### Atwater Kent 60

The first or early type of Model 60 —*see A-K page 3-29 in Rider's Volume III and page 167 in the Rider-Combination Manual*—has a single volume control and the second or late type—*see A-K page 3-31 in Rider's Volume III and page 169 in the Rider Combination Manual*—has a dual volume control made up of combined wire-wound and carbon resistors.

*First or Early Type:*

When replacing the bleeder resistor, use No. 16295 wire-wound resistor, 4000 ohms. When replacing the first r-f. bias resistor, use No. 16253 wire-wound resistor, 1500 ohms and replace the r-f. bias resistor with No. 16988, 160 ohms.

*Second or Late Type:*

The bleeder resistor No. 1 was made in two types. The first type, No. 16905, consists of two 3000-ohm wire-wound resistors riveted together and connected in series. The second type, No. 17041, is a single 6000-ohm wire-wound resistor with a tap at the center. Use No. 17041 for servicing.

In early production of the second type Model 60, bleeder resistor No. 2 was wound on the same fibre base as the first r-f. bias resistor, the part number of the combined unit being No. 16872. If either section of this combined unit is defective, remove the unit and use a No. 16253 (1500 ohms) as r-f. bias, and a No. 15660 (1050 ohms) as bleeder No. 2. Later production of the second type Model 60 used a separate No. 15660 resistor as bleeder No. 2.

In early production of the second type Model 60, the first r-f. bias resistor was wound on the same fibre base as bleeder resistor No. 2, the number of the combined unit being No. 16872. If either section of this unit is defective, remove the unit and use a No. 16253 as a first r-f. bias resistor and a No. 15660 as bleeder No. 2. Later production of the second type Model 60 used a separate No. 16253 as first r-f. bias resistor.

Use a No. 16988 resistor (160 ohms) for replacement of the r-f. bias resistor.

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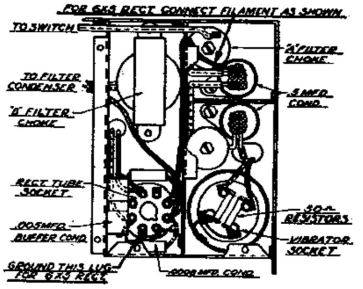
### Motorola Golden Voice

We have been advised by the manufacturer that intermittent operation of their Motorola Golden Voice models, is due to low battery voltage delivered to the set from the car's battery. Check all connections between the car battery and the radio set to avoid undue voltage drop in the car wiring, as the OZ-4 rectifier tube will fail to start and fail to operate on a battery voltage of less than 5½ volts.

The OZ-4 tube requires 15 milliamperes or more of drain to produce ionization and proper rectification in this tube, and on battery voltages of less than 5½ volts the plate current drain of the receiver is insufficient to provide the 15 milliamperes starting current. Should the car wiring and the condition of the car battery indicate that at times the voltage may fall below 5½ volts, replace the OZ-4 rectifier tube with a 6X5 metal filament type rectifier.

With the exception of a few Golden Voice sets the filament contacts of the rectifier socket have been wired at the factory and the 6X5 rectifier may be plugged in the socket in place of the OZ-4. This will completely eliminate the difficulty due to low battery voltage.

On those Golden Voice sets not having the filament contacts of the rectifier socket wired, this wiring can be inserted by inverting the chassis and removing the cover from the hash compartment and connecting the filament contacts of the rectifier socket, as shown in the accompanying sketch. One contact to ground as indicated by




Connections when using a 6X5 in Motorola Golden Voice set

the heavy arrow at the bottom of the socket and the other contact to the .5 mfd. condenser as indicated by heavy arrow at the top of the sketch. When replacing cover be sure that all screws are tight.

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### Federal Model K

Below will be found the voltage data for this receiver, the schematic of which appears on the following pages in *Rider's Manuals: 1-21 in the revised edition; *284 in the early edition, and 987 in the Rider-Combination Manual.*

| Tube | Function | Plate to Frame | Grid to Cathode | Scr. Grid to Frame |
|---|---|---|---|---|
| 227 | 1st R.F. | 120 | 7.5 | — |
| 224 | 2nd R.F. | 110 | 1.5 | 60 |
| 227 | Det. | 65 | 0-1 | — |
| 227 | 1st A.F. | 135 | 7.5 | — |
| 171A | P.P.O.P. | 205 | 40 | — |

### Emerson 108, 110

The changes listed below have been made in Chassis U5A, on models bearing serial numbers above 758,100. The schematic for models 108 and 110 appeared on *Emerson page 6-17 of Rider's Volume VI.*

Resistor, R-9, changed from 500,000 ohms, Part No. KR-56, to 50,000 ohms, Part No. KR-53. Resistor, R-11, changed from 500,000 ohms to 200,000 ohms, Part No. LR-61. Resistor, R-12, changed from 500,000 ohms to 100,000 ohms, Part No. KR-54. Condenser, C-13, changed from 0.01 mf., Part No. CCC-127, to 0.02 mf., 200 volts, Part No. FC-29. Condenser, C-14, from 0.1 mf. to 0.9 mf., 200 volts, Part No. BBC-131.

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### Sparton I-F. Peaks

The following receivers manufactured by Sparks Withington have an i-f. peak of 172.5 kc.:

Models 9-X, 13, 14-A, 15-X, 16-AW, 17, 25-X, 27-X, 28, 30-A, 33, 34, 35, 36, 111-X, 620-X, 750-A, 750-X, 870-A, 870-X.

The following Sparton models have an i-f. peak of 456 kc.: 71, 71-B, 81, 82, 333.

Model 60 has an i-f. peak of 900 kc.

*Note:* The s-w. converter in Model 16-AW operates on an intermediate frequency of 900 kc.

It is suggested that you write these i-f. peaks on the schematics for these models in your Rider Manuals.

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### Atwater Kent 55 and 60

If the first a-f. bleeder resistor is defective in either of these models, replace with a No. 15660 resistor (1050 ohms).

When either the yellow (No. 15544) or the maroon (No. 15545) second a-f. bias resistor requires replacing, do not use a new yellow or maroon resistor, but follow the procedure found below.

Remove both the yellow and maroon resistors and replace the yellow one with a white resistor (No. 16724), 40,000 ohms, 1 watt, and the maroon resistor with a black (No. 15592), 65,000 ohms, 1 watt.

These changes affect only the second a-f. bias resistors in Models 55, 55C, 60 and 60C.

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### Garod I-F. Peaks

The i-f. peak of the receivers of this manufacturer, that are shown in *Volume VI of Rider's Manuals*, is 456 kc.