



The AMA History Project Presents: Autobiography of ROLAND A. BOUCHER



**Modeler, Author, Electric Model Pioneer,
Model Industry**

Born July 12, 1932

Started modeling in 1942

AMA #961

Written & Submitted by RAB (7/1996); Transcribed by NR (8/1996); Edited by SS (2002), Reformatted and updated by JS (10/2007, 07/2012)

Career:

- Flew world record electric RF-4 over 40 miles on a closed course
- Designed and built the world's first solar-powered plane
- Book author, *Quiet Revolution* and *On Electric Flight*
- Contest Director and Vice President of the Society of Antique Modelers #49 for over 15 years
- During World War II, flew Free Flight rubber, CO2 and U-control glow 09-49

Honors:

- 2000: Model Aviation Hall of Fame
-

1948: Built Radio Control (RC) rudder only (homemade radio flapping rudder proportional).

1952: Quit to fly full-scale planes.

1963: Back in modeling flying U-control, Free Flight glider, Radio Control sailplanes, and Radio Control sport pattern.

1965: Joined Astro Flight with brother Bob and designed the following:

- Torrey Pines A-2 Nordic Free Flight Kit
- World's first electric power unit, Astro 10
- Astro 15, 25, 05, 020 and rapid battery charger
- RF-4 scale-powered sailplane glow Radio Control kit
- RF-4 scale electric sailplane electric Radio Control kit
- Bushmaster electric sport electric Radio Control kit
- Electra 225 electric pattern ship electric Radio Control kit

1971: Flew world record electric RF-4 over 40 miles closed course distance on Feb. 5. AMA refused to grant record 01/4 grounds that category did not exist. They should grant it now!

1974: Designed and built the world's first solar-powered plane and first Samarium Cobalt Motor, $\frac{3}{4}$ horsepower.

- Author, "Quiet Revolution," a four-part series in *Radio Control* magazine

- Author, article on electric flight in National Free Flight Annual

1975: Quit Astro and started Leisure Electronics with wife, Nancy.

- Designed and manufactured the world's first successful electric-powered model car.
- Helped ROAR to develop specifications for .05 motor class.
- Developed line of battery charger 104, 105, 106, 107 and digital charger 109.

1980: Put Leisure Modified Motor and 6-cell, 1200 MAH battery in Kysho Cardinal and rekindled electric power revolution.

1981: Designed electric Playboy and started 05 electric class in the Society of Antique Modelers (SAM).

- Held first Leisure Grand Championship for Powered Sailplane with a \$1,000 first prize so that FAI class competitors would try Electric Leisure Electric Kits, including Playboy and Lanzo Bomber Old-Timers, the Antique Electric Trainer and the American Eagle Electric Scale Ship.

1988: Semi-retired. Sold off all but motors and gearboxes. Now run Leisure as a part-time business to be near my airplanes – a 1980 Piper Arrow Four Place Retractable and a scratch built Marquart Charger Aerobatic Bi-plane completed in June 1992 with the help of Henry Bartle, Radio Control -Formula-A 1 U.S. Team, Fernando Ramos, writer for Model Builder, and Ted Neja, a retired TWA Airlines captain.

I have been a contest director and vice president of SAM 49 for over 15 years. Today I fly 05 electric LMR and 05 electric Texaco and Class B Ignition LMR. I also try to fly the Marquart Charger and Piper Arrow at least once a week.

Addendum

Mr. Boucher has had 35 years professional experience in engineering and management. For the past 15 years, he has been owner and president of Leisure Electronics, a small toy and hobby manufacturer.

In 1975, he conceived and developed a Radio Control electric model car. With his wife, Nancy, he formed Leisure Electronics to manufacture and market this product. At first, no toy distributor would carry this product, but in a few weeks after the first sales through a local toyshop, the car became a nationwide hit. Today every kid in the country had heard of Radio Control cars. In five years, the annual sale of Radio Control cars and accessories reached industry totals of nearly \$500 million. In 10 years (1985), pressure on the profit from foreign competition became intense and in 1988 Mr. Boucher's wife, Nancy, suffered a heart attack. These events led Mr. Boucher to scale back his company involvement and today he spends most of his time doing engineering consulting work for other companies.

Earlier upon graduation from Yale, Mr. Boucher joined the Hughes Aircraft Company of Culver

City, California. He was assigned to coordinate the test and evaluation of the avionics equipment used on the F-106 first line fighter aircraft then in production. The reliability of the first two squadrons was so bad that their deployment to active military bases was in doubt. Mr. Boucher was asked to head up a task force of engineers and technicians assigned to triple the in-flight time before failure for these two squadrons of F-106s and to do it in 90 days. This seemingly impossible mission was accomplished on time.

In 10 years, he rose to the position of engineering manager and was engaged in the design of satellites for communications and navigation. During this period, he developed an improved satellite camera for meteorological photographs, which is now in widespread use. He conceived, developed and demonstrated the feasibility of satellite to aircraft communications at VHF frequencies using Syncom III and managed the development of VHF experiments on NASA advanced technology satellites number I and III. In 1969, he was chosen to be a member of the United States delegation to the first CCIR conference in Geneva to select frequency authorization for satellite communication.

In 1968, Mr. Boucher developed the first airmobile satellite television transmission station. This system was used in Columbia during the 1968 visit of Pope Paul and later in China during the 1972 Nixon presidential visit. He was later offered a position in the office of president, but declined due to the impending Watergate investigation.

In 1973, he left the employment of Hughes Aircraft Company to form a company devoted to the development of a high altitude long endurance (months) solar-powered electric aircraft. This vehicle, conceived and designed by Mr. Boucher, demonstrated the basic design feasibility in 28 flights to five figure altitudes. All flights were powered solely by incident sunlight on the flying surfaces. In 1975, Mr. Boucher sold his interest in this company and formed Leisure Electronics.

Honors and Societies

Sigma Pi Sigma, Tau Beta Pi, Eta Kappa Nu, Sigma Xi, American Institute for Aeronautics and Astronautics, California Professional, Engineer 6094

Publications

- “End Effect Losses in Magnetohydrodynamic Generators,” with Dr. D.B. Ames, *Journal of Applied Physics*, May 1961
- “Satellites for VHF Aeronautical Communications,” *IEEE Aerospace Symposium*, Seattle, Washington, July 1966
- “VHF Satellite for Maritime Mobile Communications,” *RTCM Annual Assembly*, May 1967
- “Current Satellite Development,” Conference Record, IEEE International Conference on Communications, June 1968
- Many others

Patents

- Parallel Rail Accelerator #3374629, issued March 26, 1968
- Remotely Controlled Electric Airplane #3957230, issued May 5, 1976
- Solar-Powered Airplane – Patent Pending
- Nickel Cadmium Battery Charger – Patent Pending

Hobbies

- Aircraft owner and pilot, flies Radio Control models and built (with partners) a homebuilt aerobatic biplane

*(signed) Roland Boucher
(updated) August 27, 2002*

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