

## The Rudner family combat story

Chuck Rudner and his identical twin brother Steve were born in Flint, Michigan in 1948, during the golden age of aviation (long before the water was contaminated with lead). In those days, when a full-scale airplane would fly over, all the neighbors would come out of their houses to watch it fly by. Chuck and Steve were no exception. Before getting into control line, as little kids they spent countless hours playing with balsa wood "chuck gliders" and Slick Streaks from the local drug store. From an early age they began experimenting, modifying the gliders to look like P-38s by combining parts from multiple packs.

The first built-up balsa kit that they tried to build was a Taylorcraft. With nobody to guide them or to help interpret the plans, they cut the spar at every rib and butt-glued it to the side of the rib. (They misinterpreted the printed outlines of the spar notches in the ribs as targets for gluing the spars). After noticing that the first wing done this way was pretty droopy, they realized that those red rectangles were meant to be cut out; they finished the other wing with one solid spar all the way through. It was a eureka moment, and their first hard-knock lesson in structural engineering.

In 1958, Chuck and Steve's dad Louis Rudner passed away at the age of 58. Louis had owned a furniture store, and one of his long-time employees and friends -- Vick Blandon -- gave Chuck and Steve a Wen Mac Corsair plastic control line model. This present provided them with countless hours of "enjoyment" while attempting to figure out how to start the engine and keep it running. At the same time, all of the other boys in the neighborhood were similarly attempting to learn how to fly control line.



Wen-Mac Corsair in the box (Photo from ebay)

Eventually, the plane that taught the neighborhood how to fly was the "Firebaby." The Firebaby had a profile fuselage, a slip-in balsa wing, and a Cox Baby Bee engine. All the kids had them. When one of the kids would manage to make a successful flight in the school yard, the neighborhood adults (who would be watching from their porches) would all clap and cheer. Nobody ever would've thought of calling the cops with a noise complaint. It was a different time.

At age 11, the Rudner boys got their first "big" engine, which was a McCoy 0.19. The first plane that they built for it was a kit of a Hawker Typhoon. They remembered not to cut the spars and got it flying reliably at their elementary school playground. At that time, their friends were flying a vast assortment of similar types of setups.

One day when Chuck and Steve were at home, they heard the unmistakable sound of someone flying control line. They jumped on their bikes and rode through the neighborhood to find it, guided by their ears. The sound led them to the local high school athletic field, where two older boys were flying 0.35-sized models. Their names were Bill Brown and Tom Mintline, and they were flying a T-Square and a modified Ringmaster that Tom called a Mintline Special. They wanted to fly combat, and needed somebody to launch for them. Chuck and Steve were in awe, as the two older kids asked them to help and launch their planes. They flew combat as the sun went down, and the rest is history.

The End.

Just kidding.

Before that fateful day, control line flying had just been about flying around level and trying to run out a whole tank and glide in for a landing without crashing. After that experience, Chuck and Steve turned their focus to building combat planes and learning how to do maneuvers so that they could one day fly combat themselves.

In those early days they built a Flite-Streak or two, a Quicker, and a Whatsit. They learned how to do inside and outside loops, and to fly inverted. They learned the hard way, probably the only way, which was by crashing a lot of times. Eventually they got it.

Chuck and Steve entered their first combat contest, which was sponsored by the Flint Flying Fools and was held at their local, dedicated control line field. They got in the air, which was a good start, but didn't win anything.



Flint Fliers L-R standing Brian Liljelblad with Super Swoop, Steve Rudner, Chuck Rudner with Swoop. Kneeling is Bruce Burris. Picture from Glenview Nats circa 1961.

Unfazed, the Rudner brothers kept flying at their local elementary school until they moved to Detroit with their mother in 1961. There, they introduced their new neighborhood friends to control line flying and flew regularly in local parks. Sometimes they would even ride their bikes across town on a 12 mile journey to the city flying field at Rouge Park (which is still an active site today).

When they were about 14 years old, Chuck and Steve joined the Royal Oak Cloudbusters, a long-established control line club in the outer suburbs of Detroit. In addition to gaining access to the knowledge base of the club's experienced fliers, club membership also gave them the

opportunity to ride along with some of the club's more senior fliers to combat contests across Michigan. At the same time, they also joined a combat-only control line club called "The Orbiteers," run by Dave Keats and John Kilsdonk out of a local hobby shop. Dave and John were pretty much the top combat dogs in the area at that time. The Orbiteers also included Paul Smith and Rick Olsen.

From time to time, Chuck and Steve's mother would drive the boys and some of the other neighborhood kids (David Petrakovitz, Dave Weinandy, Mike Wieder, and Bob Fein) with all of their gear out to Rouge Park for local contests. At these contests, several rival clubs (including The Orbiteers, The Strathmoor Modelers, and The Cloudbusters) participated and competed for bragging rights in addition to the first, second, and third place trophies.



Chuck and Steve . . . Detroit basement . . . Circa 1960



Local hobby shop owner Eliot Elkin seated at table in back room of his hobby shop for informal meeting of our neighborhood flying group. L-R are Mike Weider, Chuck Rudner, Dave Weinandy, Steve Rudner, Bob Fein, and seated hobby shop owner Elliot Elkin. circa 1961.



Steve and Chuck Rudner, Chuck holding Dave Keats designed "El Chopper" circa 1962



Adult with one foot on tailgate of his station wagon is then president of one of the oldest model clubs in U.S., the Royal Oak Cloudbusters, established in 1944. Mr. Lewis had driven to our neighborhood to pick up some of our neighborhood gang of C/L fliers who were Cloudbusters members to take us to a contest. L-R next to Mr. Lewis are Bob Fein, Steve Rudner, Chuck Rudner, Dave Petrakovitz. Model is Mr. Lewis' carrier ship. Photo circa 1962.

Among the juniors, which comprised a large fraction of the competitors at those meets, there were roughly two camps. The first group of boys was well organized, with intense parental support that ensured that they always had fleets of pristine airplanes, sometimes built by their dads, each with a brand new Johnson Combat Special. The second group was a rag-tag crew of boys assembled together from various locations all over the Detroit area. They were forced to band together out of necessity, in order to get in the air and compete. Chuck and Steve were part of this second group, which also included many other familiar combat fliers such as Steve Kott, Gary Arnold, Jim Morway and Ray and Roy Krupa.

The winning in these contests was dominated by kids from the first group, which included Butch Sweet, Artie Jerome, and the Adamissin boys. Although the Adamissins went on to have successful stunt careers, it was pretty much exclusively the kids from the second group who went on to become lifelong combat fliers.

Chuck and Steve would always share planes and engines. At first they had a red-head McCoy .35 and a red-head Fox Rocket .35 to share between them, and eventually they also got a Johnson Combat Special. For planes, they built a Renegade, a Quicker, a Whatsit, and then started building Swoops and Super Swoops. After being in the Orbiteers for a while, Chuck was influenced by Dave Keats and started building his "El Chopper" design from plans. Steve continued to fly Swoops and Super Swoops.

When the era of Voodoos came along, Chuck and Steve started building Voodoos as well. One year at the Michigan State Meet, Fred Phillips from Louisiana showed up with a modified mono-boom Voodoo with reflex-tips. Chuck and Steve spent long hours in the basement building modified Voodoos and listening to great hits such as "Green Onions," "Do You Love Me," "The Locomotion," and the like (see photo).

The Rudner boys flew in contests regularly, rarely winning anything except for an occasional second or third place. Nonetheless, they managed to get themselves invited to the Detroit Invitational Combat Championships two years running during the early 60s.

During those times, the combat rules were constantly in flux. Safety was rarely a consideration. For some time the rules were such that the match was live from the moment that the judges yelled "Go!" This meant that the pilot who launched first would usually do loops right behind the heads of the other pilot's mechanics, waiting to pounce as soon as he launched. To counter this strategy, Chuck and Steve developed a special technique of the mechanic launching the plane inverted over his own head.

Many ideas were tried locally, including using fancy streamers which consisted of a long string with different-colored tufts of paper attached at regular intervals. Cuts made on each "zone" between different colored tufts of paper were worth different numbers of points (with the most points being awarded for cuts in the zone closest to the end of the streamer). As you might imagine, distinguishing these different colors in the air proved basically impossible and therefore the sport returned to more normal-style streamers. The "always live" combat rule was also eventually abandoned due to safety concerns.

In the mid-60s Chuck and Steve took a hiatus from competition flying to focus on building hot rods and motorcycles, and thinking about girls. Then one day during college, while Chuck was driving back from Detroit to the University of Michigan in Ann Arbor with his girlfriend Muffy, Chuck decided to stop by Rouge Park to see if anybody was flying. As luck would have it, there was a control line contest with stunt, carrier, racing, and combat going on that day. This was when Chuck learned of the formation of the Detroit Combat Team. His old friends Jim Morway and Paul Smith were there flying, and he also met other Detroit Combat Team members includ-

ing Mike Condon (who of late runs R/C Pylon Racing at the NATS), Al Denison, Jim Wasik, Bill Lajack, Claire Schumacher, and Ron Colombo (who had come there on his bicycle). Chuck and Ron would eventually become long-time flying buddies, and traveled the combat circuit together for years. After Chuck and Muffy got back to Ann Arbor, Chuck convinced Steve to start flying again and they flew as DCT members.

During college at the University of Michigan, Chuck studied aerospace engineering while he and Steve traveled the contest circuit. Steve eventually became an architect and structural engineer. The brothers flew Nemesis/Supretigre G21 0.35 bb setups with the models being built from plans. They flew in Michigan, Ohio, And Indiana. At contests in Indiana they crossed paths with the designer of the Nemesis, Howard Rush, who became an arch rival for Chuck. Over many years, Howard and Chuck became close friends.

When Chuck graduated with his B.S. in aerospace engineering, the aerospace industry was in a slump and there were no jobs. Fortunately he was offered a scholarship to continue studying for a Masters degree in aerospace engineering, which he accepted. After finishing, there were still no jobs. Time for plan C. By that time, Chuck and Muffy were married. Muffy worked while helping to put Chuck through medical school, again at the University of Michigan. During the first 2 years of med school Chuck designed the "Scalpel," to try to best Howard Rush's Nemesis. Around the same time, Neil White designed the Bosta with similar goals. Eventually Chuck was able to beat Howard from time to time.

Steve eventually became interested in sailing and stopped flying in contests. Chuck continued competing, often traveling to contests with Ron Colombo. The duo did well, and in 1974, the first year that MACA awarded points for podium finishes, Chuck became the first pilot to be MACA #1 (then called the "killer of the year award"). Ron also would have scored highly that year, possibly even #1, but he hadn't joined MACA. So remember, kids, always join MACA!

When Chuck graduated from medical school in 1975, he and Muffy moved to Gainesville, Florida, where Chuck continued his medical training at the University of Florida. At first the work load was overwhelming, and Chuck didn't fly. Muffy sensed that he was getting depressed with all work and no play, and urged him to return to combat. Chuck designed the "Rongeur" (named for a surgical instrument used for taking gross bites out of tissue and/or bone). Chuck flew on the Florida circuit with Art Chambers, T. Bailey Henry and Bob MacDonald, attending and doing well in contests in Jacksonville, Tampa, Melbourne, etc. Around that time, Muffy learned to launch combat planes and would help Chuck practice. She even pit- ted for him in a contest once!

While in training in Gainesville, Chuck competed at the NATS in Dayton, Ohio. It was there that



he met Rich Lopez, Steve Hills, Pete Athans, and Chris Gay, who would become his flying buddies when he moved to Southern California in 1980.

In 1977, Chuck and Muffy drove from Florida to St. Louis, Mo., for the first USA FAI Team Selection competition. Chuck earned a place on the first USA Combat Team for the 1978 Control Line World Championships in Liverpool, England, alongside George Cleveland and Gary Frost. Chuck used a Cox Conquest .15 and a K&B .15 with various balsa models in the team trials. Paul Smith and Phil Granderson were his pit crew at the team trials.

In November 1977, Chuck began a 3 year orthopedic surgery residency at Case Western Reserve University in Cleveland, Ohio. In Cleveland he flew locally with Paul Baluch, and competed in contests in Ohio and Michigan whenever his training schedule permitted. Chuck drew up plans for his Rongeur design, including versions for fast combat, FAI combat, and slow combat. He wrote a construction article, and the plans and article were published in Model Aviation some time around 1978.

Chuck designed an FAI version of the balsa Scalpel design for his appearance in the 1978 World Championships. He used Anderson Rossi and Fox .15 engines. Brother Steve and Paul Smith were his pit crew in England.

In 1978, Chuck and Muffy's first child, Lanny, was born. In 1980, after completing his residency in Cleveland, Chuck and the family moved to Southern California.

Now part of the Southern California Combat Team, Chuck flew at Whittier Narrows park (aka "Gopher Gulch") with Miles Lawrence, Rich Lopez, Leonardo Silva, Steve Hills, Pete Athans, Don Repp, Chris Gay, the 2 Jensens, the 3 Cashes, Greg Carter, Bill Maywald, George Lacour, Martyn Cowley, Russ Willcox, Russ Graves, Russ Hester, Mike Alurac, Chris Collins, and many others, including his sons Lanny and Mark (Mark was born in California in 1981). Jed Kusick gave Chuck a lesson in making foam wings and Chuck started building foamies. Steve Hills designed the Arrowplane and Chuck built and flew those before using the internal Arrowplane structure as a basis for the series of foam Scalpel designs that he flew successfully on the West Coast.

A crucial turning point for the SoCal Combat Team came when Miles Lawrence and John McCollum got Andy Kerr in Australia to make large-bore crankshafts for Fox MK III and IV cases, while Pete Athans got the Wisniewskis to make AAC piston and liner sets for them. John McCollum would bore out the cases to fit the cranks. Throughout the late 80s and through the 90s this was the setup of choice for the SoCal crew (with RPM rods and Virginia Craftsman double bubble heads).



Chuck Rudner's conventional airplane is one of the best. He flew similar airplanes at the 1978 Control Line World Championships.

Left: Chuck & Muffy with Chuck holding his Scalpel design circa 1974

Right: Lanny's first contest 1978. Plane is Ron Colombo's "Lite and Lemony". (Lite and Lemony was an advertising slogan for a soft drink that I believe was manufactured in Detroit by Vernors).



Those souped up Foxes were very powerful, allowing the team to do well in California contests, the Top Gun in Tucson, the Duke Fox Memorial in Chicago, the Houston Combat Classic, and the Bladder Grabber in Seattle. The Bladder Grabber was the biggest, baddest, triple elimination fast combat contest in the country. A lot of Carver and Sunfire stereo equipment made its way from the winner's circle at the Bladder Grabber down to Southern California in the days when Bob Carver was donating high end stereo equipment from his companies as prizes for the B.G. Chuck managed to win the Bladder Grabber four times, including the biggest of the Bladder Grabbers, which topped out at 63 pilots.

Chuck and many of the Southern California Combat Team members have been active in FAI combat, in addition to fast, speed limit, and 1/2A. Chuck has competed in every USA FAI Team Trials from the first one in 1977, up to now, gaining spots on the team to represent the US in F2D at the World Championships in Liverpool, England in 1977, Pecs, Hungary in 1986, Hradec Kralove, Czechoslovakia in 1992, Shanghai, China in 1994, Valladolid, Spain in 2006, and Wloclawek, Poland in 2014. Through these trips, Chuck and Muffy made friends with many competitors from around the world, and have enjoyed visiting them and hosting them at their home over the years.

Initially Chuck used planes of his own design in FAI events, eventually designing them to use the powerful Nelson rear intake/rear exhaust .15 engines on 40% nitro (back then there were far fewer restrictions on equipment in F2D). At that time, Chuck was also using self-made composite props from a mold made by John McCollum. Nitro was eventually limited to 10% in 1988, and later in 1993 mufflers became mandatory. At that point the Nelson 0.15 engines were no longer suitable, and Chuck switched to using various engines from Russia (Doroshenko, Buran, Kozjol, AKM), Ukraine (Fora), and Belarus (Zorro).

Chuck has continued competing to this day, with renewed vigor after retiring from work in late 2015. Now more relaxed, and with far fewer distractions, he won his first National Championship at the 2015 NATS in F2D. Still on a roll, Chuck regained the overall MACA #1 title in 2016.

Rudners: the next generation

From an early age, Chuck's sons Lanny and Mark were interested in combat. Remembering his days in the ragtag crew of Detroit combat kids, Chuck encouraged their interest but didn't want to pressure his boys to fly. Likewise, he wanted them to own their involvement in the hobby: from the start Chuck made it clear that he was happy to teach the kids to fly, but that they'd have to build their own planes and start their own engines if they wanted to fly.

When it came to actual flight training, to avoid any unnecessary parent/child struggles, Chuck believed it would be best to have a neutral third party coach the kids through their first flights. (Note from Mark: this was a good idea.) Steve Hills was happy to step in, and did an awesome job getting both boys in the air and flying consistently when they were each about 7 years old. In addition to his well-known skills as a designer, pilot, and artist, Hills was an amazing teacher and very generous with his time and effort.

Big brother Lanny, 3 years Mark's elder, was athletic and skilled with his hands. He took to both building and flying easily. Lanny was a fast learner and rapidly taught himself to do maneuvers and to fly inverted. However, he didn't like the idea of breaking planes he'd built. Moreover, as a natural athlete, he was very busy with baseball, soccer, and volleyball teams. While he showed great potential, Lanny decided that combat wasn't for him. He still does come out to fly Chuck's F2D practice planes occasionally, and can put up a mean test flight even after all these years.

The story with Mark went a bit differently. Despite being much less coordinated and athletically-inclined than Lanny, Mark was enthusiastically hooked on combat from the beginning. Looking back, there were probably several factors that drove his interest in flying. One particular point of inspiration came just around the time Mark was starting to fly. At that time, a young kid from Texas, teenager Mike Willcox, was storming the country winning some of the nation's premiere contests such as the Bladder Grabber. Being very competitive by nature, the idea of a kid beating up on the adults was very exciting for Mark. Moreover, having a bit of "younger brother syndrome," Mark always wanted to be a part of the action with the older boys. It became a dream of Mark's to get to that level, to leave the boys behind and to compete with the men.

The dream was nice, but there was one hitch -- Mark would have to learn how to fly before he could start cutting streamers. While he learned to fly level with a Cox PT-19 at 7 years old, Mark was a very nervous kid and was often too afraid of crashing to take the chances needed to learn how to maneuver. It took a long time, but eventually he learned how to do maneuvers and to fly inverted. Once he started to get the hang of it, his confidence quickly grew and he refined his flying further and further.

When it came to building, Mark initially did not have the eye/hand coordination of his older brother and had difficulty learning to build. That was when Mark taught Chuck an interesting lesson. It was time to make his first 1/2 A combat plane (around 9 years old), and Chuck had given Mark a piece of 1/8" balsa on which he'd traced the pattern for the stabilator. Mark was having trouble cutting along the outline with an x-acto knife, so Chuck had him put the wood in

a vise and try to cut out the part with a coping saw. No dice, still too hard. Down but not out, Mark had a plan. He asked to be allowed to use the power tools (a surprising move, given that this was the kid who didn't walk until he was nearly 2 years old because he was afraid of hurting himself). Chuck supervised as Mark used both hands to guide the part through the jigsaw, cutting safely outside the outline. Mark then used the table mounted disc sander to slowly trim the part up to the outline he'd drawn, again using both hands to guide the part. Being a perfectionist by nature, with this approach and a bit of patience Mark was able to carefully touch up the part bit-by-bit until it had precisely the shape he wanted. It was a proud moment for Mark, who grew to develop a great appreciation for craftsmanship and to take pride in his own handiwork (to the extent of eventually spending nearly two hours each carving ultra-thin, mirror-finished wooden props for fast combat).

Chuck taught Mark to fly combat once Mark had mastered solo maneuvering. They spent evenings flying "arm combat" in the workshop, imagining how their planes were flying and giving Mark a chance to learn about body position and lining up. This at-home "shadow boxing" was quite useful. Their early two-up training flights just involved flying level, with Mark learning how to fly high over Chuck's head and then to come back down level behind his opponent's streamer, with his hand in good position to make a cut. After a long period of such exercises, they graduated to doing 8s, and then eventually to flying full-on matches. In addition to his training by Chuck and Steve Hills, throughout this time Mark benefited immensely from the mentorship of other legends of the SoCal Combat Team, including Rich "von" Lopez, Pete Athans, and Don Repp.

At 13 years old, Mark had the opportunity to fill the slot on the US team for the newly created Junior age category at the 1994 Control Line World Championships, in Shanghai, China. Up to that point Mark had not had any particular success in contests. He flew his first F2D contest at the 1994 NATS in Lubbock, TX, the summer before the World Champs (that year the World Champs were held quite late, in October). Those World Champs would turn out to be his breakout performance: Mark won the gold medal in the Junior age division, and with his score assisted the USA Combat Team to an overall Team Bronze Medal. It was after this contest that Mike Willcox coined Mark's nickname -- "Skud" -- noting that Mark flew like a SCUD missile chasing down Jari Valo's streamer in a 5-3 victory in the 3rd round. Emboldened by this success, the next year Mark went on to win the LA Money NATS and the Duke Fox Memorial (triple elimination Fast combat "money meets"), and the F2D Team Selection for the following World Championships cycle. That was the year Mark came into his own as a combat pilot. Later, in addition to his Junior gold from the 1994 World Champs, Mark won places on the USA Combat Team and flew in Sweden in 1996, where he took home the Junior bronze medal, Kiev in 1998, Muncie in 2004, where he tied for fifth place, and in Wloclawek, Poland in 2014.

Throughout his high school years, Chuck and Rich Lopez would often pick Mark up after class on a Friday afternoon, with a van full of planes and equipment, and head off for contests in Texas or Arizona. Sometimes, when he had a test coming up, Mark would come prepared with a crib sheet for Rich and Chuck to use to quiz him during their travels. On one occasion when Chuck



Mark won the gold metal at the 1994 World Championships - Shanghai, China

was driving with Mark to a contest, Mark forgot to bring paper to write an essay that was due the coming Monday. Mark wrote the essay on the sides and back of a Kleenex box as they drove along, then copied it over on paper when they got back home.

Mark learned aircraft design techniques from Chuck. During high school he designed a large, thick airfoiled fast combat plane, aimed at taking advantage of the monstrous power of the Nelson 0.36. He named this plane the "Eclipse," because it was so big that it blotted out the sun. Both Chuck and Mark used Eclipses to win the Bladder Grabber in different years.

After high school, Mark was awarded a Charles H. Grant scholarship by the AMA for his freshman year of college. He graduated from Caltech with a B.S. in chemistry, then went to MIT to do a PhD in physics. When Mark moved to Cambridge, MA, the New England combat fliers (including Neil Simpson, Brian Stas, Paul Kubek, Jeff Vader, and Dick Sherman) were super welcoming and took Mark under their wings. Mark really values their friendships, and their hospitality certainly made the cross-country move much more pleasant. During that time, Mark drove down to Philadelphia many times to stay with Andrey and Tatyana Nadein, and to practice with Andrey. The Nadeins took Mark in like one of the family, and he has enjoyed many great times with them.

Over the years, Mark invested a lot of effort into developing his skills as a mechanic, and has served as mechanic on the US team consistently since 2002, when he and Andrey Nadein pitched in to help Mike Willcox to his World Championship victory in Sebnitz, Germany. He has also enjoyed helping Alex Prokofiev and the Latvian combat team in the past several European Championships. Mark and Alex became good friends after Alex moved from Moscow to New Jersey in 2006. They've spent many hours flying and traveling together, as well as working on various combat-related projects.

While at MIT, Mark looked up Greg Wornell, whom he knew was then a professor of electrical engineering and computer science there. In the 80s and 90s, Greg was famous for his Thunderdome-inspired chants of "Two men enter, one man leaves!" as a member of the "Dreaded Canadian Contingent" at the Bladder Grabber. It took some time for Mark to convince Greg to come out flying, but finally Greg came out to watch a local F2D meet. Mark had bigger plans for Greg, though. After the contest he set Greg up on a test flight with one of his F2D models, knowing full well that a drop or two of nitro was all it would take to get Greg hooked back in. Boy did it work -- they quickly became close flying buddies and Greg rapidly developed as an F2D pilot. In 2015 Greg qualified for the US F2D Team, and Mark accompanied him to Perth, Australia as his mechanic (also helping Andrey and Sasha Nadein) in the 2016 World Championships.

In 2012, Mark took a job as an associate professor at the Niels Bohr Institute in Copenhagen, Denmark. When he arrived there, the Danish combat fliers (particularly Anders Kudsk, Ole Bjerager, Henning Forbech, and Andre Bertelsen) took him in and they quickly became great friends. While living in Denmark, Mark has been training regularly and traveling to contests with the "Danish Vikings" combat team. Chuck gave Mark more than just the gift of flight. The hobby has spawned great friendships that have made his moves across the country and the world much more pleasant than they otherwise would have been.

In 2015, Rich Lopez passed away. Rich was like a brother to Chuck and an uncle to Mark, and his death hit them hard. For decades Rich had been the Control Line Combat columnist for Model Aviation. To help keep his spirit alive, Mark took over the column after his passing and continues to write bimonthly articles for the magazine.

At the time of writing Mark remains in Denmark, and returns home to California occasionally to visit Chuck and Muffy and to go fly with the old crew at Gopher Gulch. Chuck and Mark still regularly compete together at contests around the US and the world, and hope to continue to do so for many years to come.



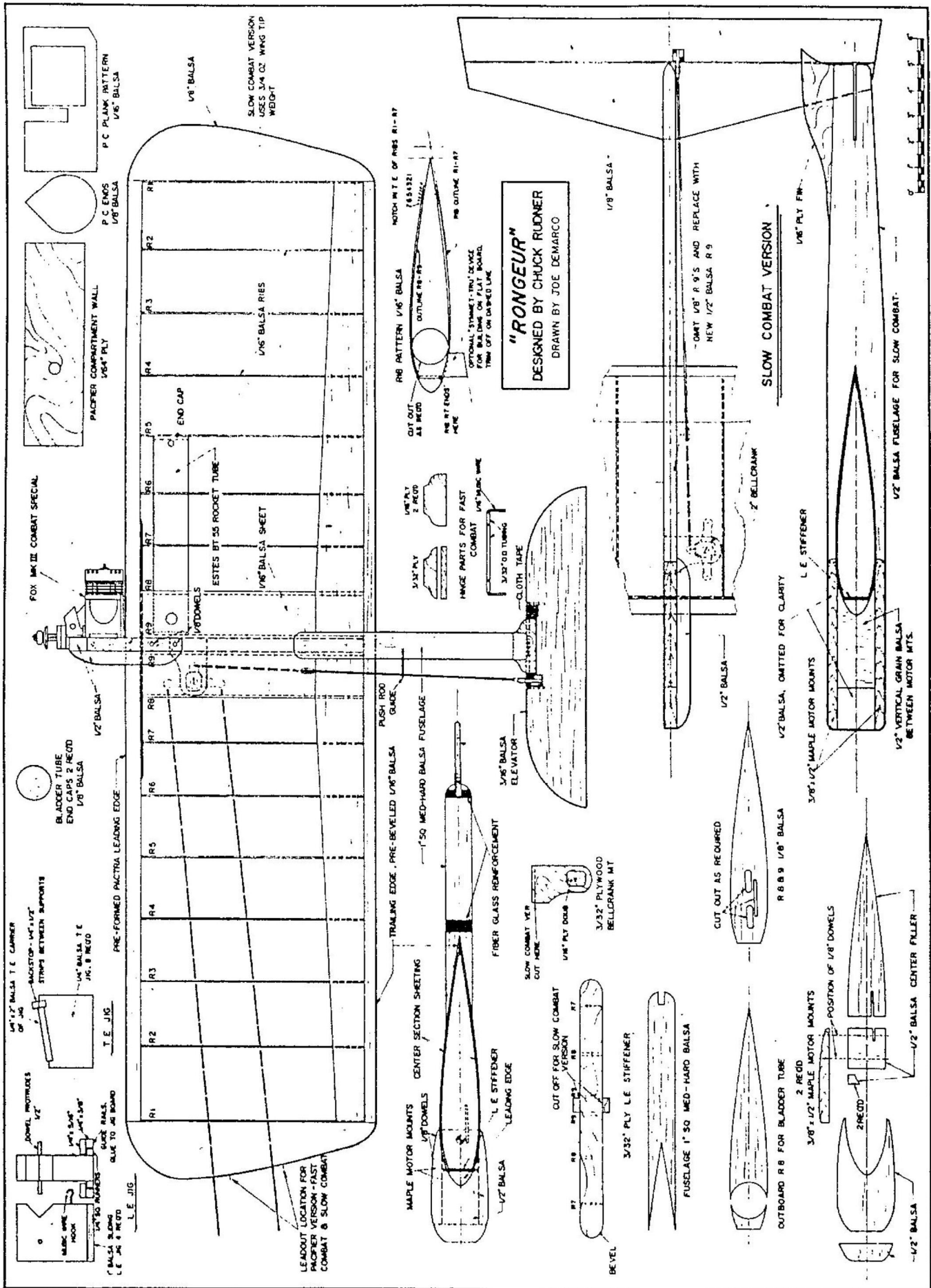
Chuck and Mark - 2013 Nats



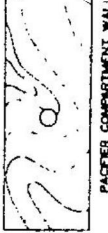
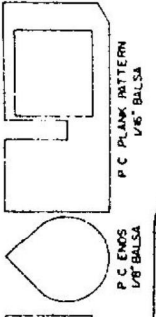
Chuck, Muffy and Mark-2016



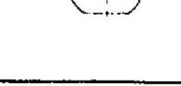
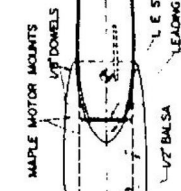
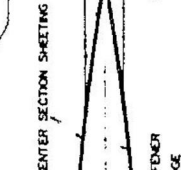
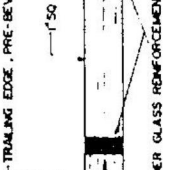
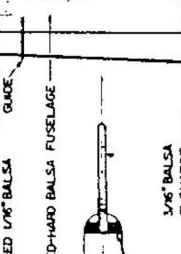
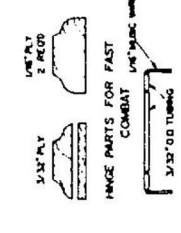
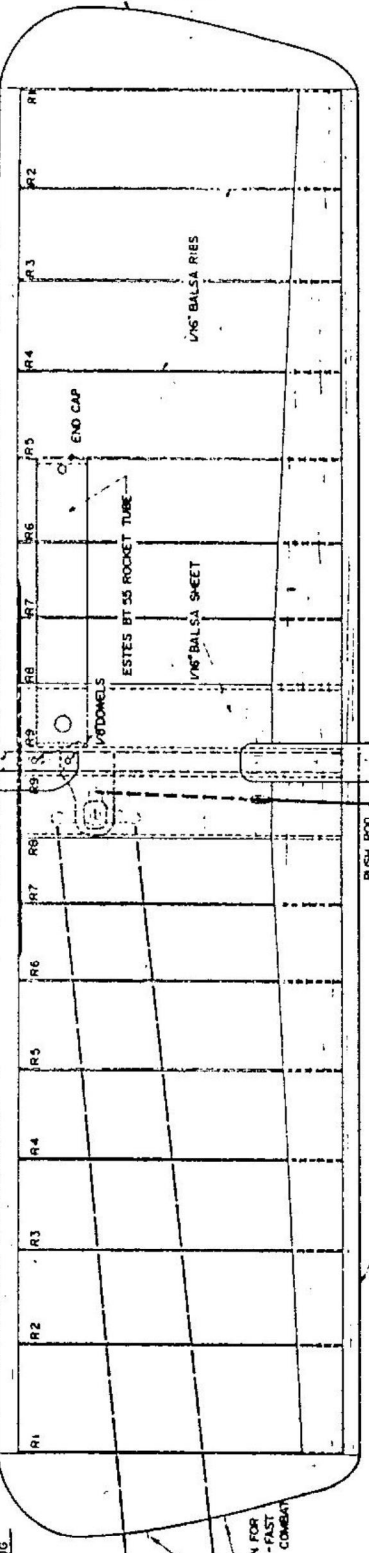
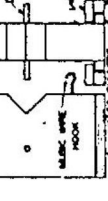
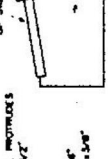
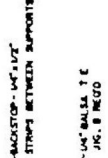
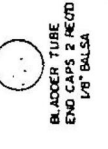
# Chuck Rudner's Rongeur-Circa 1978



**"RONGEUR"**  
 DESIGNED BY CHUCK RUDNER  
 DRAWN BY JOE DEMARCO



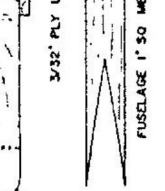
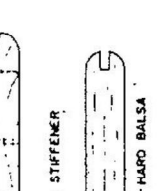
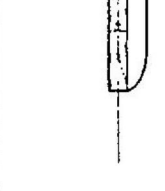
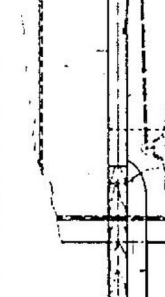
FOR MK III COMBAT SPECIAL



**"RONGEUR"**  
 DESIGNED BY CHUCK RUDNER  
 DRAWN BY JOE DEMARCO

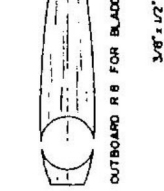
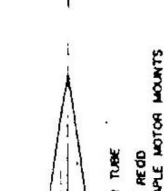
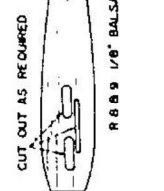
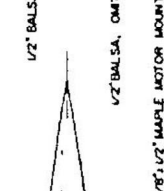
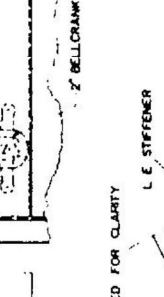
ONLY 1/8" R 9'S AND REPLACE WITH NEW 1/2" Balsa R 9

SLOW COMBAT VERSION



ONLY 1/8" R 9'S AND REPLACE WITH NEW 1/2" Balsa R 9

SLOW COMBAT VERSION



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