Market place

Members wishing to advertise in this space should ensure that their ads reach the editor by the 20th of the month preceding the month of publication. Deadline for the next issue is Jan 20,1984. Please write or print plainly and be sure to include your phone number. There is no charge for this service. NOTE: no telephone ads.

WANTED

Valves wanted, Types 22, 201A, 112, EF22
G.Watson, 28 Pulham Cres, Hamilton, Ph 53812

Info wanted regarding a British 'Detex' vernier dial. Details as to how the vernier action is effected. I have two of these dials in damaged condition and wish to reconstruct them. Any illustration would be helpful.
George Askey, 106 North Avon Rd, Christchurch

Complete chassis for Zenith model 1084.
Paul MacDiarmid, P.O.box 643, Rotorua

Electrostatic experimental apparutus, such as Wimshurst machines, Leyden jars, electrophorus etc. What have you? Anything considered.
Peter Noonan,58 Abbots Way,Remuera,Auck 5

Four knobs and glass dial scale for Pye 'H' type PZ60. Vols 1 and 2 Communications Handbook,good price paid.
Glynn Thomas, 23 Jull St, Napier, Ph54-820

Vols 1 and 2 RSGB Radio Communications Handbook, good price for right edition.

Chassis and speaker for Philco 44 or 504, will buy or exchange for Philco 60 cathedral. Three 2-piece valve shields 53mm diam for Echophone model 54.
Dave McLean, 25 Aotea St,Dunedin, Ph44-777 (collect)

Vols 1 and 2 of 'Complete Wireless' by Ralph Stranger, to complete my set.
Bill Lambie, 230 Taita Drive, Lower Hutt

Columbus chassis , model 63 or 66. Dial scale for Columbus / Courtenay model 27 code OE170,dual-wave. Plastic dial scale for Philco 620E and two black push-on knobs
Mark Maloney,22 Williamson Ave,Takapuna,Auck Ph 458-867 (collect)

Information on the following: Crescent radios (Minneapolis,USA) c.1931 Pooley radio cabinets(Philadelphia,USA); Ultimate 312 shortwave converter c.1932; N.Z.Wireless College,Wellington c.1922. Will pay cost of photocopying.
Ray Knowles,507 Wellwood St, Hastings

Dial scale for Philips 362A/34 (part no 28.711.860), Escutcheon with or without glass for Pilot X-63B also two knob escutcheons for same
Bryan Marsh,20 Rimu Rd, Mangare, Auckland, Ph 667-712

AVAILABLE

Valves for sale, large range of old types (tested), cheap to members. Write or phone for list.
Jack Patrick,3 Charles St,Takapuna,Auck. Ph(03)492-947

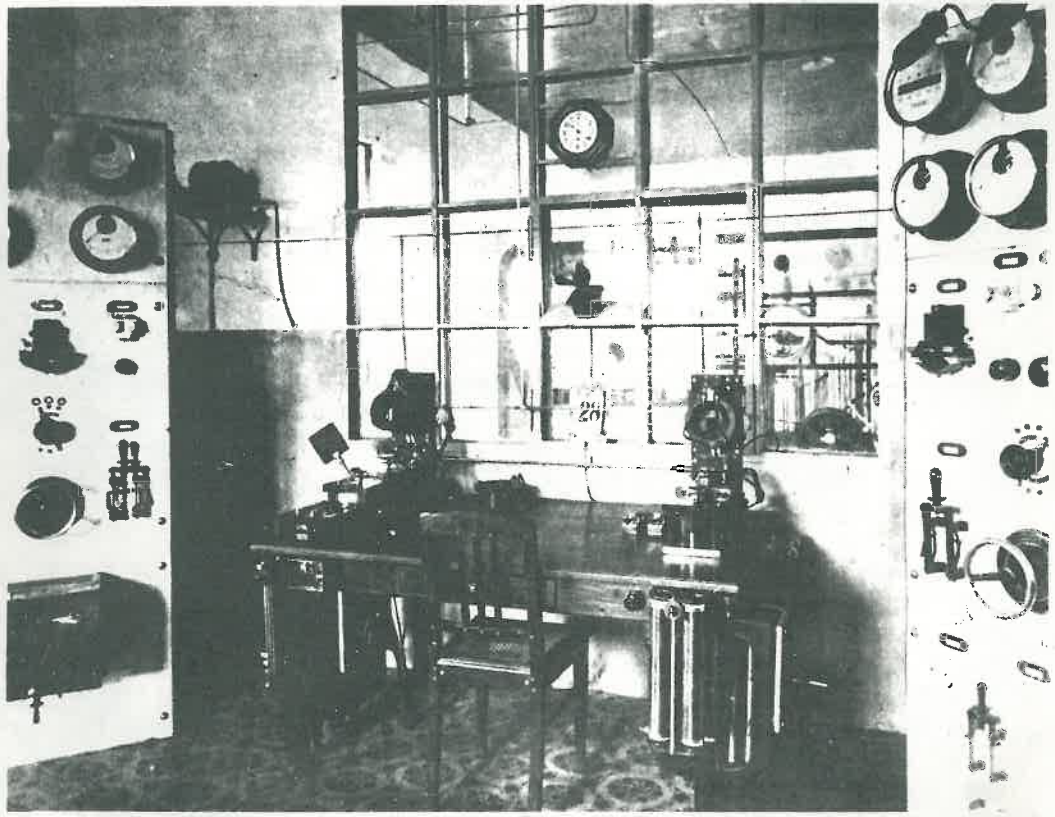
Cabinet only for Gilfillan GN2 Neutrodyne, complete with nameplate, no borer
John Stokes, 617 Dominion Rd, Auck. Ph 604-213 (Bus hrs)

NZVRS BULLETIN

Vol.4 No 3 Nov 1983

NEW ZEALAND VINTAGE RADIO SOCIETY

An organisation devoted to the preservation and restoration of early radio equipment, and collation of associated information



Alexander Turnbull Library.

CLOSE TO HOME

Back in the halcyon days before the outbreak of the first World War a powerful Telefunken spark transmitter had been established at Apia, in what was then German Samoa, which is only 2000 miles from Auckland.

This station was intended to provide communication with Germany as well as with ships at sea. When war was declared in August,1914 a contingent of New Zealand troops was sent to occupy Apia. No opposition was encountered and the wireless station was captured intact on August 29, as the picture shows. German prisoners of war, and civilians, were later interned on Motuhi Island in the Hauraki Gulf.

NEW ZEALAND VINTAGE RADIO SOCIETY

PRESIDENT: Des. Wright
3 Coquille Place
Bucklands Beach
Ph. 535-8928

SECRETARY: Eric Kirby
10/29 Owens Rd.,Epsom,
Auckland 3
Ph. 603-054

Correspondence, membership enquiries, subscriptions: To Secretary, at address above.

N.Z.V.R.S. BULLETIN...

EDITOR: John Stokes
617 Dominion Rd., Mt.
Roskill, Auckland 4
Ph. 604-213

Contributions to the BULLETIN, and advertisements, should be sent to The Editor.

EDITORIAL COMMENT

It is now over ten years ago since the first 'reproduction' cathedral radio appeared in the U.S., and since then several others have followed. More receently Philips in the U.K. brought out a two'thirds scale repro of their 1933 model 634A 'Super Inductance' TRF.

Before dismissing them as nothing more than gimmicks it is interesting to recall that in 1974 TIME magazine ran an article entitled "Radio: The Coliseum of Nostalgia" which included a picture of a PHILCO repro cathedral radio.

Originally all these repro sets had something in common - they were of substantially smaller size than the originals, and were equipped to receive FM transmissions. Largely because of these two features it would be almost impossible to mistake any of them for an original.

Quite recently,however,a completely new type of repro has made its appearance. This particular set is modelled on the 1931 RCA-HMV R4 and is of the same size as the original and could easily be mistaken for it. (was it meant to be?). A well finished wooden cabinet looks very much like the original but the inclusion of a plywood back is a dead give away. The metal escutcheon,complete with trade-marks could easily be mistaken for the original,though "Little Nipper's" appearance has been altered sufficiently to avoid infringing copyright.

These particular sets are,at this very moment,being offered for sale in Auckland and Wellington. They come from Italy. And,whether by coincidence or not, a different sort of repro from the same country is being advertised as an "Italian Electric Gramophone". This a most crudely made object with a dummy winding handle protruding from the side; it plays 45 rpm records only. The price is $400. By comparison the Italian radio sells for $1100.

J.W.S.

N.Z.V.R.S. MEETINGS

Meetings of the NZVRS are held in Auckland on the third Monday of every month regardless of whether the day is a public holiday, details as under:

VENUE: Meeting Room of the Dominion Road Methodist Church. This room is located at the rear of the church, between the church itself and the church hall.

ADDRESS: The church is located at 426 Dominion Road on the east side between Herbert and Milton Roads.

PARKING: There is usually sufficient parking available in the area alongside the church but if not then cars may be parked in the main street or in either of the two side roads mentioned above.

TIME: Starting time is 7.30 pm and most meetings finish before 10 pm.

SALES OF EQUIPMENT

Sales are held quarterly on regular meeting nights during the months of March, June September and December. NZVRS policy on sales of equipment is as follows:

1. DONATED EQUIPMENT: Any items donated to the Society and considered not worthy of being retained are sold by ballot at prices determined at the time of sale. All proceeds from such sales go to the Society's funds.
2. MEMBERS' PRIVATE ITEMS: These are sold by auction and the Society retains 20% of the selling price as commission. Vendors should prepare a list of items on the form provided, indicating the reserve price (if any) in the space provided. Forms are available from the Secretary and after completion should be handed to the auctioneer before the sale commences. Please ensure that all items are marked with the name of the vendor.
3. ELIGIBILITY: Only financial members of the Society are eligible to buy or sell goods at the above sales.

CAN YOU IDENTIFY THIS SPEAKER?

Alan and Stan Brehaut are trying to discover the brandname or manufacturer of the horn speaker illustrated. (no, it's not an Amplion!) They would greatly appreciate receiving any information.
Please write: Alan Brehaut,
22A Cain St, Timaru.

THE DEVELOPMENT OF THE RADIOLA 80

by Peter Lankshear

Throughout the course of industrial history there appear models which through their innovative design, popularity, superior performance and their influence on succeeding designs, become 'landmarks'. Examples are - the Volkswagen car, the DC3 aircraft, the N.Z.Railways Ab class locomotive. To the list can be added RCA's model 80 of 1930.

In the U.S. during the period 1929 - 1930, 97% of the sets in use were TRF models, whereas for the period 1931-1932 the percentage had dropped to 33%, the rest by then being superheterodynes. Although the TRF was supreme during the 1920s the superhet was actually the earlier, the invention dating from E.H.Armstrong's work in 1918. Some of the reasons for this paradox were technical, others were commercial, but for the moment it is sufficient to say that by 1930 RCA (who held the patent rights to the superhet) were under increasing pressure to release them to the rest of the industry. The result when they did, at the end of 1930, led to a dramatic revolution in receiver design as revealed by the above figures.

During 1930, possibly anticipating the market change, RCA engineers had been working on the design of a revolutionary new superheterodyne incorporating the technical advances of a decade of research and development. Now, for the first time in one receiver were - a high-impedance aerial coil, bandpass RF tuning, accurate oscillator tuning, AC screen-grid tubes, double-tuned IF transformers and high-level detector operation. The result was a stable, sensitive and selective radio capable of providing several watts of high quality audio into a solidly built 12" speaker.

There were three versions of this model Radiola issued - the 80, a straight radio in a lowboy cabinet; the 82, (fitted with tone control and a phono input connection) in a highboy cabinet; the 86, a combination radio phonograph also in a highboy cabinet. The cabinet styles are illustrated in McMahon's *Flick of the Switch*. All three models were marketed under four different brandnames - Radiola, General Electric, Graybar and Westinghouse though the last three were not seen in N.Z.

A most interesting feature of the model 86 was the provision for making home recordings on pre-grooved nitrocellulose blank discs, either from radio or from a carbon microphone, using the pickup as a cutter head.

A few years ago my friend Ian King was fortunate to obtain a model 86 which, although in poor condition electrically, was complete and original. I had the pleasure of assisting with its restoration and as several major components had to be rebuilt a good insight into the receiver's qualities was obtained. A detailed study is worthwhile.

There were two long chassis, the one for RF,mixer,IF and detector being positioned above that for the AF stage, power supply and loudspeaker.

The longstanding problem of efficiently coupling the aerial without upsetting the tracking through detuning of the first tuned circuit was solved by a method which became widely used right to the end of the valve era. A large loosely coupled aerial (primary) winding, resonant below 500kHz, transferred low frequency inductively, whilst higher frequency signals were coupled via a small capacitance (not shown in the diagram) consisting of a single turn of wire wound over the tuned winding. Preceding the 224 RF amplifier a second tuned circuit acted as a bandpass filter, protecting the sharp cut-off tube from images and cross-modulation caused by strong interfering signals.

Coupling the RF amplifier to the 224 mixer,or 1st detector,was a tuned circuit wound on the same long former as the 227 oscillator coils. This method of inductively coupling the oscillator to the mixer was to become popular until the advent of the pentagrid mixer tube some three or four years later. Although the oscillator circuit looks complicated it is really the familiar trimmer-padder of tracking using a Hartley oscillator.

A considerable advance was the two-stage IF amplifier with its 224 screen-grid tubes and double-tuned transformers operating on the then high frequency of 175 kHz, a figure which was to become astandard in the U.S. for many years. So, too, was the transformer construction of round ceramic trimmer blocks and horizontal wooden formers.

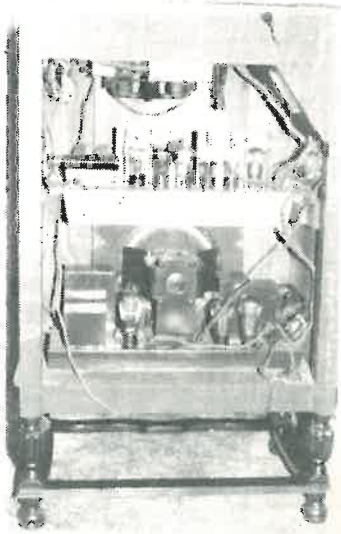
The function of the copper disc between the windings of the first IF transformer was to reduce the coupling without resorting to excessive physical spacing. Gain control was by varying the bias for the RF and first IF tubes. The second IF stage operated with fixed bias to ensure low-distortion drive for the high-level detector. As variable mu tubes had not then arrived a local-distance switch coped with strong signals. The ingenious use of a DPDT switch and two resistors not only desensitised the receiver on 'local' but also broadened the tuning at the same time - an early variable selectivity control.

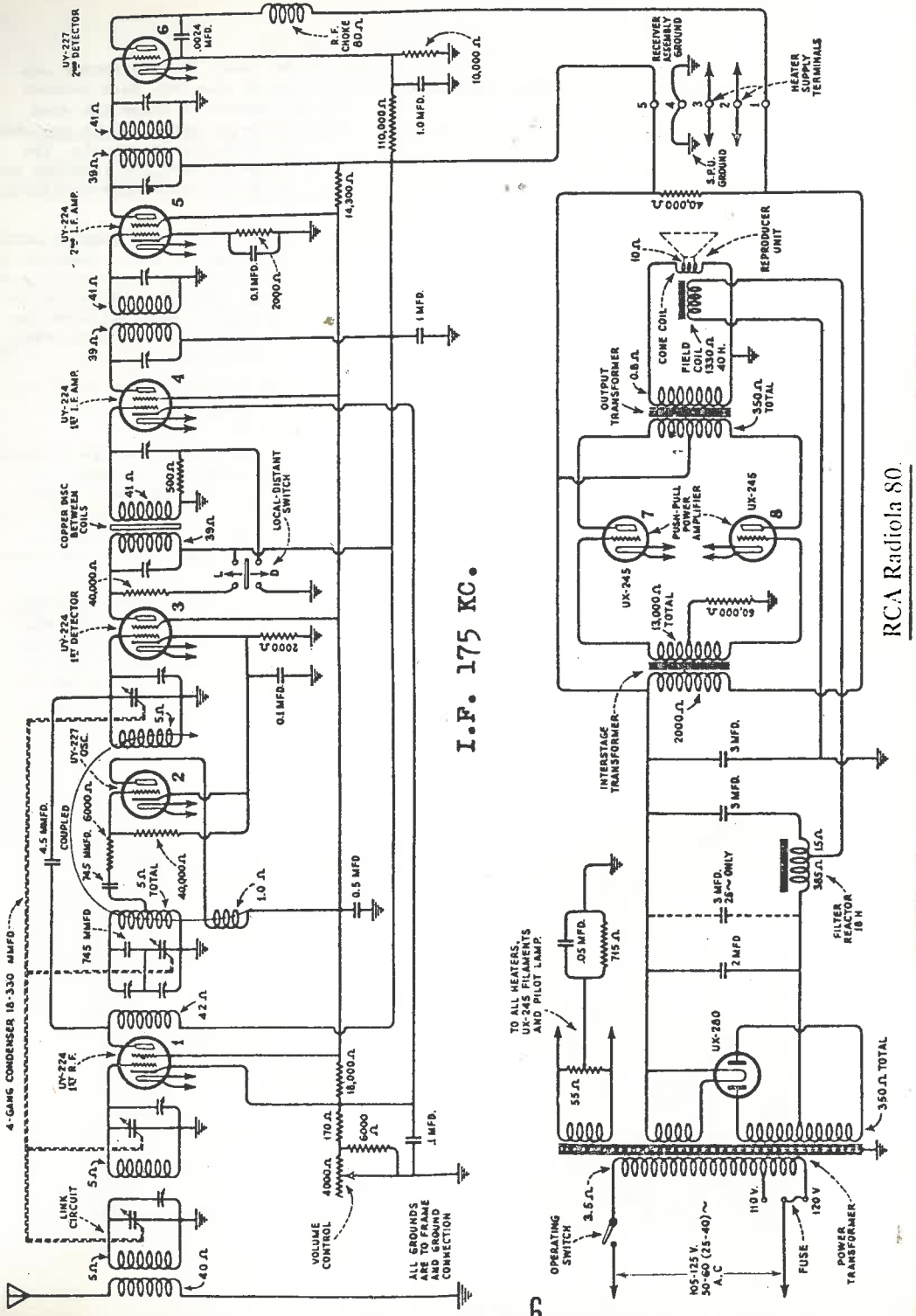
The 227 'biassed' detector was capable of providing 100 volts of high quality audio via the 5:1 AF transformer which, with a total of 30,000 turns was of quite substantial size. Its response was smoothed by the inclusion of a 40K ohm resistor in parallel with the primary. In the phonograph mode (not shown in the diagram) the 227 detector became an audio amplifier by the addition of a 5k ohm resistor switched in parallel with the cathode resistor to provide the correct bias for linear operation. Incidentally, this necessary requirement was not always observed by other manufacturers.

Like practically every other larger American receiver of the period the model 80 used push-pull 245 tubes to drive the speaker, actually with better quality than the pentode output tubes which were to follow in the next year's models.

The power supply was of generous proportions - the 2.5 volt winding on the transformer had to supply a total of 14 amps; rectification was by means of the ubiquitous 280. The HT filtering system was a type used by several manuafctures; a tuned overwind on the filter choke providing a potent ripple absorber. Sometimes regarded as a 'trick' circuit it was in fact a soundly engineered and patented system, to be superseded a year or so later when speaker hum-bucking coils and electrolytic capacitors made chokes unnecessary.

Cabinets were impressive and appropriate to the superior performance produced. In some models doors hid the control knobs, speaker fret and optically projected dial scale. The pickup arm was particularly ornate. Similar arms were still in service as recently as 1950 in some AWA equipment used by the NZBS! Some highboy models were available with a sophisticated motorised preselector remote control. Yes, the model 80 was certainly a 'landmark' radio.





R1

IDENTIFICATION OF PRE-WAR PHILIPS RECEIVERS SOLD IN NEW ZEALAND

The first system of model identification, used on Philips receivers manufactured between 1928 and 1931, consisted of a plain four-figure number, e.g. 2510, 2514.

Commencing in 1931 a three-figure model number combined with a suffix A, B, or C came into use. The suffix indicated the power supply source needed, thus :- A = AC mains, B = batteries, C = DC mains. eg. 930A, 930c

With the introduction of AC/DC or 'universal' models in 1935 the suffix 'U' came came into use to identify this class of receiver. Car radios, which were also introduced in 1935, initially carried the suffix 'B' , as used on battery sets. Commencing in 1940 the suffix 'V' replaced 'B' for both car radios and vibrator-operated home radios, e.g. 258V, 644V.

The suffix 'AX' indicated that a particular AC model was wired for optional use in conjunction with a separate vibrator unit, e.g 758AX. Although there were other suffixes in use overseas they are not of interest to N.Z. collectors

Quite apart from the receivers mentioned above, there were also small numbers of Australian made sets imported between 1938 and 1939. These were made by Thom & Smith Melbourne and usually carried a three-figure style of model numbering.

Then there were several models made during 1935-36 by Radio Corporation of N.Z. before the establishment of Philips own factory. These usually carried a 3-figure model used in conjunction with the letter 'P' as a prefix or a suffix, e.g P636.

MULLARD

Receivers made by Philips were also sold under the Mullard name in the U.K. and in N.Z.. Such sets first appeared appeared in the U.K. in 1935 but were not seen in N.Z. until 1937. The two-year gap occurred during a time when the Mullard agency changed hands, the new agents being C & A Odlin Ltd. It should be noted that no sets made by Radio Corp for Philips were marketed under the Mullard name. Similarly no Australian Mullard sets (made by Airzone) were marketed in N.Z. Only three Australian Philips (made by Tasma) were marketed here under the Mullard name by Odlin's. These were models 528V, 628V and 628B, all of which were battery operated.

To assist collectors a cross index of pre-war British made Philips and Mullard receivers is included.

PHILIPS	MULLARD	PHILIPS	MULLARD	PHILIPS	MULLARD
V7A	MAS 2	462A	44A	650A	15A
361A	30A	463A	45A	660A	24A
362A	31A	470A	12A	753A	17A

Note: the Mullard model numbers were usually preceded by the letters MAS

X30A

ERRATUM

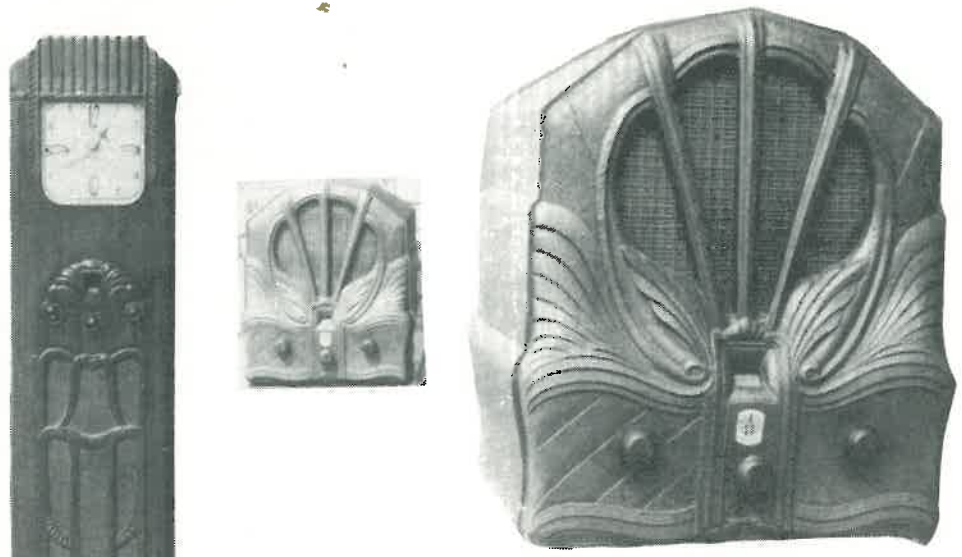
The model number of the Mullard 'Westminster' illustrated in the May issue was incorrectly given as MAS 12: the correct number is MAS 2.

WANTED

Articles and/or photographs for the NZVRS Bulletin are always needed If you can help by providing short articles or photographs of unusual items then send them in now.

Continued publication of our Bulletin depends on reader participation. Don't leave it to the other fellow, even if he is the willing horse. DO IT NOW!

CROSLEY RADIO



THE LONG AND THE SHORT OF IT

The Crosley model 59AC,a 5-tube TRF, was produced in several cabinet styles but the chassis was identical in all models. The grandfather clock model was dignified by the namestyle'ORACLE', while its little companion was known as the'WIGIT'. The centre illustration is on the same scale as the one on the left.

YOU'RE *THERE* WITH A CROSLEY

SCOTT AND THE WORLD'S RECORD 9

by Jack Rhodes*

During the summer of 1924, Mr E.H.Scott,radio experimenter and syndicated radio columnist for 112 newspapers in the U.S.,Canada and Australia, decided he needed a really good holiday. For nearly four years he had been doing experimental work and testing scores of radio circuits which ranged from simple crystal sets to the most complicated super-heterodynes. This building and testing provided the basis for the material which appeared in his radio columns. His decision to holiday in his native New Zealand and his desire to take along a sensitive radio he had been experimenting with earlier in the summer led to the final development and production of the set which subsequently became known as the "World's Record 9".

Before leaving Chicago for New Zealand, 8300 miles away, he arranged with stations WGN and WQJ and WFAA Dallas to send out special test programmes. Despite the lower broadcasting power in use at that time, all of these programmes were received by Mr Scott and reported by cable the following day. In addition, a numberof other North American stations were heard many times at the receiving site located at Tasman near Nelson. Later, his log was submitted to *New Zealand Wireless and Broadcasting News* in Wellington and they confirmed that a number of world's records had been establihsed.

Scott was so amazed with the results that he thought he might have a freak receiver. To eliminate this possibility, and to establish that anyone could obtain similar results, he cabled to Chicago for another set of parts which he assembled and obtained comparable reception results. This proved to Scott's satisfaction that the 'World's Record Super 9" was not a freak receiver, that it could be duplicated, and that it was the most efficient receiver developed up to that time. The actual testing took place between December 27,1924 and April 10,1925.

Although Scott left behind the second set and I spent weeks in the area making enquiries during a visit to N.Z. I was unable to locate it; no one could remember what had become of it. Maybe it's still there, lying in some dusty barn, waiting to be discovered.

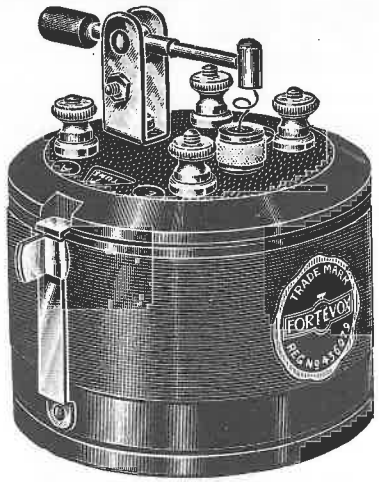
* 2700 Burdick Avenue, Oak Bay, Victoria, B.C. Canada V8R 3L9

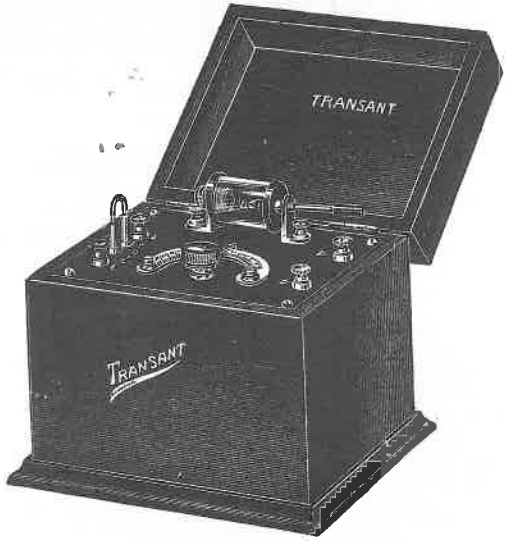
The portable superhet receiver on which remarkable results were obtained using only a loop (frame) aerial.

MR. E. H. SCOTT AND HIS SET.

CRYSTAL SETS.

Accessories required for a crystal set include merely aerial outfit A138, 14/6; Vlodyne 'Phones, 16/6; total, £1/11/-.





FORTEVOX JUNIOR.

A wonderfully cheap set, ready for working, complete with crystal. English.

PRICE, ONLY 8/6

TRANSANT.

Well designed and made, with glass enclosed crystal detector and polished wood cabinet. English.

PRICE, 27/-

CLIVIC.

Built by Johns Ltd. from good quality apparatus, in leatherette covered case.

PRICE, 33/-

From a 1929 Johns Ltd catalogue. Unfortunately there was no illustration of their 'Clivic' (Clive and Victor) set. In 1930 they produced a crystal set under the then new name - 'Wellmayde'.

BOOK REVIEWS

BROADCASTING,GRAVE AND GAY .... by Ken G.Collins
196 pp, illustrated, pub. Caxton Press, 1967.

Ken G.Collins' wide experience in broadcasting made him well qualified to write on the subject as during his career he held announcing, technical and administrative positions. His first job,whilst still a schoolboy, was as assistant operator/ announcer at the private station 2YF (later 2ZF) Palmerston North in 1926. That was the year in which a national broadcasting service was established by the Radio Broadcasting Company.

Shortly after this Collins left for Australia to train as a marine wireless operator at AWA's Marconi School in Sydney. However, after obtaining his PMG certificate he decided that shipboard life was not for him so returned to N.Z. Early in 1929 he applied for an advertised technical position at 2YA and was successful in obtaining the job. Ken Collin' job interview was conducted by the General Manager of the R.B.C., A.R.Harris and the Chief Engineer, Jack Bingham.

That was the beginning of a career which spanned nearly 40 years in broadcasting and Ken Collins account of it is both lively and interesting. Amongst his contemporaries was the now legendary Clive Drummond (the "Goodnight Man") about whom the following tale is told. Firstly though, it is necessary to realise that in those days broadcasting, and indeed most aspects of life, was conducted much more formally than it is to-day. For instance, announcers were not referred to by name over the air; an official directive insisted that they were to be called "Mr Announcer".

Notable amongst programmes of of the day was the broadcasting of annual Maori pageants held during the years 1928-1930. These pageants were always officially opened by the Prime Minister and were attended by the RBC's General Manager and various other people from Broadcasting, together with well-known Maori figures of the day plus a large body of Maori performers.

On one occasion when the entire group had assembled for an official photograph the irrepressible Clive Drummond happened to be standing directly behind one of the Maori performers, a 20 stone lady named Mangu Tahana who was seated next to the Prime Minister. At the crucial moment when everybody was motionless 'watching the birdie' the silence was broken by a piercing shriek from the Maori lady, followed by her explanation - "Sorry Mr Coates (the P.M.) but Mr Announcer he pinch my arse." Apparently Mr Drummond had become bored with the proceedings and had decided to liven things up. One can imagine the reactions of the group to have been a horrified gasp followed by a deathly hush!

This little anecdote is related early in the book and is indicative of the easy-going style of the author in his description of his life in broadcasting. Unfortunately this book is now long out of print but is well worth searching for in libraries or second-hand bookshops. It certainly deserves to be more widely known among to-day's vintage radio enthusiasts.

Reviewed by John Stokes.

PRACTICAL HANDBOOK OF VALVE RADIO REPAIR .... by Chas E.Miller
published by Newnes Technical Books, 1982

Having seen various books on radio repair, both ancient and modern, by Ghiradi, Camm, Rider and others, I found this one pleasantly different.

It is easy to follow and anyone interested in servicing vintage receivers should find it of great interest. The novice in particular will find the explanations of valve and radio theory easy to follow.

The book is well illustrated with schematics, block diagrams, period advertisements etc and includes valve data as well as details of IF peaks of British sets. Also covered are aspects of history including dating of sets, through to servicing of both battery and mains sets, speakers, unusual sets (e.g. Philips V7A), push-button and motor-tuned sets (e.g.Ekco), portables, car radios and through to FM and stereo receivers of the 1950s and early 1960s.

Despite the emphasis on English sets most of the basic information would also apply to American or New Zealand made receivers. This is one book I would like to add to my own library. The copy reviewed is a recent addition to the Invercargill Public Library.

Reviewed by Arthur Williams.