

REPLACEMENT PARTS

CONDENSERS

| Symbol | Description | Part No. |
|----------|--------------------|----------|
| C15 | .002 mfd. 600 Volt | 64B1-14 |
| C1, C7 | .005 mfd. 600 Volt | 64B1-12 |
| C10 | .01 mfd. 400 Volt | 64B1-25 |
| C5 | .05 mfd. 200 Volt | 64B1-32 |
| C11, C12 | .0001 mfd. | 65B7-17 |
| C2, C6 | .00025 mfd. | 65B7-22 |
| C8 | .0008 mfd. | 64B5-31 |
| C9 | 4. mfd. 150 Volt | 67A4-2 |
| C3, C4 | Dual trimmer | 66A9-1 |
| C13, C16 | .01 mfd. 400 Volt | 64B1-25 |

RESISTORS

| | | |
|---------|----------------------|----------|
| R12 | .75 ohm 1/4 w (wire) | 61A2-1 |
| R11 | 390. ohm 1/4 w | 60B2-301 |
| R13 | 2200 ohm 1/4 w | 60B2-222 |
| R1 | 15,000 ohm 1/2 w | 60B8-153 |
| R4 | 33,000 ohm 1/2 w | 60B8-333 |
| R3 | 220,000 ohm 1/2 w | 60B8-224 |
| R2 | 470,000 ohm 1/4 w | 60B2-474 |
| R9, R10 | 1,000,000 ohm 1/4 w | 60B2-105 |
| R6 | 2,200,000 ohm 1/4 w | 60B2-225 |
| R5, R8 | 4,700,000 ohm 1/4 w | 60B2-475 |

TRANSFORMERS and COILS

| Symbol | Description | Part No. |
|--------|--|----------|
| L1 | Antenna Coil | AC105-1 |
| L2 | Oscillator Coil | AB104-4 |
| L3 | 1st I.F. Transformer | 72B5 |
| L4 | 2nd I.F. Transformer | 72B6 |
| L5 | Choke Coil (RF) | AB103-1 |
| T1 | Output Transformer (specify full speaker part no. including mfg. code when ordering.) | |

MISCELLANEOUS

| Description | Part No. |
|---------------------------------------|----------|
| Background, Dial | 22C5-1 |
| Cabinet, R643-W | 35C25 |
| Cable, Battery (complete with plug) | A1026 |
| Cap. Grid | 90A1-4 |
| Cord, Dial (5" on tuner) | 50A1-1 |
| Cord, Dial (5 1/2" on dial drive) | 50A1-1 |
| Drum and Hub, Tuning | A1035 |
| Escutcheon | 23A8-1 |
| Iron Core, with wire (Osc.) | 71B1-3 |
| Iron Core, with wire (Ant.) | 71B1-4 |
| Knob | A1028 |
| Permeability Tuner Assembly, complete | 33A7-2 |

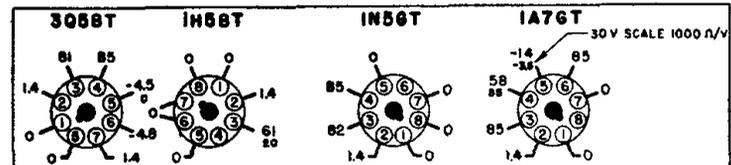
MISCELLANEOUS

| Description | Part No. |
|--|----------|
| Plug, Battery 5 Prong | 88A4-4 |
| Pointer, Dial | 25A9-1 |
| Pulley, Fibre Dial | 17A1-3 |
| Scale, Glass Dial | 21B13 |
| Screw studs (for iron cores) | 27A4 |
| Shield, Tube | 87A8 |
| Shaft, Tuning | 28A11-1 |
| Shaft and pulley (Tuner) | A1040 |
| Socket, octal tube | 87A10-2 |
| Speaker and output Transformer (specify all numbers appearing on Output Trans. as well as speaker when ordering.) | 78B5 |
| Spring, Dial Drum Cord Tension | 19A1-3 |
| Spring, Tuner slide cord tension | 19A1-4 |
| Spring, Tuner slide pressure | 18A1 |
| Spring, Tuner, front bearing takeup | 19A5 |
| Spring, Tuner, back bearing takeup | 19A6 |
| Spring, Hairpin (To hold Ant-Osc. coils) | 19A3-1 |
| Switch, SPST (Economizer) SW2 | 88A1-6 |
| Terminal, Tuner slide cord | 9A8-1 |
| Washer, C | 4A4-1 |
| Washer, spring (shaft) | 4A6-3-0 |
| Washer, spring (coils) | 4A6-5-0 |

VOLTAGE DATA

All readings made between tube socket terminals and chassis. Voltages indicated have been obtained using a Vacuum Tube Voltmeter. A second voltage reading is shown made with a 1000 ohm per voltmeter, when use of this instrument would result in appreciably lower readings. Measured with a fresh battery, volume control full on, dial at the high frequency end, no signal.

VOLTAGE CHART



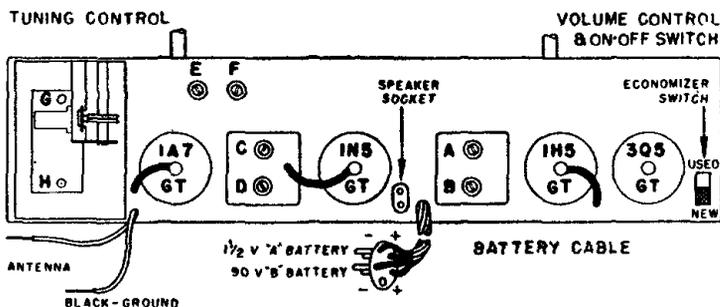
ALIGNMENT PROCEDURE

1. **IMPORTANT**—Check to see that dial pointer reaches each end of dial scale when Station Selector Control is turned from one end to the other.
2. **Volume control**—Maximum for all adjustments.
3. Connect radio chassis to ground post of signal generator with a short heavy lead.
4. Connect output meter across voice coil of speaker.
5. Connect dummy antenna value in series with generator output lead, when needed (see below).
6. Allow chassis and signal generator to "heat up" for several minutes.
7. Use lowest Output setting of Signal Generator capable of producing adequate Output Meter indication and then proceed in the following sequence.

| BAND | SIGNAL GENERATOR | | Connection to Radio | Receiver Dial Setting | Trimmers Adjusted (In Order Shown) | Trimmer Function | Type of Adjustment |
|------------|-------------------|------------------|---------------------|----------------------------|--|--------------------|--------------------------|
| | Frequency Setting | Dummy Antenna | | | | | |
| I.F. | 455 KC. | .1 mfd. | Grid of 1A7 (Cap) | High Frequency end of dial | C-D—2nd I.F. | Output I.F. | Adjust to maximum output |
| I.F. | 455 KC. | .1 mfd. | Grid of 1A7 (Cap) | High Frequency end of dial | A-B—1st I.F. | Input I.F. | Adjust to maximum output |
| Broad-cast | 1630 KC. | .00025 mfd. Mica | Antenna Lead | High Frequency end of dial | E-(See note below) F-(See note below) | Oscillator Antenna | Adjust to maximum output |
| Broad-cast | 1300 KC. | .00025 mfd. Mica | Antenna Lead | 1300 KC. | G H | Oscillator Antenna | Adjust to maximum output |

NOTE: Before adjusting trimmers "E" and "F," make sure that each iron core is $1\frac{1}{8}$ " or more outside of its coil form. If necessary, turn adjustments "G" and "H" to accomplish this.

TUBE AND TRIMMER LOCATION



CIRCUIT

Battery operated 4 Tube Superheterodyne with Single Tuning Range 535 KC. to 1630 KC. Covers standard broadcast band, using antenna and ground. Permeability tuning on Ant. and Osc. circuits. I.F. 455 KC.

POWER SUPPLY

Single unit "AB" battery pack. 90 volt "B" 1½ volt "A." Plug in connection. Use Ensign AB48, Burgess 17G-D60, Eveready 748, General 60DL-11L, Ray-O-Vac AB-82, or Bond 0528 Battery or Equivalent.

ECONOMIZER SWITCH

The battery economizer switch is located on the top of the chassis, right side.

Always have this Economizer Switch in the "NEW" battery position when first placing radio in operation or when installing a new battery.

STRINGING DIAGRAM

