The AMA History Project Presents:
Biography of GEORGE P. STEINER

May 30, 1926 – May 6, 2023 Modeler starting in 1968
AMA #52297

Written & Submitted by BA, GPS (09/1997), AMA staff (06/1991); Transcribed by NR (01/1998); Edited by SS (2002); Updated by JS (05/2008, 05/2023); Reformatted by JS (02/2010)

Career:

- Designed and built one of the very first glider winches
- 1971/72: Took first place in distance and speed by flying a Graupner *Cirrus*
- 1973: Published a magazine construction article about winch in *American Aircraft Modeler* (April 1973 issue)
- 1974-1997: wrote a monthly column in *RC Modeler*
- 1985: Went to the Reno Nationals (Nats) to serve as frequency coordinator in 1985
- 1985: Became a frequency coordinator for District X
- 1985-1997: served on the AMA Frequency Committee Board
- 1986: AMA asked George to be the frequency honcho for the next Nats
- His electronic design articles and product reviews have appeared regularly over the years in *RC Modeler* magazine
- His popular 2 X5 redundant battery system is still being used by many Radio Control modelers
- 1996: Authored and published book, *A to Z:Radio Controlled Electronics Journal*

Honors:

- 1989: AMA Distinguished Service Award
- 1991: Howard McEntee Award
- 1991: Vintage Radio Control Society Hall of Fame
- 1992: AMA Fellow
- 1998: Model Aviation Hall of Fame

Steiner's principle contribution to the AMA and all Radio Control flyers is in the laboratory and field-testing of Radio Control equipment with particular emphasis on receivers.

About George Steiner, as observed by Bob Aberle

George has been active in modeling since childhood days. He got into Radio Control 26 years ago, in 1965. A professional engineer specializing in microwave communications, George is now retired, but runs his own Radio Control service and repair business out of his home in Sacramento, California under the name of GSP Products

George Steiner's electronic design articles and product reviews have appeared regularly over the years in *RC Modeler* magazine. Many Radio Control modelers are still using his popular 2X5 redundant battery system. The list of his original design, Radio Control oriented, electronic

circuits certainly parallels the efforts of Howard McEntee during the 1950s and 1960s.

In recent times (1981-1996), George Steiner has been a very active member of the AMA Radio Control Frequency Committee. His principle contribution is in the laboratory and field-testing of Radio Control equipment, with particular emphasis on receivers. A good deal of the current AMA Guideline 1991 Radio Control equipment has evolved from the dedicated efforts and time consuming testing work done by George. Much of his work will likely never appear in print, simply because of the tremendous volume of data involved. But rest assured our Radio Control hobby today is a lot better off. As you begin to fly on all 50 Radio Control channels this year, or any year without any technical problems, keep in mind it was George Steiner who helped us get to this point.

"George" by George in the beginning

When I was 8 or 9-years-old and living in the San Francisco, California, area near the famous Oakland Airport, I saw Amelia Earhart take off on her world famous flight around the world, so my interest was making balsa wood solid models that famous people flew. Then I advanced to the 10-cent rubber powered models, and finally ended up with a larger rubber powered model, but never got into Free Flight or model airplane engines. I rather put it away for a good many years. Then about 1965, I moved to Sacramento, California, and went to the flea market. Low and behold, there was this table full of Megow and Comet models for sale, so I bought several of them. Still have some of them fresh in the box.

That got me started again. I built a few of those that made me remember of my childhood days back in the late 1930s and started visiting the hobby shops, started looking at the Radio Control stuff that looked fairly simple and basic. It turned out that it was still escapements from way back then in the early 1950s, so I just went ahead and got started into it anyway.

My vocation was in electronics, so I can say that it was easy enough to understand to put together and make it work. I got started doing the Galloping Ghost equipment and by 1967 or 1968, I had the Galloping Ghost working very well, but let's back up to later in 1965. My first radio used an escapement – it was a Junior Falcon. Back then, there was nobody around to show you how to put things together. Hobby shops were somewhat sparse and they could not tell you anything. So I worked at it and I had 52 crashes – one every weekend. It took me 52 weeks before I had a successful flight in Radio Control. And on the first flight (without crashing), it flew away. It flew a mile or so away and disappeared.

That did not stop me. I started building another model and got it going. So by 1968, I was doing pretty well. Incidentally, that lost model showed up again. Somebody had found it. I could not salvage the radio or the model since it had weathered a whole year and was now a piece of junk. From 1967 when proportional started coming in, I started buying Heathkit items and ad lobbing and building the Radio Control equipment electronically and flying. About 1969, I got started into glider flying because it seemed that the power flying and I wasn't gaining on the controls intermingled with aerodynamics with crashes every other weekend. I was not getting too far with power. It was OK, but then I took a hold of glider flying.

About that time, Graupner came out with the *Cirrus* that I built. At this time, there were many ideas about having different kinds of winches for the use of slinging up the Radio Control gliders. It was all just getting started back then, winching airplanes up with bungees and all that kind of contraption. Therefore, I designed and built one of the very first winches. There was a magazine article in [the April 1973 issue of] *American Aircraft Modeler* [titled "AAM Glider Winch"]. It was a construction article so you could build it yourself. That became a standard around Sacramento and other areas because it used a rolling pin for the spool and drum. It was easy to build, going to a hardware store, getting a rolling pin and then the 1949 Ford starter motor. I found out the starter had a third brush, and I figured out how to eliminate it. The speed was governed by this third brush. By modifying the Ford starter to two brushes, it made it wind up faster, tighter, and more power.

Along with the winch ideas, I got involved with the LSF, and finally became a LSF level 4 by 1974. In the interim, I devised a pulser so that you could set the pulse of the winch pedal. Instead of pulsing the winch with your foot, you could set the dial and just lean on it to the pulser and the glider would go up real smooth without ripping the wings off. At that time, gliders were not as strong as they are now. They were light thermal type things, and you could just rip the wings right off with a heavy foot on the winch. I got that down to where it was pulsing up, you could go fast or slow to gain a lot of altitude before you left the winch line. Then I entered into the LSF contests.

In 1971 or 1972, I took first place in distance and speed by flying a Graupner *Cirrus*. From then on, I worked on the contests and kept winning and winning. So by 1976, I had won a whole bunch of contests and I was up to Level 4 (LSF). What really did me in was when I was doing my Level 5 was the eight-hour slope flight. I was with other Level 4 people in my area on a hill down in Vacaville that I had gotten permission to use. We started out the first thing in the morning, like at 7:30 or 8 then flew for about an hour and a half when the wind quit. So we had to come back down and start all over again. Everything was going along fine. I was seven and a half hours into the second flight, thinking about how I only had 30 minutes left. One of the guys was smoking and caught the hill on fire. The fire burned that whole hill where the local club now slope fly, everything from local nursery clear over the top of that hill burned. A mile square. That put me into such a state of shock that I gave up gliding from then on. I was geared to keep on going, but psychologically I just was ready to give it up. From then on, I turned to scale, sport, and Radio Control electronics.

By 1978, I had designed and built a programmable transmitter that would do everything from the early days with reversing and rate and mixing and a first of its kind. I built the transmitter myself and it was designed around a bunch of 555 IC chips. There was only one built, but I distributed the boards to several people, who never finished building them. In 1980, I was doing a lot more scale modeling things and also I began to write more articles for the magazines with interest in electronic items. Then it got around in the early 1980s that I had become pretty proficient in frequency use and testing with Radio Control equipment, so I became a frequency coordinator for my district and went to the Reno Nats in 1985.

I went up there with a group of guys and boy did we have a good time! There were six of us who

ran the contest for the glider people. That is how I got introduced into the AMA on a one-on-one basis because I ended up doing all the frequency checking and everything for all the transmitters at this Nats. I found out that they did not have anybody that knew enough about it to do a good job. And I went there and they were in trouble with checking the Radio Control radios to see if they met the Nats new requirements. I took their equipment and did it all for them, and left my name and address and said, “If you have any problems, give me a call.”

The next year, 1986, they called and asked me to be the frequency honcho for the next Nats, which were up at Chicopee in the New England states. They paid my expenses for the time I was there. So, from then on, I became involved in AMA. I got a call from the AMA Frequency Committee about that time and they asked if I could be on the board with 16 other members. So every year, I was at the Nats doing all the frequency changing, coordinating and working out along with the AMA Frequency Committee in Reston, Virginia, near Washington, D.C.

Finally, about 1987 or 1988 they said that we are going to have all 50 frequencies and asked how can we use them at the Nats? I took on the task of assigning different classes for different frequencies so that they could all be flown at the site at the same time for the Nats. That frequency plan was implemented by AMA and is still in force. That was just one of the many thing that I did for AMA. Since then things have been smoothed over because of all the new 50 frequencies and everything is going great. There are very few problems. I have not been assigned anything lately from AMA except for this last year, they asked if I could go to Florida and help with the Stanford Research Institute study looking for frequencies that might conflict with radio control. That became a magazine article in 1994. That finally finished that year up. Since then I have been doing just magazine articles with many product reviews.

I am still the Region X (AMA) frequency coordinator. It is interesting to note that the majority of the test equipment that the frequency coordinator's use throughout out the AMA districts is by my suggestion. This is because I had purchased and brought the first piece of equipment myself to the Frequency Committee meeting back in 1986 saying, “You are going to need this, if we are going to have any kind of monitoring of frequencies for all our districts.” They proceeded to purchase the devices per my recommendation at $1,000 per copy for each district. Therefore, I have been kind of a leader in that area, but right now it is on the downhill side. AMA finally moved to Muncie, Ind., and so they have their own staff with special interest groups to run things like the Nats. It was fun to be a part of the AMA Nats because you were one of about 25 selected people to run the Nats and you were gypsies, like a carnival, and you would go to different towns and places. It was really a lot of fun. I really had a good time for two weeks or more each year. Just being a part of it and putting it together. They have a good staff of people and they counted on you to be a part of it. I was doing all the frequency checking and monitoring all Radio Control frequencies at the Nats and you can see that in my published (1996) book “The A to Z, Radio Control Electronic Journal.” I kept tally of who was using what in those years. It stopped this last year because I did not get a chance to go to the Nats, but I was getting tired of it anyway.
There were many disappointed people because they liked the way that I was doing that keeping a tally on who flew what. But it did not make any difference to the AMA group. But you would be surprised that every one of the manufacturers called for their own list or comparison list that I printed. They would slide out to the Nats to ask if I had it, to ask that I please send the data. They wanted to compare the percentage of where they fit in. That was neat!

My background did not come easy. I became an electrical engineer the hard way. I worked 34 years for PG&E in their Electronics Engineering Group on many powerhouse projects in electrical controls and installing microwave communication links. This background worked in well with Radio Control when I became interested and what I was doing.

To back up a little bit, in the late 1960s, while I was interested in the Galloping Ghost working for PG&E, I found a use using the GG pulse width and pulse rate for two functions, (and you could have a third function with loss of signal). PG&E was looking for a three-function alarm for their remote substations to come to some central point over a single pair of wires. They could lease a pair of telephone wires for this control so I designed the pulse rate, pulse width, and loss of signal system to give them three functions. I always laughed at that, because that was the basic Galloping Ghost and they were using it to monitor remote electrical substations for alarms. I did the analog pulse rate, pulse width on a single board that took the entire wiggle out of it with some relays to give an alarm. It would just tremble a little bit and the alarm would come in. Neat!

That is it up to about 1996 and 1997. Now I am kind of more or less into the electronics of the radio control, writing articles and kind of backing off the flying. I do not have much enthusiasm in the directions of balsa wood, but love it when some of my friends get me out on special occasions to fun fly.

I get out now and then so that I will not stay home and stagnate. I am also keeping a collection of about 100 old Radio Control units of all brands, to remind me of the good old days of a crash every week.

September 17, 1997: George Steiner (far left). Also, Jack Albrecht (second from far left), Dave Brown (far right)

The following was published in the June 1991 issue of Model Aviation *magazine. Bob received a 1991 WRAMS Howard McEntee Award.*

In 1971, the Westchester Radio Aero Modelers (WRAMS) established an award in memory of Howard McEntee, well-known radio control experimenter, designer, and author. The award has been conferred on a number of modeling notables over the years, including Bill and Walt Good, Maynard Hill, Paul Runge, Hal deBolt, John Worth, and others.

This year's award was presented to George Steiner at a luncheon held during the WRAMS' annual show in White Plains, New York. George is a member of the Academy's Frequency Advisory Council. He has served on the board, as well as the Frequency Committee, for five years.

Highlights of Steiner's contributions to the Radio Control community are varied. Having been involved with Radio Control for 26 years, he has been a contributing and associate editor for *R/C Modeler* magazine for 18 years. In addition to designing various radio related items, he has conducted extensive empirical lab tests on equipment and assisted the industry in creating equipment that will survive in our new harsh radio environment. Invaluable aid has been afforded modelers by preparing frequency control plans for both clubs and the national organization.

A sincere thank you to the Westchester Radio Aero Modelers for recognizing the contributions of George Steiner. A hearty "well done" and congratulations is passed along from the Academy, as well.

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