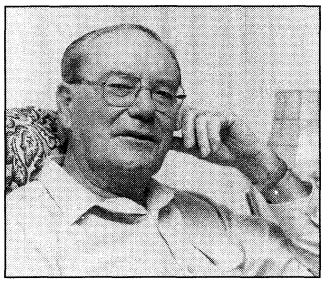


When I Think Back...

by Neville Williams

Ferris Bros Radio, a prominent Australian firm: but the truth is stranger than fiction! (2)

From the humblest of beginnings, Ferris Bros. Radio battled on through World War II, with radio assuming a distinctly limited role in its affairs. After the war the situation changed, with a strong emphasis on portable and car radios, backed up by a nation-wide involvement in TV components and antenna systems. In the ultimate, however, Ferris Industries acquired new owners and a new identity and effectively disappeared into outer space!

From the very outset in 1932, Chum Ferris planned to build household radio receivers which would carry the family brandname, as well as marketing and servicing as many other brands as might become available. Significantly, he took time out to fit a radio set into the Company's ancient Hupmobile tourer, demonstrating thereby an underlying interest in radio in 'the great outdoors': cars, caravans, boats and weekenders.

However, while the Company picked up a few related orders in the early days, technology in the '30s was heavily biased towards conventional household radios, and by the time the way had opened up for mobile or portable receivers, wartime regulations had severely curtailed all civilian radio production in Australia. But not surprisingly, once the restrictions were finally lifted Ferris lost no time moving back into this specialised field.

In a promotional brochure *The Ferris Company 1932-1964*, they claimed that their postwar 'portable' receivers had already gained a reputation (I quote) 'as quality products or, as some say, the Rolls-Royce of car radios'. Their contemporary sales literature was proudly emblazoned with two distinctive circles, one emphasising the name FERRIS, the other AUSTRALIAN MADE.

The brochure also claims that the Ferris model 74, produced in 1947 under the personal supervision of Chum Ferris and F.B. Allison, had been the 'world's first genuine portable car radio'. Admittedly its chunky shape was still reminiscent of a mantel radio, but it was small enough and rugged enough to withstand any likely amount of handling and bumping around in a road vehicle.

Using six 6.3V valves and a vibrator HT system, it could be bracketed into a car and powered from the car's own electrical system — be it 6V or 12V, negative or positive earth. Its copper plated steel case and internal filtering served to attenuate ignition noise. It could as easily be transferred into a boat, a caravan or a holiday cottage for normal family listening, a DC/AC switch allowing it to operate either from an alternative battery supply or from the AC mains.

Featured freely on Company literature were twin circles displaying 'Ferris' and 'Australian Made'. Ferris were justifiably proud of their heritage, their reputation, their staff and their products.

At a time when radio was a vital source of news and entertainment, yet normally so very 'non-portable', the Ferris concept had obvious consumer appeal.

Variations on a theme

A check through old leaflets uncov-

Ferris Bros' Head Office and No.1 Factory in Pittwater Rd, Brookvale (Sydney) — occupied in 1953, and subsequently extended to embrace their ever more demanding products and facilities.

ered a range of derivatives from the model 74, including one using a reflex circuit to reduce the valve complement to five — in order to lower the price. There was a compact version to suit small English cars, and another adapted for remote cable control from the steering column. Yet another provided for an extension loudspeaker system, for use in tourist coaches.

A couple of models featured a short-wave band, the 'outback' version offering reception of the Flying Doctor, Bush Fire Control, Police and Ambulance. Some models also included an economy switch, to reduce the current drain when the full potential of the receiver was not required.

At the time of initial release the basic model 74 was priced at 39 guineas (£40-19-0). The introduction of transistors around 1959, the adoption of printed circuit boards and other technological developments saw the subsequent release of more efficient and more attractively styled Ferris 'car/portable' radios, with minimal increase in the price relative to prevailing wage levels.

Model 184 (1962-64) typifies the styling which dominated the solid-state era. In a car, it could be supported under the lower lip of the facia panel. In other situations it could be carried by the handle as a self-powered portable, or perched upright on a shelf or table top for family listening.

Over the years, Ferris produced an impressive sequence of both portable and 'fixed' auto receivers with the design emphasis variously on RF gain and selectivity, multiband coverage, push-button tuning, audio performance and so on. Normal and/or key-locked cradles were made available, with a variety of fitting accessories, escutcheons, antennas, plugs, cables, extra loudspeakers etc., to suit most vehicles on Australian roads.

The Ferris No.2 Factory in nearby Mitchell Rd, Brookvale. Commissioned in 1956, it was devoted mainly to metal working processes to do with TV antenna engineering.

Backup service

Typically, a Retailers Price List to hand dated July 1967 offered about a dozen different Ferris models, with and without accessories. Supplementary literature listed a couple of conventional transistor portables, a 'Gemini' twin speaker mantel set and an odd gadget called a 'Tranimate'. Used with a gutter-grip antenna, the latter could receive signals from outside a car and feed them to an ordinary transistor set inside, thereby minimising the ignition hash that might otherwise obliterate the program.

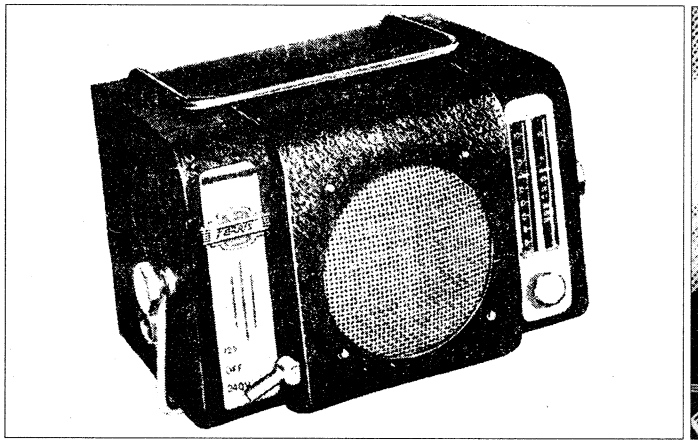
If that seems somewhat 'over the top', what about a four-speed portable record player that could transform a car radio into a portable radiogram — presumably for use on a picnic or holiday outing.

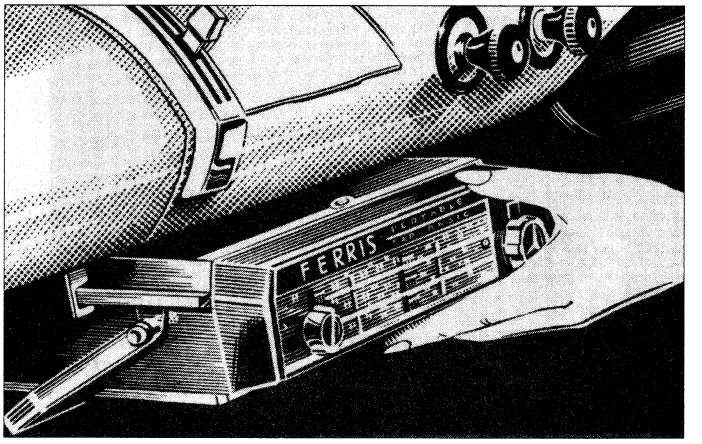
Thumbing through the literature, one repeatedly comes across evidence that Ferris Industries were very serious about performance and quality control, in terms of equipment, facilities and personnel.

All receivers, they emphasised, were subjected at the factory to vibration, voltage, temperature and humidity tests to ensure that they would cope with conditions likely to be encountered in everyday useage. As for field service, the literature on loan from Chum Ferris contained typical service manuals relating to individual models, while a brochure listed 300-odd accredited service centres spread around Australia.

Ferris were proud in 1969 when *Choice* magazine, published by the Australian Consumers Association, specially commended their Volumatic II series of car radios, after detailed comparison with other currently available brands. Furthermore I gather that they were featured in the Montreal EXPO.

In the literature I also encountered





The first Ferris portable car radio model 74 (left) was released in 1947. Shaped like a mantel radio, it was housed in a plated steel case and included a built-in vibrator type HT supply. Current in 1963-64, model 184 (right) was typical of the styling that won Ferris industry awards and a substantial share of the Australian auto/home/portable market.

Set up for the first postwar Sydney Royal Show — the traditional image of Ferris as EA's older readers will remember it. The model trains are displayed on the tabletop on the right.

references to products that I'd either forgotten — or didn't know about in the first place. There was, for example a reputedly popular range of 'Marina' marine transceivers, PMG approved 'for small ships'. A (then) recent addition to the series detailed in *The Ferris Wheel* (No.11, November 1967) offered 8-channel coverage, crystal locked circuitry, an RF output of up around 150 watts, and a remote control unit. Fibreglass whip antennas, which could be lowered conveniently to clear obstructions, were said to be available for the series, plus a whole range of boating installation extras.

(This is not to be wondered at because, according to the Penta Comstat *Beacon*, Chum and his wife ('mate') Joan had been 'boaties' for decades with their cruiser *Tempest*, replaced in 1971 with the more pretentious *Barrine*. Nowadays, in 'boatie' terminology, they have apparently 'swallowed the anchor' and substituted a golf course for the blue water, and amateur bands for the boaties' network).

In the same publication, there is mention of the Ferris M-200 series of 'Easybeat' portable mains-powered record players, of which I also had no previous knowledge. A new stereo model 500 is said to have been released, styled along similar lines in a neatly finished portable case. In the stereo version, one loudspeaker had been housed in the body of the unit, the other in the removeable lid. For use in the home, a separate pair of bookshelf loudspeaker enclosures was available.

Not surprisingly, Chum Ferris was well aware of the potential of FM broadcasting, with its promise of high quality, noise-free sound, ultimately in stereo. He had supported the late Ray Allsop, right back to the time when AM broadcasters were doing their best to turn the politicians against what they saw as a threat.

When AM appeared to have won the day by side-tracking FM to UHF some time in the distant future, Chum publicly rejected the proposal, both as a major manufacturer and an officer of ERDA — the Electrical and Radio Manufacturers and Distributors Association.

Writing in *Mingay's Electrical Weekly* (March 9, 1962) — with Os Mingay's personal support — he detailed his findings in the USA, where he had been researching TV antennas with Channel Master, 100 miles west of New York. Quoting figures from the FCC, the Americans, he said, had successfully accommodated more than 10 times as many VHF TV stations as proposed by Australia, while also setting aside a VHF broadcast band, currently occupied by 195 FM broadcasters. Unlike the AM stations, they were virtually noise-free.

As it turned out, the Federal Government later reversed its decision and legislated Australian FM broadcasters into what had become the *de facto* international FM Band.

Allied Capacitors

Returning to *The Ferris Wheel*, issue No.11 (November 1967) summarised Ferris Industries' successful venture into the production of Allied Capacitors in the mid 1960s. The article does not spell out the circumstances and, 30 years on, Chum Ferris himself is hazy about the commercial details.

It would appear, however, that Ducon and Simplex had run into problems, raising the question as to whether Ferris/Telecomponents could help fill the gap. Whatever the details, the challenge — spelled out by Alleyne Bowler (ex Ducon) — was to meet the electronics industry's need for improved capacitors with tougher 'Military Standard' specifications. For Ferris it meant urgently re-training operators to cope with new and more demanding production technology.

Acknowledging — typically — their ultimate reliance on reliable staff, the Ferris newsletter pictures Anka Obatrov and Rose-May Ringuet operating plastic film winding machines; Ayesha Easlea tab welding; Sylvia McColl performing a control lead strength test; and Departmental Supervisor Pam Loveday operating tell-tale capacitance measuring equipment. Also mentioned in this context was Chief Engineer Karl Trankle and trainee engineer Kevin Charters.

Credited as prime sources of the production 'know-how' were TCS for polystyrene capacitors; Fischer & Tausche, electrolytics; Shinmei Electric, trimmer capacitors; Shizuki Electrical, plastic including lacquer film capacitors; and Johnson Matthey & Co, for silvered mica types.

Back in the 1960s, I vaguely recall Geoff Wood offering me over the counter at RDS (Radio Despatch Service) capacitors that were agreeably small and well rated when compared with the traditional bulky Australian eqivalents. Here I am, 30 years later, tracing or re-tracing them back to Allied, Telecomponents and Ferris Bros — the multifaceted company out Brookvale way!

Channel Master antennas

But if mobile radio and the Telecomponents arm of Ferris Industries loomed large, the agreement that Ferris signed back in the 1950s with Channel Master must surely have out-loomed them! In *The Ferris Company 1932-64*, the writer remarks that Channel Master (Aust) Pty Ltd, in

respect to TV antennas and accessories, gained the manufacturing rights to 'everything but the roof!'

In the USA, Channel Master had had the opportunity to document the role of the antenna in a huge number of installations and environments. They had access to an 'enormous' test range in the Catskill Mountains, New York State, where the gain, frequency response, directivity, front/back ratio and impedance of arrays could be measured and plotted.

The resulting expertise became available to Ferris, and gave them a head start when they pondered the congested mix of stations and channels down the mountain-strewn East Coast of Australia (see illustration). Ferris were in the fortunate position of having lab facilities and knowledgable staff, qualified to debate problems and solutions with their counterparts in New York State.

Ferris' No.2 factory in Brookvale, NSW, had been expressly set up to manufacture TV antennas and the bits and pieces that were part of the installation process. They had agents and service centres who could alert them to problems and problem areas.

They also had survey vans which could be despatched into new or problem TV areas. Fitted with a telescopic tower, the vans could be fitted with antennas of one kind of another, with appropriate equipment in the van to observe and measure the incoming signal(s).

Nor was it a lop-sided arrangement, as far as Ferris and the US Channel Master were concerned. In the brochure *The Crossfire Story*, Chum Ferris, as a Member of the IREE Aust. and Technical Director of Channel Master, tells how he spent time in the US laboratory (August/September 1961) adapting the 'Crossfire' range of antennas to frequencies that had been provisionally earmarked for channels 4 and 5 in Australia. All six models of the Crossfire series were modified successfully, without compromising their normal hi-band and low-band performance, thereby fitting in with the policy of Channel Master (Aust) to major on all-band antennas. They were so successful, in fact, that the Americans realised that they could offer the same designs in the USA as universal TV/FM antennas.

In *The Ferris Wheel* for November 1967, Kevin W. Hill, General Sales Manager, observes that with new stations coming on air and the prospect of an ultimate colour service, the days of 'any so-called TV antenna' or any gimmicky indoor gadget had passed. Channel Master had developed and could supply properly engineered antenna systems optimised for weak signals or strong signals, whether subject to ghosts or not, on specified channels and sited fortuitously or otherwise. I gather that in order to cater for TV reception areas Australia wide, the Channel Master inventory of models topped the 100 mark, ranging from the simplest design to 20-odd elements.

They were also able to offer masts, rotatable beams, cables, splitters, line amplifiers and community systems, where appropriate.

(Although identified as General Sales Manager, Kevin Hill himself had a technical background, with tech college training in Melbourne and Sydney and radar service in the Armed Forces during the war.)

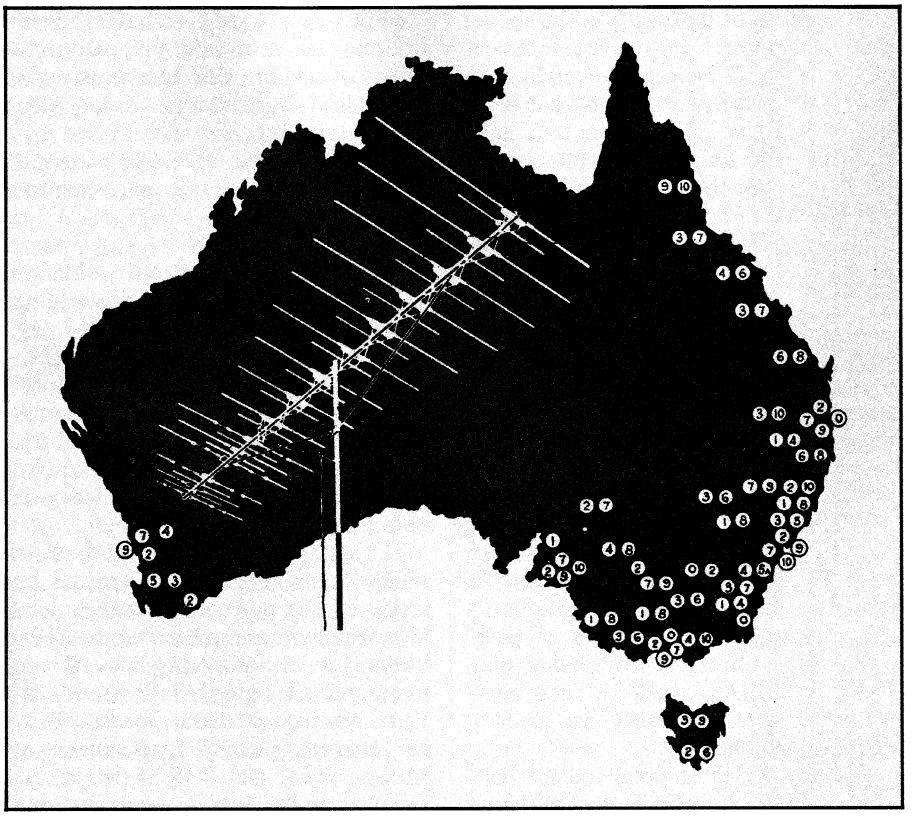
Channel Master antennas not only dominated the Australian scene but led to overseas connections. Ferris Industries cooperated in the establishment in Auckland of Channel Master (NZ) Ltd, holding one third of the share capital. It proved to be a very successful venture.

In 1963 Ferris, in conjunction with local interests, also formed Ferris Industries (Malaysian) Ltd, to assemble and market Channel Master products in Malaysia and Singapore. Key personnel were seconded to Malaysia/Singapore to familiarise the staff with Australian products and services. The General Electric Co. subsequently purchased a majority interest, but Ferris retained its original shareholding of 100,000 Straits dollars.

In the mid 1960s, Ferris Channel Master concentrated on both MATV (master antenna TV) and CATV (community antenna TV). In 1967 they produced a special handbook on MATV, detailing the special considerations affecting multiple TV sets required in hotels, motels, blocks of flats, etc. Of special interest was their combination of the Crossfire 3606A — claimed to be 'the World's most powerful TV antenna' and a built-in Telstar signal booster, said to be lightning-proof and fed from a readily accessible power supply within the building.

1969 saw the release of a new series of solid-state MATV amplifiers offering higher gain, lower noise and a strong emphasis on reliability.

CATV commonly addressed the problem of multiple separate homes or apartments which needed to share access to one strategically placed antenna to gain acceptable reception. Classical examples occurred in NSW coastal areas where waterside homes were shielded from TV transmitters by steep and lofty cliffs.



From 'The Ferris Wheel', a TV map of Australia showing the VHF channels, actual and planned. Some areas require a large, complex array, as implied by the superimposed sketch.

Staff relationships

In the matter of personnel, it is evident that the Ferris Group did not share the cyclical hire-and-fire attitude that has been mentioned from time to time in these columns.

John Emanuel, who cooperated in the preparation of this article, served much of his formal apprenticeship with the Company and there is photographic evidence in the literature that, at any one time, there would be a dozen-odd apprentices in training. If they had formal obligations to the Company, the reverse was also true.

Factory photos also indicate a generous percentage of women operators on the production lines. Looking back, Chum Ferris recalls that the Company had a very good relationship with women in the area. They were grateful for the opportunity to supplement the family income, and generally cooperative in adapting to the peaks and troughs of production schedules.

In any case, it was in the interest of Company shareholders to keep the factory operative and the staff busy. In the early days, they had deliberately diversified into radio service, electrical service, refrigeration and even the odd spot of plumbing.

The need to keep the factory occupied had led them into producer gas generators, interspersed with mechanical service on the vehicles being so fitted.

Things had gone well with car radio, but TV set production had been a disaster. They gave it up, but resumed some months later when they got the opportunity to supply sets to a couple of TV rental groups with reliable finance.

They had also contracted to build special professional equipment, such as an electricity meter checking system for EMMCO/EMAIL and an Audiometer, as used by specialists to measure the acuity of patients' hearing. For good measure, add two-way VHF radio for light planes, laboratory power supplies, battery chargers for home handymen, and the Ferris 'Fireplus' transistorised ignition system. Chum stressed in conversation that they had long term plans to expand and develop custom-built high tech products.

Again, when the No.2 factory had capacity to spare, Mr J.L. ('Jack') Ferris — a cousin to the brothers — cast around and produced a 'Coursemaster' golf buggy and a selection of road trailers. They also came up with a range of six 'Tiltmaster' boat trailers, with winches and boat hooks to suit, along with folding canopies. Like the golf buggy, the boating equipment tended to peak in summer, when interest in radio and television tended to taper off.

A typical group of 14 Ferris aprentices, distinguished in their shirts and 'string' ties. John Emanuel, who owns the picture, is in the back row, second from the right.

Oh yes — someone even came up with the idea of making 0-gauge model trains, including a very desirable model of the NSW C-36 express/freight loco and replicas of Sydney's suburban electric 'red rattlers'. These, I am told, have since become sought after collectables; but in their day they kept operators busy and provided a novel sideline for Ferris dealers, Australia-wide.

End of the story

So what happened to the Ferris Group? The short answer is that the two brothers, having battled their way from a run-down shop in Mosman to a company with national and international connections, reached an age where they had to plan for ultimate retirement.

Chatting with 'Chum', I recalled the observations of Arthur Spring — also featured recently in these columns. As he grew older he became progressively more conscious that an error of judgment could affect the well-being of a whole raft of employees and their families. It was a responsibility that, for him, became a burden.

Said Chum, as he pondered the hundreds of people relying on the Ferris Group, "I can identify with that!"

Sufficient to say that in 1969 the shares in Ferris Industries Ltd were acquired by Hawker Siddeley, such that it became a subsidiary of Hawker Siddeley Electronics Ltd.

In a complicated reshuffle, Ferris became an associate company with Space Track Pty Ltd (previously a de Havilland subsidiary) and Allied Capacitors Pty Ltd.

Out of these overall resources, Hawker Siddeley Electronics spawned two new Divisions:

- Systems Division, based at Manuka ACT and elsewhere, and concerned with space tracking, systems engineering and systems management.

- Engineering Division, based initially at Salisbury SA and concerned with defence electronics, guided missile development and specialised electronic products.

The stated intention was that the Ferris group would progressively expand into industrial and defence electronics, while also continuing to manufacture and sell its traditional consumer products through existing facilities and channels. Mr G.I. Ferris was requested to serve on the Board of Hawker Siddeley Electronics, with Messrs W.M. and T.W. Ferris on the Ferris Bros Pty Ltd Board, both boards

being under the chairmanship of Mr Rollo Kingsford-Smith.

The last copy of *The Ferris Wheel* to hand from Chum Ferris is dated March 1971, with 'Hawker Siddeley Electronics' added to the masthead, along with a trade mark contrived from the initials HS. Inside is a mixture of items from Ferris and HS, including a release item about the new award winning 'Volumatic' Ferris car radios.

It was in accordance with forward planning but, with hindsight, one could but speculate whether the Directors had any notion of the Federal Government's tariff reductions that would shortly devastate radio production in Australia. Or that, despite Ferris' moves to automate, complete Asian-built receivers would ultimately be imported for less than the cost of the parts needed to build them here.

Again, whether the negotiators had fully appreciated the enormous gulf between consumer products and space hardware. With that thought came the conviction that Ferris was in danger of becoming a mere segment of a very complex wheel: 'the Ferris cog'!

As if to emphasise the point, *The Ferris Wheel* for November 1970 had featured Hawker Siddeley Electronics' deep involvement in the Tidbinbilla space telescope in the ACT — a very odd partner indeed for the traditional Ferris marketing enterprise.

What happened to Ferris/Hawker Siddeley/De Havilland in the next couple of decades is quite another story, which I have not followed up in detail. Sufficient to say that when I asked John Emanuel — now a car radio specialist — what had become of Ferris and their award-winning 'Volumatics' he was very sad. The proudly Australian made Ferris range had given way in the marketplace to a much less distinctive Asian import.

As to the Brookvale complex itself, Bob Ditchburn — who worked with Ferris for best part of 30 years — tells me that the number 1 factory and Head Office has recently been bulldozed out of existence, while the buildings that comprised factories 2 and 3 are apparently industrial real estate occupied by sundry tenants.

I remember visiting the Tidbinbilla space station some years ago, and was suitably impressed by what I was shown. I recall nothing, however, to suggest that it had ever had anything in common with Ferris industries. Intentions and plans notwithstanding, Ferris Industries has seemingly disappeared into space in more ways than one! ❖