

Is The Second Greatest Radio Problem Solved?

New Receiver Promises to Prevent Station Interference

OUTSTANDING claims are made for a new British receiver, the Stenode Radiostat, which promises to solve the great radio problems of overcrowding channels. It is heralded as the greatest single invention in radio since the introduction of the thermionic valve. From the "Christian Science Monitor" we take the following description:—

THE Stenode Radiostat system comprises a number of patents relating to the inventions of Dr. James Robinson, late chief of wireless research to the Royal Air Force, which have a very important bearing not only upon wireless telegraphy and broadcasting, but also upon cable and land line working and television.

Toward the end of last year, a demonstration of a Stenode Radiostat broadcast receiver was given to the trade and technical press, and at a dinner given at the Hyde Park Hotel, a number of highly important and even sensational claims were made for the Stenode Radiostat. The actual demonstration given was the reception of Brookmans Park on a loud-speaker, while a powerful local oscillator was made to produce very bad heterodyne interference on a normal receiving set in the same room. When tuned in on the Stenode Radiostat receiver it was shown that Brookmans Park could be received entirely free from any heterodyne interference.

A disclosure of the actual circuit and apparatus used was not given at this time owing to the patent position as many of the important devices used were only provisionally covered. Furthermore, the apparatus then demonstrated was not in a suitable form adequate to demonstrate long distance reception.

Critics Dubious.

OWING to the limited nature of the demonstration, a number of criticisms were quite fairly made.

One critic, for example, made a comment on the claims in the following terms: "It would be interesting to know to what degree sensitivity has been sacrificed to obtain this result."

"We await further details, especially as to the actual results obtained in practice. We would suggest as a useful test the reception in London of Stuttgart (833 k.c.) while 2LO (842 k.c.) is working. In view of the claims made for the system we feel, however, that we should apologise for suggesting anything so easy."

A demonstration was given showing, for example, the test suggested above, i.e., the separation of Stuttgart from London, and, much more important than this, that stations which are actually heterodyning one another are proving by the heterodyne note that the separation is only 1000 or 2000 cycles, can be clearly separated and received in good quality.

The sensitivity of the apparatus is now such that there was no need to produce the interference locally in order to demonstrate the principle, while it will be noticed that the quality of reproduction was of a very high order, giving a proper reproduction of all frequencies from the lowest to the highest.

It is interesting here to consider for a moment the present position in relation to broadcast transmissions. By general consent of wireless authorities throughout the world, radio telephony stations cannot be placed closer than 9000 or 10,000 cycles, for three reasons: Firstly, it is claimed that satisfactory reception of all the frequencies which it is desired to include in broadcast reception cannot be effected unless the receiver responds not only to the carrier wave frequency but to a band of frequencies approximately 5000 cycles on each side of the carrier wave. Secondly, that if stations are placed closer than this the so-called side band frequencies will heterodyne with one another, producing interference. Thirdly, that the carrier waves will heterodyne, producing an audible beat note.

The purpose of this demonstration was not to deal with theories but with facts, and it was desired to show that the reception of the carrier wave alone, or rather the carrier wave with a very few cycles on either side, was sufficient to get a proper reception of all the modulations of radio telephony.

A Million Dollar Idea.

FOLLOWING these remarks, there was little made public for some six months, till in its most recent issue, "Radio News," in an editorial headed "A Million Dollar Idea," says:—

As this editorial is being written, engineering representatives of an English inventor, whose new system for radio transmission and reception may upset and greatly improve our present method, are preparing to leave London for New York. They are bringing models of receivers which they claim will enable us to operate three times the present number of broadcasting stations, without interference, on the present broadcast band. These new receivers are neither expensive nor difficult to build.

We must admit having been mildly impressed in much the same way when the first newspaper announcements of the Stenode Radiostat appeared about a year ago. The claims made for it were so broad that we took them with a grain of salt. We noted that they were being made in the name of a group of estimable English scientists, and decided that it might be well to investigate, even though the claims made in the newspaper articles could not be reconciled with current engineering practice.

A few years ago, when we organised the International Radio Broadcast tests, we were fortunate in having the hearty co-operation of Mr. Hugh S.

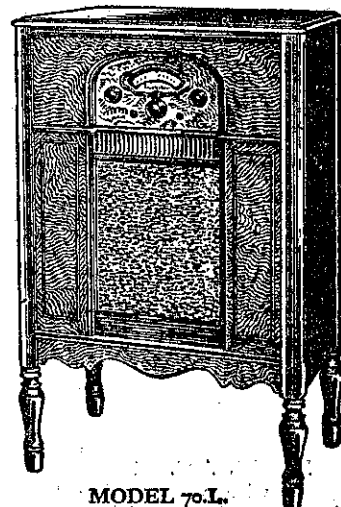
Pocock, editor of the "Wireless World" encouraging. Nearly six months later and "Radio Review," in London, the subject came up at one of our editorial meetings, and we decided upon through our correspondence we came to know him well, and to hold his further investigation. The reports judgment in high regard. We cabled were extremely interesting. for a report from him. It was not very We found that Mr. Percy Harris,

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