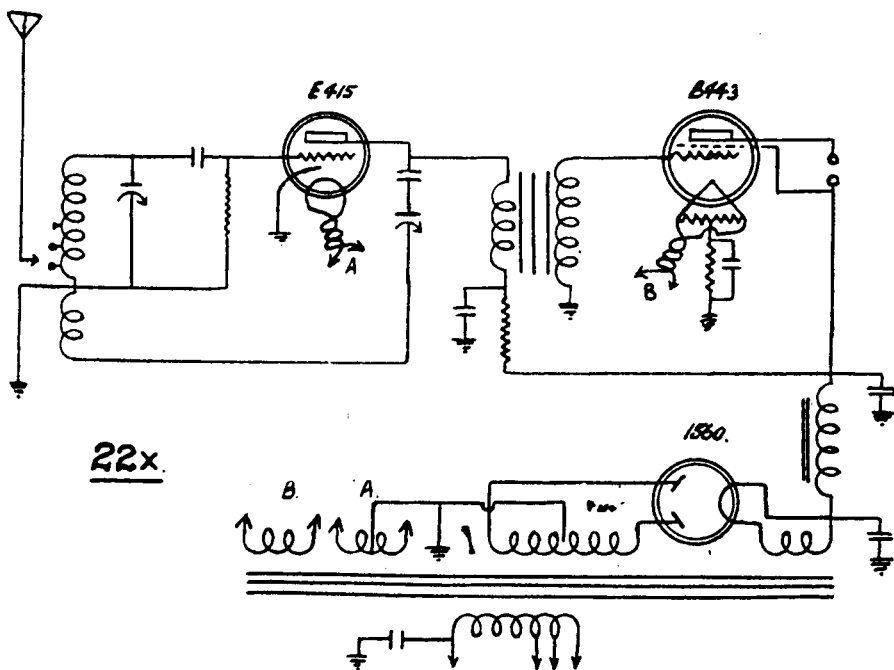


# THE STROMBERG-CARLSON 22X

## Details For the Service Mechanic



We reproduce herewith circuit diagram and details of the new Stromberg-Carlson 22X model for the benefit of the service mechanic and all those engaged in the radio industry. From time to time "Wireless Weekly" has arranged to give its professional readers first-hand information from the factories of the manufacturers.

FOR the Service man this week we present the circuit of a typical Stromberg-Carlson receiver, together with a few hints on the servicing of the set. The model 22X, as it is known, is one of the latest models of the Stromberg-Carlson line, and has achieved great popularity. As will be seen, the circuit is a simple and straightforward one, but incorporating one or two features which are quite ingenious and most effective. The fixed condenser in series with the reaction condenser gives smooth reaction, a most desirable feature in this class of set. There is little likely to give trouble in a Stromberg-Carlson, but when such trouble arises we strongly advise owners to take the set direct to the nearest Stromberg-Carlson dealer or distributor. These authorized dealers are in close touch with the factory, and are all particularly keen that owners receive service and satisfaction. They are in a much better position to handle the job than any ordinary mechanics, who may not be acquainted with this particular job. However, it is not a bad plan to cut out this circuit and keep it handy, or, better still, paste it inside the lid of the set, so that should you at any time be forced to take the set to a mechanic who has not previously handled this type of set, he will be able to get the idea of the circuit from the diagram.

### THE EARTH LEAD

AN important point is the earth lead. This should be as short and low as possible, and must make good contact to a water-pipe or other suitable earth connection. If the earth lead is long, or runs high up, it has a chance of affecting the selectivity of the set. If it should run close to lighting or power mains it can cause a hum in the speaker.

### LINE VOLTAGE

THE power transformers of all models are equipped with different tapings for the primary, so that the sets are suitable for operation with all line

voltages from 220 to 250 volts. In every case the tapping higher than the normal voltage should be used. It is far safer to run the valves underload than overload. If the line voltage is under 220 volts the special power transformer for this voltage should be specified. The power pack of the model 22X is not designed to supply the additional load of the field of a d.c. type dynamic speaker, but all other models have ample current available for this purpose. Should it be desired to use a dynamic speaker with the model 22X a rectifier type of speaker must be used.

### THE POWER PLUG

WHEN fitting the adaptor into the lighting socket or power point, it is advisable to try the set with the

plug fitted in both ways. It is possible that a slight difference in the hum level may be noticed.

### THE VOLTAGES

A CHECK-UP of the voltages when the set is operating correctly should read somewhere about the following figures: Detector and audio filaments, 3.75 to 4 volts a.c. Detector plate, 65 to 75 volts at 4 to 6 ma. d.c. Output valve plate, 165 to 175 volts at 8 to 12 mills., d.c. The reading from the centre tap of the filament of this valve to earth when read with a high-resistance meter should be 18 to 20 volts.

### FAULTS

THESE models are of simple and strong construction, with a low current consumption, so that the possible service troubles are reduced to a minimum, and this statement has been proved by the negligible number of service troubles reported on the previous Model 22.

The following are possible faults in this model:—

#### No Reaction:

Examine Midget Variable to see that plates are not shorted. Test reaction coil for open circuit.

#### No Voltage:

(a) Detector Plate. Examine joints on Resistance R. 2.

(b) Audio Plate. Open circuit Filter Choke or open circuit Speaker.

#### High Plate Current:

Audio Valve. Check R. 1 Bias Resistance, and C. 3 Bias Condenser.

#### All Voltages Low:

Test Rectifier Tube for emission loss. Check Filter Condensers for NOISE. Check all earth connections to chassis, and test R. 3 Grid Leak.

#### Replacement Parts:

When ordering replacement parts you will ensure getting the right part if you quote, wherever possible, the indicating letter and number shown on the drawing for the particular part you require.

## SERVICE DETAILS

### THE LOFTIN-WHITE CIRCUIT

WITH the next circuit of this series we hope to publish the first official Loftin-White circuit, as supplied direct from the Loftin-White Laboratories. The direct-coupled amplifier has been such an outstanding success that several manufacturers have adopted it for their commercial receivers for this season. An Australian representative has been appointed to look after the interests of Loftin and White, who are particularly keen that only the official circuit should be used. Knowing how interested our readers have been in past references to direct-coupling, we are sure that they will appreciate next week's article.