

Radio Reveries



L.A. Chaston Ltd
Wellington

"Arnrith"
Receivers

(written by Bill Chaston)

Leslie Alan Chaston was born in Christchurch and commenced his early working life there. Later he became a small operator on Wellington's post-war radio manufacturing scene.

He was a genuinely liked man with a cheerful outgoing personality who retained a boyish enthusiasm for making things mechanical and electrical.

This started at a young age with the making of crystal sets and batteries. In a serious moment Les confided to the writer that he had an indifferent start to life with a series of early childhood illnesses which prompted the family doctor to advise the doting parents that their son's life expectancy would be a brief one and unlikely to exceed his teenage years

Rebelling at what he perceived as family mollycoddling and a fawning attitude by the old doctor, Les decided if life was to be short at least it would be a merry one. Hard work and hard play would go hand in hand. He carried this philosophy through his span exceeding more than three score years and ten. This obviously showing the Doctor's dire prognosis to be quite wrong.

After leaving College he worked for a Christchurch company making torch cells and a range of other dry batteries. Later this company was bought out by National Carbon Ltd. He was then transferred to their Vivian Street, Wellington factory employed as a Maintenance Engineer. The factory produced a wide range of Eveready batteries to a largely unsatisfied market and virtually enjoyed a near monopoly in this field.

About 1946 Les Chaston left National Carbon to set up a Radio parts and Service shop around the corner in Cambridge Terrace. This business traded under the name of Radio and Electrical Exchange.

The business soon flourished and was swamped with radios and electrical appliances needing repairs (thus proving that despite their extensive, radio advertising Columbus by no means dominated the servicing field).

To cope with this influx of work Les Chaston employed Les Townsend a long term employee of Philips Industries to take charge of the service side.

Time was now available to turn attention to a kit set portable radio using the miniature valves which need 50 M.A. at 1.5 V to heat their filaments well within the capacity of ordinary torch batteries. This allowed the portable radio to gain in both compactness and economy at a time of increasing affluence to become an affordable purchase for many more people.

The kit set radios sold very well indeed but Les Chaston was surprised by the insistent demand for a fully built up version and determined to meet the request with an enhanced commercial model.

Enter now Arnold & Wright Limited, Radio and Electrical Wholesalers who had been supplying "WEARITE" I.F. transformers and "POLAR" tuning condensers. A deal was struck for them to distribute the new radios under their ARNRITE trade name with 4-valve and 5-valve models to be produced.

A design committee of four determined the final design and consisted of Les Chaston, Les Townsend, Harry Gestro (a clever mechanical engineer who had a small business in Courtenay Place) and "Gordon" a printer who designed the gold embossed calibrations on the front panel of the cabinet.

A Mr Thomas who operated a plastics business almost opposite near Kent Terrace was contacted to supply the PERSPEX cabinets in white and various pastel shades.

In order to deal with the extra workload Les Townsend persuaded Robert Blatchford a former senior colleague of his at Philips to join the team as Serviceman and final tester.

The writer who had received like many others invaluable technical training in the RNZAF followed by radio factory experience at Philips and then some time at Radio Corporation factory and service departments also joined the staff.

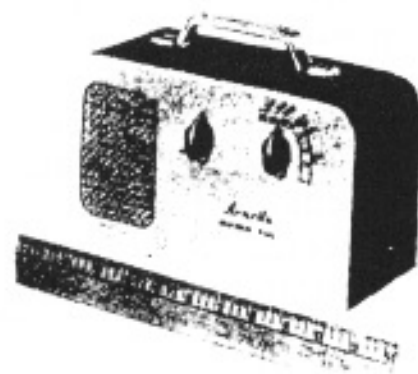
I was quickly followed by a young Doug King ex McDonald's "Moderne" radio factory where Wynne Billing designer/technician had been his guide and mentor. Doug had a natural flair for receiver design and construction.

Reg Green, son and heir of a Taranaki family was the last to arrive for a position. A well educated man with a good knowledge of mathematics and radio theory he was also ex RNZAF (RADAR) and Radio Corporation Limited.

The group therefore were a fine blend of youth and maturity with good technical backgrounds and ample enthusiasm to make a formidable team.

In 1948 radio production got off to a fine start in the small factory at the rear of the retail shop and the radios sold like "hot cakes". To keep up with demand an evening shift was necessary. Among the evening workers was "Gordon" the printer who was "moonlighting" with the worthy objective of saving for a house.

The 5-Valve model was the most popular seller but the 4-valve version was a good performer. Outside the factory premises in Cambridge Terrace which was noted for its high level of electrical interference from overhead tram wires and nearby industry it was possible to receive 3YA Christchurch at a reasonable level in daylight.



Arrite Battery portable
1948. Available in 4 and 5-
valve models and made by
R. Chaston Ltd.

This compared favourably with Doug King's Emerson 558 portable which was used as some sort of a standard; but of course more accurate measurements were made on the lab equipment.

*This caption
pencil
P-87 G.A.O.R*

However, back to the 5-valve model, we were amused to hear through the "grapevine" that AL Webb of Webb's Radio, Auckland was being taken to task by some of his local dealers who claimed that his ARIEL portable radios were running a poor second to the new ARNRITE in the performance stakes.

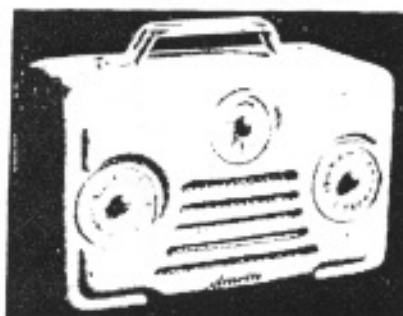
ARNRITE

"JUNIOR PORTABLE"

OUTDOORS ... OR IN THE HOME

This new portable is becoming a real sales-getter. It's a combined battery-house plug-in set at the exceptional price of only £31 10/-; 5 valves; fully guaranteed; pink, wine, green, blue.

ENQUIRIES CORDIALLY INVITED FROM THE TRADE



Arnríte 5-valve, AC
Battery 1949.

my exact caption p. 88 G.A.O.R

Stung by such criticism Mr Webb surreptitiously purchased an Arnríte from Arnold and Wrights Auckland branch for comparison tests.

He was mortified to confirm that indeed his radio was an inferior performer and was greatly perplexed at this state of affairs. Here was a rival receiver using the same valve line-up, the same voltage supplies, virtually the same circuit and of similar physical size and was markedly superior.

What was the "secret"? In fact it was no "secret" at all and can be summed up in three words "tuned circuit efficiency".

Due to inadequate quality control by the makers of WEARITE I.F. transformers there were considerable discrepancies in their specification. It was one of the writers tasks to check all I.F.'s on a Q meter. Those with the highest gain being used for the first I.F. stage in the receiver and those below par rejected if not good enough for the second stage.

As Inductance Specialists Limited had declined to make a special R.F. coil for us it was necessary to remove some turns from the primary of one of their standard stock coils. Again all were checked on the Q meter.

Finally the loop aerials were very carefully designed and wound on paxalin material. They were then given the hot wax bath treatment in a special low loss wax obtained from National Carbon Limited. All this attention to detail resulted in a better product.

As an experiment a few 5-valve models were fitted with the high gain I.F. transformers in both stages and the loop aerials were wound on perpex formers. These performed so well that in our Wellington location it was possible to receive 1YA Auckland in daylight.

However these receivers were not identified in any special way and were sold off with the general run of production radios. Some fortunate purchasers must have been most impressed.

Also most impressed was a young man who must have been the original Backpacker who entered the shop with a normal 5-valve version to have batteries fitted and to especially thank us as makers for such a reliable radio with a fine performance.

He explained that he had taken the ARNRITE radio around many parts of the world on his travels.

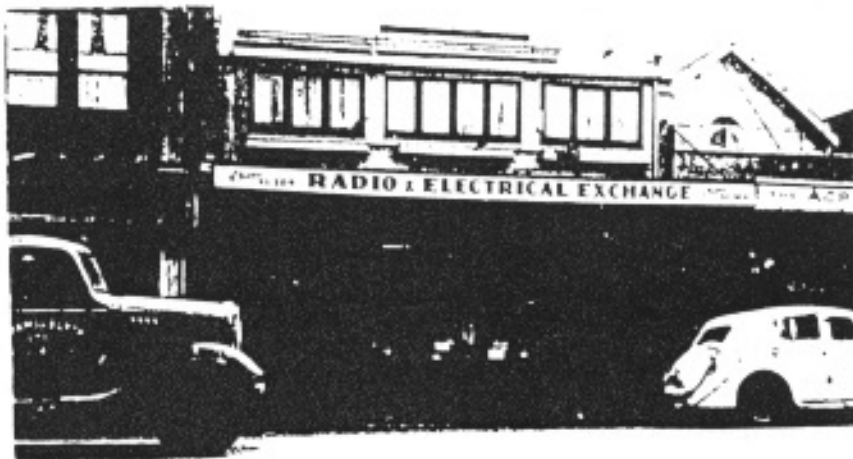
Its receiving capabilities caused some astonishment in the U.K. but of course it didn't have much competition from the local products which were just fair performers and only suitable for their own domestic market. The few English brands such as Ever Ready (note spelling) Vidor and Mullard which trickled into New Zealand were very mediocre with low sensitivity.

The traveller went on to say that he achieved the near impossible by being allowed to tour parts of the Soviet Union and how the radio had amazed the locals with its reception in that vast country.

This unexpected source of praise was greatly appreciated.

Meanwhile production continued at a steady pace and to divert attention from matters entirely radio whilst working, other topics came up for consideration including motoring. In those days new cars were very scarce and so too were good used ones.

Reg Green was into the ownership of his second used Riley and this is shown in the shop photograph.



Merely for the sake of being provocative Doug King and I told Reg that his impaired judgement in buying the first one might be excused but to go on and replace it with a second one was bordering on a serious aberration. We went on to say that "surely he knew that American cars were far superior in technology and reliability and how much better it would be for him to own a sensational new Studebaker "Champion" or for something a little more conservative seeing he came from Taranaki a new Plymouth would be the answer." Reg accepted this banter with good natured tolerance.

One day he arrived back at the factory late in the afternoon and confessed to having a motoring mishap with his precious Riley. Setting off for the Railway Station with a small carton of portable radios to dispatch and travelling down Lambton Quay the car was bumping and jolting over Wellington's notorious rutted tram tracks before it came to a dramatic stop when the battery which was located in an "out of sight out of mind" place under the back seat collapsed through the wooden floor onto the road in a spectacular shower of sparks.

Hoots of derision and laughter greeted this admission and we gave the gratuitous advice to "sell it and buy a Buick". Naturally this advice was ignored.

Really our feigned anti English car bias was on very shaky grounds as Doug King owned a new Hillman Minx and the writer a Vauxhall 12, both British cars.

Les Chaston and Arnold & Wright Limited had done very well out of their joint venture with the radios and as production eventually tapered off Len Arnold and Les Chaston mutually agreed to replace them with a medium size AC-BATTERY model to be known as ARNRITE "JUNIOR" for the 1949 model year.

It was also agreed that Les Chaston form a company which was registered as L.A. Chaston Limited. Staff members were offered minority shareholding which we took up and we had a celebratory drink to toast a new era and looked forward with confidence to a bright future.

Les Townsend was given virtually a free hand to design and develop the new radio while Les Chaston decided to enjoy some of the fruits of his labour and switched on to PLAY mode. He converted almost one entire floor of his large Newtown house to an entertainment area.

Fitted out with a bar, jukebox, pool table, card tables and a library of American magazines and all the appointments considered necessary for a gentleman's leisure.

There he entertained Embassy members of a large friendly nation and leading personalities from the radio industry.

Among his guests were Ralph Slade of Philips, George Wooller of Akrad, Ted Palmer of Inductance Specialists, Ray Wright of Arnold & Wright, George Tustin and Guy Thornton of Martin Burns Limited and many others including the trio of ex airforce radio/radar boffins Doug Foster, Stan Shea and Ian Rowe.

The Johnsons' Archives

In the early post war years these three worked in Ballingers building Victoria Street occupying some of the same floor used by T. Meganns radio business. There they made transmitters and other radio equipment.

Later they separated. Doug Foster going to Mercer Street as founding editor of N.Z. Radio-Electronics magazine, Stan Shea went to Tory Street and manufactured transformers and later radio telephones. Ian Rowe operated from his home workshop in the Brooklyn suburb making Williamson and other special transformers as well as doing general rewinds.

← who was used for R & E for work?

However back to the party scene where Stan Shea had a penchant for quoting Shakespeare which was a little outside Les Chaston's range of interests but he agreed that the Bards words fitted neatly when applied to crystal set radios when he wrote:

THIS SHALL PROVE A BRAVE KINDGOM FOR ME
WHEN I SHALL HAVE MY MUSIC FOR NOTHING
The Tempest Act 3, SC2.

On the formation of the Company Reg Green was promoted to the position of retail shop manager. He was a little unfortunate in having a speech stammer which worsened when he became excited. One day the inevitable happened when a customer with a similar impediment entered the shop to be served by Reg.

While we genuinely had sympathy with peoples' problems what followed seemed like pure farce and we simply gave way to the occasion. It was like two Arkwrights of the "Open All Hours" TV series in full flight each battling to outdo the other in this remarkable verbal jousting, so we turned on the intercom to the shop to best hear this unusual contest.

The effect was hilarious and we were doubled up with laughter listening to it all. Reg was the winner and sold to the enquirer the most expensive Philishave in the shop. In spite of his speech problem he was a very helpful and effective manager.

He was certainly capable of giving considerable help to and converse in french with Andre a worker in the French legation whose knowledge of English was virtually nil and who had just taken up the hobby of building kit set radios. Andre returned many times for advice and to buy component parts.

I must comment that the French kits were the first I had seen from that country and were of a very high standard, while the parts lay-out and wiring drawings were the best I have even seen.

Adjacent to our shop one H. Wood printer had set up a printing business. One of his first orders was for the certificates and stationery for our newly formed company. He was given permission to use our shop telephone pending the installation of one in his own premises. (Remember the "good old days" when it took up to 12 months to get a business phone connected?).

Known to all and sundry as "Woodsey" he was a dapper little man with an impish sense of humour. He was also a jazz fan and had a fine collection of jazz records.

In those days it was necessary for radio manufacturers to attach patent license transfers to each receiver, the fee for these going to Australian Radio Technical Services and Patents Limited. The transfer decals showed the abbreviated name form ARTS & P. One morning "Woodsey" called to use the phone in a small office located in the showroom.

There he spotted on the desk a large commercial cheque book with a cheque made out to ARTS & P and awaiting the signature of the company secretary. Unable to resist temptation he decided to show a sample of a printers skills by adding the letter "F" in front of those already on the cheque.

Ken, the dour Scottish secretary was not amused by such vulgarity and even more sinful in his eyes was the waste of a cheque form. The culprit was sternly upbraided for his indiscretion.

These light hearted episodes show that all our lives are full of nuts and bolts that look trivial and commonplace but are matters of humour and/or high drama to us living through them.

In the meantime work was proceeding slowly on the design of the new receiver. The concept of the original ARNRITE was simple and very effective.

With the development of the replacement model the designer veered off in another direction with a "custom-built" attitude. Also his long spell with Philips seemed to influence him to use some of their less endearing design practices.

The end result was a product mechanically complicated and costly with a formidable list of custom-made parts including the following:

- Power Transformer
- AC input plug and socket
- W/W Resistors
- Control Knobs
- Rosette Plastic-Headed Screws
- Metal Rectifiers
- Coils
- Cabinet Back Fasteners
- Metal Shaft Couplers

exact date ? Perhaps most remarkable of all was having National Carbon Limited make a special 9-volt "A" battery known as C16 (Retail 10/6).

Fortunately other manufacturers ^{*ack*} later used this battery type for various purposes to ensure a continuity of supply for the replacement market.

Drama was about to unfold due to the long gestation period and instead of new receivers appearing a decidedly unwelcome form of receiver appeared being appointed by the bank who became alarmed at the cashflow going mainly in one direction; - out.

During the development time the only income was derived from retailing servicing and the making of some one-off specials such as a D.C. operated guitar amplifier for shipboard use.

per P. 7
The shock appointment of a receiver sooner had the Managing Director devoting his full time to the important task of running a business.

Alarmed at these happenings and dismayed at the technical design of the new radio (done in great secrecy) we younger staff decided unofficially to do something about it.

While impressed with the performance and style of the model which looked particularly smart in a maroon coloured cabinet; we agreed that it was too mechanically complicated for ease of production and servicing.

Therefore we prevailed upon Doug King to come up with another version. This he did in a miraculously short time working from his home workshop in the evenings. Despite its great simplification there was no impairment to the radios fine performance and "off the shelf" parts were used widely.

At last production of the original design was under way as many of the component parts had been bought in for that purpose. Slowly building up the output reduced the business pressures for a while then a progress blow was struck when for various reasons Arnold & Wright Limited cancelled their order for further supplies of radios.

Shown Doug King's new chassis design a worried Les Chaston eagerly seized the opportunity to relieve the pain and to put it into production immediately.

At that stage the company designer resigned and left to set up a small radio service business in Upper Cuba Street, Wellington. His place was taken by Maurice Maloney ex H.M.V. (N.Z.) Limited radio design laboratory.

As senior technical-man he suggested minor amendments to the new chassis and it went into production to be sold under the NEECO nameplate. Next the two jointly designed a simple 5-valve AC mantel radio which was installed in an inverted U shaped plastic cabinet. It was reliable and a good performer and also sold under the NEECO label.

Probably a couple of hundred were made but I have never seen one since.

Despite the burning of much midnight-oil and the best efforts of all concerned the company was wound up. All manufacturing stopped. So another Kiwi dream faded away. In hindsight it is clear to see that a lack of effective liaison between the company accountant, the Company Secretary, the Managing Director and the designer; plus a one model policy caused the business to fail.

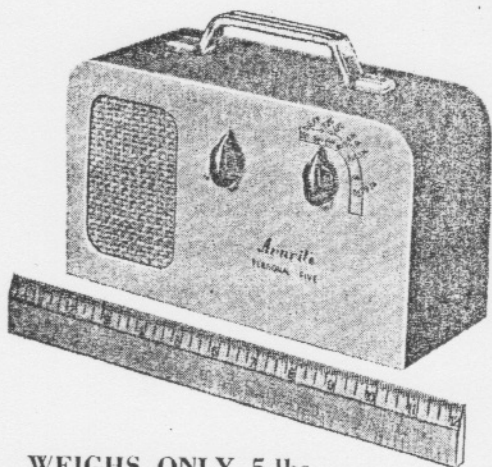
Reg Green who had come into a family inheritance purchased the retail business from the receiver. Les Chaston left to pursue other interests. Maurice Moloney joined the radio section of Civil Aviation and Robert Blatchford took on part-time work pending his retirement.

That left Doug King and I who undaunted by the set-back decided in partnership to take on the big exciting world of radio on our own terms.

This leads to T.V. Radio Company Limited and CAPEHARTE radios of which more later.

Bill Collerton
1994

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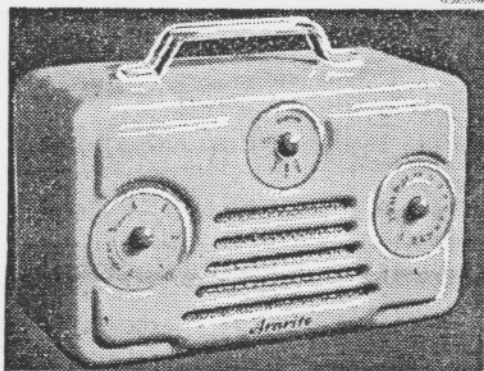
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