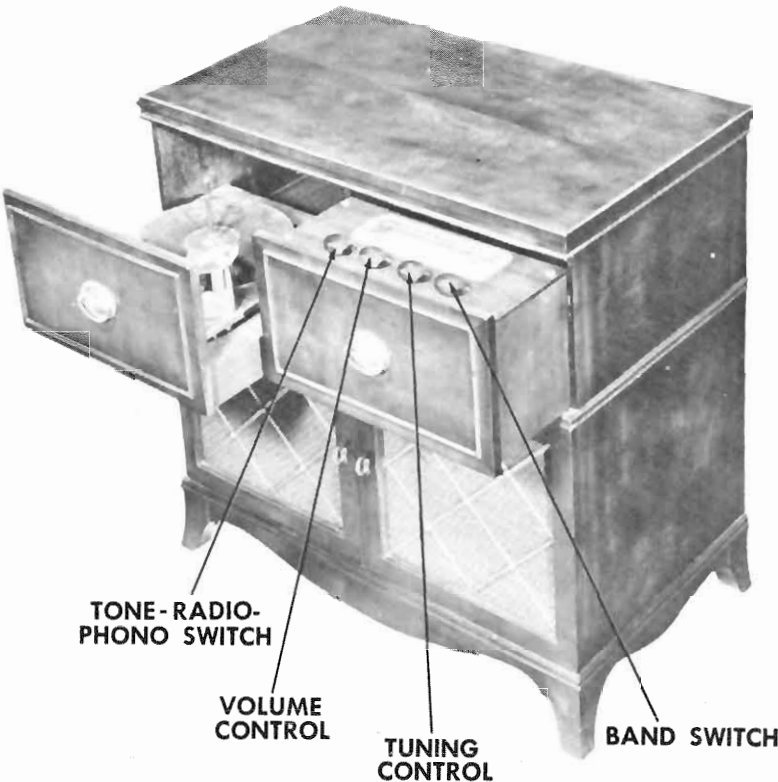


The stage gain measured values listed above are approximate values for an average operative stage, rather than an absolute value. It should be borne in mind that it is possible to introduce so many variables into the measurement operation, such as, type of equipment used for measuring, handling and placement of probes, the accuracy of alignment, etc., that an absolute reading is impractical. AVC is m de inoperative and 3-volt battery bias substituted for measurement.

PHOTOFACT* Folder

LEARADIO MODELS 6610PC, 6611PC, 6612PC

LEARADIO MODELS 6610PC, 6611PC, 6612PC



LEARADIO MODEL 6611PC

| | | | | | | | |
|---|---|----------------------------|------------------|--------------------------------------|-------------------|---------------|--|
| TRADE NAME | Learadio Models 6610PC, 6611PC, 6612PC | | | | | | |
| MANUFACTURER | Lear, Inc., 110 Ionia Ave., N. W. Grand Rapids, Mich. | | | | | | |
| TYPE SET | AC Operated Combination Automatic Phono. - 3 Band Superheterodyne Receiver With Self Contained Loop Antenna | | | | | | |
| TUBES(SIX) | Types, 6SK7 RF Amp., 6SA7 Converter, 6SF7 IF Amp.-Det.-AVC, 6SJ7 1st Audio, 6V6GT Power Output, 6X5GT Rectifier | | | | | | |
| POWER SUPPLY | 117 Volts AC | | | RATING .450 Amps. @ 117V AC | | | |
| TUNING RANGE—BROADCAST | 535-1730KC | | | SHORT WAVE 1.68-5.35 MC, 5.45-18.3MC | | | |
| ALIGNMENT INSTRUCTIONS | | | | | | | |
| To set pointer, turn variable fully closed and set pointer at the last reference mark at the left end of the dial. Set volume control at maximum volume and keep output from signal generator no higher than necessary to obtain output reading. Use insulated alignment screwdriver for adjusting. | | | | | | | |
| DUMMY ANTENNA | SIGNAL GENERATOR COUPLING | SIGNAL GENERATOR FREQUENCY | BAND SWITCH POS. | RADIO DIAL SETTING | OUTPUT METER | ADJUST | REMARKS |
| .05 MFD. | High side to pin #8 (signal grid) of 6SA7. Low side to chassis. | 455KC | BC | High freq. end. | Across voice coil | A1,A2, A3,A4. | Adjust for maximum output |
| 400 OHMS | High side to ext. ant. lead. Low side to chassis. | 18.0MC | SW-2 | 18.0MC | " | A5 | " |
| 400 OHMS | " | 15.0MC | " | Tune for maximum output. | " | A6,A7. | Rock variable and adjust for maximum output. |
| 400 OHMS | " | 5.6MC | SW-1 | 5.6MC | " | A8 | Adjust for maximum output |
| 400 OHMS | " | 5.0MC | " | Tune for maximum output. | " | A9,A10 | Rock variable and adjust for maximum output. |
| 200 MMF. | " | 1700KC | BC | 1700KC | " | A11 | Adjust for maximum output |
| 200 MMF. | " | 1500KC | " | Tune for maximum output. | " | A12,A13 | " |
| 200 MMF. | " | 600KC | " | " | " | A14 | Rock variable and adjust for maximum output. Repeat last three steps until no further improvement can be obtained. |

HOWARD W. SAMS & CO., INC. •

"The listing of any available replacement part herein does not constitute in any case a recommendation, warranty or guaranty by Howard W. Sams & Co., Inc., as to the quality and suitability of such replacement part. The numbers of these parts have been compiled from information furnished to Howard W. Sams & Co., Inc., by the manufacturers of the particular type of replacement part listed."

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• Indianapolis Indiana

NOTE: VOLTAGE AND RESISTANCE READINGS TAKEN IN STANDARD BROADCAST POSITION.

VOLTAGE READINGS

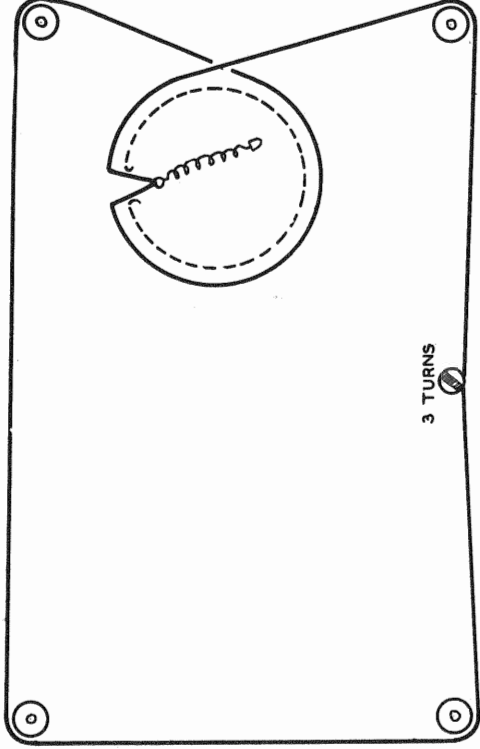
| Item | Tube | Pin 1 | Pin 2 | Pin 3 | Pin 4 | Pin 5 | Pin 6 | Pin 7 | Pin 8 |
|------|-------|-------|-------|-------|--------|---------|--------|---------|--------|
| 1 | 6SK7 | OV. | OV. | OV. | -55VDC | OV. | 82VDC | 64VAC | 230VDC |
| 2 | 6SA7 | OV. | OV. | OV. | 230VDC | -3.6VDC | OV. | 64VAC | -45VDC |
| 3 | 6SF7 | OV. | OV. | OV. | -45VDC | OV. | 82VDC | -5VDC | 230VDC |
| 4 | 6SJ7 | OV. | OV. | OV. | .6VDC | OV. | 16VDC | 64VAC | 17VDC |
| 5 | 6V6GT | OV. | OV. | OV. | 265VDC | 230VDC | OV. | 64VAC | 11VDC |
| 6 | 6X5GT | OV. | OV. | OV. | 260VAC | 49.5VAC | 260VAC | 49.5VAC | 64VAC |

RESISTANCE READINGS

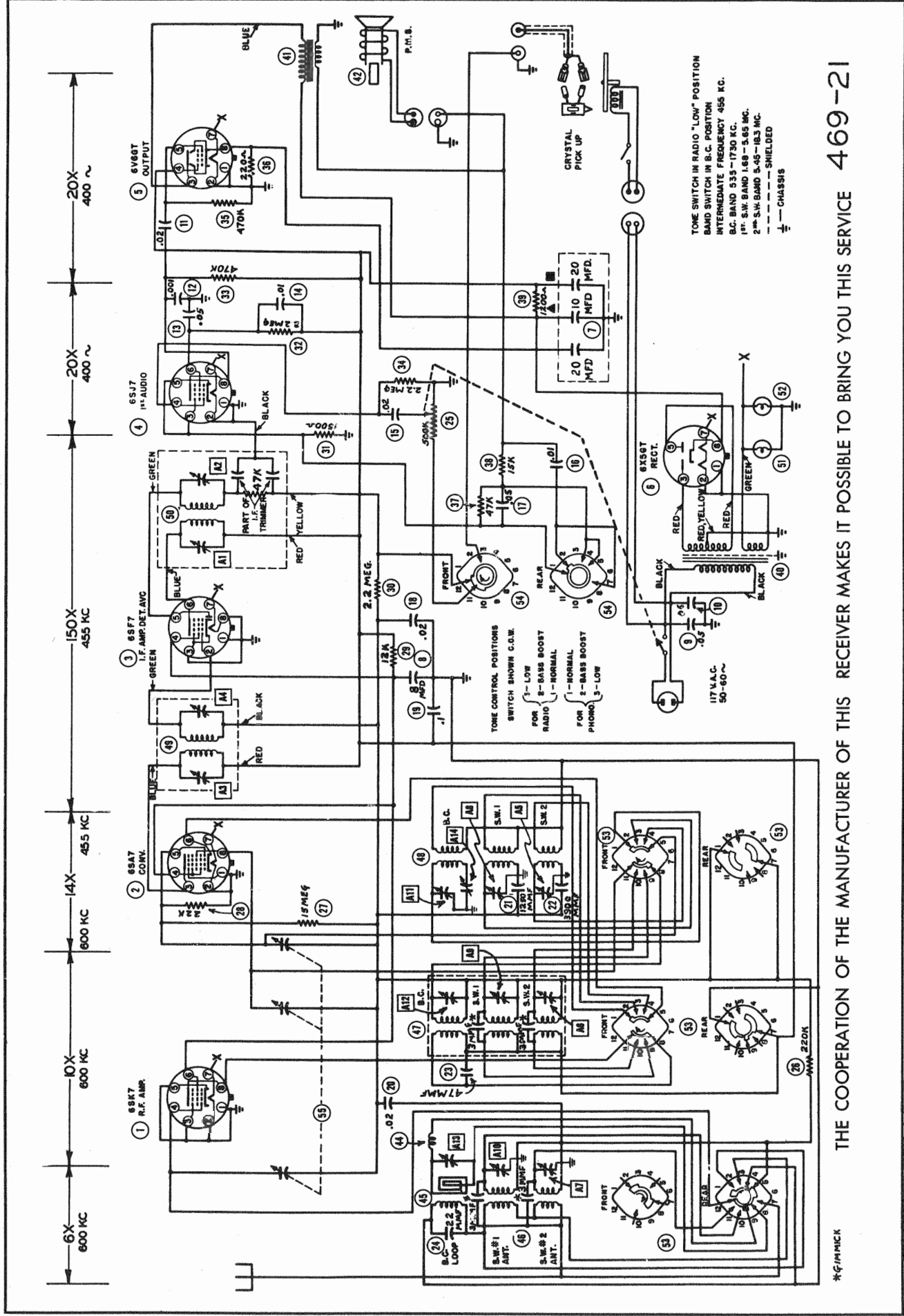
| Item | Tube | Pin 1 | Pin 2 | Pin 3 | Pin 4 | Pin 5 | Pin 6 | Pin 7 | Pin 8 |
|------|-------|-------|-------|-------|----------------|----------------|----------------|-------------|----------------|
| 1 | 6SK7 | OV. | OV. | OV. | 15 MEG. | OV. | 212 K Ω | .2 Ω | 200 K Ω |
| 2 | 6SA7 | OV. | OV. | OV. | 200 K Ω | 212 K Ω | 19 K Ω | .5 Ω | 15 MEG. |
| 3 | 6SF7 | OV. | OV. | OV. | 15 MEG. | OV. | 212 K Ω | 15 MEG. | 200 K Ω |
| 4 | 6SJ7 | OV. | OV. | OV. | 100 Ω | 19 MEG. | 1100 Ω | 24 MEG. | .2 Ω |
| 5 | 6V6GT | OV. | OV. | OV. | 200 K Ω | 200 K Ω | 360 K Ω | INF. | .2 Ω |
| 6 | 6X5GT | OV. | OV. | OV. | 180 Ω | INF. | 190 Ω | INF. | .2 Ω |

RESISTANCE READINGS IN THE B+ CIRCUITS MAY VARY WIDELY
ACCORDING TO THE CONDITION OF THE FILTER CAPACITORS

- DC Voltage measurements are at 20,000 ohms per volt; AC Voltages measured at 1000 ohms per volt.
- Socket connections are shown as bottom views.
- Measured values are from socket pin to 6, common negative.
- Line voltage maintained at 117 volts for voltage readings.
- Nominal tolerance on component values makes possible a variation of $\pm 10\%$ in voltage and resistance readings.
- Volume control at maximum, no signal applied for voltage measurements.



DIAL CORD DRIVE



The stage gain measured values listed above are approximate values for an average operative stage, rather than an absolute value. It should be borne in mind that it is possible to introduce so many variables into the measurement operation, such as, type of equipment used for measuring, handling and placement of probes, the accuracy of alignment, etc., that an absolute reading is impractical. AVC is *in de inoperative* and 3-volt battery bias substituted for measurement.

PARTS LIST AND DESCRIPTIONS

CHASSIS—TOP VIEW

| ITEM No. | USE | REPLACEMENT DATA | | | INSTALLATION NOTES |
|----------|-----------------|--------------------|----------------------|---------------|--------------------|
| | | LEARNADIO PART No. | STANDARD REPLACEMENT | RMA BASE TYPE | |
| 1 | RF Amp. | 6SK7 | 6SK7 | 8N | |
| 2 | Converter | 6SK7 | 6SK7 | 8N | |
| 3 | IF Amp.-De-Mod. | 6SF7 | 6SF7 | 7A2 | |
| 4 | 1st Audio Amp. | 6SJ7 | 6SJ7 | 6N | |
| 5 | Pwr. Output | 6V6GT | 6V6GT | 7AC | |
| 6 | Rectifier | 6X5GT | 6X5GT | 6S | |

CAPACITORS

Capacity values given in the rating column are in mfd. for Electrolytic and Paper Capacitors, and in mmfd. for Mica and Ceramic Capacitors.

| ITEM No. | RATING | REPLACEMENT DATA | | | IDENTIFICATION CODES AND INSTALLATION NOTES |
|----------|--------|--------------------|----------------|------------------|---|
| | | LEARNADIO PART No. | SOLAR PART No. | SPRAGUE PART No. | |
| 7A | 10 | 1B53339 | DY-312 | EL-212 | FP339 |
| B | 20 | | | | |
| C | 25 | | | | |
| 8 | 250 | A5146 | 1-B-250C | FR5250-8 | TC52 |
| 9 | 400 | C5628 | S-4-05 | 454-05 | TP428 |
| 10 | 400 | C5628 | S-4-05 | 454-05 | TP428 |
| 11 | 400 | C5628 | S-4-05 | 454-05 | TP428 |
| 12 | 400 | C5628 | S-4-05 | 454-05 | TP428 |
| 13 | 400 | C5628 | S-4-05 | 454-05 | TP428 |
| 14 | 400 | C5628 | S-4-05 | 454-05 | TP428 |
| 15 | 400 | C5628 | S-4-05 | 454-05 | TP428 |
| 16 | 400 | C5628 | S-4-05 | 454-05 | TP428 |
| 17 | 400 | C5628 | S-4-05 | 454-05 | TP428 |
| 18 | 400 | C5628 | S-4-05 | 454-05 | TP428 |
| 19 | 400 | C5628 | S-4-05 | 454-05 | TP428 |
| 20 | 400 | C5628 | S-4-05 | 454-05 | TP428 |
| 21 | 1250 | 500 A51931 | MO-5-45 | 15M-45 | MC295 |
| 22 | 3000 | 500 A51931 | MO-5-45 | 15M-45 | MC295 |
| 23 | 47 | 500 B56033 | MO-5-45 | 15M-45 | MC295 |
| 24 | 22 | 500 B56033 | MO-5-45 | 15M-45 | MC295 |

CONTROLS

| ITEM No. | RATING | REPLACEMENT DATA | | | INSTALLATION NOTES |
|----------|--------|------------------|--------|--------------------|--------------------|
| | | RESISTANCE | WATTS | CLAROSTAT PART No. | |
| 25A | 500K | 1 | D56340 | MK401 | Volume Control |
| B | 500K | 1 | D56340 | MK401 | Volume Control |
| C | 500K | 1 | D56340 | MK401 | Volume Control |

RESISTORS

| ITEM No. | RATING | REPLACEMENT DATA | | | IDENTIFICATION CODES |
|----------|----------|------------------|-------|--------------------|-------------------------|
| | | RESISTANCE | WATTS | LEARNADIO PART No. | |
| 25 | 250K | 250K | 1/2 | B55485 | Red-Red-V1. AVC Network |
| 26 | 15 Meg. | 15M | 1/2 | B55496 | Br.-Grn.-Blue |
| 27 | 22K | 22K | 1/2 | B55479 | Red-Red-Or. |
| 28 | 12K | 12K | 1/2 | B55492 | Br.-Red-Or. |
| 29 | 2.2 Meg. | 2.2M | 1/2 | B55491 | Br.-Red-Or. |
| 30 | 2.2 Meg. | 2.2M | 1/2 | B55472 | Br.-Red-Or. |
| 31 | 150K | 150K | 1/2 | B55491 | Br.-Red-Or. |
| 32 | 2.2 Meg. | 2.2M | 1/2 | B55487 | Br.-Red-Or. |
| 33 | 470K | 470K | 1/2 | B55491 | Br.-Red-Or. |
| 34 | 2.2 Meg. | 2.2M | 1/2 | B55487 | Br.-Red-Or. |
| 35 | 470K | 470K | 1/2 | B55481 | Br.-Red-Or. |
| 36 | 220K | 220K | 1/2 | B55478 | Br.-Red-Or. |
| 37 | 47K | 47K | 1/2 | B55478 | Br.-Red-Or. |
| 38 | 15K | 15K | 1/2 | B55478 | Br.-Red-Or. |
| 39 | 120K | 120K | 1/2 | B55478 | Br.-Red-Or. |

TRANSFORMER (POWER)

| ITEM No. | RATING | REPLACEMENT DATA | | | INSTALLATION NOTES |
|----------|--|------------------|--------|--------|--|
| | | SEC. 1 | SEC. 2 | SEC. 3 | |
| 40 | 117V AC 520V CT 16.4V A.C. 0-450A 0-072A 0-25A | | | B55942 | * Bend mounting tabs down on one side. |

TRANSFORMER (OUTPUT)

| ITEM No. | RATING | REPLACEMENT DATA | | | INSTALLATION NOTES |
|----------|-----------------|------------------|---------|--------|--------------------------------|
| | | IMPEDANCE | DC RES. | SEC. | |
| 41 | 5000 5-8 225 80 | | | B55941 | * Drill one new mounting hole. |

SPEAKER

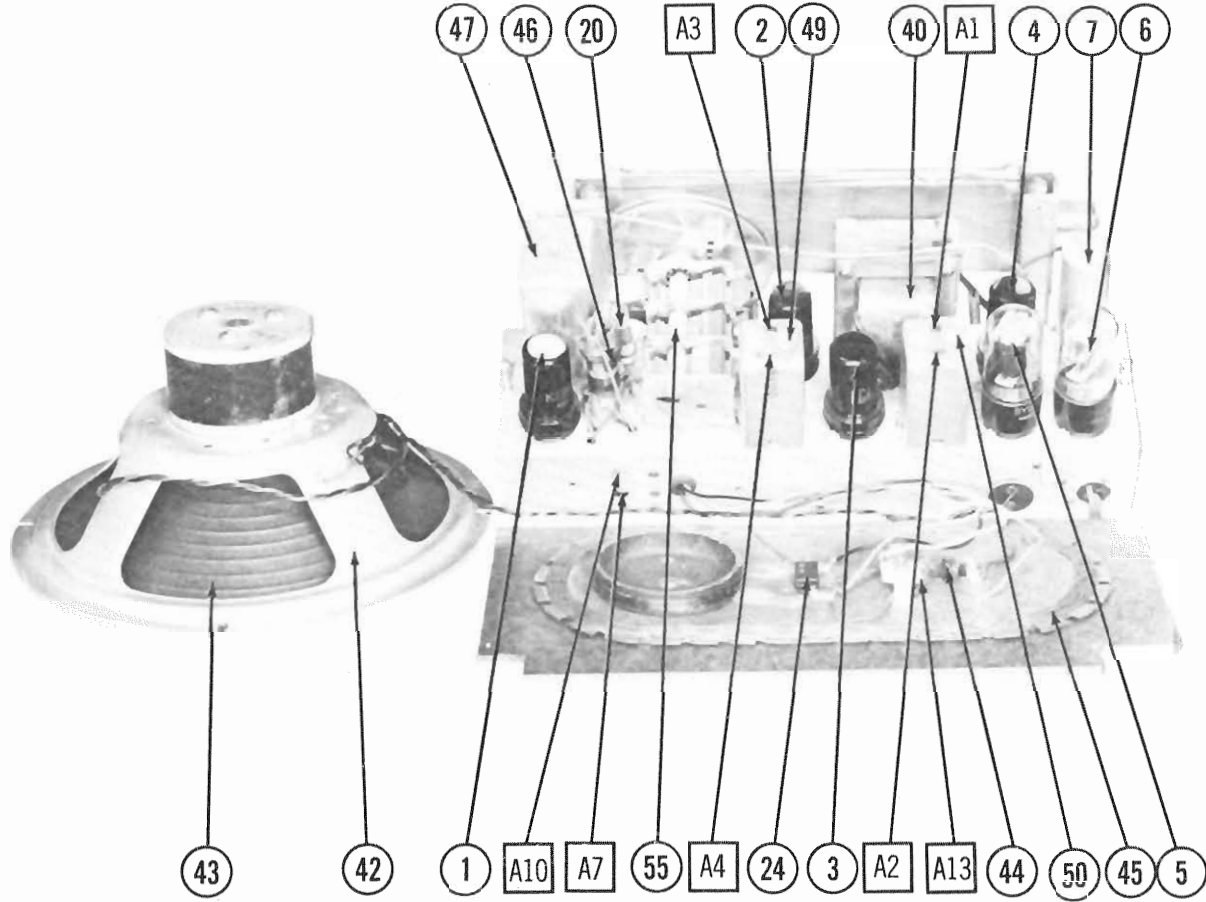
| ITEM No. | USE | REPLACEMENT DATA | | | INSTALLATION NOTES |
|----------|-----|------------------|---------|---------|--------------------|
| | | FIELD | VC IMP. | VC DIA. | |
| 42 | 10" | | | | |
| 43 | 10" | | | | |

R F COILS

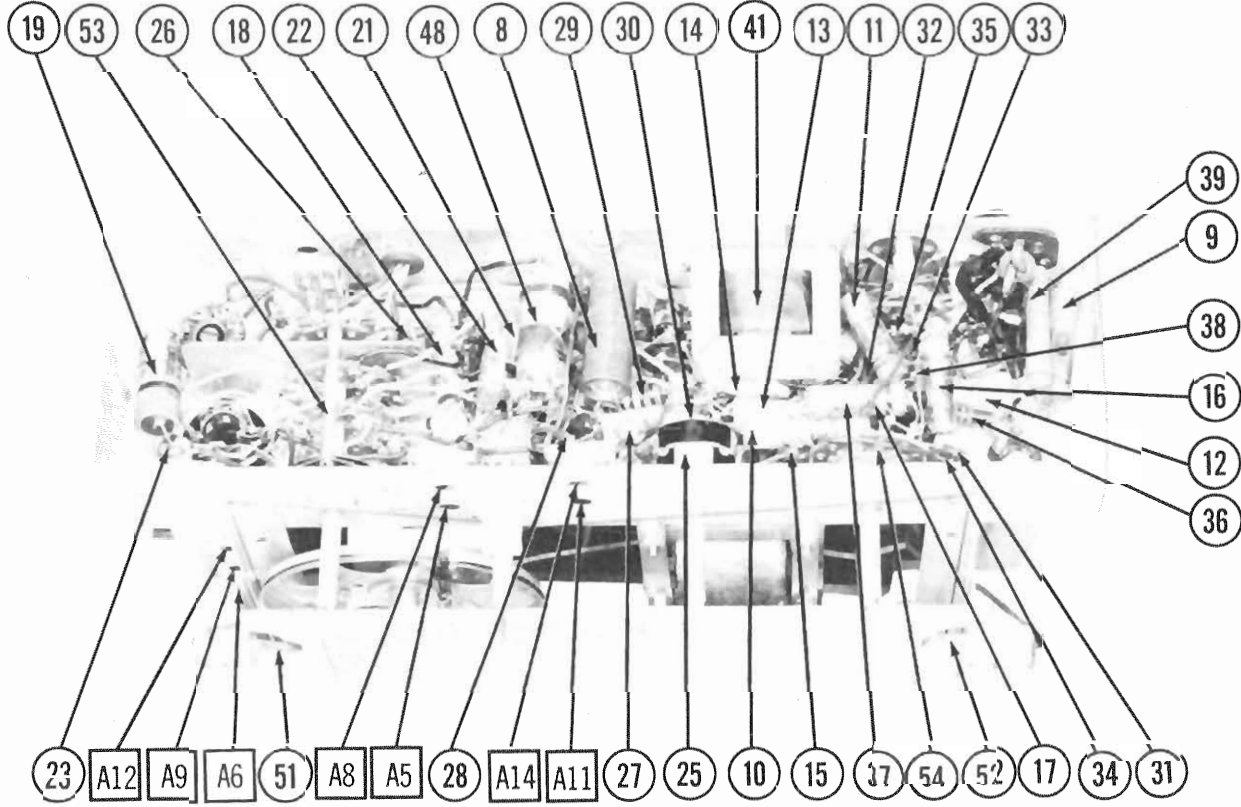
| ITEM No. | USE | REPLACEMENT DATA | | | INSTALLATION NOTES |
|----------|--------------|------------------|------|------|--------------------|
| | | DC RES. | SEC. | SEC. | |
| 44 | Iron Load | 2.8 10 | | | |
| 45 | Ant. Loop | 70 10 | | | |
| 46A | SW Ant. | 10 10 | | | |
| 46B | SW Ant. | 10 10 | | | |
| 47A | RF Coil #1 | 48 10 | | | |
| 47B | RF Coil #2 | 48 10 | | | |
| 47C | RF Coil #3 | 48 10 | | | |
| 48A | Osc. Coil #1 | 48 10 | | | |
| 48B | Osc. Coil #2 | 48 10 | | | |
| 48C | Osc. Coil #3 | 48 10 | | | |
| 49 | Input IF | 18 10 | | | |
| 50 | Output IF | 18 10 | | | |

DIAL LIGHT

| ITEM No. | BASE TYPE | VOLTS | AMPS | REPLACEMENT DATA | | INSTALLATION NOTES |
|----------|-----------|-------|------|------------------|----------------------|--------------------|
| | | | | BEAD COLOR | REPLACEMENT PART No. | |
| 51 | Bayonet | 6-8 | 0.15 | Brown | 70535 | Type 47 |
| 52 | Bayonet | 6-8 | 0.15 | Brown | 70535 | Type 47 |



CHASSIS—BOTTOM VIEW



| | | | |
|----|----------|--------|------------------------------------|
| 26 | 220K | B55485 | Red-Red-Vl. AVC Network |
| 27 | 15 16g. | B55496 | Br.-Grn.-slue Oscillator Grid |
| 28 | 22K | B55479 | Br.-Red-Gr. Screen Dropping |
| 29 | 12K | B55952 | Br.-Red-Gr. AVC Network |
| 30 | 2.2 deg. | B55491 | Br.-Grn.-Red. 1st Cathode |
| 31 | 1500 | B55472 | Br.-Grn.-Red. 1st Cathode Dropping |
| 32 | 2.2 16g. | B55491 | Yl.-Vl.-Gr. " " Grid |
| 33 | 470K | B55487 | Red-Red-Grn. Output Cathode |
| 34 | 2.2 16g. | B55491 | Yl.-Vl.-Gr. Tone Compensation |
| 35 | 470K | B55497 | Br.-Grn.-Red. " " Filter |
| 36 | 220 | B55478 | Br.-Grn.-Red. " " Filter |
| 37 | 15K | B55481 | Br.-Grn.-Red. " " Filter |
| 38 | 1200 | B55480 | Br.-Grn.-Red. " " Filter |



PARTS LIST AND DESCRIPTIONS (Continued)

| ITEM No. | RATING | | | REPLACEMENT DATA | |
|----------|--------------------------------|-------------|--------|---------------------|--|
| | PRI. | SEC. 1 | SEC. 2 | LEAD-RADIO PART No. | THORDARSON PART No. |
| 40 | 117V AC 500V CT 6.4V AC @.450A | 2250 @.072A | 25A | B55642 | T22R31 * |
| | | | | | * bend mounting tabs down on one side. |

TRANSFORMER (OUTPUT)

| ITEM No. | RATING | | | REPLACEMENT DATA | | INSTALLATION NOTES |
|----------|------------|---------|---------|---------------------|---------------------|--------------------------------|
| | IMPEDANCE | DC RES. | DC RES. | LEAD-RADIO PART No. | THORDARSON PART No. | |
| 41 | 35000 5.50 | 2250 | .80 | B55941 | A-3856 + T22R4 + | + Drill one new mounting hole. |

SPEAKER

| ITEM No. | RATINGS | | REPLACEMENT DATA | | INSTALLATION NOTES |
|----------|----------------|----------------|---|-----------------|--------------------|
| | FIELD | VC IMP. | LEAD-RADIO PART No. | JENSEN PART No. | |
| 42 | PM | 5.80 | B53933 | ST-120 | |
| 43 | CONE DIA. 1.0" | VC DIA. 15/16" | NOT READILY REPLACABLE-USE COMPLETE SPEAKER UNIT. | | |

R F COILS

| ITEM No. | USE | DC RES. | | REPLACEMENT DATA | | INSTALLATION NOTES |
|----------|-----------------|---------|------|---------------------|-------------------|---|
| | | PRI. | SEC. | LEAD-RADIO PART No. | MEISSNER PART No. | |
| 44 | Loop Lead | 2.80 | | B55335 | | |
| 45 | SW Ant. Coil #1 | 10 | | B4448 | | Items 46A, 46B wound on same form. |
| 46A | SW Ant. Coil #2 | 2.50 | | B55025 | | |
| 46B | SW Ant. Coil #3 | .20 | | | | |
| 47A | RF Coil #1 | 98 | | B55026 | | Items 47A, 47B, 47C wound on same form. |
| 47B | RF Coil #2 | 30 | | | | |
| 47C | RF Coil #3 | 30 | | | | |
| 48A | Osc. Coil #1 | 1.90 | | B55022 | | Items 48A, 48B, 48C wound on same form. |
| 48B | Osc. Coil #2 | .50 | | | | |
| 48C | Osc. Coil #3 | .50 | | | | |
| 49 | Input IF | 200 | | B53350 | 16-8658 | |
| 50 | Output IF | 10.50 | | 54990 | 16-8670 | |

DIAL LIGHT

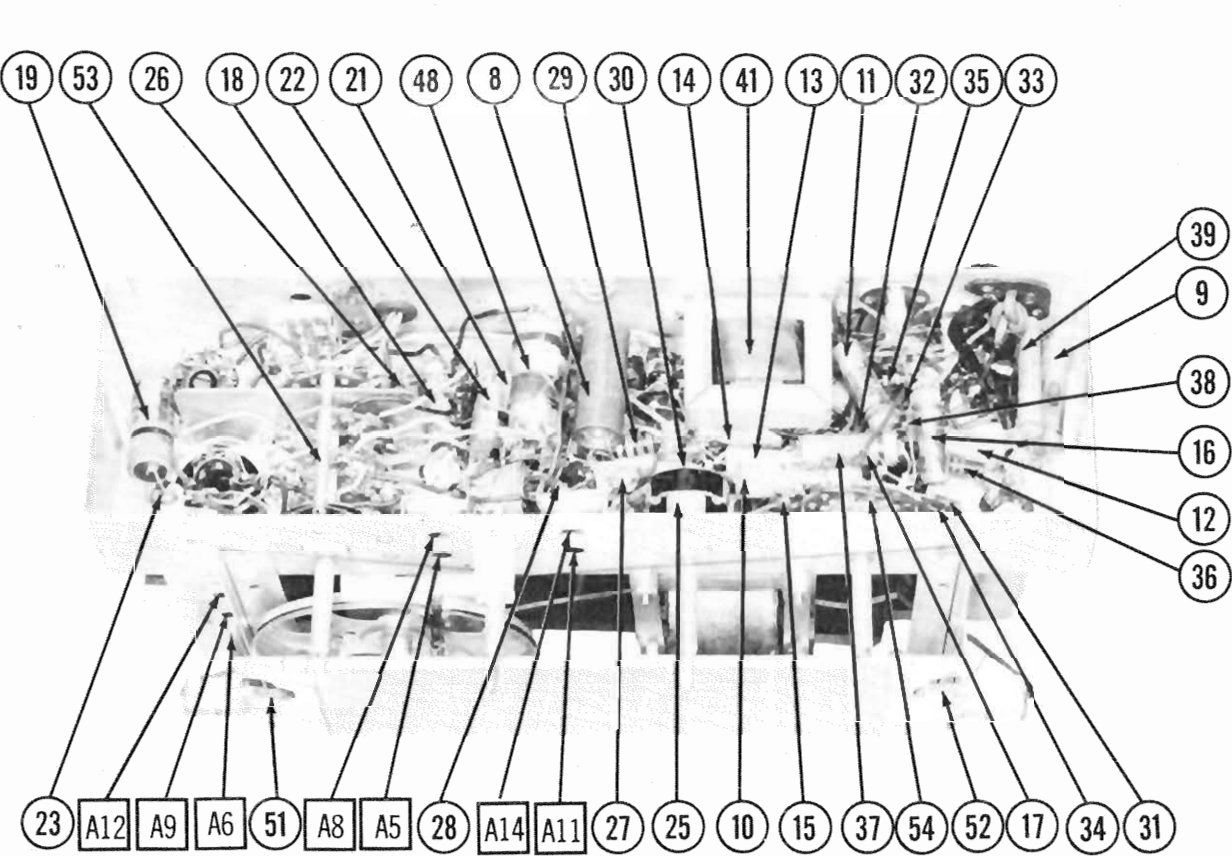
| ITEM No. | BASE TYPE | VOLTS | AMPS. | REPLACEMENT DATA | | INSTALLATION NOTES |
|----------|-----------|-------|-------|------------------|---------------------|--------------------|
| | | | | BEAD COLOR | LEAD-RADIO PART No. | |
| 51 | Bayonet | 6-8 | 0.15 | BROWN | 70555 | Type 47 |
| 52 | Bayonet | 6-8 | 0.15 | BROWN | 70555 | Type 47 |

PARTS LIST AND DESCRIPTIONS (Continued)

MISCELLANEOUS

| ITEM No. | PART NAME | LEAD-RADIO PART No. | NOTES |
|----------|---------------|---------------------|--------------------|
| 53 | Band Switch | B52646 | |
| 54 | Switch | A53940 | Radio-Phono & Tone |
| 55 | Tuning Cap. | B52642 | 3 Gang Variable |
| A5 | (Trimmer Cap. | A52664 | #2 SW Osc. Adj. |
| A6 | (Trimmer Cap. | A52644 | #1 " " " " |
| A9 | (Trimmer Cap. | A52644 | #2 SW RF Adj. |
| A12 | (Trimmer Cap. | A52664 | #1 " " " " |
| A7 | (Trimmer Cap. | A52664 | #2 RF Ant. Adj. |
| A10 | (Trimmer Cap. | A52664 | #1 SW Ant. Adj. |
| A11 | Trimmer Cap. | A52665 | #2 SW Ant. Adj. |
| A14 | Padder Cap. | A52665 | #3 SW Osc. Adj. |
| A13 | Trimmer Cap. | A52696 | #3 SW Ant. Adj. |

CHASSIS—BOTTOM VIEW



DISASSEMBLY INSTRUCTIONS

1. Remove four push-on type control knobs.
 2. Remove screw and clamp holding speaker, phono-pickup and phono-motor cables.
 3. Remove two screws holding loop antenna.
 4. Loosen two bolts holding chassis. Slide chassis out rear.
 5. Remove phono-motor and pickup plugs.
 6. Unsolder phono-motor leads from chassis.
 7. Remove four screws holding speaker. Remove speaker.
- The following instructions must be carefully observed for quick and accurate installation of chassis in cabinet.
1. Loosen drawer stop allowing drawer to slide forward.
 2. Remove wood screws holding top control panel to drawer.
 3. Now proceed to reassemble in the reverse order of the above disassembly instructions.