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# The AMA History Project Presents: Autobiography of WALTER (WALT) A. MUSCIANO



November 19, 1922 – April 3, 2019

Modeler starting in 1930

AMA #184895

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Written and Submitted by WAM (08/1997), Transcribed by NR (02/1998), Transcribed & Edited by SS (01/2003), Edited by JS (10/2005, 09/2007),  
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## Career:

- 1936: Won a school flying model contest at age 13
- Late 1930s: Became involved with the Brooklyn Skyscrapers
- Late 1930s: Won first prize in his aviation school's rubber-powered model contest
- Worked for 50 years at the George G. Sharp Inc. Norfolk, Virginia, office; retired as chief designer
- November 1946: His work was first published in Model Craftsman magazine, which started a long career in model aviation article writing for various magazine including international writing
- Helped design models for Scientific Models Inc. for a quarter century
- Occasionally wrote with a penname (such as Warner Frake, Vincent Manfredi and D.A. Newell) because so many of his articles were being published
- Was careful to use exact marking on his models and always designed models small enough to be built on a kitchen table
- 1953: Wrote first book about models
- Has written a total of 10 model books and 11 other books
- 1980s: Wrote latest model airplane book while living in England, and later continued to write books about aviation history
- 2003: Began his twenty-second book – a consummate history about the F4U Corsair
- Has had model books and articles published in the U.S., France and England
- Has written about 500 modeling building articles
- Other books of his were published in the U.S., Japan and Germany

## Honors:

- 1987: Model Aviation Hall of Fame
- 1995: Kits and Plans Antiquitous (KAPA) Hall of Fame

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*This autobiography of Walter A. Musciano ran in June 1997, Issue 18 of The KAPA Kollector. (KAPA is the acronym for the Kits and Plans Antiquitous organization.) The entire issue is on file in the Lee Renaud Memorial Library. Please see the AMA librarian for assistance. This reprint is with the permission of Walter A. Musciano and KAPA Kollector.*

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## Walt Musciano and His Model Aircraft

“Model airplanes: how we love them, especially Scale replicas. What do we receive from our models in return for the time and effort we devote to this Hobby/Sport? Pride and a sense of

achievement come to mind at once! Other obvious reasons are recreation and relaxation, but there is more – much more. How many of us realize the educational side of this hobby? We learn patience, history, biography and engineering plus science with structural design and force arrangements, usually without being aware of these hidden benefits as we intensely engage in our model activities. But, there is another benefit, perhaps one of the most important but the most remote and nebulous. It is neurological therapy, which is why model building and other crafts are prescribed for and help “shell shocked” servicemen. Hey, don’t put down your *KAPA Kollector*, yet. This is not a reprint from *JAMA* or *The Lancet*. It is the intimate story of my 66-year “love affair” with model airplanes, during which my devotion was genuine and relentless. In return, my airplanes rewarded my ardor by giving me not only unrestricted pride and pleasure but also welcome peace and calm in times of stress. Haven’t we all experienced these wonderments?

### **The Beginning**

I did not know model airplanes existed until I was eight years old. Before that time, I had spent my life caring for my mother, who was blind. My father worked out of town most of the time, so it was my job to lead her all around New York City on trolley cars, buses, and subways to doctors, etc. She was my “best friend,” as well as a loving mother, and I missed her terribly when she died suddenly during a medical procedure to restore her sight just one month before my eighth birthday. I was lost, alone, heartbroken; she had been my “life.” Then, a short while later, as I was walking aimlessly down the street one

Saturday afternoon, I passed a boy my age holding a small model airplane, and as he held it into the wind, the twisted metal propeller spun dynamically. In answer to my question, he led me to the local Woolworth “5 and 10” and showed me an array of white paper bags that had a sketch of an airplane on each bag, indicating the contents.

When I shook the bag, I heard the clatter of wood. The models were called “shelf model” kits. Prices were five and ten cents. The ten-cent kits were biplanes and had a little vial of cement (I called it glue because cement was for sidewalks!), while the five-cent kits were monoplanes with no “glue.” In those days, it was “If it doesn’t have two wings, it’s not an airplane,” so I decided to invest my dime in a biplane and “glue.” I ran home, being a “latch-key” kid, took the dime I had banked in the sugar bowl, and bought my first airplane kit. It was a French SPAD, but I thought it was an American “Spade,” thinking the “Bull’s Eye” insignia was American. I was disappointed when I opened the bag at home. It contained a small sheet of instructions, assembly sketch, patterns, a block of white wood, a couple of planks of wood, corked cement vial, a propeller, wheels and some bamboo sticks. I worked so hard at it. The



*Walt in September 2000 with two Cyclones at the Musciano Commemorative. The planes were built by two contest entrants and were Walt’s designs. More information about this event is at the end of the biography.*

block of wood was so hard to cut, it must have been pine. I carved the fuselage at the curb in the street and then rubbed the fuselage on cement sidewalks and on the bricks of buildings to act as coarse sandpaper. Alternating this with carving shaped the fuselage quite well. Then I used the small piece of sandpaper in the kit.

I had trouble holding the 12 wing struts in place while the cement dried, so I made holes in the wings and fuselage with an ice pick (we had an ice box; no refrigerator) for the struts, and it worked very well. I was quite proud of myself! Now that I reflect on this episode, I realize that this was a prime example of how model building promotes improvisation, as well as self-satisfaction and self-reliance.

I finally finished the model and colored it with watercolor paints, but I made it “shiny” by smearing the finished model with my father’s mucilage glue. After that, I had to be sure my hands were absolutely dry before handling my sticky “Spade.”

The year was 1930, in the depths of the Great Depression. I was so pleased with my first model that I became addicted to model airplanes overnight and spent every cent that I could get on the solid “shelf model” airplanes. I realize only now that my feverish model building helped me to overcome the severe loss of my mother. My father, who was 59 years old at that time, thought that model building was a “waste of time” and smashed my models as punishment; but I managed to keep ahead of him with my building. By then I had discovered model paints and no longer used my father’s mucilage over watercolors.

My love affair with model airplanes came to an abrupt halt when my father placed me in an orphanage because he could not properly take care of me due to his work, which required seasonal travel. I missed my model airplanes terribly. After I “escaped” a couple of times, my father took me home one year later, and I resumed building my wonderful model airplanes.

Now that I was back with my father, I had to move with him to a different state every season – four times a year. New York City in the spring and fall, Florida in the winter and New Jersey shore in the summer. New York City was our “base camp.”

I resumed my model building at once and always had a model ready to hold out of the window of the car as we drove to our next residence. I’d watch the propeller spin madly, and I’d climb and dive in the slipstream, imagining that I was the pilot. My father never stopped my amusement, and I believed he would no longer smash my models...but I was wrong.

It was not until two years later (10-years-old - 1932) and living in Florida that I saw my first rubber-powered, tissue-covered framework model airplane. Two teenagers were flying it back and forth to each other from opposite sides of a model shop in Miami. I was fascinated, and suddenly my beloved “shelf models” had lost some of their allure. I had to have one of these graceful, yet dynamic flying model airplanes! The price of flying model kits was much more than for the “shelf models.” Model airplanes were so dear to me that I had become quite proficient. The fuselage blocks and sheets in the kits had become much softer (balsa?), and I could build my shelf models much faster than before. At the age of 10, I struck a “deal” with the manager of the model department at Burdine’s Department Store in Miami. The store bought my completed ten-cent shelf models for 50-cents’ worth of kits and supplies. I received

no allowance, so this was a great way to get plenty of model supplies. It was work that I enjoyed so much.

### **A New Phase**

My first flying model was a 20-inch wingspan Bellanca monoplane. I was enthralled with the “side frame” method of construction, not having had any idea of how these complex structures were assembled. The airplane flew beautifully, despite the fact that the tissue was uncoated. I’ll never forget how happy and proud I was. I wanted to show my father how well it flew but I dared not, lest he smash it, too! Then I discovered model airplane magazines!

A chance meeting with another model airplane builder, Brittain Stokes, occurred as I was flying my Bellanca in Miami. He admired my model and said he could never get his models to fly like mine. During our animated conversation, he learned that I had to build my models in secret, while I learned that his mother encouraged model building and bought him model airplane magazines. “Model airplane magazines?” I didn’t know they existed! We made arrangements to meet at his home every weekend, despite the fact that it was a two-mile walk from my home. It was heaven; voraciously reading *Universal Model Airplane News*, *The American Boy* and *Bill Barnes Air Trails* and building to my heart’s content. I inherited the old magazines as soon as the next issue appeared. Further, my newfound friend had plenty of banana oil, tissue, and bamboo strips. Best of all, he had single-edge razor blades! I had been using my father’s old double-edge blades, which made the left side of my right hand index finger very raw with repeated razor blade nicks and scrapes. However, this was a small price to pay to be with my beloved model airplanes.

I learned from an article in *The American Boy* that a mixture of five parts acetone and one part banana oil makes a good solution to brush on the tissue of flying models after the tissue has been shrunk with water. I interrupted the construction of my next model, a Lockheed Vega, and my friend and I went shopping for “Ace Tone,” as we pronounced it. The article said it was available at drug stores. Our mispronunciation of acetone as “Ace Tone” baffled a dozen drug stores until I finally mentioned that I wanted to mix it with banana oil and brush the solution onto the tissue of my model airplane. The druggist understood immediately, and after correcting our pronunciation, he produced a rather large bottle of clear liquid. We had been buying banana oil, etc., in small, ¼-ounce, test-tube size, corked vials and were astonished at the size of this four-ounce bottle. My friend had the money, so he lent it to me. We rushed home for this “grand experiment” and were amazed at the marvelous translucent and taut appearance of the tissue. As soon as it dried, we went outside and test glided the Bellanca all afternoon, swearing that each glide was better than the previous one.

### **Discovering Technology**

I did not just read the model airplane magazines, I studied them and discovered “under-camber”: RAF 32, Eiffel 400, Gottingen 535, and some Charles Hampson Grant airfoils. The magazine stated that they were high lift, etc., so I decided to modify the ribs of my Lockheed Vega. This was only my second flying model, and I dared to modify the kit design! I was so

excited that I threw all caution to the wind. Not knowing that I should change the airfoil gradually towards the wingtips, I made them all the same design in the tapered Vega wing.

My friend, Brittain Stokes, was so concerned that I would ruin the airplane that he stopped working on his own and just sat at the kitchen table watching me convert the flat bottom to the required curvature. I covered the bottom of the wing first as the magazine instructed, but it still took three tries to make the tissue adhere to the ribs with the banana oil. I don't remember the airfoil that I chose, but I think it must have been a Grant design. I lightly coated the Vega with the acetone/banana oil mixture.

We took turns test gliding the Vega and, despite the fact that it had less wing area and was a bit heavier than the Bellanca, we agreed that it glided farther and flatter than my old Bellanca and actually gained some altitude if a light breeze created a headwind. The Vega climbed faster and glided longer than the Bellanca, which fact I credited to the under-cambered airfoil. I was on my way!

And so it went until by age 12, in 1934, I was modifying and building kits of specially designed endurance models. I had learned about incidence, thrust line adjustments, center of gravity, dihedral and hand-drill rubber-motor winding, as well as some very vague references to experiments with freewheeling propellers, dope, rubber-motor lubricant and other model airplane innovations. It was about this time that I joined the Airplane Model League of America and experienced my biggest model aviation thrill thus far.

### **Original Designs and Contest Wins**

It was a hot summer day in 1935 in Highlands on the Jersey Shore when I completed my latest model. The design was a conventional box fuselage, bamboo landing gear, straight wing design, with the wing held in place with rubber bands around the fuselage. I used an old propeller left over from a previous model. It was my habit to save any scraps of material left over from previous models – a habit that I still have today. I had decided to enlarge the wing and added two more rib-spacings using some scraps of wood and tissue. I also used an under-cambered airfoil and added a loop of rubber from a previous model. My model building friend, Arnold, and a couple of non-model building pals accompanied me to the school athletic field at the north end of town, and after several test glides that were conducted as we walked, all was ready. A light breeze was blowing from the ocean against a high, steep hill (the highest point on the Jersey Shore) that was topped with two immense lighthouses. The hill was filled with trees and heavy underbrush, and my buddies were to help search for the model if it landed in the woods.

After adding a few extra winds to the rubber motor, I released the model into the breeze, and my pals cheered as the model climbed dramatically, circling tighter than I expected. When the propeller stopped, the model reversed the circle direction and kept climbing as it drifted toward the hill. We scrambled up the hill as the model kept going up and up. When it reached the top of the hill, we saw the model barely clear the lighthouses and drift out of sight! It was a grand sight to see the white model disappear over the highest point on the New Jersey shore – I couldn't have been happier. When my father learned that I lost the model, he scolded me

because I was so “stupid” for losing the model and insisted this proved that my model airplanes were “good for nothing.” He was of the old European school and insisted that learning languages was more important. My parents taught me four languages, for which I am most grateful...but I still loved my model airplanes!

I never failed to qualify for and star in school track teams because I was an accomplished runner and jumper. Could this be the result of running after my model airplanes?

Into the following year, I reverted to flying Scale models and after building about a dozen, I started designing my own flying Scale models, using magazine three-views. I did my drawing on large sheets of white paper that I begged from the local butcher and bakery. Between the magazine information and experience, I learned the basic requirements for rubber Free Flight and became quite good at it – not because I was so smart, but because I loved model airplanes so dearly. At the age of thirteen in the winter of 1936, I won a school flying model contest at Coral Gables, Florida. My prize was five dollars. Many entrants flew hand-launched gliders, while others had selected biplanes or low-wing designs, but I was learning and selected a parasol wing 24” Fairchild 22. The school principal was amazed that I had designed my own flying model from three-view drawings, but I didn’t think it was that unusual. The five dollars bought a lot of model supplies. The contest had been a gala occasion, with free lemonade and many parents attending. My father was there because it was a school function and was, therefore, important to him. He was very proud that I had won and no longer smashed my models. It was a double victory for me!

### **Orphaned!**

Late that summer my father died suddenly and, along with sorrow, I was terror-stricken! I had to arrange for his funeral and burial because I had no brothers, sisters, grandparents, aunts or uncles in the U.S. I had aunts in Germany, but there was no way of contacting them. Alone at age thirteen, I sold whatever meager possessions we had, but most of the earnings went to pay my father’s debts. In the midst of these vicissitudes, I realized that I was doomed, once again, to be placed into an orphanage without my model airplanes. They had become an important part of my life. I tried to contact a young woman whom I had known all my life (she cared for me when I was a baby and was a dear friend of my mother); however, I learned that she was in Germany for an extended vacation. I had hoped she would take me in to live with her. She had been like an older sister to me.

The die was cast – I chose to live on the streets of “Little Italy” in New York until my dear friend returned to the U.S. My belongings were in a huge leather suitcase that contained my clothing on one side and my model airplane supplies and models on the other side. I used the closed suitcase as a worktable, building my models in the tenement hallway and carving or sandpapering in the street at the curb. I applied the banana oil/acetone mixture outdoors because the tenants complained at the pungent odor. The close-knit community knew I was an orphan, but kept my secret. I signed my own school report cards, and only now do I realize that school officials must have known the truth. I slept under the staircase in a tenement; however, occasionally, I would help one of my schoolmates with his model airplane while I feverishly worked on mine under the ideal condition of a kitchen table! It seems that many mothers and

fathers virtually forced their sons to build and fly models “like Walter.” My school chums were also told to wear a necktie “like Walter!” My school chums’ mothers would invariably ask me to stay for dinner and sometimes invited me to sleep on the kitchen floor. It was a “Dickensian” existence in a poor neighborhood, and only my model airplanes made it not only bearable, but even happy in many ways. My school on Elizabeth St. had showers in the basement, because tenements had no bathrooms! I showered in school and, on occasion, I also washed my clothes while they were on my body under the school showers. The pushcart vendors let me take raw vegetables, and the delicatessen owner gave me a piece of provolone or pepperoni once in a while. I made Italian sausage after school, leading the meat into the casing as the local butcher mixed and ground the sausage meat. He gave me fifty cents a week for working three hours in each of six days. I found an ideal flying site in this myriad of tall buildings, because a large tract of land had been cleared for the Sara D. Roosevelt Park, flanked by Christie and Forsythe Streets. The long area was over one-half mile wide. I’d climb the highest pile of earth and launch my model from the top, hoping it wouldn’t land under one of the giant earthmovers. It went on like this for a year before I learned that my friend, Emma, was home from Europe and living in Brooklyn.

### **Brooklyn Days**

I carefully packed my models and clothes and rode the subway to Flatbush at dinnertime, assuming that she would at least invite me to dinner if I could not live with her. I found her apartment house in a nice neighborhood, and when she answered the door, I blurted, “Can I live with you?” She took me in when I told her about my father. Emma was appointed my guardian in 1937, and I lived with her and her husband for about eight years until I married. I still see her often. They were very good to me, gave me care and love, and always encouraged my model building. Her husband realized the benefits of model building.

Living with Emma and Fred Muller enabled my model airplane designing, building, and flying to blossom. Every time I won a trophy or medal, I’d subway to Macy’s Department Store, where Emma worked, to show her my prize. It made us both very happy. Again, I met another model airplane enthusiast, Allen Labie, while we were both flying rubber-powered models at the Parade Grounds. We also discovered that we lived in adjoining apartment houses. He built his models in the kitchen, and he invited me over to build with him. To my surprise (and delight), his mother cleaned up our mess of shavings, bits of wood and sandpapering dust. After that, I built all of my models in Mrs. Labie’s kitchen!

I found Brooklyn to be an aeromodeler’s paradise with so many model airplane builders and numerous fine model shops. I discussed design theories with the renowned Brooklyn Skyscrapers model airplane club members, including Gordon “Scotty” Murray, Leo Schulman, Maurice Schoenburn, Sal Taibi and many other accomplished aeromodelers. Most of the great flying space was in Creedmore, Long Island, but Allen and I had no car and was too young to drive. We made one trip by train. It was so difficult and confusing; we had to walk miles to the flying field, so we never did it again! Later, we begged rides from older builders.

During the next few years, models were being built at a feverish pace. I designed and built rubber- and engine-powered flying Scale, and small fireworks rocket-powered gliders. I didn’t

own a camera until 1970, so very few photos were taken of the dozens of models I designed and flew. Pushers, twin fins, elliptical dihedral, polyhedral, folding props, single-blade folding props, retractable landing gears, gull wings, lifting stabilizers, and so forth – I tried them all! My friends told me to send my designs to the model magazines, but I dared not, believing that the magazines wouldn't be interested.

### **Engine Power**

My first engine-powered model was a converted old planked-fuselage Wakefield model. I added a four-rib spacing center section as I had done on my first O.O.S. [out-of-sight] model years before and replaced the stabilizer with a larger lifting stabilizer. Test gliding had been performed on a dead end street, and when all was ready, I traveled by subway to the flying field at Van Cortlandt Park in the Bronx, a 1½-hour ride from Brooklyn. The model was powered by a borrowed Bantam ignition engine, which gave the model a high wing loading, but I depended on the high power to generate more lift with speed. At the hand-launch, it flew out of my hand like a startled bird, into an extremely fast, circling, flat climb! We were amazed at how much altitude it had reached in 20 seconds. There was no dip at engine cutout; the model kept circling at virtually the same high speed as it glided fast and flat. Even when the wheels touched the grass, it kept descending until the belly skidded on the ground! I had failed to replace or reinforce the rubber-powered model landing gear; therefore, it “wiped out” during the fast and heavy landing. I learned! Rather than waste the long trip, I flew my model without landing gear for the rest of the afternoon for some fun-time, enjoying the fastest model on the field!

I designed, built and flew my first purpose-built engine-powered model in 1938 and spent most of the year modifying the model to experiment with ideal fuselage shape (lateral area) and dihedral/polyhedral. As I remember, I used at least three different engines of various powers in this model – all borrowed. By using the Skyscraper's engine mount/bearer design, I was able to install the several engines without drilling several sets of mounting holes. The actual engine mounts were attached to the engine bearers, which were built into the fuselage structure, by means of thin dowels or even wooden matchsticks pushed horizontally through snug-fitting holes in the engine mounts and the bearers. When wooden matchsticks were used, they would break under severe impact and prevent engine damage. I had to make new engine mounts (not bearers) for each engine that I used in this model. I lost this airplane O.O.S. (out of sight) at Van Cortlandt Park with a borrowed Mighty Midget engine in the nose.

I had not forgotten my deceased parents, but my modeling activities were very therapeutic and prevented me from dwelling on my loss!

By 1939, I was finished with high school/aviation school and obtained a drafting position at Brewster Aeronautical Corporation in the Borough of Queens in New York City. At the age of 17, I had secured a technical position because I was capable of plotting airfoils and calculating center of gravity and force arrangements. Who said that building model airplanes was a “waste of time?” My salary was 18 dollars a week.



I continued with my models, and now that I was working, I bought a Bantam .19 and a Forster .29. At last, I had my own engines! Every Monday morning the Brewster Chief Engineer, Dayton Brown, came to my board to inquire about my model flying experience of the previous weekend. I never learned whether he was a model airplane builder, too.

Class "C" cabin rubber-powered endurance models captured my interest through 1938 - 1939. My experiments with different models enabled me to win first prize in my aviation school's rubber-powered model contest with my third Class "C" model of this series. The contest was held in Sheep Meadow Field in Manhattan's Central Park. All models had to be original designs. My model climbed to at least 80 feet (eight building stories) and the super glide led it over Fifth Avenue toward the swank apartment houses. It struck the buildings repeatedly, dropping away and then circling back to repeat the collision. I expected the model to be crushed by the heavy traffic but, as it descended to the third story, the craft drifted back to the park and lodged in a tree. The school presented me with a medal of which I was justly proud.

The final development of this Class "C" Cabin ("Classy Cabin") series won a contest in either Jersey City or Newark, NJ (not sure of the city), where I was presented with a trophy in 1939. A kind spectator took some pictures and mailed the prints to me. I made the trip by subway and train.

Meanwhile, I was putting my Bantam and Forster engines to work during 1939 and 1940. Ritz wings, twin rudders, enclosed engines, high center of lateral area, etc. By this time, I had bought a 1932 Chevrolet business design with a big trunk for models. It was quite a sight to see three builders on the front seat and large wings across the back seat, with wing tips protruding from the partially open windows. Fuselages usually fit in the trunk. It was a grand time: designing, building, and flying. Despite the fact that there were some really big models being built of nine-foot spans or more at that time, I held the size of my models down to where I could build them on the kitchen table. Storage of my models was another problem, which forced me to sell many of my older airplanes.

### **Career Change**

I was attending evening classes at Brooklyn Polytechnic Institute, but Brewster Management wanted me to work overtime. I politely declined because of my college work. When Brewster management became hostile, I found a similar position with George G. Sharp, Inc., a prestigious ship-designing firm, at 15 dollars a week, and quit Brewster in Sept. 1940. My intention was to work on ships only until I could get back into aviation, but the Fates had other plans. The combination of promotions, pay raises, and America's entry into World War [II] converted my "temporary" job into a permanent position. I retired fifty years later as Chief Designer of the George G. Sharp, Inc., Norfolk, Virginia office.

Work continued on engine-powered Free Flight in 1941, but rubber-powered jobs waned because good rubber became increasingly difficult to find. Pirelli black rubber was displacing the popular brown rubber. Control-line or "U-Control" had surfaced, and I tried to fly Free Flight types but found them hard to control because they were too light, very underpowered and tended to roll in on me because of slack lines. I tried progressively heavier and more

powerful models, which showed improvement. My last control-line experiment was an exact Scale, 24-inch solid model of the Hurricane, with fuselage hollowed just enough for the coil and batteries. To my surprise, it flew well but fast with a Bantam installed.

Demands of ship designing, shortage of materials, gasoline rationing, and college gradually diminished my model airplane activities until they stopped entirely by 1942.

### **Modeling Again**

When the war with Japan ended in August 1945, I yearned to get back to my model airplanes. By that time, I had married and moved to New Jersey. When my lovely daughter, Carol, was born, we needed a larger place to live. (I had tried to get her interested in model airplanes, but by the time she was old enough, she had discovered boys!) Apartments were scarce, so we decided to buy a small ranch house..., but we had just bought a car and needed the house down payment. My aviation school buddy, Paul Palanek, suggested model airplane magazines for some extra money.

My break came when I contacted Leo Schulman, who, as editor of *Model Craftsman* magazine, agreed to publish one of my Wakefield designs (Wakefield Defender) in Nov. 1946 and my Bantam powered Free Flight design (Classy Gassie) in February 1947. The Bantam job has an interesting story to tell.

My brother-in-law, Ed, wanted to see one of my airplanes fly, so I took my Classy Gassie to his home, north of Yonkers, from where he drove me farther north to a vast, open field that was apparently part of an estate. The airplane climbed like a rocket and was a mere speck after the twenty-second engine run. It was circling beautifully and as soon as I noticed the direction of drift, I began running across the field, through underbrush and woods, to keep ahead of the model, but it gained on me and was directly overhead when I came to a small river or a large creek. As the craft circled ahead, I decided to wade across the water. Holding my wallet in my teeth, I managed to wade across the water, which was shoulder-deep in spots. By that time, the model was only about 50 feet high and, soaking wet, I resumed the chase. I thought I was gaining on the runaway when I came to a very busy highway. I wanted to cross the road because the model was still losing altitude, and I had to see where it would land. Circling widely, the model crossed the highway and appeared ready to land, but thermals from the hot roadway kept it aloft and circling. It headed back toward the highway at less than 10 feet from the ground. I remember muttering over and over to myself between my labored breathing, "Don't let it crash; don't let it crash," fearful it would land in traffic. Maybe I was hyperventilating and semi-conscious. I knew I couldn't run across the highway in my condition.

Then the uncanny happened: the model bounced off the road between speeding cars and glided into my hands! I lost my way several times, as I tried to locate Ed and his car. I was a dirty, bedraggled figure with my wallet still clenched between my teeth when I finally found my way back to the car. I was dazed but happy, because it was a great flight and my lovely model was undamaged. Ed had been blowing the car horn at half-minute intervals to lead me back. It is astounding to realize the amount of energy a modeler can draw upon when chasing his

handiwork on a super flight. When I described by odyssey, I was told that the river was over four miles from the car! I never learned the name of the river or the highway, but I imagine it is either the Bronx River and Bronx River Parkway or the Saw Mill River and Saw Mill River Parkway.

*Model Airplane News* magazine had also published one of my rubber-powered Free Flight endurance models (Valhalla Visitor) in the August 1947 issue. I had entered this design in a local rubber-powered Free Flight contest. A couple of contestants demanded that I be disqualified, accusing me of being a “professional,” having been published in a couple of magazines. The judges overruled their protests, and I placed third within a 3 min. – 51 sec. average. Third flight was O.O.S. in seven minutes. After that experience, I no longer entered, but attended and assisted at contests.

### **Control Line Interest**

During the first few years after the war, I had concentrated on Free Flight Scale and endurance models, having almost forgotten my experience with the pre-war control-line Hawker Hurricane model. My recollection rekindled interest in control-line and I became excited at the prospect of flying an exact-scale model without concern about dihedral, enlarged stabilizer, or excessive weight. Now I could combine my interests in Exhibition Scale and flying in one model. My first post-war control-line model airplane followed my pioneering Hurricane with a carved fuselage that was fully hollowed; however, the solid wing was replaced with a sheet balsa-covered, spar-less wing with a heavy leading edge. After that, I also used planked, heavy sheet balsa and carved fuselages, depending upon the fuselage shape. At times, I used two or more techniques on a single fuselage.

By 1947, I had built and flown my first control-line triplane. I selected a Sopwith Triplane in preference to other triplanes, because the narrow-chord wings would not generate excessive lift and lower the wing loading too far. I had learned about that during my pre-war attempt to fly Free Flight type aircraft on control-lines. The triplane flights were fine and *Model Airplane News* published drawings and [an] article in the November 1947 issue. The rugged framework was silk span-covered.

Both *Air Trails* and *Mechanix Illustrated* published my plans and articles for control-line Scale models for the first time in 1948.

I always retained an interest in Scale half-A control-line models because they were inexpensive, compact for stowage in city apartments, and could be flown on dead end streets, city lots, small parking areas, city school yards, cul-de-sacs, and other small spaces in the city. Further, the engines are very quiet and rarely annoy residents. After all, not everyone lives in the suburbs with plenty of open space and cellar workshops!

In 1948, John D. Frisoli of Scientific Models Inc., asked *Air Trails* editor Al Lewis to recommend a model designer/draftsman, and Lewis named me. At the onset, I prepared plans for an original sport control-liner and a .29-powered Beech Staggerwing. We then discussed small, inexpensive models that pre-teenagers could afford, build, and fly. The famous

Scientific carved fuselage, shaped wing, plastic cowl half-A model kits were born. Thousands of kits were produced from 1949 through 1972, of about 100 different models from Scale to stunt designs. John Frisoli and I had the same basic philosophy regarding model airplanes: fun, education, and pride of achievement.

I moved into a modest ranch house in New Jersey in 1950 and set up a model work area in the basement. Then my obsession took root, and the designing, building, and flying of my models flourished. Researching, drafting, and building Scale models were an education to me, and I began to cover history, biography, and aircraft performance in my magazine model articles.

I became the father of a son, Gary, in 1953, and was determined to expose him to model building.

During the late 1940s and 1950s, I sought full-size aircraft that would produce an Acrobatic Scale model or a high-speed Scale model without altering the configuration of the full-size airplane. This proved quite successful, but very often the perfect candidates for model aerobatics were, in fact, not acrobatically - inclined full-size airplanes. The Vickers Wellesley is an example.

Foreign magazines had taken note of my model articles in U.S. magazines, and soon I was writing model articles for *British Aeromodeller* and *French Systeme "D,"* which were first published in 1948 and 1957, respectively.

Designing full-size airplanes and ships can be as tense and exhausting as any creative and exacting profession that has completion deadlines. While others went home and relaxed with a couple of martinis, I relaxed with my models. So many of my models were being published that I was asked to use a "nom de plume" or a pen name occasionally. Warner Frake, Vincent Manfredi and D.A. Newell were names that I used on occasion.

I became increasingly particular regarding the correct Scale and color scheme and markings for my models, and by the 1960s, I delved even further and tried to duplicate the exact markings for my models as used by famous aviation personalities on their full-size airplanes. I dwelt on fighter aircraft flown by famous aces and record-breaking commercial airplanes and their pilots. At times, I became a "Walter Mitty," as I imagined myself at the controls of the famous full-size airplane while I flew my model.

Throughout my model aviation career, I never designed or built a model that could not be built on a kitchen table, nor do I intend to do so. I also never design or build a model airplane that is beyond the building and flying capability of the average aeromodeler. Perhaps that is why they have been so popular.

### **Injury!**

By 1974, my son, Gary, had become interested in formula car racing, and I joined the team to assist him as much as I could without neglecting my model airplanes. In September of that racing year, I suffered a severe head injury: concussion, fractured skull, and hematoma. Some

magazines reported that I had died! An operation was successful, but recovery was a harrowing experience. Not only was I fearful of becoming a “vegetable,” but my senses of smell and taste had become horribly distorted. I found I could not endure any odor or flavor at all. Although I could not identify the odor, taste, or its source, any taste or smell that reached my senses was sickening to the point of nausea! I could not eat nor be near any person, because the blandest odor/flavor made me ill. My weight went down from 155 to 114 pounds because I could not eat. I became withdrawn, sullen, and argumentative. Marguerite and Gil Rose of Polk’s Modelcraft Hobbies discovered a concentrated nutrient that kept me alive. I was very concerned for my family and was terrified at the prospect of never again being able to open a tube of cement or a can of dope! On the onset, neurologists thought my reaction to odors, taste was my imagination, and when that proved wrong, they thought nerves were damaged, which was also incorrect.

### **Cured!**

As a last resort I was taken to the National Institute of Health (NIH), and after numerous tests, it was discovered that the healing process had lessened the amount of zinc in my body, which affected my senses of taste and smell. It required about a year to get my full senses back, during which time I could not resist the ultimate test. I went into my workshop and opened a tube of cement. Yes, I could detect that it was cement! Then I opened a can of dope and brushed it on some papers. It smelled like dope and was not at all offensive. I was cured!

Although still very weak and under the NIH doctors’ and scientists’ care, I returned to my beloved models. Somehow, this infused a sense of purpose in me, and I became cheerful again. The doctors were happily surprised at my exceptionally rapid physical and emotional improvement. During one of our sessions, I casually mentioned that I could detect and tolerate the pungent odor of model airplane cement and dope. The neurologists/psychologists asked if that was my hobby. I related my story: losing my mother, father, living alone as a youngster, and how I had been “addicted” to model airplanes for most of my life. Their eyes lit up and all agreed that my hobby had spurred my recovery!

### **Changes**

My injury and its repercussions brought to the surface troubles that had been brewing in my 36-year marriage. After a few years of attempted reconciliation, my neurologist/psychologist recommended that I divorce my wife, which I did in 1982. She had been no longer willing to tolerate my model airplane hobby, among other serious, irreconcilable problems. I loved her but could no longer live with her. The impact of this separation was so severe that I suffered a nervous breakdown. I did, however, recover quickly because I had my model airplanes to divert me from otherwise impossible problems, according to my neurologist/psychologist. Did my model airplanes rescue me from a possible life of depression and indolence? The answer appears to be “yes.”

I lived in England during the early 80s, which gave me a wonderful opportunity to meet some of England’s greatest model designers, including the fan-jet designer/builders Peter and Paul Thorpe. I noticed the very meticulous care that British modelers took in model airplane design

and construction. In turn, they were surprised at how quickly I designed, built, and tested new models. It was a habit I had learned as a youngster, when I was forced to build quickly to keep ahead of my father's wrath. I learned from them, and they learned from me. That's what it's all about! I built some very interesting R.C. Scale models and wrote a model airplane book during my stay in England.

As long as I can remember, I have been intensely interested in world history and aviation in general, with special emphasis on design and performance. When my interest in Scale models rose to a crescendo, I combined the two studies with biographical data to make my Scale model construction articles more interesting. Eventually, I included companion articles with my construction descriptions, covering the technical features of the full-size airplane, the famous pilot, and the history of the airplane's achievement. This led to separate articles about airplanes and men, as well as the historical setting. Reader interest in men and airplanes led to writing books on the subject, but I never deserted my model airplanes.

My son, Gary, took to model building very well and drifted from airplanes to the construction and operation of model cars. He is now an architect, and even in that profession, models play a very important part. Gary can build his own models, and his past hobby has given him greater capability in his profession.

### **More Changes**

I retired from my ship designing career in 1990 to devote all of my time to model airplanes and writing aviation history. A lovely lady became my bride during the following year. She doesn't merely tolerate my writing and model building, but actually admires and encourages my activities.

I had several model airplanes completed, many on the drafting board, some partially completed, and also had started another aviation history book when, in the spring of 1994, a careless driver smashed into the back of our car as we were stopped at a red traffic light. My wife suffered a heart attack that was followed by several mini-strokes, and I have an injured spine with herniated disks. We have improved somewhat but have been forced to severely limit our activities. I can't work on large model drawings or at my model worktable; I can only work at my desk for a couple of hours each day because of the herniated disks. These limited periods at my desk enable me to write only intermittently. I look forward to continuing my hobby as soon as I can, because I have several models that I must complete!

I must be patient and wait until I am able to raise and turn my head and to bend. Meanwhile, I pore over model airplane magazines, waiting for the day that I can again enjoy this great hobby...and I will!

In closing, I must say that I'm disappointed in the direction taken by the majority of the U.S. model industry! The huge size, expense and work area required for aeromodeling prohibits the youngsters from participating in the hobby. Average city youngsters have no chance of entering this fine hobby, nor has any youngster much of an opportunity to learn model building skills when so many Almost Ready to Fly and Ready to Fly models have entered the market.

These have become toys for the wealthy, up-scale, middle-aged “sportsman.” We must not let model airplane building become a “lost art!”

Of course, television has converted our youth into spectators, instead of stimulating their creative ability. Where are the simple “kitchen table” kits that teach the younger set how to build as well as fly? Also absent are local neighborhood and town or city contests sponsored by municipalities, or larger contests sponsored by movie studios, or even U.S. Government Agencies, such as the Navy and Air Force; also model magazines, hobby trade associations, aircraft companies, airlines and so forth.

Witness the government of Finland, which sponsors model airplane clubs with paid instructors to teach model building. Very few countries have as high a percentage of its population with high technical skills as in Finland, which supplies the world, including industrialized countries, with splendid diesel generators, ship propulsion diesel engines, cruise ships, ultra-high speed ships, trains, and so forth. These skills can be attributed to a young population that had been exposed to model airplane building!

When I return to my model airplanes, they will be “kitchen table” models that will be within the ability and the pocketbook of the average model builder. That is how it must be.

Keep ‘em flying!

*(signed) Walter A. Musciano  
June 1997*

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*The following addendum was written by W. Musciano in February of 2003.*

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### **Addendum in 2003**

Since 1996: The Northern Virginia Control Line Association (NVCL) sponsors the Walt Musciano Commemorative event annually in September at a model flying field in Lorton, Virginia. All contestants must enter a solid (carved) fuselage-solid wing, Musciano-designed model that was kitted by Scientific Models Inc. Modelers from all parts of the United States attend every year. I attend the commemorative event every year. I contribute two trophies that I award for workmanship and for the all-points winner. The events are speed, stunt, rat race, and workmanship. Miscellaneous awards are also presented.

I have planned and am designing 10 RC Scale models and 11 control-line Scale models, plus 2 books on aviation history. Three of my aviation magazine articles will be published into 2005 in *Aviation History* magazine.

*(signed) Walter A. Musciano  
February 2003*



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