

Speaking on his experiences of air combat during the Battle of Britain, famed German fighter pilot Adolf Galland later recalled, ‘We learned very soon that English radar was just perfect, but we neglected to attack the system’. For the RAF, the network of radars and control rooms gave the British commanders the upper hand in the battle. Two years later, radar was instrumental in defeating the air threat to Allied forces in Northern Australia and the South West Pacific. This was the genesis of the Air Battle Management (ABM) process still practiced today and one in which a young RAAF officer, Alfred Pither, played a major role.

Born and raised in country Victoria in 1908, Alfred Pither had an abiding fascination for radio in his early years. In 1927, he was selected by the RAAF as one of the first cadets to attend the Army’s Royal Military College, Duntroon (RMC), before being commissioned into the Air Force. After graduating from RMC in 1930, Pither completed pilot training at Point Cook and after a short flying tour with No 1 Squadron, was posted as the Station Signals Officer at Point Cook. Further postings involving signals work in Air Force Headquarters and at Laverton gave Pither practical experience in this specialised field.

In 1936, he was promoted to Flight Lieutenant and sent to the UK to attend the Royal Air Force signals course at RAF Cranwell. On completion, he returned to be in charge of signals training at the RAAF Signals School at Laverton. Pither’s enthusiasm for the role was such that he designed a new training facility which was built at Point Cook. On 1 September 1939, Pither was promoted to Squadron Leader and posted to Air Force Headquarters in Melbourne, where he planned the expansion of the Air Force’s signals training schools. A huge increase in the rate of this training was required if Australia was to achieve its commitment under the Empire Air Training Scheme. Pither’s workload was immense, but the required outcomes were achieved.

In September 1940, Pither travelled to England where he witnessed first hand the benefits afforded by radio direction and ranging (radar) in the control of RAF fighters countering the Luftwaffe’s bombing campaign. Promoted to Wing Commander on his return in 1941, Pither was posted to Air Force Headquarters where he was responsible for the development of the RAAF’s radar capability. Recalling the techniques employed during the Battle of Britain, he developed a plan to surround Australia with a chain of radars consisting of nine ‘Advanced Chain Overseas’ radar stations using equipment imported from Britain.

With the Japanese entering the war in December, getting a radar network operational was a top priority. Under Pither’s direction, 57 radar stations were built, equipped and manned, 100 aircraft were fitted with
Airborne radar, a radar school was created and over 1500 personnel were trained in the maintenance and operation of this specialised equipment. All this was achieved in only 18 months.

The personnel and equipment required to establish No 31 Radar Station at Dripstone Caves near Darwin arrived on 5 February 1942, but the system was still under construction when the first air raid occurred on 19 February. However, by March 1942, No 29 Radar Station with their early warning radar became operational at Port Moresby just in time to provide warnings and allow the Kittyhawks of No 75 Squadron to intercept the attacking Japanese bombers.

Pither also foresaw the need for mobility and drew up the requirement for an air-transportable radar. This resulted in the Light Weight Air Warning (LWAW) radar which was largely manufactured in Australia. In December 1942, No 50 Radar Station deployed with one of the first of these radars to Dobodura, PNG using six C-47 transport aircraft. Within days, the radar was operational and providing warning of the approach of enemy aircraft to Allied forces in the Buna campaign. Later in the conflict, No 114 Mobile Fighter Control Unit and their six subordinate radar stations equipped with LWAW radars, disembarked in the amphibious landings on Tarakan, Borneo in May 1945 and within days, assumed responsibility for the air defence of the beachhead.

Having achieved so much in establishing the radar early warning systems around the Australia, Pither was again sent to England in 1944. As a staff officer in the Allied Expeditionary Air Force Headquarters, he assisted in the planning of air defence measures necessary for the Normandy landings. From July 1944, he served with No 80 Wing RAF—a formation that was established to jam or ‘bend’ the radio signals used to guide German bombers to their targets. When German V-2 rockets began impacting British cities, it was believed that the missiles received some sort of radio guidance. A radio-countermeasures unit of No 80 Wing, commanded by Pither, deployed to France and Belgium in October 1944 in an unsuccessful attempt to jam the missiles shortly after launch.

Pither returned to Australia in December 1944, taking up the post of Director of Radar and continued his work developing the Air Force’s radar capability. Shortly after the end of hostilities, he joined the Australian Scientific Mission to Japan which examined the state of Japanese scientific development. In 1947, he was promoted to Group Captain and assumed responsibility for the RAAF involvement in guided missile development. It was in this capacity that Pither was active in establishing a rocket-range in South Australia and is credited with suggesting the name ‘Woomera’ for the new establishment. In 1956, his service in the wartime Air Force was recognised when he was appointed a Commander of the Order of the British Empire (CBE).

Group Captain Pither’s last decade of service was spent in various appointments that included Commanding Officer No 1 Aircraft Depot at Laverton, and Officer Commanding RAAF Laverton. From January 1963, he held the post of Staff Officer Telecommunication Engineering at Headquarters Support Command in Melbourne. He retired from the Air Force in February 1966 with the honorary rank of Air Commodore. Air Commodore Pither passed away suddenly in Melbourne in 1971 where he was cremated with military honours.

Today, Air Commodore Pither is remembered within the RAAF air defence community as the Father of RAAF Radar. His advocacy of radar systems pioneered the ISR networks of the contemporary Air Force. Every year, the award of the Pither Trophy to the airman making the most positive contribution in support of No. 41 Wing’s activities, is a fitting tribute to this dedicated officer.

Key Points

- Alfred Pither was a tireless advocate for the establishment of an RAAF radar network during World War II.
- Over 150 ground-based, early-warning radars, and many mobile ground control intercept radars were central to his vision.
- The fundamentals of the contemporary ABM role trace a direct lineage to the principles of fighter control established during World War II.