

General Household Utilities Co.

Model: 861

Chassis:

Year: Pre November 1935

Power:

Circuit:

IF:

Tubes:

Bands:

Resources

Riders Volume 6 - GRUNOW 6-19

Riders Volume 6 - GRUNOW 6-20

Riders Volume 6 - GRUNOW 6-21

Riders Volume 6 - GRUNOW 6-22

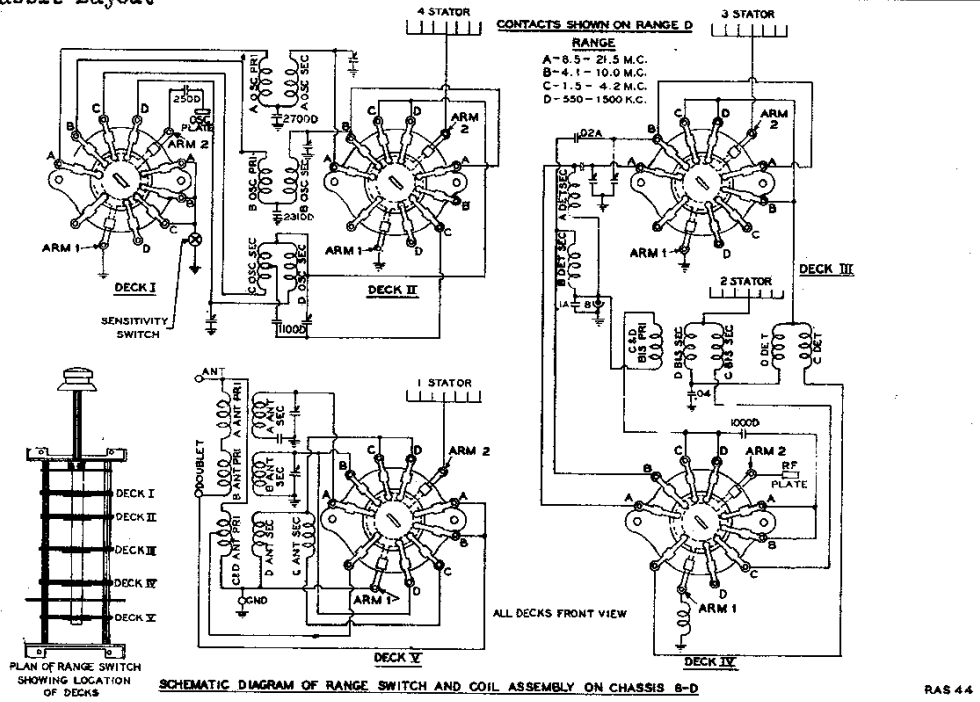
MODEL 861

Chassis 8D

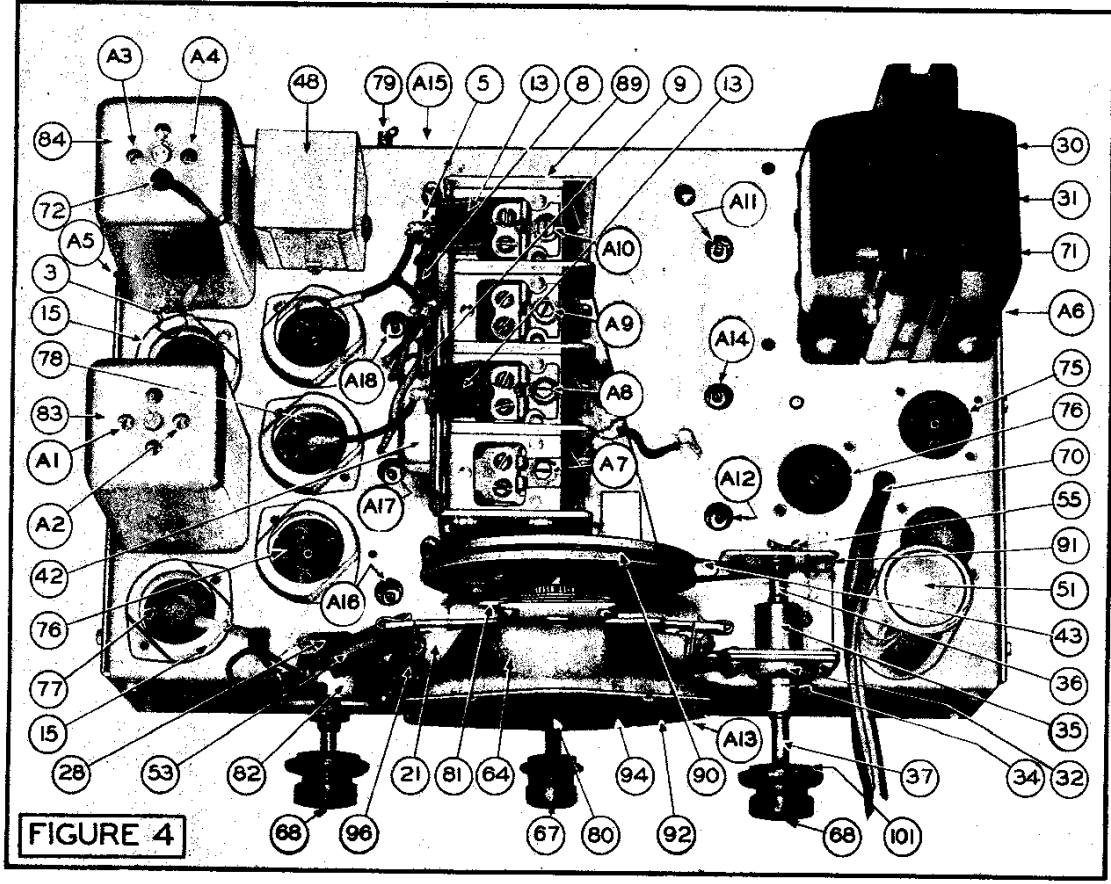
GENERAL HOUSEHOLD UTILITIES CO.

Switch & Coil Assembly
Trimmers, Chassis Layout

FIGURE 3



RAS 44



SERVICE DATA

January, 1935
Service Notes and Parts List

Grunow Radio

CHASSIS TYPE 8D

Receiver Model
861
Speaker Model
10A9

GENERAL HOUSEHOLD UTILITIES COMPANY

RADIO SERVICE DEPT.

CHICAGO, U. S. A.

31587-1

Chassis 8D —115 volt 50-60 cycle

Chassis 8DX—115 volt 25-50 cycle

Power Consumption 75 watts.

Chassis 8DZ { 110—135—220—250 volt
50-60 cycle

Tubes—2, 6D6, 1-6A7, 1-75, 1-42, 2-76, 1-80

INTRODUCTION

The following characteristics apply to the Grunow Radio—Chassis Type 8D:

This model is an 8 tube Super-Heterodyne All Wave (550 to 21,000 KC.) Receiver, using 1-6D6 tube as an R. F. Amplifier, 1-6A7 tube as a 1st Detector or mixer—Being electronically tuned to a 76 Oscillator tube, 1-806 tube as a 1st I.F. amplifier with the 1st I.F. Transformer tuned to the Bi-Selector type and both 1st and 2nd detectors tuned to 455 K. C. A 75 tube double diode high mu-triodes is used as a detector, delayed automatic Volume Control (AVC) and a high gain audio amplifier. The 42 output tube receives its bias through the voltage drop produced in the tapped speaker field. A 76 tube is used as a signal booster or beat oscillator. Plate voltage to the signal Beacon being applied by closing the switch on the tone control. The rectifier tube is an 80, the output of which is well filtered through the choke and electrolytic condensers.

The broadcast section of the receiver consists of the following 4 variable tuned circuits: R.F. input, bi-selector, mixed input and oscillator. These circuits are tuned with a 4-gang variable condenser of rugged construction.

The short wave section of the receiver consists of 3 variable tuned circuits, the bi-selector being

The Chassis frame is built in such a way that the end plates may be disconnected, allowing easy inspection of the underside of the Chassis assembly. (Fig. 6.)

The range switch and coil assembly is made up in a unit and may be removed for inspection or repair. (Fig. 7.) The removal of this assembly necessitates the unsoldering of 14 wire leads. These leads and the position to which they are connected are marked on the illustrations with letters. The leads A-B-C on the Coil Assembly (Fig. 7) are attached to the points marked A-B-C on the Chassis Assembly (Fig. 5). The leads marked D-E-F-G on the Coil Assembly (Fig. 7) are attached to the points of corresponding letters on the Chassis Assembly (Fig. 6). Leads H, I, J, K, L, M on Coil Assembly are connected as follows:

Lead "H" connects the ground side of the short wave antenna transformer (Red) to the rotor ground of the variable condenser.

Lead "I" connects Arm 2 of Deck 5 to the No. 1 stator of the variable condenser.

Lead "J" is the shielded lead connecting the bi-selector transformer to the No. 2 stator of the variable condenser.

Lead "K" connects Arm 2 of Deck 3 to the No. 3 stator of the variable condenser.

Lead "L" connects the switch assembly ground to the variable condenser rotor ground.

Lead "M" connects Arm 2 of Deck 2 with No. 4 stator of the variable condenser.

Care should be exercised in making these connections. (A soldering iron with a bent point should be used in this operation.)

Lead "N" connects contacts A-B-C of Arm 1 on Deck 1 to the sensitivity control switch and the 250-Ohm bias resistor.

Lead "P" connects the plate of the signal Beacon to an insulator, acting as a pick-up lead.

Continuity and Voltage

Continuity and voltage readings should be taken from the underside of the Chassis. The values given on the schematic diagram are average and allow the service man to make a quick check of the Chassis Constants. The socket layouts given on the schematic diagram show each socket from the underside.

GENERAL HOUSEHOLD UTILITIES CO.

MODEL 861
Chassis 8D
Circuit Data
Socket Layout

The Range Switch

In servicing the 8D Receiver consider the radio frequency end as four different and distinct radios: One working from 550 to 1500 K.C. (D Range) One working from 1500 to 4200 K.C. (C Range) One working from 4100 to 10000 K.C. (B Range) One working from 8500 to 21500 K.C. (A Range)

These four radios are put into operation as desired by means of the Range Switch.

When on position "A", the short wave coils covering the range from 8,500 to 21,500 K.C. are connected into the three tuned circuits of the receiver; one coil as an R.F. Transformer, one as the Detector Coupler, and one as the Oscillator Transformer.

On position "B" the 4100 to 10,000 K.C. coils are put into operation.

On position "C", the 1500 to 4200 K.C. coils are shunted across the 550 to 1500 K.C. coils in such a manner as to lower the total inductance of the combined coils and reduce the losses caused by the open end coils.

On both the "C" and "D" positions, four coil sets are put into the circuit and the receiver operates as a four-tuned circuit radio. On all four ranges the receiver works at maximum sensitivity and selectivity. All coils and condensers are of such construction that atmospheric and temperature changes have minimum effect.

Each circuit is completely shielded from each other, and the complete range switch and coil assembly may be removed for inspection or repair.

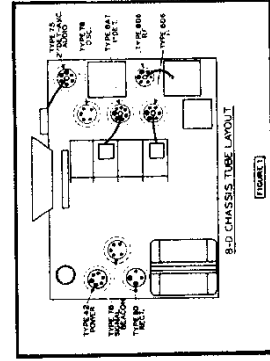


Fig. 1

