



Ron Howard
Engineer and Director

By

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Ronald Walter HOWARD CBE BE FREng Hon FRAeS, (1929-2017)

Ron Howard was born in Adelaide, Australia in 1929. He graduated with a Bachelor of Engineering (Electrical) from Adelaide University in 1950 and a Fellowship Diploma (Diploma of Technical Instrumentation) from the South Australian School of Mines in 1951. He entered into 'industry' by way of the Australian Government service and was appointed to the Long Range Weapons establishment at Salisbury and Woomera where among other projects he worked on the first UK Guided Missile, RTVI. In 1951-2 he was seconded to Britain to work on Guided Missiles in the Admiralty Gunnery Establishment, Teddington and at RAE Aberporth.

In June 1951 Ron Howard arrived at Heathrow Airport having travelled from Australia via San Francisco. Apparently, the journey to the UK required several attempts to get across the Atlantic in a Stratocruiser. Heathrow was still under construction and the 'arrivals hall' was still a Nissen Hut. He spent his first night in London at the Park Lane Hotel since this was the only one he recognized having 'acquired' it many times while playing Monopoly! Back in Australia, he was involved in the firings of the UK Guided Missiles and also set up the firing of Guided Rockets at Woomera.

Ron Howard then left the Civil Service and came to Europe on a Youth Hosteling Holiday, whilst seeking employment. He told the story of how he came to Elliott Bros. by recalling how one day in Genoa (Italy) he was eating chips which were wrapped in a copy of an English newspaper, when, through the grease he saw an advertisement for Engineers by Elliotts! This led to his ultimate introduction to the Company, beginning at Borehamwood in 1954 as a Project Leader on Auto-Stabilisers, and Auto-Pilots for Lightning Aircraft.

In the late 1950s he pioneered the dual-monitored concept of safe automatic landing used on the VC10 and subsequently on the BAC one-eleven and Concorde. Coupled with this, he wrote in 1960 the first definitive paper to the Air Registration Board setting out guidelines for the statistical safety assessment required for certification of autoland systems under the 1 in 107 fatal accident criteria. The substance of this paper was subsequently expanded by various authorities to become the basis of all such certification to the present day, including the new "fly-by-wire" systems.

In 1955 he met an old school friend, Enid Gretta Harrington, and they were married at Riddlesworth Hall in Norfolk. They had two daughters Julie Rosanna (Morgan) daughters Jane Clare (Lynch).

Ron Howard progressed on moving to Elliotts at Rochester and from 1960 to he 1965 held a progression of appointments in Elliott Flight Automation Limited (EFA Ltd) from Assistant Chief Engineer and then became Divisional Manager of Transport Aircraft Controls, heading a team which at one time had D.I. Jackson, A.J. Colwell and Brian Woolf as members, all of whom rose to successful appointments within the Company.

He was appointed Assistant General Manager in 1962 and Joint General Manager in 1965, responsible for Control Systems, and had seven Divisions reporting to him. Ron Howard was first appointed to the Company Board (Elliott Flight Automation) in 1965 and was made Managing Director of the Dynamics Group of the successor Company GEC Avionics Limited in 1986-87. He was appointed Managing Director GEC Avionics and a Director of GEC-Marconi in 1987. He was appointed Chairman of GEC Avionics from 1990.

During 60s he also developed the safety-critical system design principles for fly-by-wire, one of his special interests, which came to first fruition for a combat aircraft in the Panavia Tornado. He also devised the "dissimilar redundant" safety-critical system design concepts used on the Airbus aircraft (A310, A300-600 and A320) and had management responsibility for the development extension of this into the fly-by-wire system now adopted by Boeing for the B777.

Ron Howard pioneered many of the principles which are the foundation of the Company's business. These include automatic landing systems for VC-10 and Concorde. He developed the principles of the first safety critical fly-by-wire system for the Tornado and EFA and for passenger airliners which eventually led to electronic slat and flap controls for Airbus and the fly-by-wire system on the Boeing 777.

Ron Howard has played a leading role in his Company's export activities to the United States. The latter commenced with his acquisition in 1965 of the first contracts ever placed in the UK for avionics equipment for a new US aircraft, the Lockheed C5A. At this time, he founded the United States associate Company originally called EAIC to give support to the UK export activity.

In the early 1980s he received the group of contract awards to GEC Avionics for the USAF and Navy Standard Central Air Data programme (SCADC). This was a life-cycle-cost improvement programme, one of the largest of its class ever placed in the Western world and now covering over 4000 aircraft of 35 types. Later programmes within his responsibility included the Army Phoenix Reconnaissance Drone system and the Digital active controls system for the Experimental Aircraft Programme (EAP) from which followed the system for the European Fighter Aircraft.

In 1987 he was responsible for the acquisition by GEC of two United States avionics companies, Lear Astronics Inc and Developmental Sciences Inc, which operate as GEC Avionics associate companies.

Under his management GEC Avionics from its Headquarters at Rochester, Kent, was continuously successful in avionics exports, achieving its 14th Queen's Award in 1988, second in this respect only to Rolls Royce and the consolidated BAe. This export business was more than half of the UK total in Avionics, peaking at over £200 million per annum in 1988 in a total Company turnover of over £400 million. (8000 people).

He was a member of the Aeronautical Research Council, is a past chairman of the Aviation Division of the EEA, on which he served for 20 years, and a past chairman of the Technical Board of the SBAC, on which he served for 17 years. He was joint Chairman with Deputy Controller Research MOD(PE) of the Joint Research Council in 1978-80. He has served on the CAA R & D Board and was a member of the CAA Air Requirements Board. He was also a member of the DTI Aviation Committee and the Board of Management of the Royal Aerospace Establishment, the Department of Energy Offshore Energy Technology Board and a member of Court of Cranfield.

He was elected President of the SBAC (Society of British Aerospace Companies) for the year 1989/90 and was deputy President for Farnborough '90.

Ron Howard was awarded the Bronze Medal of the Royal Aeronautical Society in 1973 and

the British Gold Medal for Aeronautics in 1986 "For his exceptional contribution to the development and success at home and overseas of British avionics systems, and in recognition of the manner in which he has exercised engineering and marketing leadership of the highest standard." ...

He is the author of many technical papers and twice winner of the Aeronautical Society's Simms Prize. ("Automatic Flight Controls in Fixed Wing Aircraft" (1973), the basis for his 1975 Sir George Cayley Memorial Lecture, and "Progress in the use of automatic flight controls in safety critical applications", the basis for his European Pioneers Lecture in Braunschweig (presented in German) in 1980). He was also joint author of several Technical works, including *'Reliability in Automatic Landing'* and *'Concepts of Redundancy for 'all weather' landing'*.

He was made a CBE for services to the avionics industry in the 1991 New Year's Honours.

He has 500 hours as Pilot in light aircraft and gliders, and other interests include the restoration of historic domestic buildings and antique furniture. He served for 4 years on the Boxley Parish Council, taking a special interest in Conservation and Environmental matters.

After his retirement in 1992 he went back to Adelaide and worked at the University of South Australia.

Ron Howard died at the age of 88 on Friday, 23rd June 2017, in Adelaide, South Australia.

Ron W. Howard was a son of the Antipodes, having originated in, South Australia. (He allegedly had a map of England upside down on his office wall)