



The Flightline



Volume 37, Issue 9

Newsletter of the Propstoppers RC Club

AMA 1042 September 2007

The President's Message

Not much going on at the fields recently, both are in great shape but not much flying; it's either too hot or raining. Don't forget the Walt Bryant Electric Fun Fly is Saturday 9/8. It will be at the Christian Academy Field. This should be a fun event. Our team will be flying in the Electric Texaco Postal competition also. The club came in first place last year so come on out and cheer the teams on and help time the flights.

The next meeting is at Sleighton field if you have a fuel plane bring it out a stretch its legs .Bring your electrics also. You can fly from 5 to 8. We will keep the meeting short.

Don't forget club elections are coming up.

The CA lock has been replaced but it's the same number.

Dick Seiwell, President

Agenda for September 14th Meeting At Sleighton Field; Flying from 5 pm; Meeting 7pm.

1. Approval of August Meeting Minutes
2. Membership Report
3. Finance Report
4. Plan for Night Fly
5. Show and Tell
6. Flying till dusk.

Minutes of the 14th August Monthly Club Meeting at Sleighton Field

The meeting was called to order at 7:05 p.m. by President Dick Seiwell.

Roll-call by membership chair Ray Wopatek showed 16 members and one new member present.

The treasurer's report was deferred to next month.

Minutes of the July meeting as printed in the newsletter were approved by the membership.

Old Business:

The Walt Bryan electric fun fly will be held on Saturday September 8th. We will also have a team flying for the international Electric Texaco postal contest. Because our club was last year's winner, we became the sponsor for this year's contest. We will also enter a team in the contest. Several members will have extra planes so that we can include a good number of flyers. The top three times will be added for the team score.

New Business:

Several members inquired about how to find out when people will be flying at one of the fields. Several other members suggested that the best way is to post an e-mail to the Propstoppers group and ask if anyone is going out on a given day and time. There are usually members interested who just need to know what field and what time.

Adjournment took place at 7:30 p.m. to allow members to fly in the calm cool August evening air. Pictures follow.

Dick Bartkowski, Secretary

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Mick Harris gets ready to fly his Apex for the first time in two years

Calendar of Events

Club Meetings

Regular Summer Meeting at Sleighton Field; Tuesday 14th September, 2006
Flying from 5 pm, meeting 7:00 pm

Saturday 8th September. Annual Walt Bryan Electric Fun Fly, Christian Academy

Next Monthly Meeting Tuesday 9th October 2007 at the Middletown Library.

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 till dusk
Saturday 10 am till dusk
Sunday, after Church; 12 pm till dusk

Special Club Flying

Saturday mornings 10 am Sleighton Field
Tuesday mornings 10 am Sleighton Field
Thursday evenings 5pm on CA Field

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

Bill Tomasco with his Mini Rascal
Great looks and excellent to fly



Bill Tomasco with a Mini Rascal ARF. A beauty and a sweet flyer to boot.

New member Brian Williams with his helicopter



New member Brian Williams with his helicopter (sorry guys, don't know what kind it is; they all look the same to me!). Brian also flies fixed wing but is faced with a repair job before bringing one out.

Jess Davison the sticks, Eric Hofberg coaches?



Jess Davis on the sticks with Eric Hofberg kibitzing.

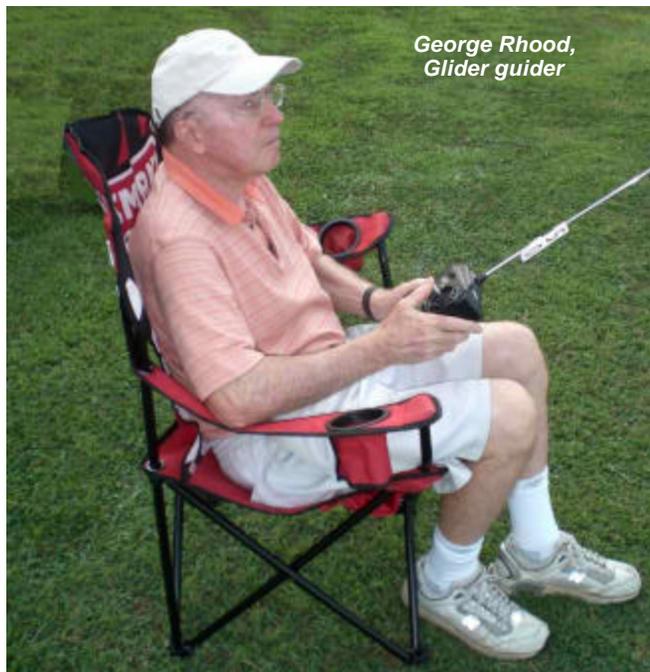
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Propstoppers Web Site; www.propstoppers.org
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Paul MacCready, Model Builder; 1925 - 2007



*George Rhoad,
Glider guider*

George Rhoad has been a regular flier on Tuesday mornings, Thursday evenings and Saturdays with his Multiplex Easystar and Kyosho electric gliders.

Dave Harding's Bristol Freighter twin flies for the first time after a lengthily retrofit (I couldn't figure an easy way to fix it)



Your editor's old "Bristol Freighter" speed 400 twin flies again.

DH-6 on dusk patrol over Sleighton



DH-6 on dusk patrol over Sleighton Field. Micks build, Dave flies, in fact the model that took a third at the Electric Nats. Standoff scale event a few years ago.



Dr. Paul MacCready, Jr., Ph.D., winner of the Kremer Prize for creating the first human-powered flight aircraft, 3-time U.S. National Soaring Champion, the first U.S. World Soaring Champion, founder of AeroVironment

Paul MacCready, the internationally acclaimed engineer known as the father of human-powered flight, died at his home in Pasadena on Aug. 29. He was 81. MacCready was perhaps best known for his fantastical inventions, the Gossamer Condor and the Gossamer Albatross, which made the world's first sustained and controlled human-powered flights. Though he began his career with attempts to change the weather, MacCready soon turned his considerable gifts to the notions of soaring and gliding, which had entranced him from an early age.

Paul began his professional career with efforts to change the weather. He ended it having changed the world.

- His first company, started in 1958, was Atmospheric Research Group, a cutting edge venture that made research flights into the core of storms and experimented with cloud-seeding.

- A superb sailplane pilot he developed the MacCready Ring, a device to indicate the optimum speed to take the sailplane from thermal to thermal while maximizing the ground speed and used it to help him win three US and one World Sailplane Championships.

- Though he had long been engaged in soaring and gliding, his work with human-powered flight began seriously in 1976 when a large business debt caused him to notice the large cash award attached to the British Kremer Prize. All he had to do was figure out how to get a heavier-than-air craft off the ground to an elevation of at least 10 feet entirely under human power and fly a figure-eight course of at least a half-mile.

- While on a family vacation in 1976, he was studying the soaring habits of turkey vultures and explaining it to his sons when he realized the secret to human-powered flight.

...I was doing the scaling laws for all of these different flight devices, natural and artificial, in my mind...And while working on that, I thought back about human-powered flight and realized, why yes, there was a very simple, straightforward way of doing it. Which was merely, you can take any airplane, conceptually, keep the size the same -- I mean, keep the weight the same -- but let the size just get bigger and bigger and bigger in all dimensions, and the power goes down and, conceptually, you can make it big enough so it can get by on the tiny power that a person puts out...The simplest analogy I can think of is Lindbergh's flight across the Atlantic in 1927, which was really a pretty bum airplane. Well tailored for that purpose, but...there was no reason ever to make another one...

After consulting with colleagues on these unique insights, he gathered an intrepid crew of stalwart volunteers. The project he had optimistically estimated would take 6 weeks took a year. To do what nobody else ever did.

On August 22, 1977, Paul's entirely human-powered "Gossamer Condor" became the first aircraft ever to fly the course and distance required by the Kremer Prize as proof of "human-powered flight." On June 12, 1979, his "Gossamer Albatross" flew over the English Channel entirely by human power.



The man who showed humans how to fly under their own power now soars in history. He was taciturn yet funny, quiet yet articulate, gentle yet stronger than steel, reasonable yet firm of opinion, unconventional yet profoundly practical.

From various internet sources.

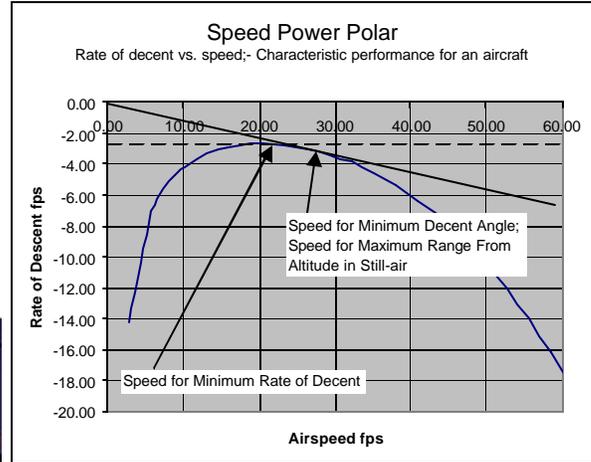
The MacCready Ring for Models?

Us guys involved in SAM competition need to understand the physics involved in MacCready's Ring and apply it to our flying. Our competitions are basically glider events where we power to altitude and then fly for maximum duration. This we achieve through models with good performance; that is low rate of descent, and by finding and exploiting thermals. This is not unlike competition sailplane flying but the difference is they usually fly a distance, typically point to point or out and back. The sailplane that does it in the minimum time wins. This is accomplished by using thermals to gain altitude then flying as fast as possible to the next one and so on. But what if there is a wind?

Now airplanes all have a range of glide performance in terms of rate of descent at different airspeeds. Powered airplanes have the same characteristics but rate of descent may be substituted by power required. The curve relating these factors is known as a Speed-Power Polar.

Why do we care? Well, first off we need to know what speed to fly to minimize our descent rate. Then, if we get blown down-wind we need to know the speed to fly to get back.

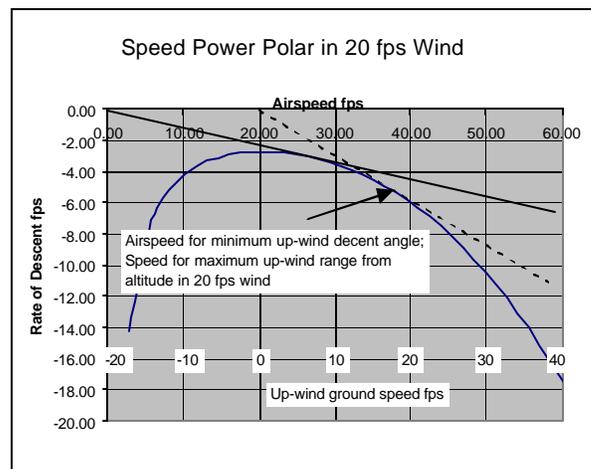
Look at a typical Speed Power Polar in the figure below. We see that the minimum descent speed of 2.6 fps is achieved at airspeed of about 22 feet per second. If we go any slower the rate of descent increases, as it does if we go faster. But what if we want to bring it back from down-wind? Well we need to fly at the speed that achieves the minimum descent angle; **speed of descent / airspeed**. In our example this is achieved at airspeed of about 27 fps where the rate of descent is 3 fps for a glide angle of 1:9 or about 6 degrees.



But what if we are not in still air? Then the airspeed to bring it back is, of course, higher and we can see in the following figure that in a 20 fps wind the optimum airspeed to bring it back is about 37 fps. And the rate of descent has increased from 3 to 5 fps. However the ground speed is only 17 fps so the actual descent angle with respect to the stationary flyer is 5/17 or about ten degrees.

Converting this to our contest metric of duration let us examine the case where we are able to climb to 1000 ft. In still air with a rate of descent 2.6 fps we will glide for 385 seconds. In a 20 fps wind our duration will be 200 seconds. But can we get back? In the still air case we will travel 9/1 x 1000 = 9000 feet (in circling flight of course) but in the wind we will travel only 3400 ft

If we increase the wind speed to 30 fps the optimum bring it home airspeed increases to 47 fps and the rate of descent to 9 fps, while the ground speed is still 17fps. Now the duration is 111 seconds and the get home distance is about 900 feet. The model will appear to descend at about 45 degrees; don't get caught downwind under these conditions.



The MacCready Ring allows the sailplane pilot to make these decisions on the fly via a ring surrounding the variometer, the instrument that indicates rate of descent. We have to do it with the seat of our pants, but some insights are useful.

Dave Harding



SKSS Electric Aerotow

Our friends and neighbors to the south, the Silent Knights Soaring Society of Newark Delaware, held their first electric aerotow recently. Big scale sailplanes have a special attraction to a certain group of modelers. They look great, and fly great, but how do you make them stand out at a meet. Well the answer seems to be hold an aerotow and they will come. Problem is, most sailplane tugs are big gas powered models, and in fact they are usually powered by a big 100cc gas twin.

Now the SKSS club has a huge almost flat County-owned grass field on which they are restricted to silent models; gliders and electrics. What to do? Build electric tugs of course. What with the current flow of large LiPo batteries and outsized brushless motors it seemed possible to build an electric tug. Indeed, they outdid themselves by having six of them on hand at the meet. The gliders never had to wait for a tug.



They had built three 110 inch Rascal ARF tugs with huge motors and 12S LiPo batteries. These proved to have both the power and duration necessary for this difficult task.



Three Electric SIC Rascal Tugs; excellent performance and duration

There are a great variety of full-scale gliders on which to base your scale model but like in every other branch of our hobby there are perennial favorites. In the case of gliders both antique and modern eras hold these favorites, several of which were seen at the SKSS meet. The Minimoa, with its graceful gull wing and smooth lines is a favorite oldie. The military also has some interesting machines that were used as trainers. In fact, as recently as the 1980's the US Army sent its potential

Test Plots School candidates to Tehachapi's glider port to expand their skills in different forms of aviation.



Pre-war German Minimoa



SKSS member Dave DeGroute with his Schweitzer Army trainer





This was the first flight and aerotow for this pilot. His knees were knocking, as we all have experienced. It was a pleasure to watch and capture his thrill on a successful landing.

Mick and I were just spectators at this event but this is something we both want to try sometime. We learned several lessons from watching, unfortunately mostly from other's missteps. One poor fellow crashed on takeoff because the tow plane pulled him too fast causing his ailerons to flutter to bits. They might have worked fine at slow speed but the tug pilot seemed anxious to show of the surplus power.

Others did not follow the tug well enough and caused them to separate and pop the tow line. By the way, both tug and glider have a line release. The tug tow point is on the top, center of the wing and it is fitted with a full-span brace/guide wire that runs between the horizontal tail tip, over the top of the fin and back to the other tip. This prevents the tow cable from snagging in the tug empennage. Of course, without our fingers on the sticks it was not possible to determine the correct way to pilot the glider but it would seem that with a nose-mounted tow you might just let it tow hands-off in direction. On the other hand you would need to control the glider's altitude with respect to the tug, a higher than tug climb out seems the right way to do it.

I plan to modify my Hanger 9 Cub to accommodate a tow release. Anyone care to build the glider? A two-meter size should be adequate; want to modify your Gentle Lady?

The 6th Annual Walt Bryan Electric Fun Fly

It occurred to me that many of our current members would not know the genesis of this Propstopper meet, so I thought I would tell you. Walt Bryan was a pioneer in electric flight for the Propstoppers club. I don't know when Walt began to experiment with electrics but I do know it was long before I joined the club about nine years ago. At that time most of the club flying was glow powered, and like most clubs the Propstoppers would buy their fuel in 55gallon drums each season. Nevertheless, there was enough interest in electric flying that an annual Electric Fun Fly was held.

I joined the club as a new RC flier with the aim to fly electric until I found something I couldn't do that way. So it was natural that Walt and I became flying buddies and friends. Here is the only picture I have of Walt. It was taken at the Old Eagles meet in New Jersey in May of 2001.



Walt Bryan at the Old Eagles meet in 2001

Walt soared away from us that year and we subsequently decided to name our annual Electric Fun Fly in his memory. Come out this Saturday and celebrate the memory of Walt with some good flying.

Dave Harding



- ◆ **Saturday and Sunday, September 15th and 16th**
- ◆ Sponsored by the Mercer County Radio Control Society
- ◆ Open to military models of all sizes
- ◆ At Warren Kruse Flying Field on Assunpink Lake near Imlaystown, NJ. Take Exit 11 off of I-195 and follow the signs (Easy to get to, nice field, Dave H.)
- ◆ **Free admission and parking**
- ◆ **The public is welcome**
- ◆ Pilot registration starts at 8:00 and flying starts at 9:00 each day — **No landing fee**
- ◆ AMA membership required to fly
- ◆ Hot breakfast and lunch are available
- ◆ For more information, see the club web site at www.mcrs.com, email to airshow@mcrs.com or call contest director Sal Lucania at (609) 587-1248

Euro SAM Free Flight Champs

It just so happens that on my way to a family wedding in England, I found that there was a meet an hour or so from my mother's house. So of course, we had to check it out; particularly since the weather was just about perfect. Middle Wallop is the UK Army Aviation primary training center, or at least it was. It also houses the Army Aviation Museum. But the best part is that it is a vast grass field, available to modelers on special occasions.

The Euro SAM Champs is a free flight affair organized by SAM 1066. This year it was well attended, probably due to the weather as the UK has just experienced the record quantity of summer rain and flying has been virtually impossible for months.



Although this is a contest it is a pretty laid back affair and there are flyers spread all over launching their models. So it is rather difficult to actually follow what is happening. We just settled for a slow walk along the parked vehicles where most people set

up. There were of course the usual oldies, like this Jaguar Wakefield Cup winner from the 1930's.



But then there was this interesting chap with a bunch of rocket powered scale models; note the burned one. He says you have to watch the high specific impulse motors; the blow out!

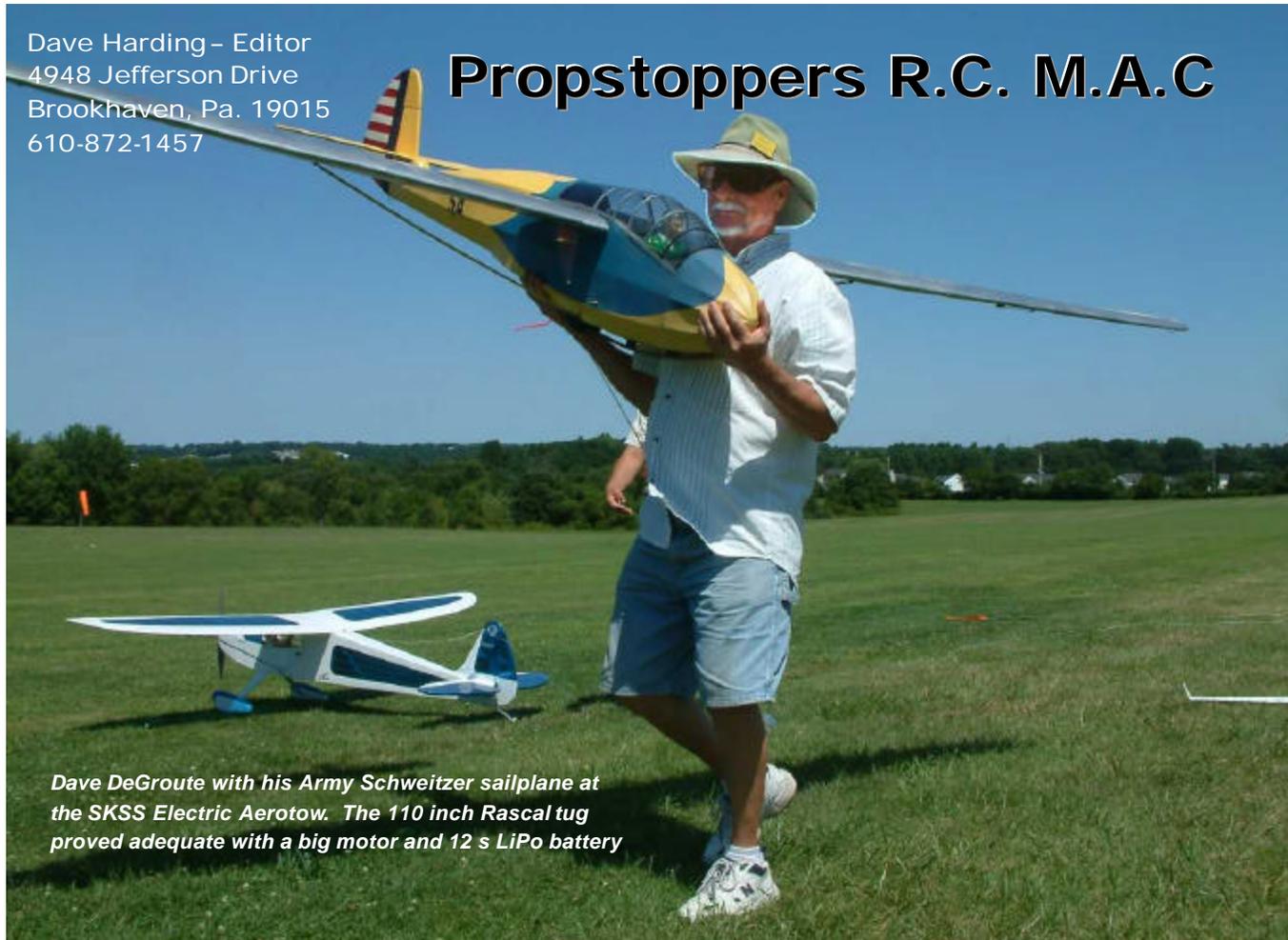


Apparently, the old Jetex has been replaced by a special rocket motor. Just look at this guy's cool models. Aint this hobby special?

Dave Harding

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Propstoppers R.C. M.A.C



Dave DeGroute with his Army Schweitzer sailplane at the SKSS Electric Aerotow. The 110 inch Rascal tug proved adequate with a big motor and 12 s LiPo battery

Last Summer Club Meeting at Sleighton Field;

Tuesday September 14th

Fly from 5pm

Meeting at 7pm

Then fly till dusk

Gas flying permitted but watch the noise levels.

Nomination of Officers due August and September per Club Bylaws;

http://www.propstoppers.org/pdf_files/PropstoppersBylaws-Revision-Dec2006%202.pdf

Flying Event Calendar Walt Bryan Memorial Electric Fun Fly and International Electric Texaco Postal Competition

Saturday 8th September, Christian Academy,
10:30 till 3 pm.

Night Flying

Saturday 13th October
Christian Academy Field

7:30 pm

Sunset: 6:27pm Moonset: 7:17pm

Indoor Flying Anyone?