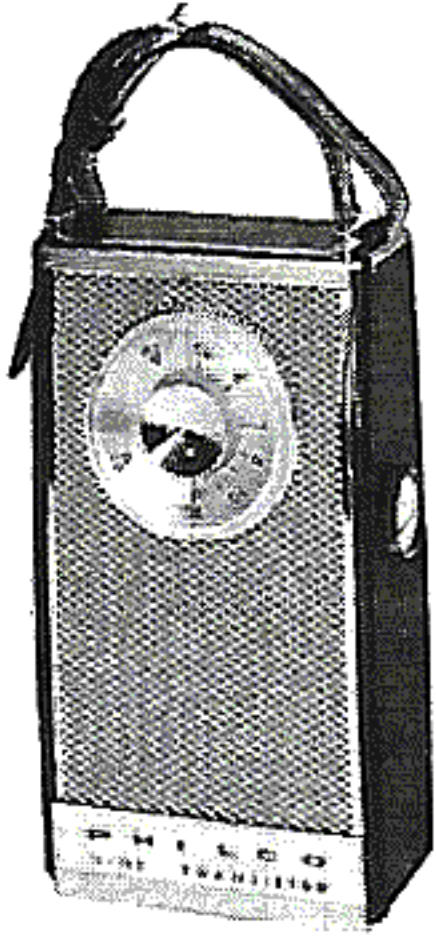
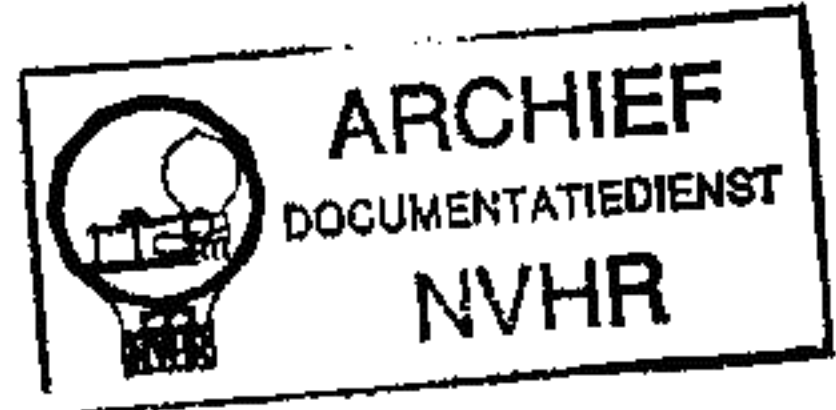




# PHOTOFACT<sup>®</sup> with

Ned. Ver. v. Historie v/d Radio



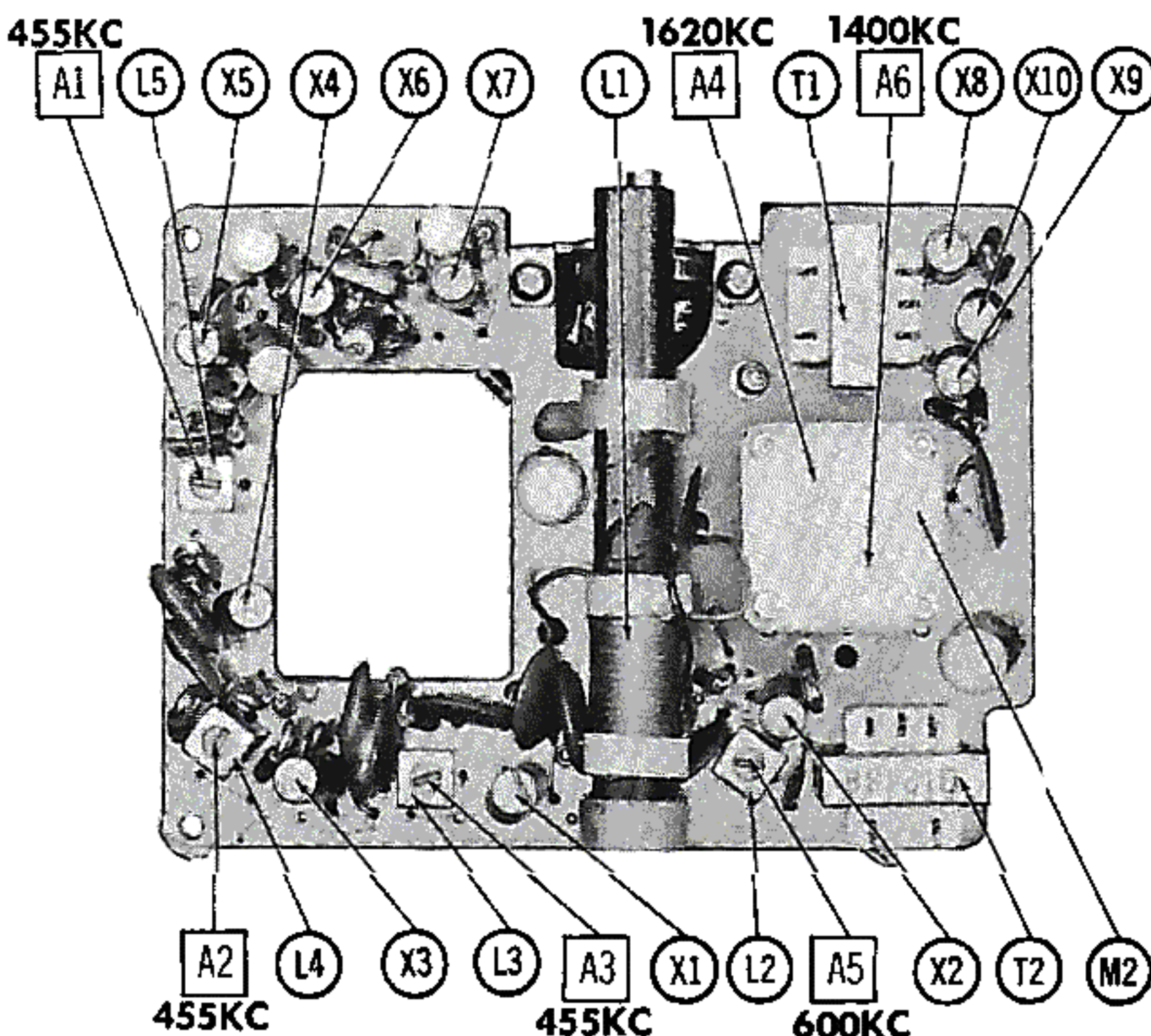
TRADE NAME: Philco Model T-90  
 SUPPLIER: Philco Corp., Subsidiary of Ford Motor Co.  
 Tioga & C Streets, Philadelphia, Pa.  
 TYPE SET: 10 Transistor AM Receiver  
 POWER SUPPLY: 6 Volts DC  
 RATING: 12MA @ 6VDC (No Signal, Min. Volume)  
 40MA @ 6VDC (Signal, Normal Volume)  
 TUNING RANGE: BROADCAST 540 - 1620KC

Met dank aan Jef Bos

## ALIGNMENT INSTRUCTIONS

Check for specified source voltage.  
 Fashion loop of several turns of wire and connect generator across loop.  
 Adjust output of generator to radiate only enough signal into receiver to obtain a suitable indication.  
 Suggested Alignment Tools:  
 A1, A2, A3, A5..... GENERAL CEMENT #8282, 8606, 9440  
 WALSCO #2501, 2526, 2543  
 A4, A6..... GENERAL CEMENT #5000, 8290  
 WALSCO #2525, 2528

| SIGNAL GENERATOR FREQUENCY | RADIO DIAL SETTING      | INDICATOR                       | ADJUST     | REMARKS  |
|----------------------------|-------------------------|---------------------------------|------------|--|
| 1. 455KC (400v Mod.)       | Tuning gang fully open. | Output Meter across voice coil. | A1, A2, A3 | Adjust for maximum. Repeat as required.                        |
| 2. 1620KC                  | "                       | "                               | A4         | Adjust for maximum.  |
| 3. 600KC                   | Tune to Signal.         | "                               | A5         | Rock tuning gang and adjust for maximum. Repeat steps 2 and 3. |
| 4. 1400KC                  | "                       | "                               | A6         | Adjust for maximum.  |



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

## TRANSISTORS

| ITEM No. | ORIG. TYPE | USE         | REPLACEMENT DATA |                           |              | NOTES |
|----------|------------|-------------|------------------|---------------------------|--------------|-------|
|          |            |             | DELCO PART No.   | GENERAL ELECTRIC PART No. | RCA PART No. |       |
| X1       | 2SA269     | Mixer       | DS-25            | GE-1                      |              | PNP   |
| X2       | 2SA297     | Osc.        | DS-25            | GE-1                      |              | PNP   |
| X3       | 2SA296     | 1st IF Amp. | DS-25            | GE-1                      |              | PNP   |
| X4       | 2SA296     | 2nd IF Amp. | DS-25            | GE-1                      |              | PNP   |
| X5       | 2SA296     | Detector    | DS-25            | GE-1                      |              | PNP   |
| X6       | 2SB266     | AF Amp.     | DS-26            | GE-2                      | 2N406        | PNP   |
| X7       | 2SB266     | Driver      | DS-26            | GE-2                      | 2N406        | PNP   |
| X8       | 2SB267     | Output      | DS-26            | GE-2                      | 2N406        | PNP   |
| X9       | 2SB267     | Output      | DS-26            | GE-2                      | 2N406        | PNP   |
| X10      | YV-1       | Bias Reg.   |                  |                           | 1N2326       | PNP   |

## ELECTROLYTIC CAPACITORS

| ITEM No. | RATING |       | REPLACEMENT DATA |                  |                           |                           |                             |                  |                  |
|----------|--------|-------|------------------|------------------|---------------------------|---------------------------|-----------------------------|------------------|------------------|
|          | CAP.   | VOLT. | PHILCO PART No.  | AEROVOX PART No. | CORNELL-DUBILIER PART No. | GENERAL ELECTRIC PART No. | GENERAL INSTRUMENT PART No. | MALLORY PART No. | SPRAGUE PART No. |
| C1       | 50     | 10    | 320-0095         | BCD10050         | ECPB117                   | MT1-16                    | MLV50-10                    | PET1575          | VL-1134          |
| C2       | 50     | 10    | 320-0095         | BCD10050         | ECPB117                   | MT1-16                    | MLV50-10                    | PET1575          | VL-1134          |
| C3       | 3      | 6     | 320-0093         | PTT20            | NLW3-15                   | MT1-3                     | MLV5-6                      | TT6X3            | TE-1082          |
| C4       | 30     | 6     | 320-0094         | BCD6025          | ECPB412                   | MT1-13                    | MLV30-6                     | TT6X30           | VL-1092          |
| C5       | 3      | 6     | 320-0093         | PTT20            | NLW3-15                   | MT1-3                     | MLV5-6                      | TT6X3            | TE-1082          |
| C6       | 30     | 6     | 320-0094         | BCD6025          | ECPB412                   | MT1-13                    | MLV30-6                     | TT6X30           | VL-1092          |
| C7       | .3     | 6     | 320-0092         | BCD6001          | ECPB401                   | MT1-1                     | MLV1-150                    | TT12X1           | VL-1080          |
| C8       | 30     | 6     | 320-0094         | BCD6025          | ECPB412                   | MT1-13                    | MLV30-6                     | TT6X30           | VL-1092          |

## 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      | .04    |         | TTD-05           | CK-503             | H5                        |                  | TA-150           | TG-S50           |
| C11      | .02    |         | TTD-02           | CK-203             | H3                        |                  | TA-120           | TG-S20           |
| C12      | .04    |         | TTD-05           | CK-503             | H5                        |                  | TA-150           | TG-S50           |
| C13      | .04    |         | TTD-05           | CK-503             | H5                        |                  | TA-150           | TG-S50           |
| C14      | .04    |         | TTD-05           | CK-503             | H5                        |                  | TA-150           | TG-S50           |
| C15      | 8      |         | NPO-DI 8.2       |                    | C10V8C                    |                  |                  | 10TCC-V82        |
| C16      | .04    |         | TTD-05           | CK-503             | H5                        |                  | TA-150           | TG-S50           |
| C17      | .04    |         | TTD-05           | CK-503             | H5                        |                  | TA-150           | TG-S50           |
| C18      | 7      |         | NPO-DI 6.8       | DTZ-6R8            | C10V7C                    | CCTO-6R8         | CNO-588          | 10TCC-V68        |
| C19      | .01    |         | TTD-01           | CK-103             | H2                        |                  | TA-110           | TG-S10           |
| C20      | .01    |         | TTD-01           | CK-103             | H2                        |                  | TA-110           | TG-S10           |
| C21      | .04    |         | TTD-05           | CK-503             | H5                        |                  | TA-150           | TG-S50           |
| C22      | .04    |         | TTD-05           | CK-503             | H5                        |                  | TA-150           | TG-S50           |
| C23      | .005   |         | TTD-005          | CK-502             | H1                        |                  | TA-250           | TG-D50           |
| C24      | .02    |         | TTD-02           | CK-203             | H3                        |                  | TA-120           | TG-S20           |
| C25      | .04    |         | TTD-05           | CK-503             | H5                        |                  | TA-150           | TG-S50           |
| C26      | .1mfd  |         | TTD-1            | CK-104             | H6                        |                  | TA-010           | TG-P10           |

## CONTROLS

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

| ITEM No. | USE             | RESISTANCE | REPLACEMENT DATA |                    |                    |                  |                  |
|----------|-----------------|------------|------------------|--------------------|--------------------|------------------|------------------|
|          |                 |            | PHILCO PART No.  | CENTRALAB PART No. | CLAROSTAT PART No. | CTS-IRC PART No. | MALLORY PART No. |
| R1       | Volume & Switch | 5000Ω      | 323-0109         |                    |                    |                  |                  |

# DESCRIPTION

## COILS (RF-IF)

| ITEM No. | USE       | REPLACEMENT DATA |                |                 |                  |                  | NOTES |
|----------|-----------|------------------|----------------|-----------------|------------------|------------------|-------|
|          |           | PHILCO PART No.  | MERIT PART No. | MILLER PART No. | STANCOR PART No. | WORKMAN PART No. |       |
| L1       | Loopstick | 322-0196         |                |                 |                  |                  |       |
| L2       | Osc.      | 322-0195         |                |                 |                  |                  |       |
| L3       | 1st IF    | 322-0192         | BC-569         | 2061            | RTC-9262         |                  |       |
| L4       | 2nd IF    | 322-0193         | BC-570         | 2062            | RTC-9263         |                  |       |
| L5       | 3rd IF    | 322-0194         | BC-571         | 2063            | RTC-9264         |                  |       |

## TRANSFORMER (DRIVER)

| ITEM No. | TURNS RATIO |      | REPLACEMENT DATA |                |                  |                     |                | NOTES |
|----------|-------------|------|------------------|----------------|------------------|---------------------|----------------|-------|
|          |             |      | PHILCO PART No.  | MERIT PART No. | STANCOR PART No. | THORDARSON PART No. | TRIAD PART No. |       |
|          | PRI.        | SEC. |                  |                |                  |                     |                |       |
| T1       | 1           | 1    | 322-0190         |                |                  |                     |                |       |

## TRANSFORMER (AUDIO OUTPUT)

| ITEM No. | IMPEDANCE |      | REPLACEMENT DATA |                |                  |                     |                | NOTES |
|----------|-----------|------|------------------|----------------|------------------|---------------------|----------------|-------|
|          |           |      | PHILCO PART No.  | MERIT PART No. | STANCOR PART No. | THORDARSON PART No. | TRIAD PART No. |       |
|          | PRI.      | SEC. |                  |                |                  |                     |                |       |
| T2       | 200Ω CT   | 6-8Ω | 322-0191         |                |                  |                     |                |       |

## SPEAKER

| ITEM No. | TYPE           | REPLACEMENT DATA |               | NOTES |
|----------|----------------|------------------|---------------|-------|
|          |                | PHILCO PART No.  | QUAM PART No. |       |
| SP1      | 2 3/4" PM 6-8Ω | 36-1864-10       | 27A06Z12      |       |

## BATTERIES

| ITEM No. | VOLTAGE | PHILCO PART No. | REPLACEMENT DATA    |                   |                         | NOTES      |
|----------|---------|-----------------|---------------------|-------------------|-------------------------|------------|
|          |         |                 | BURGESS             | EVEREADY          | MALLORY                 |            |
| M1       | 6       | P-15            | 930 (or AL-9, Hg-9) | 1015 (or E91, E9) | M-15R (or MN1500, ZM-9) | 4 Required |

## MISCELLANEOUS

| ITEM No. | PART NAME   | PHILCO PART No. | NOTES  |
|----------|-------------|-----------------|--------|
| M2       | Tuning Cap. | 321-0008        | 2 Gang |

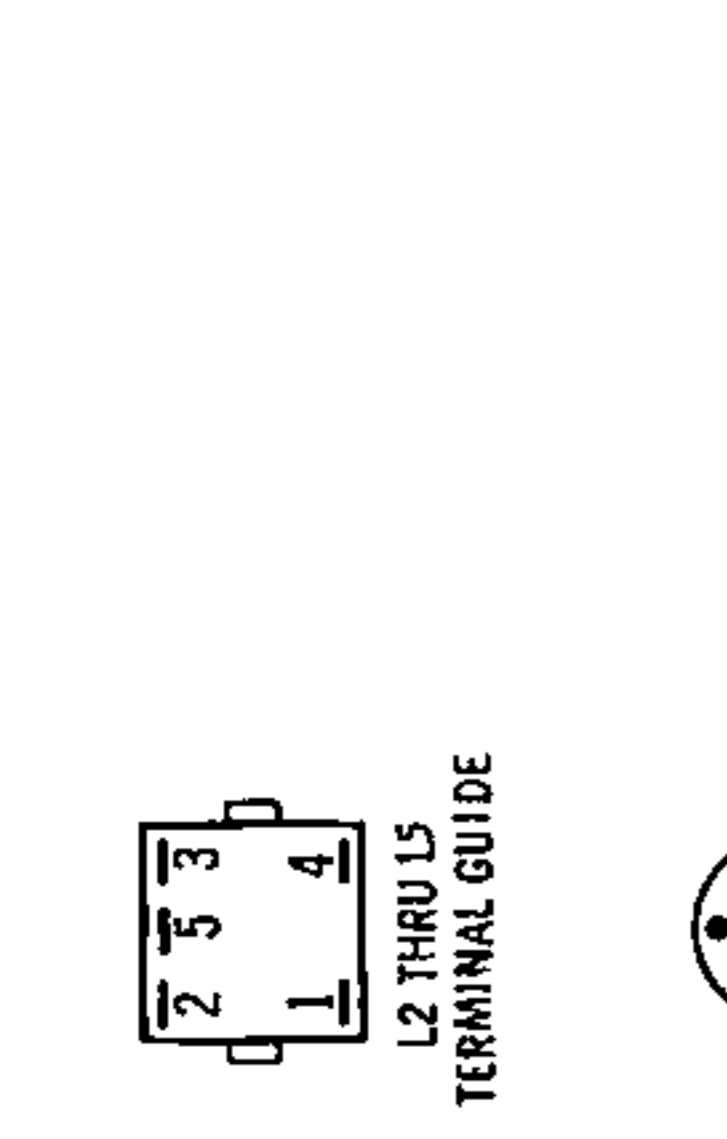
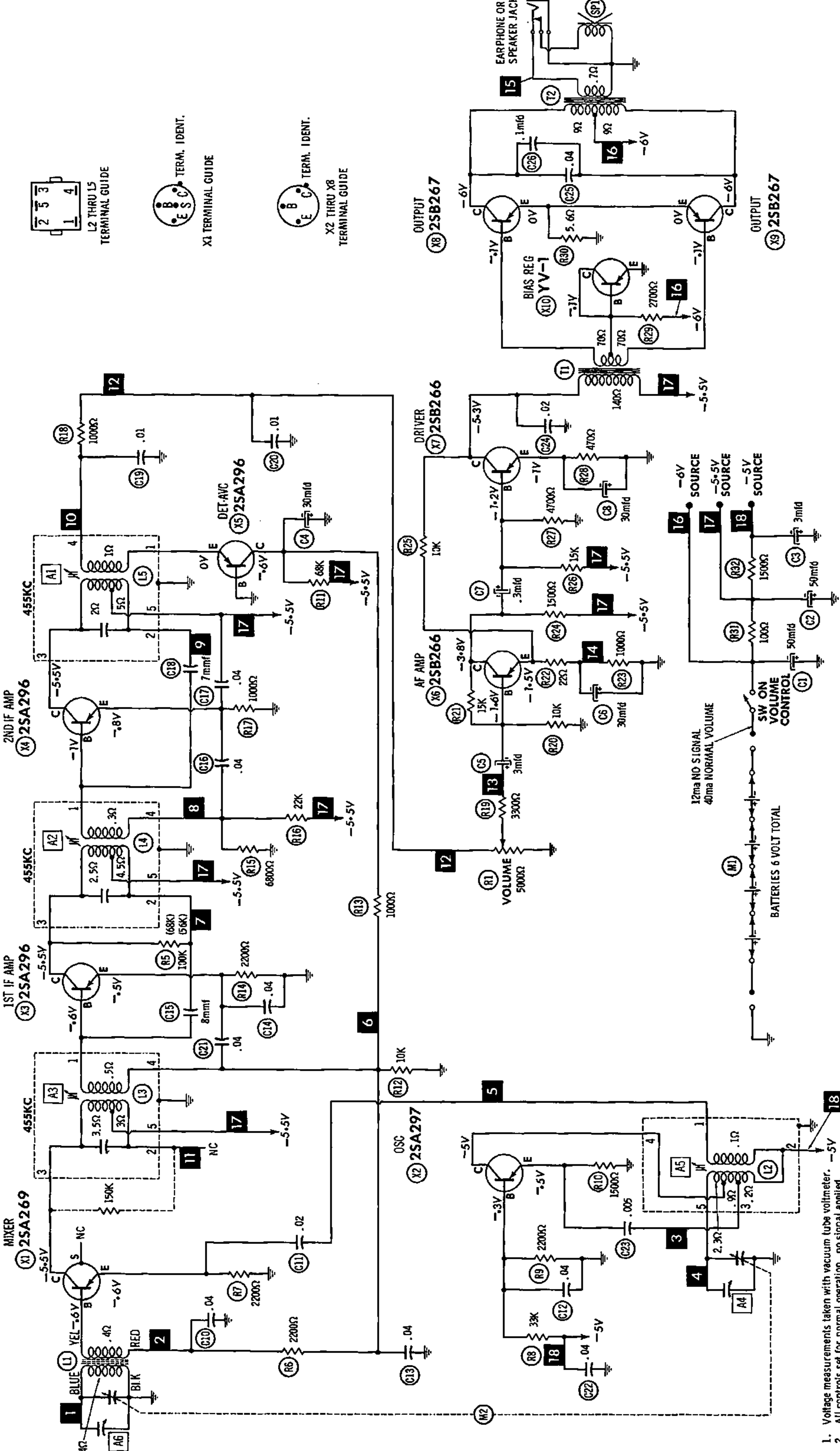
## CABINETS & CABINET PARTS

(When Ordering Specify Model, Chassis & Color)

| ITEM          | PART No. | ITEM                  | PART No. |
|---------------|----------|-----------------------|----------|
| Knob - Tuning | 227-0141 | Cabinet               | 424-0049 |
| Knob - Volume | 227-0142 | Cabinet Back Assembly | 424-0052 |

## WIRING DATA

General-use Unshielded Hook-up Wire ..... Use BELDEN No. 8530 (Solid 22AWG) Available  
 8524 (Stranded 22AWG) in  
 8570 (Stranded 26AWG) 12 Colors



1. Voltage measurements taken with vacuum tube voltmeter. -5V
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.

**PHILCO MODEL T-90**

A PHOTOFAC TANDARD NOTATION SCHEMATIC  
with **CIRCUTRACE**

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