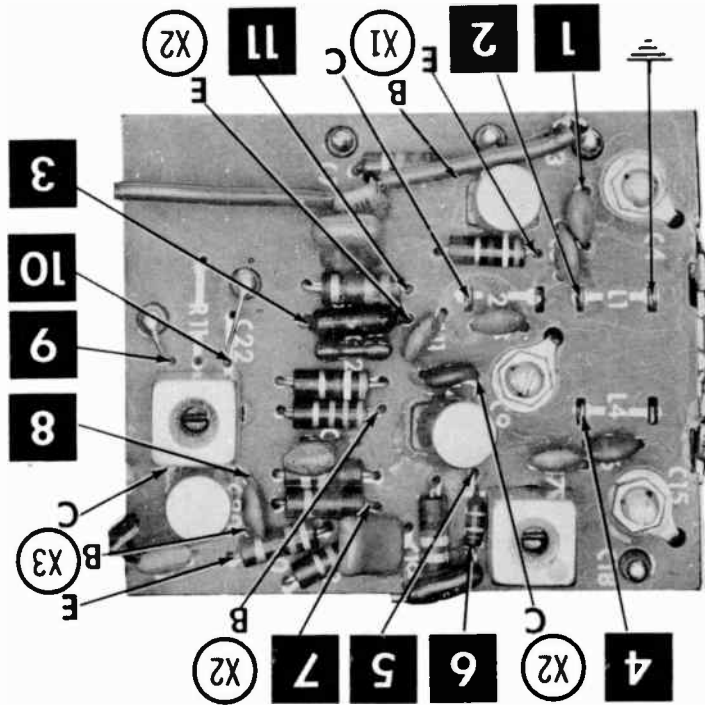
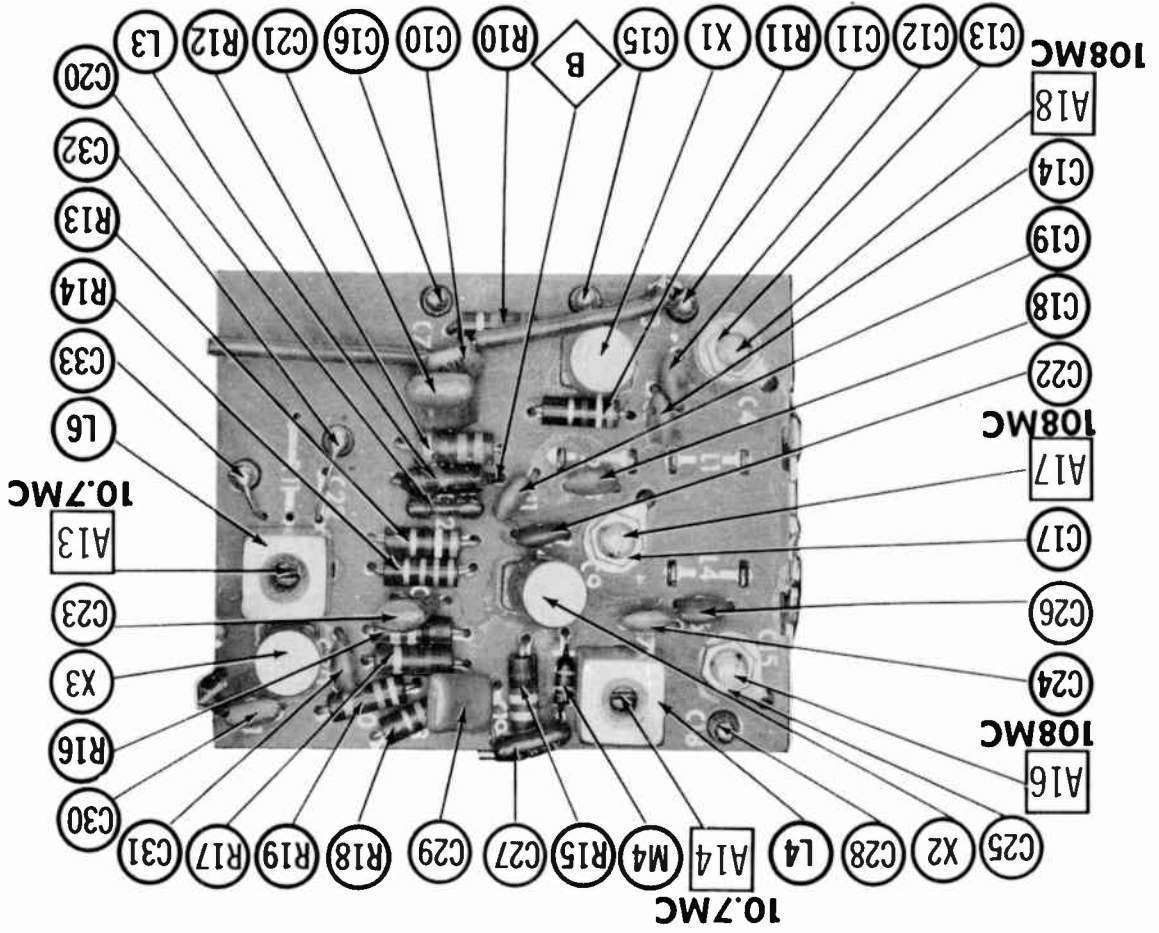
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# PARTS LIST AND DESCRIPTION

Replacement parts shown may be superseded by the availability of newly introduced replacements.  
 Have your local distributor check Sams COUNTER FACTS for the most up-to-date replacement.

## TRANSISTORS

| ITEM No. | ORIG. TYPE       | USE                         | REPLACEMENT DATA |                           |              | NOTES |
|----------|------------------|-----------------------------|------------------|---------------------------|--------------|-------|
|          |                  |                             | DELCO PART No.   | GENERAL ELECTRIC PART No. | RCA PART No. |       |
| X1       | 6-89<br>(2N2089) | FM RF Amp.                  | D8-41            |                           | 2N1177       | PNP   |
| X2       | 6-89<br>(2N2089) | FM Conv.                    | D8-42            |                           | 2N1179       | PNP   |
| X3       | 6-89<br>(2N2089) | 1st FM IF                   | D8-34            |                           | 2N1180       | PNP   |
| X4       | 6-89<br>(2N2090) | 2nd FM IF Amp. - AM RF Amp. | D8-34            |                           | 2N1180       | PNP   |
| X5       | 6-89<br>(2N2090) | 3rd FM IF Amp. - AM Mixer   | D8-35            |                           | 2N1180       | PNP   |
| X6       | 6-60<br>(3N640)  | AM Osc.                     | D8-25            | GE-1                      | 2N1639       | PNP   |
| X7       | 6-89<br>(2N2090) | 4th FM IF Amp. - AM IF Amp. | D8-37            |                           | 2N1180       | PNP   |
| X8       | 6-53<br>(2N591)  | Driver                      | D8-26            | GE-2                      | 2N591        | PNP   |
| X9       | 8P404<br>(2N176) | Output                      | D8-520           | GE-3                      | 2N301        | PNP*  |

\* When replacing, apply silicon grease to both sides of insulator. Tighten mounting screws securely.

## ELECTROLYTIC CAPACITORS

| ITEM No. | RATING |       | REPLACEMENT DATA  |                  |                           |                           |                             |                  |                  |
|----------|--------|-------|-------------------|------------------|---------------------------|---------------------------|-----------------------------|------------------|------------------|
|          | CAP.   | VOLT. | PENNEY'S PART No. | AEROVOX PART No. | CORNELL-DUBILIER PART No. | GENERAL ELECTRIC PART No. | GENERAL INSTRUMENT PART No. | MALLORY PART No. | SPRAGUE PART No. |
| C1A      | 500    | 16    | 20-2653           | AFH3-00-94.5     | CCOO12                    | XC3-48.1                  |                             | FP-300, 83       | PC18-3026, 1P    |
| B        | 100    | 16    |                   |                  |                           |                           |                             |                  |                  |
| C        | 300    | 16    |                   |                  |                           |                           |                             |                  |                  |
| C2       | 100    | 16    | 20-107            | PTT86            | NLW100-25                 | MT1-20                    | BL2050                      | TT25X100         | TL-1162          |
| C3       | 10     | 16    | 20-108            | CRE457A          | NLW10-15                  | MT1-5                     | MLV10-15                    | TT15X10          | TE-1155          |
| C4       | 25     | 16    | 20-258            | PTT89            | NLW25-15                  | MT1-10                    | MLV25-15                    | TT15X25          | TE-1157, 1       |
| C5       | 5      | 16    | 20-505            | CRE454A          | NLW5-15                   | MT1-3                     | MLV5-15                     | TT25X5           | TE-1152          |
| C6       | 5      | 16    | 20-505            | CRE454A          | NLW5-15                   | MT1-3                     | MLV5-15                     | TT25X5           | TE-1152          |
| C7       | 100    | 16    | 20-107            | PTT86            | NLW100-25                 | MT1-20                    | BL2050                      | TT25X100         | TL-1162          |
| C8       | 120    | 3     | 20-127            | CRE228A          | NLW125-3                  | MT1-21                    | BL1611                      | TT3X110          | TL-1061          |

\* Not normally in distributor's stock. Available thru distributor on order to manufacturer.

## FIXED CAPACITORS

| ITEM No. | RATING  | REMARKS | REPLACEMENT DATA |                    |                           |                  |                  |                  |
|----------|---------|---------|------------------|--------------------|---------------------------|------------------|------------------|------------------|
|          |         |         | AEROVOX PART No. | CENTRALAB PART No. | CORNELL-DUBILIER PART No. | ELMENCO PART No. | MALLORY PART No. | SPRAGUE PART No. |
| C10      | 22 NPO  |         | NPO-D1 22        | DTZ-22             | C10Q22C                   | CCTO-220         | CNO-422          | 10TCC-Q22        |
| C11      | 47      |         |                  |                    |                           |                  |                  |                  |
| C12      | 12 NPO  |         |                  | TCZ-12             |                           | CCTO-120         | CNO-412          | 10TCC-Q12        |
| C13      | 1-4     |         |                  |                    |                           |                  |                  |                  |
| C14      | 3 NPO   |         | NPO-DI 3         | DTZ-3R3            | C10V33C                   | CCTO-3R3         | CNO-533          | 10TCC-V30        |
| C15      | .0015   |         | EF-001           | MFT-1000           |                           | CCF-102          | CT280A           |                  |
| C16      | .0015   |         | EF-001           | MFT-1000           |                           | CCF-102          | CT280A           |                  |
| C17      | 1-4     |         |                  |                    |                           |                  |                  |                  |
| C18      | 12 NPO  |         |                  | TCZ-12             |                           | CCTO-120         | CNO-412          | 10TCC-Q12        |
| C19      | 5 NPO   |         | NPO-DI 5         | DTZ-4R7            | C10V47C                   | CCTO-050         | CNO-547          | 10TCC-V50        |
| C20      | 270     |         | NPO-SI 270       | TCZ-270            | LA10T27-C4                | CCD-271          | CNO-327          | 10TCC-T27        |
| C21      | .05 50V |         | TTD-05           | CK-503             | H5                        |                  | TA-150           | TG-850           |
| C22      | 2.2 NPO |         | NPO-DI 2.2       | DTZ-2R2            | C10V22C                   | CCTO-2R2         | CNO-522          | 10TCC-V22        |
| C23      | .02 50V |         | BPD-02           | DD-203             | BYA682                    | CCD-203          | B-120            | 5HK-820          |
| C24      | 5 NPO   |         | NPO-DI 5         | DTZ-4R7            | C10V47C                   | CCTO-050         | CNO-547          | 10TCC-V50        |
| C25      | 1-4     |         |                  |                    |                           |                  |                  |                  |
| C26      | 12 N330 |         |                  |                    |                           |                  |                  | 10TCC-Q12        |
| C27      | 180     |         | DI-180           | DD-181             | LA10T18-83                | CCD-161          | GP318            | 5GA-T18          |
| C28      | .0015   |         | EF-001           | MFT-1000           |                           | CCF-102          | CT280A           |                  |
| C29      | .02 50V |         | BPD-02           | DD-203             | BYA682                    | CCD-203          | B-120            | 5HK-820          |
| C30      | .02 50V |         | BPD-02           | DD-203             | BYA682                    | CCD-203          | B-120            | 5HK-820          |
| C31      | 3 NPO   |         | NPO-DI 3         | DTZ-3R3            | C10V33C                   | CCTO-3R3         | CNO-533          | 10TCC-V30        |

## FIXED CAPACITORS (cont)

| ITEM No. | RATING   | REMARKS   | REPLACEMENT DATA |                    |                           |                  |                  |                  |           |
|----------|----------|-----------|------------------|--------------------|---------------------------|------------------|------------------|------------------|-----------|
|          |          |           | AEROVOX PART No. | CENTRALAB PART No. | CORNELL-DUBILIER PART No. | ELMENCO PART No. | MALLORY PART No. | SPRAGUE PART No. |           |
| C32      | 390      |           |                  |                    |                           |                  |                  |                  |           |
| C33      | 5        |           |                  |                    |                           |                  |                  |                  |           |
| C34      | 1mfd 3V  | Note 1    |                  | UK-105             | HCC3105P                  |                  |                  | HY-135           |           |
| C35      | 50-250   | #28A3044  |                  |                    |                           |                  |                  |                  |           |
| C36      | 12 NPO   |           |                  | TCZ-12             |                           |                  | CCTO-120         | CNO-412          | 10TCC-Q12 |
| C37      | 250-450  | #28A2547A |                  |                    |                           |                  |                  |                  |           |
| C38      | .05 50V  |           | TTD-05           | CK-503             | H5                        |                  |                  | TA-150           | TG-850    |
| C39      | 270      |           | NPO-SI 270       | TCZ-270            | LA10T27-C4                | CCD-271          | CNO-327          | 10TCC-T27        |           |
| C40      | .0015    |           | BPD-0015         | DD-152             | LA10D15-C4                | CCD-152          | B-215            | 10T8-D15         |           |
| C41      | .02 50V  |           | BPD-02           | DD-203             | BYA682                    | CCD-203          | B-120            | 5HK-820          |           |
| C42      | 270      |           | NPO-SI 270       | TCZ-270            | LA10T27-C4                | CCD-271          | CNO-327          | 10TCC-T27        |           |
| C43      | .01      |           | BPD-01           | DD-103             | BYA10S1                   | CCD-103          | B-110            | 5HK-810          |           |
| C44      | .0047    |           | BPD-0047         | DD-472             | BYA10D47                  | CCD-472          | B-247            | 5HK-D47          |           |
| C45      | 250-450  | #28A2547A |                  |                    |                           |                  |                  |                  |           |
| C46      | 200 N750 |           | N750-D1 200      | DTN-200            | C10T2U                    | CCTN-201         | CN7-320          | 10TCU-T20        |           |
| C47      | .05 50V  | Note 2    | TTD-05           | CK-503             | H5                        |                  | TA-150           | TG-850           |           |
| C48      | .05 50V  | Note 2    | TTD-05           | CK-503             | H5                        |                  | TA-150           | TG-850           |           |
| C49      | 300      |           |                  | DM-301             |                           |                  |                  |                  |           |
| C50      | .002     |           |                  |                    |                           |                  |                  |                  |           |
| C51      | .05 50V  | Note 3    | TTD-05           | CK-503             | H5                        |                  | TA-150           | TG-850           |           |
| C52      | .05 50V  | Note 3    | TTD-05           | CK-503             | H5                        |                  | TA-150           | TG-850           |           |
| C53      | 180      |           | DI-180           | DD-181             | LA10T18-83                | CCD-181          | GP318            | 5GA-T18          |           |
| C54      | .05 50V  |           | TTD-05           | CK-503             | H5                        |                  | TA-150           | TG-850           |           |
| C55      | .02 50V  |           | TTD-02           | DD-203             | BYA682                    | CCD-203          | B-120            | 5HK-820          |           |
| C56      | .22 3V   |           |                  | UK20-204           | HCC25224Z                 |                  |                  | HY-325           |           |
| C57      | .1 16V   |           | TTD-1            | CK-104             | H6                        |                  | TA-010           | TG-P10           |           |
| C58      | .05 50V  |           | TTD-05           | CK-503             | H5                        |                  | TA-150           | TG-850           |           |
| C59      | .05 50V  |           | TTD-05           | CK-503             | H5                        |                  | TA-150           | TG-850           |           |
| C60      | 300      |           |                  | DM-301             |                           |                  |                  |                  |           |

# PENNEY'S Part Number.

Note 1 Not used in some versions.  
 Note 2 When C48 is .1mfd, C47 is not used.  
 Note 3 When C52 is .1mfd, C51 is not used.

## CONTROLS

All wattages 1/2 watt, or less, unless otherwise listed.

| ITEM No. | USE             | RESISTANCE        | REPLACEMENT DATA  |                    |                    |                  |
|----------|-----------------|-------------------|-------------------|--------------------|--------------------|------------------|
|          |                 |                   | PENNEY'S PART No. | CENTRALAB PART No. | CLAROSTAT PART No. | CTS-IRC PART No. |
| R1A      | Tone            | 10K               | 80A3001           |                    |                    |                  |
| B        | Volume & Switch | 7500Ω Tap @ 5100Ω |                   |                    |                    |                  |
| R2       | Fader           | 40Ω               | 80A3002           |                    |                    |                  |

## COILS (RF-IF)

| ITEM No. | USE              | REPLACEMENT DATA  |                |                 |                  |                  | NOTES  |
|----------|------------------|-------------------|----------------|-----------------|------------------|------------------|--|
|          |                  | PENNEY'S PART No. | MERIT PART No. | MILLER PART No. | STANCOR PART No. | WORKMAN PART No. |  |
| L1       | FM Ant.          |                   |                |                 |                  |                  | ① Part of M2, coil assembly, (Part #78A2991F)<br>② Part of M3. |
| L2       | FM RF            |                   |                |                 |                  |                  |  |
| L3       | RF Choke (.82uh) | 14-.82            | TV-169         | 4594            |                  | T804             |  |
| L4       | 1st FM IF        | 14A2931           |                |                 |                  |                  |  |
| L5       | FM Osc.          |                   |                |                 |                  |                  |  |
| L6       | 2nd FM IF        | 14A2932           |                |                 |                  |                  |  |
| L7       | RF Choke (6.2uh) | 14-6.2            | BC-565         | 4610            | RTC-8520         | T859             |  |
| L8       | AM Ant.          |                   |                |                 |                  |                  |  |
| L9       | 3rd FM IF        | 14A2933           |                |                 |                  |                  |  |
| L10      | AM RF            |                   |                |                 |                  |                  |  |
| L11      | AM Osc.          |                   |                |                 |                  |                  |  |
| L12      | 4th FM IF        | 14A2934           |                |                 |                  |                  |  |
| L13      | 1st AM IF        | 14A2935           |                |                 |                  |                  |  |
| L14      | Ratio Detector   | 14A2522           |                |                 |                  |                  |  |
| L15      | 2nd AM IF        | 14A2936           |                |                 |                  |                  |  |

PENNEY'S MODEL 3138 (984-8243)



## PARTS LIST AND DESCRIPTION (CONTINUED)

Replacement parts shown may be superseded by the availability of newly introduced replacements.  
Have your local distributor check Sams COUNTER FACTS<sup>®</sup> for the most up-to-date replacement.

### FILTER CHOKE

| ITEM No. | RATINGS            |         |                              | REPLACEMENT DATA  |                |                  |                     |                | NOTES |
|----------|--------------------|---------|------------------------------|-------------------|----------------|------------------|---------------------|----------------|-------|
|          | CURRENT (Measured) | DC RES. | INDUCTANCE (D CURRENT 1000~) | PENNEY'S PART No. | MERIT PART No. | STANCOR PART No. | THORDARSON PART No. | TRIAD PART No. |       |
| L16      | 600ma              | .5Ω     | 10MH                         | 75A1289D          | C-4095         | TC-2             | TR-155              | TY17XT         |       |

### TRANSFORMER (DRIVER)

| ITEM No. | TURNS RATIO |      | REPLACEMENT DATA  |                |                  |                     |                | NOTES |
|----------|-------------|------|-------------------|----------------|------------------|---------------------|----------------|-------|
|          | PRI.        | SEC. | PENNEY'S PART No. | MERIT PART No. | STANCOR PART No. | THORDARSON PART No. | TRIAD PART No. |       |
| T1       | 8:          | 1    | 75A2635           |                |                  | TR-184              |                |       |

### TRANSFORMER (AUDIO OUTPUT)

| ITEM No. | IMPEDANCE |      | REPLACEMENT DATA  |                |                  |                     |                | NOTES |
|----------|-----------|------|-------------------|----------------|------------------|---------------------|----------------|-------|
|          | PRI.      | SEC. | PENNEY'S PART No. | MERIT PART No. | STANCOR PART No. | THORDARSON PART No. | TRIAD PART No. |       |
| T2       | 24Ω Tap@  | 8Ω   | 75A2636           |                |                  | TR-169              |                |       |

### SPEAKER

| ITEM No. | TYPE          | REPLACEMENT DATA  |               | NOTES |
|----------|---------------|-------------------|---------------|-------|
|          |               | PENNEY'S PART No. | QUAM PART No. |       |
| SP1      | 5" X 8" PM 8Ω | 73B3113           | 58A15Z8       |       |

### COMPONENT COMBINATIONS

| ITEM No. | USE                | DESCRIPTION                                    | PENNEY'S PART No. | REPLACEMENT DATA |
|----------|--------------------|--|-------------------|------------------|
| K1       | X4 Bias -AVC       | 270Ω, 1000Ω, 82K, .05mfd, 1mfd                 | 89A2582C          |                  |
| K2       | X5 Bias            | 470Ω, 2200Ω, 18K, .1mfd                        | 89A3074           |                  |
| K3       | X7 Bias -AVC       | 470Ω, 2200Ω, 18K, .05mfd, .05mfd, .05mfd       | 89A2534           |                  |
| K4       | Ratio Det. Balance | 680Ω, 820Ω, 6800Ω, 6800Ω, 330mmf, 330mmf       | 89A2538           |                  |
| K5       | Det. Bias-Tone-AVC | 180Ω, 3900Ω, 10K, 100K, .01mfd, .01mfd, .02mfd | 89A2536           |                  |

### FUSES

| ITEM No. | TYPE | RATING | REPLACEMENT DATA  |          |                     |        |                |        |
|----------|------|--------|-------------------|----------|---------------------|--------|----------------|--------|
|          |      |        | PENNEY'S PART No. |          | LITTELFUSE PART No. |        | BLISS PART No. |        |
|          |      |        | FUSE              | HOLDER   | FUSE                | HOLDER | FUSE           | HOLDER |
| M1       | AGA  | 2A     | 108-302           | 12-1912B | 301002              | 155004 | AGA 2          | HMF    |

Some versions may use 3 Amp. Part #108-303

### MISCELLANEOUS

| ITEM No. | PART NAME         | PENNEY'S PART No. | NOTES        |              |
|----------|-------------------|-------------------|--------------|--------------|
| M2       | FM Tuner          | 78B2987A          |              |              |
| M3       | AM Tuner          |                   |              |              |
| M4       | AFC Det.          |                   | 1GD5X/1N3182 |              |
| M5       | AVC Det.          |                   | 1N541        |              |
| M6       | Overload          |                   | 1N295        |              |
| M7       | AFC Det.          |                   | 1N541/1GD2   |              |
| M8       | Ratio Det.        |                   | 1N542        |              |
| M9       | Ratio Det.        |                   | 1N542        |              |
| M10      | AM Det.           |                   | 1N295        |              |
| M11      | Voltage Regulator |                   | 43-215       |              |
| M12      | Spark Plate       |                   | 94A3028      |              |
| M13      | Selector Switch   |                   |              | Matched Pair |

### CABINETS & CABINET PARTS

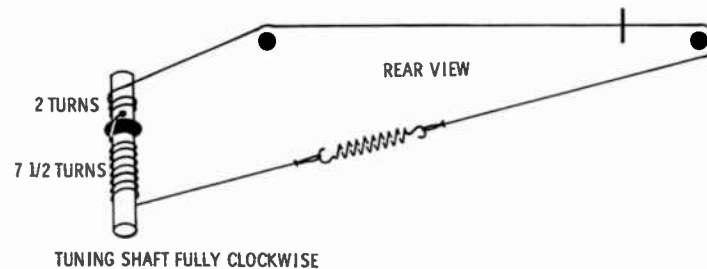
(When Ordering Specify Model, Chassis & Color)

| ITEM         | PART No. | ITEM                   | PART No. |
|--------------|----------|------------------------|----------|
| Dial Window  | 55A2997  | Knob, Tuning or Volume | 48A2225  |
| Dial Pointer | 84A2996  | Knob, Tone or Fader    | 48A1522  |

### WIRING DATA

General-use Unshielded Hook-up Wire ..... Use BELDEN No. 8530 (Solid) Available in 12 Colors  
8524 (Stranded) Available in 12 Colors  
Shielded Hook-up Wire ..... Use BELDEN No. 8885  
Rear Seat Speaker Extension Cable ..... Use BELDEN No. 8782 (Stranded) Coded Parallel Leads  
Bonding Strap ..... Use BELDEN No. 8661 (3/8 In.) or 8670 (3/4 In.)

### DIAL CORD STRINGING





# PHOTOFACT<sup>®</sup>

**TRADE NAME:** Penneys Model 3143 (985-8358)  
**SUPPLIER:** For Current Address, See Master Index.  
**TYPE SET:** 5 Transistor AM Receiver  
**POWER SUPPLY:** 12 Volt Storage Battery  
**RATING:** .680 Amp. @ 12.6 Volts DC  
**TUNING RANGE:** BROADCAST 540-1615KC



## ALIGNMENT INSTRUCTIONS

Check for specified source voltage.

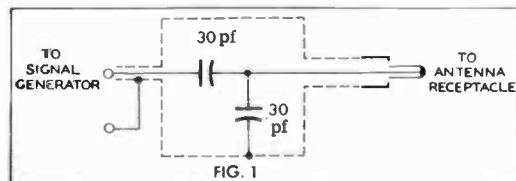
Use only enough generator output to provide a usable indication.

Suggested Alignment Tools:

|            |                                   |                          |
|------------|-----------------------------------|--------------------------|
| A1 thru A4 | GENERAL CEMENT: 8606, 8606L, 8869 | WALSCO: 2543, 2544, 2588 |
| A5, A6, A7 | GENERAL CEMENT: 8290, 8868, 9087  | WALSCO: 2525, 2528, 2587 |

|    | SIGNAL GENERATOR COUPLING                                    | SIGNAL GENERATOR FREQUENCY | RADIO DIAL SETTING   | INDICATOR                       | ADJUST         | REMARKS             |
|----|--|----------------------------|----------------------|---------------------------------|----------------|---------------------|
| 1. | High side thru .1mfd to point <b>A</b> , low side to ground. | 262KC (400v Mod.)          | High Freq. End Stop. | Output Meter across voice coil. | A1, A2, A3, A4 | Adjust for maximum. |
| 2. | Thru dummy (Fig. 1) to antenna receptacle.                   | 1615KC                     | "                    | "                               | A5, A6, A7     | "                   |

With radio installed in car and antenna fully extended, tune in a weak station near 1400KC and adjust A7 for maximum output.

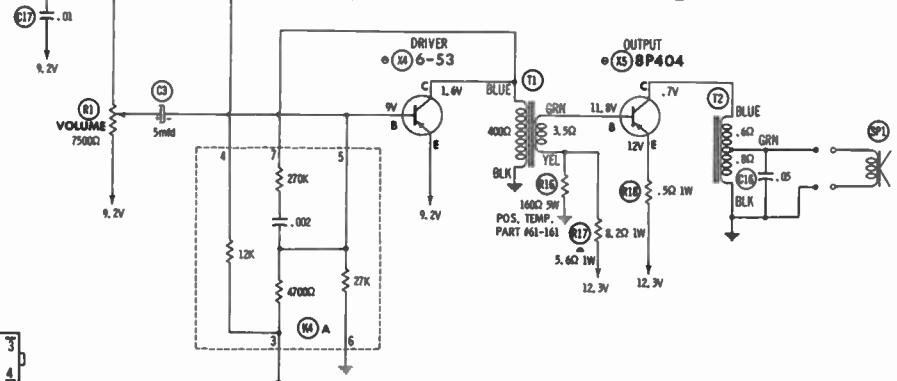
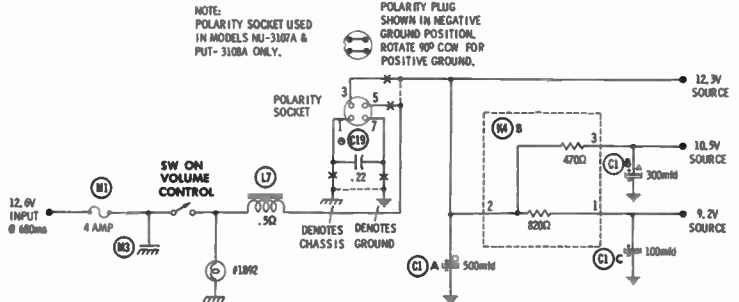
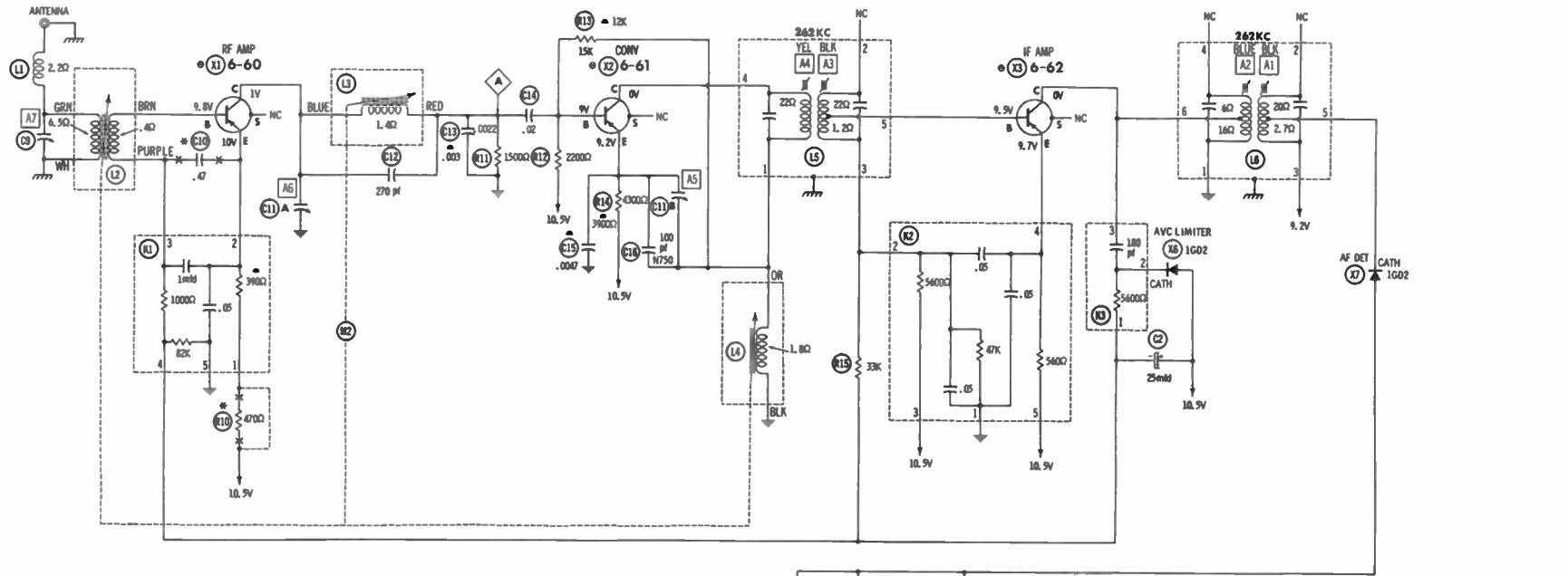


PENNEYS MODEL 3143 (985-8358)

**HOWARD W. SAMS & CO., INC.** Indianapolis 6, Indiana

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World Radio History



◻ NOMINAL VALUE MAY VARY.

\* NOT USED IN SOME VERSIONS.

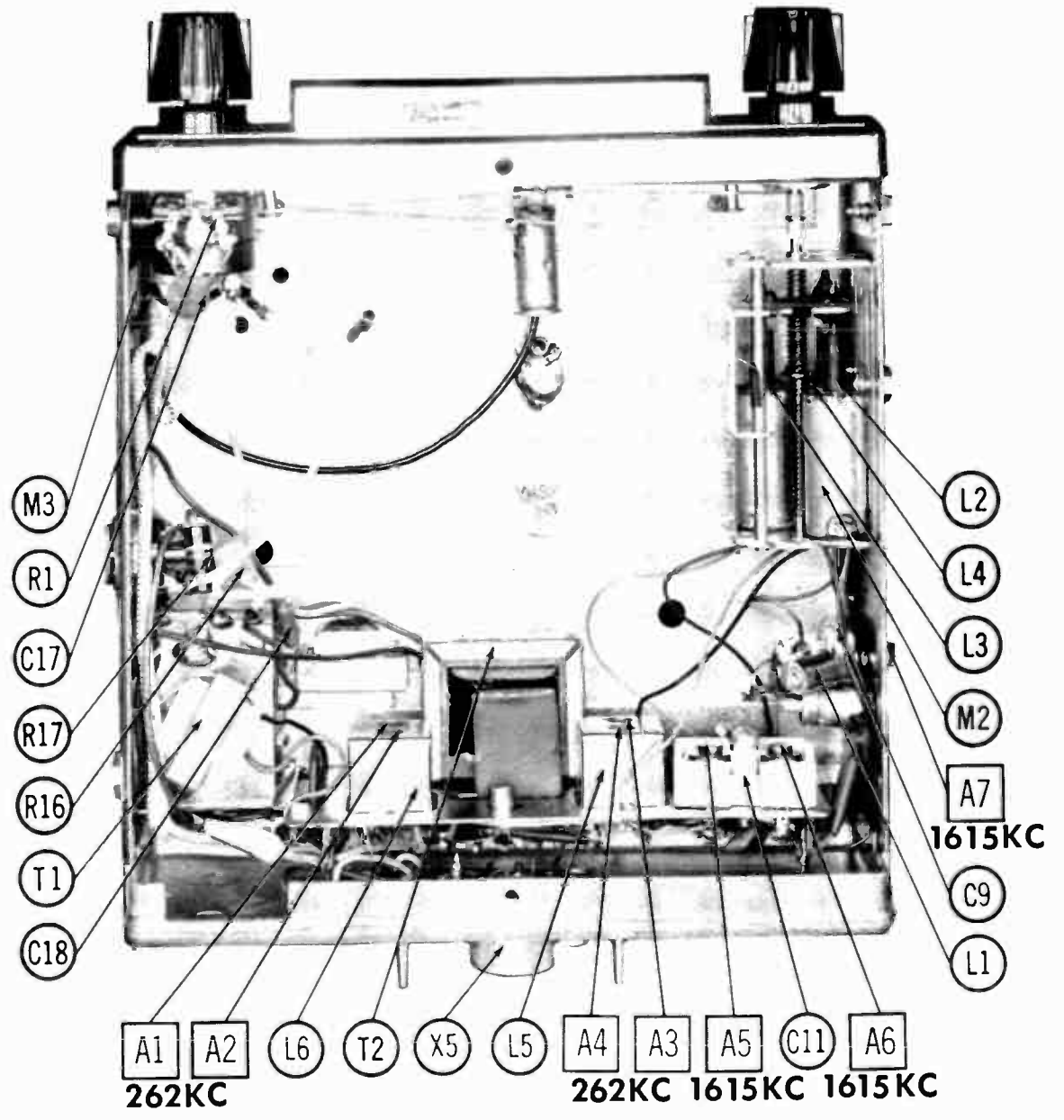
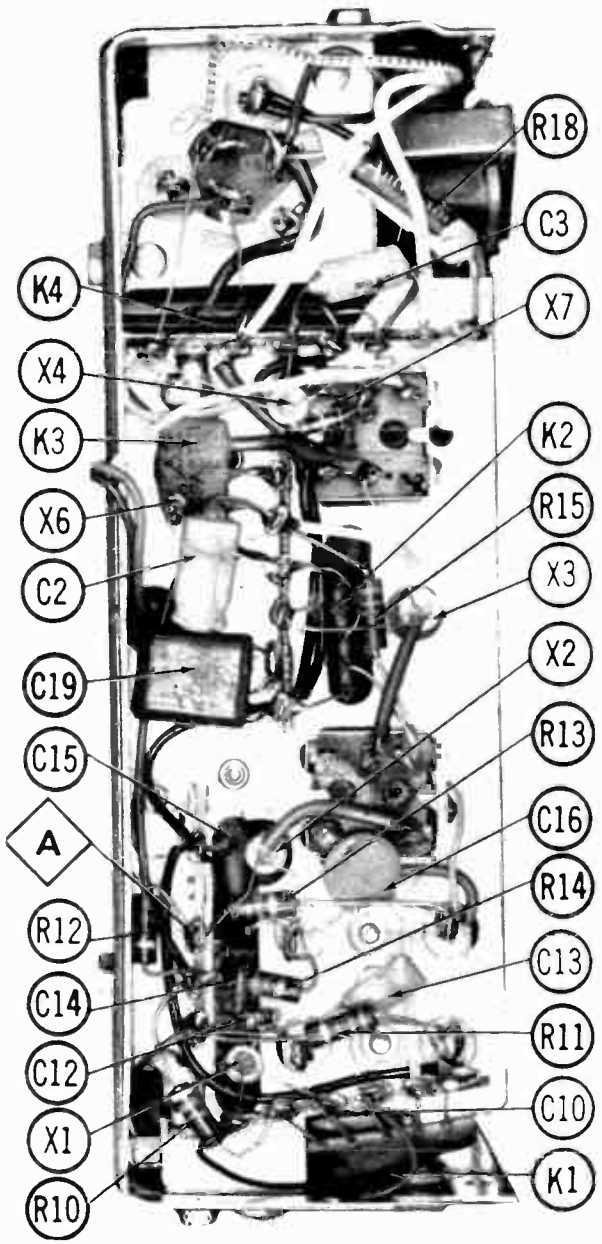
Resistors are 1/2 watt or less and rated 10% or 20% unless otherwise indicated.

- ① See parts list for alternate value or application.
- 1. Voltage measurements taken with vacuum tube voltmeter.
- 2. All controls set for normal operation, no signal applied.
- 3. Measured values are from socket pin or terminal to common ground.
- 4. All terminals viewed from bottom unless otherwise designated.
- 5. Numbers assigned to terminals may not be found on the unit.
- 6. Supply voltage maintained at rated value for voltage readings.
- 7. Resistance measurements not given because of the wide variation in internal resistance of transistor.



A PHOTOFAC STANDARD NOTATION SCHEMATIC  
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PENNEY'S MODEL 3143 (985-8358)



PENNYS MODEL 3143 (985-8358)



# PARTS LIST AND DESCRIPTION

Replacement parts shown may be superseded by the availability of newly introduced replacements.  
Have your local distributor check Sams COUNTER FACTS for the most up-to-date replacement.

## WIRING DATA

|   |  |
|---|--|
| General-use Unshielded Hook-up Wire ..... | Use BELDEN No. 8530 (Solid) Available in 12 Colors<br>8524 (Stranded) Available in 12 Colors |
| Shielded Hook-up Wire .....               | Use BELDEN No. 8885  |
| Rear Seat Speaker Extension Cable .....   | Use BELDEN No. 8782 (Stranded) Coded Parallel Leads  |
| Bonding Strap .....                       | Use BELDEN No. 8661 (3/8 In.) or 8670 (3/4 In.)  |

## TRANSISTORS

| ITEM No. | ORIG. TYPE       | USE     | REPLACEMENT DATA |                           |              | NOTES |
|----------|------------------|---------|------------------|---------------------------|--------------|-------|
|          |                  |         | DELCO PART No.   | GENERAL ELECTRIC PART No. | RCA PART No. |       |
| X1       | 6-60<br>(2N640)  | RF Amp. | DS-25            | GE-1                      | 2N1637       | PNP   |
| X2       | 6-81<br>(2N642)  | Conv.   | DS-25            | GE-1                      | 2N1639       | PNP   |
| X3       | 6-82<br>(2N641)  | IF Amp. | DS-25            | GE-1                      | 2N1638       | PNP   |
| X4       | 6-53<br>(2N591)  | Driver  | DS-26            | GE-2                      | 2N591        | PNP   |
| X5       | 8P404<br>(2N178) | Output  | DS-520           | GE-3                      | 2N301        | PNP*  |

\* When replacing, apply silicon grease to both sides of insulator. Tighten mounting screws securely.

## POWER RECTIFIERS & SIGNAL DIODES

| ITEM No. | MEASURED CURRENT | ORIGINAL Part or Type No. | RECTIFIERS                |                  |              |                         | DIODES                    |
|----------|------------------|---------------------------|---------------------------|------------------|--------------|-------------------------|---------------------------|
|          |                  |                           | GENERAL ELECTRIC PART No. | MALLORY PART No. | RCA PART No. | SARKES TARZIAN PART No. | GENERAL ELECTRIC PART No. |
| X6       |                  | 1GD2                      |                           |                  |              |                         | 1N34AS                    |
| X7       |                  | 1GD2                      |                           |                  |              |                         | 1N34AS                    |

## ELECTROLYTIC CAPACITORS

| ITEM No. | RATING |       | PENNEY'S Part No. | AEROVOX Part No. | CORNELL-DUBILIER Part No. | GENERAL ELECTRIC Part No. | GENERAL INSTRUMENT Part No. | MALLORY Part No. | SPRAGUE Part No. |
|----------|--------|-------|-------------------|------------------|---------------------------|---------------------------|-----------------------------|------------------|------------------|
|          | CAP.   | VOLT. |                   |                  |                           |                           |                             |                  |                  |
| C1A      | 500    | 16    | 20-2653           | AFH3-00-04.5     |                           | XC3-48.1                  |                             | FP300.83         | TVLS-3026.14*    |
| B        | 300    | 16    |                   |                  |                           |                           |                             |                  |                  |
| C        | 100    | 16    |                   |                  |                           |                           |                             |                  |                  |
| C2       | 25     | 15    | 20-256            | PTT89            | NLW25-15                  | MT1-10                    | MLV25-15                    | TT15X25          | TE-1157.1        |
| C3       | 5      | 15    | 20-505            | CRE454A          | NLW5-15                   | MT1-3                     | MLV5-15                     | TT25X5           | TE-1152          |

\* Not normally in distributor's stock. Available thru distributor on order to manufacturer.

## FIXED CAPACITORS

| ITEM No. | RATING   | REMARKS    | REPLACEMENT DATA |                    |                           |                  |                  |                  |        |
|----------|----------|------------|------------------|--------------------|---------------------------|------------------|------------------|------------------|--------|
|          |          |            | AEROVOX Part No. | CENTRALAB Part No. | CORNELL-DUBILIER Part No. | ELMENCO Part No. | MALLORY Part No. | SPRAGUE Part No. |        |
| C9       | .47 3V   | #26-800-2L |                  |                    |                           |                  |                  |                  |        |
| C10      |          | ①          |                  | UK10-404           | HCC10474Z                 |                  |                  |                  | HY-330 |
| C11A     |          | #28A1332   |                  |                    |                           |                  |                  |                  |        |
| B        |          |            |                  |                    |                           |                  |                  |                  |        |
| C12      | 270      |            | DI-270           | DD-271             | LA10T27-C4                | CCD-271          | GP327            | 5GA-T25          |        |
| C13      | .0022    |            | BPD-0022         | DD-222             | LA10D22-C4                | CCD-222          | B222             | 10TS-D22         |        |
| C14      | .02      | (.003) †   | TTD-02           | CK-203             | H3                        |                  | TA120            | TG-520           |        |
| C15      | .0047    |            | BPD-0047         | DD-472             | BYA10D47                  | CCD-472          | B247             | 5HK-D47          |        |
| C16      | 100 N750 |            | N750-DX100       | DTN-100            | C10T1U                    | CCTN-101         | CN7310           | 10TCU-T10        |        |
| C17      | .01      |            | BPD-01           | DD-103             | BYA10S1                   | CCD-103          | B110             | 5HK-S10          |        |
| C18      | .05      |            | TTD-05           | CK-503             | H5                        |                  | TA150            | TG-550           |        |
| C19      | .22      | ①          |                  | UK20-204           | HCC25224Z                 |                  |                  | HY-325           |        |

# PENNEY'S Part Number.

† Alternate Value.

① Not used in some versions

## CONTROLS

All wattages 1/2 watt, or less, unless otherwise listed.

| ITEM No. | USE    | RESISTANCE | REPLACEMENT DATA      |                               |                    |                  |  |  |
|----------|--------|------------|-----------------------|-------------------------------|--------------------|------------------|--|--|
|          |        |            | PENNEY'S Part No.     | CENTRALAB Part No.            | CLAROSTAT Part No. | CTS-IRC Part No. | MALLORY Part No.   |  |
| R1       | Volume | 7500Ω      | 80A2916A<br>(80A2916) | F2-10K,SFS212,<br>AK-31, KR-4 |                    |                  | B13-116, TM8,<br>QCB4 ①, 76-1<br>or (BU14 ②)<br>CF61, 884, GC) |  |

① Use QCB4 instead of Tab Mount Plate in TM8.

② Alter bushing to meet requirements.

## RESISTORS (Power and Special)

| ITEM No. | RATING         | REPLACEMENT DATA |                  |                   | ITEM No. | RATING | REPLACEMENT DATA |                  |          |
|----------|----------------|------------------|------------------|-------------------|----------|--------|------------------|------------------|----------|
|          |                | IRC Part No.     | WORKMAN Part No. | PENNEY'S Part No. |          |        | IRC Part No.     | WORKMAN Part No. | Part No. |
| R16      | 160Ω 5W<br>PTC |                  |                  | 61-161            |          |        |                  |                  |          |

## PARTS LIST AND DESCRIPTION (CONTINUED)

Replacement parts shown may be superseded by the availability of newly introduced replacements.  
Have your local distributor check Sams COUNTER FACTS<sup>®</sup> for the most up-to-date replacement.

### COILS (RF-IF)

| ITEM No.                         | USE  | REPLACEMENT DATA                               |                |                 |                  |                  | NOTES         |
|----------------------------------|--|--|----------------|-----------------|------------------|------------------|---------------|
|                                  |  | PENNEY'S PART No.                              | MERIT PART No. | MILLER PART No. | STANCOR PART No. | WORKMAN PART No. |               |
| L1<br>L2<br>L3<br>L4<br>L5<br>L6 | RF Choke (6, 2ah)<br>Ant.<br>RF<br>Osc.<br>Input IF<br>Output IF | 14-6, 2<br>①<br>①<br>①<br>14-3233A<br>14-3234A | BC-565         | 4610            | RTC-8520         | T850             | ① Part of M2. |

### FILTER CHOKE

| ITEM No. | RATINGS            |         |                              | REPLACEMENT DATA  |                |                  |                     |                | NOTES |
|----------|--------------------|---------|------------------------------|-------------------|----------------|------------------|---------------------|----------------|-------|
|          | CURRENT (Measured) | DC RES. | INDUCTANCE (0 CURRENT 1000~) | PENNEY'S PART No. | MERIT PART No. | STANCOR PART No. | THORDARSON PART No. | TRIAD PART No. |       |
| L7       | .680               | .5Ω     | 10MH                         | 75A3082           | C-4095         | TC-2             | TR-155              | TY17XT         |       |

### TRANSFORMER (DRIVER)

| ITEM No. | TURNS RATIO |      | REPLACEMENT DATA |                |                  |                     |                | NOTES |
|----------|-------------|------|------------------|----------------|------------------|---------------------|----------------|-------|
|          | PRI.        | SEC. | PART No.         | MERIT PART No. | STANCOR PART No. | THORDARSON PART No. | TRIAD PART No. |       |
| T1       | 8:          | 1    | 75A2635          |                |                  | TR-184              |                |       |

### TRANSFORMER (AUDIO OUTPUT)

| ITEM No. | IMPEDANCE |      | REPLACEMENT DATA     |                |                  |                     |                | NOTES |
|----------|-----------|------|----------------------|----------------|------------------|---------------------|----------------|-------|
|          | PRI.      | SEC. | PENNEY'S PART No.    | MERIT PART No. | STANCOR PART No. | THORDARSON PART No. | TRIAD PART No. |       |
| T2       | 24Ω Tap   | @ 8Ω | 75A2638<br>(75A2636) |                |                  | TR-169              |                |       |

### SPEAKER

| ITEM No. | TYPE     | REPLACEMENT DATA  |               | NOTES |
|----------|----------|-------------------|---------------|-------|
|          |          | PENNEY'S PART No. | QUAM PART No. |       |
| SP1      | 5" PM 8Ω | 73A2163           | 5A05Z8        |       |

### COMPONENT COMBINATIONS

| ITEM No. | USE          | DESCRIPTION                                | PENNEY'S PART No. | REPLACEMENT DATA |
|----------|--------------|--|-------------------|------------------|
| K1       | RF Amplifier | 390Ω, 1000Ω, 82K, .05mfd, 1mfd             | 89A2582C          |                  |
| K2       | IF Amplifier | 560Ω, 5600Ω, 47K, .05mfd, .05mfd, .05mfd   | 89A2584B          |                  |
| K3       | AVC          | 5600Ω, 180pf                               | 89A2701           |                  |
| K4       | A/F Amp.     | 470Ω, 820Ω, 4700Ω, 12K, 27K, 270K, .002mfd | 89A2585A          |                  |

### FUSES

| ITEM No. | TYPE | RATING | REPLACEMENT DATA  |        |                     |        |               |        |
|----------|------|--------|-------------------|--------|---------------------|--------|---------------|--------|
|          |      |        | PENNEY'S PART No. |        | LITTELFUSE PART No. |        | BUSS PART No. |        |
|          |      |        | FUSE              | HOLDER | FUSE                | HOLDER | FUSE          | HOLDER |
| M1       | AGW  | 4A     |                   |        | 30S004              | 155004 | AGW4          | H4H    |

### MISCELLANEOUS

| ITEM No. | PART NAME   | PENNEY'S PART No. | NOTES |
|----------|-------------|-------------------|-------|
| M2       | Tuner       | 78A3602           |       |
| M3       | Spark Plate | 43-216            |       |

### CABINETS & CABINET PARTS

(When Ordering Specify Model, Chassis & Color)

| ITEM       | PART No. | ITEM                   | PART No. |
|------------|----------|------------------------|----------|
| Escutcheon | 55C3605  | Knob, Tuning or Volume | 47A1235  |
| Dial Glass | 39-78    | Knob, Spacer           | 47A1249  |

PENNEY'S MODEL 31A3 (985-8358)



# PHOTOFACT®



**TRADE NAME :**

|                 |                        |
|-----------------|------------------------|
| Penneys Models  |                        |
| 3160 (985-8408) | 1964 Chevelle          |
| 3161 (985-8416) | 1963/64 Chevrolet      |
| 3162 (985-8424) | 1963/64 Chevy II       |
| 3171 (985-8515) | 1964 F-85              |
| 3174 (985-8549) | 1964 Oldsmobile        |
| 3176 (985-8564) | 1963/64 Pontiac        |
| 3179 (985-8275) | 1964 Tempest           |
| 3180 (985-8291) | 1964 Chevrolet         |
| 3181 (985-8309) | 1960 thru 1964 Corvair |
| 3182 (985-8317) | 1963/64 Chevy II       |

**SUPPLIER :** For Current Address, See Master Index.

**TYPE SET :** 5 Transistor AM Receiver

**POWER SUPPLY :** 12 Volt Storage Battery

**RATING :** .870 Amp. @ 12.6 Volts DC

**TUNING RANGE :** BROADCAST 540-1615KC

## ALIGNMENT INSTRUCTIONS

Check for specified source voltage.

Use only enough generator output to provide a usable indication.

Suggested Alignment Tools:

A1 thru A4

GENERAL CEMENT: 8606, 8606L, 8869

WALSCO: 2543, 2544, 2588

A5 thru A7

GENERAL CEMENT: 8290, 8868, 9087

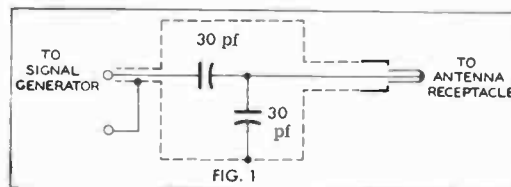
WALSCO: 2525, 2528, 2587

|    | SIGNAL GENERATOR COUPLING                            | SIGNAL GENERATOR FREQUENCY | RADIO DIAL SETTING   | INDICATOR                       | ADJUST         | REMARKS             |
|----|--|----------------------------|----------------------|---------------------------------|----------------|---------------------|
| 1. | High side thru .1mfd to point A, low side to ground. | 262KC (400% Mod.)          | High Freq. End Stop. | Output Meter across voice coil. | A1, A2, A3, A4 | Adjust for maximum. |
| 2. | Thru dummy (Fig. 1) to antenna receptacle.           | 1615KC                     | "                    | "                               | A5, A6, A7     | "                   |

With radio installed in car and antenna fully extended, tune in a weak station near 1400KC and adjust A7 for maximum output.

### PUSH-BUTTON ADJUSTMENT

1. Pull button out.
2. Tune manually to desired station.
3. Press button in firmly.
4. Repeat for remaining buttons.



**HOWARD W. SAMS & CO., INC.** Indianapolis 6, Indiana

PENNEYS MODELS 3160/1/2, 3171/4/6/9, 3180/1/2

# PARTS LIST AND DESCRIPTION

Replacement parts shown may be superseded by the availability of newly introduced replacements.  
 Have your local distributor check Sams COUNTER FACTS<sup>®</sup> for the most up-to-date replacement.  
**TRANSISTORS**

| ITEM No. | ORIG. TYPE       | USE     | REPLACEMENT DATA |                           |              | NOTES |
|----------|------------------|---------|------------------|---------------------------|--------------|-------|
|          |                  |         | DELCO PART No.   | GENERAL ELECTRIC PART No. | RCA PART No. |       |
| X1       | 6-60<br>(2N640)  | RF Amp. | D8-25            | GE-1                      | 2N1637       | PNP   |
| X2       | 6-61<br>(2N642)  | Conv.   | D8-25            | GE-1                      | 2N1639       | PNP   |
| X3       | 6-62<br>(2N641)  | IF Amp. | D8-25            | GE-1                      | 2N1638       | PNP   |
| X4       | 6-53<br>(2N591)  | Driver  | D8-26            | GE-2                      | 2N591        | PNP   |
| X5       | 8P404<br>(2N176) | Output  | D8-520           | GE-3                      | 2N301        | PNP*  |

\* When replacing, apply silicon grease to both sides of insulator. Tighten mounting screws securely.

## POWER RECTIFIERS & SIGNAL DIODES

| ITEM No. | MEASURED CURRENT | ORIGINAL Part or Type No. | RECTIFIERS                |                  |              |                         | DIODES                    |
|----------|------------------|---------------------------|---------------------------|------------------|--------------|-------------------------|---------------------------|
|          |                  |                           | GENERAL ELECTRIC PART No. | MALLORY PART No. | RCA PART No. | SARKES TARZIAN PART No. | GENERAL ELECTRIC PART No. |
| X6       |                  | 1GD2                      |                           |                  |              |                         | 1N34AS                    |
| X7       |                  | 1GD2                      |                           |                  |              |                         | 1N34AS                    |

## ELECTROLYTIC CAPACITORS

| ITEM No. | RATING |       | PENNEY'S PART No. | REPLACEMENT DATA |                           |                           |                             |                  |                  |
|----------|--------|-------|-------------------|------------------|---------------------------|---------------------------|-----------------------------|------------------|------------------|
|          | CAP.   | VOLT. |                   | AEROVOX PART No. | CORNELL-DUBILIER PART No. | GENERAL ELECTRIC PART No. | GENERAL INSTRUMENT PART No. | MALLORY PART No. | SPRAGUE PART No. |
| C1A      | 500    | 18    | 20-2853           | A7H3-00-045      |                           | XC3-48.1                  |                             | FP300.83         | TVLS3026.1*      |
| B        | 300    | 18    |                   |                  |                           |                           |                             |                  |                  |
| C        | 100    | 18    |                   |                  |                           |                           |                             |                  |                  |
| C2       | 25     | 15    | 20-258            | PTT69            | NLW25-15                  | MT1-10                    | MLV25-15                    | TT15X25          | TE-2257.1        |
| C3       | 5      | 15    | 20-505            | CRE454A          | NLW5-15                   | MT1-3                     | MLV5-15                     | TT25X5           | TE-1152          |

\* Not normally in distributor's stock. Available thru distributor on order to manufacturer.

## FIXED CAPACITORS

| ITEM No. | RATING | REMARKS    | REPLACEMENT DATA |                    |                           |                  |                  |                  |  |
|----------|--------|------------|------------------|--------------------|---------------------------|------------------|------------------|------------------|--|
|          |        |            | AEROVOX PART No. | CENTRALAB PART No. | CORNELL-DUBILIER PART No. | ELMENCO PART No. | MALLORY PART No. | SPRAGUE PART No. |  |
| C10      |        | #28-800-2L |                  |                    |                           |                  |                  |                  |  |
| C11A     |        | #28A1332   |                  |                    |                           |                  |                  |                  |  |
| B        |        |            |                  |                    |                           |                  |                  |                  |  |
| C12      | 270    |            | DI-270           | DD-271             | LA10T27-C4                | CCD-271          | GP327            | 5GA-T25          |  |
| C13      | 100    | N750       | N750-DI100       | DTN-100            | C10T1U                    | CCTN-101         | CN7310           | 10TCU-T10        |  |
| C14      | .01    |            | BPD-01           | DD-103             | BYA10S1                   | CCD-103          | B110             | 5HK-S10          |  |
| C15      | .22    |            |                  | UK20-204           | HCC25224Z                 |                  |                  | HY-325           |  |
| C16      | .1     | 16V        | TTD-1            | CK-104             | H8                        |                  | TA010            | TG-P10           |  |
| C17      | .05    |            | TTD-05           | CK-503             | H5                        |                  | TA150            | TG-S50           |  |

# PENNEY'S Part Number.

## CONTROLS

All wattages 1/2 watt, or less, unless otherwise listed.

| ITEM No. | USE                | RESISTANCE  | REPLACEMENT DATA  |                    |                    |                  |                  |           |
|----------|--------------------|-------------|-------------------|--------------------|--------------------|------------------|------------------|-----------|
|          |                    |             | PENNEY'S PART No. | CENTRALAB PART No. | CLAROSTAT PART No. | CTS-IRC PART No. | MALLORY PART No. |           |
| R1A      | Tone Volume/Switch | 10K         | 80A2772           |                    |                    |                  | † QJ-1887A       | #UE4459-S |
|          |                    | Tap @ 5000Ω |                   |                    |                    |                  |                  |           |
|          |                    | 10K         | 80A3402①          |                    |                    |                  |                  |           |
|          |                    | Tap @ 5000Ω |                   |                    |                    |                  |                  |           |
| B        | Tone Volume/Switch | 10K         | 80A3443②          |                    |                    |                  |                  |           |
|          |                    | Tap @ 5000Ω |                   |                    |                    |                  |                  |           |
|          |                    | 10K         | 80A3469③          |                    |                    |                  |                  |           |
|          |                    | Tap @ 5000Ω |                   |                    |                    |                  |                  |           |
| R2       | Fader              | 25Ω 2W      | 80A1137④          |                    |                    |                  | ▲ QJ-1818A       |           |
|          |                    | 40Ω 2W      | 80A2685⑤          |                    |                    |                  |                  |           |
|          |                    | 40Ω 2W      | 80A2774⑥          |                    |                    |                  | †† QJ-1806A      |           |
|          |                    | 40Ω 2W      | 80A2879⑦          |                    |                    |                  | ††† QJ-1688A     |           |
|          |                    | 40Ω 2W      | 80A3403⑧          |                    |                    |                  |                  |           |
|          |                    | 40Ω 2W      | 80A3470⑨          |                    |                    |                  |                  |           |

① Used in Model 3160

② Used in Model 3179

③ Used in Model 3171

④ Used in some versions.

⑤ Used in Models 3161, 3180

⑥ Used in Models 3176, 3174

† "CONCENTRIKIT" Equivalent: K8 Kit with Base Elements and Shafts: B11-116, P17-129 (Panel)  
 "SNAPTROL" Equivalent: BU8, CF9, CR48T, SF18, SR51, GC.

†† "CONCENTRIKIT" Equivalent: K10 Kit with Base Elements and Shafts: W11-050, P3-100 (Panel)  
 None, None (Rear)  
 QCB6 (Bushing)

††† "SNAPTROL" Equivalent: BU8, WF18, SF5

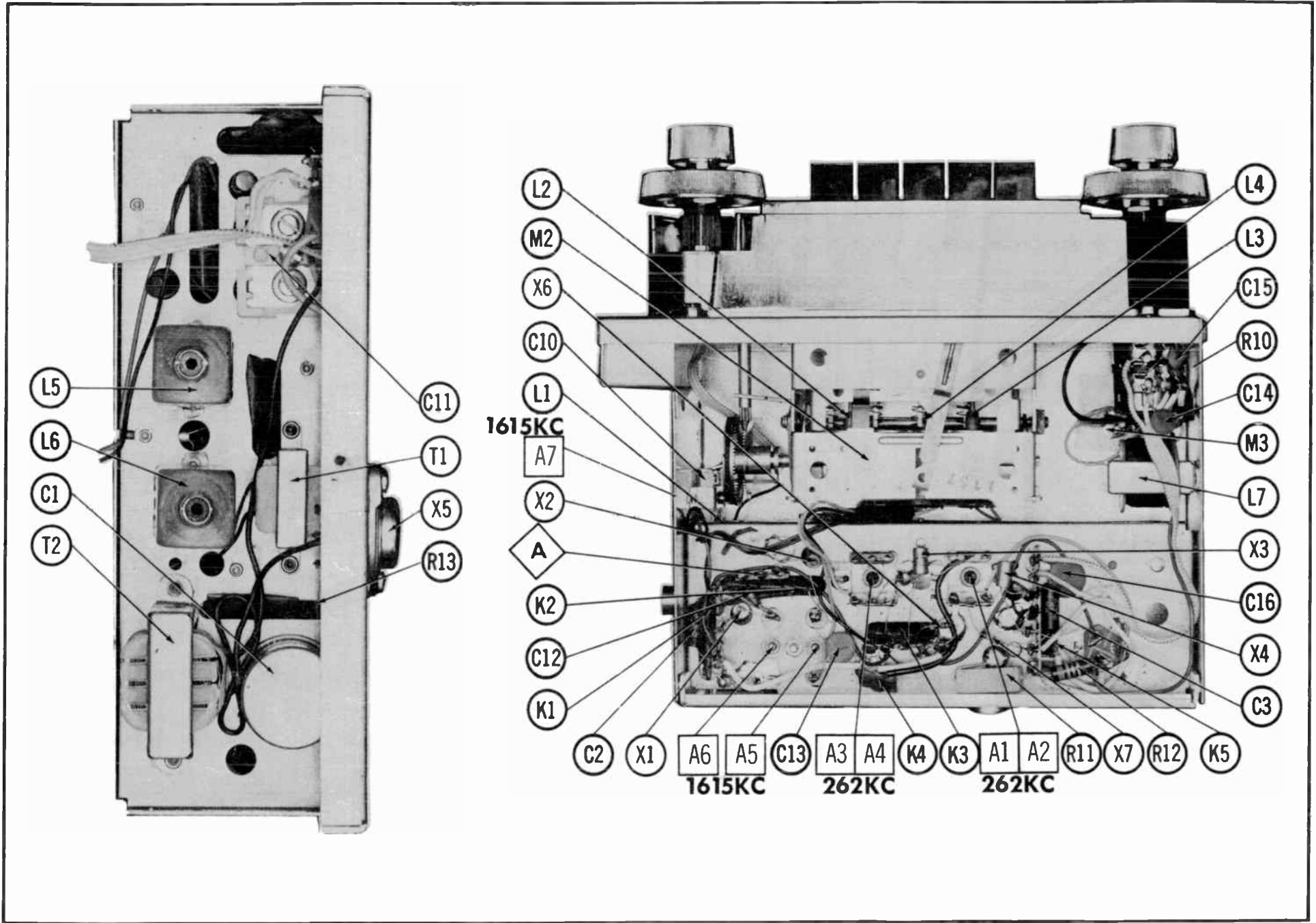
■ "STA-LOC" Equivalent: FG14L, RU752T53, OS2000, IS2437, US41.

▲ "CONCENTRIKIT" Equivalent: K13 Kit with Base Elements and Shafts: W11-020, P3-100 (Panel)  
 None, None (Rear)  
 QCB6 (Bushing)

CONTINUED PAGE 118







PENNYS MODELS 3160/1/2, 3171/4/6/9, 3180/1/2

## PARTS LIST AND DESCRIPTION (CONTINUED)

Replacement parts shown may be superseded by the availability of newly introduced replacements.  
Have your local distributor check Sams COUNTER FACTS<sup>(8)</sup> for the most up-to-date replacement.

### COILS (RF-IF)

| ITEM No. | USE              | REPLACEMENT DATA  |                |                 |                  |                  | NOTES         |
|----------|------------------|-------------------|----------------|-----------------|------------------|------------------|---------------|
|          |                  | PENNEY'S PART No. | MERIT PART No. | MILLER PART No. | STANCOR PART No. | WORKMAN PART No. |               |
| L1       | RF Choke (6.2uh) | 14-6.2            | BC-585         | 4610            | RTC-8520         | T859             | ① Part of M2. |
| L2       | Ant.             | ①                 |                |                 |                  |                  |               |
| L3       | RF               | ①                 |                |                 |                  |                  |               |
| L4       | Osc.             | ①                 |                |                 |                  |                  |               |
| L5       | Input IF         | 14-2654           |                |                 |                  |                  |               |
| L6       | Output IF        | 14-2655           |                | 6571            |                  |                  |               |

### FILTER CHOKE

| ITEM No. | RATINGS            |         |                              | REPLACEMENT DATA  |                |                  |                     |                | NOTES |
|----------|--------------------|---------|------------------------------|-------------------|----------------|------------------|---------------------|----------------|-------|
|          | CURRENT (Measured) | DC RES. | INDUCTANCE (0 CURRENT 1000~) | PENNEY'S PART No. | MERIT PART No. | STANCOR PART No. | THORDARSON PART No. | TRIAD PART No. |       |
| L7       | 870ma              | .5Ω     | 10MH                         | 75A1269           | C-4095         | TC-2             | TR-155              | TY17XT         |       |

### TRANSFORMER (DRIVER)

| ITEM No. | TURNS RATIO |      | REPLACEMENT DATA  |                |                  |                     |                | NOTES |
|----------|-------------|------|-------------------|----------------|------------------|---------------------|----------------|-------|
|          |             |      | PENNEY'S PART No. | MERIT PART No. | STANCOR PART No. | THORDARSON PART No. | TRIAD PART No. |       |
|          | PRI.        | SEC. |                   |                |                  |                     |                |       |
| T1       | 8:          | 1    | 75A2635           |                |                  | TR-184              |                |       |

### TRANSFORMER (AUDIO OUTPUT)

| ITEM No. | IMPEDANCE |      | REPLACEMENT DATA   |                |                  |                     |                | NOTES                             |
|----------|-----------|------|--------------------|----------------|------------------|---------------------|----------------|-----------------------------------|
|          |           |      | Automatic PART No. | MERIT PART No. | STANCOR PART No. | THORDARSON PART No. | TRIAD PART No. |                                   |
|          | PRI.      | SEC. |                    |                |                  |                     |                |                                   |
| T2       | 24Ω Tap   | @ 8Ω | 75A2636 ①          |                |                  |                     | TR-189         | ① 75A2693, Alternate Part Number. |

### SPEAKER

| ITEM No. | TYPE        |    | REPLACEMENT DATA  |               | NOTES   |
|----------|-------------|----|-------------------|---------------|---|
|          |             |    | PENNEY'S PART No. | QUAM PART No. |   |
| SP1      | 6" X 9" PM  | 8Ω | 73B2671           | 69A3Z8        | Used in Model 3181.<br>Used in Models 3160, 3162, 3171, 3174, 3176, 3179, 3182.<br>Used in Models 3161, 3180. |
|          | 4" X 10" PM | 8Ω | 73B2737           | 410A2Z8       |   |
|          | 6" X 9" PM  | 8Ω | 73B3374           | 69A3Z8        |   |

### COMPONENT COMBINATIONS

| ITEM No. | USE     | DESCRIPTION                                       | PENNEY'S PART No. | REPLACEMENT DATA |
|----------|---------|---|-------------------|------------------|
| K1       | Biasing | 390Ω, 1000Ω, 82K, .05mfd, 1mfd                    | 89A2582C          |                  |
| K2       | Biasing | 150Ω, 1000Ω, 4700Ω, 47K, .005mfd, .015mfd, .02mfd | 89A2583           |                  |
| K3       | Biasing | 560Ω, 5600Ω, 47K, .05mfd, .05mfd                  | 89A2584           |                  |
| K4       | AVC     | 5600Ω, 180pf                                      | 89A2701           |                  |
| K5       | Biasing | 470Ω, 820Ω, 4700Ω, 12K, 27K, 270K, .002mfd.       | 89A2585           |                  |

### FUSES

| ITEM No. | TYPE | RATING | REPLACEMENT DATA  |               |                     |        |               |  |
|----------|------|--------|-------------------|---------------|---------------------|--------|---------------|--|
|          |      |        | PENNEY'S PART No. |               | LITTELFUSE PART No. |        | BUSS PART No. |  |
|          |      |        | FUSE              | HOLDER        | FUSE                | HOLDER |               |  |
| M1       | AGW  | 4A     |                   | In Fuse Block | 303004              |        | AGW4          |  |

### MISCELLANEOUS

| ITEM No. | PART NAME   | PENNEY'S PART No. | NOTES |
|----------|-------------|-------------------|-------|
| M2       | Tuner       | 78B2689           |       |
| M3       | Spark Plate | 43-216            |       |

### CABINETS & CABINET PARTS

(When Ordering Specify Model, Chassis & Color)

| ITEM                   | PART No. | ITEM                | PART No. |
|------------------------|----------|---------------------|----------|
| Escutcheon             | 54C2644  | Knob, Tone or Fader | 48B1872  |
| Dial Glass             | 39-86    | Pushbutton          | 55A2662  |
| Knob, Tuning or Volume | 48A2854  |                     |          |

### WIRING DATA

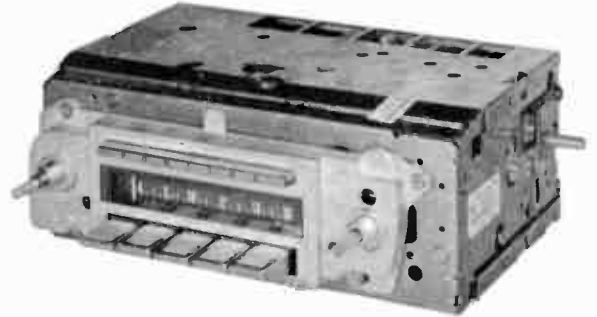
|   |  |
|---|--|
| General-use Unshielded Hook-up Wire ..... | Use BELDEN No. 8530 (Solid) Available in 12 Colors<br>8524 (Stranded) Available in 12 Colors |
| Shielded Hook-up Wire .....               | Use BELDEN No. 8885  |
| Rear Seat Speaker Extension Cable .....   | Use BELDEN No. 8782 (Stranded) Coded Parallel Leads  |
| Bonding Strap .....                       | Use BELDEN No. 8661 (3/8 In.) or 8670 (3/4 In.)  |



**PHOTOFACT<sup>®</sup> with**

**CIRCUITRACE<sup>®</sup>**

TRADE NAME: Pontiac Model 7289752 (1965)  
 SUPPLIER: For Current Address, See Master Index.  
 TYPE SET: 6 Transistor AM Receiver  
 POWER SUPPLY: 12 Volt Storage Battery  
 RATING: 1.2 Amp. @ 12.6 Volts DC (Less Lamp)  
 TUNING RANGE: BROADCAST 540-1615KC



## ALIGNMENT INSTRUCTIONS

Check for specified source voltage.

Use only enough generator output to provide a usable indication.

Suggested Alignment Tools:

A1 thru A5, A9, A10  
 A6, A7, A8

GENERAL CEMENT: 5009, 8728A, 8987  
 GENERAL CEMENT: 9087, 8290, 8868

WALSCO: 2531-X, 2536  
 WALSCO: 2525, 2528, 2587

|  | SIGNAL GENERATOR COUPLING                                       | SIGNAL GENERATOR FREQUENCY | RADIO DIAL SETTING   | INDICATOR                       | ADJUST         | REMARKS                            |
|--|---|----------------------------|----------------------|---------------------------------|----------------|------------------------------------|
| 1.   | High side thru .1mfd to point <b>A</b> , low side to ground.    | 262KC (400v Mod.)          | High Freq. End Stop. | Output Meter across voice coil. | A1, A2, A3, A4 | Adjust for maximum.                |
| Check setting of oscillator coil core (A5). Rear of core should be 1 3/8" from mounting end of coil form.                    |   |                            |                      |                                 |                |                                    |
| 2.   | High side thru 82 pf to antenna receptacle, low side to ground. | 1615KC                     | High Freq. End Stop. | Output Meter across voice coil. | A6, A7, A8     | Adjust for maximum.                |
| 3.   | "   | 600KC                      | 600KC Signal         | "                               | A9, A10        | Adjust for maximum. Repeat step 2. |
| With radio installed in car and antenna fully extended, tune in a weak station near 1400KC and adjust A8 for maximum output. |   |                            |                      |                                 |                |                                    |

### PUSH-BUTTON ADJUSTMENT

1. Pull button out.
2. Tune manually to desired station.
3. Press button in firmly.
4. Repeat for remaining buttons.

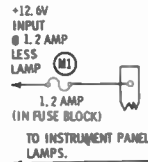
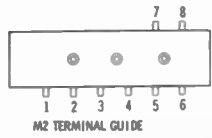
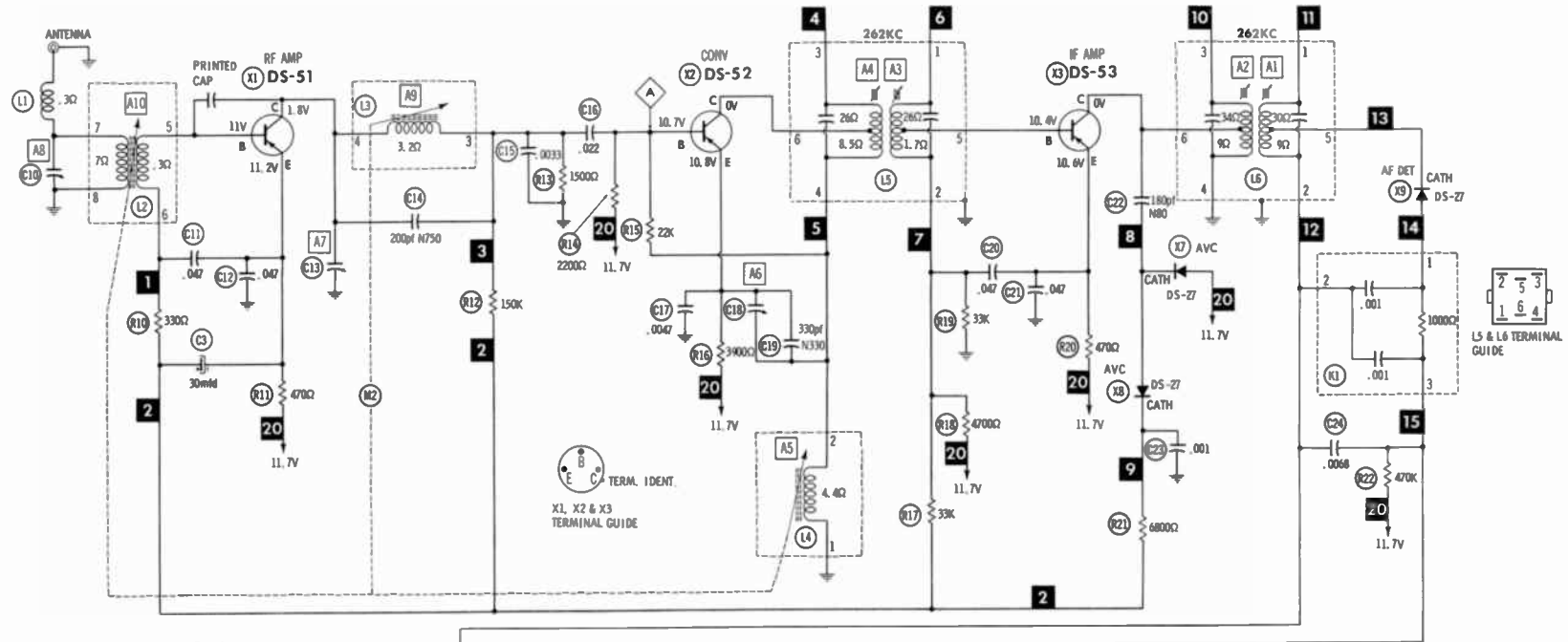
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World Radio History

PONTIAC MODEL 7289752

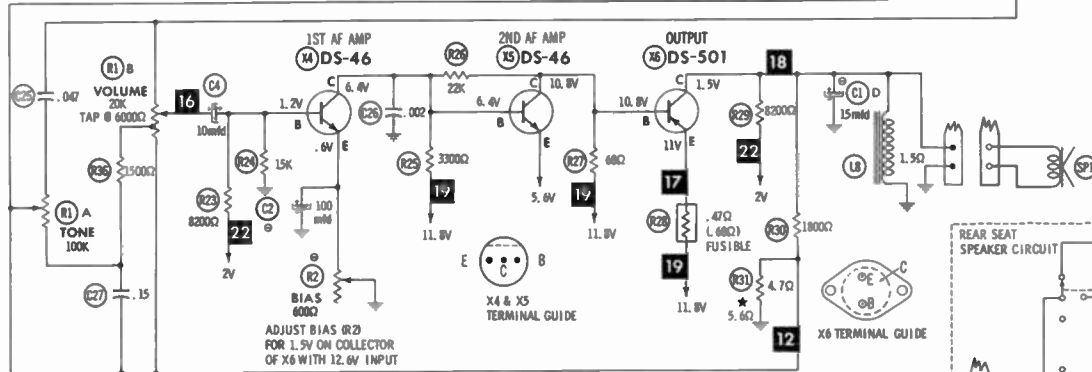




\* NOMINAL VALUE, MAY VARY.  
Resistors are 1/2 watt or less and rated 10% or 20% unless otherwise indicated.

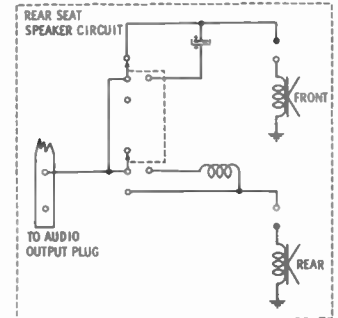
A PHOTOFAC STANDARD NOTATION SCHEMATIC with **CIRCUITRACE**

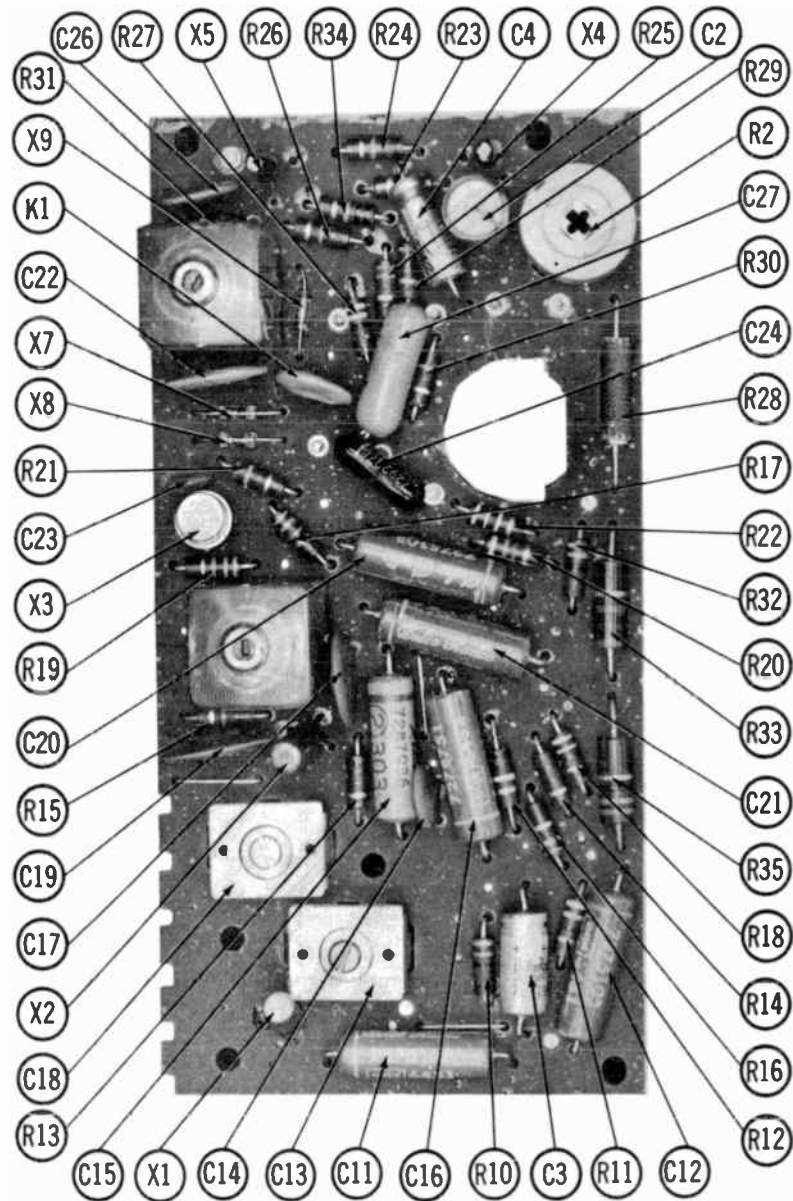
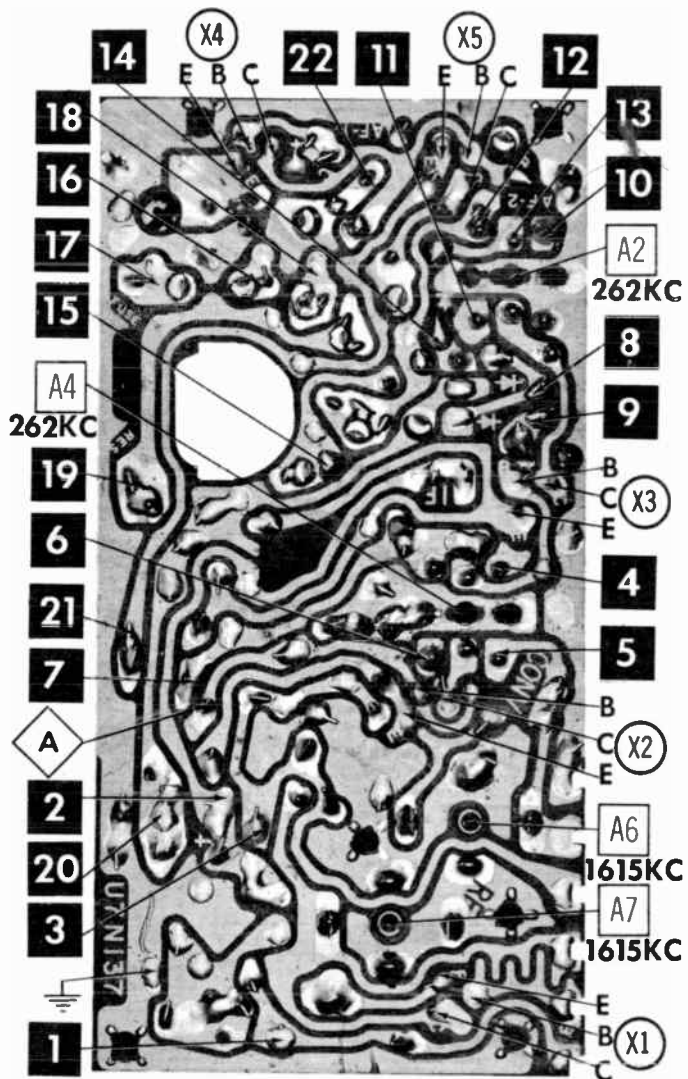
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- ① See parts list for alternate value or application.
- 1. Voltage measurements taken with vacuum tube voltmeter.
- 2. All controls set for normal operation, no signal applied.
- 3. Measured values are from socket pin or terminal to common ground.
- 4. All terminals viewed from bottom unless otherwise designated.
- 5. Numbers assigned to terminals may not be found on the unit.
- 6. Supply voltage maintained at rated value for voltage readings.
- 7. Resistance measurements not given because of the wide variation in internal resistance of transistor.

PONTIAC MODEL 7289752





# PARTS LIST AND DESCRIPTION

Replacement parts shown may be superseded by the availability of newly introduced replacements.  
Have your local distributor check Sams COUNTER FACTS for the most up-to-date replacement.

## TRANSISTORS

| ITEM No. | ORIG. TYPE | USE         | REPLACEMENT DATA |                           |              | NOTES |
|----------|------------|-------------|------------------|---------------------------|--------------|-------|
|          |            |             | DELCO PART No.   | GENERAL ELECTRIC PART No. | RCA PART No. |       |
| X1       | DS-51      | RF Amp.     | DS-25            | GE-1                      |              | PNP   |
| X2       | DS-52      | Conv.       | DS-25            | GE-1                      |              | PNP   |
| X3       | DS-53      | IF Amp.     | DS-25            | GE-1                      |              | PNP   |
| X4       | DS-46      | 1st AF Amp. | DS-46            | GE-10                     |              | NPN   |
| X5       | DS-46      | 2nd AF Amp. | DS-46            | GE-10                     |              | NPN   |
| X6       | DS-501     | Output      | DS-501           | GE-4                      |              | PNP*  |

\* Check bias adjustment.

## POWER RECTIFIERS & SIGNAL DIODES

| ITEM No. | MEASURED CURRENT | ORIGINAL Part or Type No. | RECTIFIERS                |                  |              |                         | DIODES |
|----------|------------------|---------------------------|---------------------------|------------------|--------------|-------------------------|--------|
|          |                  |                           | GENERAL ELECTRIC PART No. | MALLORY PART No. | RCA PART No. | SARKES TARZIAN PART No. |        |
| X7       |                  | DS-27                     |                           |                  |              |                         | 1N34A  |
| X8       |                  | DS-27                     |                           |                  |              |                         | 1N34A  |
| X9       |                  | DS-27                     |                           |                  |              |                         | 1N34A  |

## ELECTROLYTIC CAPACITORS

| ITEM No. | RATING |        | REPLACEMENT DATA |                  |                           |                           |                             |                  |                  |
|----------|--------|--------|------------------|------------------|---------------------------|---------------------------|-----------------------------|------------------|------------------|
|          | CAP.   | VOLT.  | DELCO PART No.   | AEROVOX PART No. | CORNELL-DUBILIER PART No. | GENERAL ELECTRIC PART No. | GENERAL INSTRUMENT PART No. | MALLORY PART No. | SPRAGUE PART No. |
| C1A      | ▲850   | 16     | 7291786 ①        |                  |                           |                           |                             |                  | TV184206*        |
| B        | ▲400   | 16     |                  |                  |                           |                           |                             |                  |                  |
| C        | ▲100   | 4      |                  |                  |                           |                           |                             |                  |                  |
| D        | 15     | 1.5RMB |                  |                  |                           |                           |                             |                  |                  |
| C2       | 100    | 4      | 7291810 ②        | PTT30            | NLW125-8                  | MT1-21                    | BL1720                      | TT6X100          | TE-1102          |
| C3       | 30     | 8      | 7279898          | PTT27            | NLW30-15                  | MT1-13                    | MLV30-8                     | TT6X30           | TE-1092          |
| C4       | 10     | 12     | 7292738          | PTT53            | NLW10-15                  | MT1-5                     | BL1241                      | TT12X10          | TL-1128          |

① Sect. C may be part of C2 in some versions. \* Not normally in distributor's stock. Available thru distributor on order to manufacturer.  
② May be 100-100 @ 4V in some versions.

## FIXED CAPACITORS

| ITEM No. | RATING        | REMARKS  | REPLACEMENT DATA |                    |                           |                  |                  |                  |
|----------|---------------|----------|------------------|--------------------|---------------------------|------------------|------------------|------------------|
|          |               |          | AEROVOX PART No. | CENTRALAB PART No. | CORNELL-DUBILIER PART No. | ELMENCO PART No. | MALLORY PART No. | SPRAGUE PART No. |
| C10      | .047 75V      | #7281971 | DBE2S47          | W                  | WMF2S47                   | 1DP-2-473        | PVC1147          | 2PS-847          |
| C11      | .047 75V      |          | DBE2S47          |                    | WMF2S47                   | 1DP-2-473        | PVC1147          | 2PS-847          |
| C12      | .047 75V      | #7293277 |                  |                    |                           |                  |                  |                  |
| C13      |               |          |                  |                    |                           |                  |                  |                  |
| C14      | 200 N750      |          | N750-DI200       | DTN-200            | C10T2U                    | CCTN-201         | CN7320           | 10TCU-T20        |
| C15      | .0033 75V 75V |          | DBE6D33          | CPR-3300J          | WMF1D33                   | 6DP-1-332        | PVC4233          | 6PS-D33          |
| C16      | .022 75V      |          | DBE2S22          |                    | WMF1S22                   | 1DP-1-223        | PVC1123          | 2PS-822          |
| C17      | .0047         |          | BPD-0047         | DD-472             | BYA10D47                  | CCD-472          | B247             | 5HK-D47          |
| C18      |               | #7282165 |                  |                    |                           |                  |                  |                  |
| C19      | 330 N330      |          |                  |                    |                           |                  |                  |                  |
| C20      | .047 75V      |          | DBE2S47          |                    | WMF2S47                   | 1DP-2-473        | PVC1147          | 2PS-847          |
| C21      | .047 75V      |          | DBE2S47          |                    | WMF2S47                   | 1DP-2-473        | PVC1147          | 2PS-847          |
| C22      | 180 N80       |          |                  |                    |                           |                  |                  | 10TCN-T80        |
| C23      | .001          |          | BPD-001          | DD-102             | BYA10D1                   | CCD-102          | B210             | 5HK-D10          |
| C24      | .0068 75V     |          | DBE6D68          | CPR-6800J          | WMF4D68                   | 1DP-1-682        | PVC4268          | 6PS-D68          |
| C25      | .047 75V      |          | DBE2S47          |                    | WMF2S47                   | 1DP-2-473        | PVC1147          | 2PS-847          |
| C26      | .002          |          | BPD-002          | DD-202             | BYA10D2                   | CCD-202          | B220             | 5HK-D20          |
| C27      | .15 75V       |          | DBE2P15          |                    | WMF1P15                   | 1DP-3-154        | PVC1015          | 2PS-P15          |

# Delco Part Number.

## CONTROLS

All wattages 1/2 watt, or less, unless otherwise listed.

| ITEM No. | USE           | RESIST-ANCE     | REPLACEMENT DATA |                               |                    |                  |                  |        |
|----------|---------------|-----------------|------------------|-------------------------------|--------------------|------------------|------------------|--------|
|          |               |                 | DELCO PART No.   | CENTRALAB PART No.            | CLAROSTAT PART No. | CTS-IRC PART No. | MALLORY PART No. |        |
| R1A      | Tone          | 100K            | 7289887          | FL-100K, R14-25K              |                    |                  | ↑ QJ-1872A       |        |
| B        | Volume/Switch | 20K Tap @ 6000Ω |                  | FFS014, RFS109, AK-26 ①, KR-4 |                    |                  |                  |        |
| R2       | Bias          | 600Ω            | 7288801          | V-800                         | U39-600            |                  | 110-600          | MR600P |

① Alter bushing to meet requirement.

↑ "CONCENTRIKIT" Equivalent: K3 Kit with Base Elements and Shafts: B11-128, P23-027 (Panel)  
B19-119X, R26-112 (Rear)  
"SNAPTROL" Equivalent: BU8 ①, CF13, CR50T, SF40, SR7, GC. 848 (Bushings)  
76-1 (Switch)

## RESISTORS (Power and Special)

| ITEM No. | RATING         | REPLACEMENT DATA |                  |                | ITEM No. | RATING | REPLACEMENT DATA |                  |                |
|----------|----------------|------------------|------------------|----------------|----------|--------|------------------|------------------|----------------|
|          |                | IRC PART No.     | WORKMAN PART No. | DELCO PART No. |          |        | IRC PART No.     | WORKMAN PART No. | DELCO PART No. |
| R28      | .47Ω (Fusible) | BWH. 47          | WS. 47Ω          | 7281890        |          | .68Ω   | BWH. 68Ω         | WS. 68Ω          | 7287480 (Alt.) |

## COILS (RF-IF)

| ITEM No. | USE              | REPLACEMENT DATA |                   |                |                 |                  |                  |
|----------|------------------|------------------|-------------------|----------------|-----------------|------------------|------------------|
|          |                  | DELCO PART No.   | MEISSNER PART No. | MERIT PART No. | MILLER PART No. | STANCOR PART No. | WORKMAN PART No. |
| L1       | RF Choke (8.2uH) | 7281948          | 19-1004           | BC-585         | 4610            | RTC-8520         | T859             |
| L2       | Ant.             | ①                |                   |                |                 |                  |                  |
| L3       | RF               | ①                |                   |                |                 |                  |                  |
| L4       | Osc.             | ①                |                   |                |                 |                  |                  |
| L5       | Input IF         | 1221858          | 16-8704           |                | 8542            |                  | TA853            |
| L8       | Output IF        | 1221857          | 16-8705           |                | 8543            |                  | TA853            |

① Part of M2.



## PARTS LIST AND DESCRIPTION (CONTINUED)

Replacement parts shown may be superseded by the availability of newly introduced replacements.  
Have your local distributor check Sams COUNTER FACTS<sup>®</sup> for the most up-to-date replacement.

### FILTER CHOKE

| ITEM No. | RATINGS            |         |                              | REPLACEMENT DATA |                |                  |                     |                | NOTES |
|----------|--------------------|---------|------------------------------|------------------|----------------|------------------|---------------------|----------------|-------|
|          | CURRENT (Measured) | DC RES. | INDUCTANCE (0 CURRENT 1000~) | DELCO PART No.   | MERIT PART No. | STANCOR PART No. | THORDARSON PART No. | TRIAD PART No. |       |
| L7       | 1.2 Amp.           | .6Ω     | 8MH                          | 1221023          | C-4095         | TC-2             | TR-154              | TY17XT         |       |

### CHOKE (AUDIO OUTPUT)

| ITEM No. | INDUCTANCE | REPLACEMENT DATA |                |                  |                     |                | NOTES |
|----------|------------|------------------|----------------|------------------|---------------------|----------------|-------|
|          |            | DELCO PART No.   | MERIT PART No. | STANCOR PART No. | THORDARSON PART No. | TRIAD PART No. |       |
| L8       | 29.5MH     | 7282278          |                |                  |                     |                |       |

### SPEAKER

| ITEM No. | TYPE        | REPLACEMENT DATA | NOTES   |
|----------|-------------|------------------|---------|
|          |             |                  |         |
| SP1      | 4" X 10" PM | 10Ω              |         |
|          |             | 7291442          | 410A2Z8 |

### COMPONENT COMBINATIONS

| ITEM No. | USE        | DESCRIPTION             | DELCO PART No. | REPLACEMENT DATA |
|----------|------------|-------------------------|----------------|------------------|
| K1       | Det. Comp. | 1000Ω, .001mfd, .001mfd | 7287253        |                  |

### FUSES

| ITEM No. | TYPE | RATING | REPLACEMENT DATA |               |                     |        |               |        |  |
|----------|------|--------|------------------|---------------|---------------------|--------|---------------|--------|--|
|          |      |        | DELCO PART No.   |               | LITTELFUSE PART No. |        | BUSS PART No. |        |  |
|          |      |        | FUSE             | HOLDER        | FUSE                | HOLDER | FUSE          | HOLDER |  |
| M1       | AGC  | 3A     |                  | In Fuse Block | 312003              |        |               | AGC3   |  |

### MISCELLANEOUS

| ITEM No. | PART NAME         | DELCO PART No. | NOTES |
|----------|-------------------|----------------|-------|
| M2       | Tuning Coil Assy. | 7287957        |       |
| M3       | Spark Plate       | 7271564        |       |

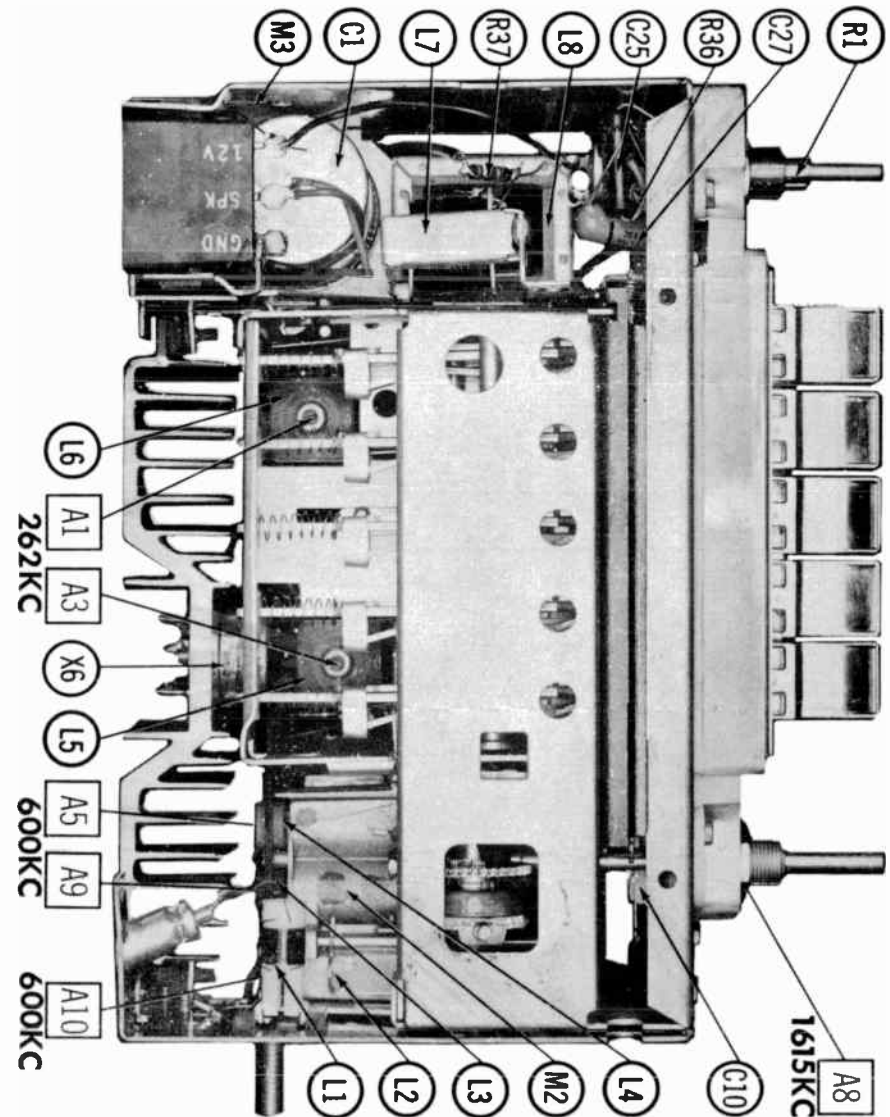
### CABINETS & CABINET PARTS

(When Ordering Specify Model, Chassis & Color)

| ITEM         | PART No. | ITEM                   | PART No. |
|--------------|----------|------------------------|----------|
| Escutcheon   | 7289719  | Knob, Tuning or Volume | 9775398  |
| Pushbutton   | 7290577  | Knob, Tone             | 9773916  |
| Dial Pointer | 7290180  | Knob, Dummy            | 9778957  |

### WIRING DATA

General-use Unshielded Hook-up Wire ..... Use BELDEN No. 8530 (Solid) Available in 12 Colors  
8524 (Stranded) Available in 12 Colors  
Shielded Hook-up Wire ..... Use BELDEN No. 8885  
Rear Seat Speaker Extension Cable ..... Use BELDEN No. 8782 (Stranded) Coded Parallel Leads  
Bonding Strap ..... Use BELDEN No. 8661 (3/8 In.) or 8670 (3/4 In.)







PHOTOFACT<sup>®</sup> with

CIRCUITRACE<sup>®</sup>



TRADE NAME : Pontiac Model 7291582 (1965 Tempest)  
 SUPPLIER : For Current Address, See Master Index.  
 TYPE SET : 6 Transistor AM Receiver  
 POWER SUPPLY : 12 Volt Storage Battery  
 RATING : .670 Amp. @ 12.6 Volts DC  
 TUNING RANGE : BROADCAST 540-1615KC

PONTIAC MODEL 7291582

## ALIGNMENT INSTRUCTIONS

Check for specified source voltage.  
 Use only enough generator output to provide a usable indication.  
 Suggested Alignment Tools:

A1 thru A5, A9, A10  
 A6, A7, A8

GENERAL CEMENT: 5009, 8728A, 8987  
 GENERAL CEMENT: 8290, 8868, 9087

WALSCO: 2531-X, 2536  
 WALSCO: 2525, 2528, 2587

| SIGNAL GENERATOR COUPLING  | SIGNAL GENERATOR FREQUENCY | RADIO DIAL SETTING   | INDICATOR                       | ADJUST         | REMARKS                            |
|--|----------------------------|----------------------|---------------------------------|----------------|------------------------------------|
| 1. High side thru .1mfd to point $\Delta$ , low side to ground.  | 262KC (400% Mod.)          | High Freq. End Stop. | Output Meter across voice coil. | A1, A2, A3, A4 | Adjust for maximum.                |
| Check setting of oscillator coil core (A5). Rear of core should be 1 3/8" from mounting end of coil form.                    |                            |                      |                                 |                |                                    |
| 2. High side thru 82pf to antenna receptacle, low side to ground.  | 1615KC                     | High Freq. End Stop. | Output Meter across voice coil. | A6, A7, A8     | Adjust for maximum.                |
| 3. "   | 600KC                      | 600KC Signal         | "                               | A9, A10        | Adjust for maximum. Repeat step 2. |
| With radio installed in car and antenna fully extended, tune in a weak station near 1400KC and adjust A8 for maximum output. |                            |                      |                                 |                |                                    |

### PUSH-BUTTON ADJUSTMENT

1. Pull button out.
2. Tune manually to desired station.
3. Press button in firmly.
4. Repeat for remaining buttons.

HOWARD W. SAMS & CO., INC. Indianapolis 6, Indiana

## PARTS LIST AND DESCRIPTION

Replacement parts shown may be superseded by the availability of newly introduced replacements.  
Have your local distributor check Sams COUNTER FACTS for the most up-to-date replacement.

### TRANSISTORS

| ITEM No. | ORIG. TYPE | USE         | REPLACEMENT DATA |                           |              | NOTES                                  |
|----------|------------|-------------|------------------|---------------------------|--------------|--|
|          |            |             | DELCO PART No.   | GENERAL ELECTRIC PART No. | RCA PART No. |  |
| X1       | DS-51      | RF Amp.     | DS-25            | GE-1                      |              | PNP<br>PNP<br>PNP<br>NPN<br>NPN<br>PNP |
| X2       | DS-52      | Conv.       | DS-25            | GE-1                      |              |  |
| X3       | DS-53      | IF Amp.     | DS-25            | GE-1                      |              |  |
| X4       | DS-46      | 1st AF Amp. | DS-46            | GE-10                     |              |  |
| X5       | DS-46      | 2nd AF Amp. | DS-48            | GE-10                     |              |  |
| X6       | DS-503     | Output      | DS-503           | GE-3                      |              |  |

\* When replacing, apply silicon grease to both sides of insulator. Tighten mounting screws securely. Check bias adjustment.

### POWER RECTIFIERS & SIGNAL DIODES

| ITEM No. | MEASURED CURRENT | ORIGINAL Part or Type No. | RECTIFIERS                |                  |              |                         | DIODES                    |
|----------|------------------|---------------------------|---------------------------|------------------|--------------|-------------------------|---------------------------|
|          |                  |                           | GENERAL ELECTRIC PART No. | MALLORY PART No. | RCA PART No. | SARKES TARZIAN PART No. | GENERAL ELECTRIC PART No. |
| X7       |                  | DS-27                     |                           |                  |              |                         | 1N34A8                    |
| X8       |                  | DS-27                     |                           |                  |              |                         | 1N34A8                    |
| X9       |                  | DS-27                     |                           |                  |              |                         | 1N34A8                    |

### ELECTROLYTIC CAPACITORS

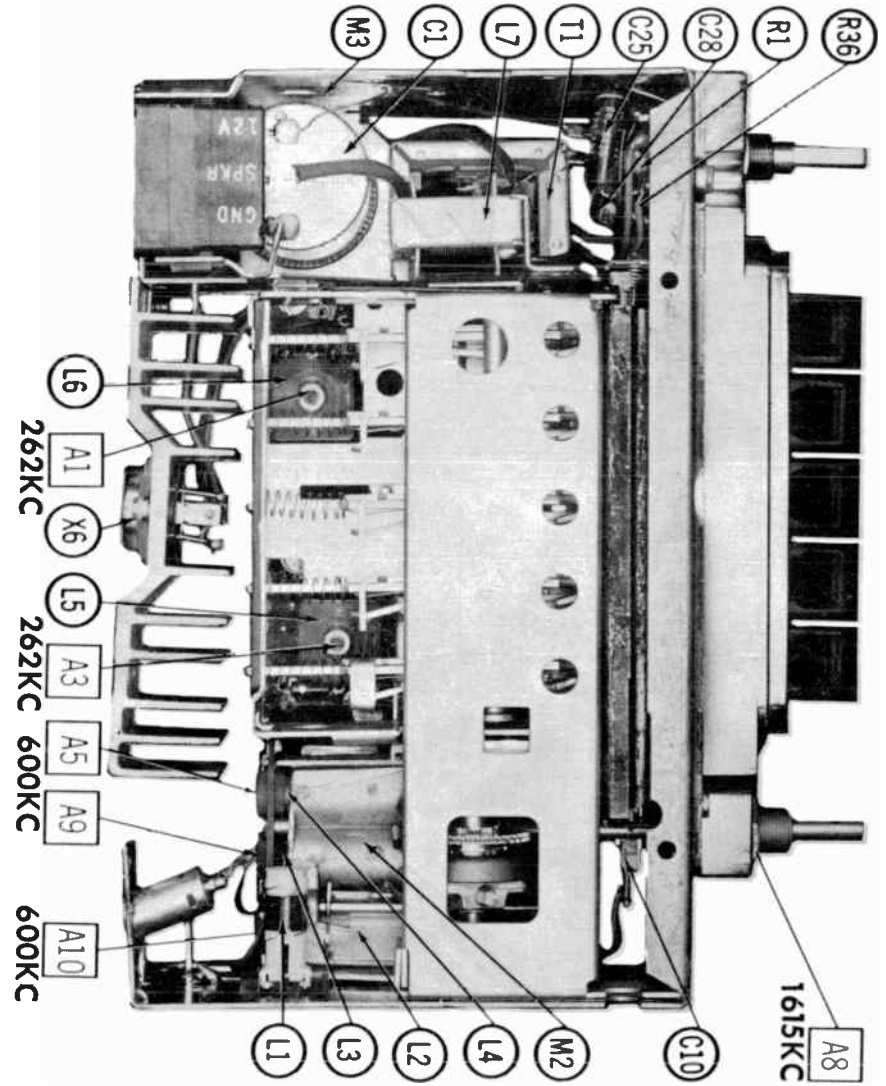
| ITEM No. | RATING |         | REPLACEMENT DATA |                  |                           |                           |                             |                  |                  |
|----------|--------|---------|------------------|------------------|---------------------------|---------------------------|-----------------------------|------------------|------------------|
|          | CAP.   | VOLT.   | DELCO PART No.   | AEROVOX PART No. | CORNELL-DUBILIER PART No. | GENERAL ELECTRIC PART No. | GENERAL INSTRUMENT PART No. | MALLORY PART No. | SPRAGUE PART No. |
| C1A      | 850    | 16      | 7292515 ①        |                  |                           |                           |                             |                  |                  |
| B        | 400    | 16      |                  |                  |                           |                           |                             |                  |                  |
| C        | 100    | 4       |                  |                  |                           |                           |                             |                  |                  |
| D        | 4      | 11.5RMS |                  |                  |                           |                           |                             |                  |                  |
| C2       | 100    | 4       | 7291810 ②        | PTT30            | NLW125-6                  | MT1-21                    | BL1720                      | TT6X100          | TE-1102          |
| C3       | 30     | 6       | 7279896          | PTT27            | NLW30-15                  | MT1-13                    | MLV30-6                     | TT6X30           | TE-1092          |
| C4       | 10     | 12      | 7292738          | PTT53            | NLW10-15                  | MT1-5                     | BL1241                      | TT12X10          | TL-1128          |

① 850-400-16V and 4 @ 11.5RMS used in some versions.  
② 100-100 @ 4 used in some versions.

### FIXED CAPACITORS

| ITEM No. | RATING    | REMARKS  | REPLACEMENT DATA |                    |                           |                  |                  |                  |
|----------|-----------|----------|------------------|--------------------|---------------------------|------------------|------------------|------------------|
|          |           |          | AEROVOX PART No. | CENTRALAB PART No. | CORNELL-DUBILIER PART No. | ELMENCO PART No. | MALLORY PART No. | SPRAGUE PART No. |
| C10      |           | #7281971 | DBE2847          |                    | WMF2847                   | 1DP-2-473        | PVC1147          | 2PS-847          |
| C11      | .047 75V  |          | DBE2847          |                    | WMF2847                   | 1DP-2-473        | PVC1147          | 2PS-847          |
| C12      | .047 75V  | #7293277 |                  |                    |                           |                  |                  |                  |
| C13      |           |          |                  |                    |                           |                  |                  |                  |
| C14      | 200 N750  |          | N750-DI 200      | DTN-200            | C10T2U                    | CCTN-201         | CN7320           | 10TCU-T20        |
| C15      | .0033 75V |          | DBE6D33          | CPR-3300J          | WMF1D33                   | 6DP-1-332        | PVC4233          | 6PS-D33          |
| C16      | .022 75V  |          | DBE2822          |                    | WMF1822                   | 1DP-1-223        | PVC1122          | 2PS-822          |
| C17      | .0047     |          | BPD-0047         | DD-472             | YA10D47                   | CCD-472          | B247             | 5HK-D47          |
| C18      |           | #7282165 |                  |                    |                           |                  |                  |                  |
| C19      | 330 N330  |          |                  |                    |                           |                  |                  | 10TCS-T33        |
| C20      | .047 75V  |          | DBE2847          |                    | WMF2847                   | 1DP-2-473        | PVC1147          | 2PS-847          |
| C21      | .047 75V  |          | DBE2847          |                    | WMF2847                   | 1DP-2-473        | PVC1147          | 2PS-847          |
| C22      | 180 N80   |          |                  |                    |                           |                  |                  | 10TCN-T80        |
| C23      | .001      |          | BPD-001          | DD-102             | BYA10D1                   | CCD-102          | B210             | 5HK-D10          |
| C24      | .0068 75V |          | DBE6D68          | CPR-6800J          | WMF4D68                   | 1DP-1-682        | PVC4268          | 6PS-D68          |
| C25      | .047 75V  |          | DBE2847          |                    | WMF2847                   | 1DP-2-473        | PVC1147          | 2PS-847          |
| C26      | .002      |          | BPD-002          | DD-202             | BYA10D2                   | CCD-202          | B220             | 5HK-D20          |
| C27      | .015 75V  |          | DBE4815          |                    | DPMB4815                  | 1DP-1-153        | PVC2115          | 4PS-815          |
| C28      | .15 75V   |          | DBE2P15          |                    | WMF1P15                   | 1DP-3-154        | PVC1015          | 2PS-P15          |

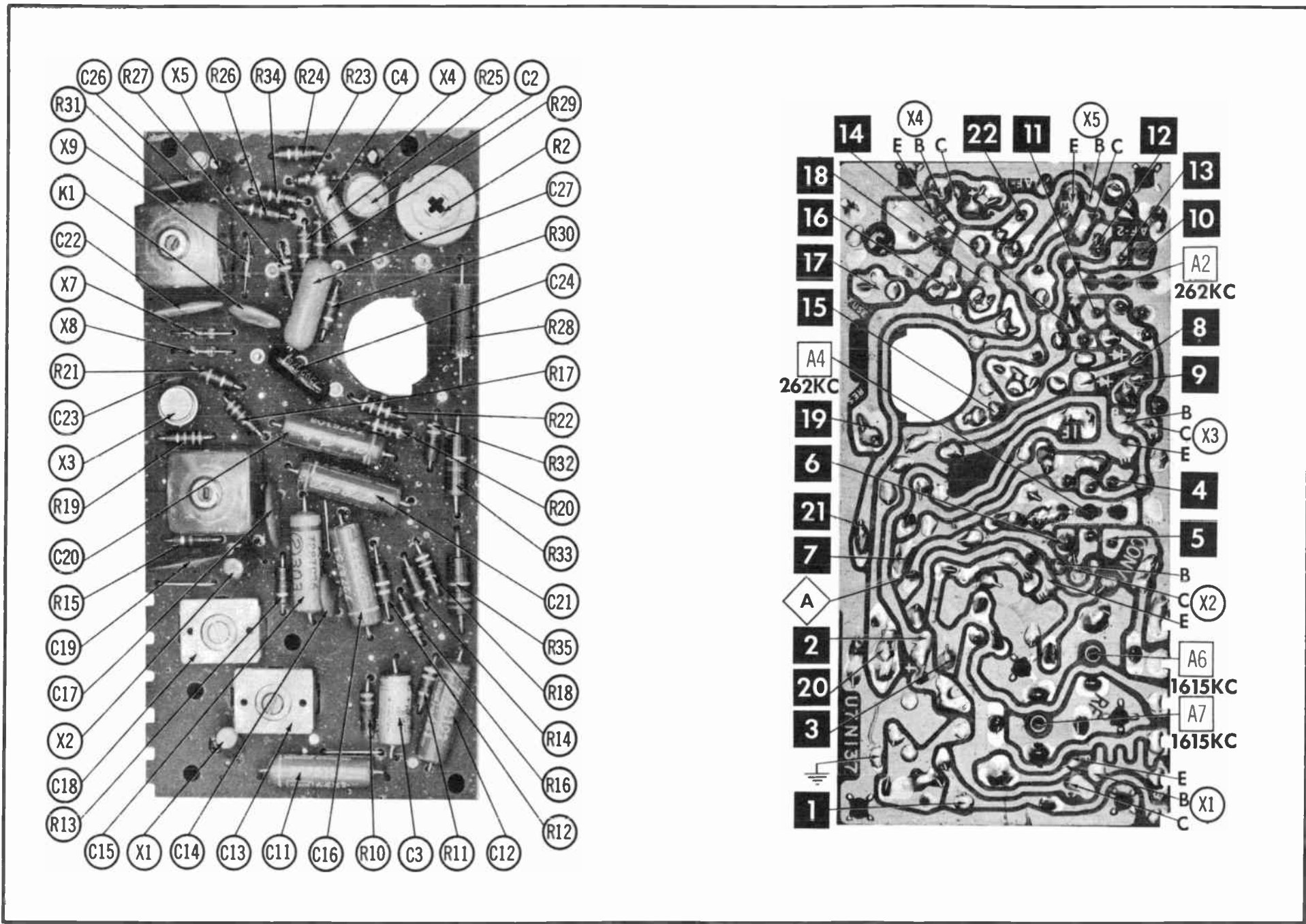
① Delco Part Number.



PONTIAC MODEL 7291582







PONTIAC MODEL 7291582

- C26
- R27
- X5
- R26
- R34
- R24
- R23
- C4
- X4
- R25
- C2
- R31
- R29
- X9
- R2
- K1
- C27
- C22
- R30
- X7
- C24
- X8
- R28
- R21
- R17
- C23
- R22
- X3
- R32
- R19
- R20
- C20
- R33
- R15
- C21
- C19
- R35
- C17
- R18
- X2
- R14
- C18
- R16
- R13
- R12
- C15
- X1
- C14
- C13
- C11
- C16
- R10
- C3
- R11
- C12

- 14
- X4
- 22
- 11
- X5
- 12
- 18
- E B C
- 13
- 16
- 17
- 15
- A2
- 262KC
- A4
- 19
- 6
- 21
- 7
- A
- 2
- 20
- 3
- 1
- 8
- 9
- B C E
- X3
- 4
- 5
- B C E
- X2
- A6
- 1615KC
- A7
- 1615KC
- E B C
- X1



# PARTS LIST AND DESCRIPTION (CONTINUED)

Replacement parts shown may be superseded by the availability of newly introduced replacements.  
Have your local distributor check Sams COUNTERFACTS for the most up-to-date replacement.

## CONTROLS

All wattages 1/2 watt, or less, unless otherwise listed.

| ITEM No. | USE         | RESISTANCE                | REPLACEMENT DATA |                                      |                    |                  |                  |
|----------|-------------|---------------------------|------------------|--------------------------------------|--------------------|------------------|------------------|
|          |             |                           | DELCO PART No.   | CENTRALAB PART No.                   | CLAROSTAT PART No. | CTS-IRC PART No. | MALLORY PART No. |
| R1A      | Tone Volume | 100K<br>20K Tap<br>@ 600Ω | 7291806          | F1-100K, R14-25K,<br>RFS108, AK-26 ① |                    | † QJ-1875A       |                  |
| R2       | Bias        | 600Ω                      | 7286601          | KR-4<br>V-600                        | U39-600            | 110-600          | MR600P           |

① Alter bushing to meet requirement.

† "CONCENTRIC" Equivalent: K8 Kit with Base Elements and Shafts: B11-128, P17-024 (Panel)  
B19-119X, R9-11D (Rear)  
S46 (Bushing)  
78-1 (Switch)

"SNAPTROL" Equivalent: BU8 ①, CF13, CR50T, 8F3, SR6, GC.

## RESISTORS (Power and Special)

| ITEM No. | RATING            | REPLACEMENT DATA |                  |                | ITEM No. | RATING | REPLACEMENT DATA |                  |         |
|----------|-------------------|------------------|------------------|----------------|----------|--------|------------------|------------------|---------|
|          |                   | IRC PART No.     | WORKMAN PART No. | DELCO PART No. |          |        | IRC PART No.     | WORKMAN PART No. | REMARKS |
| R28      | .68Ω<br>(Fusible) | BWH. 68          | WS. 68Ω          | 728748D        |          |        |                  |                  |         |

## COILS (RF-IF)

| ITEM No. | USE              | REPLACEMENT DATA |                   |                |                 |                  |                  |
|----------|------------------|------------------|-------------------|----------------|-----------------|------------------|------------------|
|          |                  | DELCO PART No.   | MEISSNER PART No. | MERIT PART No. | MILLER PART No. | STANCOR PART No. | WORKMAN PART No. |
| L1       | RF Choke (6.2uh) | 7281946          | 19-1004           | BC-585         | 461D            | RTC-852D         | T859             |
| L2       | Am.              | ①                |                   |                |                 |                  |                  |
| L3       | RF               | ①                |                   |                |                 |                  |                  |
| L4       | Osc.             | ①                |                   |                |                 |                  |                  |
| L5       | Input IF         | 1221856          | 16-8704           |                | 6542            |                  | TA853            |
| L6       | Output IF        | 1221857          | 16-8705           |                | 6543            |                  | TA653            |

① Part of M2.

## FILTER CHOKE

| ITEM No. | RATINGS            |         |                              | REPLACEMENT DATA |                |                  |                     |                | NOTES |
|----------|--------------------|---------|------------------------------|------------------|----------------|------------------|---------------------|----------------|-------|
|          | CURRENT (Measured) | DC RES. | INDUCTANCE (0 CURRENT 1000~) | DELCO PART No.   | MERIT PART No. | STANCOR PART No. | THORDARSON PART No. | TRIAD PART No. |       |
| L7       | 870ma              | .6Ω     | 8MH                          | 1221823          | C-4095         | TC-2             | TR-154              | TY17XT         |       |

## TRANSFORMER (AUDIO OUTPUT)

| ITEM No. | IMPEDANCE |       | REPLACEMENT DATA |                |                  |                     |                | NOTES |
|----------|-----------|-------|------------------|----------------|------------------|---------------------|----------------|-------|
|          | PRI.      | SEC.  | DELCO PART No.   | MERIT PART No. | STANCOR PART No. | THORDARSON PART No. | TRIAD PART No. |       |
|          |           |       |                  |                |                  |                     |                |       |
| T1       | 12Ω Tap   | @ 10Ω | 7282057          |                |                  |                     |                |       |

## SPEAKER

| ITEM No. | TYPE        | REPLACEMENT DATA           | NOTES |
|----------|-------------|----------------------------|-------|
|          |             |                            |       |
| SP1      | 4" X 10" PM | 10Ω<br>7286462<br>410A2Z1D |       |

## COMPONENT COMBINATIONS

| ITEM No. | USE        | DESCRIPTION             | DELCO PART No. | REPLACEMENT DATA |
|----------|------------|-------------------------|----------------|------------------|
| K1       | Det. Comp. | 1000Ω, .001mfd, .001mfd | 7287253        |                  |

## FUSES

| ITEM No. | TYPE | RATING | REPLACEMENT DATA |               |                    |        |               |        |  |
|----------|------|--------|------------------|---------------|--------------------|--------|---------------|--------|--|
|          |      |        | DELCO PART No.   |               | LITELFUSE PART No. |        | BUSS PART No. |        |  |
|          |      |        | FUSE             | HOLDER        | FUSE               | HOLDER | FUSE          | HOLDER |  |
| M1       | AGC  | 3A     |                  | In Fuse Block | 312003             |        |               | AGC3   |  |

## MISCELLANEOUS

| ITEM No. | PART NAME         | DELCO PART No. | NOTES |
|----------|-------------------|----------------|-------|
| M2       | Tuning Coil Assy. | 7287957        |       |
| M3       | Spark Plate       | 7271564        |       |

## CABINETS & CABINET PARTS

(When Ordering Specify Model, Chassis & Color)

| ITEM         | PART No. | ITEM                   | PART No. |
|--------------|----------|------------------------|----------|
| Escutcheon   | 1222244  | Knob, Tuning or Volume | 9775398  |
| Dial Pointer | 1221848  | Knob, Tone             | 9773916  |
| Pushbuttons  | 7276507  | Knob, Dummy            | 9773915  |

## WIRING DATA

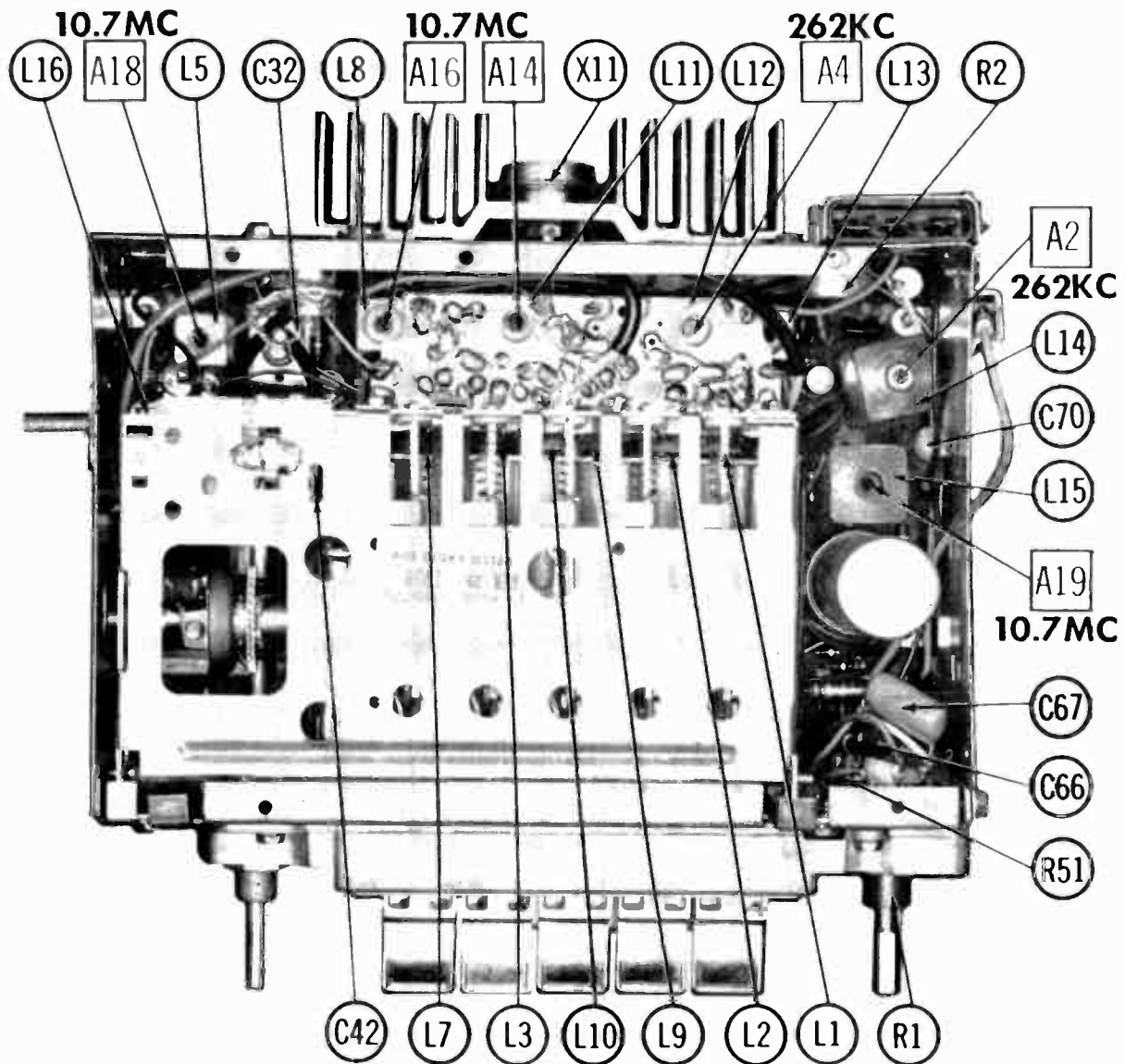
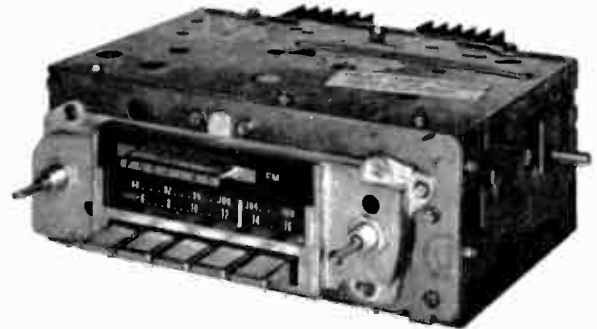
General-use Unshielded Hook-up Wire ..... Use BELDEN No. 8530 (Solid) Available in 12 Colors  
8524 (Stranded) Available in 12 Colors  
Shielded Hook-up Wire ..... Use BELDEN No. 8885  
Rear Seat Speaker Extension Cable ..... Use BELDEN No. 8782 (Stranded) Coded Parallel Leads  
Bonding Strap ..... Use BELDEN No. 8661 (3/8 in.) or 8670 (3/4 in.)



# PHOTOFACT<sup>®</sup> with

# CIRCUITRACE<sup>®</sup>

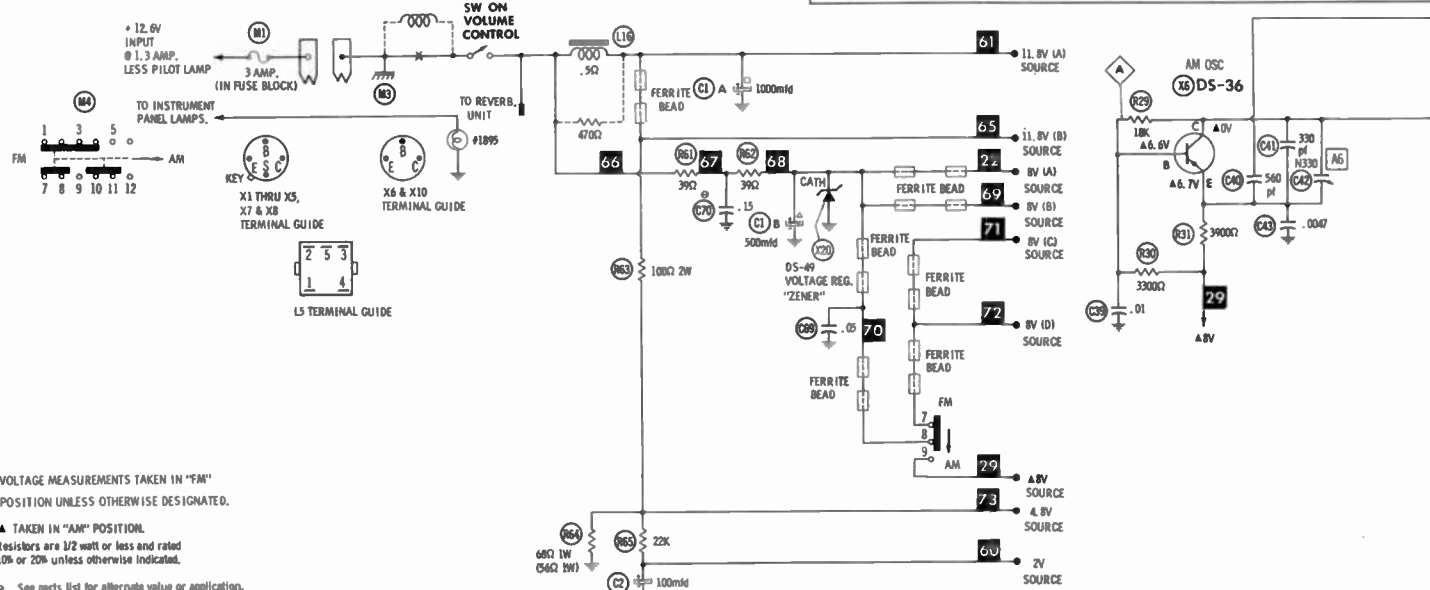
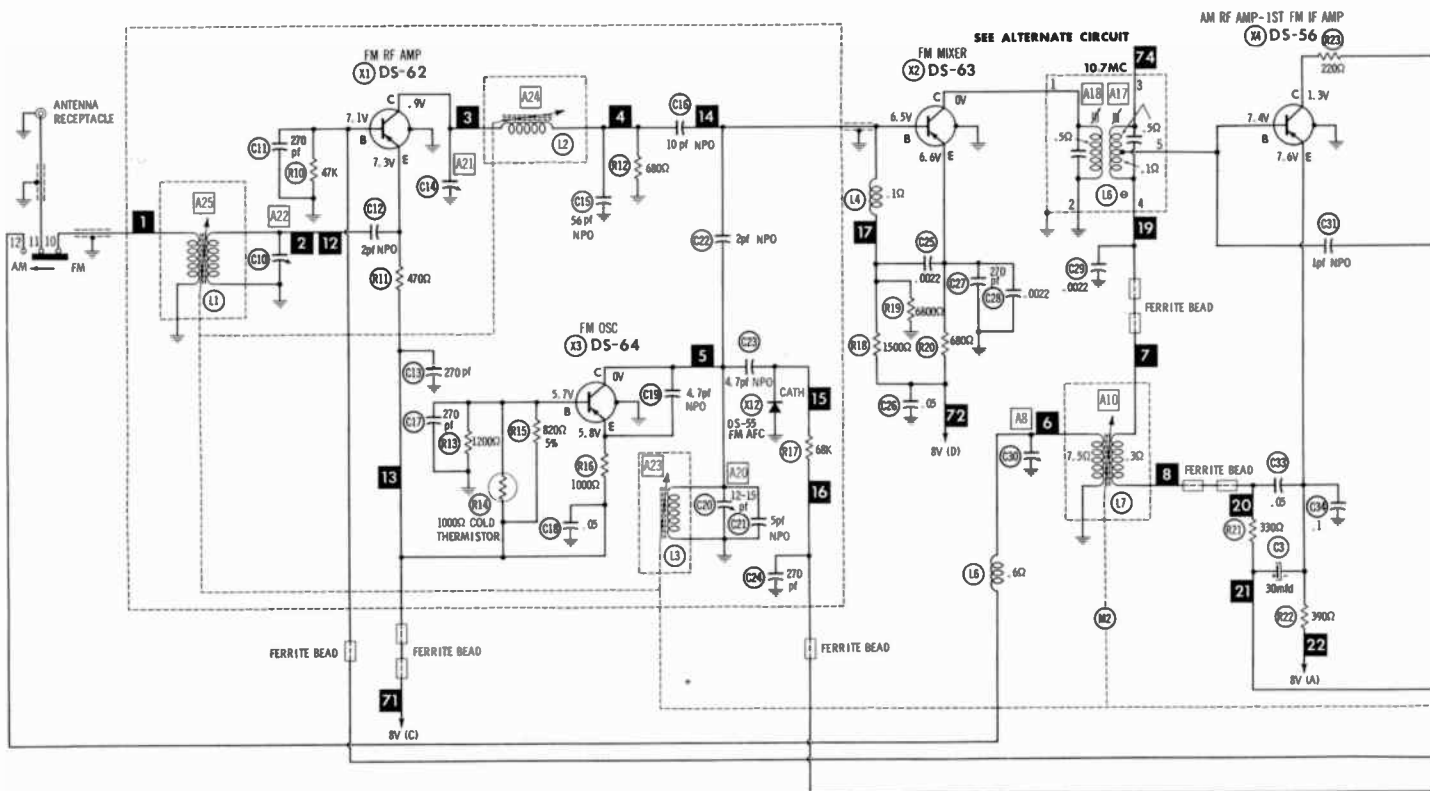
TRADE NAME: Pontiac Models 7289772 (1965 Pontiac),  
7292112 (1965 Tempest)  
SUPPLIER: For Current Address, See Master Index.  
TYPE SET: 11 Transistor AM-FM Receiver  
POWER SUPPLY: 12 Volt Storage Battery  
RATING: 1.3 Amp. @ 12.6 Volts DC  
TUNING RANGE: BROADCAST 540-1640KC  
FREQ. MOD. 87.5-108.5MC



PONTIAC MODELS 7289772, 7292112

**HOWARD W. SAMS & CO., INC.** Indianapolis 6, Indiana

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VOLTAGE MEASUREMENTS TAKEN IN "FM" POSITION UNLESS OTHERWISE DESIGNATED.

▲ TAKEN IN "AM" POSITION.

Resistors are 1/2 watt or less and rated 10% or 20% unless otherwise indicated.

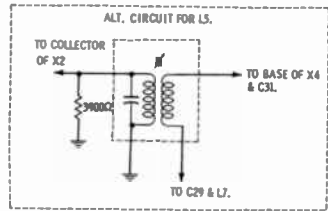
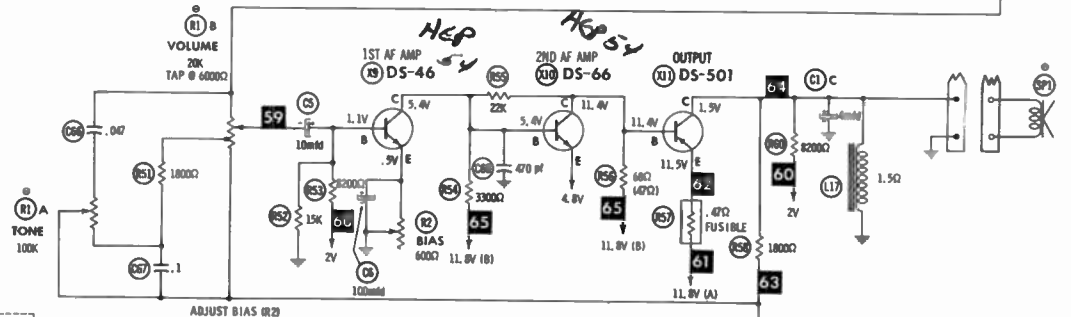
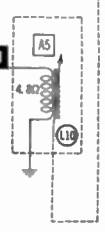
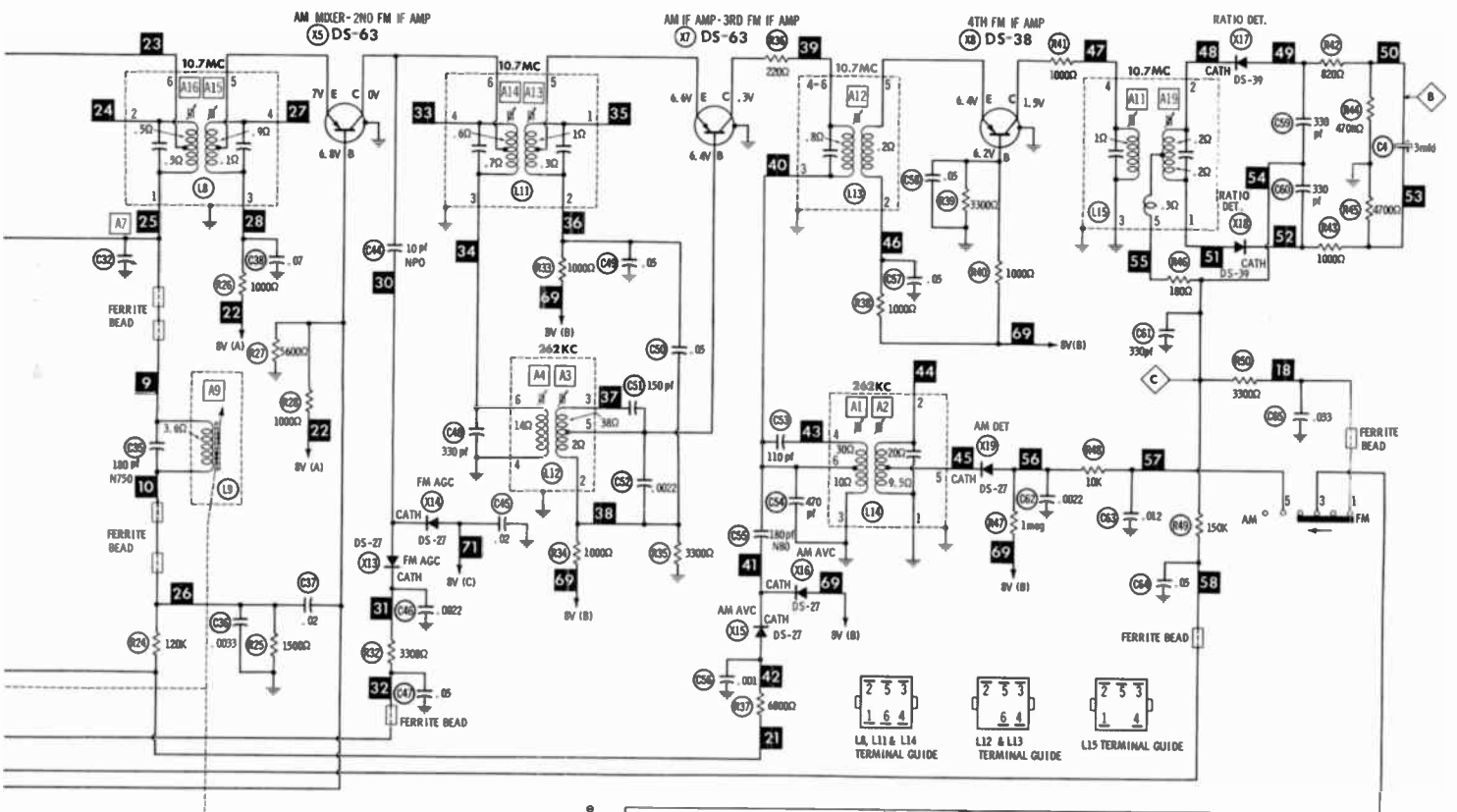
○ See parts list for alternate value or application.

1. Voltage measurements taken with vacuum tube voltmeter.
2. All controls set for normal operation, no signal applied.
3. Measured values are from socket pin or terminal to common ground.
4. All terminals viewed from bottom unless otherwise designated.
5. Numbers assigned to terminals may not be found on the unit.
6. Supply voltage maintained at rated value for voltage readings.
7. Resistance measurements not given because of the wide variation in internal resistance of transistor.

A PHOTOFAC STANDARD NOTATION SCHEMATIC

with CIRCUITRACE

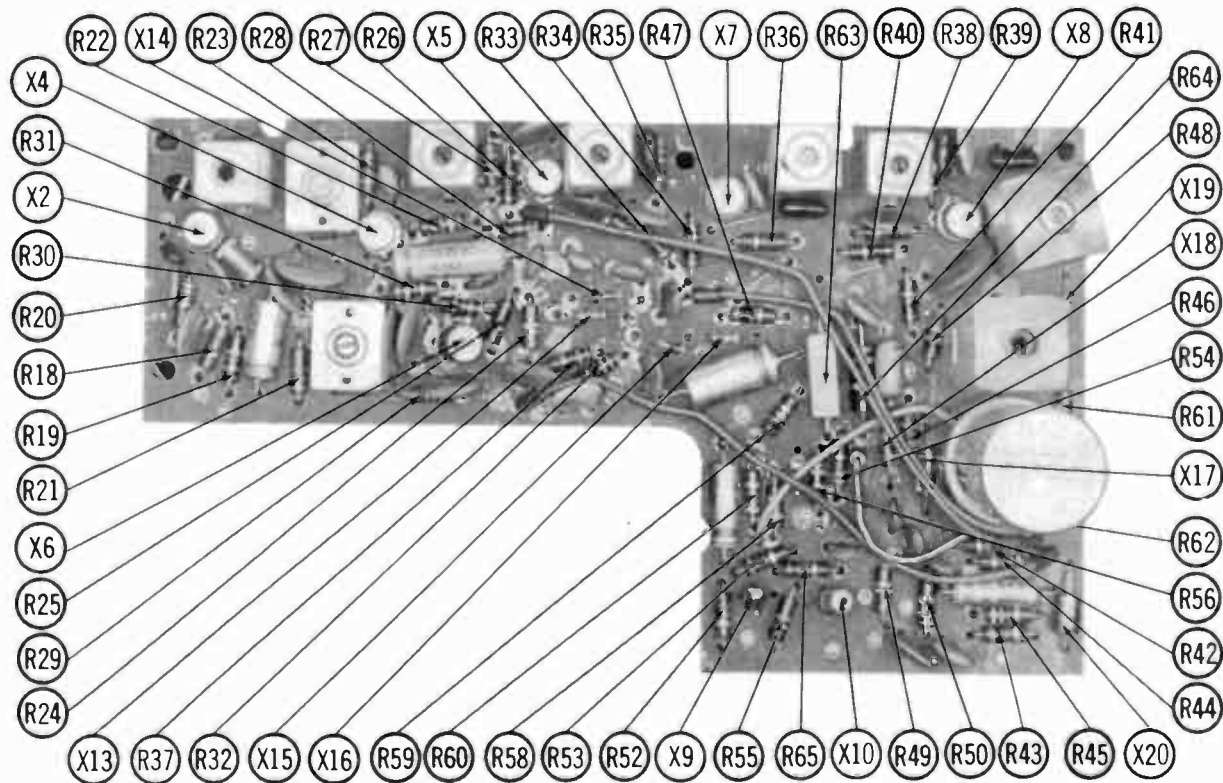
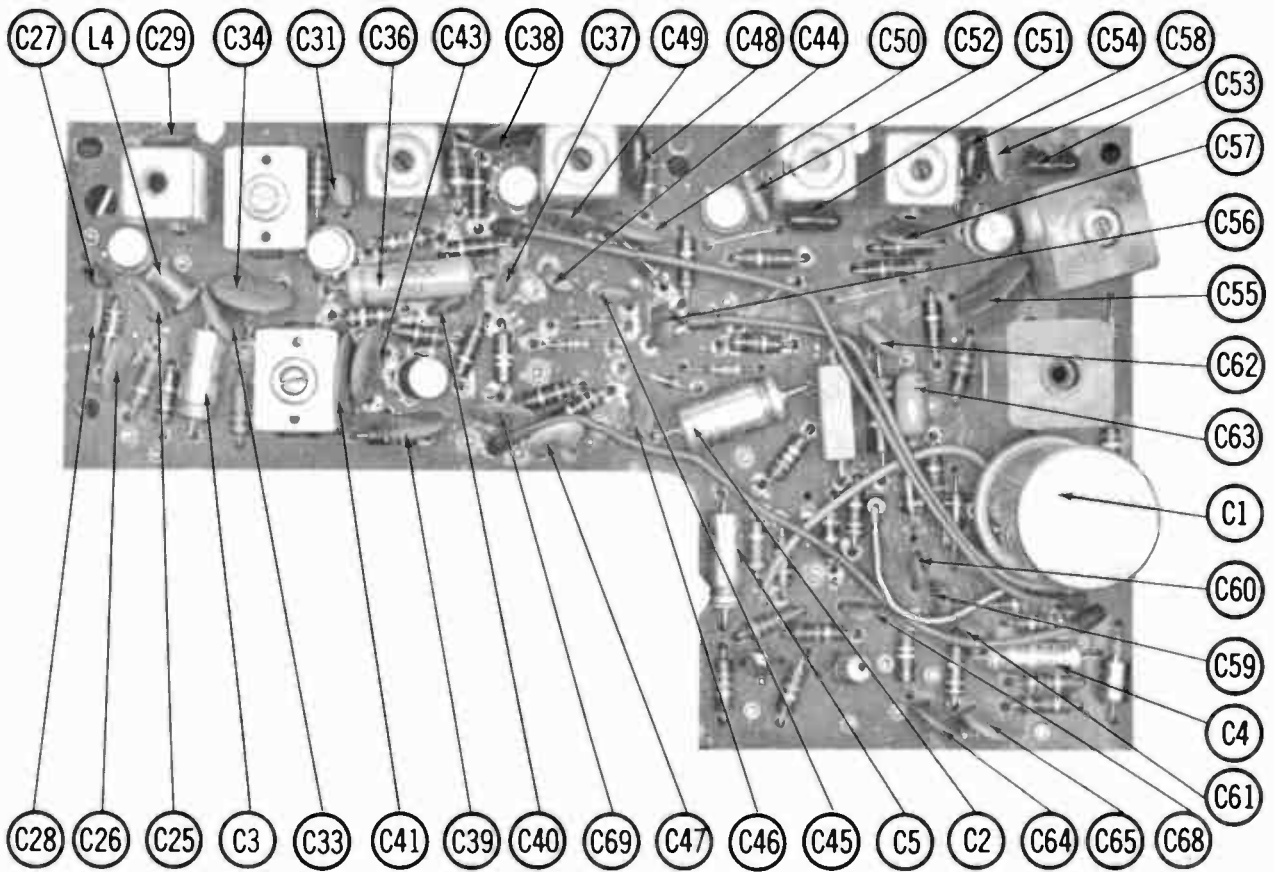
© Howard W Sams & Co., Inc. 1965

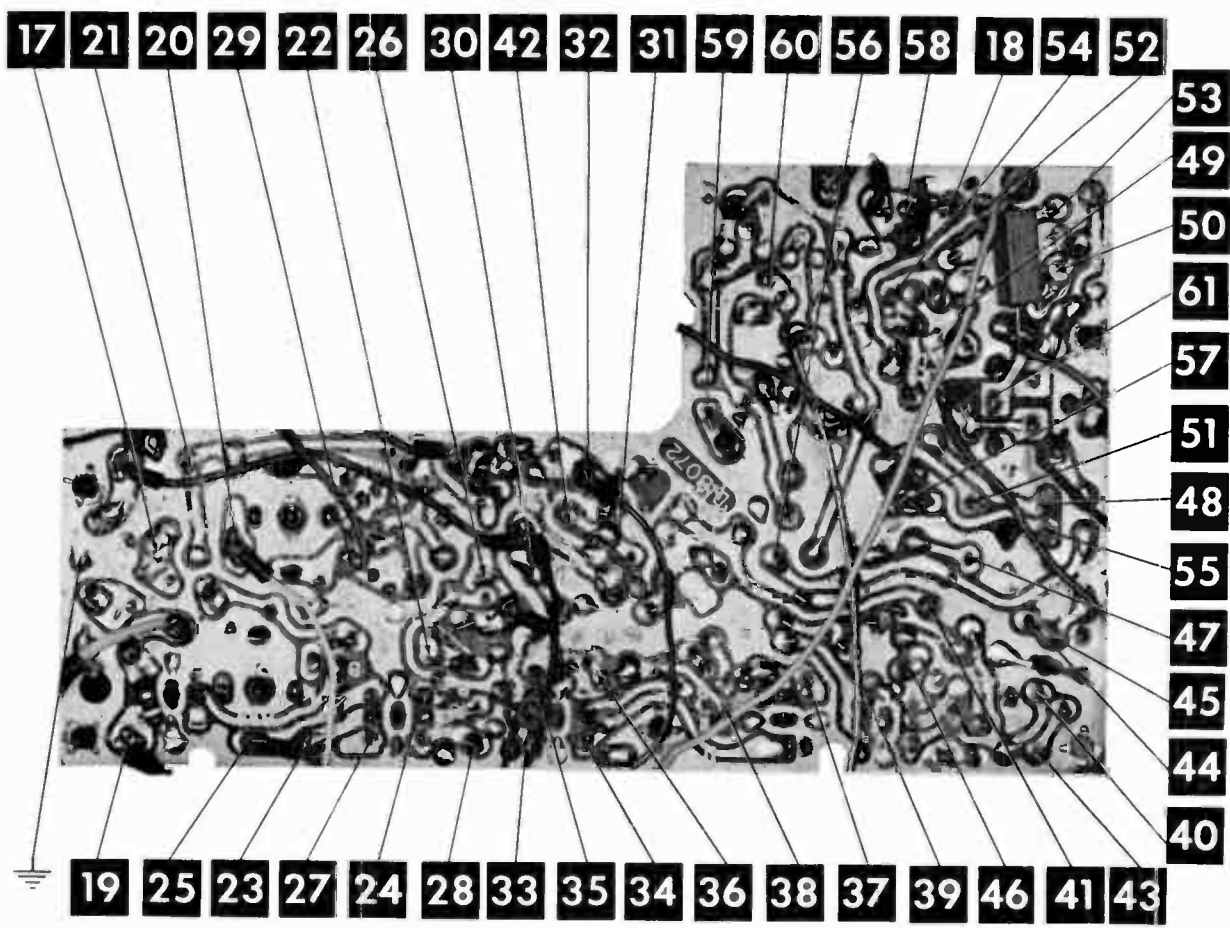
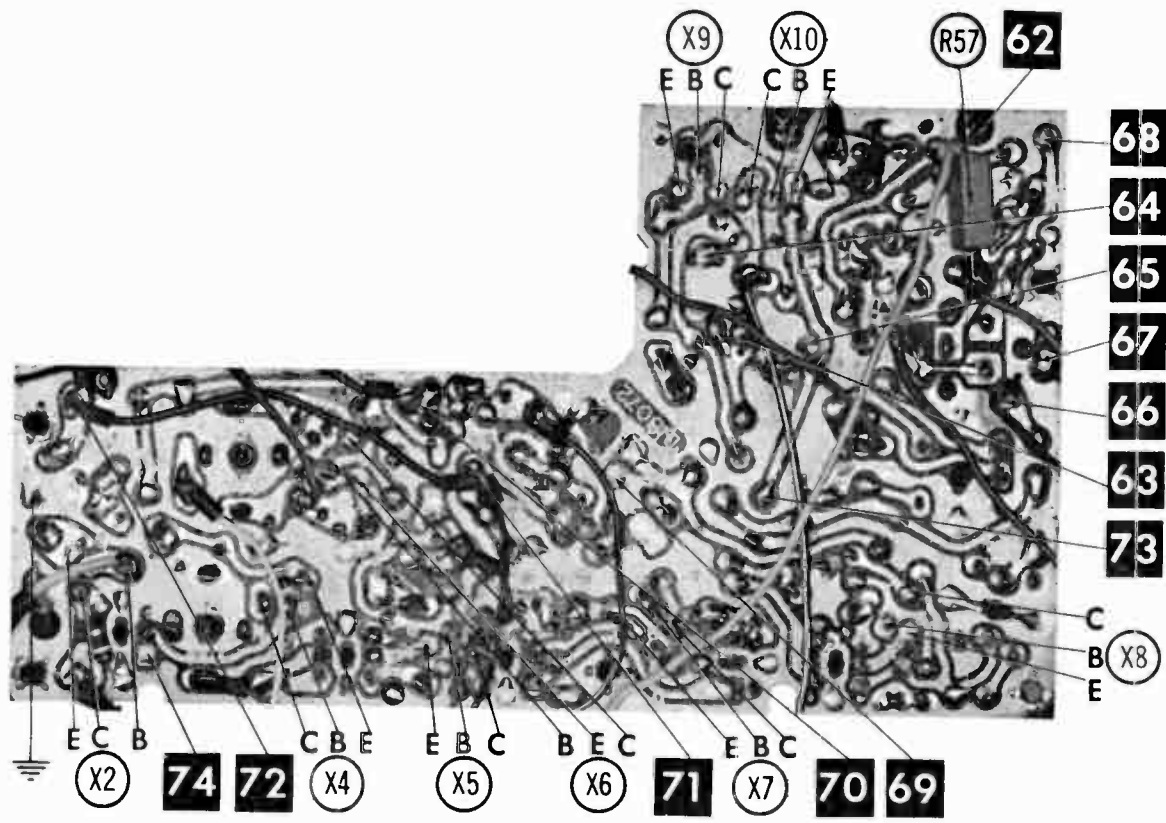


PONTIAC MODELS 7289772, 7292112

HEP54  
5K 3020



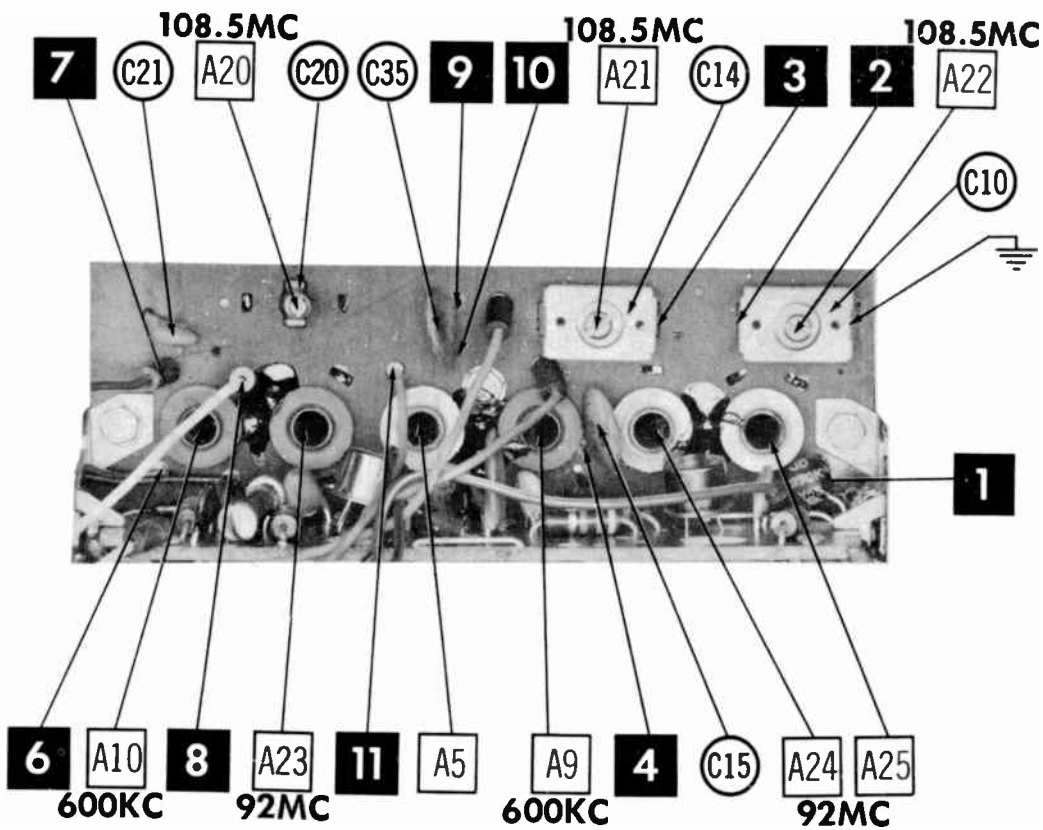
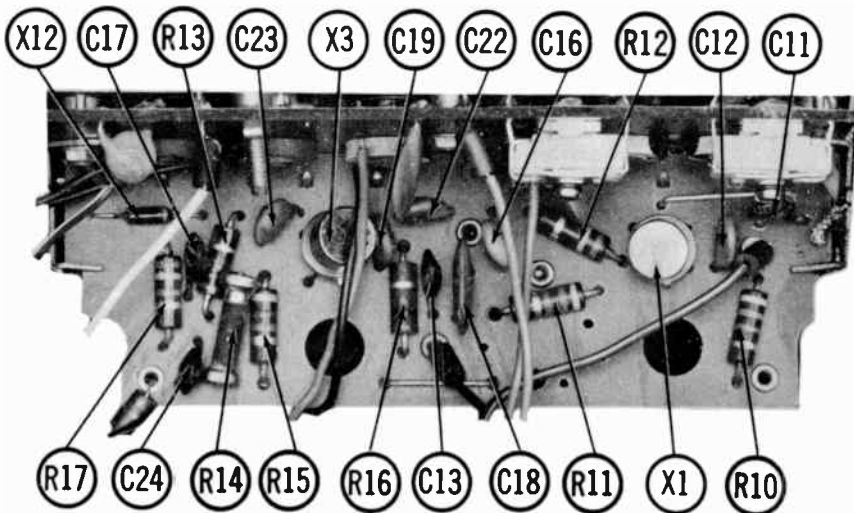
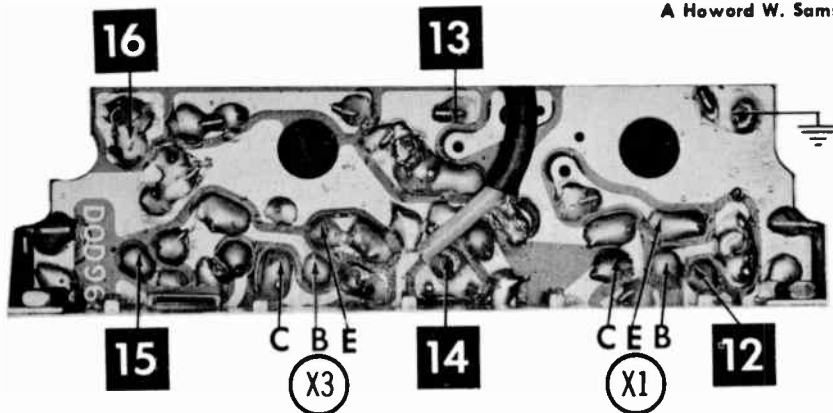




PONTIAC MODELS 7289772, 7292112

A Howard W. Sams CIRCUITRACE® Photo





# ALIGNMENT INSTRUCTIONS

Check for specified source voltage.  
 Use only enough generator output to provide a usable indication.  
 Suggested Alignment Tools:  
 A1 thru A10, A12 thru A18  
 A11, A19

GENERAL CEMENT: 5009, 8728A, 8987  
 GENERAL CEMENT: 8606, 8606L, 8868  
 WALSCO: 2531-X, 2536  
 WALSCO: 2525, 2528, 2587

**PUSH-BUTTON ADJUSTMENT**

1. Pull button out.
2. Tune manually to desired station.
3. Press button in firmly.
4. Repeat for remaining buttons.

| SIGNAL GENERATOR COUPLING  | SIGNAL GENERATOR FREQUENCY | RADIO DIAL SETTING   | INDICATOR                       | ADJUST         | REMARKS                            |
|--|----------------------------|----------------------|---------------------------------|----------------|------------------------------------|
| 1. High side thru .1mf to point $\diamond$ A, low side to ground.  | 262KC (400% Mod.)          | High Freq. End Stop. | Output Meter across voice coil. | A1, A2, A3, A4 | Adjust for maximum.                |
| Check setting of oscillator coil core (A5). Rear of core should be 1 3/8" from mounting end of coil form.                  |                            |                      |                                 |                |                                    |
| 2. High side thru 82 pf to antenna receptacle, low side to ground.   | 1640KC                     | High Freq. End Stop. | Output Meter across voice coil. | A6, A7, A8     | Adjust for maximum.                |
| 3. " "   | 600KC                      | 600KC Signal         | "                               | A9, A10        | Adjust for maximum. Repeat step 2. |
| With radio installed in car and antenna extended 30", tune in a weak station near 1400KC and adjust A8 for maximum output. |                            |                      |                                 |                |                                    |

### FM ALIGNMENT USING AM SIGNAL GENERATOR - SELECTOR IN FM POSITION

High side thru 82pf to Antenna receptacle.

| GENERATOR FREQUENCY | DIAL SETTING               | INDICATOR   | ADJUST       | REMARKS   |
|---------------------|----------------------------|---|--------------|---|
| 4. 10.7MC (Unmod.)  | Point of non-interference. | DC probe of VTVM to point $\diamond$ B; common to ground. | A11 thru A18 | Adjust for maximum.   |
| 5. " "              | " "                        | DC probe to point $\diamond$ C; common to                 | A19          | Adjust for zero reading. A positive or negative reading will be obtained on either side of the correct setting. |

### FM IF ALIGNMENT USING FM SIGNAL GENERATOR - SELECTOR IN FM POSITION

High side thru 82pf to Antenna receptacle. , low side to ground. Use only enough marker signal to obtain indication. Use 60% frequency modulated signal with 450KC sweep. Use 120% sawtooth voltage in scope for horizontal deflection.

| GENERATOR FREQUENCY    | DIAL SETTING              | INDICATOR  | ADJUST       | REMARKS   |
|------------------------|---------------------------|--|--------------|---|
| 4. 10.7MC (450KC Swp.) | Point of non-interference | Vert. amp. of Scope to point $\diamond$ B; low side to ground. | A11 thru A18 | Disconnect stabilizing capacitor C 4 . Adjust for maximum gain and symmetry of response similar to Fig. 1 with marker as shown. Reconnect C 4 .                         |
| 5. " "                 | " "                       | Vert. amp. to point $\diamond$ C; low side to                  | A19          | Adjust A19 (Secondary) to place marker at center of crossover lines similar to Fig. 2. Adjust A 11 (Primary) for maximum amplitude and straightness of crossover lines. |

### FM RF ALIGNMENT

Connect generator thru 82pf to Antenna receptacle, low side to ground.

| GENERATOR FREQUENCY | DIAL SETTING     | INDICATOR   | ADJUST        | REMARKS  |
|---------------------|------------------|---|---------------|--|
| 6. 108.5MC          | Set at high end. | DC probe of VTVM to point $\diamond$ B; common to ground. | A20, A21, A22 | Adjust for maximum.  |
| 7. 92MC             | Tune to signal.  | "   | A23, A24, A25 | Rock tuning and adjust for maximum. Repeat steps 6 and 7 until no further improvement can be made. |

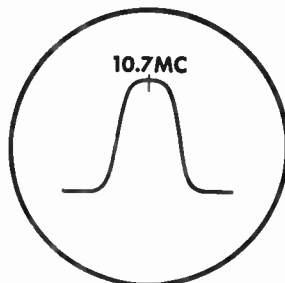


FIG. 1

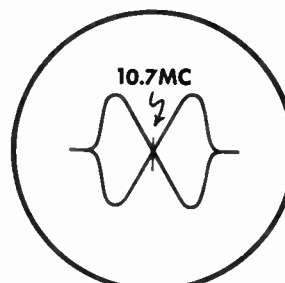


FIG. 2

PONTIAC MODELS 7289772, 7292112



# PARTS LIST AND DESCRIPTION

Replacement parts shown may be superseded by the availability of newly introduced replacements.  
 Have your local distributor check Sams COUNTER FACTS for the most up-to-date replacement.

## WIRING DATA

|   |  |
|---|--|
| General-use Unshielded Hook-up Wire ..... | Use BELDEN No. 8530 (Solid) Available in 12 Colors<br>8524 (Stranded) Available in 12 Colors |
| Shielded Hook-up Wire .....               | Use BELDEN No. 8885  |
| Rear Seat Speaker Extension Cable .....   | Use BELDEN No. 8782 (Stranded) Coded Parallel Leads  |
| Bonding Strap .....                       | Use BELDEN No. 8661 (3/8 in.) or 8670 (3/4 in.)  |

## TRANSISTORS

| ITEM No. | ORIG. TYPE | USE                  | REPLACEMENT DATA |                           |              | NOTES |
|----------|------------|----------------------|------------------|---------------------------|--------------|-------|
|          |            |                      | DELCO PART No.   | GENERAL ELECTRIC PART No. | RCA PART No. |       |
| X1       | D8-62      | FM RF Amp.           | D8-41            |                           |              | PNP   |
| X2       | D8-63      | FM Mixer             | D8-41            |                           |              | PNP   |
| X3       | D8-64      | FM Osc.              | D8-41            |                           |              | PNP   |
| X4       | D8-56      | AM RF Amp.-1st FM IF | D8-56            |                           |              | PNP   |
| X5       | D8-63      | AM Mixer-2nd FM IF   | D8-56            | GE-1                      |              | PNP   |
| X6       | D8-36      | AM Osc.              | D8-25            |                           |              | PNP   |
| X7       | D8-63      | AM IF-3rd FM IF      | D8-56            |                           |              | PNP   |
| X8       | D8-38      | 4th FM IF            | D8-56            |                           |              | PNP   |
| X9       | D8-46      | 1st AF Amp.          | D8-46            | GE-10                     |              | NPN   |
| X10      | D8-66      | 2nd AF Amp.          | D8-66            |                           |              | NPN   |
| X11      | D8-501     | Output               | D8-501           | GE-4                      |              | PNP*  |

\* Check bias adjustment.

## POWER RECTIFIERS & SIGNAL DIODES

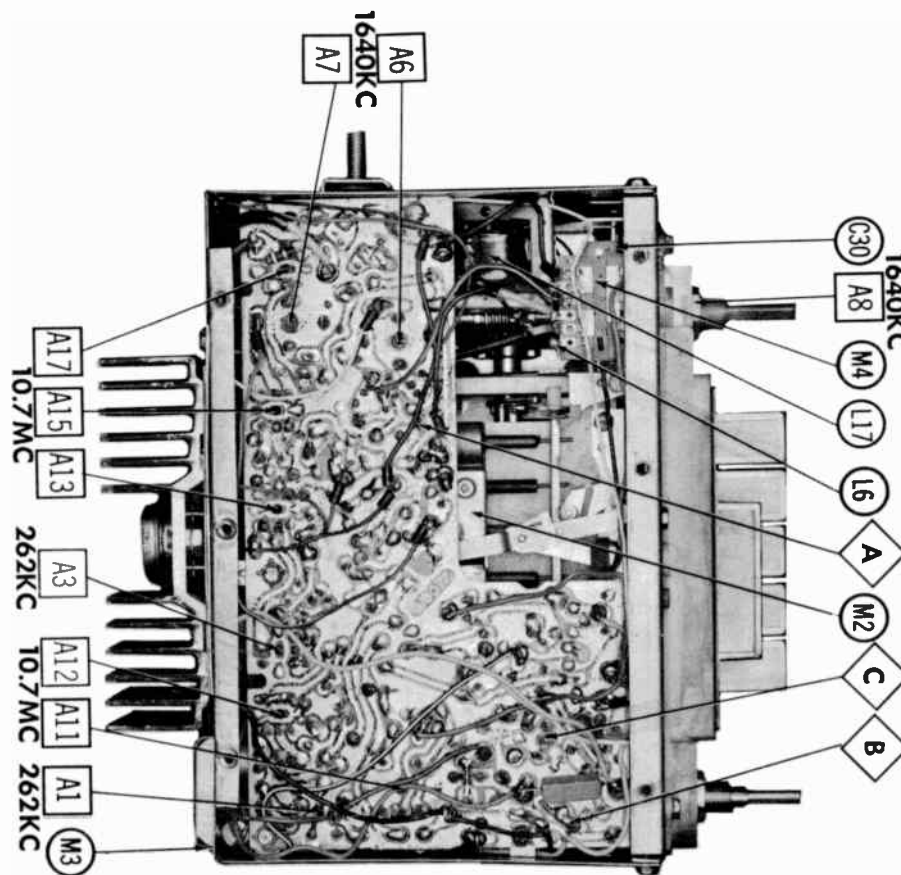
| ITEM No. | MEASURED CURRENT | ORIGINAL Part or Type No. | RECTIFIERS                |                  |              |                         | DIODES                    |
|----------|------------------|---------------------------|---------------------------|------------------|--------------|-------------------------|---------------------------|
|          |                  |                           | GENERAL ELECTRIC PART No. | MALLORY PART No. | RCA PART No. | SARKES TARZIAN PART No. | GENERAL ELECTRIC PART No. |
| X12      |                  | D8-55                     |                           |                  |              |                         | 1N34AS                    |
| X13      |                  | D8-27                     |                           |                  |              |                         | 1N34AS                    |
| X14      |                  | D8-27                     |                           |                  |              |                         | 1N34AS                    |
| X15      |                  | D8-27                     |                           |                  |              |                         | 1N34AS                    |
| X16      |                  | D8-27                     |                           |                  |              |                         | 1N34AS                    |
| X17      |                  | D8-39 ①                   |                           |                  |              |                         | 1N34AS                    |
| X18      |                  | D8-39 ①                   |                           |                  |              |                         | 1N34AS                    |
| X19      |                  | D8-27                     |                           |                  |              |                         | 1N34AS                    |
| X20      |                  | D8-49                     |                           |                  |              |                         | 1N34AS                    |

① X17 and X18 are a matched pair.

## ELECTROLYTIC CAPACITORS

| ITEM No. | RATING |         | REPLACEMENT DATA |                  |                           |                           |                             |                  |                  |
|----------|--------|---------|------------------|------------------|---------------------------|---------------------------|-----------------------------|------------------|------------------|
|          | CAP.   | VOLT.   | DELCO PART No.   | AEROVOX PART No. | CORNELL DUBILIER PART No. | GENERAL ELECTRIC PART No. | GENERAL INSTRUMENT PART No. | MALLORY PART No. | SPRAGUE PART No. |
| C1A      | m1000  | 16      | 7283675          | AFH3-54-41       | C0006                     |                           |                             | FPS300, 91       | PCL8-3021.6*     |
| B        | 500    | 16      |                  |                  |                           |                           |                             |                  |                  |
| C        | 4      | 11.5RMS |                  |                  |                           |                           |                             |                  |                  |
| C2       | 100    | 4       | 7291785          | PTT30            | NLW125-6                  | MT1-21                    | BL1720                      | TT6X100          | TE-1102          |
| C3       | 30     | 6       | 7279896          | PTT27            | NLW30-15                  | MT1-13                    | MLV30-6                     | TT6X30           | TE-1092          |
| C4       | 3      | 12      | 7291860          | PTT50            | NLW3-15                   | MT1-3                     | BL1140                      | TT12X3           | TE-1122          |
| C5       | 10     | 12      | 7292738          | PTT53            | NLW10-15                  | MT1-5                     |                             |                  |                  |
| C6       | 100    | 4       | 7291785          | PTT30            | NLW125-6                  | MT1-21                    | BL1720                      | TT6X100          | TE-1102          |

\* Not normally in distributor's stock. Available thru distributor on order to manufacturer.



# PARTS LIST AND DESCRIPTION (CONTINUED)

Replacement parts shown may be superseded by the availability of newly introduced replacements.  
 Have your local distributor check Sams COUNTER FACTS for the most up-to-date replacement.

## FIXED CAPACITORS

| ITEM No. | RATING | REMARKS  | REPLACEMENT DATA |                    |                           |                  |                  |                  |
|----------|--------|----------|------------------|--------------------|---------------------------|------------------|------------------|------------------|
|          |        |          | AEROVOX PART No. | CENTRALAB PART No. | CORNELL-DUBILIER PART No. | ELMENCO PART No. | MALLORY PART No. | SPRAGUE PART No. |
| C10      |        | #7293221 | DI-270           | DD-271             | LA10T27-C4                | CCD-271          | GP327            | 5GA-T27          |
| C11      | 270    |          | NPO-DI 2.2       | DTZ-2R2            | C10V22C                   | CCTO-2R2         | CNO522           | 10TCC-V22        |
| C12      | 2      | NPO      | DI-270           | DD-271             | LA10T27-C4                | CCD-271          | GP327            | 5GA-T27          |
| C13      | 270    |          |                  |                    |                           |                  |                  |                  |
| C14      |        | #7291003 |                  |                    |                           |                  |                  |                  |
| C15      | 56     | NPO      |                  | TCZ-56             |                           | CCTO-560         | CNO456           | 10TCC-Q56        |
| C16      | 10     | NPO      | NPO-DI 10        | DTZ-10             | C10Q1C                    | CCTO-100         | CNO410           | 10TCC-Q10        |
| C17      | 270    |          | DI-270           | DD-271             | LA10T27-C4                | CCD-271          | GP327            | 5GA-T27          |
| C18      | .05    |          | TTD-05           | CK-503             | H5                        |                  | TA150            | TG-850           |
| C19      | 4.7    | NPO      | NPO-DI 5.0       | DTZ-4R7            | C10V47C                   | CCTO-050         | CNO547           | 10TCC-V50        |
| C20      | 12-15  |          |                  |                    |                           |                  |                  |                  |
| C21      | 5      | NPO      | NPO-DI 5.0       | DTZ-4R7            | C10V47C                   | CCTO-050         | CNO547           | 10TCC-V50        |
| C22      | 2      | NPO      | NPO-DI 2.2       | DTZ-2R2            | C10V22C                   | CCTO-2R2         | CNO522           | 10TCC-V22        |
| C23      | 4.7    | NPO      | NPO-DI 5.0       | DTZ-4R7            | C10V47C                   | CCTO-050         | CNO547           | 10TCC-V50        |
| C24      | 270    |          | DI-270           | DD-271             | LA10T27-C4                | CCD-271          | GP327            | 5GA-T27          |
| C25      | .0022  |          | DI-2200          | CF-222             | JB6D22                    | CCD-222          | GP222            | 10T8-D22         |
| C26      | .05    |          | TTD-05           | CK-503             | H5                        |                  | TA150            | TG-850           |
| C27      | 270    |          | DI-270           | DD-271             | LA10T27-C4                | CCD-271          | GP327            | 5GA-T27          |
| C28      | .0022  |          | DI-2200          | CF-222             | JB6D22                    | CCD-222          | GP222            | 10T8-D22         |
| C29      | .0022  |          | DI-2200          | CF-222             | JB6D22                    | CCD-222          | GP222            | 10T8-D22         |
| C30      |        | #7285097 |                  |                    |                           |                  |                  |                  |
| C31      | 1      | NPO      | NPO-DI 1.0       | TCZ-1              |                           |                  | CNO510           | 10TCC-V10        |
| C32      |        | #7287935 |                  |                    |                           |                  |                  |                  |
| C33      | .05    |          | TTD-05           | CK-503             | H5                        |                  | TA150            | TG-850           |
| C34      | .1     |          | TTD-1            | CK-104             | H6                        |                  | TA010            | TG-P10           |
| C35      | 180    | N750     |                  | C10T18U            |                           |                  | CN7318           | 10TCU-T18        |
| C36      | .0033  | 75V      | DBE6D33          | CPR-3300J          | WMF1D33                   | 6DP-1-332        | PVC4233          | 6PS-D33          |
| C37      | .02    |          | BPD-02           | DD-203             | BYA682                    | CCD-203          | B120             | 5HK-S20          |
| C38      | .07    |          |                  |                    |                           |                  |                  |                  |
| C39      | .01    |          | BPD-01           | DD-103             | BYA1061                   | CCD-103          | B110             | 5HK-S10          |
| C40      | 560    |          | DI-560           | DD-561             | LA10T56-C4                | CCD-561          | GP356            | 5GA-T56          |
| C41      | 330    | N330     |                  |                    |                           |                  |                  | 10TCS-T33        |
| C42      |        | #7282165 |                  |                    |                           |                  |                  |                  |
| C43      | .0047  |          | BPD-0047         | DD-472             | BYA10D47                  | CCD-472          | B247             | 5HK-D47          |
| C44      | 10     | NPO      | DI-470           | DD-471             | JB6T47                    | CCD-471          | GP347            | 10T8-T47         |
| C45      | .02    |          | BPD-02           | DD-203             | BYA8S2                    | CCD-203          | B120             | 5HK-S20          |
| C46      | .0022  |          | BPD-0022         | DD-222             | LA10D22-C4                | CCD-222          | B222             | 10T8-D22         |
| C47      | .05    |          | TTD-05           | CK-503             | H5                        |                  | TA150            | TG-850           |
| C48      | 330    |          | DI-330           | DD-331             | LA10T33-C4                | CCD-331          | GP333            | 10T8-T33         |
| C49      | .05    |          | TTD-05           | CK-503             | H5                        |                  | TA150            | TG-850           |
| C50      | .05    |          | TTD-05           | CK-503             | H5                        |                  | TA150            | TG-850           |
| C51      | 150    |          | DI-150           | DD-151             | LA10T15-S3                | CCD-151          | GP315            | 5GA-T15          |
| C52      | .0022  |          | BPD-0022         | DD-222             | LA10D22-C4                | CCD-222          | B222             | 10T8-D22         |
| C53      | 110    |          | DI-100           | DD-101             | LA10T1-S3                 | CCD-101          | GP310            | 5GA-T10          |
| C54      | 470    |          | BPD-00047        | DD-471             | BYA10T47                  | CCD-471          | B347             | 10T8-T47         |
| C55      | 180    | N80      |                  |                    |                           |                  |                  | 10CN-T80         |
| C56      | .001   |          | BPD-001          | DD-102             | BYA10D1                   | CCD-102          | B210             | 5HK-D10          |
| C57      | .05    |          | TTD-05           | CK-503             | H5                        |                  | TA150            | TG-850           |
| C58      | .05    |          | TTD-05           | CK-503             | H5                        |                  | TA150            | TG-850           |
| C59      | 330    |          | DI-330           | DD-331             | LA10T33-C4                | CCD-331          | GP333            | 10T8-T33         |
| C60      | 330    |          | DI-330           | DD-331             | LA10T33-C4                | CCD-331          | GP333            | 10T8-T33         |
| C61      | 330    |          | DI-330           | DD-331             | LA10T33-C4                | CCD-331          | GP333            | 10T8-T33         |
| C62      | .0022  |          | BPD-0022         | DD-222             | LA10D22-C4                | CCD-222          | B222             | 10T8-D22         |
| C63      | .012   | 75V      | DBE6S12          |                    | PM4812                    | 6DP-2-123        | PVC6112          | 6PS-S12          |
| C64      | .05    |          | TTD-05           | CK-503             | H5                        |                  | TA150            | TG-850           |
| C65      | .033   |          | DBE4S33          |                    | WMF1833                   | 1DP-1-333        | PVC1133          | 4PS-S33          |
| C66      | .047   | 75V      | P288N-047        | DD-503             | PM2847                    | 4DP-3-473        | GEM2147          | 2TM-S47          |
| C67      | .1     |          | TTD-01           | CK-104             | H6                        |                  | TA010            | TG-P10           |
| C68      | 470    |          | BPD-00047        | DD-471             | BYA10T47                  | CCD-471          | B347             | 10T8-T47         |
| C69      | .05    |          | TTD-05           | CK-503             | H5                        |                  | TA150            | TG-850           |
| C70      | .15    | 75V      | DBE2P15          |                    | WMF1P15                   | 1DP-3-154        | PVC1015          | 2PS-P15          |

# Delco Part Number.  
 ① 100mfd @ 16V Part #7289772 used in some versions.

## CONTROLS

All wattages 1/2 watt, or less, unless otherwise listed.

| ITEM No. | USE                | RESISTANCE           | REPLACEMENT DATA |   |                    |                  |                  |        |
|----------|--------------------|----------------------|------------------|---|--------------------|------------------|------------------|--------|
|          |                    |                      | DELCO PART No.   | CENTRALAB PART No.                            | CLAROSTAT PART No. | CTS-IRC PART No. | MALLORY PART No. |        |
| RIA      | Tone Volume/Switch | 100K 20K Tap @ 6000Ω | 7290475 ①        | F1-100K, R14-25K, PFB015, RFS109, AK26 ②, KR4 |                    |                  | † QJ-1872A       |        |
| B        | Tone Volume/Switch | 100K 20K Tap @ 6000Ω | 7292423 ②        |   |                    |                  |                  |        |
| R2       | Bias               | 600Ω                 | 7286864          | V-600   | U39-600            | 110-600          |                  | MR850T |

① Used in Model 7289772  
 ② Used in Model 7292112.  
 ③ Alter bushing to meet requirement.  
 † "CONCENTRIKIT" Equivalent: K8 Kit with Base Elements and Shafts: B11-128, P22-027 (Panel)  
 B19-119X, R26-112 (Rear)  
 S46 (Bushing)  
 76-1 (Switch)  
 "SNAPTROL" Equivalent: BU8 ③, CF13, CR50T, SF40, SR7, GC.

## RESISTORS (Power and Special)

| ITEM No. | RATING         | REPLACEMENT DATA |                  |                | ITEM No. | RATING | REPLACEMENT DATA |                  |         |
|----------|----------------|------------------|------------------|----------------|----------|--------|------------------|------------------|---------|
|          |                | IRC PART No.     | WORKMAN PART No. | DELCO PART No. |          |        | IRC PART No.     | WORKMAN PART No. | REMARKS |
| R57      | .47Ω (Fusible) | BWEL 47Ω         | WS 47Ω           | 7281890        |          |        |                  |                  |         |

PONTIAC MODELS 7289772, 7292112

## PARTS LIST AND DESCRIPTION (CONTINUED)

Replacement parts shown may be superseded by the availability of newly introduced replacements.  
Have your local distributor check Sams COUNTER FACTS for the most up-to-date replacement.

### COILS (RF-IF)

| ITEM No. | USE              | REPLACEMENT DATA |                   |                |                 |                  |                  |
|----------|------------------|------------------|-------------------|----------------|-----------------|------------------|------------------|
|          |                  | DELCO PART No.   | MEISSNER PART No. | MERIT PART No. | MILLER PART No. | STANCOR PART No. | WORKMAN PART No. |
| L1       | FM Ant.          | ①                |                   |                |                 |                  |                  |
| L2       | FM RF            | ①                |                   |                |                 |                  |                  |
| L3       | FM Osc.          | ①                |                   |                |                 |                  |                  |
| L4       | RF Choke (1.8uh) | 7291800          |                   |                |                 |                  |                  |
| L5       | 1st FM IF        | 7292791 ②        |                   |                |                 |                  |                  |
| L6       | RF Choke (8uh)   | 7255738          | 19-1009           | BC-565         | 4611            | RTC-8521         | T822             |
| L7       | AM Ant.          | ①                |                   |                |                 |                  |                  |
| L8       | 2nd FM IF        | 7291358          |                   |                |                 |                  |                  |
| L9       | AM RF            | ①                |                   |                |                 |                  |                  |
| L10      | AM Osc.          | ①                |                   |                |                 |                  |                  |
| L11      | 3rd FM IF        | 7291359          |                   |                |                 |                  |                  |
| L12      | 1st AM IF        | 7288144          |                   |                |                 |                  |                  |
| L13      | 4th FM IF        | 7291360          |                   |                |                 |                  |                  |
| L14      | 2nd AM IF        | 1221859          |                   |                | 6545            |                  | TE638            |
| L15      | Ratio Detector   | 7289392          |                   |                |                 |                  |                  |

① Part of M2.

② Part #7291540 used in early production. Use Part #7292791 for replacement.

### FILTER CHOKE

| ITEM No. | RATINGS            |         |                              | REPLACEMENT DATA |                |                  |                     |                | NOTES |
|----------|--------------------|---------|------------------------------|------------------|----------------|------------------|---------------------|----------------|-------|
|          | CURRENT (Measured) | DC RES. | INDUCTANCE (0 CURRENT 1000~) | DELCO PART No.   | MERIT PART No. | STANCOR PART No. | THORDARSON PART No. | TRIAD PART No. |       |
| L16      | 1.3 Amp.           | .5Ω     | 8MH                          | 1221623          | C-4095         | TC-2             | TR-154              | TY17XT         |       |

### CHOKE (AUDIO OUTPUT)

| ITEM No. | INDUCTANCE | REPLACEMENT DATA |                |                  |                     |                | NOTES |
|----------|------------|------------------|----------------|------------------|---------------------|----------------|-------|
|          |            | DELCO PART No.   | MERIT PART No. | STANCOR PART No. | THORDARSON PART No. | TRIAD PART No. |       |
| L17      | 30MH       | 1222297          |                |                  |                     |                |       |

### SPEAKER

| ITEM No. | TYPE            | REPLACEMENT DATA |               |                        | NOTES |
|----------|-----------------|------------------|---------------|------------------------|-------|
|          |                 | DELCO PART No.   | QUAM PART No. |                        |       |
| SP1      | 4" X 10" PM 10Ω | 7291442          | 410A2Z10      | Used in Model 7289772. |       |
|          | 4" X 10" PM 10Ω | 7286462          | 410A2Z10      | Used in Model 7292112. |       |

### FUSES

| ITEM No. | TYPE | RATING | REPLACEMENT DATA |               |                     |        |               |        |  |
|----------|------|--------|------------------|---------------|---------------------|--------|---------------|--------|--|
|          |      |        | DELCO PART No.   |               | LITTELFUSE PART No. |        | BUSS PART No. |        |  |
|          |      |        | FJSE             | HOLDER        | FUSE                | HOLDER | FUSE          | HOLDER |  |
| M1       | AGC  | 3A     |                  | In Fuse Block | 312003              |        |               | AGC3   |  |

### MISCELLANEOUS

| ITEM No. | PART NAME          | DELCO PART No. | NOTES |
|----------|--------------------|----------------|-------|
| M2       | Tuning Coils Assy. | 7290996        |       |
| M3       | Spark Plate        | 7271564        |       |
| M4       | Selector Switch    | 7284009        |       |

### CABINETS & CABINET PARTS

(When Ordering Specify Model, Chassis & Color)

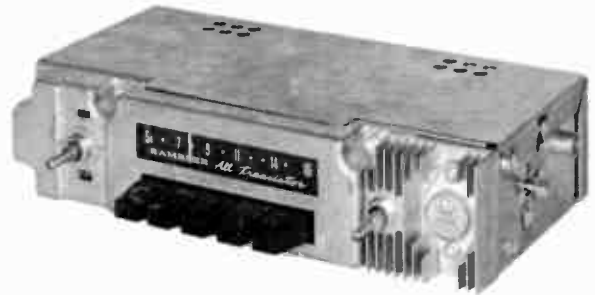
| ITEM                     | PART No. | ITEM                      | PART No. |
|--------------------------|----------|---------------------------|----------|
| Escutcheon-Model 7289772 | 7290468  | Knob, Tuning or Volume    | 9775998  |
| Escutcheon-Model 7292112 | 1222262  | Knob, Tone                | 9773916  |
| Dial Pointer             | 1222249  | Knob, Dummy-Model 7289772 | 9778957  |
| Pushbutton               | 7290577  | Knob, Dummy-Model 7292112 | 9773915  |



# PHOTOFACT<sup>®</sup> with

# CIRCUITRACE<sup>®</sup>

**TRADE NAME :** Rambler Models 5BA (8991562), 5BAM (89915561) (1965 (Rambler American))  
**SUPPLIER :** For Current Address, See Master Index.  
**TYPE SET :** 6 Transistor AM Receiver  
**POWER SUPPLY :** 12 Volt Storage Battery  
**RATING :** .800 Amp. @ 12.6 Volts  
  
**TUNING RANGE :** BROADCAST 540-1605KC



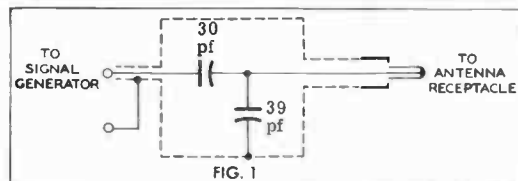
## ALIGNMENT INSTRUCTIONS

Check for specified source voltage.  
 Use only enough generator output to provide a usable indication.  
 Suggested Alignment Tools:  
 A1 thru A7    GENERAL CEMENT: 9440    WALSCO: 2501

|  | SIGNAL GENERATOR COUPLING                                   | SIGNAL GENERATOR FREQUENCY | RADIO DIAL SETTING   | INDICATOR                       | ADJUST         | REMARKS   |
|--|---|----------------------------|----------------------|---------------------------------|----------------|---|
| 1.   | High side thru .1mf to point $\Delta$ , low side to ground. | 262.5KC (400% Mod.)        | High Freq. End Stop. | Output Meter across voice coil. | A1, A2, A3, A4 | Adjust for maximum.   |
| 2.   | Thru dummy (Fig. 1) to antenna receptacle.                  | 1605KC                     | "                    | "                               | A5, A6, A7     | "   |
| Step 3 is not necessary unless tuner has been tampered with or associated components have been replaced. IF necessary, back tuning cores (A8, A9, A10) out of coils but not out of forms. Repeat step 2. |   |                            |                      |                                 |                |   |
| 3.   | Thru dummy (Fig. 1) to antenna receptacle.                  | 1000KC                     | Tune to Signal.      | Output Meter across voice coil. | A8, A9, A10    | Adjust for maximum. Repeat steps 2 & 3 until no further improvement is noted. |
| With radio installed in car and antenna fully extended, tune in a weak station near 1600KC and adjust A7 for maximum output.   |   |                            |                      |                                 |                |   |

### PUSH-BUTTON ADJUSTMENT

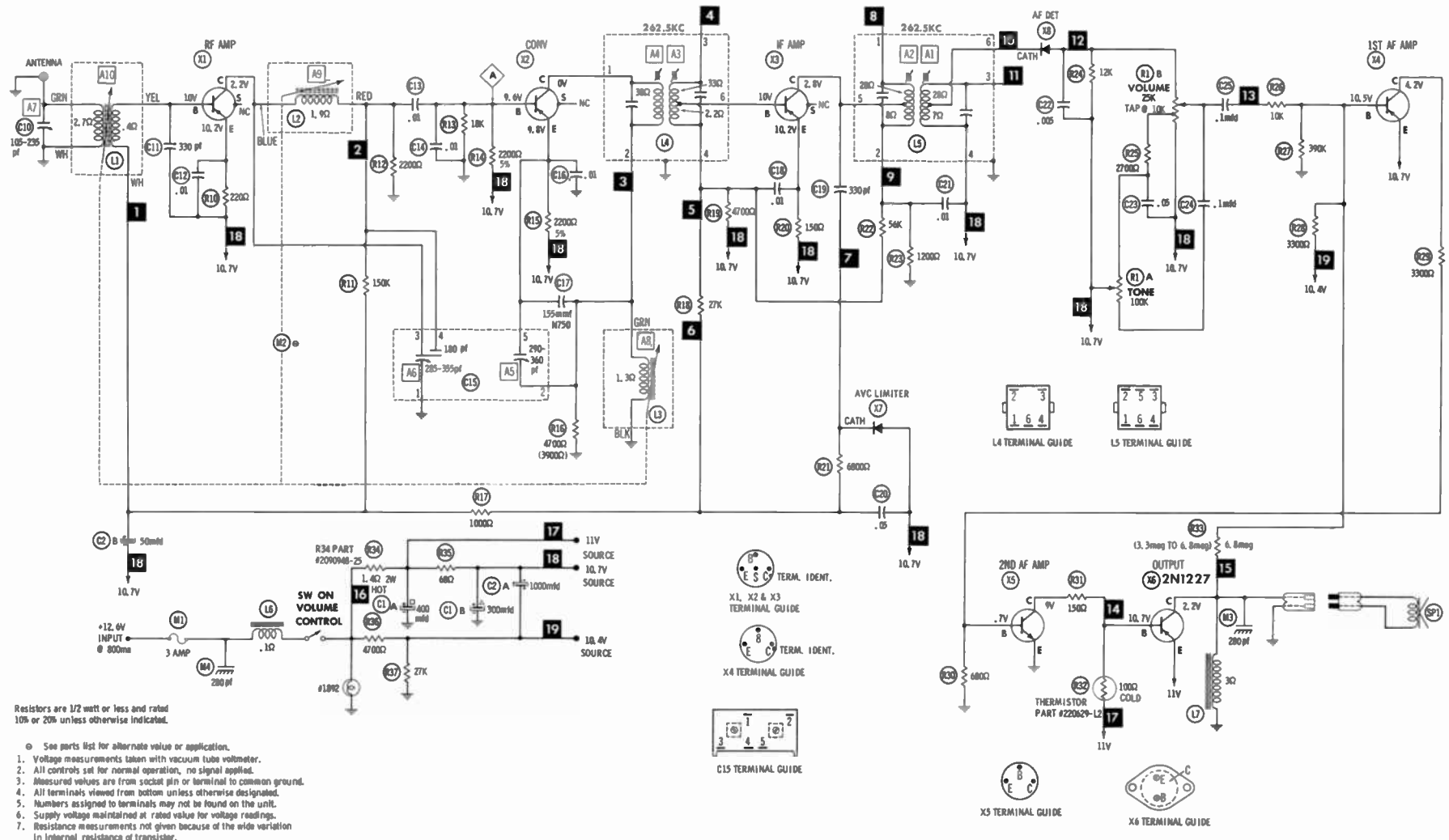
1. Pull button out.
2. Tune manually to desired station.
3. Press button in firmly.
4. Repeat for remaining buttons.



**RAMBLER MODEL 5BA (8991562), 5BAM (89915561)**

**HOWARD W. SAMS & CO., INC.** Indianapolis 6, Indiana





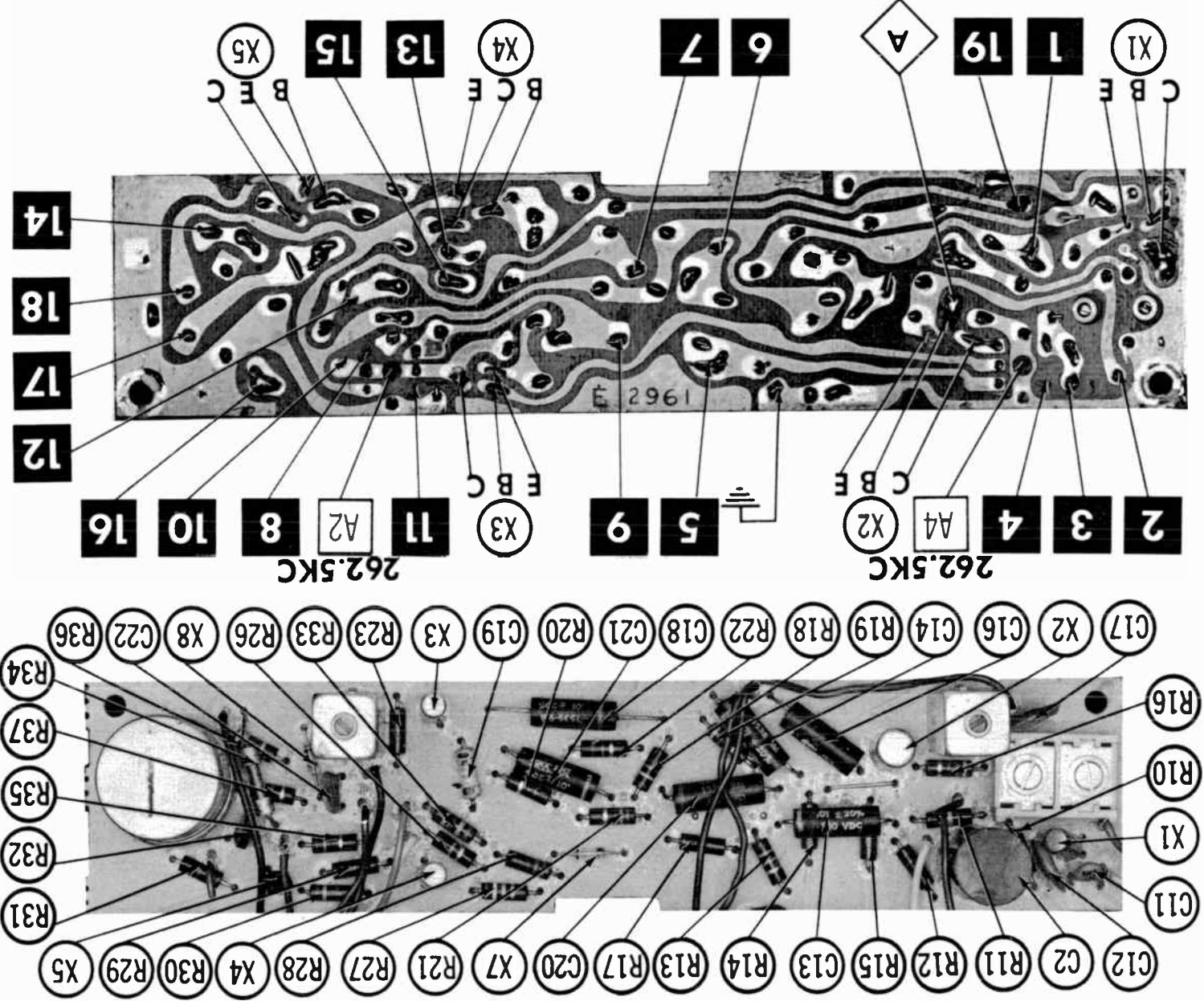
Resistors are 1/2 watt or less and rated 10% or 20% unless otherwise indicated.

See parts list for alternate value or application.

1. Voltage measurements taken with vacuum tube voltmeter.
2. All controls set for normal operation, no signal applied.
3. Measured values are from socket pin or terminal to common ground.
4. All terminals viewed from bottom unless otherwise designated.
5. Numbers assigned to terminals may not be found on the unit.
6. Supply voltage maintained at rated value for voltage readings.
7. Resistance measurements not given because of the wide variation in internal resistance of transistor.

A PHOTOFACT STANDARD NOTATION SCHEMATIC with **CIRCUITRACE**  
 © Howard W Sams & Co., Inc 1965

**RAMBLER MODEL SBA (8991562), 5BAM(8991561)**



# PARTS LIST AND DESCRIPTION

Replacement parts shown may be superseded by the availability of newly introduced replacements.  
Have your local distributor check Sams COUNTER FACTS<sup>®</sup> for the most up-to-date replacement.

## TRANSISTORS

| ITEM No. | ORIG. TYPE | USE               | REPLACEMENT DATA |                           |              | NOTES | BENDIX PART No. |
|----------|------------|-------------------|------------------|---------------------------|--------------|-------|-----------------|
|          |            |                   | DELCO PART No.   | GENERAL ELECTRIC PART No. | RCA PART No. |       |                 |
| X1       |            | RF Amp. Converter | DS-25            | GE-1                      | 2N1637       | PNP   | 2091241-0015    |
| X2       |            | IF Amp.           | DS-25            | GE-1                      | 2N1639       | PNP   | 2091241-0013    |
| X3       |            | 1st AF Amp.       | DS-25            | GE-1                      | 2N1638       | PNP   | 2091241-0014    |
| X4       |            | 2nd AF Amp.       | DS-26            | GE-2                      | 2N591        | PNP   | 2090924-0008    |
| X5       | 2N1227     | Output            | DS-46            | GE-10                     | 2N649        | NPN   | 2092609-0002    |
| X6       |            |                   | DS-520           | GE-3                      | 2N301        | PNP*  | 2091859-0008    |

\* When replacing, apply silicon grease to both sides of insulator. Tighten mounting screws securely.

## POWER RECTIFIERS & SIGNAL DIODES

| ITEM No. | MEASURED CURRENT | ORIGINAL Part or Type No. | RECTIFIERS                |                  |              |                         | DIODES                    |
|----------|------------------|---------------------------|---------------------------|------------------|--------------|-------------------------|---------------------------|
|          |                  |                           | GENERAL ELECTRIC PART No. | MALLORY PART No. | RCA PART No. | SARKES TARZIAN PART No. | GENERAL ELECTRIC PART No. |
| X7       |                  | 2092055-0001              |                           |                  |              |                         | 1N34AS                    |
| X8       |                  | 2092055-0001              |                           |                  |              |                         | 1N34AS                    |

## ELECTROLYTIC CAPACITORS

| ITEM No. | RATING |       | BENDIX PART No. | REPLACEMENT DATA |                           |                           |                             |                  |                  |
|----------|--------|-------|-----------------|------------------|---------------------------|---------------------------|-----------------------------|------------------|------------------|
|          | CAP.   | VOLT. |                 | AEROVOX PART No. | CORNELL-DUBILIER PART No. | GENERAL ELECTRIC PART No. | GENERAL INSTRUMENT PART No. | MALLORY PART No. | SPRAGUE PART No. |
| C1A      | 400    | 16    | 2091503-0007    | PWH2-02-08       | CCOO12                    | XC3-48.1                  |                             | PPF300.65        | PCLS-2174.1*     |
| B        | 300    | 16    |                 |                  |                           |                           |                             |                  |                  |
| C2A      | 1000   | 1.5   | 2092246-0702    | BCD1.5-3X100050  |                           |                           |                             |                  |                  |
| B        | 50     | 3     |                 |                  |                           |                           |                             |                  |                  |

\* Not normally in distributor's stock. Available thru distributor on order to manufacturer.

## FIXED CAPACITORS

| ITEM No. | RATING   | REMARKS       | REPLACEMENT DATA |                    |                           |                  |                  |                  |  |
|----------|----------|---------------|------------------|--------------------|---------------------------|------------------|------------------|------------------|--|
|          |          |               | AEROVOX PART No. | CENTRALAB PART No. | CORNELL-DUBILIER PART No. | ELMENCO PART No. | MALLORY PART No. | SPRAGUE PART No. |  |
| C10      | 105-235  | #219083-13 ①  |                  |                    |                           |                  |                  |                  |  |
| C11      | 330      |               | DI-330           | DD-331             | LA10T33-C4                | CCD-331          | GP333            | 10TS-T33         |  |
| C12      | .01      |               | BPD-01           | DD-103             | BYA10S1                   | CCD-103          | B110             | 5HK-S10          |  |
| C13      | .01 100V |               | DBE-4S1          | CPR-1000J          | WMF1S1                    | 1DP-1-103        | PVC211           | 4PS-S10          |  |
| C14      | .01 100V |               | DBE4S1           | CPR-1000J          | WMF1S1                    | 1DP-1-103        | PVC211           | 4PS-S10          |  |
| C15A     | 285-355  | #2092422-0709 |                  |                    |                           |                  |                  |                  |  |
| B        | 180      |               |                  |                    |                           |                  |                  |                  |  |
| C        | 290-360  |               |                  |                    |                           |                  |                  |                  |  |
| C16      | .01 100V |               | DBE4S1           | CPR-1000J          | WMF1S1                    | 1DP-1-103        | PVC211           | 4PS-S10          |  |
| C17      | 155 N750 |               | N750-DI 150      | DTN-150            | C10T15U                   | CCTN-151         | CN7315           | 10TCU-T15        |  |
| C18      | .01 100V |               | DBE4S1           | CPR-1000J          | WMF1S1                    | 1DP-1-103        | PVC211           | 4PS-S10          |  |
| C19      | 330      |               | DI-330           | DD-331             | LA10T33-C4                | CCD-331          | GP333            | 10TS-T33         |  |
| C20      | .05 100V |               | DBE6S5           | DPMS255            | 1DP-2-503                 | 1DP-2-503        | PVC215           | 2PS-S50          |  |
| C21      | .01 100V |               | DBE4S1           | CPR-1000J          | WMF1S1                    | 1DP-1-103        | PVC211           | 4PS-S10          |  |
| C22      | .005     |               | BPD-005          | DD-502             | BYA10D5                   | CCD-502          | B250             | 5HK-D50          |  |
| C23      | .05 100V |               | DBE6S5           | DPMS255            | 1DP-2-503                 | 1DP-2-503        | PVC215           | 2PS-S50          |  |
| C24      | .1       |               | TTD-1            | CK-104             | H6                        |                  | TA010            | TG-P10           |  |
| C25      | .1 10V   |               | TTD-1            | CK-104             | H6                        |                  | TA010            | TG-P10           |  |

# Bendix Part Number.

① Alternate Part #219083-0011.

## CONTROLS

All wattages 1/2 watt, or less, unless otherwise listed.

| ITEM No. | USE           | RESISTANCE    | REPLACEMENT DATA |                               |                    |                  |                  |                           |
|----------|---------------|---------------|------------------|-------------------------------|--------------------|------------------|------------------|---------------------------|
|          |               |               | BENDIX PART No.  | CENTRALAB PART No.            | CLAROSTAT PART No. | CTS-IRC PART No. | MALLORY PART No. |                           |
| R1A      | Tone          | 100K          | 2092528-0004     | F1-100K ①                     |                    |                  | † QJ-1746A       | FA15L ①, RU253T53, OS750A |
| B        | Volume-Switch | 25K Tap @ 10K |                  | R14-25K, FFS012, RFS104, KR-4 |                    |                  |                  | IS1250, US41              |

† "CONCENTRKIT" Equivalent: K8 ① Kit with Base Elements and Shafts: B11-128, P17-024 (Panel)

① Use original spring mounting clip.

B19-119X, R16-106 (Rear)

76-1 (Switch)

## COILS (RF-IF)

| ITEM No. | USE       | REPLACEMENT DATA |                |                 |                  |                  | NOTES         |
|----------|-----------|------------------|----------------|-----------------|------------------|------------------|---------------|
|          |           | BENDIX PART No.  | MERIT PART No. | MILLER PART No. | STANCOR PART No. | WORKMAN PART No. |               |
| L1       | Ant.      | ①                |                |                 |                  |                  | ① Part of M2. |
| L2       | RF        | ①                |                |                 |                  |                  |               |
| L3       | Osc.      | ①                |                |                 |                  |                  |               |
| L4       | Input IF  | 2092419-0005     |                |                 |                  |                  |               |
| L5       | Output IF | 2092419-0006     |                |                 |                  |                  |               |



## PARTS LIST AND DESCRIPTION (CONTINUED)

Replacement parts shown may be superseded by the availability of newly introduced replacements.  
Have your local distributor check Sams COUNTER FACTS® for the most up-to-date replacement.

### FILTER CHOKE

| ITEM No. | RATINGS            |         |                              | REPLACEMENT DATA |                |                  |                     |                | NOTES                |
|----------|--------------------|---------|------------------------------|------------------|----------------|------------------|---------------------|----------------|----------------------|
|          | CURRENT (Measured) | DC RES. | INDUCTANCE (0 CURRENT 1000~) | BENDIX PART No.  | MERIT PART No. | STANCOR PART No. | THORDARSON PART No. | TRIAD PART No. |                      |
| L6       | 800ma              | .1Ω     | 1.9MH                        | 2092050-0018     | C-4124①        | TC-1 ①           | TR-159 ①            | TY16XT①        | ① Fabricate mounting |

### CHOKE (AUDIO OUTPUT)

| ITEM No. | INDUCTANCE | REPLACEMENT DATA |                |                  |                     |                | NOTES |
|----------|------------|------------------|----------------|------------------|---------------------|----------------|-------|
|          |            | BENDIX PART No.  | MERIT PART No. | STANCOR PART No. | THORDARSON PART No. | TRIAD PART No. |       |
| L7       | 50MH       | 2092245-0003     |                |                  |                     |                |       |

### SPEAKER

| ITEM No. | TYPE        | RATING | REPLACEMENT DATA |               | NOTES |
|----------|-------------|--------|------------------|---------------|-------|
|          |             |        | BENDIX PART No.  | QUAM PART No. |       |
| SP1      | 4" X 10" PM | 20Ω    | 2092955-0001     | 410A2Z20      |       |

### FUSES

| ITEM No. | TYPE | RATING | REPLACEMENT DATA |              |                     |        |               |        |
|----------|------|--------|------------------|--------------|---------------------|--------|---------------|--------|
|          |      |        | BENDIX PART No.  |              | LITTELFUSE PART No. |        | BUSS PART No. |        |
|          |      |        | FUSE             | HOLDER       | FUSE                | HOLDER | FUSE          | HOLDER |
| M1       | 1AG  | 3A 32V | 2091811-0008     | 2092729-0008 | 301003              | 155004 | AGA3          | HAF    |

### MISCELLANEOUS

| ITEM No. | PART NAME   | BENDIX PART No.              | NOTES   |
|----------|-------------|------------------------------|---|
| M2       | Tuner       | 2094055-0703<br>2094055-0702 | Coil Assembly 2090131-0080 RCC used in Model 5BA.<br>Coil Assembly 2040131-0083 GIC used in Model 5BAM. |
| M3       | Spark Plate | 2093050-0705                 | Coil Assembly 2040131-0084 used in Model 5BAM.  |
| M4       | Spark Plate | 2093050-0705                 | (280pf)<br>(280pf)  |

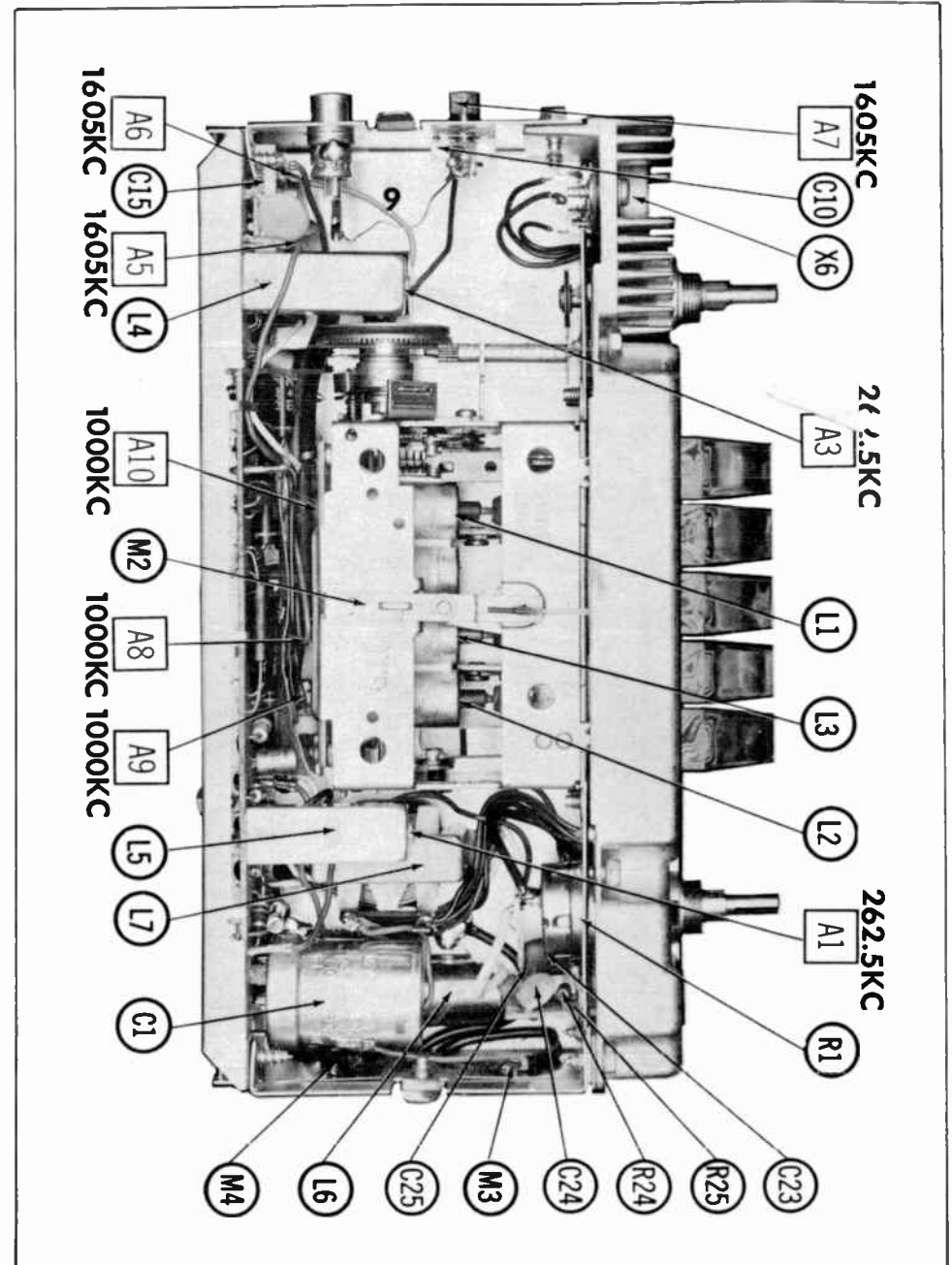
### CABINETS & CABINET PARTS

(When Ordering Specify Model, Chassis & Color)

| ITEM                         | PART No.     | ITEM                    | PART No.     |
|------------------------------|--------------|-------------------------|--------------|
| Escutcheon (Calibrated Dial) | 2092714-0002 | Pointer Assembly (5BA)  | 2090129-0024 |
| Dial Glass (Calibrated Dial) | 2092953-0003 | Pointer Assembly (5BAM) | 2090129-0025 |
| Pushbutton                   | 2091982-0001 |                         |              |

### WIRING DATA

|   |  |
|---|--|
| General-use Unshielded Hook-up Wire ..... | Use BELDEN No. 8530 (Solid) Available in 12 Colors<br>8524 (Stranded) Available in 12 Colors |
| Shielded Hook-up Wire .....               | Use BELDEN No. 8885  |
| Rear Seat Speaker Extension Cable .....   | Use BELDEN No. 8782 (Stranded) Coded Parallel Leads  |
| Bonding Strap .....                       | Use BELDEN No. 8861 (3/8 in.) or 8670 (3/4 in.)  |



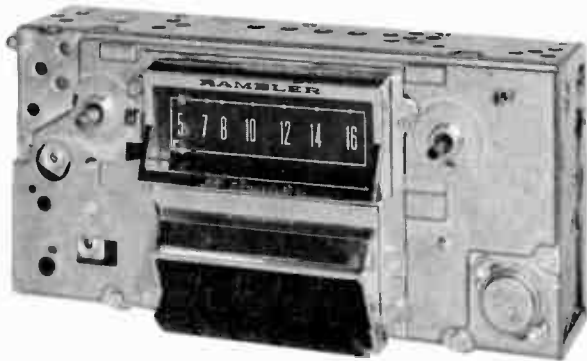
RAMBLER MODEL 5BA (8991562), 5BAM (8991561)





PHOTOFACT<sup>®</sup> with

CIRCUITRACE<sup>®</sup>



TRADE NAME : Rambler Model 5TMR (1965 Rambler)  
 SUPPLIER : For Current Address, See Master Index.  
 TYPE SET : 5 Transistor AM Receiver  
 POWER SUPPLY : 12 Volt Storage Battery  
 RATING : .870 Amp. @ 12.6 Volts DC  
 TUNING RANGE : BROADCAST 540-1615KC

RAMBLER MODEL 5TMR

## ALIGNMENT INSTRUCTIONS

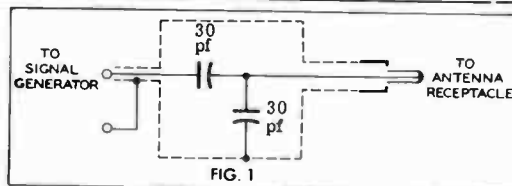
Check for specified source voltage.  
 Use only enough generator output to provide a usable indication.  
 Suggested Alignment Tools:

A1 thru A7      GENERAL CEMENT: 9440      WALSCO: 2501

|  | SIGNAL GENERATOR COUPLING                           | SIGNAL GENERATOR FREQUENCY | RADIO DIAL SETTING   | INDICATOR                       | ADJUST         | REMARKS   |
|--|---|----------------------------|----------------------|---------------------------------|----------------|---|
| 1.   | High side thru .1mf to point A, low side to ground. | 262KC (400% Mod.)          | High Freq. End Stop. | Output Meter across voice coil. | A1, A2, A3, A4 | Adjust for maximum.   |
| 2.   | Thru dummy (Fig. 1) to antenna receptacle.          | 1615KC                     | "                    | "                               | A5, A6, A7     | "   |
| Step 3 is not necessary unless tuner has been tampered with or associated components have been replaced. IF necessary, back tuning cores (A8, A9, A10) out of coils but not out of forms. Repeat step 2. |   |                            |                      |                                 |                |   |
| 3.   | Thru dummy (Fig. 1) to antenna receptacle.          | 1000KC                     | Tune to Signal.      | Output Meter across voice coil. | A8, A9, A10    | Adjust for maximum. Repeat steps 2 & 3 until no further improvement is noted. |
| With radio installed in car and antenna fully extended, tune in a weak station near 1400KC and adjust A7 for maximum output.   |   |                            |                      |                                 |                |   |

### PUSH-BUTTON ADJUSTMENT

1. Pull button up.
2. Tune manually to desired station.
3. Press button down firmly.
4. Repeat for remaining buttons.



HOWARD W. SAMS & CO., INC. Indianapolis 6, Indiana

## PARTS LIST AND DESCRIPTION

Replacement parts shown may be superseded by the availability of newly introduced replacements.  
Have your local distributor check Sams COUNTER FACTS<sup>®</sup> for the most up-to-date replacement.

### TRANSISTORS

| ITEM No. | ORIG. TYPE | USE     | REPLACEMENT DATA |                           |              | NOTES | Motorola PART No. |
|----------|------------|---------|------------------|---------------------------|--------------|-------|-------------------|
|          |            |         | DELCO PART No.   | GENERAL ELECTRIC PART No. | RCA PART No. |       |                   |
| X1       | 2SA72      | RF Amp. | D8-25            | GE-1                      | 2N1637       | PNP   | 46K134601         |
| X2       | 2SA72      | Conv.   | D8-25            | GE-1                      | 2N1639       | PNP   | 46K134601         |
| X3       | 2SA72      | IF Amp. | D8-25            | GE-1                      | 2N1636       | PNP   | 46K134601         |
| X4       | M54        | Driver  | D8-46            | GE-10                     | 2N649        | NPN   | 46R134665         |
| X5       | 2N176      | Output  | D8-520           | GE-3                      | 2N301        | PNP*  | 46C124246         |

\* When replacing, apply silicon grease to both sides of insulator. Tighten mounting screws securely.

### POWER RECTIFIERS & SIGNAL DIODES

| ITEM No. | MEASURED CURRENT | ORIGINAL Part or Type No. | RECTIFIERS                |                  |              |                         | DIODES                    |
|----------|------------------|---------------------------|---------------------------|------------------|--------------|-------------------------|---------------------------|
|          |                  |                           | GENERAL ELECTRIC PART No. | MALLORY PART No. | RCA PART No. | SARKIS TARZIAN PART No. | GENERAL ELECTRIC PART No. |
| X6       |                  | 1N139                     |                           |                  |              |                         | 1N34AS                    |
| X7       |                  | 1N139                     |                           |                  |              |                         | 1N34AS                    |

### ELECTROLYTIC CAPACITORS

| ITEM No. | RATING |       | REPLACEMENT DATA  |                  |                           |                           |                             |                  |                  |
|----------|--------|-------|-------------------|------------------|---------------------------|---------------------------|-----------------------------|------------------|------------------|
|          | CAP.   | VOLT. | Motorola PART No. | AEROVOX PART No. | CORNELL-DUBILIER PART No. | GENERAL ELECTRIC PART No. | GENERAL INSTRUMENT PART No. | MALLORY PART No. | SPRAGUE PART No. |
| C1A      | 500    | 16    | 23C40302A06       | PWH2-02-40       |                           |                           |                             | PEP200.65        | PCL5-2177*       |
| B        | 500    | 16    | ① 23C41928A16     | CRE607A          | NLW10-25                  | MT1-5                     | BL1460                      | TT25X10          | TE-1204          |
| C2       | 10     | 25    | ② 23C41928A16     | CRE607A          | NLW10-25                  | MT1-5                     | BL1460                      | TT25X10          | TE-1204          |
| C3       | 10     | 25    | ③ 23C41928A16     | CRE607A          | NLW10-25                  | MT1-5                     | BL1460                      | TT25X10          | TE-1204          |
| C4       | 1.6    | 25    | ④ 23C41928A09     | CRE601A          | NLW2-50                   | MT1-1                     | BL1160                      | TT50X2           | TL-1201          |

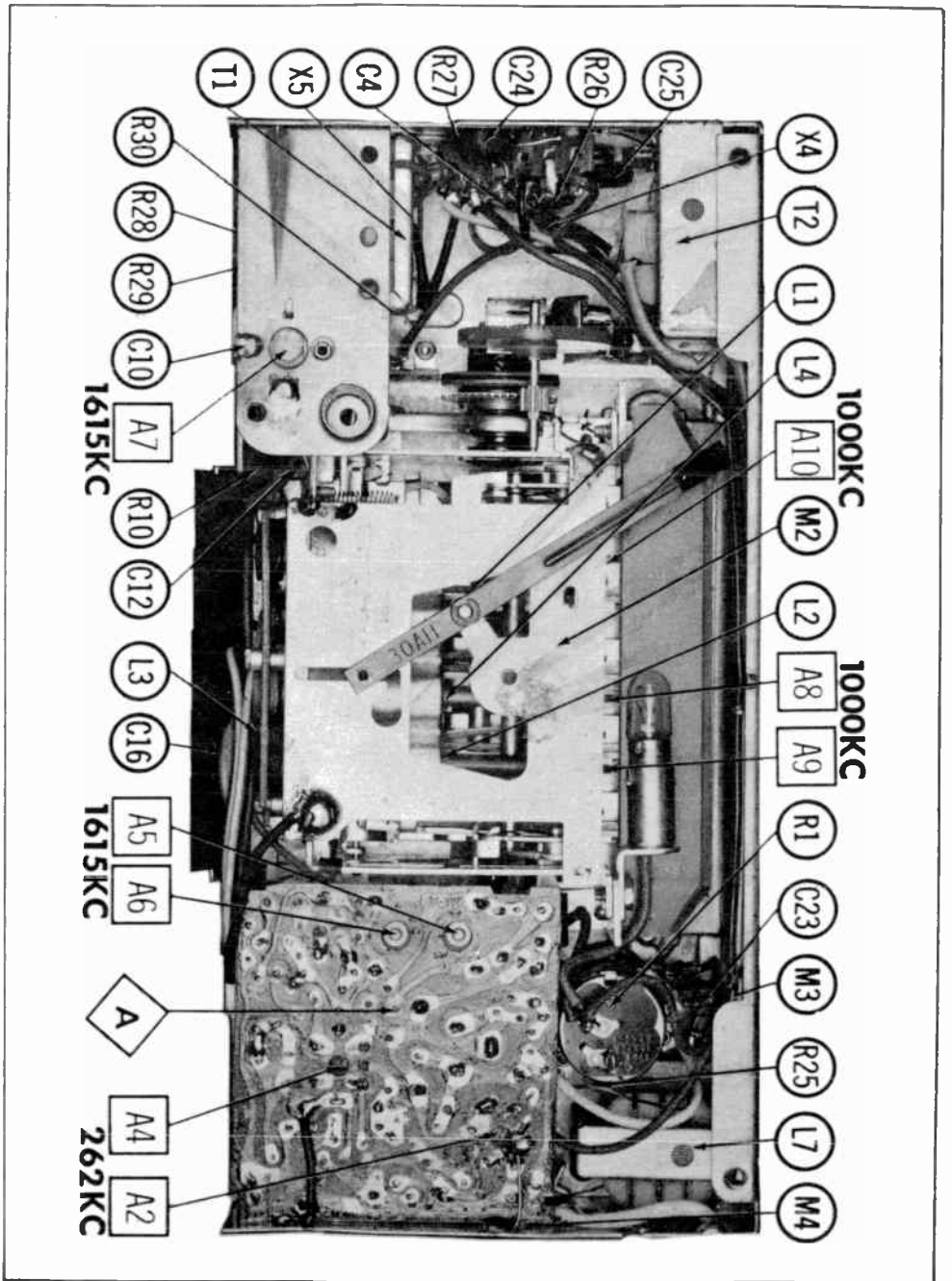
\* Not normally in distributor's stock. Available thru distributor on order to manufacturer.

① Manufacture suggests replacing with Part #23C4032A04. ② Manufacture suggest replacing with Part #23D65262A81. Part #23C41928A05.

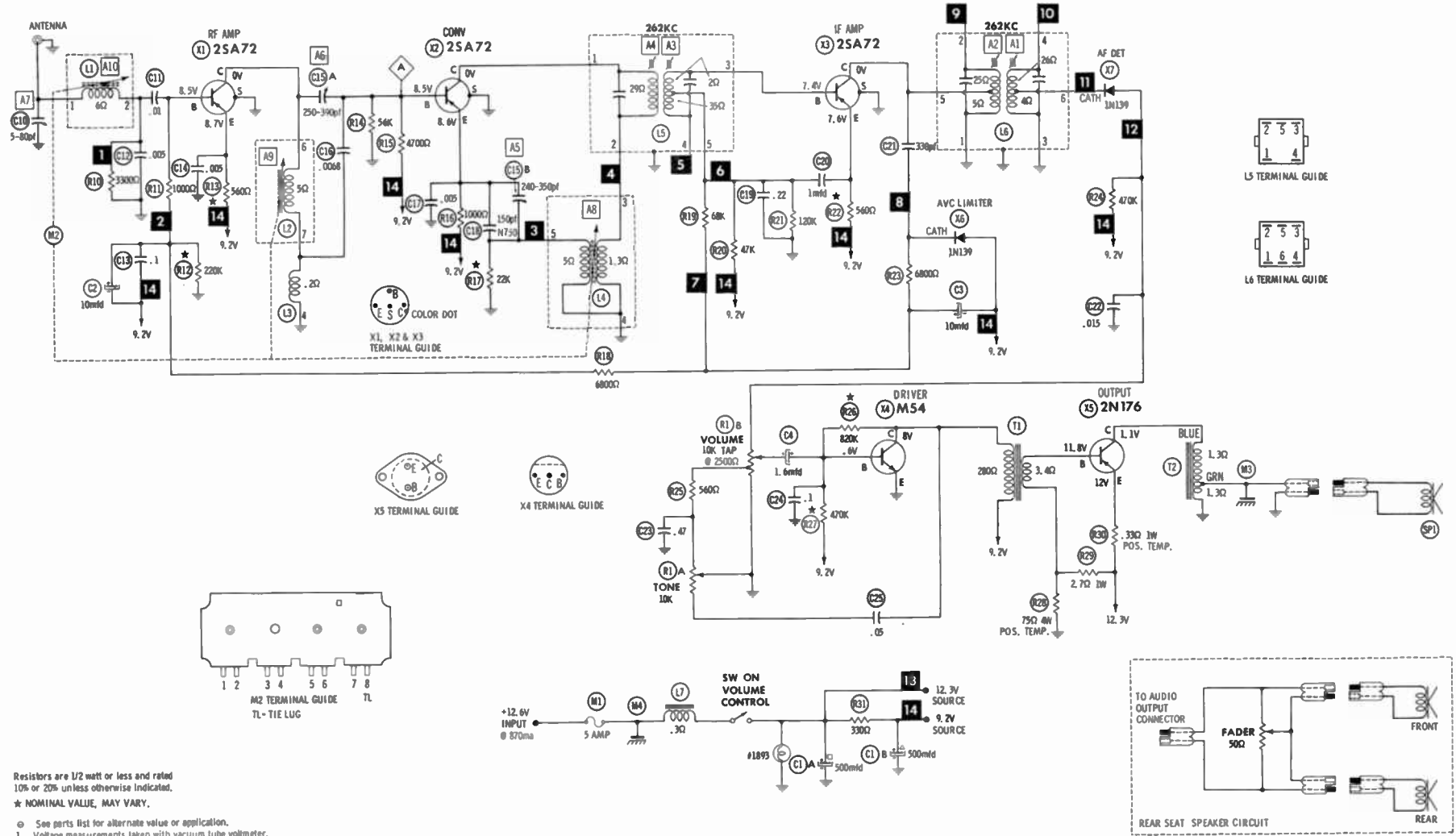
### FIXED CAPACITORS

| ITEM No. | RATING  | REMARKS      | REPLACEMENT DATA |                    |                           |                  |                  |                  |  |
|----------|---------|--------------|------------------|--------------------|---------------------------|------------------|------------------|------------------|--|
|          |         |              | AEROVOX PART No. | CENTRALAB PART No. | CORNELL-DUBILIER PART No. | ELMENCO PART No. | MALLORY PART No. | SPRAGUE PART No. |  |
| C10      | 5-60    | #20K534810   |                  |                    |                           |                  |                  |                  |  |
| C11      | .01     | 100V         | DBE4S1           | CPR-10000J         | WMF1                      | 1DP-1-103        | PVC211           | 4PS-S10          |  |
| C12      | .005    | 100V         | DBE6D5           | CPR-5000J          | DPMS6D5                   | 1DP-1-502        | PVC625           | 6PS-D50          |  |
| C13      | .1      | 100V         | DBE2P1           |                    | WMF1P1                    | 1DP-2-104        | PVC101           | 2PS-P110         |  |
| C14      | .005    | 100V         | DBE6D5           | CPR-5000J          | DPMS6D5                   | 1DP-1-502        | PVC525           | 6PS-D50          |  |
| C15A     | 250-390 | #20C40461A07 |                  |                    |                           |                  |                  |                  |  |
| B        | 240-350 |              |                  |                    |                           |                  |                  |                  |  |
| C16      | .0068   |              | DI-6800          | DD-682             | BYA10D68                  | CCD-682          | GP266            | 10TS-D68         |  |
| C17      | .005    | 100V         | DBE6D5           | CPR-5000J          | DPMS6D5                   | 1DP-1-502        | PVC625           | 6PS-D50          |  |
| C18      | 150     | N750         | N750-DI150       | DTN-150            | C10T15U                   | CCTN-151         | CN7315           | 10TCU-T15        |  |
| C19      | .22     | 100V         | DBE2P22          |                    | DPMS2P22                  | 1DP-3-224        | PVC1022          | 2PS-P22          |  |
| C20      | 1mfd    | 3V           |                  | UK-105             | HCC3105P                  |                  |                  | HY-135           |  |
| C21      | 330     |              | DI-330           | DD-331             | LA10T33-C4                | CCD-331          | GP333            | 10TS-T33         |  |
| C22      | .015    | 100V         | DBE4S15          |                    | DPMS4S15                  | 1DP-1-153        | PVC2115          | 4PS-S15          |  |
| C23      | .47     |              |                  | UK10-404           | HCC10474Z                 |                  |                  | HY-330           |  |
| C24      | .1      | 100V         | DBE2P1           |                    | WMF1P1                    | 1DP-2-104        | PVC101           | 2PS-P110         |  |
| C25      | .05     | 100V         | DBE6S5           |                    | DPMS2S5                   | 1DP-2-503        | PVC215           | 2PS-850          |  |

\* Motorola Part Number.



RAMBLAR MODEL 5TMR



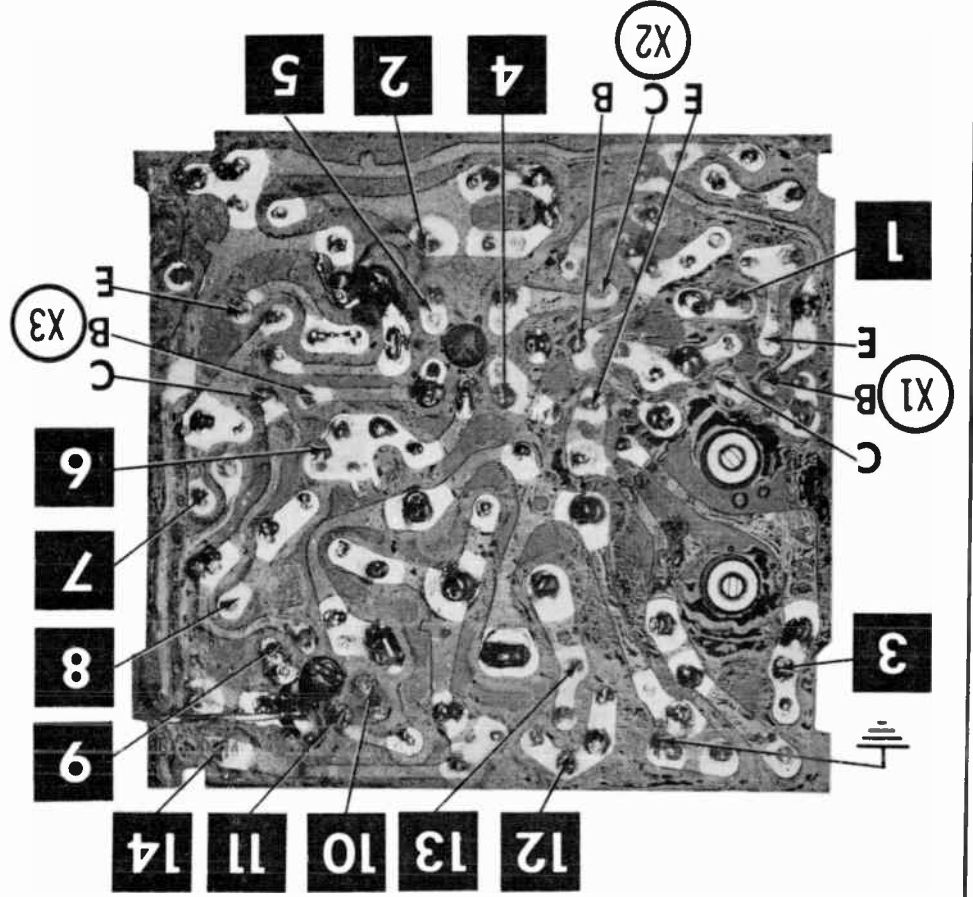
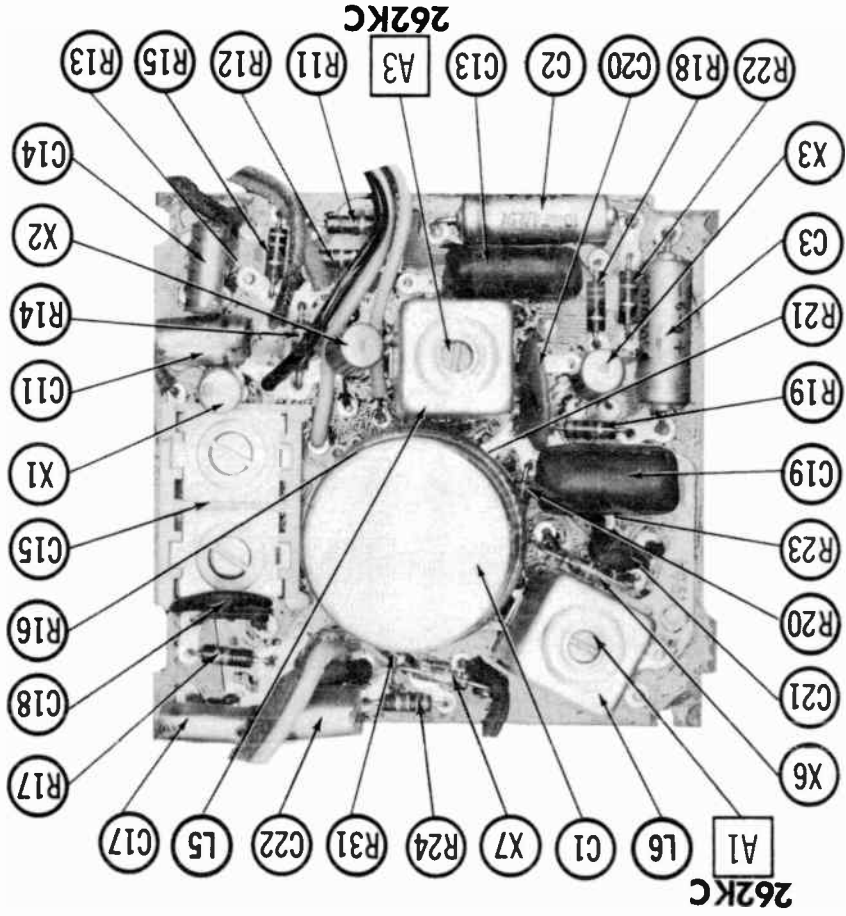
Resistors are 1/2 watt or less and rated 10% or 20% unless otherwise indicated.  
 \* NOMINAL VALUE, MAY VARY.

- ⊙ See parts list for alternate value or application.
- 1. Voltage measurements taken with vacuum tube voltmeter.
- 2. All controls set for normal operation, no signal applied.
- 3. Measured values are from socket pin or terminal to common ground.
- 4. All terminals viewed from bottom unless otherwise designated.
- 5. Numbers assigned to terminals may not be found on the unit.
- 6. Supply voltage maintained at rated value for voltage readings.
- 7. Resistance measurements not given because of the wide variation in internal resistance of transistor.

**RAMBLER MODEL 5TMR**

A PHOTOFAC STANDARD NOTATION SCHEMATIC  
 with **CIRCUITRACE**  
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## PARTS LIST AND DESCRIPTION (CONTINUED)

Replacement parts shown may be superseded by the availability of newly introduced replacements.  
Have your local distributor check Sams COUNTER FACTS for the most up-to-date replacement.

### CONTROLS

All wattages 1/2 watt, or less, unless otherwise listed.

| ITEM No. | USE                   | RESIST-ANCE               | REPLACEMENT DATA  |                    |                    |                  |                  |
|----------|-----------------------|---------------------------|-------------------|--------------------|--------------------|------------------|------------------|
|          |                       |                           | Motorola PART No. | CENTRALAB PART No. | CLAROSTAT PART No. | CTS-IRC PART No. | MALLORY PART No. |
| R1A<br>B | Tone<br>Volume-Switch | 10K<br>10K Tap<br>@ 2500Ω | 18D42832A01       |                    |                    |                  | ††               |

① Use original spring mounting clip.      **RESISTORS (Power and Special)** †† FA14A ① RU14T53, 061250A, BA3082 ②  
② Cut shaft to proper length

| ITEM No. | RATING        | REPLACEMENT DATA |                  |                   | ITEM No. | RATING         | REPLACEMENT DATA |                  |                   |
|----------|---------------|------------------|------------------|-------------------|----------|----------------|------------------|------------------|-------------------|
|          |               | IRC PART No.     | WORKMAN PART No. | Motorola PART No. |          |                | IRC PART No.     | WORKMAN PART No. | Motorola PART No. |
| R28      | 75Ω 4W<br>PTC |                  |                  | 17C40259A02       | R30      | .33Ω 1W<br>PTC |                  |                  | 17C40258A08       |
| R29      | 2.7Ω 1W       | BWH2.7           | WS2.7Ω           | 17C40258A09       |          |                |                  |                  |                   |

### COILS (RF-IF)

| ITEM No.                         | USE  | REPLACEMENT DATA   |                |                 |                  |                  | NOTES   |
|----------------------------------|--|--|----------------|-----------------|------------------|------------------|---|
|                                  |  | Motorola PART No.  | MERIT PART No. | MILLER PART No. | STANCOR PART No. | WORKMAN PART No. |   |
| L1<br>L2<br>L3<br>L4<br>L5<br>L6 | Ant.<br>RF<br>Image Trap<br>(1.5uh)<br>Osc.<br>Input IF<br>Output IF | ①<br>①<br>24C40788A04<br>①<br>24D42517A05<br>24D42517A06 | BC-582         | 4604            | RTC-8510         | T858             | ① Part of M2. (Coils & mounting plate assembly Part #1V42700A93). |

### FILTER CHOKE

| ITEM No. | RATINGS            |         |                              | REPLACEMENT DATA  |                |                  |                     |                | NOTES |
|----------|--------------------|---------|------------------------------|-------------------|----------------|------------------|---------------------|----------------|-------|
|          | CURRENT (Measured) | DC RES. | INDUCTANCE (0 CURRENT 1000~) | Motorola PART No. | MERIT PART No. | STANCOR PART No. | THORDARSON PART No. | TRIAD PART No. |       |
| L7       | 870ma              | .3Ω     | 4MH                          | 25C41871A02       | C-4095         | TC-1             | TR-158              | TY16XT         |       |

### TRANSFORMER (DRIVER)

| ITEM No. | TURNS RATIO |      | REPLACEMENT DATA  |                |                  |                     |                | NOTES |
|----------|-------------|------|-------------------|----------------|------------------|---------------------|----------------|-------|
|          | PRI.        | SEC. | Motorola PART No. | MERIT PART No. | STANCOR PART No. | THORDARSON PART No. | TRIAD PART No. |       |
| T1       | 15:         | 1    | 25D42045A01       |                |                  | TR-187              |                |       |

### TRANSFORMER (AUDIO OUTPUT)

| ITEM No. | IMPEDANCE |      | REPLACEMENT DATA  |                |                  |                     |                | NOTES |
|----------|-----------|------|-------------------|----------------|------------------|---------------------|----------------|-------|
|          | PRI.      | SEC. | Motorola PART No. | MERIT PART No. | STANCOR PART No. | THORDARSON PART No. | TRIAD PART No. |       |
| T2       | 12Ω Tap   | @ 8Ω | 25C41985A01       |                |                  |                     |                |       |

### SPEAKER

| ITEM No. | TYPE       | REPLACEMENT DATA | NOTES                   |
|----------|------------|------------------|-------------------------|
|          |            |                  |                         |
| SP1      | 6" X 9" PM | 8Ω               | 50C42114A03      89A2Z8 |

### FUSES

| ITEM No. | TYPE | RATING | REPLACEMENT DATA  |            |                     |        |               |        |
|----------|------|--------|-------------------|------------|---------------------|--------|---------------|--------|
|          |      |        | Motorola PART No. |            | LITTELFUSE PART No. |        | BUSS PART No. |        |
|          |      |        | FUSE              | HOLDER     | FUSE                | HOLDER | FUSE          | HOLDER |
| M1       | AGA  | 5A     | 85R122345         | 9C41095A01 | 301005              | 155004 | AGA5          | HAF    |

### MISCELLANEOUS

| ITEM No. | PART NAME             | Motorola PART No. | NOTES    |
|----------|-----------------------|-------------------|----------|
| M2       | Tuner                 | 77D42894A01       | (AT-489) |
| M3       | Coils & Mounting Assy | 1V42700A93        |          |
| M4       | Spark Plate           | 64A41868A02       |          |
|          | Spark Plate           | 64K561878         |          |

### CABINETS & CABINET PARTS

(When Ordering Specify Model, Chassis & Color)

| ITEM                            | PART No.    | ITEM              | PART No.    |
|---------------------------------|-------------|-------------------|-------------|
| Escutcheon, includes dial scale | 1V42700A04  | Knob, Dummy       | 38C42231A01 |
| Dial Scale                      | 34B42679A01 | Pointer, Assembly | 1A41638A05  |
| Knob, Volume or Tuning          | 38C42264A01 | Pushbutton        | 1V42700A15  |
| Knob, Tone                      | 38C42239A01 |                   |             |

### WIRING DATA

|   |  |
|---|--|
| General-use Unshielded Hook-up Wire ..... | Use BELDEN No. 8530 (Solid) Available in 12 Colors<br>8524 (Stranded) Available in 12 Colors |
| Shielded Hook-up Wire .....               | Use BELDEN No. 8885  |
| Rear Seat Speaker Extension Cable .....   | Use BELDEN No. 8782 (Stranded) Coded Parallel Leads  |
| Bonding Strap .....                       | Use BELDEN No. 8661 (3/8 in.) or 8670 (3/4 in.)  |



PHOTOFACT<sup>®</sup> with

CIRCUITRACE<sup>®</sup>

TRADE NAME : Volkswagen Models 4TMVG(Karmann Ghia)  
 4TMVT(Volkswagen- Transporter)  
 4TMVW(Volkswagen-Sedan)  
 (Serial #50001 and Higher)

SUPPLIER : For Current Address, See Master Index.

TYPE SET : 6 Transistor AM Receiver

POWER SUPPLY : 6 Volt Storage Battery

RATING : 870ma @6.3 Volts DC

TUNING RANGE : BROADCAST 540-1615KC



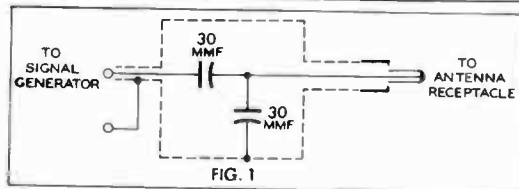
## ALIGNMENT INSTRUCTIONS

Check for specified source voltage.  
 Use only enough generator output to provide a usable indication.  
 Suggested Alignment Tools: A1 thru A10 GENERAL CEMENT: 5009, 8987, 8728A WALSCO: 2531X, 2536

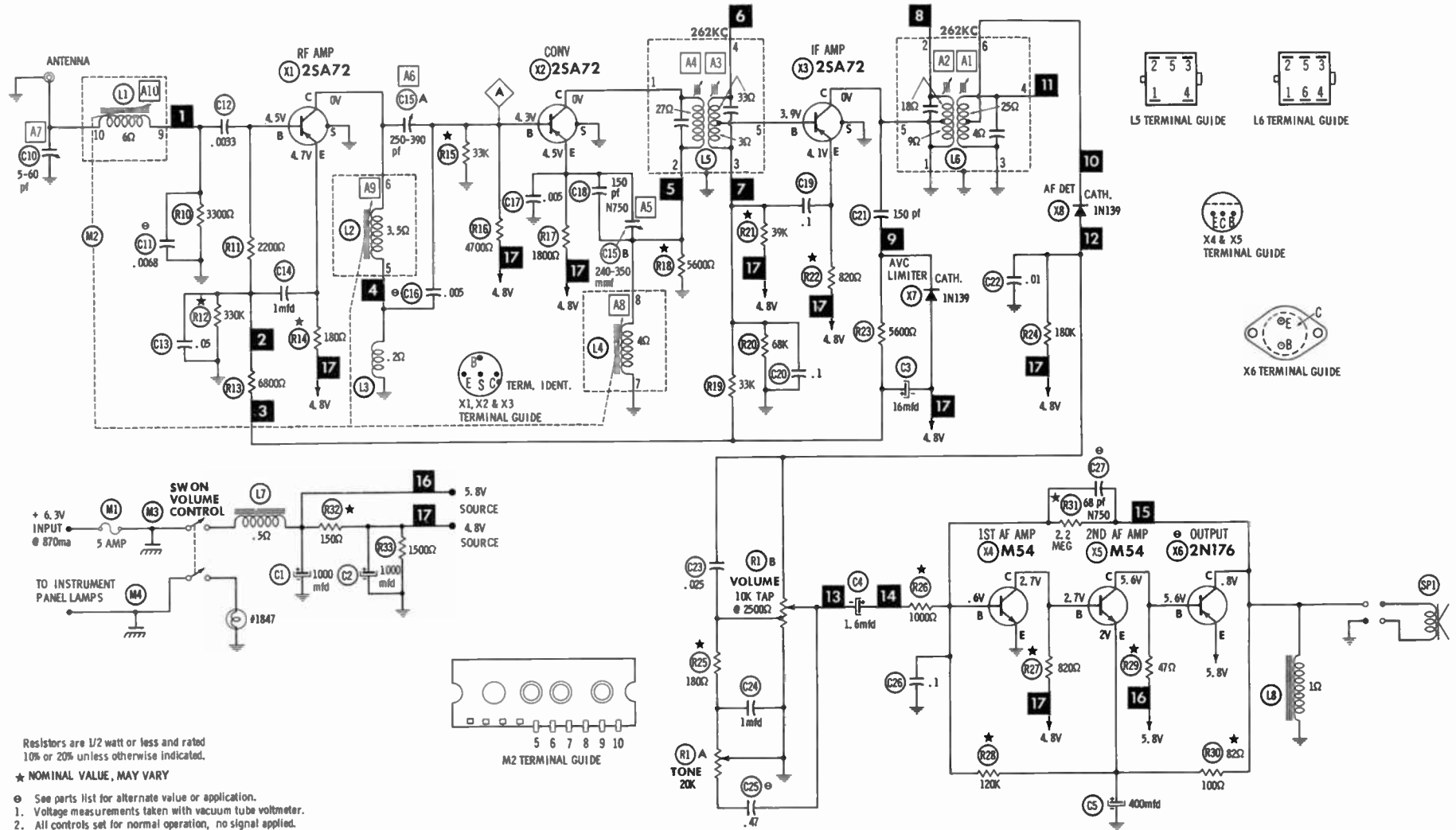
|  | SIGNAL GENERATOR COUPLING                                    | SIGNAL GENERATOR FREQUENCY | RADIO DIAL SETTING   | INDICATOR                       | ADJUST         | REMARKS   |
|--|--|----------------------------|----------------------|---------------------------------|----------------|---|
| 1.   | High side thru .1mfd to point $\Delta$ , low side to ground. | 262KC (400v Mod.)          | High Freq. End Stop. | Output Meter across voice coil. | A1, A2, A3, A4 | Adjust for maximum.   |
| 2.   | Thru dummy (Fig. 1) to antenna receptacle.                   | 1615KC                     | "                    | "                               | A5, A6, A7     | "   |
| Step 3 is not necessary unless tuner has been tampered with or associated components have been replaced. IF necessary, back tuning cores (A8, A9, A10) out of coils but not out of forms. Repeat step 2. |  |                            |                      |                                 |                |   |
| 3.   | Thru dummy (Fig. 1) to antenna receptacle.                   | 1000KC                     | Tune to Signal.      | Output Meter across voice coil. | A8, A9, A10    | Adjust for maximum. Repeat steps 2 & 3 until no further improvement is noted. |
| With radio installed in car and antenna fully extended, tune in a weak station near 1000KC and adjust A7 for maximum output.   |  |                            |                      |                                 |                |   |

### PUSH-BUTTON ADJUSTMENT

1. Pull button out.
2. Tune manually to desired station.
3. Press button in firmly.
4. Repeat for remaining buttons.



VOLKSWAGEN MODELS 4TMVG, 4TMVT, 4TMVW



Resistors are 1/2 watt or less and rated 10% or 20% unless otherwise indicated.

★ NOMINAL VALUE, MAY VARY

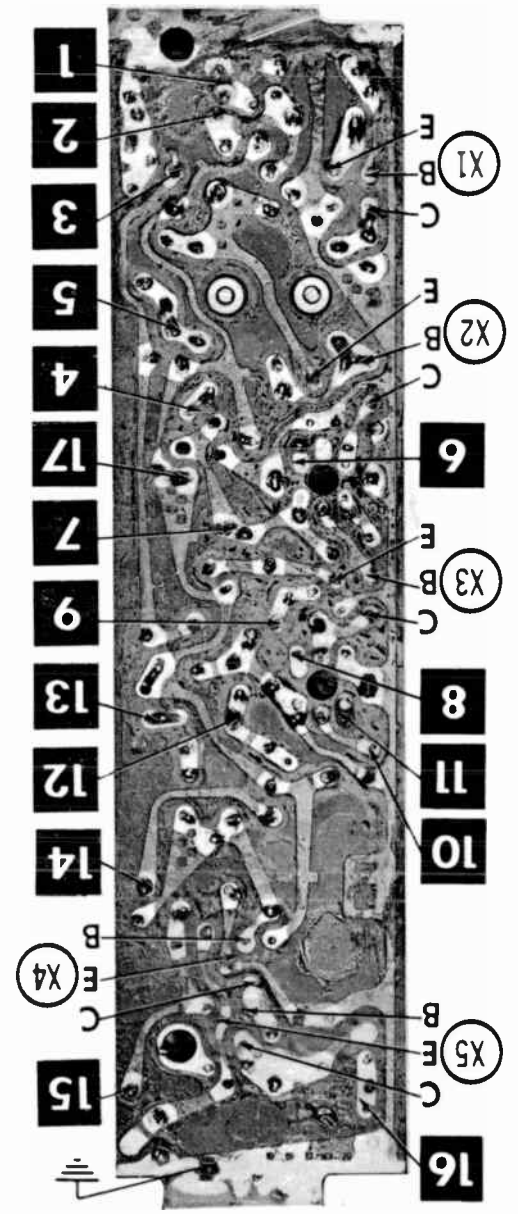
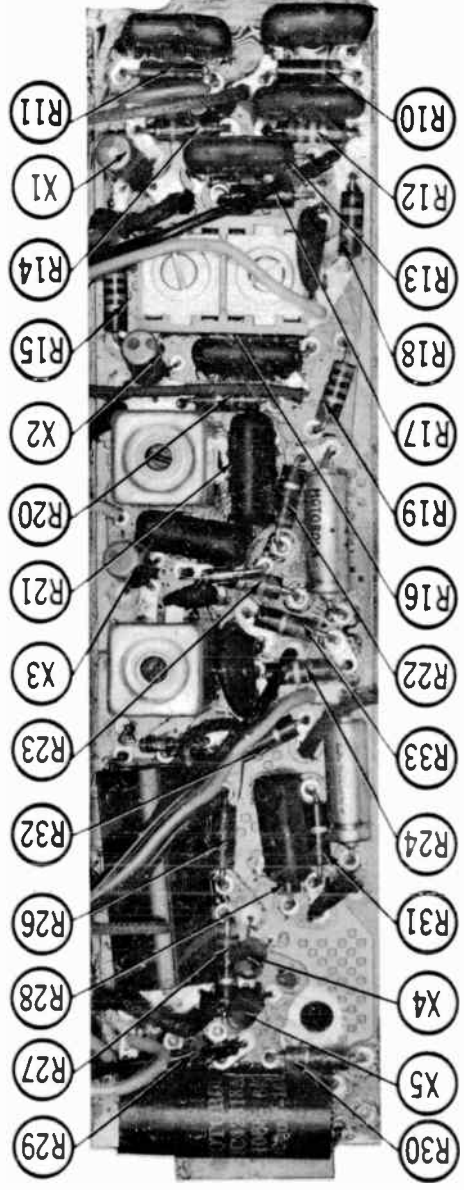
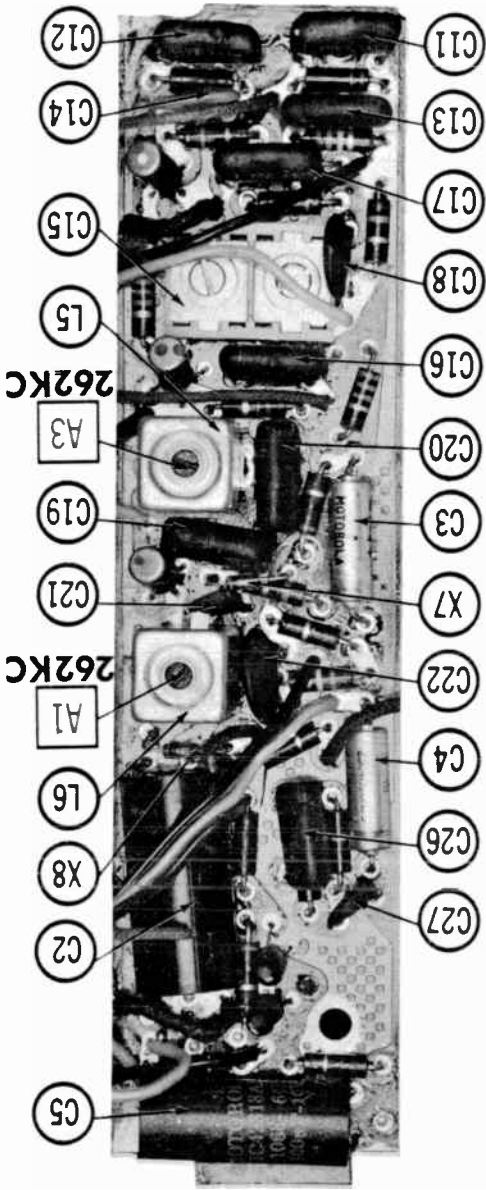
- ⊙ See parts list for alternate value or application.
- 1. Voltage measurements taken with vacuum tube voltmeter.
- 2. All controls set for normal operation, no signal applied.
- 3. Measured values are from socket pin or terminal to common ground.
- 4. All terminals viewed from bottom unless otherwise designated.
- 5. Numbers assigned to terminals may not be found on the unit.
- 6. Supply voltage maintained at rated value for voltage readings.
- 7. Resistance measurements not given because of the wide variation in internal resistance of transistor.

A PHOTOFAC STANDARD NOTATION SCHEMATIC with CIRCUITRACE

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**VOLKSWAGEN MODELS 4TMVG, 4TMVT, 4TMVW**







# PARTS LIST AND DESCRIPTION

Replacement parts shown may be superseded by the availability of newly introduced replacements.  
 Have your local distributor check Sams COUNTER FACTS for the most up-to-date replacement.

## TRANSISTORS

| ITEM No. | ORIG. TYPE | USE              | REPLACEMENT DATA |                           |              | NOTES            |
|----------|------------|------------------|------------------|---------------------------|--------------|------------------|
|          |            |                  | DELCO PART No.   | GENERAL ELECTRIC PART No. | RCA PART No. |                  |
| X1       | 2SA72      | RF Amplifier     | D8-25            | GE-1                      | 2N1037       | PNP              |
| X2       | 2SA72      | Converter        | D8-25            | GE-1                      | 2N1039       | PNP              |
| X3       | 2SA72      | IF Amplifier     | D8-25            | GE-1                      | 2N1038       | PNP              |
| X4       | M54        | 1st AF Amplifier | D8-46            | GE-10                     | 2N649        | NPN              |
| X5       | M54        | 2nd AF Amplifier | D8-46            | GE-10                     | 2N649        | NPN              |
| X6       | 2N176      | Output           | D8-520           | GE-3                      | 2N501        | PNP* SP891W Alt. |

\*When replacing, apply silicon grease to both sides of insulator. Tighten mounting screws securely.

## POWER RECTIFIERS & SIGNAL DIODES

| ITEM No. | MEASURED CURRENT | ORIGINAL Part or Type No. | RECTIFIERS                |                  |              |                         | DIODES                    |
|----------|------------------|---------------------------|---------------------------|------------------|--------------|-------------------------|---------------------------|
|          |                  |                           | GENERAL ELECTRIC PART No. | MALLORY PART No. | RCA PART No. | SARKES TARZIAN PART No. | GENERAL ELECTRIC PART No. |
| X7       |                  | 1N139                     |                           |                  |              |                         | 1N34AS                    |
| X8       |                  | 1N139                     |                           |                  |              |                         | 1N34AS                    |

## ELECTROLYTIC CAPACITORS

| ITEM No. | RATING |       | REPLACEMENT DATA             |                  |                           |                           |                             |                  |                  |
|----------|--------|-------|------------------------------|------------------|---------------------------|---------------------------|-----------------------------|------------------|------------------|
|          | CAP.   | VOLT. | Motorola PART No.            | AEROVOX PART No. | CORNELL-DUBILIER PART No. | GENERAL ELECTRIC PART No. | GENERAL INSTRUMENT PART No. | MALLORY PART No. | SPRAGUE PART No. |
| C1       | 1000   | 10    | 23C41928A10                  | PR81180          | BR1000-12                 | QT1-32                    | BL-2430                     |                  | TVAS-1128*       |
| C2       | 1000   | 10    | 23C41928A10                  | PR81180          | BR1000-12                 | QT1-32                    | BL-2430                     |                  |                  |
| C3       | 16     | 16    | 23C41928A13<br>(23C41928A06) | CRE609A          | NLW15-25                  | MT1-11                    | MLV15-25                    | TT25X15          | TL-1156          |
| C4       | 1.6    | 25    | 23C41928A09<br>(23C41928A05) | CRE601A          | NLW2-50                   | MT1-1                     | BL-1160                     | TT50X2           | TL-1201          |
| C5       | 400    | 10    | 23C41928A16<br>(23C41928A15) | PR81170          | BR500-15                  | QT1-30                    | BL-2340                     | TC1506           | TVA-1162         |

\* Not normally in distributor's stock. Available thru distributor on order to manufacturer.

## FIXED CAPACITORS

| ITEM No. | RATING     | REMARKS      | REPLACEMENT DATA |                    |                           |                  |                  |                  |  |
|----------|------------|--------------|------------------|--------------------|---------------------------|------------------|------------------|------------------|--|
|          |            |              | AEROVOX PART No. | CENTRALAB PART No. | CORNELL-DUBILIER PART No. | ELMENCO PART No. | MALLORY PART No. | SPRAGUE PART No. |  |
| C10      | 5-60       | #20B40944A05 |                  |                    |                           |                  |                  |                  |  |
| C11      | .0068 100V | •            | P288N-0068       | CPR-6800J          | WMF2D68                   | 6DP-1-682        | PVC4268          | 6PS-D68          |  |
| C12      | .0033 100V | •            | P288N-0033       | CPR-3300J          | WMF1D33                   | 6DP-1-332        | PVC4233          | 6PS-D33          |  |
| C13      | .05 100V   | •            | P288N-05         |                    | DPMS285                   | 1DP-2-503        | PVC215           | 2PS-850          |  |
| C14      | 1mfd 3V    | •            |                  | UK-106             | HCC3105P                  |                  |                  | HY-135           |  |
| C15A     | 250-390    | #20C40481A07 |                  |                    |                           |                  |                  |                  |  |
| C15B     | 240-350    | •            |                  |                    |                           |                  |                  |                  |  |
| C16      | .005 100V  | •            | P288N-005        | CPR-5000J          | DPMS6D5                   | 1DP-1-502        | PVC625           | 6PS-D60          |  |
| C17      | .005 100V  | •            | P288N-005        | CPR-5000J          | DPMS6D6                   | 1DP-1-502        | PVC625           | 6PS-D60          |  |
| C18      | 150 N750   | •            | N750-DI150       | DTN-150            | C10T15U                   | CCTN-151         | CN7315           | 10TCU-T15        |  |
| C19      | .1 100V    | •            | DBE2P1           |                    | WMF1P1                    | 1DP-2-104        | PVC101           | 2PS-P10          |  |
| C20      | .1 100V    | •            | DBE2P1           |                    | WMF1P1                    | 1DP-2-104        | PVC101           | 2PS-P10          |  |
| C21      | 150        | •            | DI-150           | DD-151             | LA10T15-83                | CCD-151          | GP315            | 5GA-T15          |  |
| C22      | .01        | •            | BPD-01           | DD-103             | BYA1081                   | CCD-103          | B110             | 5HK-510          |  |
| C23      | .025       | •            | TTD-025          | CK-253             | H4                        |                  | TA125            | TG-525           |  |
| C24      | 1mfd 3V    | •            |                  | UK-106             | HCC3105P                  |                  |                  | HY-135           |  |
| C25      | .47 10V    | •            |                  | UK10-404           | HCC10474Z                 |                  |                  | HY-330           |  |
| C26      | .1 100V    | •            | P288N-1          |                    | WMF1P1                    | 1DP-2-104        | PVC101           | 2QS-P10          |  |
| C27      | 68 N750    | •            | N750-DI68        | DTN-68             | C10Q68U                   | CCTN-680         | CN7468           | 10TCU-Q68        |  |

# Motorola Part Number  
 • Nominal Value.

## CONTROLS

All wattages 1/2 watt, or less, unless otherwise listed.

| ITEM No. | USE    | RESIST-ANCE     | REPLACEMENT DATA  |                               |                    |                  |                  |                               |
|----------|--------|-----------------|-------------------|-------------------------------|--------------------|------------------|------------------|-------------------------------|
|          |        |                 | Motorola PART No. | CENTRALAB PART No.            | CLAROSTAT PART No. | CTS-HRC PART No. | MALLORY PART No. |                               |
| RIA      | Tone   | 20K             | 18C42340A01       | F1-25K①                       |                    |                  | † QJ-1853A       | FA-24L①                       |
| B        | Volume | 10K Tap @ 2500Ω |                   | R16-10K, FFB107, RFB200, KR-7 |                    |                  |                  | RUI4T53, O61437A, B2000, UB42 |

† "CONCENTRIKIT" Equivalent: K8① Kit with Base Elements and Shafts: B11-119, P17-115 (Panel) B19-116X, R1-130 (Rear) 76-2 (Switch)

① Use Original Spring Mounting Clip.

## COILS (RF-IF)

| ITEM No. | USE                   | REPLACEMENT DATA  |                |                 |                  |                  | NOTES  |
|----------|-----------------------|-------------------|----------------|-----------------|------------------|------------------|--|
|          |                       | Motorola PART No. | MERIT PART No. | MILLER PART No. | STANCOR PART No. | WORKMAN PART No. |  |
| L1       | Ant                   |                   |                |                 |                  |                  | ① Part of M2 or coils & Plate assembly Part #1V42300A95. |
| L2       | RF Image Trap (1.5uh) | ① 24C40788A11     | BC-562         | 4604            | RTC-8516         | T856             |  |
| L3       |                       |                   |                |                 |                  |                  |  |
| L4       | Osc.                  |                   |                |                 |                  |                  |  |
| L5       | Input IF              | ① 24D42517A01     |                |                 |                  |                  |  |
| L6       | Output IF             | 24D42517A02       |                |                 |                  |                  |  |

## FILTER CHOKE

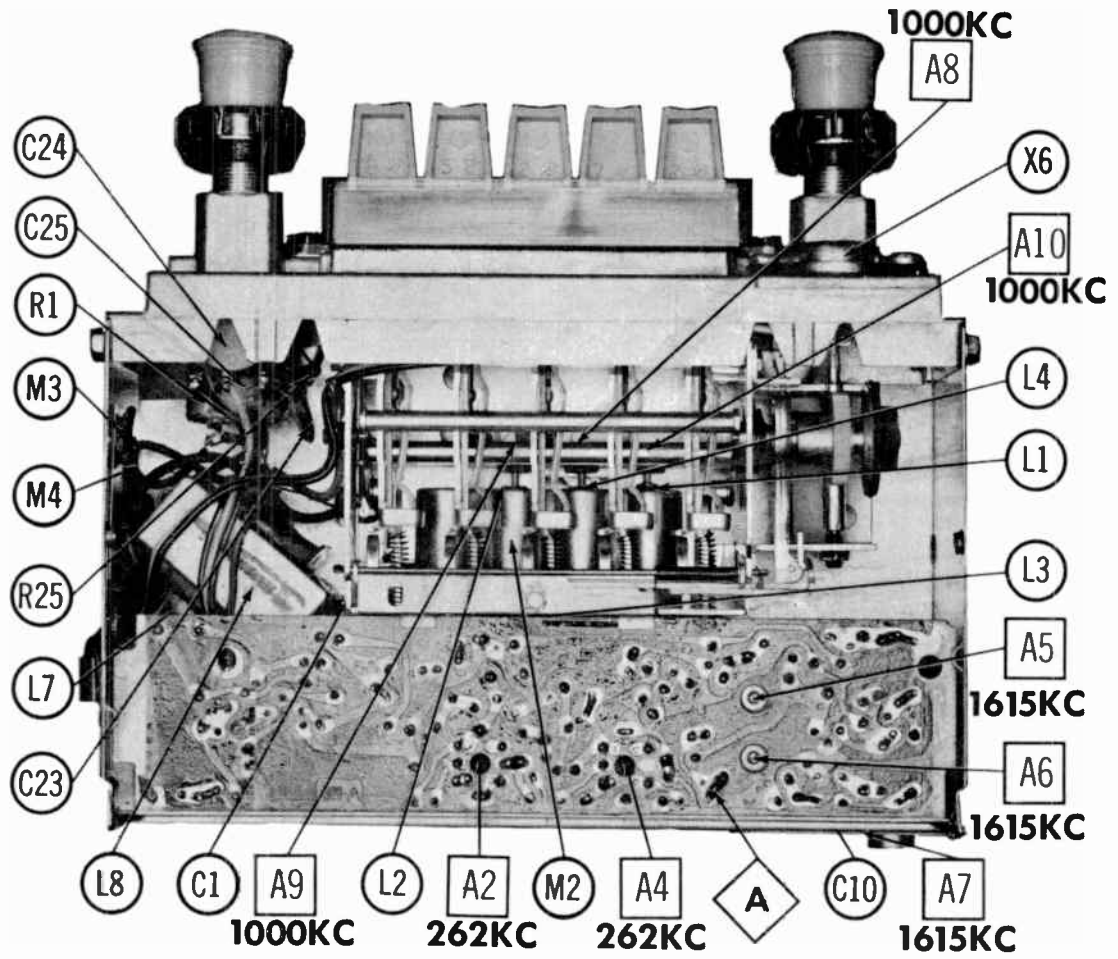
| ITEM No. | RATINGS            |         |                              | REPLACEMENT DATA  |                |                  |                     |                | NOTES |
|----------|--------------------|---------|------------------------------|-------------------|----------------|------------------|---------------------|----------------|-------|
|          | CURRENT (Measured) | DC RES. | INDUCTANCE (0 CURRENT 1000~) | Motorola PART No. | MERIT PART No. | STANCOR PART No. | THORDARSON PART No. | TRIAD PART No. |       |
| L7       | 870ma              | .5Ω     | 11MH                         | 25D42032A07       | C-4005         | TC-2             | TR-154              | TY17XT         |       |

## CHOKE (AUDIO OUTPUT)

| ITEM No. | INDUCTANCE | REPLACEMENT DATA  |                |                  |                     |                | NOTES |
|----------|------------|-------------------|----------------|------------------|---------------------|----------------|-------|
|          |            | Motorola PART No. | MERIT PART No. | STANCOR PART No. | THORDARSON PART No. | TRIAD PART No. |       |
| L8       | 18MH       | 25D42101A06       |                |                  |                     |                |       |

## SPEAKER

| ITEM No. | TYPE                 | REPLACEMENT DATA           |               | NOTES                         |
|----------|----------------------|----------------------------|---------------|-------------------------------|
|          |                      | Motorola PART No.          | QUAM PART No. |                               |
| SP1      | 5" PM 6Ω<br>6" PM 6Ω | 50C42526A01<br>50C42592A01 | 5A15Z6        | Models 4TMVG/W<br>Model 4TMVT |



### PARTS LIST AND DESCRIPTION (CONTINUED)

Replacement parts shown may be superseded by the availability of newly introduced replacements. Have your local distributor check Sams COUNTER FACTS for the most up-to-date replacement.

#### FUSES

| ITEM No. | TYPE | RATING | REPLACEMENT DATA  |            |                     |         |               |        |
|----------|------|--------|-------------------|------------|---------------------|---------|---------------|--------|
|          |      |        | Motorola PART No. |            | LITTELFUSE PART No. |         | BUSS PART No. |        |
|          |      |        | FUSE              | HOLDER     | FUSE                | HOLDER  | FUSE          | HOLDER |
| M1       | AGA  | 5      | 85R122345         | 9C41096A14 | 301006              | 155004A | AGA5          | BAF    |

#### MISCELLANEOUS

| ITEM No. | PART NAME                 | Motorola PART No. | NOTES  |
|----------|---------------------------|-------------------|--------|
| M2       | Tuner Coils & Plate Assy. | 77D42372A01       | AT-468 |
| M3       | Spark Plate               | 1V42300A05        |        |
| M4       | Spark Plate               | 64A41668A01       |        |
|          | Spark Plate               | 64A41668A01       |        |

#### CABINETS & CABINET PARTS

(When Ordering Specify Model, Chassis & Color)

| ITEM                   | PART No.    | ITEM             | PART No.    |
|------------------------|-------------|------------------|-------------|
| Dial Scale             | 34C42349A01 | Push Button      | 38B42343A01 |
| Knob, Tuning or Volume | 36B42400A01 | Pointer Assembly | 52B42600A01 |
| Knob, Tone or Dummy    | 36B42396A01 |                  |             |

#### WIRING DATA

|                                     |   |
|-------------------------------------|---|
| General-use Unshielded Hook-up Wire | Use BELDEN No. 8530 (Solid) Available in 12 Colors  |
|                                     | 8524 (Stranded) Available in 12 Colors              |
| Shielded Hook-up Wire               | Use BELDEN No. 8885                                 |
| Rear Seat Speaker Extension Cable   | Use BELDEN No. 6782 (Stranded) Coded Parallel Leads |
| Bonding Strap                       | Use BELDEN No. 8661 (3/8 In.) or 8670 (3/4 In.)     |





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