

station received on 236 metres or 1170 kilocycles.

There are two reasons why this situation existed. First, the radio-frequency transformers then used were more efficient on the higher frequencies; and second, the natural tendency of the tubes to regenerate was greater on the higher frequencies.

These conditions still obtain to some extent, but other factors working in the opposite direction have been introduced into the circuit in some cases. The net result is a reasonably uniform degree of sensitivity on all wavelengths within the band used for broadcasting.

WHAT is the advantage of push-pull amplification? Push-pull amplification is featured in a large number of the latest sets. The push-pull circuit definitely reduces distortion and therefore improves tone quality. Briefly, the characteristics of a power valve are such that a small amount of distortion is produced in its operation. In the push-pull circuit the distortion produced in one valve is balanced out by the distortion produced in the other valve.

ARE the new speakers any better than those of last year? The high-grade loudspeakers this year produce no better tone quality than the high-grade speakers of last year, but in the less expensive models there has been a vast improvement. There is less difference in tone quality between a low-priced speaker and a high-priced speaker now than there ever has been in the past.

DO the new sets need antennas? Since the latest sets are, on the

average, more sensitive than their predecessors, in any given installation a shorter antenna will produce the same results as the longer antenna of previous years. In an unfavourable location where reception is poor at best and the building is of steel with wire lath construction, an antenna still is necessary for really satisfactory results. Or course, conditions vary so that it is impossible to give definite rules.

WHAT new improvements may be expected next season? It is difficult to see how any radical improvements can be made in the latest radio receivers. From the standpoint of tone quality, for example, it is extremely doubtful whether anyone except a trained musician could detect the difference between the type of reproduction obtainable from the best of modern sets and an outfit that was theoretically perfect. In other words, with the best sets of this year it is practically impossible to determine, when listening from another room, whether the music is from a radio set or from actual musical instruments.

Future radio receivers may be made even more sensitive and selective than they are at present, but any great improvement in sensitiveness would be of no use because the static level is, in any case, the limiting factor. Any great increase in selectivity can be accomplished only by sacrificing tone quality. Improvements from now on are likely to be in the nature of mechanical refinements in construction and operation, and of changes in cabinet design.

Byrd Transmissions

Brilliantly Successful

THE tests between 4YA, 2YA, 2ME and 2XAF were success late Sunday night. Sydney included some local static in their rebroadcast of New Zealand stations, but speech was quite clearly understood from every angle. 2XAF had a long chat with both 2YA and 4YA.

A triangular talk was clearly heard in Wellington between 2YA, 2ME and 2XAF (Wellington, Sydney and New York).

On short-wave reception everything was O.K. from both Australia and New York.

4YA passed on by 2YA to 2ME, and back from 2ME on short-wave as received in Wellington by Mr. R. Leslie Jones was beautifully clear with plenty of volume.

The Dunedin broadcast was passed through the land-line and cable to Wellington, and thence rebroadcast by 2YA on to Sydney.

Further tests were to be carried out by the quartet Tuesday this week from about midnight (N.Z. time).

Commander (Admiral) Byrd was to speak from Dunedin Wednesday last, and at time of writing the indications appeared favourable for clear reception in America.

The Sunday night tests ended at approximately 1.30 a.m. (Monday). Mr. A. Ochs, owner and publisher of the "New York Times," was to be the principal speaker from New York to

Commander Byrd, and Mr. Emanuel Cohen, head of the Paramount News Reel, also Captain Raleigh, Commander Byrd's manager in U.S.A., and Governor Byrd, of Virginia, brother of Commander Byrd, were invited to speak to Admiral Byrd.

A huge reception is being arranged at Chicago by the "Press Club of Chicago," of which Commander Byrd is a member; accommodation being provided for 115,000 people.

Saturday last was the anniversary of the special transmissions to Commander Byrd at "Little America" from WGY through the short-wave stations 2XAF and 2XAD. It was the final of the special week-end transmissions from WGY, Schenectady, New York.

Trade Personals

Mr. Scott Ramsay, manager of the "Hoover" organisation, has completely recovered from his temporary indisposition, and has taken up his duties again.

Mr. N. R. Cunningham left Masterton on March 11 on a tour of the North Island, appointing distributors for the new Miraco tenth anniversary radio.

Mr. W. J. Smeeton, Director of Abel, Smeeton, Ltd., Auckland, left on his annual holidays last Friday. We understand he is making an extensive motor tour.

Mr. C. A. Black, who was appointed managing-director for New Zealand of Electrolux, Ltd., last December, has just completed an inspection of the Electrolux depots throughout the Dominion.

MIRACO

TRADE MARK REGISTERED

"BETTER IN EVERY WAY"

Screen - Grid, Electro - Dynamic, Power Detection, Push-Pull Audio, 245 Power Valves.

Phonograph Terminals, New Condenser Balance, Absolute Single Control, and Solid Walnut Consoles.

MIRACO RADIO IS QUALITY THROUGHOUT

THE MIRACO A.C. 9. Nine Valves (including rectifier), Screen Grid in its proper place, absolute single control, new Rola Electro-Dynamic Speaker, high voltage power detection, 245 Valves working at full voltage, Push-pull Audio, Phonograph Pick-up Terminals, Cabinet of specially selected solid walnut throughout, beautifully hand polished and built to New Zealand styles.

PRICE COMPLETE £57

For those who desire a cheaper quality radio, Miraco has built the A.C. 7. Seven valves, including rectifier, a worthy companion to the A.C. 9. Mounted on a heavy steel chassis, polished aluminium shields, absolute single control phonograph pick-up terminals, built-in Rola power speaker. Cabinet beautifully finished in walnut, hand polished and exactly similar in design to that of the A.C. 9. A gem of beauty and performance at an amazingly low price.

PRICE COMPLETE £43/10/-

TENTH ANNIVERSARY RADIO

The country was combed for this crowning achievement of ten years of radio pioneering. Every minutest part is precision-tested before assembly—experts carefully watch the construction lines—and each set is individually tested on actual broadcasting before being shifted from the factory.

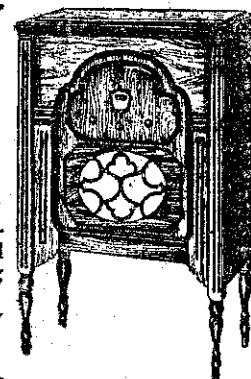
For example, take the new Super Heavy Duty Power Pack.

After Hours of Strenuous Work, the Miraco Power Pack is Barely Warm.

Apply this test to any other electric radio.

THE PHONOGRAPH COMBINATION. Specifications as in the Miraco A.C. 9 with high quality electric induction motor, absolutely silent in operation, automatic stop, new type Webster Pick-up, and space for record storage. Tremendous, undistorted volume at will, with super excellence of tone.

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are invited to write for franchise arrangements.