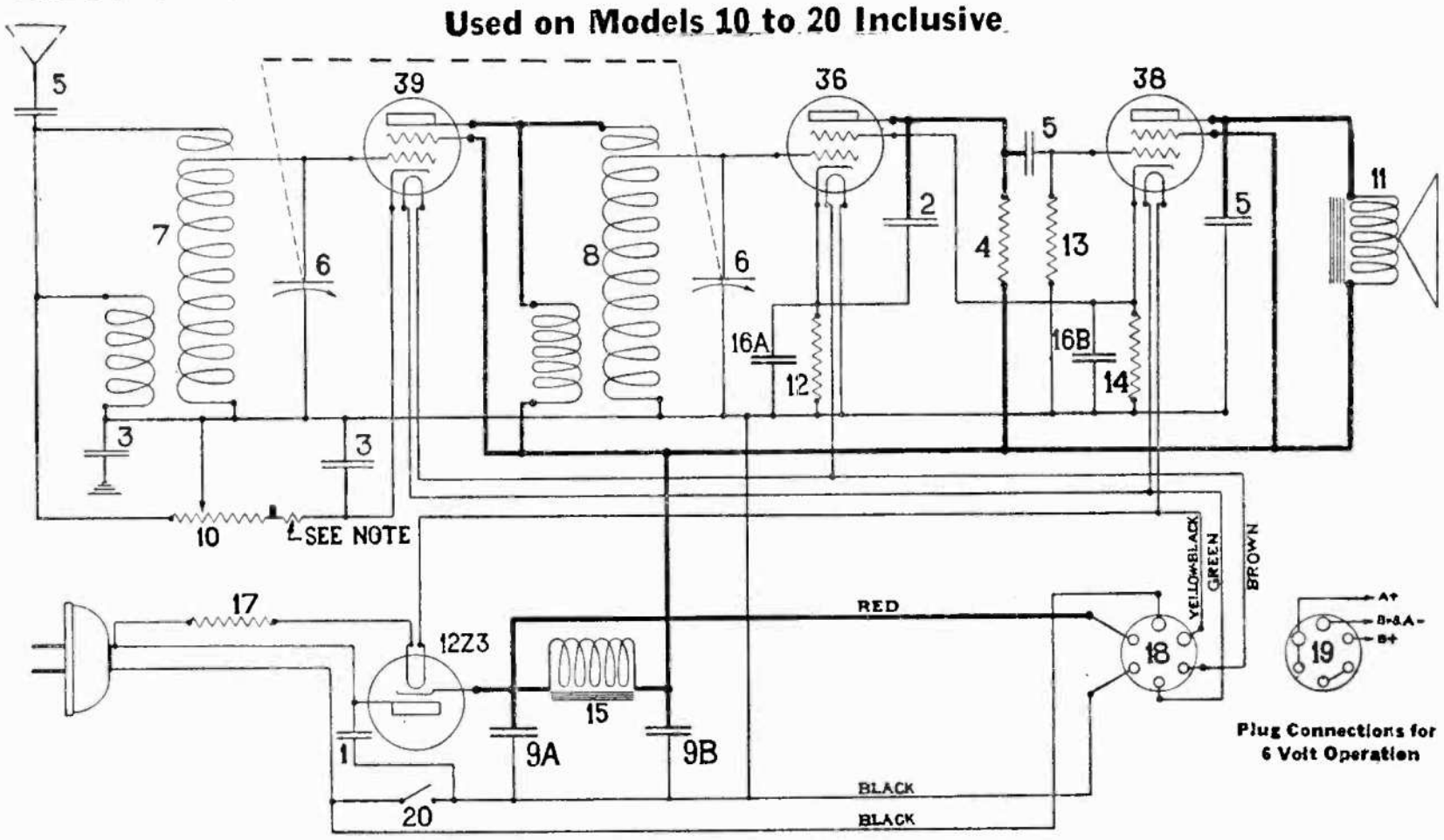
MODEL 108, 108-X
(Models 10 to 20 inc.)

STEWART - WARNER CORP.

# Circuit Data for Stewart-Warner Chassis Series 108 and 108-X

**Used on Models 10 to 20 Inclusive**




**NOTE: In some receivers, a 140 ohm, ¼ watt carbon resistor, part 81646 is connected in series with the volume control; in other sets this resistor is built into the volume control.**

LINE VOLTAGE 115 VOLTS A. C. ★ **Voltage Table** ★ VOLUME CONTROL FULL ON

| Type of Tube | Tube Circuit | Filament to Condenser | Plate to Condenser | Screen Grid to Condenser | Cathode to Condenser |
|---|---|---|---|---|---|
| 39 | R. F. | ** (See Note) | 107 | 107 | 1.5 |
| 36 | Det. | ** (See Note) | 1.3‡ | 9 | 1.3 |
| 38 | Output | ** (See Note) | 103 | 107 | 9 |
| 12Z3 | Rect. | ** (See Note) | ... | .... | 122 |

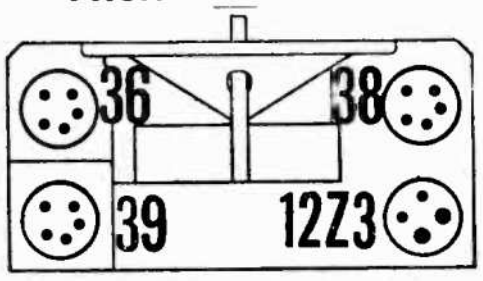
IMPORTANT NOTE

★These voltages will be obtained when the set is operated at 115 volts, 60 cycles A. C. For D. C. operation, voltages will be somewhat lower. All voltage readings have been taken between tube prongs and the variable condenser frame, *not the chassis*. The chassis cannot be used in this receiver as a reference point for voltage readings.

**Filament voltage readings will vary widely, depending upon the resistance of the A. C. voltmeter. With high resistance rectifier type meters, voltage readings will be approximately 6.3 for the detector and amplifier tubes, and 12.6 for the 12Z3 rectifier. With ordinary A. C. Voltmeters, readings will be very much less.

‡This reading is obtained with a 30-volt scale, one thousand ohms per volt instrument. Higher resistance meters or higher scale readings will give greater voltage readings.

**FRONT OF CHASSIS**




## PARTS LIST

| Diag. No. | Part No. | Description |
|---|---|---|
| 1 | 67298 | .01 mfd. 600 V cartridge condenser |
| 2 | 81158 | .0001 mfd. mica condenser |
| 3 | 81630 | .1 mfd. 100 V cartridge condenser |
| 4 | 81644 | 2.1 meg. ¼ W. carbon resistor |
| | 81646 | 140 ohm ¼ W. carbon resistor |
| 5 | 81657 | .003 mfd. mica condenser |
| 6 | 81662 | Variable condenser |
| 7 | 81664 | Antenna Coil |
| 8 | 81666 | Detector Coil |
| 9A, 9B | 81678 | 4 mfd. 150 V dry electrolytic condensers (in one unit) |
| 10 | 81679 | 250,000 ohm volume control and switch |
| 11 | 81680 | Speaker |
| 12 | 81681 | 29,000 ohm ¼ W. carbon resistor |
| 13 | 81682 | 1.1 meg. ¼ W. carbon resistor |
| 14 | 81683 | 1600 ohm ½ W. carbon resistor |
| 15 | 81694 | Filter choke |
| 16A, 16B | 81698 | 5 mfd. 20 V dry electrolytic condensers (in one unit) |
| 17 | 81785 | Power cord assembly |
| 18 | 81834 | Battery cable socket |
| 19 | 81861 | 6 volt battery cable |
| | 81863 | 12 volt battery cable |
| | 81865 | 32 volt battery cable |
| 20 | ..... | Switch on back of 81679 |

USING MODEL 108-X IN AUTOMOBILE

Two #81884 brackets and a #81861 6-volt adaptor cable are needed. The plug at the cable's end fits the socket at the rear of set. Clip the yellow A lead to the positive terminal of storage battery and the yellow-black wire labeled -A to the negative terminal of battery. Connect these leads to battery terminals instead of ammeter or other convenient connection points.

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