## "S.T.C." A.C. Dual-Wave Console Model 629G and R/G 529G



Strudard Telephones' morlel "520'" is a five-valve receiver designed to provide dual-wave coverage (200-550 and $16.5-$ 53 m .) and operate from 200-250 volt A.C. supply. This receiver may be found in two ennsole versions (suffixed " $\mathcal{G}$ "' and " H, ," respectively), and as a console radio-gramophone, known as the " 529 K. ." Four panel controls are provided on each model, these being for volume, tuning, wave-change, and tone (contintous). An, additional adjustment, for the regulation of broadcast band sen sitivity, is provided on the rear of each chassis, while the " $K$ " version also in cludes a switch for selection of "radio" or "pick-up" operation. All three versions use a 10 -inch, 2,000 ohms fieli, Ioudsponker and all werc introduced during 1939.

In each of the three versions of this receiver, the basic circuit arrangement is as shown in the diagram, but only the 'G'" execution conforms exactly. In the "H" version, an added refinement is provided in the form of a "magie eye", tuning indicator which is viewell through the main tuning dial glass, while the radio-gramophone switching
system usel in the "K," version comprises a double-pole, double-throw switch which simultaneously opens the sereen feed to the mixer and I.F. valves as the pick-up is switched into circuit. However, these refinements do not alter the basic circuit arrangement and the diagram gisen may be used in maintenance of all three receivers.

The circuit arrangement of the " 529 ' chassis is, subject to the necessary amendments for dual wave coverage, very similar to that used in the " 505 "' broadcast chassis (see "R.R.", 3/2/44), and the same general remarks apply, partienlarly with respect to replacement of the 6Q7G, 6AGBCt and 5Z4G valves.

Analysis of the circuit arrangement, bowerer, will reveal an important point of difference in the oscillator circuit. Not only is a trpe 6K8G triode-hexode used in place of the 6ASG, which serves as mixer in the " 505 ', but it will be noted that the oseillator feed-back system is of the series-fed type, instead of the shunt-fed arrangement employed in the broadcast receiver.

The sensitivity control system also is rather interesting in that the usual pre-
set control (1,200 ohms variable eathodo resistor for the mixer and I.F. valves) functions only on the broadcast band. On short waves, this control is switched out in farour of a 300 ohms fixed resistor. This arrangement permits a convenient threchold sensitivity to be seleced for brondcast band operation without reduction of the maximum sensitivity under short-wave conditions.

Alignment, of this receiver follows standard practice, with trimmer adjustments being used on all circuits except the short-wave padler, which is fixed in value. Both of the intermedinte-fre quency transformers are of the iron cort type, but the slugs are fixed in position and trimmer tuning is usel. The I.E employed was initially $450 \mathrm{kC} / \mathrm{s}$, at shown, but in some later production, th frequency was incrensed slightly to 455 $\mathrm{kC} / \mathrm{s}$. Fither value may be used. in ac. cordance with local conditions, as th range of adjustment available on th various circuits will permit accurate overall alignment to suit : cither frequeney.

