

# Association of Professional Engineers

of the

Province of Manitoba

## Merit Award

to

### WILLIAM RALPH BULLOCK

B.Sc.Eng. Physics, M.Sc., P.Eng.

*Ralph Bullock graduated from the University of Saskatchewan with a Bachelor of Science degree in Engineering Physics in 1958 and a Master of Science in Upper Atmosphere Physics in 1960, with credits from U.C.L.A.*

*Ralph commenced his 34-year career with the Canadian Armament Research and Development Establishment in Valcartier, Quebec in 1957, in the areas of circuit design and solid-state physics. In 1960 he worked as a Research Associate in solid-state physics at the University of British Columbia.*

*In the same year, he joined the Rocket and Space Division of Bristol Aerospace Ltd. He was immediately assigned as leader of a group responsible for the development of diagnostic payloads for the Black Brant series of scientific sounding rockets. He continued working in this area until he was promoted to Manager of the Electrical Engineering Department. In 1979, he was promoted to Director of the Rocket and Space Division, and in 1980, to his present position of Vice-President, Engineering and Quality.*

*Ralph is responsible for all design engineering, plant engineering and technical support activities for projects including the development of components for the CRV-7, air-to-ground missile and the development of advanced multi-stage, Black Brant vehicles and systems. He is also responsible for the engineering support for the Canadian and international fleets of F-5's, and the design and development of the Wire Strike Protection System (WSPS) for helicopters.*

*Ralph Bullock has become well-known and respected by members of the Government and the scientific community for his energy and commitment to the success of Canada's space science programme and the Black Brant. His strong technical leadership in the engineering activities at Bristol has made Bristol Aerospace Ltd. a Canadian and world leader in the areas of advanced propulsion systems, space systems, and aircraft systems design, repair and overhaul. In 1990 Ralph Bullock received the Canadian Aeronautics and Space Institute McCurdy Award.*

*Throughout his career, Ralph has been active in many professional associations and a member of many advisory boards, organizational committees, and boards of directors at the local, provincial and national levels. With every activity and deed, he has provided leadership in the advancement of the quality of life within the engineering profession.*

*For his outstanding engineering creativity and technical leadership during 30 years of close involvement with the development and operational use of the Bristol Aerospace family of Black Brant sounding rockets, the Association is proud to confer its Merit Award on Ralph Bullock.*

October 25, 1991