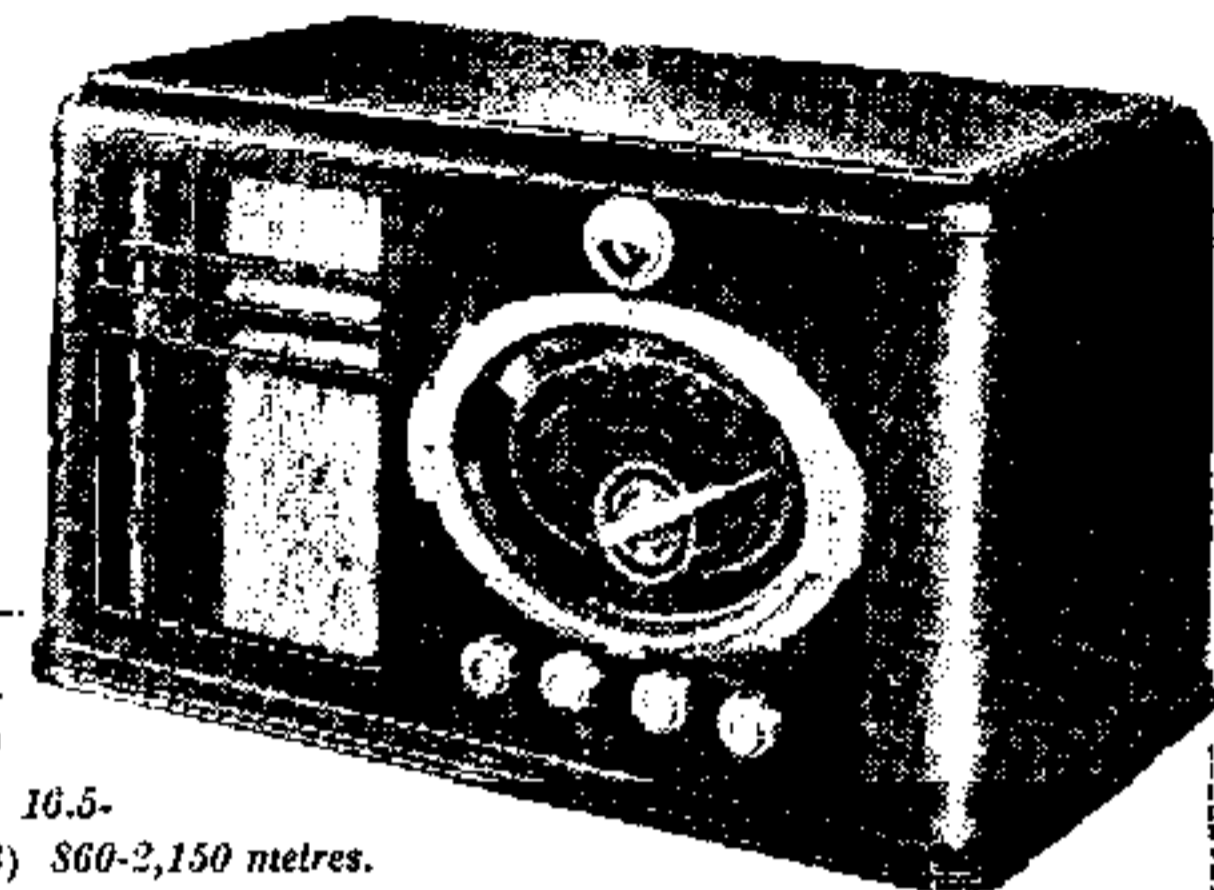


Belmont MODEL 700

High Sensitivity and Good Quality in a
Compact Table Model



FEATURES.—Table model super-heterodyne for AC mains. (190-280 volts, 50 cycles). **Waveranges.**—(1) 16.5-56.5 metres. (2) 187-538 metres. (3) 860-2,150 metres. **Circuit.**—Heptode mixing valve—triode oscillator—var.-mu pentode IF amplifier—double-diode triode second detector—pentode output valve. Full-wave valve rectifier. **Controls.**—(1) Tuning. (2) Volume and on-off switch. (3) Tone. (4) Waverange. (5) Radiogram. switch. **Price.**—13 guineas. **Makers.**—British Belmont Radio Ltd., Belmont House, 4/5, Ridgmount Street, London, W.C.1.

AS the result of arrangements which have recently been completed, sets of this make are now being manufactured in this country. The Model 700 is a worthy representative of the range and has many points, both in cabinet design and performance, which cannot fail to earn for it a good reputation.

The large oval dial is distinctive, and if we may disagree with the arrangement of scales in which the greatest length goes to the long-wave range, which needs it least, there is no denying the lucidity of the station calibrations and the convenience of the indicator showing the setting of the waverange switch.

Immediately above the tuning scale is the cathode-ray tuning indicator. This is provided with a shade so that the glow is still easily distinguishable in bright light. Tuning controls are four in number and are arranged in a row immediately below the oval dial. They are not identified by any form of lettering, but one soon learns to memorise the order which, from left to right, is as follows: Volume control and on-off switch, tone, tuning, waverange switch. A separate switch at the back of the chassis is used to change over from radio to gramophone, and it should be noted that the volume control operates only for radio reception, and that a pick-up incorporating a separate volume control will be required.

From the moment of switching on there can be no doubts of the outstanding sensitivity of this receiver. This is a property

which is not shared by one waveband alone, nor is there any obvious falling-off at the ends of each range. In daylight the medium-wave range is crowded with stations, and the majority of the long-wave transmissions are fully loading the loud speaker before the volume control reaches the half-way mark. The short-wave performance is no less convincing, and so far as sensitivity is concerned the reception of American transmissions will be effortless whenever conditions in the ionosphere permit a signal to get across. There is room for improvement, however, in the ratio of the slow motion control for this range, and a certain delicacy of touch is necessary when making the final adjustment of tuning.

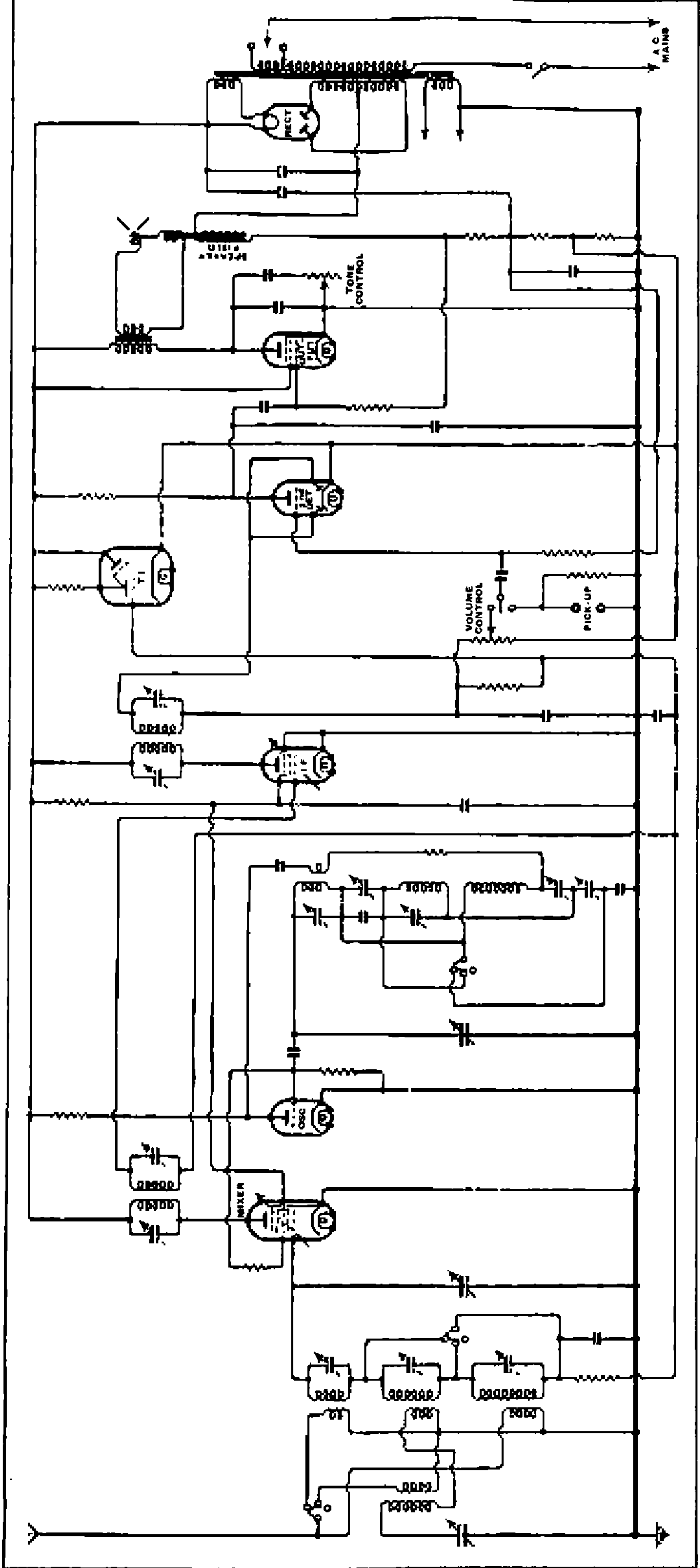
Signal-to-Noise Ratio

High sensitivity brings its own special problems, and before it can be allowed full rein a set must be cleaned up so far as background noise and whistles are con-

cerned. This precaution has been taken in the Model 700, and there is nothing to complain of in the set's behaviour while the pointer is traversing the short gaps between useful stations. The high intermediate frequency (465 kc/s) compensates to some extent for the fact that there is only one stage of preselection on short waves, and second-channel repetition points for stations have to be carefully searched for to be found.

On the medium-wave range, for which a band-pass filter is provided, the selectivity is sufficient to give clear reception outside $1\frac{1}{2}$ channels on either side of the power local stations and on long waves, where there is a single tuned circuit instead of the band-pass filter, station separation though adequate is not quite sufficient to give Deutschlandsender clear of Droitwich and Radio-Paris in London.

No less impressive than the high sensitivity is the quality of reproduction which provides ample justification for those who maintain that an off-set speaker in a



A band-pass filter is used on medium waves and single tuned circuits on the short- and long-wave ranges. Separate valves are used for the oscillator and mixing functions of the frequency-changer.

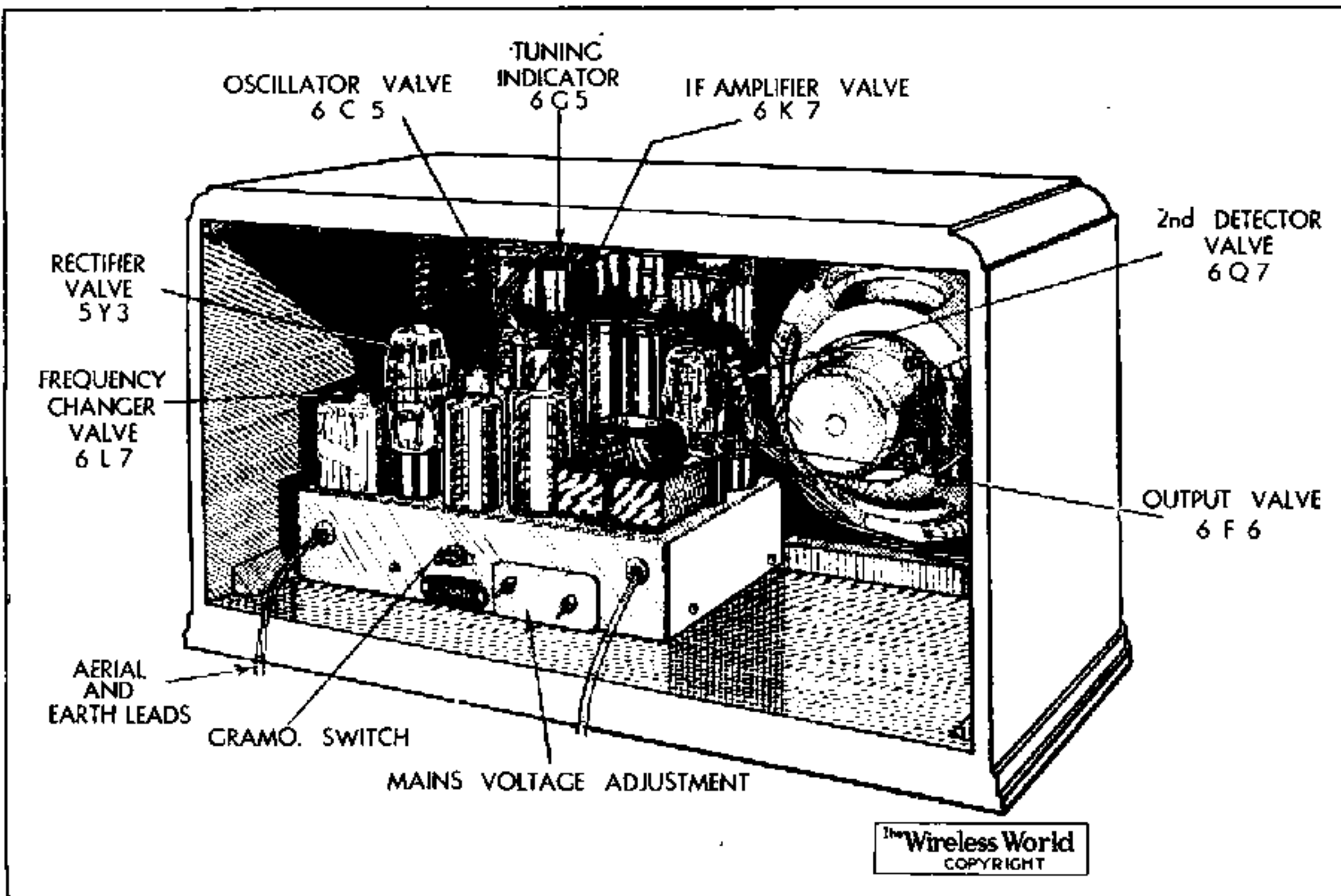
Belmont Model 700—

cabinet of a horizontal type is an effective method of steering clear of cabinet resonances and the peaks and troughs which a symmetrical arrangement gives. Certainly there is in this set a wide and mobile bass response, and the top register is crystal clear with no trace of the 2,500-cycle peaks which so often set a limit to the volume which can be tolerated.

At all events, no reduction of high-note response seems to be called for under any

using a separate oscillator in conjunction with a heptode mixing valve has been adopted. Apart from this and the fact that band-pass tuning is used only on the medium waveband, the circuit follows the usual layout with a var.-mu. pentode IF amplifier, double-diode-triode second detector and pentode output valve.

The chassis as a whole is neat and compact, and a good feature is the protection of the mains voltage adjustment by an easily detachable cover plate. The



The change-over from radio to gramophone is effected by a separate switch at the back of the chassis. Extension loud speaker connections must be made directly to the terminal panel of the internal loud speaker unit.

conditions of operation, so that the fact that the range of the tone control is rather crowded towards the lower end does not amount to a serious criticism.

In the arrangement of the frequency-changing circuits the American practice of

cathode-ray tuning indicator, generally the least accessible of valves, is in this case not only the easiest to replace, but is mounted in a special clip with a detachable socket on flexible leads so that the image can be easily adjusted for angle.