THE LOW FLYING BOMB

by Paul R. Hare

Archibald low was an inventor who conceived numerous innovations and advances in many fields of technology; principally those related to either wireless or transportation, although his ideas were frequently far in advance of the technology required to bring them to fruition. He was a founder, and president, of the British Interplanetary Society, long before space travel was more than a dream, and never lived to see man go into space.

Born in 1988, Archibald Montgomery Low was educated at St Paul's School and at the Central Technical College (later part of Imperial College) where his tutors encouraged his creativity, but failed to instill in him the perseverance necessary to bring his ideas to fruition.[1] It was a character defect that would plague him all his life, and prevent his gaining the fame his inventiveness deserved. He is now better known for the many books he wrote, most intended to explain science to the layman, than for any of his many inventions.

In May 1914 he gave a demonstration of a form of television, which he called 'Televista', at the Institute of Automobile Engineers, of which he was a member.

Low's system employed a selenium cell, a semi-conductor, to convert light into electrical impulses but this proved too slow to adequately handle a moving image, spoiling the effect. Under a headline *Seeing by Wireless* a leading newspaper commented[2]

An Inventor, Dr A.M. Low, has discovered a means of transmitting visual images by wire. If all goes well with this invention we shall soon be able, it seems, to see people at a distance, as now we can talk to them at a distance. Whether Dr. Low will be regarded in future as a benefactor, or the opposite, depends on something more than the degree to which the business will be mismanaged by the government department that will certainly absorb it as soon as private enterprise and capital have made it a going concern

But then came the war, and so the first Government department to show an interest in Low's work was the War Office. Low volunteered and was commissioned into the army, and was then set to adapting his 'Televista' system to range finding, and the control of coastal artillery batteries. Whilst carrying out this work, he was based at the Ordnance College at Woolwich and claims[3] to have been given the title of Honorary Assistant Professor of Physics. Thereafter, and for the rest of his life, he adopted the title 'Professor', much to the annoyance of the establishment, since he occupied no chair in any university and was therefore not entitled to be so called.

During 1916, with the Zeppelin menace causing widespread concern and the airships seeming invulnerable to machine gun bullets, Low was approached by Colonel Cadell, Director of Aircraft Equipment, to see if he could adapt his wireless system to control a flying bomb that could be guided into a position close to the enemy dirigible and then exploded, thus destroying it.

This idea was far from new, having first been made public back in 1909 by the film *The Airship Destroyer* in which the hero saves the world, and wins the girl, all in less than seven minutes, by devising an aerial torpedo with which to bring down the airship which is attacking a city.

Low happily transferred to the RFC, enjoying what he considered to be its youthful enthusiasm and infectious camaraderie.[4] Based at the experimental unit at Feltham, which opened n July 1916, and, assisted by Captain Poole and Lieutenants Bowen and Whitton, Low worked in comparative secrecy to develop his apparatus. In order to preserve this secrecy, General David Henderson, Director General of Military Aeronautics, suggested that the project should be called the 'Aerial Target', so that, if its existence became known to the enemy, it would be thought of as some kind of drone for anti-aircraft gunnery practice, thus disguising its true purpose, and by that name it has always been known.

What Low devised, making the best possible use of the technology available, was a variable spark transmitter and a receiver which allowed sequential control of a number of

Archibald Montgomery Low demonstrating one of his inventions.