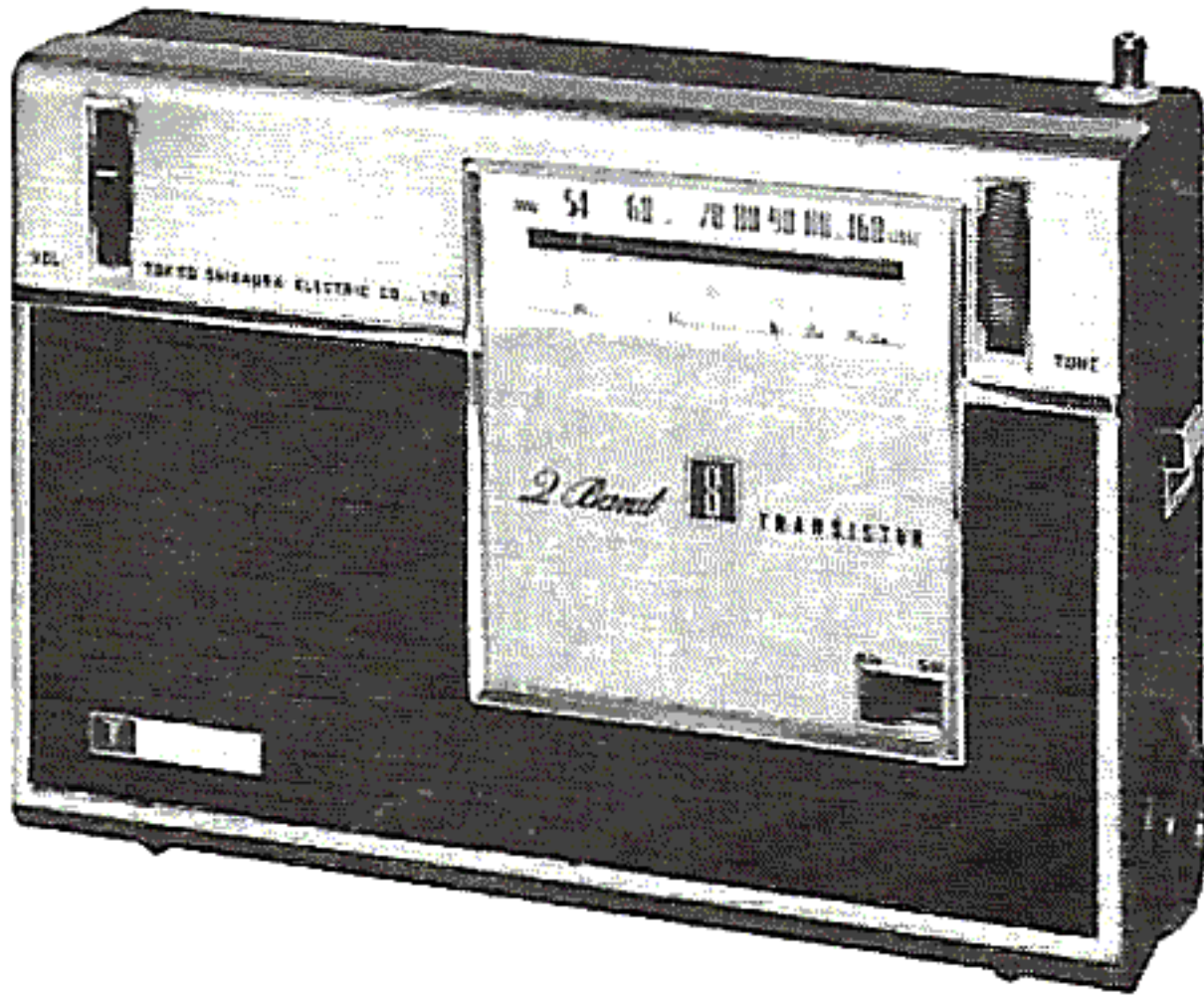




**PHOTOFACT<sup>®</sup> with**

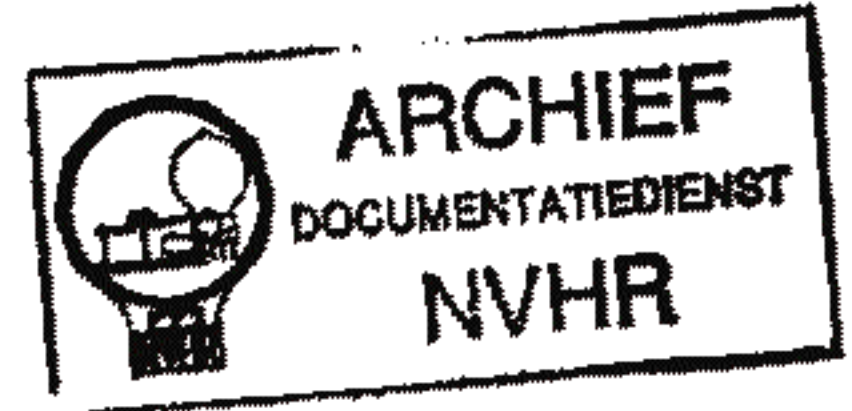
**CIRCUITRACE<sup>®</sup>**



Met dank aan Jef Bos

TRADE NAME: Toshiba Model 8L-420R  
 SUPPLIER: Transistor World Corp.,  
 513 W. 24th Street, New York 11, N. Y.  
 TYPE SET: 8 Transistor BC-SW Receiver  
 POWER SUPPLY: 6 Volts DC  
 RATING: 12MA @ 6VDC (No Signal, Min. Volume)  
 20MA @ 6VDC (Signal, Normal Volume)  
 TUNING RANGE: BROADCAST 535-1620KC  
 SHORT WAVE 6-18MC

Ned. Ver. v. Historie v/d



**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: A4, A6, A7, A9 .. GENERAL CEMENT #5000, 5066, 8290  
 WALSCO #2512, 2525, 2528

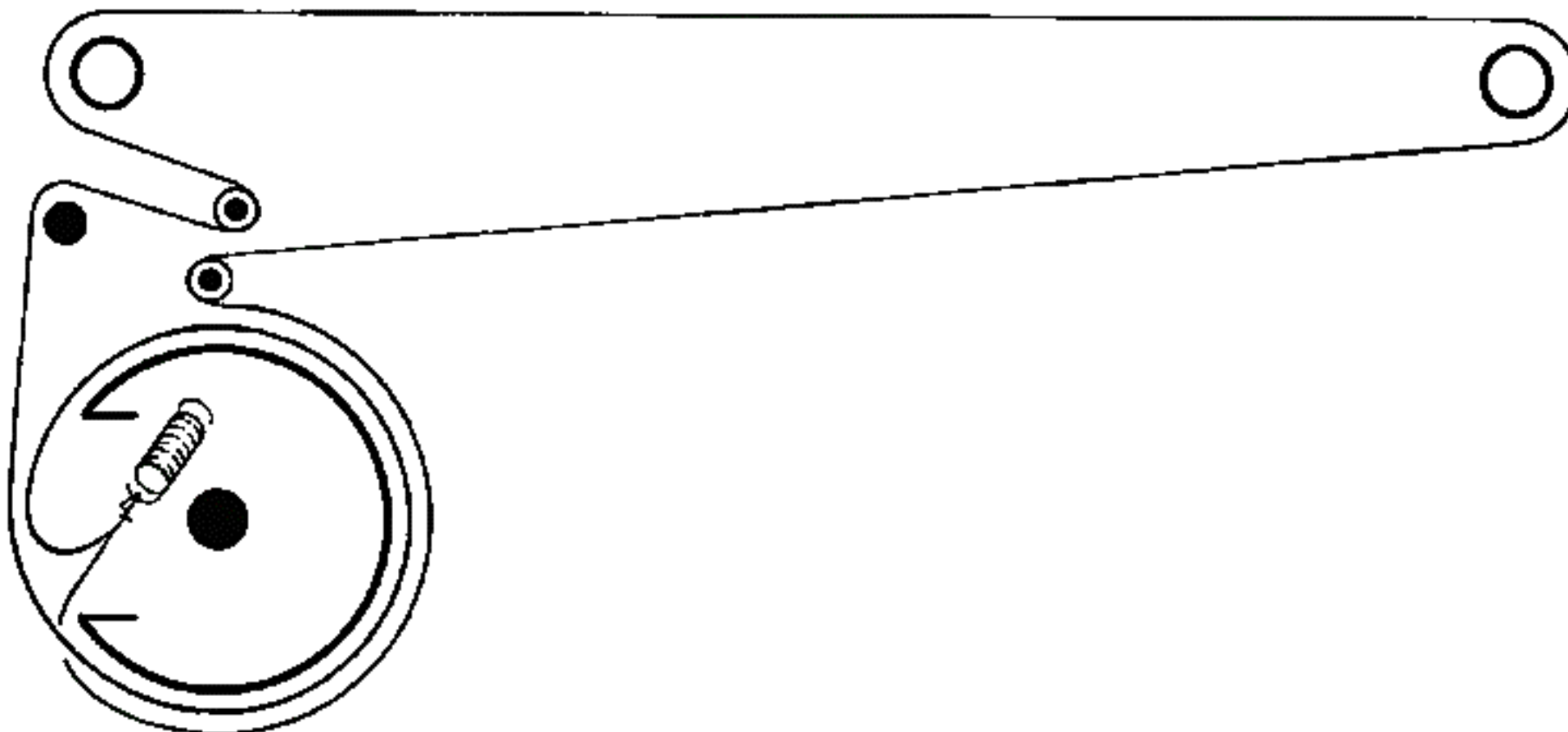
**BC ALIGNMENT — SELECTOR IN MW POSITION**

| 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.  |

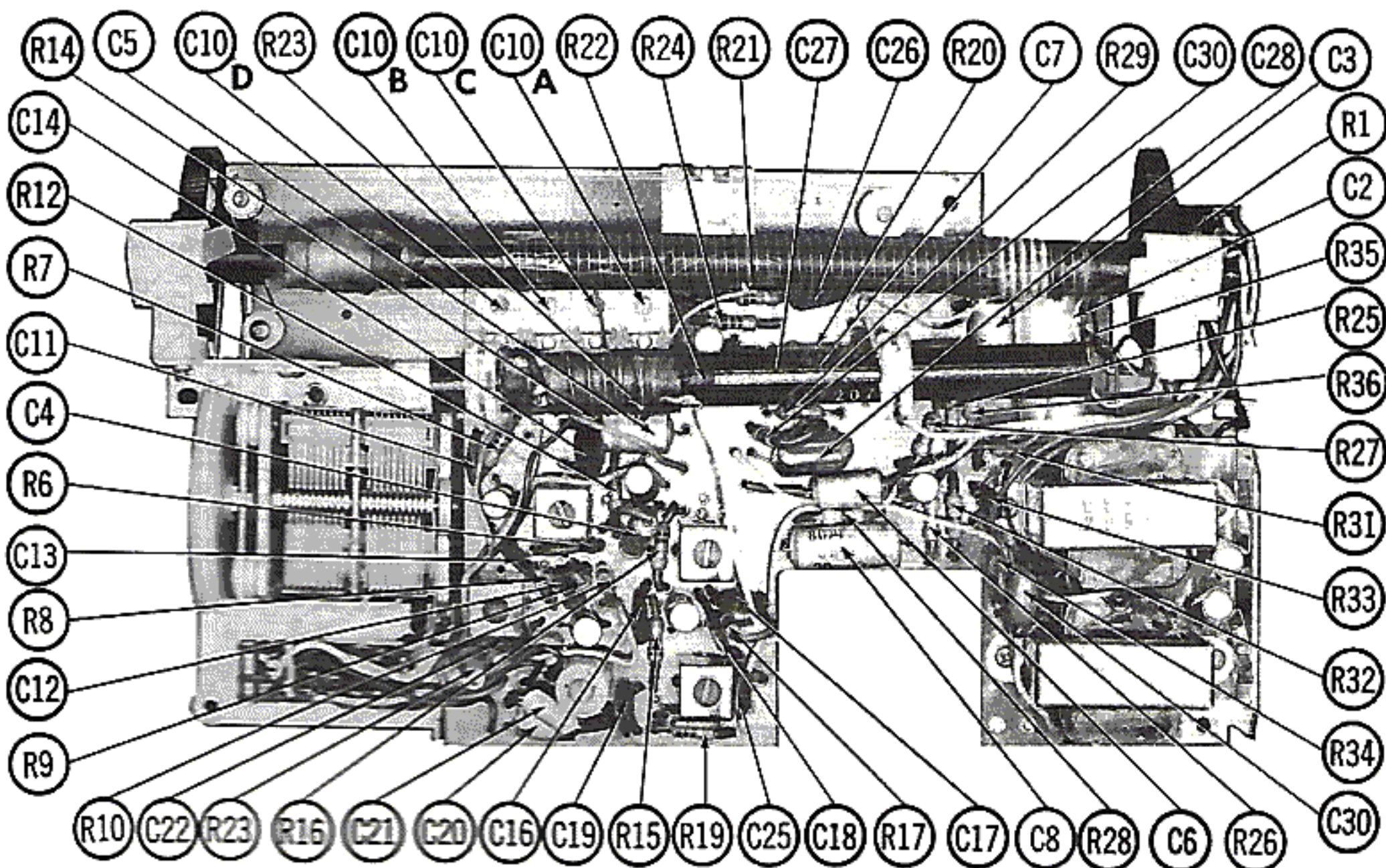
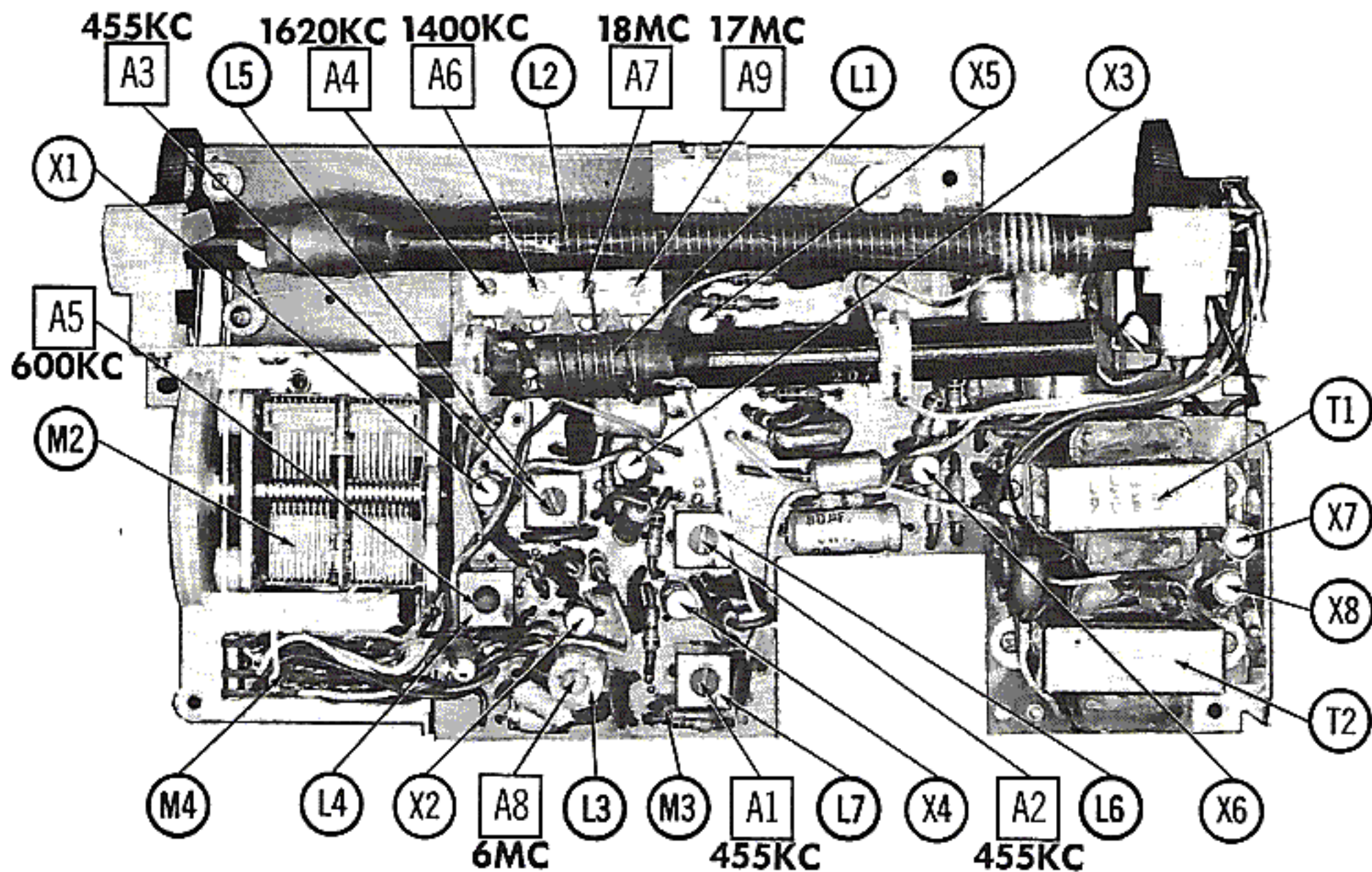
**SW ALIGNMENT — SELECTOR IN SW POSITION**

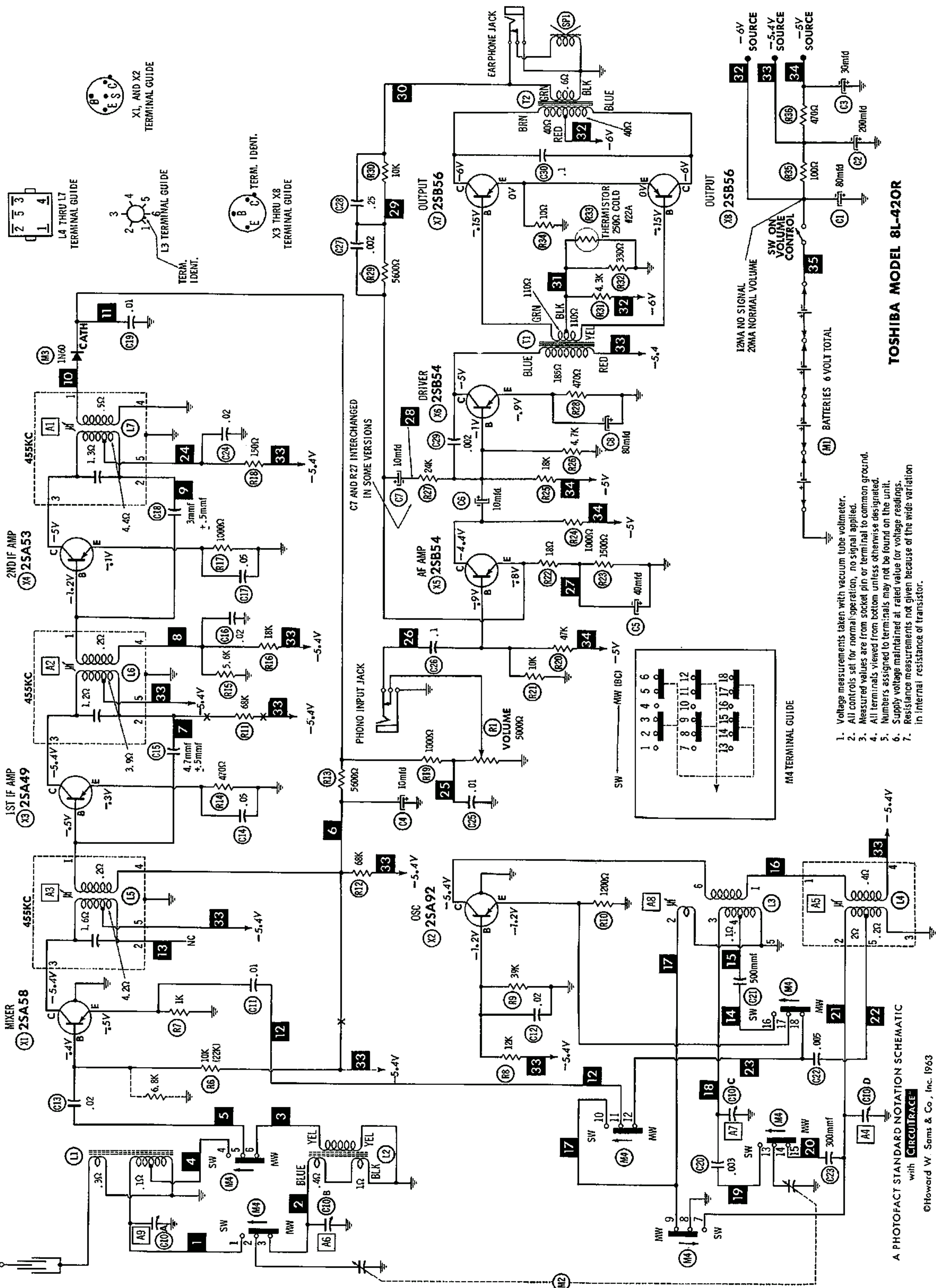
|         |                        |   |    |  |
|---------|------------------------|---|----|--|
| 5. 18MC | Tuning gang fully open | " | A7 | Adjust for maximum.  |
| 6. 6MC  | Tune to Signal         | " | A8 | Rock tuning gang and adjust for maximum. Repeat steps 5 & 6. |
| 7. 17MC | "                      | " | A9 | Adjust for maximum.  |

**DIAL CORD STRINGING**



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



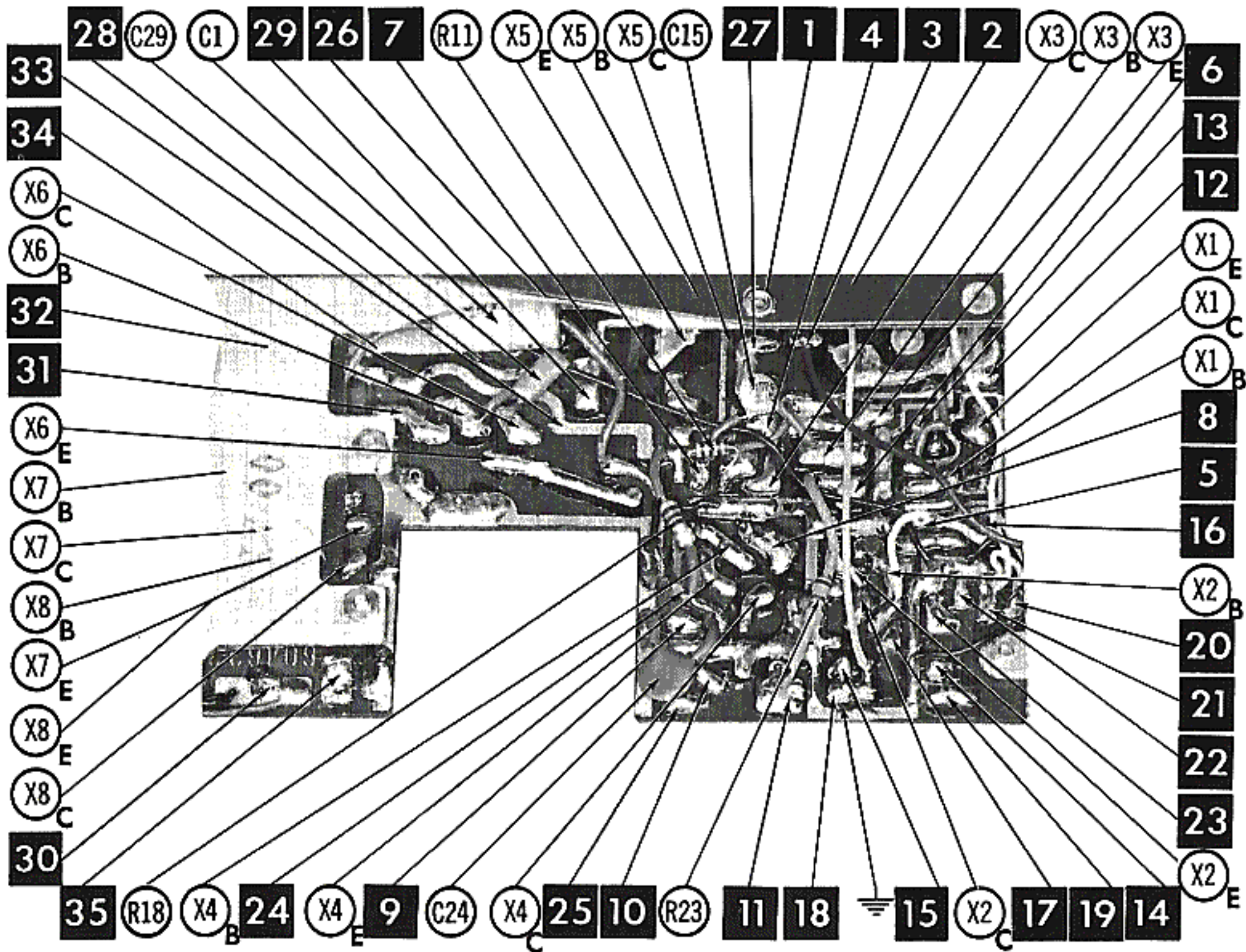


**TOSHIBA MODEL 8L-42OR**

**A PHOTOFAC STANDARD NOTATION SCHEMATIC**  
with **CIRCUITRACE**

©Howard W. Sams & Co., Inc. 1963

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.



**WIRING DATA**

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

**TRANSISTORS**

| ITEM No. | ORIG. TYPE | USE              | REPLACEMENT DATA |                           |              | NOTES |
|----------|------------|------------------|------------------|---------------------------|--------------|-------|
|          |            |                  | DELCO PART No.   | GENERAL ELECTRIC PART No. | RCA PART No. |       |
| X1       | 2SA58      | Mixer            | DS-25            | GE-1                      |              | PNP   |
| X2       | 2SA92      | Oscillator       | DS-25            | GE-1                      |              | PNP   |
| X3       | 2SA49      | 1st IF Amplifier | DS-25            | GE-1                      | 2N410        | PNP   |
| X4       | 2SA53      | 2nd IF Amplifier | DS-25            | GE-1                      | 2N410        | PNP   |
| X5       | 2SB54      | AF Amplifier     | DS-26            | GE-2                      | 2N406        | PNP   |
| X6       | 2SB54      | Driver           | DS-26            | GE-2                      | 2N406        | PNP   |
| X7       | 2SB56      | Output           | DS-26            | GE-2                      | 2N408        | PNP   |
| X8       | 2SB56      | Output           | DS-26            | GE-2                      | 2N408        | PNP   |

**ELECTROLYTIC CAPACITORS**

| ITEM No. | RATING |       | REPLACEMENT DATA |                  |                           |                           |                             |                  |                  |
|----------|--------|-------|------------------|------------------|---------------------------|---------------------------|-----------------------------|------------------|------------------|
|          | CAP.   | VOLT. | TOSHIBA PART No. | AEROVOX PART No. | CORNELL-DUBILIER PART No. | GENERAL ELECTRIC PART No. | GENERAL INSTRUMENT PART No. | MALLORY PART No. | SPRAGUE PART No. |
| C1       | 80     | 6     |                  | CRE320           | NLW75-10                  | MT1-18                    | BL1620                      | TT6X80           | TE-1101.5        |
| C2       | 200    | 6     |                  | CRE331           | NLW200-12                 | MT1-24                    | MLV200-6                    | TT6X200          | TE-1104          |
| C3       | 30     | 6     |                  | CRE313           | NLW30-6                   | MT1-13                    | MLV30-6                     | TT6X30           | TE-1092          |
| C4       | 10     | 3     |                  | CRE207           | NLW10-3                   | MT1-5                     | MLV10-3                     | TT3X10           | TE-1053          |
| C5       | 40     | 3     |                  | CRE215           | NLW40-3                   | MT1-15                    | MLV40-3                     | TT3X40           | TE-1057          |
| C6       | 10     | 6     |                  | CRE307           | NLW10-6                   | MT1-5                     | MLV10-6                     | TT6X10           | TE-1087          |
| C7       | 10     | 6     |                  | CRE307           | NLW10-6                   | MT1-5                     | MLV10-6                     | TT6X10           | TE-1087          |
| C8       | 80     | 6     |                  | CRE320           | NLW75-10                  | MT1-18                    | BL1620                      | TT6X80           | TE-1101.5        |

**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. |           |
| C10A<br>B<br>C<br>D |            |         |                  |                    |                           |                  |                  |                  |           |
| C11                 | .01 50V    |         | TTD-01           | CK-103             | H2                        |                  |                  | TA-110           | TG-S10    |
| C12                 | .02 50V    |         | TTD-02           | CK-203             | H3                        |                  |                  | TA-120           | TG-S20    |
| C13                 | .02 50V    |         | TTD-02           | CK-203             | H3                        |                  |                  | TA-120           | TG-S20    |
| C14                 | .05 50V    |         | TTD-05           | CK-503             | H5                        |                  |                  | TA-150           | TG-S50    |
| C15                 | 4.7 ±.5mmf |         | NPO-DI 4.7       | DTZ-4R7            | C10V47C                   | CCTO-4R7         |                  | CNO-547          | 10TCC-V47 |
| C16                 | .02 50V    |         | TTD-02           | CK-203             | H3                        |                  |                  | TA-120           | TG-S20    |
| C17                 | .05 50V    |         | TTD-05           | CK-503             | H5                        |                  |                  | TA-150           | TG-S50    |
| C18                 | 3 ±.5mmf   |         | NPO-DI 3.0       | DTZ-3R3            | C10V33C                   | CCTO-3R3         |                  | CNO-533          | 10TCC-V30 |
| C19                 | .01 50V    |         | TTD-01           | CK-103             | H2                        |                  |                  | TA-110           | TG-S10    |
| C20                 | .003       |         |                  | CPR-3000J          |                           |                  |                  |                  |           |
| C21                 | 500        |         |                  | CPR-510J           |                           |                  |                  |                  |           |
| C22                 | .005 50V   |         | TTD-005          | CK-502             | H1                        |                  |                  | TA-250           | TG-D50    |
| C23                 | 300        |         |                  | CPR-300J           |                           |                  |                  |                  |           |
| C24                 | .02 50V    |         | TTD-02           | CK-203             | H3                        |                  |                  | TA-120           | TG-S20    |
| C25                 | .01 50V    |         | TTD-01           | CK-103             | H2                        |                  |                  | TA-110           | TG-S10    |
| C26                 | .1 50V     |         | BE2P1            | CK-104             | WMF1P1                    | 1DP-2-104        |                  | PVC101           | 2WF-P10   |
| C27                 | .002 50V   |         |                  | DM-202             |                           |                  |                  |                  |           |
| C28                 | .25 50V    |         | BE2P25           |                    | MPV2P25                   | 1DP-3-254        |                  | PVC1025          | 2WF-P27   |
| C29                 | .002 50V   |         |                  | DM-202             |                           |                  |                  |                  |           |
| C30                 | .1 50V     |         | BE2P1            | CK-104             | WMF1P1                    | 1DP-2-104        |                  | PVC101           | 2WF-P10   |

# DESCRIPTION

## CONTROLS

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

| ITEM No. | USE             | RESIST-ANCE | REPLACEMENT DATA |                    |                    |                  |                  |
|----------|-----------------|-------------|------------------|--------------------|--------------------|------------------|------------------|
|          |                 |             | TOSHIBA PART No. | CENTRALAB PART No. | CLAROSTAT PART No. | CTS-IRC PART No. | MALLORY PART No. |
| R1       | Volume & Switch | 5000Ω       |                  |                    |                    |                  |                  |

## COILS (RF-IF)

| ITEM No. | USE          | REPLACEMENT DATA |                |                 |                  |                  | NOTES |
|----------|--------------|------------------|----------------|-----------------|------------------|------------------|-------|
|          |              | TOSHIBA PART No. | MERIT PART No. | MILLER PART No. | STANCOR PART No. | WORKMAN PART No. |       |
| L1       | SW Loopstick |                  |                |                 |                  |                  |       |
| L2       | BC Loopstick |                  |                |                 |                  |                  |       |
| L3       | SW Osc.      |                  |                |                 |                  |                  |       |
| L4       | BC Osc.      |                  |                |                 |                  |                  |       |
| L5       | 1st IF       |                  | BC-574         | 2066            | RTC-9266         |                  |       |
| L6       | 2nd IF       |                  | BC-575         | 2067            | RTC-9267         |                  |       |
| L7       | 3rd IF       |                  | BC-576         | 2068            | RTC-9268         |                  |       |

## TRANSFORMER (DRIVER)

| ITEM No. | TURNS RATIO |      | REPLACEMENT DATA |                |                  |                     |                | NOTES |
|----------|-------------|------|------------------|----------------|------------------|---------------------|----------------|-------|
|          |             |      | TOSHIBA PART No. | MERIT PART No. | STANCOR PART No. | THORDARSON PART No. | TRIAD PART No. |       |
|          | PRI.        | SEC. |                  |                |                  |                     |                |       |
| T1       | 2.2         | 1    |                  |                |                  |                     |                |       |

## TRANSFORMER (AUDIO OUTPUT)

| ITEM No. | IMPEDANCE |      | REPLACEMENT DATA |                |                  |                     |                | NOTES |
|----------|-----------|------|------------------|----------------|------------------|---------------------|----------------|-------|
|          |           |      | TOSHIBA PART No. | MERIT PART No. | STANCOR PART No. | THORDARSON PART No. | TRIAD PART No. |       |
|          | PRI.      | SEC. |                  |                |                  |                     |                |       |
| T2       | 125Ω CT   | 6-8Ω |                  |                |                  |                     |                |       |

## SPEAKER

| ITEM No. | TYPE        | REPLACEMENT DATA |               | NOTES |
|----------|-------------|------------------|---------------|-------|
|          |             | TOSHIBA PART No. | QUAM PART No. |       |
| SP1      | 3½" PM 6-8Ω | SP-3503C         | 3A07Z8        |       |

## BATTERIES

| ITEM No. | VOLTAGE | TOSHIBA PART No. | REPLACEMENT DATA |              |                   | NOTES      |
|----------|---------|------------------|------------------|--------------|-------------------|------------|
|          |         |                  | BURGESS          | EVEREADY     | MALLORY           |            |
| M1       | 6V      | UM-2             | 130 (or AL-1)    | 635 (or E93) | M-14R (or MN1400) | 4 Required |

## MISCELLANEOUS

| ITEM No. | PART NAME       | TOSHIBA PART No. | NOTES |
|----------|-----------------|------------------|-------|
| M2       | Tuning Cap      |                  |       |
| M3       | Detector (1N60) |                  |       |
| M4       | Bandswitch      |                  |       |