

## **COMBAT AS I REMEMBER**

**by GARY FROST**

I started modeling about 1958-59, and more/less taught myself to fly using an OK Cub .049 powered Walker Firebaby with a balloon (no pressure) tank. Good thing for me that spare parts were available as I sure needed them. Was I flying the plane or was it flying me? Later the Cox Baby Bee came along in a bubble pack for \$3.95.

I remember a TV series about combat in which scale like planes were used. Today even the national belly flop contest was televised, but not model planes. And after a contest-most everywhere, only those in attendance knew who won or lost.

My first combat planes were the up -right mount Quicker, covered with a doped, flower patterned silk scarf. Choice of engines were two: Fox stunt or K&B green head torpedo. The Harter's magnesium pan Count Clipper was popular too.

The big innovation was Riley Wooten's Voodoo with a sidewinder mounted engine. This started an argument about whether or not the engine would run crazy and/or wear quicker due to horizontal drag of the piston. That concern is very similar to the argument when the V series of auto engines came about over the in-lines. We never looked back and the sidewinder mounted engine is exclusively used in combat today.

Another innovation, by Howard Rush, was the long tailed Nemesis. This plane along with Howard's flying skills were nearly unbeatable. I remember someone asking Howard why his tail is so long? As you would expect from Howard, 'because I made my pushrod too long'! During one match when I pitted for Howard, his request was to launch him in front of the approaching airborne opponent. Howard then planned to loop and kill the opponent as he pancaked the plane. Nearly worked, and was ok with early rules. See photos.

In St. Louis early contests were flown over shopping center parking lots, with a circular nut shell layer as a cushion. Later a saying by Howard got popular "Combat is best flown on grass" (double meaning)

The Veco 35 appeared and it was popular with hop up guys. You could comb your hair by looking inside the case!

Before my very first match I asked what to do? I was told just do a loop. Not knowing more than that, I did a loop (flying upside down was out of the question) and luckily got a cut in the process. Here is an example of my opponent losing, not me winning. But I won the trophy and the girl!

Most high schools had a model airplane class/club after school, similar to a chess or soccer club, and was usually taught by a shop/industrial arts teacher. Bill Johnson would put on shows with his U-Reely. Somehow he knew when his engine was about to quit and started to wind in his lines. He was more than ½- way wound when the engine would stop, and he whipped the plane until finally he just reached out and grabbed the wing tip. Of course with speeds today it would not work. Bill later went on to be a well- known throttle expert . One big difference between yesterday and today is that before most every kid was at least exposed to model aviation-today very few. One kid said he told no one of his trophy win at a contest because 'airplanes are not cool'.

In the 60s I belonged to an Air Explorer unit of the Boy Scouts, sponsored by Ozark Airlines—(good ole DC3s). Ozark would fly us to airports all over the Midwest area and they placed scenic ride ticket booths close to where we set up. No doubt it was a win-win situation. As a bonus several destinations happened to have combat contests. In most cases Bill Johnson and I ended up flying for first and second. I had learned to fly upside down by now. Some locals 'uninvited' us because we were taking 'their trophies'. Imagine taking fuel, batteries and assorted equipment, in plain sight on an airplane today! See map picture.

C/L clubs were popular and large-some with over 100 members. At least one was exclusively combat in St. Louis—the Hot Heads. I rode my bike over 20 miles to attend meetings in which we would often discuss what the optimal combat design was?



**Gary as an Air Explorer with his first scratch built airplane  
A full size Fierce Arrow**



**Howard Rush with one of his long tail designs  
(push-rod too long)**



**Howard Rush with his serious clown act**

The answer most of the time was: a Johnson .35 powered Voodoo, and 9x8 prop-about 20% nitro was required. The benchmark for speed was 120 mph. You had to go 120 or you simply were not part of the 'in crowd'. Howard's Nemesis changed the airplane equation.. A local hero was Randy Tucker. The newly arrived Super Tigre made 120 easier.

Rat race and combat were popular here. One large club, the Yellow Jackets, got into an internal squabble and split in half- with each half having over 100 members. Adding balsa to underside of piston to pack the case was one 'secret' used in rat.

I remember driving from STL to Cincinnati, Ohio many times. (I made my life of building week days and driving/flying on weekends.) There was only one combat event – combat-called fast combat today, with usually over 100 entries, single elimination. After a long drive it was in the morning and lights were out at Dan Patton's home, with floor to floor combat flyers inside. Most people would knock or just enter, but Howard just stands there and kept repeating 'knock, knock, knockity knock, knock'. I think someone inside kicked the latch. See picture of Dick Imhoff showing me his new design at airport in Cincinnati.



**Dick Imhoff from Grand Rapids Michigan showing Gary his latest design  
Cincinnati, Ohio  
circa 1975 or 1976**

The AMA had not invented SIGs then and there was no organization to tie combat flyers together. About 1974-1975 Bill Allen of DeKalb, Iowa came up with a combat specialty organization, he called MACA. Bill was known for selling combat specialty goodies and kits. I believe Bill also designed the MACA logo. MACA was to have elected officers, it's own newsletter, an annual contest in Dist VI which was well attended several years in a row called the MACA Nats, and an annual meeting at the Nats which was also well attended. I was elected the first MACA President and held office for approx. 10 years. I gave up the post to help a young Jr. flyer, Eric Parker, win the AMA Nats, and go on to win the Jr. position on the World Championship team. Bob Beardon of Bear model products in Chicago took over sometime in the 80s.

We did not know it but across the pond combat evolved quite differently in the UK and in Europe. Nitro was scarce so they used .15 diesels, and that influenced airplane design.



**a MACA Nats ceremony**

Sometime in the 70s, Charlie Johnson, on his own, visited the European championships and came back to tell about the differences. Diesel powered planes were heavy and strong and the ground was not the enemy. If someone got behind you, just doink the plane and it was easy to start the diesel as no battery was needed and it did not need extra fuel. The home built 'mustard tin' tank was popular. Flying tactics were different. I don't remember a lot of following in loops. When a looping situation did occur one pilot would follow with the lines getting twisted with each loop. No one wanted to reverse because it was known that he who reverses first will end up on defense as lines untangle.

Next year I went with Charlie to the European championships—this time to enter. I was flying balsa ST G15 powered planes. I went to local flying field in Manchester and challenged the local hot shot to a match—big mistake. He got five cuts, I was devastated at the time but later realized he did me a favor. I had the faster plane but he could turn on the CG. I flew the usual inside/outside loop combinations, and he did not do one loop; instead he flew square turns and zig zags.

We stayed at Dave Clarkson's house; Dave is a true modeler and his interests were team race and combat. Balsa wood shavings were all over his house. His building area was his kitchen table.

Somehow I managed to be circle marshal in a local contest during my stay for the European champs. In one early match, one opponent, got a cut and then laid prone on the ground, with his toes inside pilot's circle, and arm stretched out, thus mismatching lines so his opponent could not get a cut. The opponent complained and then asked, 'can he do that'? I referenced a copy of rules which were written in UK English with different meanings than we would associate. The written words were something like, 'feet cannot touch the ground outside the pilot's circle'. After a pause the second flyer walked up the middle of the prone flyer's back, stood in the middle of his shoulders, got a cut and walked back to the pilot's circle without ever actually touching the ground outside the pilot's circle. Good balancing act. I will never forget this one.



**Gary and Charlie Johnson at the European Championships**

I also remember the Russians having a much stronger engine than anyone else. One UK flyer had a girlfriend that rivaled a movie star, and she spent the night with a Russian flyer and the next morning brought back to her boyfriend one Russian combat engine.

Lessons learned include: they learned they could not spot us airspeed, and we learned we could not spot them airtime. These concepts contributed to many design changes on both sides of the pond. Some in the UK were not happy about us messing with 'their event'.

Back at home I wrote about planes and tactics in April and May 1976 Model Airplane News.

I also approached the AMA about sponsoring a US combat team. To my dismay they were not interested. To me any other c/l event was lesser, and r/c was out of the question. Later when I tried stunt, I found out that if you took mylar, epoxy and foam wings from me, I did not know how to build!

I organized the first two team selection trials here in STL- sponsored by a local club at Buder Park. ( Later on a world championships was also held here). Basic format was two separate single elimination contests held on a Sat and Sun. Everyone flew Saturday with first place filling one spot on the team. Sunday everyone else flew for another spot which was awarded to the winner.

Then the two second place Sat. and Sun. winners flew single elimination for the third spot on the team, and first alternate. I was fortunate enough to be on the team along with Chuck Rudner, and George Cleveland.

There was a protest/ question during the contest 'how come judges are counting streamers that shred as cuts? One cut judge answered, "I suggest you not let your opponent get so close behind you when your streamer decides to shred!"

Mack Henry of Nashville organized the next 2 team selection contests. One change may have been the introduction of the multiple eliminations. After 4 years the AMA got involved in the team selection process.

For the W/C, I chose Mike Strieter of Laurel Maryland, (who authored a MAN article on how to modify a Flite Streak to make it more competitive) and Charlie Johnson of San Diego, as my pit men, We were on our own financially and I did my best to help with their expenses. I was lucky to have them.

I used Phil Cartier's Bumble Bee powered by specially prepared Fox 15s. To run the best Duke had a special head button, but the down side is if you had to change plugs, it required you to take the head off. Also Duke had added steel epoxy to the shaft and by pass.

During the actual 1977 w/c I learned how emotions play during competition. I was a kid who loved flying, win or lose. But during the flag raising at opening ceremonies, when they played the national anthem, I choked up. This was no longer a game and I HAD to win.

To make matters worse, the three of us decided to check out our competition. We were amazed that so many planes were in the air at the same time, and then realized they were all flying in overlapping circles. That is one would maneuver in one side of circle only, and the overlapping pilot was maneuvering only on the unused side, leaving room for someone else to do the same. We took notice of one pilot who was flying low to the ground at bottom of his maneuvers, and then realized he was not watching his plane but was watching us watch him! Ugh.

The tightness prevailed in first part of my first match. Somehow I was losing against an opponent whom I assumed would be easy. Time was short and my plane was down. So here I am wondering how I managed to lose my first match.

One judge in a very distinctive UK accent said, 'better 'ang it up mate, only 10 seconds left.' Mean-time Charlie was frantically flipping my prop, and Mike looked at his watch and said, 'that's a minute and 10 seconds, get that #@\*& up!!! I heard all this and my emotion turned to anger. The engine fired and I went up and got enough cuts to win the match in short order.

During one match I was against the EU champ who was flying his traditional diesel heavy plane set up. I had lighter glow, planes which by comparison were much weaker. I had two planes left; one new and one slightly damaged. Which to use first-with other matches to go? I started with the damaged plane and quickly was behind by one cut. I switched planes which cost me 15 seconds air-time. My advantage was I had enough power to fly upwind and think, where the diesel just kept getting blown backwards. In desperation I tried turning above my opponent. Finally it worked and he hit the ground 180 degrees from his pit. His young pit member made it around to the back of the downed plane in record time, his foot went under the wing and he kicked the plane up grabbing it by the TE, and reached in front to start the diesel with one flip and throw the plane in the air in 12.8 sec. Guess winning was not meant to be.

MACA continued to be popular: we held a routine meeting at the AMA Nats to discuss whatever the membership wanted. It may be at that time we were the first SIG. When the safety thong became rule under an emergency/safety action, I think MACA lost a lot of credibility. I had convinced some AMA officials to at least wait till emotions calmed down following a combat plane that got loose and hit power lines at a military base where a Nats was held. Power was out for awhile. Trouble is I had obligations at home and could not attend this MACA meeting. I really believe that had I been there I could have at least postponed the ruling.

I was also involved promoting modeling via airshows. As Chairman of the Greater St. Louis Modeling Asso., we put on an airshow at a local Marriot hotel and news was covered by a public relations firm, Fleishman Hilliard. I was also contacted by a local movie company contracted by Ford Motor Co. who had budgeted for a movie, which had a theme of a young boy capturing the competitive spirit of model competition. His father, a car salesman, captured that spirit to sell cars.

We used a plane designed for a weight lifting event at local contests to pick up an old style 16mm movie camera-about 6 pounds. The plane also towed a streamer and we got some great shots during cuts. We built 7 different R/C Contenders in different stages of construction so the entire building sequence could be filmed in 15 minutes. I understand copies were sent to every Ford dealership.

I also contacted the STL Cardinal organization and somehow managed to get an interview with owner, Bill Bidwell, himself. I thought it was over when the unmuffled engine noise echoed back and forth inside the empty Busch stadium. Bill informed me that humans were the best sound attenuators and not to worry. He lost composure during the practice match that got more and more like the real thing, and kept beating on his ticket manager's back, saying 'get 'em, get 'em'. After the flight he paced back and forth and said he did not like those &%\$#@ bands anyway' We ended up pre game, and later found out only the lack of a TV sponsor prevented us doing a show at 7th inning'. Combat needs no explanation.

Mike Tallman and Lew Woolard of Wichita, came down for 7 years and put on a thrilling tandem stunt show, in addition to the combat action. They stayed tight in wing overs, loops, eights, and head on passes were perfect—any closer and...

Later we also performed for the football cardinals.





**Here are the Saint Louis Cardinal players watching and enjoying the actual flying. Red Schiendist on far left. Note facial expressions on both players and fans. The fans loved it.**

**Interesting to note: When I auditioned for Bidwell I was in the same stadium only it was empty. One burp and the noise echoed and re-echoed back and forth . . . I thought I was dead. Bidwell said “You don’t know anything about show business, do you? First with no noise no one has any fun and second, when the stadium is full you can’t hear these things anyway” . . . He was right**

**What did make noise was the crowd when Tallman and Woolard did their head on passes. One did an inverted wingover. The other pulled out right side up, so they passed twice in one lap with no space between them.**

Night shows were difficult with the bright stadium lights. One either had to fly at top of circle or lower, below the lights. While learning this we had several unplanned near miss head on passes and one night I ended up crashing directly on second base. The crowd went wild and the cardinals wanted me to build a plane that would ‘crash pretty’. We ended up getting better and better and managed to deploy a second streamer triggered by a DT fuse. See Cardinal photos.

One club member, John Bruno, had an amazing ability to dive a plane exactly into an open 55 gal barrel. He did this at other air shows many times. First the plane would disappear and then the whosh with the wing panels flying up.

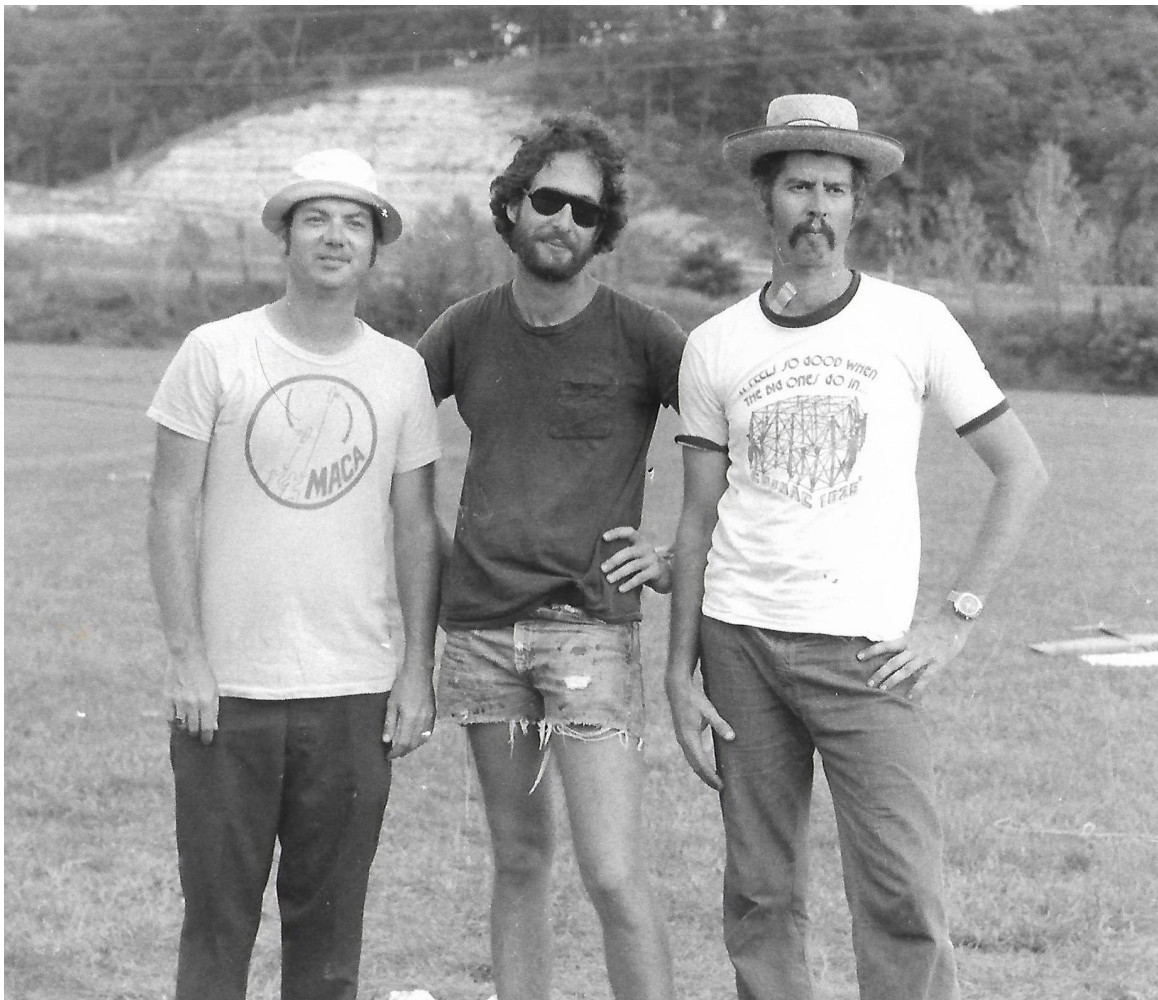
During the flap over engine noise and mufflers, I figured prevention was the best approach. So when I moved I became a member of the local park board, and proceeded to teach board members about modeling and noise, and what concerns could be expected. I flew in a local park with houses nearby and introduced myself to each owner and explained what I was doing. Not one complaint using an un-muffled combat engine got back to me. Hardest part was crowd control. I even got the local mayor to take a flight.

At this point job commitments began to take more and more of my spare/modeling time away.

I want to thank Neil for taking on this project, and thank you for reading this, as I had a great trip through memory lane as I wrote.

Extra photos included.

Respectfully submitted,  
Gary Frost



**First World Championship Team**



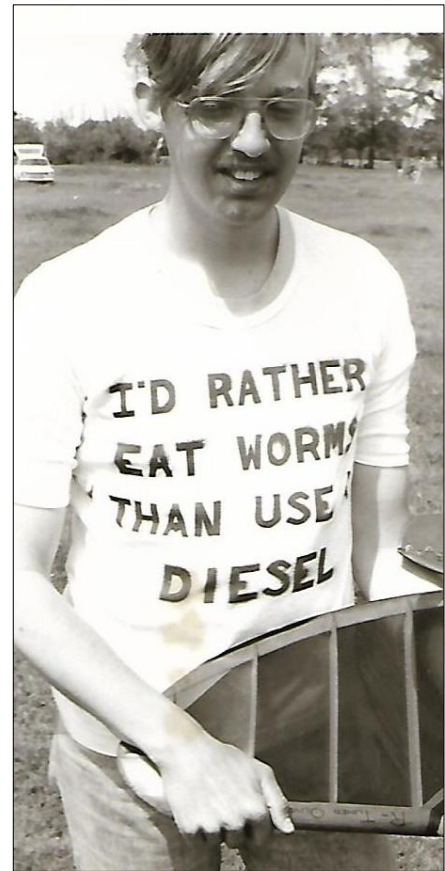
**Dave Wood and his own design, Titan.  
The Titan was to England and Holland as the  
Nemesis II was to the U.S**



**Mike Strieter at AMA Nats**



**Vernon Hunt in the 1970s**



**Chuck Thomas, pit crew captain for  
the Outlaws, wearing a T-Shirt that  
raised a few eyebrows in diesel  
country. T-Shirt and photo by  
Gary Frost**



**Mack Henry and Jordy Segal in St. Louis**



**First and Second Place at the 78 World Championships  
Dave Wood at Right**



**Gary Frost launches during a match in the United Kingdom**