



The AMA History Project Presents: Autobiography of PETE REED

Born September 30, 1931

Started modeling in the late 1930s

AMA #253



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Career:

- A pioneer in early Radio Control models
 - Converted a ground based reed transmitter to a hand held unit
 - Starting in 1965 ran the New England Championships at Orange, Massachusetts
 - Volunteered in 1965 to chaperone a group of Nationals (Nats) winners to the Pensacola National Air Station for the weekend
 - Flew Radio Control off the flight deck of the carrier Enterprise for an admiral
 - President of the National Miniature Pylon Racing Association in 1970 and 1995 to 1996
 - Ran the pylon racing event at the Aerolympics in New Jersey in 1974
 - Competed in the Nationals Radio Control Scale in 1983 and won second place with prototype Bantam gas engine
 - Served for years on the racing contest board and still does in 2000; currently (2003) the chair
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A Joyful Trip

I was born in 1931 so I carried the Great Depression baggage. My modeling start was with Strombecker solid models in the late 1930s and I put together a lot of them in my “cave” in the basement. My dad was a physician working in the insurance industry and commuting into New York City from our home in Larchmont, New York. He didn't have my time for or interest in my models. There was no hobby shop closer than a train ride away in New Rochelle. There were no model builders in my circle and my exposure was through Air Age and the written word and pictures.

Pretty soon, I realized that these things could fly and I brought home a 15-cent Megow Puss Moth. I was eight or nine. I asked my dad to help me put it together and as I recall his response after looking at the 1/ 16-inch stringers was “Kid, that's impossible.” Well, as it turned out he was correct. I probably built a dozen before I got one to fly. Without any help or advice, you get to make all the mistakes, but I stuck with it.

Sometime about 1940, I got a GHQ motor kit with my paper route money. I think it was about \$9.95 and came with a flywheel and a cast aluminum propeller. My dad didn't know anything about motors either but he had a friend who had an outboard so he knew all about motors! I remember they set this thing up in our garage and they started working; I started watching. The motor popped and sputtered and the air got full of smelly blue smoke and then blue language. I was instructed to exit the garage (it was a more gentle time back then). To the best of my

recollection the motor never ran. I still have it and it still doesn't and based on the fit of the parts. I don't think it ever could.

Then the war came and I traipsed off to Great Lakes Naval Training Station with my dad who enlisted in the Navy because doctors could be drafted until they were 50 and he didn't care for walking.

No powered models at this time, even if I had had the money; everybody busy with the war, but I did learn to fly U-Control – Sterling profile models of some kind. Not exactly, the way it's done today! Where the motor was to be there was a big glob of plaster of Paris. The drill was - you ran two lines from the bell crank through the tip of a fishing rod and down to the Jim Walker U Reely Control handle. You paid out the line and spun around until the line was at the line length you wanted. You could actually do a loop! I stuffed a few until I got it.

About a year later, my dad went to the South Pacific, my mom and I went back to Larchmont to wait things out.

My second motor was an Atom motor that had something wrong with it and was sent back to the manufacturer just as they went out of business. Alas, it never came back (my first disillusionment as a modeler). I tried a Drone diesel and got smelly and dirty but never got anything to fly with it. Mostly it was a lack of instruction transportation and money. My dad came back from the war and found a 15-year-old who was six foot two inches and 220 pounds who had been pretty much without supervision. He didn't know what to do about me and I didn't know how to deal with him. He still wasn't interested in my models but I was. I finally got a motor that worked – a Delong 30 and a Jim Walker Fireball – and it all finally came together and I had a ball.

My U-Control flying almost came to permanent end, though, at our summer cottage on a lake in New Hampshire. We had an eight by eight-foot float about 60 feet from the end of the dock. I reasoned that if I started the Fireball on the dock and had my dad hold it in the water I could swim to the float, grab the handle and have my dad push the plane off. Everything went well until I became a victim of poor work instructions. I apparently had not explained well enough that the plane had to be pushed sort of tangentially to the circle. My dad shoved and the plane moved out across the circle until it reached the end of the lines whereupon it snapped around and promptly cut the lines. Instead of heading toward shore, it headed off down the lake toward the proverbial sedate old lady who was bathing in the lake about an eighth of a mile away. She was not too mobile at best and being up to her neck in the water didn't help. She also was not a fan of my previous attempts to fly Free Flight off the water – the noise and all! Anyway, my Fireball was bouncing along heading right for her at a good clip and I was sure I was a dead man. Mercifully, the engine quit and the plane coasted to a stop a few yards short of my early demise.

About this time, I discovered that girls were different from boys and shortly thereafter, I began to care that girls were different from boys. This pretty much put a stop to my modeling because then came college where I started to become a Cornell aeronautical engineer. Then I discovered that aeronautical engineers had a lot more to do with number crunching than silk scarf flying so straight mechanical engineering began to look better.

I spent five years getting a degree from Cornell, getting married and getting drafted. When I came back from overseas in 1956 with my wife and a new daughter, I happened to pass by an open field and there was what I thought was a Free Flight that, lo and behold, came back to the guys standing in the snow. I slogged over in my penny loafers and discovered Radio Control! Here, I thought, was the solution to all my frustration in trying to make Free Flight off the water a reality.

The only thing I could afford was single channel where the only control was engine and rudder, and the engine part of it was more marginal than the rudder.

The first radios I had anything to do with were RF carrier operated. The transmitter sent nothing until you pushed a button and sent an RF carrier, which caused a current increase in the receiver and a small relay to close actuating whatever you had connected to your control surface. This, of course, left the receiver to listen to whatever was on the air when you were not sending a command so operation was erratic at best.

In our case, the actuator was a Bonner Vari-Comp. This device was driven by a wound rubber band. The driven face cam could be stopped at three positions such that a pin follower turned a torque rod hooked to a yolk on the rudder. One pulse and hold would give you right, two left and a single quick blip of the button would let a three-position escapement – rubber band driven – give you three throttle positions.

We took the Vari-Comp a lot farther than Howard Bonner intended. We mounted a printed circuit board and wipers to the back of a Vari-Comp to substitute for one of the two relays it took to operate the Bonner Digimite servo that had just made its appearance. Then we hooked a second Vari-Comp to the first and now one pulse gave right, two left, three down, four up and five and hold it; right aileron and we could do a true axial roll!

We considered it a good weekend if your plane didn't fly away and if you could fix what broke before the next weekend.

Science marched on and radios became tone activated and these worked better.

The Cadillac of radios was the Babcock with three tubes with filaments and lots of “B” voltage so the battery load was heavy, but we could get three loops pretty reliably by cramping the rudder hard over and holding for several turns of a spiral dive. When you neutralized the excess speed gave a zoom, which became a loop and aerobatics were a reality.

In 1959, Ace Radio Control started to publish a small paper edited by Paul Runge, the father of Tom Runge who is still (in 2000) at Ace Hobby Distributors in Higginsville, Missouri. The paper was called Grid Leaks and it opened more doors for me. The transistor could be bought and now radios were current amplification devices not voltage and what I learned in becoming a ham was partially obsolete!

I built tone-operated radios like Macy Tone and the TR4.5 from the Grid Leaks information.

Some worked better than others did.

I built the single channel receiver designed by Phil Kraft that was published in Model Airplane News magazine. It worked so well that I built quite a few for the local flyers.

Now radio design began to take giant steps. Walt Good developed TTPW (two-tone pulse width) and proportional control was on the scene. Space Control, which cost like a good used car, became available on the market.

When the resonant reed relay system showed up commercially we could still send only two simultaneous tones and it took 10 tones to operate five servos. This two-tone business was the basis for today's mode one because it made sense to put the two primary actuation levers in such a location that made it hard to give a second command along with either one and thus not get the primary control you wanted. Further, the position of those servos was neutral at rest and only began to move when the right tone was received. If you wanted only a little control movement, you gave short control bursts thus moving the servo only a little way. The transmitter was a busy place.

The class act of that system was Bramco, which was made up of a transmitter sitting on the ground with a nine-foot long antenna and a control box tethered to the transmitter. If you were a pacer, the box was an impediment as was tipping over the transmitter!

I engineered and built a hand held Bramco transmitter. It had five filament tubes run by two D-size NiCad that had just started to appear on the market. The 135 volts of "B" (voltage) necessary came from a converter run by three of the same cells. The toroidal transformers were hand-wound in front of the TV set – 1,600 turns as I recall. I ruined several of my wife's Revere bowls learning how to etch printed circuit boards as I recall!

Model Airplane News continued to publish Kraft's radio designs including 10-tone reed relay receivers to which I could match my handheld transmitter.

At one point, I designed a receiver that was built on the cord wood principle using standard resistors and stuff anyone could buy at Radio Shack. The printed circuit components were too hard to get and too expensive for the average guy. The receiver solved that problem. The construction article was published and I didn't get any complaints so it must have been OK or I made the only one!

In the early 1960s, I discovered competition and pylon racing so I flew rudder only pattern and raced deltas. By 1965, I was involved with the New England Radio Control Modelers. This was the kingpin club in New England with such soon to be luminaries as Harvey Thomasian, Ernie Huber of helicopter fame and Ed and Louise Izzo.

Starting in 1965, I ran the New England Championships at the Orange, Massachusetts, airport and it was not unusual to get several thousand spectators. We ran three classes of pattern based on the controls available as well as pylon and scale. The 23 maneuvers we did look pretty simple compared to what IMAA and TOC can do in 2000.

This was the day of New England modeling. Ernie Huber was slaving to get his helicopter to work. He said he could fly it just like a fixed wing but every landing was a crash. Ed Izzo raced pylon but his heart was in scale and his development of the foam wing cutting technique set the stage for rapid improvement of pattern airplanes as the radio technology developed.

In 1965, back when the Navy hosted the Nats, Don Lowe (who was to become the AMA president) and I volunteered to chaperone a group of modelers to Pensacola, Florida. The deal was the Navy took the senior winners and flew them to Pensacola. They would be treated to a banquet, fly their models for the admiral and then he would take his carrier out and put on flight operations for the kids. One of the kids was Dub Jett, now one of the premier engine manufacturers. The novel thing was that for the first time two of the winners were girls. I would like to have been a fly on the wall at the staff meeting when they were deciding how to handle that. The military was definitely not unisex back then. What they did was to furnish two female Marines as chaperones and two tougher ladies you never saw. It made our job easy because all we had to do was keep track of the girls and the guys were easy to find! I flew my 19-size Delta off the carrier Enterprise but I sure wish I had known in advance about the deep tie downs! I might not have been willing. I got off OK and made a nice pylon turn around what would have been the bowsprit in earlier days and came back past the island. When I landed the admiral came down and said "Great flying, son." It turned out I came back about six feet from where he was standing on the bridge. Sheer luck I didn't set modeling back a generation. He gave me a nice set of wings though and said, "Anyone who solos off a carrier deserves 'em."

In 1968, I saw Formula 1, and my modeling future was determined. My wife was and is prone to say that it is nice I have an obsession but when am I going to get a hobby.

In 1968, Hale Wallace and I built a couple of World War I semi-scale models. His was a Bristol Bullet. I wanted something different so I cut the slots in the wing and mine became a Bristol Scout. Now I had been to Rhinebeck the year before because I had heard that the IBM club was going to have a contest for models of planes flown before 1916. I figured I better get there early or both planes would have crashed because everyone knows how hard it is to balance a World War I. Well I was surprised; 16 planes showed up and I don't think any crashed. This was my inspiration. Hale and I finished first and second in the maneuvers event. The idea was to put on a simulated dogfight. Now I can testify that Cole Palen, who ran the aerodrome, was not too tightly wrapped. We were flying along concentrating on not hitting each other when there was this explosion in the air. It seems that Cole thought there should be some more realism so he let off a couple of exploding shotgun shells. He didn't bother to tell us in advance. By the way if you ever go to Rhinebeck you will see an airstrip that is cupped from side to side and has a dogleg about halfway down the runway. Maybe that is the difference between an aerodrome and an airport.

In 1970, Walt Schroeder of Model Airplane News and Bill Bennett, then of the Mint Hotel, teamed up to put on the first pylon race for money at the Mint gun club in Los Vegas. Some said the commercialism would ruin racing because of greed but it was a great success. I finished 10th and won \$100!

I was so whooped after the excitement of the Mint Hotel race that I agreed to run for president of the fledgling National Miniature Pylon Racing Association. I think Walt Schroeder of Model Airplane News set it up because I don't remember any campaign. Now I had been president of my local club – in fact it met in my house – but I was not ready for the impact of being an East Coast guy trying to run a West Coast operation with a three-hour time difference. Los Angeles is truly the land of never sleep and they thought nothing of calling me at their midnight. My problems compounded when the guy who was putting out the paper left and I had no replacement. Not my finest hour. The next year I turned the reins back over to the West and the NMPRA prospered.

In 1974, I ran the pylon segment of a meet in New Jersey called the Aerolympics. I was asked to keep a time slot open for an unknown demonstration. The overall contest director (CD) was Maynard Hill, and he was on his bicycle pedaling around to keep out of the way so as not to get shut down because we were running overtime. The demonstration turned out to be Dieter Schluter and his Huey Cobra. The demonstration was wonderful and only a year after a contest had been held in Germany to see how long a model helicopter could stay in the air was won by a time something like 30 seconds. I'm not sure helicopter modelers know just how far and how fast they have come.

In 1982, I ran into a nice old gentleman who had designed and built a gas model airplane engine that didn't look like a lawn mower engine, it looked like a Bantam 19 on steroids. Not surprising because the gentleman was Ben Shereshaw, designer of the Bantam 19 in the 1930s. I helped him some with the bearing engineering and shortly after, he asked me if I wanted to try one of the new engines. Now I had always wanted to explore the idea that you could do well in a scale competition, even if you were just an average builder, if you could fly and if your plane was scale and you could prove it. I had the opportunity to take some pictures and get to know an owner of a Starduster 11 at the local airport. I built a model of his plane and got an affidavit that it had been painted with some of the leftover paint he had used. No scale fidelity issue here! I asked Ben if he wanted me to enter the plane in the Nats in 1983 because no one had seen his engine yet. I still wasn't taking this very seriously because I was competing in pylon and Bob Underwood had been kind enough to tote my scale plane to all the places it had to be. Imagine my surprise when after I flew and they displayed the combined score for the first time I was second just a few points behind Colonel DeVries! I didn't better my position but when the event was over Ben came rushing over, embraced me, and kissed me on both cheeks. Now that is a moment I will never forget.

In 1985, the FAI pylon championships were held in Westover. There was a very dramatic situation when the Malina brothers (who had snuck out of Czechoslovakia without much money and at much personal risk) won the world championship. They had stayed in Avon, Connecticut, and practiced with Bob Wallace and me so in 1986 they invited Bob, Don McStay, and me to come stay with them in Prague and race in one of the biggest European races. Czechoslovakia was an iron curtain country and we were apprehensive, but it all went well. The race was held about 30 kilometers north of Prague on a field at the foot of the castle Melnik. The army set up the course and held demonstrations all weekend long. At the banquet Saturday night in the great hall of the castle, they had tables for all countries entered. All the communist bigwig politicians made speeches while the Czechs looked bored. After the speeches, the band gave a concert.

About 10 minutes into the contest, the band began to play American songs and that lasted about five minutes. After the concert, we went up to the bandleader with our interpreter and congratulated him on his fine music. We asked him through the interpreter why he played American tunes. He leaned over and said in English "Up the Kremlin's a**."

My youngest son showed some interest in models and we teamed up to race pylon. Modeling was instrumental in teaching him some of life's lessons. Good preparation doesn't mean you will win, but poor preparation virtually guarantees you will not. We traveled the East Coast when we could and watched the success of the Telford and Violet team firsthand. My son is now a very successful banker in Los Angeles and reaping the benefits of those early lessons.

I agreed to serve on the AMA's contest board and am still there through a rather tumultuous period that saw the death of the 15-sized Quarter Midget and its replacement with 40-powered racers as well as the decline and demise of the original Formula I event. Before Formula I died, I designed and manufactured a very successful fiberglass and foam kit of a racer called the Tomcat. I also designed and manufactured a kit for a Fokerts for the new 40-sized event.

In 1993, the NMPRA presidency again came to the East Coast when Lloyd Burnham took over, and after his two terms, I succeeded him for two terms.

In 1996, the nuts and bolts running of the pylon Nats became the job of the special interest group when it became clear that the AMA could no longer get the people it took to run the event. As president, I got to try it for the first time. Many of the procedures like the split matrix developed that first time by cooperation between AMA and NMPRA are still being used. I have continued to be event director for Q500 at the Nats up through 2000 and competed in Q40. As I turn 70, I will probably stop competing in Q40 but won't give up the Nats, the contest board, or all the great associations I have had over the years.

*(signed) Pete Reed
September 2000*

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