

# Radio Amplifier for the *LOFTIN-WHITE*



As an amplifier the directly coupled Loftin-White system has aroused world-wide interest. Commencing in America with the original researches of two young radio engineers, Loftin and White, published in "Radio News," interest has spread; Australia, shortly afterward followed by New Zealand, were soon to realise its possibilities and published descriptions led to a period of construction unparalleled in recent years. Probably its simplicity, faithfulness in reproduction and cheapness made it admirably suited to the amateur constructor and the surprising fact was made known shortly after its appearance in this

## N.Z.'S OWN RADIO BOOKSHOP

The TE ARO BOOK DEPOT, Wellington.

Booking orders now—"Handy's Handbook," 7th edition expected shortly, 5/3 posted.

**JUST ARRIVED**—Prices include postage:

"Radio Engineering Principles," by Lauer and Brown, 19/6.

"Collins' Wireless Diary, 1931," 4/- posted (Amateurs and Broadcasters—150 pages useful information).

"1001 Radio Questions and Answers, 1930," 2/9.

"Short-Wave Manual, 1930," 2/9.

"Radio Trouble Finder," 1/10.

Above published by "Radio News" Co.

"Radio Amateur Call Book," June, 1930, 5/3

"Projection Engineering"—a monthly, 21/- per annum.

"Radio Manual," by Sterling and Kruse, latest edition, 26/-.

"Elements of Radio Communication," by Morecroft, 19/-.

"Thermionic Vacuum Tube," by Van der Bijl, 26/-.

"Radio Receiving Tubes," by Moyer and Wostrel, 14/-.

"Practical Radio Construction and Repairing," by Moyer and Wostrel, 14/-.

"Electric Wiring," by Ibbotson, 10/-.

"How Radio Receivers Work," by Roberts, 8/-.

Also all leading English, American and Australian wireless magazines.

Mr. F. W. Sellens' list of Shortwave Broadcasting Stations, 7d.

Last year's "N.Z. Radio Listeners' Guide" still selling well, 2/9.

"Modern Wireless," 1/7.

"All About the All-Electric," 1/7.

"N.Z. Radio Handbook Annual, 1930," 2/9.

(contains list of the World's broadcasting stations).

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## Systems Using Screen-Grid R.F. Stages

### Loftin-White Series

A unique series of articles has been arranged. These will probably extend over five weeks, the topics for each week being:—

1st Week—General introduction and construction hints.

2nd Week—The "Loftin Three." Using the existing amplifier but rebuilding it into a compact set with one radio stage.

3rd Week—The "Loftin Three." The American system, for those who do not wish to interfere with the existing amplifier.

4th Week—The Revised "Loftin Three," for those who wish to start from the beginning and incorporate certain alterations in the value of the amplifier resistances.

5th Week—The "Loftin Four." Various adaptations of the amplifier and the use of the power pentode.

country that first the resistances and then the valves were unobtainable. Judging by the correspondence we have received, constructors have been singularly fortunate for the complaints could be numbered on the fingers of

fort has resulted finally in a workable receiver which is both stable and sensitive. This radio amplifier about to be described has been applied to various commercial receivers with considerable success. Outstanding in this field are the midget sets, many of which are equipped with the Loftin White system.

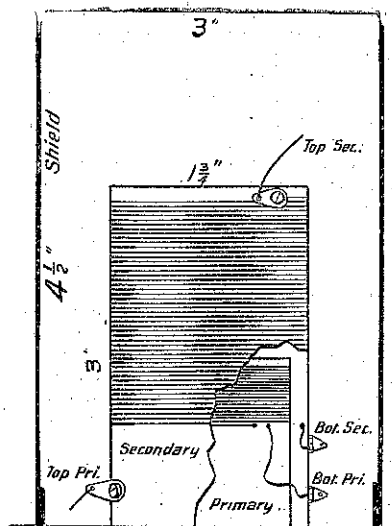
Although technical data for the construction of the radio stages has been to hand for some time, we have refrained from publishing it until our experiments satisfied us that it could be undertaken with confidence by the average constructor. The result has been that now we are in a position to

publish a unique series of articles which should fill the needs of constructors who have already constructed their amplifiers, those who, although they have constructed, will not mind rebuilding, using the same parts, and those who wish now to build the complete amplifier and tuner for the first time. There is little difference in the efficiency of the system, though the complete model made up with the adaptation in the resistances is perhaps slightly the better, though the difference is not sufficient to warrant the owner of a Loftin-White dismantling his set and discarding some of the resistances.

Some will be debating the question as to the number of radio frequency stages they will add. That must be decided by their particular requirements. The one valve, as in the Loftin-Three, will give excellent results from the local station and from the best of the New Zealand stations. It is not primarily designed as a distance-getter and although many will claim that it is good on Australian stations, it must be regarded primarily as a New Zealand set. The extra stage of radio that will be described in the course of these articles under the name of "The Loftin-Four" is the one for d.x.ers to construct. Other radio valves can be added so that the experienced experimenter may obtain all the amplification he requires. Selectivity is a feature of the set.

### No Inferior Parts.

IN setting out the construction of any of the circuits one must be guarded against the introduction of inferior parts. Watch particularly the resist-



one's hand. And these invariably were traced to neglect of instructions or defective resistances, particularly the .5 megohm leak.

It is only comparatively recently that the construction has spread farther afield, and we notice that foreign journals, particularly the French, are giving it attention.

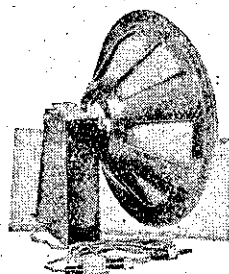
No sooner was the amplifier popular than inquiry was made to its possibilities in a multi-valve receiver. For some considerable time the system defied attempts to add a suitable tuner and in some quarters it was actually condemned. It was unstable when associated with certain detector systems and so it was considered that its usefulness would end as a gramophone and local station amplifier.

The application of considerable ef-

## THE LOFTIN THREE

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We have cabled to Australia for Special Shields, Coils, etc.

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