



# The Flightline



Volume 36, Issue 7

Newsletter of the Propstoppers RC Club

AMA 1042

July 2006

## President's Message

Here we are in July all ready I hope every one is finding time to fly. Mick Harris and I were over at Christian academy Thursday night and no one to be found. There was no wind and a smooth runway; what is wrong with this picture?

The picnic date was changed because of the conflict with father's day and just a busy weekend. Everyone at the meeting agreed and Picnic was moved to July 15<sup>th</sup> the second Saturday in July.

Bye the way we had a great turn out at the June meeting all most 1/2 the club was there flying fuel and electric models. We did miss show and tell so if you have something new or old bring it to the next meeting on Tuesday 11<sup>th</sup> July.

Bring your thoughts about the needs of a bare bones field to keep the club alive in the future. I myself have about seven fuel models and three elect. I would love to fly fuel but see, there is a noise problem. The fields that are close by are to close to houses and the situation getting worse. I

### Agenda for July 11<sup>th</sup> Meeting

#### At Sleighton Field

Flying from 5 pm, meeting at 7 pm

1. Membership Report
2. Finance Report
3. Flying Field Status
4. Plan for Walt Bryan Electric Fun Fly
5. Show and Tell
6. Continued Flying

## INSIDE THIS ISSUE

- 1 **President's Message**
- 1 **June Meeting Agenda**
- 1 **Editor's Notes**
- 2 **Calendar**
- 2 **Propstoppers at the European SAM Champs.**
- 8 **Picnic needs list**

feel we should push forward with Smedley property with the restriction of Electrics seven days a week and fuel Saturday and summer meeting nights only Or LEAVE FUEL MODELS OUT just so we have some where to fly that is close by, if this would help on getting a field.

We need some new leads on fields, if you see something that might be good ASK the owner. All they can say is No but they could say YES. The last place I asked was Pete's Farm Market on Rt. 926 by Dallet Farm. I received no response.

On the bright side we already have a good field.

Hope to see you at the July meeting bring your fuel models the FUMES are great they bring back memories.

**Dick Seiwel, President**

## Editor's Note

I am writing this edition of Flightline from my mother's in England following our trip to the European SAM Champs in Italy; reported in this edition.

Since I have been away almost a month I have had not contact with club members nor participated in club activities from which I could write reports. Furthermore, I have not received any offers to cover such events.

Neither have I received minutes of the June meeting for publication, although Dick Seiwel's message suggests that the meeting was a great success.

On the other hand I read that the picnic has been rescheduled for Saturday 15<sup>th</sup>, three days after my return. So I have included a list of things we usually bring and share at the picnic in the earnest hope that many of you will step up and offer just one thing.

I will bring my RV if I can get it inspected in time, as well as the big canopy. Of course I will bring as many models as I can make flyable in that time too. Hmmm... let me see.... Gas models too? Maybe I can get the ignition Ohlsson 60 powered models ready. I guess the Fox 36 powered U/C model is too loud though.

See you there.

**Dave Harding**

## Calendar of Events

### Club Meetings

Regular Meeting at Sleighton Field  
Flying from 5 pm meeting at 7 pm  
Tuesday 11<sup>th</sup> July, 2006

Tuesday Breakfast Meeting  
The Country Deli, Rt. 352 Glenn Mills  
9 till 10 am. Just show up.  
Flying afterwards at Sleighton Field

### Regular Club Flying

At Middletown / Sleighton Field  
Monday - Friday;  
10 am until dusk- Electric Only  
Saturday  
10 - 3pm-for FUEL PLANES and  
10 - Dusk for Electric  
Sunday - 12 - Dusk – Electric Only

At Christian Academy; Electric Only  
Monday through Friday after School till dusk  
Saturday 10 am till dusk  
Sunday, after Church; 12 pm till dusk

### Special Club Flying

**Club Picnic Saturday 15<sup>th</sup>  
July, Sleighton Field**

Walt Bryan Electric Fun Fly, Saturday  
12<sup>th</sup> August, Christian Academy Field.

Saturday mornings 10 am Sleighton Field  
Tuesday mornings 11 am Sleighton Field  
Thursday evenings 4:30 p.m., at CA field.

Note; only electric powered airplanes.  
Beginners using due caution and respecting club  
rules may fly GWS Slow Stick without instructors.

## Propstoppers at the European SAM Champs

Last year I competed at the 3<sup>rd</sup> European SAM Champs in the Czech Republic and had a wonderful time. So there was no questioning that I would return for the 4<sup>th</sup> Euro, this time in Italy about 60 miles south of Venice. And it was no coincidence that the date was the weekend before the start of Wimbledon as I had politicked for this at last year's event; it made it attractive for my wife to accompany me to Italy and London.



The story of our good times last year resulted in several additional American SAM competitors and their "support" to sign-up too, including my flying buddy, Dick Bartkowski and his wife Kathy. Once the commitment was made Dick and I began to sort out models suitable for the unique European events. I began last year when new rules were committed for SAM electric classes as I decided to make a really big Stardust Special, my preferred design, which I thought might also fit the European rules. These rules were new for this year and I found that with a motor and battery change the big Stardust would indeed be competitive in the Old Timer Limited Motor Run class. The other electric class was called 1/2 A Electric Texaco but it is actually just another LMR event for direct drive, 6 volt, Speed 400 motors. However the rules were so different from anything else that I decided to make yet another Stardust Special sized and engineered just for this event. Actually, as I did the design I realized that it would also make a fine 1/2 A Texaco model too – this class is for models powered by the venerable Cox 049 reed valve motor – so I added these provisions too. Meanwhile Dick had decided to come but since we had to fly to Europe, with our models, Dick needed to make some new ones that could be broken down and shipped. He decided to make a new Hans Stuck Record Hound with a two piece wing and removable stab, sized to match the motor and battery he had been using in the similarly sized Pacer C. When he was well along with this model he also began to think about the 1/2 A Electric Texaco class too and his initial thoughts were to bring his trusty old (maybe seven years old) small Trenton Terror which is powered by a direct drive Speed 400. The Trenton was originally built to Joe Beshar's Elexaco rules and Dick won this event several times at the Old Eagles meet and he used it to good effect in the SAM Electric Texaco events too. But at one of the club meetings he was taken by Mick Harris' larger Trenton Terror and thought this might be more competitive, so he began the development of this model.

### Propstoppers RC Club of Delaware County, Pennsylvania.

#### Club Officers

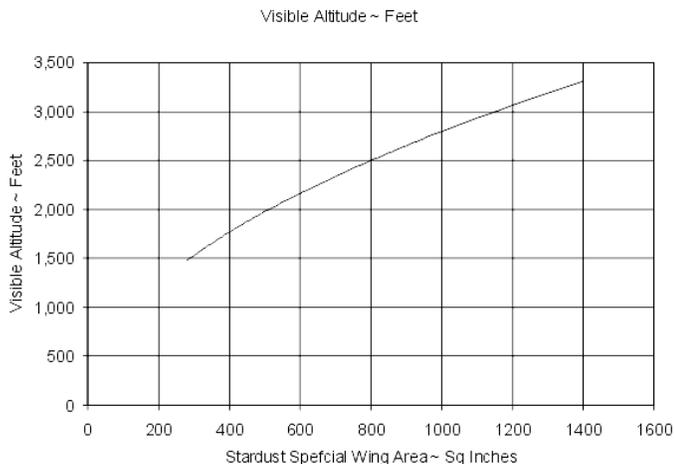
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Propstoppers Web Site; [www.propstoppers.org](http://www.propstoppers.org)  
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Now the rules for this Euro ½ A Electric Texaco include the use of any six cell NiCad or NiMh battery or two cell LiPoly. The Europeans are very aware of the sensitivity among environmentalists to heavy metal waste and they are on the verge of an outright ban on such batteries, hence the new rules allowing alternate chemistries. The rules also state a motor run time of 180 seconds and a minimum wing loading of 10 ounces per square foot.

Our experience with the Elexaco event, which allowed seven cell batteries, a 7.2 volt speed 400 and a 2 ½ minute climb, was that a 14 ounce model would go out of sight at the top of the climb. Now with a six volt motor and three minute climb clearly the model needed to be bigger than our Elexacos; but bigger means heavier because of the wing loading rule and heavier means less altitude gained.

Performance for this class of model is simply the altitude gained and the rate of descent in the glide; the latter driven by the wing loading, which is fixed in this case, and the model aerodynamics – L/D. So there is a trade between these factors bigger for visibility and therefore higher usable climb vs. heavier and less altitude potential.



On the propulsion side the Graupner Speed 400, 6 volt motor is specified but the choice of battery and propeller is open so how do we maximize the propulsion potential? Clearly we are limited to the motor's operating current limit, as exceeding these results in a burned-up motor. But we have operated these motors over 11 amps. We also need to maximize the available voltage and although the number of cells is specified there is a whale of difference in the loaded operating voltage among different cells. Even at this current level there are considerable losses from battery internal resistance. Dick chose to use six Sanyo 1000 mah SCR cells for their very low internal resistance; weight is not an issue in these models due to the size and wing loading requirements.

I went a different path and chose a very large; 4000 mah two cell LiPo. The reason for this is that, like the NiCad, the LiPo has an initial operating voltage much higher than the average and since I was to use only about 500 mah in the climb, I was assured of getting the desired higher voltage. A test on these batteries with Jim Barrow's Computer Battery Monitor showed an average of 7.5 volts at ten amps. The LiPo weighed six ounces, much like Dick's NiCad pack. In the event I bought three of these batteries as I have other plans for their use when done with this event (like the CAP aerobat I bought from Steve Boyajian).

So concluding the analysis I selected a wing area of about 250 sq inches and 18 ounces all up weight. This model I expected to climb to the visibility limit of 1400 feet in the allocated three minutes and a still air time of about 15 minutes against a heat flight maximum of ten minutes.

I built this model at the same time Dick was finishing up his fleet and so we set about flight testing with a few weeks to go. Meanwhile, for the big Stardust LMR I bought a new Steve Neu motor and gearbox to replace the Aveox I was using. The Euro LMR rules specified seven NiCad or NiMh cells or two LiPoly. I knew that to get the necessary performance in the 60 second climb specified for this class I needed to pull about 80 amps on the seven cell CP2400 SCR battery I selected vs. the 40 amps on 14 CP1300 cells of the initial SAM model. This should give the same performance and a rate of climb about 1500 feet per minute and something over twelve minutes still air time. I bought an 80 amp Hyperion ESC from Nippon Dave and two battery packs from Cheap Battery Packs, the latter as I wanted a professional end-to-end soldering job for the 80 amp current level. However, when I tested the setup I was only achieving 55 amps on a fresh charge with the 18x10 Aeronaut prop; bad news. In these climb and glide events amp = power and power = altitude and altitude = glide time. So this problem was significant. I tried different timing with the programmable ESC but still no joy. Then I tried a wide chord 18x13 prop and the current came up to almost 70 amps, but this was not an optimum prop and I was still down on power. Some correspondence with Steve Belknap and Steve Neu resulted in the suggestion that perhaps the ESC had a higher internal resistance than desired so I agreed to buy the more expensive 80 amp Castle Creations unit, but time was running out and I decided to just stay with what I had; it had seemed to fly well enough and there was the other model to sort out.

I built the small Stardust around the Graupner 6 x 3 folding prop with integral spinner – I like the look of the fully faired and cowled front end, and the aerodynamics would benefit in the glide (spinner effectiveness on propeller efficiency is a debate that goes on and on. Generally it is agreed that they do not improve propeller aerodynamics ~ right Dave Bevan?) However, when I looked carefully at the prop I found that it had a larger spinner than I expected and as a result was also rather bigger in diameter at 6.3x3. Nevertheless, I finished the model using the larger spinner and it did look good! (No pictures I am afraid; see later discussion!)

However, both Dick and I were surprised by the current draw of these motors and I don't know why as we have used them one way or another for years. Anyway, suffice to say we both fried a motor before realizing the problem; I was pulling over 14 amps on a fresh charge!

So we both began to do some prop changes, easier for Dick as he used a simple prop adapter but I had to start cutting away at Graupner's carefully designed blades. I cut almost an inch from the diameter and still was drawing over 12 amps, but I elected to go with this and it proved satisfactory, albeit, a bit weird looking. My model flew just like all the others, that is to say it flew well once I got it trimmed, both in the climb and the glide. My remaining task was to set the climb power such that I could just see the model at the top of climb and this would be adjusted by further changes to the prop. I also needed to set the climb trim. So after Tuesday breakfast with less than two weeks to departure, Dick and I went to Sleighton for more test flights. Things were going well until, suddenly during the climb, the Stardust dropped its nose and in an instant the wing folded and

both departed; the remaining "arrow" dived straight into the trees! Good grief, what happened? And only just over a week to go! Well, surprisingly I found the debris quite quickly and discovered that the fuselage forward of the pylon was smashed to pieces, the pylon lay to one side but the rest, including the tail was in good shape. The motor/ESC and LiPo battery were bent or crushed as one followed the other into the crater, but the Rx looked good. The wings had fluttered downwind, lost for ever, or so I thought. The LiPo, a unit about six inches long, was crushed over about one inch at the forward end where it struck the back of the motor, and it was essentially fully charged. What to do with it? I couldn't leave it at the field and no way was I going to put it in my van. Eventually I realized it would fit in the trailer hitch receiver so I shoved it in and secured it with a rubber band. (Once home I left it in the driveway as I still don't know how to dispose of it!) So I collected all the bits and took them home to ponder a plan for the meet.

Meanwhile Dick was having all kinds of problems with trim and control on Mick's larger Trenton Terror, and the neither the climb nor glide performance was as expected.

On examining my wreckage I sorted through the jigsaw puzzle of parts and began to glue them back in place, just a dispirited part at a time sort of exercise, but before long I could see that the fix was not that bad, although I needed a new wing. So I decided to attack the wing first as that was a major mental block. It quickly came together as I had some spare ribs and the template, as well as the laminated tip fixture. Although I did not know the weakness that might have been involved in the failure I suspected that the joiner was involved as there is not much space between the spar elements in such a small wing. This time I made a laminated graphite part and securely wrapped the socket assembly with fiber filled tissue.

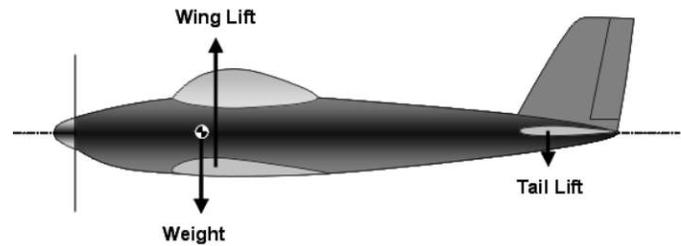
I had already bought spare motors, props and batteries and although the ESC still worked, dented as it was, I decided not to use it and replaced it with another I had on hand. The servos were damaged as they took the impact loads from the straight push-rods right into the gear train, so they were removed and replaced too. All in all, it took just a few days to put "Humpty Dumpty back together again". So I began the sorting process all over again, but this time with the Euro 35 MHz radio. Meanwhile, Dick Seiwel called and asked if I had lost any wings over at Sleighton. Had I? You bet! So Dick brought my lost pair of Stardust wings to the house. They were in good shape, but I had already replaced them. They did confirm, however, that the wing joiner failed, so maybe I had learned something and my new joiner was many times stronger than the last.

Now for my excuses! I have built and competed with five Stardust Specials, each built to different rules, sizes and propulsion. Like the little girl with curls down to her forehead; "when they are good they are very, very good, but when they are bad they are horrid" (Is this peculiarly British fairy tale?).

The Stardust has superb aerodynamics. It has a high aspect ratio wing with a good airfoil; NACA 6409, it has an aerodynamically clean fuselage and a modest sized tail. I spoke with the designer, Don Brogini, some years ago and he verified that all the design features that attracted me to it were quite deliberately chosen back in 1941. Don went on to become a designer for Grumman and flew RC gliders.

My problems with the Stardusts I have built and flown all boil down to stability. You may like to re-read my Flightline article on stability from the January 2003 edition, but here are the essentials.

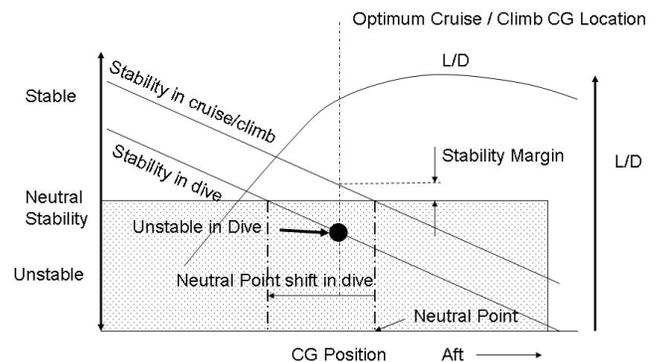
First an airplane in trimmed stable flight must experience a balance of forces and moments; the total lift must equal the weight and the tail "lift" and CG offset must balance the moments.



Shown here is the configuration which has the CG ahead of the wing center of pressure; where the lift acts. In this configuration moment balance is achieved by the tail "lift" downwards, so the wing lift must equal the weight plus the tail "lift". This produces more drag than if the wing was just lifting the weight of the aircraft and in this type of contest airplane we seek to minimize drag and maximize L/D. The lowest drag configuration is, very roughly, where the wing and tail both lift at their optimum level; but this configuration is demonstrably unstable; the airplane will diverge in pitch either up to a succession of diverging stalls, or an increasing dive. So we and the glider guider community try to set our CG further forward, such that we maximize aerodynamic performance with adequate stability. In the article I mentioned the Lockheed 1011 where they pump fuel into the horizontal tail tank to minimize this "trim drag" in cruise and then pump it back again for the increased stability needs in the landing condition. Now I have slowly, very slowly, realized that my problems are associated with this practice and an additional effect which can dominate the equation; wing pitching moments, or more particularly the change in pitching moments with Reynolds number.

Highly cambered wing sections exhibit increases in nose-down pitching moments with increase in Reynolds number (increased speed for a fixed design). And this increase in pitching moment can drive the airplane unstable; the CG is too far aft.

#### Stability – Performance Trades with CG Position



You can demonstrate this quite clearly by building a simple HLG from sheet balsa. Build one with a cambered wing, trim it to fly perfectly from a slow toss, and then throw it hard; it will just pitch over to the vertical. Now build the usual, essentially flat sheet un-cambered HLG, and repeat the test. The glide will be much faster and steeper than the cambered one, but you can launch it at high speed without the dreaded tuck.

How does this apply to my Stardust experience? Well, once trimmed for climb and glide the model behaves just fine. Of course it takes some downthrust, or down elevator trim in the climb, as most of these models can climb vertically, but they do so at much the same speed as the glide. My problems have occurred when I lose sight or orientation resulting in a nose-down flight condition, power-on. Such a relatively highly powered and low drag model gathers speed quickly even in a shallow dive, probably moving it into the unstable flight regime. The subsequent control input to arrest the descent results in excessive wing loads and subsequent failure. I am somewhat embarrassed to admit that this has not been a rare occurrence, although when it doesn't happen I have had excellent success! Life on the edge I suppose.

(On re-reading this I suspect that my description of these effects is not quite right. Increased pitching moments don't make the airplane unstable, they change the trim. This does result in the nose down tuck, but it does not actually move the neutral point) Anyway, back to the Euro development story. With the big Stardust done and packed I then installed the Euro 35 MHz radio into the small model and set about flight testing to make the trims. It is my practice to use the offset functions of my Futaba 8U to allow a three-position switch setting for climb and two glide trims. Last year my inability to make these adjustments before the event was the root cause of yet another "I've lost it, oops" incident on my second LMR flight. This year I vowed to make the trim settings before leaving the US, in case there was no opportunity at the field. In this regard I was immeasurably aided by our US AMA ambassador to Europe, Roy Brown, who observed that it is possible to change the Futaba 72 MHz module for a 35 MHz one whereupon all memories and trims are preserved. And it turned out to be so, although the search for a less expensive used module on e-bay took some time. So, having set up my models I was able to lend my UK Futaba 6XAS to Dick, having bought a couple more receivers and matching crystals, also on e-bay. I made my first flight late one evening in high winds and although the climb-out was par for the course I began to have difficulties at altitude. The controls seemed to lag and not always responsive and I was really lucky to get it back at all. The next day we went out again when it was calm and first did some range checks, which turned out poorly. This Rx was a Hyperon / Berg single conversion DSP unit with an LED that indicated hits or loss of signal. But I had used this unit before in Czech and also in some test flights with the big Stardust, so it should perform, so I thought. Nevertheless I made a flight, which went well until; I was low over the trees, whereupon I lost it again. I was fortunate in gathering it up and getting it back to the field for a satisfactory landing. Strike one Rx. Upon reflection I remembered that although this unit had functioned perfectly in Czech, my last arrival was straight-in from altitude from the above described incident; maybe something was damaged reducing the sensitivity for challenging transmission conditions; like low over and behind tree lines. Or maybe the problem was with operating on 35 MHz in the US where this band is used for mobile communications of some kind. So I decided to wait and test in Italy.

This year my events were on different days so changing the Rx between models was not an issue if that became necessary. So both models were packed in the golf bag/box and a few days later Jean and I flew directly from Philadelphia to Milan arriving Monday morning with three days of tourist stuff before going to the flying site.

After my departure Dick soldiered on with various fixes for the stability and he and Dave Bevan put all their efforts in trying to solve the problems including a rebuild of damage from an

instability induced "landing". Finally Dick had run out of time and ideas and concluded that his old trusty small Trenton was a known quantity and should perform just as well, if not better as it was a well sorted model. His final flight at Sleighton, before packing for the trip, was a ten minute still air effort; good enough and competitive too.

Many years ago we took the kids on a European jaunt and purely by accident discovered that the "hidden" gems of Italy are found in the many small and medium sized towns that were the centers of the various city states during the middle ages and reformation. So we decided to drive to Ferrara, thirty miles from the site and three hours from Milan and it turned out to be just such a place. Established by the Estes family in the 16<sup>th</sup> century, when it was on the main Po river channel it flourished for hundreds of years before being swept into the Venetian sphere. It is laid out in two sections, the medieval city and the renaissance city, all enclosed in a largely intact defensive wall, nine kilometers long. We rode bikes around it one day. Cities like this have all the charming old buildings and squares, but unlike Florence and Pisa they have few tourists. In fact it was just the process of eating, drinking and sitting in the sidewalk cafés watching the residents going about their daily chores that was at the heart of our visit. It was hot and therefore understandable that they still live by the siesta; the stores close from 12:30 till 4:30, whereupon the residents, and most particularly the older men, come out and congregate on the corners. Everybody rides bicycles, and why not in a compact flat city. We spent three happy days in Ferrara before driving to Codigoro in the Po Delta. The SAM Champs was held on a light-plane field from which the local RC club also operates. It is located in the heart of the vast agricultural areas which form the Po river delta. There are no homes for miles so noise is not an issue here. The field has a 900 ft grass runway, beautifully mown for the occasion and surrounded by corn fields.



*The field for the European SAM Champs*

Our Italian hosts had the event well organized and, unlike last year we did not have to share the field with full-sized planes. There were almost 200 models entered in the various events so this meet is growing every year. It was most enjoyable to see so many International competitors that we had met last year. They are a fun bunch and a key ingredient to making this a fine event. Dick arrived by Friday afternoon having flown Philadelphia – Venice and after a quick lap of the Grand Canal.

We registered and assembled our models then I took a test flight with the big model; it performed perfectly. Then with the small model and found that the radio problem had not gone away, indeed I was again lucky to save the model. I immediately transferred the Rx from the big model and took a completely satisfactory test flight so I was ready for the first event.

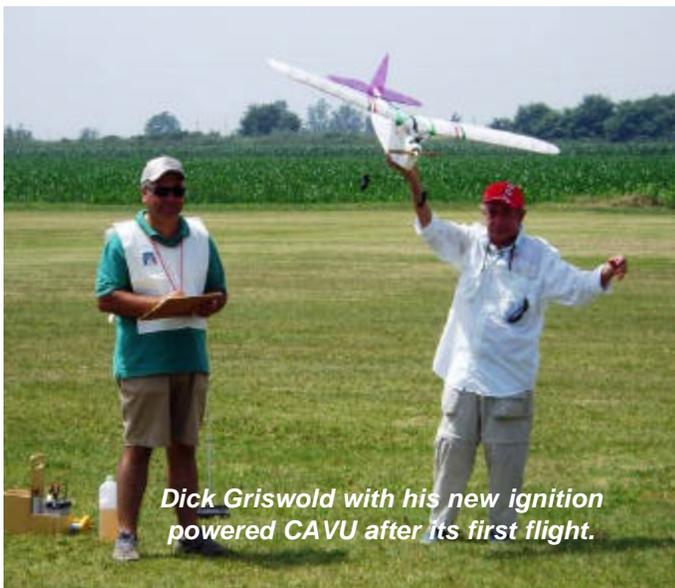


*Dick and Dave in their camp at the Euro SAM Champs. Some shade was a good idea in the strong sun.*

The weather had been hot; mid to high 80's with clear sky and hot sun. On my way to the meet I decided to pick up a beach umbrella and one of those folding seat/table affairs so we could work in some comfort, although all the small European cars are hatchbacks so we also had some shelter there too.

We joined the US SAM contingent at the field. From last year were Dick Griswold and Ed Hamler and returning, having missed last year was Don Bekins. Don and Ed are the class of the US SAM competitors. Also with us this year was Steve Roselle a broadly capable gas and electric flyer from California. Roy Brown our American in Europe joined us again and continued to be our on-site support as he provided radios and just about everything else we needed but hadn't taken.

Most of our contingent brought ignition and glow powered airplanes and Steve brought a new electric LMR too. Roy Brown was still building his 1/2 A Electric Texaco.



*Dick Griswold with his new ignition powered CAVU after its first flight.*



*Ed Hamler getting ready to launch his 1/2 A Texaco for a test flight*



*Steve Roselle with his new Lancer 72 before the incident on his first contest flight. The model uses the same Steve Neumotor as Dave has in the big Stardust for loads of performance*

At Saturday's pilots meeting the organizers explained that they would post a list of competitors / models and they would be called in turn, whereupon you will have a five-minute slot in which to fly. They provide the timers. Frequency control was another matter as they seemed a little unsure of how to do it although they did test every transmitter with a scanner to ensure the frequency stated was correct. In the event, if you had a unique frequency you could hold your Tx, and it was impounded if there were conflicts. Fortunately both Dick and I had unique frequencies, at least, at first we did.

There were four events on the first day; Old Time Glider, Old Timer Ignition LER, 1/2 A Texaco and 1/2 A Electric Texaco, our first event.

I put in a perfect first flight and easily made the ten minute max after climbing almost out of sight into the clear blue sky. In fact I dived down for the max but the altitude suggested the potential of a fifteen minute flight. Dick did not find the Sleighton form with his Trenton and scored only five minutes. The organizers seemed to struggle with getting people out on time so the first round took all morning and into the afternoon; three rounds were scheduled.

My second round flight was a repeat of the first; excellent. Dick improved on his first but was still off its potential. This event is scored on the basis of the best two flights out of three so I was done and in the flyoff if others made two maxes but Dick had another flight to bring his scores up and this he did with an eight minute effort, still off his expectations, but good enough for twelfth place. So I waited for all others to finish their flights before the flyoff.

The weather was still warm with light winds but the humidity had built and the sky was not as clear as earlier in the day, and of course the sun had shifted around too. There were six of us in the flyoff. My launch and the climbout were good but after about one minute of the three minute climb I began to have difficulties seeing the model. I thought that it would be impossible to see at three minutes so I had to do something to keep it closer to me. I began a slow turn and as the model came around I lost sight of it and, obviously caused it to depart from the expected climb attitude. Then before I knew it I had repeated my least favorite maneuver; vertical and shedding wings and tail. It plummeted into the cornfield in just the same way its earlier brother had done at Sleighton. Worse, we could not find the wreckage although I did not expect anything to be usable.

So, I made a zero and placed sixth. The winning time was 11.5 minutes! Oh well, wait till next year.

Our US leader, Ed Hamler won the Old Timer LER event and placed second in ½ A Texaco. Don Bekins placed third and Steve Roselle fifth in Old Timer Glider, both with borrowed gliders. Roy Brown finished his ½ A Electric Texaco model and made his first competition flights. Coached by Dick and Steve Roselle his final flight was a respectable six and a half minutes. Dick Griswold was ecstatic with his brief CAVU flight, despite the modest performance. The European SAM Champs has that effect on you.

But I ended the day with a problem as I now had no good Rx, the small one being bad and the good one gone for ever in the cornfield. What to do? Well, I explained that Roy Brown was our backstop in many things and this was just another one. My problem was solved by Roy lending me his Schulze Rx from his ½ A Electric Texaco. Fortunately the small GWS single conversion crystal from my bad Rx fit and worked with the Schulze and of course it matched my Futaba too. So after a range check we declared the model ready.

Sunday's events were Texaco, Nostalgia LER and Old Timer Electric LMR. Weather was the same as Saturday and by now the organizers had worked out their processes so things moved faster and smoother than Saturday.

Assuming that my LMR model, the big Stardust has a surplus of performance despite the lower power, I made my first flight as early as I could (all my test flights in Pennsylvania were for a thirty second climb, this was the first full sixty second flight). It came as some surprise therefore to find I was marginal at the ten minute max level and it took a little bump to stretch me to the max.

Dick's first flight was very disappointing as he suffered a power interrupt during the climb and only managed a four minute flight. When he came down we spent an age troubleshooting an apparent RF problem as he had really short test range and strange behavior with the ESC. Eventually we found the antenna on the used Hitec Rx to be frayed where it entered the case. Dick had tried to support the wire with some reinforcement but it did not stick and subsequently more fraying took place. So eventually, after exploring all the alternatives with Roy Brown's various receivers we managed to re-solder the antenna. Dick

vowed to ensure the Tx antenna was appropriately aligned with the model in flight to maximize signal strength, so we tried again.

Meanwhile, Steve Roselle flew his new Lancer 72 which was equipped with the same Steve Neu motor as I used, incidentally suffering the same low current problem that he solved by using a Castle Creations ESC (wish I had taken the trouble to install one in my Stardust!). I was concerned for him as the wing joiner construction seemed weak for such a high powered, relatively heavy model, so it was only a little surprising when he lost it in the climb causing a wing fold. Once again we were in the corn fields searching for parts. In this case we did find them and Steve thinks it is rebuildable.



Dick's second flight was better but still short of the max, so he charged for a third.

I made my second flight and by milking a thermal stemming from the parking lot I made my second max and qualified for the flyoff. Dick again flew to modest altitude but he also milked a thermal from the parking lot for a magnificent max. His model was still climbing strongly at altitude when it was time to come down. Dick said this one magnificent flight made the meet for him and he finished fifth.

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## Propstoppers R.C. M.A.C

### Support Your Club Picnic Next Saturday 15<sup>th</sup>

Item	Name
Hot Dogs	
Hamburgers	
Buns for both	
Condiments	
Chips	
Cole Slaw	
Plates and napkins	
BBQ and gas	
Large Coolers with ice	
Sodas and cups	
Desert or other things; identify	

**Please take a moment and think about what you will bring, then either call Dick Seiwel, or one of the other board members, or bring you offer to the Monthly Meeting on Tuesday next.**

**Guys, it only takes a little effort from each of us, we don't have to have an overall coordinator if everyone does his bit.**



*Dave carries the Record Hound out for its final excellent flight.*

There were three of us in the flyoff and not much lift because we were the last to fly and it was getting late in the day. The other two guys out climbed me and found a little buoyant air. The winner scored 796 seconds, second 671 and my flight was 624 seconds; almost ten and a half minutes for third place and a podium finish; yes, they do use a podium.



*See; they really do have a podium, and third place puts you there.*

*Switzerland first, Germany second and USA third at a meet run by Italians from the Republic of San Marino; Magic!*

**Dave Harding**