

# The Flightline

Volume 31, Issue 7

Newsletter of the Propstoppers RC Club

AMA 1042

July 2001

## **Club Picnic**

### ***This Saturday, June 23<sup>rd</sup>.***

The banner Propstoppers meet will take place at the new Sleighton Field this Saturday. This year Monica and Bill Shellhase are our hosts for this popular event and I hope you have all volunteered to support them in making this the usual success.

Bring out that new creation, the old faithful or maybe your ideas for the next endeavor to discuss with the railbirds.

Flying will be an all day affair, as will the usual refreshments of morning snacks and drinks. A barbeque lunch will be served at midday.

OK, right now, pencil this on the calendar, make the plans to fix and prepare the model you will fly and make arrangements with the boss, preferably to accompany you for a fun day in the sun.

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## ***Chester County Fun Fly*** ***Sunday June 24<sup>th</sup>***

We have been invited to join our neighboring club for a fun fly at their new field in Embreeville, on route 162 5 miles beyond West Chester on the State Police Grounds.

Just clean off the airplane from the Picnic, charge the batteries and plan for a second day of fun in the sun.

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## **Field Matters**

### ***Sleighton Field***

There is no update to our situation at Sleighton Field, that we have a one-year lease and the property is up for sale. The school activity is scheduled to close this summer.

Other Sleighton matters; the entrance adjacent to the church shown in the aerial photos in the April newsletter has now been blocked. Access to Sleighton field must be through the school main entrance, the one with the sign further south on Valley road.

You must get a parking card from the club officers and this card must be displayed in your vehicle windshield while on the property.

Furthermore, the first member to enter Sleighton each day must report to the office in the main building, the one on the left as you enter. Also, the last person leaving the field must report that we have departed. Sleighton is now patrolled by a new contract security force that has requested that we adhere to these practices so that they may maintain good security on the premises.

These practices are important to our relations with the Sleighton management so we can all enjoy this outstanding field. As it says in the ad.; Just Do It!

### ***Moore Field***

Moore Field improvements are continuing to mature as Dick Seiwel works his usual magic with the impressive array of farm machinery he brings to bear.

The new runway placement is working well and the additional dirt that was spread on the up hill end is filling-in nicely.

Absent the "Bird Tree" and the copse on the south end the obstacles remain on the boundaries unless you challenge them.

The electric guys, Dick Bartkowski, Mick Harris and yours truly have been sneaking over late in the evening for a lazy flying session in the calm warm conditions we have been having.

This is a beautify field and ideally suits the smaller (and quieter) electric models.

However, the club officers are concerned about our expanded use of Moore Field and the potential effects on the neighbors in the "high rent district" that abuts the field. They are particularly concerned about flights outside the mandated area, encroaching on the housing development. For this reason they are discouraging flight training at Moore Field.

*Continued on page 3*

## Calendar of Events

### Club Meeting

Tuesday 3<sup>rd</sup> July 2001  
Sleighton Field, 7 p.m.

### Flying Events

- **Club Picnic,**  
Saturday 23<sup>rd</sup> June  
Sleighton Field
- Warbirds Over Pennsylvania  
Saturday 4<sup>th</sup> August  
Quakertown
- **Club Electric Fun Fly**  
Saturday 25<sup>th</sup> August, Sleighton Field
- Pennsbury Land Trust Balloon Festival  
Saturday 15<sup>th</sup> September
- NEAT Electric Fair  
14 /15/ 16 September  
Downsview NY

### Regular Club Flying

At Moore and Sleighton Fields

Note; you must have a dashboard pass to enter Sleighton Field.  
First in and last out will notify the office of our presence.

Daily	10 am til Dusk
Saturday	10 am til Dusk
Sunday	12 p.m. till Dusk

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

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Propstopper's Web Site;

[http://www.geocities.com/propstoppers\\_rc/](http://www.geocities.com/propstoppers_rc/)

Check the web site for back issues of the newsletter, pictures of club events and the calendar of future events.

Pictures courtesy of Bob Kuhn and Dave Harding

## June 5, 2001 Meeting Minutes

Vice President Dick Seiwel called the meeting to order at 7:00 PM at Sleighton Field.

Membership Chairman **Ray Wopatek** read the roll call - there were 30 members and 7 guests present. The minutes of the May 1, 2001 meeting, as published in the June 2001 newsletter, were approved by the membership.

Treasurer **Al Gurewicz** gave the treasurer's report with income of \$515.50, expenses of \$755.00 and a new balance of \$4075.55 reported.

### Old Business

Dues assessments to cover the increased costs associated with Sleighton Field are due as of this meeting. Any members who have not paid the assessment will be denied flying privileges until the assessment is paid.

There are still a few hats available - \$6.00 - see **Al Gurewicz**.

Fuel purchase - 27 gallons were pumped at **Bud McClellan's** garage last Wednesday, and Bud brought 9 more gallons to the meeting and sold them all. The fuel is S&W, 15% nitro, 20% castor/synth oil blend

Dashboard placard passes for vehicle identification while parked at Sleighton Field were issued. Anyone who did not get one, please contact **Mike Black**. Use of the placards will help identify our vehicles to the new security service now in place at the Sleighton site.

**Chris Catania** will make arrangements to have both fields rolled in the near future

There will be a work detail this Saturday, June 9, starting at 8:00 AM, to re-erect the lean-to shelter at Sleighton Field. After the shelter is up, the field will be walked to remove more rocks. Tools to bring: Cordless drills, hammers, screwdrivers, levels, buckets, etc.

Club Picnic - Scheduled for Saturday, June 23 at Sleighton Field. Hosts **Monica** and **Bill Shellhase** reviewed the list of items needed to be brought by the membership. After additional sign-ups, the only needed items at this point are 3 or 4 large coolers with ice.

The Electric Fun Fly is scheduled for Saturday, August 25 (rain date, Sunday, August 26), reports chairman **Dave Harding**. Please see Dave for volunteer opportunities.

Congratulations to **Dick Bartkowski** for his decisive win of the Elexaco event at the Eagles All-Electric Meet on May 12.

Sunday, June 17, (Father's Day) is the date for the Wildwood Fun Fly, on the beach, 17<sup>th</sup> and boardwalk, in Wildwood, NJ. See **Al Tamburro** for details and directions.

It has been decided to table the decision regarding a secure website for non-public club information, until the September meeting. The yearly cost for this would be \$68.00.

Send classified ads for sale items, to newsletter editor **Dave Harding**, for free publication in the newsletter.

**New Business**

The board proposed a change in the membership rules, which will allow those on the waiting list to be brought in as probationary members. Dues and dues assessment, flying privileges, and voting rights would be the same as regular members. For now, this is a one time only occurrence, and it will be revisited next year in order to consider the status of Sleighton Field. As with regular members, trainees must fly only under the supervision of a qualified instructor. This change was approved by the membership.

Training at Moore Field is discouraged, and in no case must any training at Moore occur unless a buddy box system is in use. An aerial shot of Moore Field with the new runway and flight pattern will be published in the newsletter.

The Pennsbury Land Trust Balloon Festival will be held on Saturday, September 15. The organizers have asked the Propstoppers to present a flying demonstration as we did last year. A show of hands indicated that there are enough flyers willing to participate. Issues such as pedestrians in the takeoff zone, parking of balloon trailers and propane trucks from last year will be addressed and corrected for this year's event. Event Chairman **Rusty Neithammer** will coordinate with the event organizers. If there are enough members willing to participate, we may want to bring models for static display and have a display area. **Bud McClellan** has volunteered to help with this. It may also help to have an announcer with a bullhorn (volunteer needed).

**Al Tamburro** got a call from a member asking about the club trainer. It turns out the trainer is in the possession of **Jesse Davis** however, the radio was sold at the club auction.

Newsletter editor **Dave Harding** asks members to provide him with reports of events they have attended. This can be done in any way that is convenient, including a simple phone call. Pictures are also most welcome.

**Doug Lack** (guest at the meeting and president of the Chester County RC Club) announced that the annual CCRC Fun Fly would be held on June 24 at the CCRC Embrieville field on route 162. All Propstoppers are welcome to attend. As this is an AMA sanctioned event, proof of AMA membership is required.

Vice President Dick Seiwel adjourned the meeting at 7:35 PM.

**Rusty Neithammer - Secretary.** 

**Field Matters.** continued from page 1

The new Moore field runway placement and the allowable flight zone is shown on the picture below.

The flight zone is that which is bordered by the trees and a line through the prominent tree in the middle of the field. This area is shown on the picture below. Of course you can't fly over the pits and parking area.

**Also shown is the region of the field in which we are not allowed to fly. Known the world over as a "no fly zone". Obey the rules!**

Please help us be good neighbors. This field is a gem and we know how hard they are to replace.

**Dave Harding** 



Mick Harris and Rusty Neithammer, electric at Moore Field

## ***Strong Winds and a Favorable Slope Fun in the Sun and Wind at Cajon Pass***

Los Angeles stands in a coastal basin surrounded by mountains and bathed by winds off the Pacific Ocean.



We all know that the legendary California climate is warm and dry but it doesn't start that way. Prevailing southwesterly winds approach for thousands of miles over the cold Pacific so by the time they reach the coast they are cool and humid. The coast of our western seaboard is frequently shrouded in fog and low clouds. In California the words fog and wet are banned so they talk in terms of "Marine Layers". These ocean breezes become warm and dry only after they are heated by the warm California land -mass.

Beyond the mountain ranges that surround the LA basin is the Mojave Desert. To the Northeast Rosamond, Rogers and El Mirage dry lakes host Edwards Airforce base and other playgrounds in the high desert.

The prevailing southwesterly winds from the LA Basin spill over the surrounding mountains precipitating their moisture then flow down into the high desert where they become heated by adiabatic compression and the hot ground. The air is bone dry in the Mojave, the sky always clear and the sun is hot. Temperatures in the high desert range from near freezing at night to 90/110 in the day.

Now for the good part. The effect of this relationship between the low cool LA Basin, the prevailing winds and the hot high desert is a temperature differential which in turn causes a pressure differential. The wind is sucked into the desert and where it goes through the few mountain passes it becomes a dependable gail.

This process takes place almost every day, starting with calm mornings and building through the mid afternoon. When it doesn't it's because the Santa Annas are blowing in the opposite direction and this is just as good.

So there you have it, the ingredients for fun in the sun, aeromodelling style;

- reliable strong winds and an accessible mountain slope.

Say Wah? This is exactly the opposite of the aeromodellers delight;

- no wind and limitless flat plains! - ***Not for the Sloper!***

I was sitting in Rutan's conference room on my last Boeing business trip, chewing the fat with Dan Kreigh about the good time he had at the Southwest Aeromodelling Conference (awesome indoor session) when he asked if I was planning to go to Cajon Pass at the weekend. Cajon Pass? THE Cajon Pass of PSS fame? The annual meet that gets such good write-ups in all the mags?

Er, well I am supposed to be hanging a French door at my daughter's new (old) house in South Pasadena. ...Better do a really quick job.....Done! Can I go out for a few hours? I'll be back by dinner.

So here I am tooling East on "the-10" (in California you use "the" when you refer to highways which are called freeways). About 40 miles to the Inland Empire then hang a left onto "the-15", the road to Lost Wages (Las Vegas). Long haul up the pass going from sea level to 4100 feet at the summit where the signs warn of high winds. Good so far.

Strike out across the desert, first through an area of housing lots with an eclectic collection of large houses, Desert, Modern, Victorian styles with all kinds of toys and junk in their yards. Desert living is different and the Desert Rats a rabid crowd fanatical about their way of life.

Beyond lays a dirt road or rather trail leading out into the desert with Joshua trees and large brush vegetation. Follow the road for three miles, first through steadily climbing terrain then into the canyons and ridges that form the Cajon mountain pass. As I steer my rental van with much trepidation around the narrow heavily rutted trail bordered by precipitous drops I catch a glimpse of what looks at first like a cloud of big insects flitting around a knoll. But I can't take my eyes off the road and it seems a long treacherous way to that spot. And look at that, a sheer drop down where I came from, the I-15 freeway snaking through the pass about a thousand feet below. Oh well, this is what I came for. And then I am there.

A couple of small outcroppings along a narrow trail lined with cars and vans on the upside. Then a small clearing with a couple of canopies and a portapotty. I have arrived at the Cajon PSS meet and find a precipitous ledge on which to park.

Holy Cow, there must be the entire fleet of WWII airplanes in the air at once. Its warm, the sun is very bright at this altitude and its windy, probably about twenty miles an hour.

Look at the airplanes waiting to be judged, dozens of them.



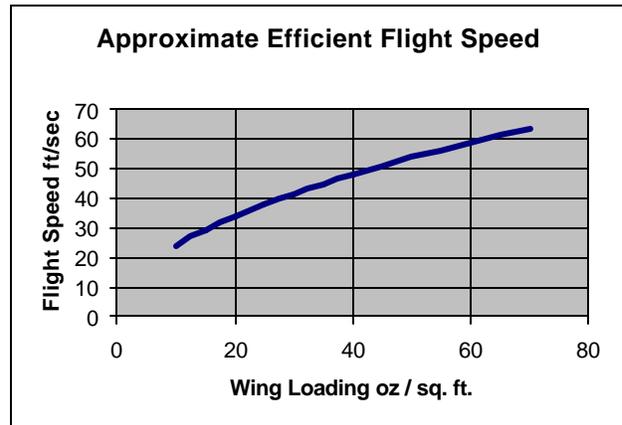
The Power Scale Soaring, PSS, event features scale models of powered airplanes constructed as slope soarers, without power! That is to say, prop driven planes have no props and jets, well, no engines.



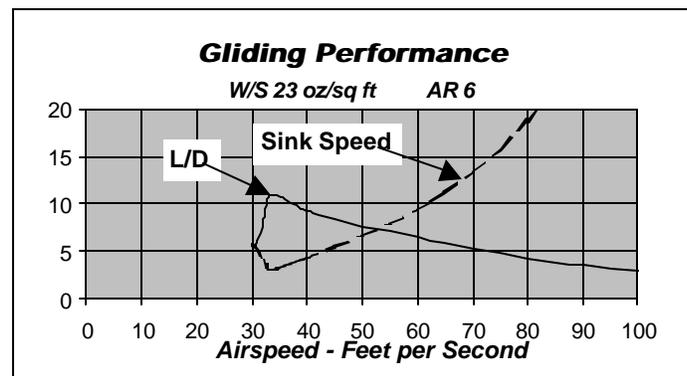
Slope soarers fly in the upwash created when a wind flows up a slope. The upwash is simply the wind speed times the angle of the slope (well the sine of the angle actually but who is counting when we are having fun). A twenty miles per hour wind on a twenty degree slope produces an upwash of ten feet per second. So if our model has a sink speed of less than ten feet per second it can fly indefinitely. Of course, it must also fly faster than the wind or it will be blown over the hill and far away to grandma's house.

To put this in terms we normally understand for

our powered models. Consider that at it's most efficient flight condition, close to the best Lift to Drag ratio point, our model speed is driven solely by the wing loading.



The model sink rate is determined by the flight speed and Lift / Drag ratio. Now, our model's L/D is set by the design but it varies with flight speed in level flight. Consider one of our typical models that is fairly clean;



Note that the most efficient airspeed is quite low, not much above stall. Remember this the next time you have a flame-out, this is the speed that will get you back to the field, but I digress.

The minimum sink speed occurs a little below the airspeed for maximum L/D. In gliding flight the sink speed is the flight speed divided by the L/D.

So for this example the minimum sink speed is 34 fps (23 mph) divided by 11 or 3.1 ft/sec. This model would fly fine on our theoretical slope; it flies faster than the wind and the sink rate is less than the upwash.

What that allows us to do, and the PSS fliers do this all the time, is to trade sink speed margin for airspeed; Fly faster and sink more (or climb less). Consider the example again. If we fly at 60 ft/sec (41 mph) the L/D is 6 and the sink speed 10 fps. Now we match the upwash and so fly level. To do this and not fly away from the hill (to the other grandma's house at the bottom!) it is necessary to fly across the face of the hill. This is what slope soarers do, they fly across the hill doing all manner of turn-around maneuvers to turn and return continuously back and forth.

What if the wind speed is too high and the model would blow away? Ballast! Ballast makes the model fly faster and increases the speed for minimum sink. Note the models L/D profile does not change, it only shifts up in speed.

The slope soarers build their models for the local conditions but always provide for the addition of ballast for when the wind really blows. This is when the really high speeds are possible.

Meanwhile, back at the Pass, let's examine a typical PSS model. Most of them are in the 60 inch span region and have only enough detail to look realistic at tens of feet. They fly fairly close-in but the real challenge is the landing. At the Cajon flying "site" there were no flat open areas in which to land, so the typical landing was a direct hit on the chosen spot.

This is the other reason that a great deal of detail is not included, these model take rough punishment. This is also the reason that many of them are made from EPP foam, the nerf ball material.



In flight the realism is stunning. As the background is tens of miles away and the eternal LA smog wafts through the pass the models take on an eerie scale-effect. The model, its detail, its flight motion and the setting look real, and you are the wingman.



**FW 190 Flies Cover over Cajon Pass.**

Not all of the models were large, one young man flew an 18 inch span Spitfire with realism and gusto.



**Spitfire Away For Another Mission, Where Is That FW?**

Models of this size look just as realistic, fly well and are more rugged to land. Jets are also very popular and well suited to PSS due to their clean lines and when ballasted in high winds really fly "like a jet".



Did I enjoy it, you bet. I learned to fly RC on the California slopes and enjoyed it immensely. By the way, slope soaring is an ideal learning method. If your plane matches the slope and wind well you launch and fly away from you for ever! No turn arounds! Until you land and that is the hard part. But by then you are too tired to continue as the flight was only limited by your body needs or adrenalin supply. I always broke my model on landing, a Hobby Lobby \$25 foam Spirit of 76 glider, but I had till the next flying session to fix it.

Wish we had California conditions in Pennsylvania. On the other hand, it makes my California visits something to look forward to, especially now I have somewhere to stash some slopers.

See you on the flat land or follow me to the slopes.

**Dave Harding**





## **Sim Writer**

**By Matthew Everett**

Do you like to fly but don't have the time to repair your airplane all the time? Can't see in the dark? Have a computer? This column is for you!

In this column, I will be reviewing the latest flight simulators. If you have a computer, you could be flying right now!

Go to online to find the latest flight sim demos up for grabs!

[http://www.adrenalinevault.com/pcl/demos/category.asp?genre=sims\\_flight](http://www.adrenalinevault.com/pcl/demos/category.asp?genre=sims_flight)

Each month, my review crew and I will look at a sim and rate it in this space. You will find paragraphs explaining the simulator and its realism. If you have any questions you can contact me at; [hardingpj@aol.com](mailto:hardingpj@aol.com), or [davejean1@home.com](mailto:davejean1@home.com).

The first issue will be by Richard Bartkowski. He will explain how to hook up your transmitter to your computer via a buddy box cable and use it for simulators. He will review two model simulators available free online.

See you next issue!

**Matt**

## **Reversed Controls - A Sure Crash**

**By Dick Bartkowski**

Already this spring I've seen four crashes caused by reversed controls. The surprising fact is that none of these were picked up with a thorough look into the set up.

According to one of our popular magazines, reversed controls are the most common reason for an unexplained plane crash.

What is the typical scenario? It involves a new plane, a repaired plane, a new transmitter, receiver servo or just something we forgot. This scene is typical. You begin a flight when suddenly the plane turns downward into the ground before you can do anything about. You often hear someone say, I lost it. It happened so quickly, that you can't really tell what caused the problem. You sometimes think it was just a wind gust or receiver glitch. So what is the problem,

why does it happen and what can we do about it?

Control reversal, what is it? It is a situation where plane responds in the opposite way to the control you put in the transmitter. You pull up but the plane goes down. You push the stick right but the plane turns left. This is not a problem that shows up in the middle of a flight. It happens right at the beginning when you go to take off or hand launch. The plane starts to turn and immediately crashes into the ground.

The reasons this happens are simple. At the beginning of every flight, we have to make small corrections. The plane makes a small move right, left, up or down. We put in the correcting move through the transmitter, only instead of correcting the problem, the problem gets worse. By reflex, we push harder and in an instant we have a crash. Whenever you see this problem, check for control reversal. If you don't, it will happen again.

So, how do the controls end up backwards? There are several common easy to understand reasons. When we first set up the servos on a new model it is easy to get the control wrong. Sometimes, we are just looking at the model from the wrong direction. This can also happen if we change servos. I was surprised to find that different brands of servo respond in opposite directions to the same input. So, if you replace the servo and are very careful to get the controls in the same direction you can still end up with a backwards control.

In easier way to have controls reversed it is via the transmitter. Our transmitters all have control reversing switches. Normally, these are set correctly when we first set up our model. Sometimes, we can have a second model on the same transmitter that uses the different reversal pattern. Sometimes, we reverse a channel to use the transmitter on a different model and forget to switch back. These are common situations and account for the four crashes I've seen this year. It is really easy to forget that this transmitter was set up for a different model.

How we avoid this? You have to do a control check at the beginning of every flying session. The last newsletter pointed out the flight check that should be made when you get to the field. The two things that I think are important are a quick range check and a control check. Actually, these are done together. With the antenna down, just walk back from the model and test all the controls: elevator, rudder and aileron. **Look carefully to make sure that they are actually going in the direction you want**. It is really easy to get it wrong. As you move the sticks, say to yourself "left, right, up, down". Watch the controls and make sure they are responding in the correct direction. This can save your plane.

**Dick**

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# Propstoppers R.C. M.A.C



## Club Picnic This Saturday, June 23<sup>rd</sup>

### For Sale

Global Tornado ARF, no cowl with Futaba 7AU radio no engine \$150  
Great Planes NIB UltraSport Kit \$35  
Ugly Stick complete, Piper Cub 3/4 finished, and much additional stuff  
Call Bill Ross on 610-399-6882

To list a For Sale item call or e-mail  
Dave Harding  
610-872-1457  
[Davejean1@home.com](mailto:Davejean1@home.com)

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