

JACKSON-BELL CO., INC.

MODEL 60
 MODEL 62
 2nd & 3rd Series
 MODEL 68
 Alignment, Voltage

VOLTAGE AND CURRENT VALUES - MODEL 60 RECEIVERS

The following values are correct with 1000 ohm speaker field and 110 volts A.C. on the line, or 125 volts on the line when power transformer is thus connected. With volume control at half way position the following voltages should be indicated from ground:

- To 280 filaments, 240 volts
- To low side of choke, 180 "
- To detector screen grid, 26 to 32 volts
- To 171 filaments, 30 volts
- To R.F. Filaments, 10 to 15 volts

As volume control is rotated from maximum to minimum the following values of plate current should be read within 20%:

- R.F. .00025 to .005 amperes as volume control is rotated from minimum to maximum.
- Detector 80 to 100 micro amperes.
- First audio .002 amperes.
- Second audio .017 to .020 amperes.

CONTINUITY TESTS

The following resistance values should be observed when making continuity tests without removing the chassis from the cabinet:

- R.F. Grid to ground, 800 ohms.
- R.F. Plate to ground, 23000 "
- R.F. Filament to ground, 1100 to 5200 ohms as volume control is shifted from maximum to minimum
- Detector grid to ground, 1 ohm
- Detector screen grid to ground, 3000 "
- Detector cathode to ground, 20000 "
- Detector filament to ground, 0
- First audio grid to ground, 2 meg
- First audio filament to ground, 5000 ohms
- First audio plate to ground, 43000 "
- Second audio grid to ground, 1500 "
- Second audio filament to ground, 750 "
- Second audio plate to ground, 23000 "

COILS:

Effective immediately, specifications of the radio frequency transformers used in the Model 60 receiver are changed to the following:-

- Primaries, 16 turns
- Secondaries, 81 "
- Circuit inductance,240 microhenries

The overall gain throughout the radio frequency amplifier with the new coils is approximately 300% greater than with the old ones. The substantial increase of sensitivity should, therefore, be observed.

When orders for replacement coils are filled they will always be in complete sets of three and of new type.

GRID SUPPRESSORS

The grid suppressor and circuit print of this receiver show 2 - 800 ohm grid suppressors. The second one remains 800.

FILTER SYSTEM:

Specifications of this receiver call for 2 - 8 microfarad electrolytic condensers in the filter. At times when the factory has been unable to obtain these electrolytic condensers it has been necessary to substitute paper condensers and an additional filter choke. The value of the units in the paper condenser block is as follows:

When the block is fastened in the chassis and the chassis is viewed in an inverted position, the bottom terminal is five microfarads, the center terminal one microfarad and the top terminal two microfarads. Only a limited number of these have been installed and regular production will continue to contain the electrolytic condensers.

MODEL 62

2nd & 3rd Series

SERVICE NOTES

FOR SERIAL NO. 120,000 AND UP

If it should become necessary to resonate the radio frequency circuit, proceed as follows:-

Set the dial at about 20 degrees and set all coupling condensers at approximately one full turn to the left of the maximum capacity adjustment. With a grid dip oscillator, check all circuits for resonance, making connection to the caps on top of the screen grid tubes. The tubes should be cold when this is done. If it is necessary to move any of the coupling condensers more than one-half turn in order to obtain resonance, adjustment of capacity in that particular stage should be made by bonding the split rotor plate of the variable condenser. This does not apply to the antenna stage where the condenser on the coil does not affect coupling. When resonance has been obtained at this point, the dial should be shifted to 90, and all stages again checked with a grid dip meter. Here all capacity adjustments must be made by bending plates, being careful not to disturb the position of that portion of the split plate which was active when the first adjustment was made.

VOLTAGE AND CURRENT VALUES

With the volume control at maximum, the following readings should be obtained, with an allowable variation of 10%:-

- R.F. Plate voltage, 160
- R.F. Screen Grid Voltage, 75
- R.F. Grid Bias, 2.5
- R.F. Plate current, 2.5M
- 245 Plate Voltage, 225
- 245 Plate current, 30
- 245 Bias, 50 V.
- Detector Screen Grid Voltage, 50 "
- Detector Bias, 5 "
- Detector Plate Current,2 M (No signal in Receiver)
- Detector Plate Voltage, 100*

*This reading will be obtained with a 500,000 ohm volt-meter as found in a Jewell 189 test set. This reading is subject to considerable variation with meters of various resistances, as the voltage at this point is measured through a 500,000 ohm resistor. The voltage at the opposite end of the resistor should be 250.

MODEL 68

If it should become necessary to resonate the radio frequency circuit, proceed as follows:

Set the dial at about 20 degrees and set all coupling condensers at approximately one full turn to the left of the maximum capacity adjustment. With the grid dip oscillator, check all circuits for resonance, making connection to the caps on top of the screen grid tubes. The tubes should be cold when this is done. If it is necessary to move any of the coupling condensers more than one-half turn in order to obtain resonance, adjustment of capacity in that particular stage should be made by bending the split rotor plate of the variable condenser. This does not apply to the antenna stage where the variable condenser on the coil does not affect coupling. When resonance has been obtained at this point, the dial should be shifted to 90 and all stages again checked with the grid dip meter. Here all capacity adjustments must be made by bending plates, being careful not to disturb the position of that portion of the split plate which was active when the first adjustment was made.