

# Unsung hero of the "flying doctor" service

*Most Australians have heard of the Reverend John Flynn, honoured for his founding of the Royal Flying Doctor Service. But few people have heard of his colleague Alfred Traeger, inventor of the pedal-powered radio that made the service possible.*

by JIM ROWE

Soon after John Flynn had been ordained as a minister of the Presbyterian Church in 1911, he was given the task of surveying the needs of people living

on isolated stations in the vast stretches of the Australian inland. He reported that there was a very real need for medical and other support services, and

as a result the Church set up the Australian Inland Mission (AIM), with Flynn as its first superintendent. By 1918 it had set up six nursing homes scattered around the inland, including one at Cloncurry (Qld) and another at Oodnadatta (SA). From these bases a team of "bush padres" toured the outback by road, providing both practical and spiritual help and also forming communications links with the cities.

Although the nursing homes and touring padres filled part of the need, Flynn realised that people living in isolated inland areas really needed much more. He dreamed of being able to provide a "mantle of safety" over the outback, by taking advantage of the then-new discoveries of aviation and radio. People living in the inland would be able to use radio to seek help, particularly in times of emergency, while aviation would be used to provide that help quickly.

At the time this seemed very far-fetched, because both technologies were in their infancies. But Flynn doggedly pursued his dream, and in 1921 sought advice from Hudson Fysh (later knighted) of QANTAS fame, regarding the most suitable kind of aircraft for a flying medical service.

It became apparent that the real problem was to provide the people of the outback with practical two-way radios. To be practical they would have to be cheap, and they would have to be self-powered because most outback stations had no way to generate electricity at the time.

On a trip to Adelaide in 1925, Flynn sought advice from Harry Kauper, a radio engineer working at the pioneering radio station 5CL. Kauper suggested that he talk to a young inventor called Alf Traeger, who was working at Hannan Brothers, a local electrical engineering firm.



**Alfred Traeger (left), inventor of the pedal radio, pictured with Qantas founder Sir Hudson Fysh in front of an RFDS aircraft at Cloncurry in 1967.**

Alfred Traeger had been born in 1895 at Glenlee, in Victoria, but grew up on a farm at Balaclava, near Adelaide. Of German descent, he had shown an interest in machinery and electricity from a very early age. At the age of 12 he had apparently rigged up a simple telephone system between various buildings at the farm, using all sorts of odds and ends.

A few years later he was able to attend the Adelaide School of Mines, and finally gained his qualification as an electrical engineer. Although shy he was very determined, and fascinated by the newly-emerging field of radio.

John Flynn followed Harry Kauper's advice, and called into Hannan Brothers to see if Alf Traeger had a generator which might be suitable for powering a radio transmitter. Traeger offered one of the existing models, which Flynn bought and took back to his then base at Alice Springs.

Alf Traeger thought little about the incident until about 12 months later, when Flynn contacted him with an invitation to join him at Alice Springs and work on the development of an outback radio network. Needless to say, he accepted immediately. He had no ties, and jumped at the idea of working in a pioneering new field.

The stumbling block was still a low-cost generator to power the remote radio sets. Traeger's first attempt was a hand-powered generator, using a converted emery wheel, but this proved to be impractical. It was extremely difficult to turn the generator handle with one hand, while tapping out messages on a morse key with the other.

Then Traeger remembered reading of a system which the German army had used in World War I, with a pair of bicycle pedals hooked up to a small generator via gearing or chain sprockets. So he rigged up a similar system and found that a seated operator, pedalling slowly and comfortably, could produce about 20 watts — enough to power quite a practical set (even in those days). And the big advantage of pedal power was that it left both of the operator's hands free.

By careful design, Traeger was able to produce a practical pedal generator and radio set costing only 33 pounds. Although nominally the equivalent of \$66, in those days it was still quite expensive, as the average weekly wage was only 5 pounds. So 33 pounds then was the equivalent of around \$3000 in today's money!

But it worked, and they were finally



**Pedal radio inventor Alfred Traeger shown demonstrating one of his remote station sets in 1929. Note the morse key and pedal generator.**

able to proceed with Flynn's dream of an outback radio network and flying medical service.

John Flynn chose the Queensland town of Cloncurry as the base for the new service, because it had a well equipped aerodrome and was also linked to the expanding telegraph and telephone networks. It also boasted a 40-bed hospital with a resident medical officer and nursing staff.

While Flynn's colleague Dr George Simpson was discussing the proposed service with Cloncurry authorities in 1927, word was received from Mount Isa that a miner had been seriously injured. The mining company chartered a De Havilland single engined DH50 aircraft from QANTAS, and Dr Simpson flew to Mount Isa to tend to the injured man on the flight back to Cloncurry hospital. It was a dramatic demonstration of the viability of a flying medical service, and the authorities were understandably impressed.

Shortly after, on September 9, 1927, the AIM was able to set up the Australian Aerial Medical Service based in Cloncurry, with Dr K. St. Vincent Welch as its first "flying doctor". A DH50 aircraft chartered from QANTAS was modified to carry a stretcher, and

became the service's first official air ambulance. It was flown by Arthur Affleck, a top QANTAS pilot. The first official call and flight was from Julia Creek, about 85 miles east of Cloncurry, on May 15, 1928.

Alf Traeger and his assistant Harry Kinzbrunner installed a 200 watt base station transmitter and receiver in the vestry of the Cloncurry Presbyterian Church. Given the official callsign "VJI", it was powered by a motor-generator set in a nearby shed, and operated initially on a wavelength of 88 metres (3.4MHz). Later this was changed to 146.3 metres (2.05MHz).

They initially installed some 10 pedal-powered sets on outlying stations. The sets had a single valve transmitter with 10 watts input, and a two-valve regenerative receiver. Each set took about 2 weeks to install, as they had to teach the station owners how to transmit and receive in morse code.

Within about a year, the system was changed from telegraphy to radio telephone. By the end of 1928, Traeger's pedal radio network was being used not just for medical emergency calls, but for almost every kind of communication — from keeping in touch with the "neighbours" to sending telegrams and listen-



**Trying out the first VJI base station in 1927, outside the Cloncurry Presbyterian Church. Alf Traeger is seated with headphones, Rev John Flynn standing behind him with the hat.**

ing to news broadcasts from capital city radio stations. Radio had arrived in the bush, and people embraced it with open arms; for a time, Traeger and Kinzbrunner simply couldn't keep up with the demand for pedal radios.

They also made a portable pedal-powered set that could be transported by car or even camel, for the AIM's ground-based bush padres.

Never one to rest on his laurels, Alfred Traeger continued to work for the service for many years. In 1939 he developed an improved two-way radio set for remote stations, powered from batteries by means of a vibrator converter.

In 1941 the official name of the service was changed to the Flying Doctor Service, by which many people had known it. The "Royal" prefix was granted in 1955, four years after the Rev. John Flynn's death in Sydney on May 5, 1951 at the age of 71.

Flynn was always very grateful for Alf Traeger's role in helping to make his dream of a flying doctor service a reality. He is quoted as saying "I must express my deep gratitude to Alf Traeger.

He worked without ceasing, and remained cheerful under the most trying runs of bad luck..." Alfred Traeger himself died in Adelaide in



**Bush padre Rev Kingsley Partridge sending a telegram to Cloncurry from outback central Australia in 1934, using Traeger's 8XP portable pedal set.**

1980, at the age of 85. His son Michael continues the family involvement with radio and electronics.

To commemorate the work of John Flynn, Alfred Traeger and the other RFDS pioneers, the Flynn of the Inland Fund and Cloncurry District Bicentennial Council are building a permanent memorial in Cloncurry. To be known as John Flynn Place, it will contain a museum, outdoor theatre, art gallery and cultural centre.

In the museum will be housed a half-scale replica of the historic DH50 aircraft used to inaugurate the RFDS.

The cultural centre will be named in honour of Alfred Traeger, while the outdoor theatre will be named after Dr Alan Vickers, the longest serving doctor to work from the RFDS base at Cloncurry. The art gallery will have the name of the Very Reverend Fred Mackay, one of Flynn's original offsidiers and the man who succeeded him for 22 years as head of the Inland Mission. Rev Mackay is still sprightly at over 80, and is very enthusiastic about the project.

"To know that at last the whole nation will know of the work of these men is one of the most exciting happenings of my life", he said recently. "Flynn and his co-workers spent sweat and blood pioneering the service from Cloncurry. It's a place where I got my baptism of John Flynn's fire."

The \$1.75 million memorial complex is currently taking shape and looks set to become a major attraction in the central western district of Queensland. It is due to open on April 27, 1988, to coincide with the CSR Hinkler Air Race's stopover in Cloncurry.

The Flynn of the Inland Fund would still welcome donations from any individuals or companies, to assist with the memorial. Donations of \$3000 or more will entitle the giver to a plaque at the Flynn Place centre, while donations of \$1000 or more will earn foundation membership of the project. Further information is available from Mr Greg Beavis, Fund Secretary at 61 Gregory Street, Cloncurry 4824, or by phoning (077) 42 1757.

The Fund is operating on one of John Flynn's maxims: "If you start an idea, nothing can stop it." Like his earlier dream of a mantle of safety over the inland, the memorial to Flynn, Traeger and their colleagues looks certain to become an enduring reality.

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