



# The Flightline



Volume 35, Issue 4

Newsletter of the Propstoppers RC Club

AMA 1042

April 2005

## President's Message

Where is spring? To me, it just seems like spring is not coming. Moving on to club matters, I have not heard any new news on identifying and securing a suitable field for all our aircraft types. So, please continue to keep your eyes and ears open, as I am sure something will come up. In the interim, we have been extended invitations, through solicitation from our membership, from both the Valley Forge Signal Seekers and Delaware County R/C club to utilize their fields. Please remember that we are being invited as guests and must adhere to all of their rules and regulations. For more information, please visit the following links: Valley Forge Signal Seekers – general information, including directions and safety rules

<http://www.netaxs.com/~mhmyers/vfss.html>

If you plan to fly at Valley Forge Signal Seekers, please note that you must get a day pass from the park ranger's office. More information can be found on the bulletin board located at the flying site.

Delaware County R/C Club - This link includes information specific to the Propstoppers membership.

<http://www.delcorc.org/propstoppers.html>

I look forward to see all of you at the membership meeting. And as always, if you have any suggestions and/or questions please feel free to reach out to me.

*Steven Boyajian, President*

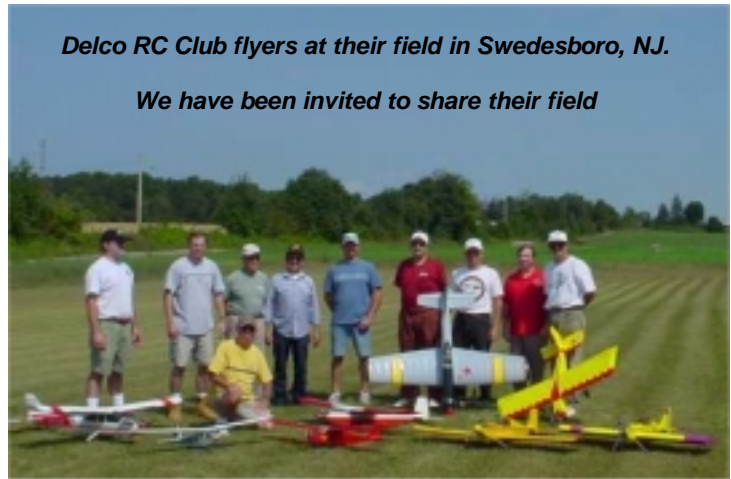
## Editorial: Fields and Friends

Following up on one of the discussion points from last month's meeting resulted in two offers of gas fields for our members to use while we look for our own.

First, I contacted Lawrence Patro, President of the Delaware County RC Club to see if we could make arrangements for a temporary use of their field. His response was "why not come to our meeting and ask the members". So Mick Harris and I attended their March meeting at their field.

**Delco RC Club flyers at their field in Swedesboro, NJ.**

**We have been invited to share their field**



The Delcorc members welcomed the suggestion and they have basically invited our club members to fly with them anytime with the following provisos;

There must be a Delco RC member present; indeed they enforce a two person to fly rule even among their members; one flying and one spotting. AMA membership is, of course, required and you must fly in accordance with the AMA safety rules, which they firmly enforce too. Make sure you have an AMA address label on your plane! These rules are expanded on their web site.

There are flying area restrictions at their site but the site is quite open and I am sure these restrictions would be defined before you fly. They fly all kinds of sport planes, both gas and electric, and encourage us to do the same. They say however, their field is too small for outsized airplanes (40% aerobats) and they discourage flying them.

They fly most weekends including Sunday mornings from 10 am or so, and we are welcome to come out and join them. Some of their members fly during the week but we will have to make specific arrangements to coordinate with them. Perhaps this will work it self out as we progress.

I have provided them with a list of Propstoppers membership from last year, so they know who we are. They maintain a web site too; [www.delcorc.org](http://www.delcorc.org) and Brian Pasternak, their web master has posted some further instructions for our members. [www.delcorc.org/propstoppers.html](http://www.delcorc.org/propstoppers.html)

Their field is in New Jersey, about three miles east on rt. 322 from the Commodore Barry Bridge.

Continued on page 4

### Agenda for April 5<sup>th</sup> Meeting

Marple Newtown Library, 7:30 pm

- Approval of March meeting minutes
- Membership Report
- Finance Report
- Flying Field Issues
- Club Event Plans
- Show and Tell

### INSIDE THIS ISSUE

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## Calendar of Events

### Club Meetings

Regular Meeting 7:30 pm  
Tuesday 5<sup>th</sup> April 2005  
Marple Newtown Library

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

### Events

Sunday 3<sup>rd</sup> April, Meet and Fly with Delco RC at their field in Swedesboro, NJ, see article.

Saturday 9<sup>th</sup> April, Christian Academy Field fix up and fun fly; 10 am, rain date Sunday 10<sup>th</sup> afternoon.

### Regular Club Flying

At Christian Academy  
Weekdays after school; 3pm till dusk  
Saturday 10 am till dusk  
Sunday, after Church; 12 pm till dusk

Note; Flying must be done in accordance with the agreement forged by Vice President Dick Seiwel Specifically, only electric powered airplanes. Beginners using due caution and respecting club rules may fly GWS Slow Stick without instructors.

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

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Propstoppers Web Site; [www.propstoppers.org](http://www.propstoppers.org)  
Check the web site for back issues of the newsletter, pictures of club events and the calendar of future events.

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## Minutes of the Propstoppers Model Airplane Club March 1st, 2005 at the Marple Newtown library

Vice President Dick Seiwel called the meeting to order at 7:30 p.m.

A roll call by membership chairman Ray Wopatek showed a 17 members and 1 guest present.

Minutes of the February meeting as published in the newsletter were accepted by the membership.

Treasurer Jim Barrow presented his report.

### Old Business:

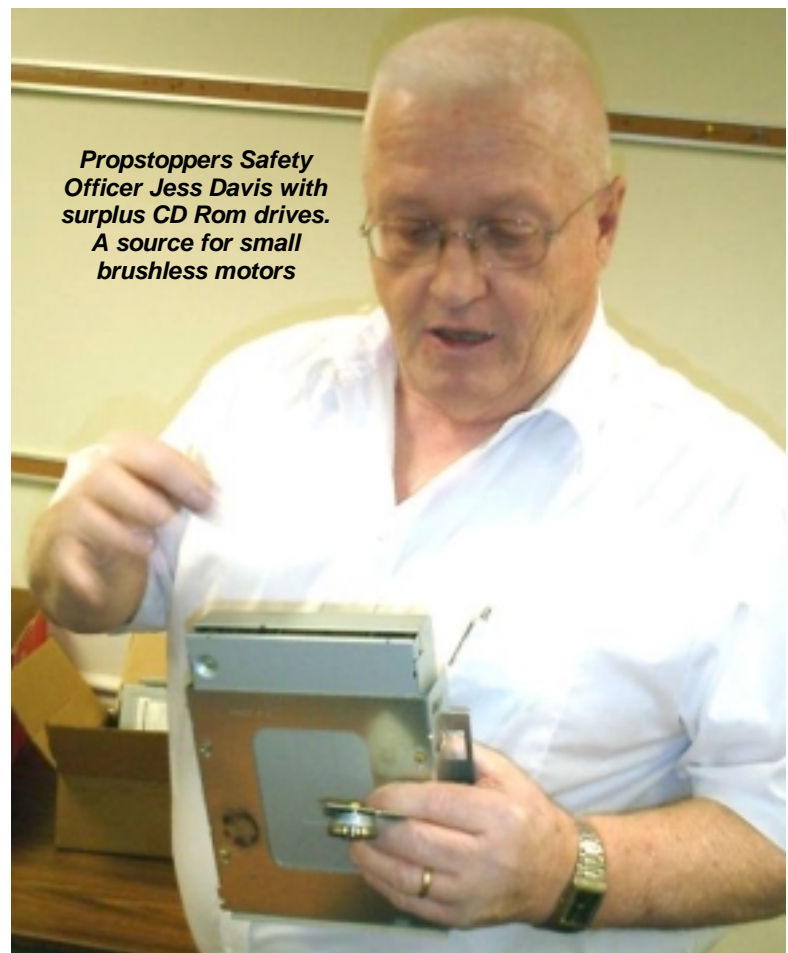
The vice president discussed several fields that he investigated. Several members also discussed possibilities that they were investigating.

### New Business:

Club President Steve Boyajian announced that he is renewing our membership with the A.M.A. He announced that Jess Davis is named as the club Safety officer.

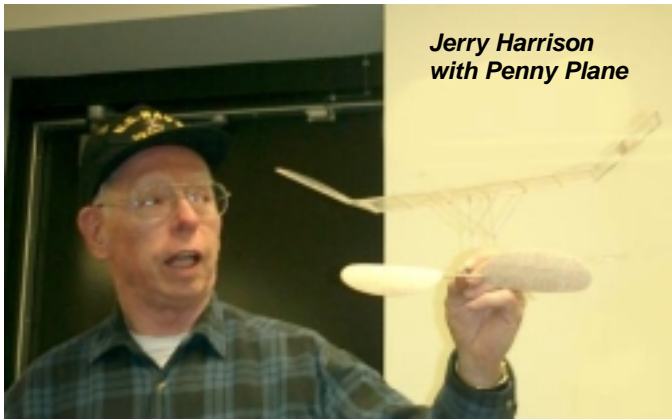
### Show and Tell:

Jess Davis brought in several CD ROM drives to scavenge for a brushless motor and connector pins.



*Propstoppers Safety Officer Jess Davis with surplus CD Rom drives. A source for small brushless motors*

Jerry Harrison showed a Penny Plane he built from a Lou Gitlow kit. He has flown it successfully, and is still working on the trim.



**Jerry Harrison  
with Penny Plane**

John Drake showed a rubber powered easy B he is building as a start to a science Olympiad model.



**John Drake with Science  
Olympiad Easy B indoor rubber  
model**

Joe Mesko showed an outdoor electric Delta Dart.



**Joe Mesko with twice-  
sized electric powered  
Delta Dart**

The meeting was adjourned at 8:45 p.m.

*Richard Bartkowski, Secretary*

### **News From the Far West**

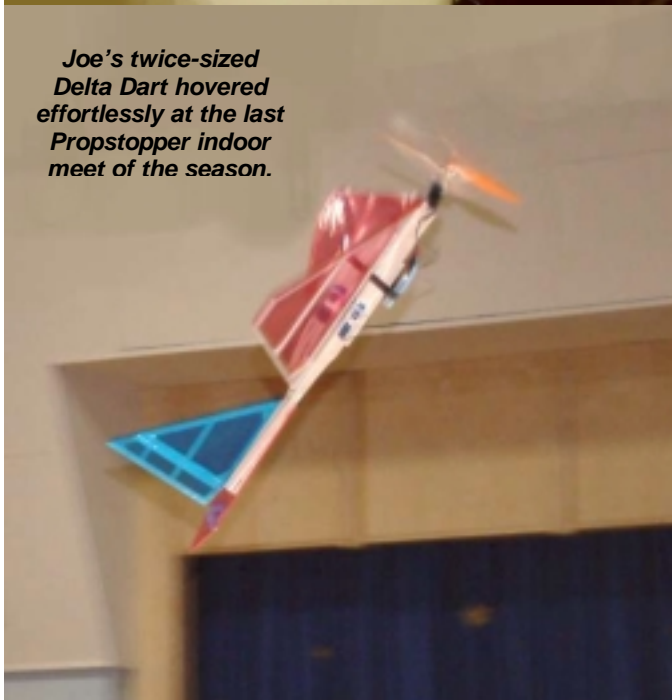
While mellowing out in the Far West, Arizona and New Mexico actually, John Tullai had one of those moments we all experience occasionally. He just happened to see a model shop, and, once in side "the beam of light from out of space" drew him to this cute little helicopter. "Would you like to see it fly?" said the shop owner. "You bet," said John in his best Western style. Well, wouldn't you know, that little sucker flew beautifully, right there in the store. So what else could he do? Buy it of course!

The model is the Hirobo XRB Lama electric powered, coaxial rotor, R/C helicopter.

*(See the review in the April MA)*



This factory-assembled ARF is already tuned and comes complete with all RC gear, 720 mAh LiPoly battery and charger. Just charge and lift-off. Rock solid stability and control in the tightest spaces. Two sets of counter rotating blades allow for close quarters flying in your living room. The blades generate the hovering stability that makes indoor flight possible and practical. Sky Robo does almost everything upright that a full-size RC chopper will do. Hover, Fly pirouettes, and Fly forward and backwards, side-to-side, practice orientations and more. John is already flying his in the basement. How about a demo at the April meeting John?



**Joe's twice-sized  
Delta Dart hovered  
effortlessly at the last  
Propstopper indoor  
meet of the season.**

that Joe subsequently flew it at the Tinicum indoor. Hovering performance was super and it even controlled well despite having only rudder and elevator.

He also showed a foam Playboy model he built from scratch from plans available at: [www.foamfly.com](http://www.foamfly.com)

**Fields and Friends continued from page 1.**

There are instructions on their web site but basically, you drive just beyond the old Matlack trucking depot (now closed and unmarked, but big and obvious) and turn right at the next "road". See the aerial photos that follow.



The field is a 500 ft x 125 ft grass runway sited SW – NE. There is a low tree line at the South end and it is wide open at the North end. A low tree line and wires run some distance beyond the field and beyond that there is another field that is within their flight boundary. The actual field is about the size of Moore but the surrounding area is much greater with very much smaller trees! Beyond the flying field the surrounding area is a mostly flat open field although there is one house just behind the strip.

On our return we timed it as four minutes from the field to the tollbooths and a total of 17 minutes to Mick's house at roughly Rt. 352 and Knowlton road.

The second good thing that happened on the field subject is that an invitation was received from Warren Barrick of the VFSS club;  
 "The Valley forge Signal Seekers would welcome all Propstoppers who want to fly at our field or join the club. Our troubles with the now retired superintendent are over and we have a permit for a few more years. If pilots want to fly they only need to stop at the guard headquarters for a day pass. AMA is required".

**Now that the weather is getting better Vice President, Dick Seiwel, has set Saturday 9th April, 10 am (rain date Sunday afternoon) as the initial opening session at the Christian Academy field. Bring your rakes and appropriate clothing so we can cut the long grass and deal with the clippings. Bring and airplane too so we can fly afterwards.**



The Delco RC Field location and close-up.



*John Tullai is all checked out on Dick Seiwel's mower. Who will be the lucky driver at the CA field day on Saturday 9th April?*

**Dave Harding**

So, while we continue to look for a new all-purpose field, let's take up this generous offer and join our local cousins and fly. Indeed, why don't we join them for their meeting and to fly on Sunday April 3rd, but be warned that they plan to do a little fieldwork starting at 10.

## Florida Report – From Charlie Storm

Charlie sent the following report from his recent Sunshine State activities.

Thought you might be interested in this article in our local paper about the annual "Gathering of Giants" at our club field. I was there yesterday and enjoyed seeing many giant scale planes on display and flying. I have done some flying when the wind isn't too strong! I miss the Tuesday morning breakfasts and all my flying buddies, see you in about a month. – Charlie

## Childhood Dreams Take Flight

**Ground-based pilots show their skills during annual two-day event.** – News Press.

Gene Wagner saw his childhood flying through the air eight years ago.

It only took one visit to the Seahawks annual Radio Controlled Air Show at Cape Coral's Seahawks Air Park and Wagner, 72, to re-energize those memories and get him hooked all over again.

"When I saw those planes flying around,] had to get one," he said. "I always had a passion for flying and airplanes. Seeing that show brought me back to a time when I would build little planes out of tissue paper and rubber bands."

Wagner is piloting a scale 1935 Waco replica in the Sea Hawks Air Show today and Sunday; Between 75 and 100 pilots will be flying giant radio-controlled planes performing aerobatic shows and scale aircraft ranging from World War I models to modern jets; A radio-controlled aircraft with radio and engine will be raffled off Sunday;

Show coordinator Jim McCormack said the air show is the club's biggest event of the year and hopes 4,000 to 6,000 people attend, despite another big air show going on this weekend, too. "We are competing with the Charlotte County air show," said McCormack. They have the Blue Angels, but that show is expensive and 30 miles away. "We are only asking \$3 for admission and we aren't far away."

Proceeds raised from the air show will go toward improvements to Seahawk Air Park and in Cape Coral's Mayor Scholarship Fund. The fund provides \$1,500 scholarships to 30 Cape Coral students to their college of choice.

Wagner began living his dream of flying airplanes when he was a boy funding his hobby with money he earned on his paper route. After graduating college, he entered the Air Force and flew the planes he built as a child. But when Wagner retired in Cape Coral, he was left with an empty feeling not being able to fly. It changed one day when he visited Seahawk Air Park and discovered a new love, flying model airplanes. It didn't come without a price tag. "Flying

models allows you to have the thrill without the expense of a real plane, but it still costs you," said Wagner. "You learn how to build and take pride in your creation, but then you take it to the field, fly it and crash it, then you cry."



PHOTOS BY JACK HARDMAN/SPECIAL TO THE NEWS-PRESS

■ Anthony Greco, above, will be participating in the radio-controlled model airplane show with his Edge 540, a 40 percent scale model with a 10-foot wing span, at the Cape Coral Sea Hawks Air Park today and Sunday.



■ Gene Wagner with his Waco 1935 classic biplane, along with other pilots, will be participating in the radio-controlled model airplane show.

## More on LiPoly Battery Safety

By Rick Grothman

After reading the LiPoly experiences in the last newsletter - Paul and I were talking about them and realized we had a couple lipos we weren't going to put in planes anymore that we could experiment with - As a summary:

We had quite a different experience with Lipos than those in the last newsletter!

Our guess is that if one or more cells in a pack still hold a charge, you can get an impressive eruption/fire from the cell with a charge.

Cells can get damaged internally so they no longer hold a charge, without causing any 'external' problems.

Here's what we tried...

On a 3-cell pack, two of the cells looked a little bloated so I had stopped using them. Voltage was 4-point-something in the pack (I think just the one cell was still good) - it had been sitting for some time. Paul wanted to simulate a short or a crash where the pack gets damaged by 'driving a stake through it's heart' ... so, in the middle of the driveway, snow all around, with welding gloves on, Paul started to tap a nail into the one side - the nail barely got into the first cell when it erupted - flame ... smoke ... big 'whoosh'.... the works ... quite impressive! ... After cooling down in the snow - it looked like the material around the other two cells were still intact (a little sooty :-)) so decided to keep going with driving the nail through the other two cells - nothing happened. Since we hadn't expected anything to happen, we didn't take any pictures.

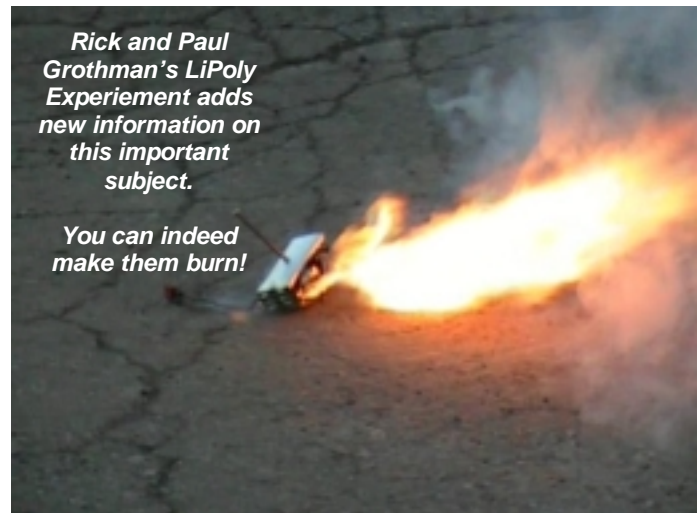
The second pack had one cell that the one edge looked a little odd so had stopped using it - Video camera in hand this time - back to the middle of the driveway, no snow this time, with welding gloves on, Paul started to tap a nail into the first cell, one that looked fine... just a little wisp of smoke ... into the second cell (which looked fine) ... a little smoke at first, then it bloats up, and a fair amount of smoke and a whistle/whoosh from it ... into the third cell ... only a little bit of smoke.

Theory at this point is that a cell needs to be capable of holding a charge for there to be a reaction of some type.

With the remaining battery we decided to try the next experiment with a charged pack. Putting the pack on the charger (0.1 amp charging rate, battery on a 12 inch square bathroom tile), the voltage was jumping up to 27 volts and back down so we took it off the charger after less than a minute and decided to proceed 'as is' with the charge it had - one cell in the pack was noticeably warm to the touch (10 degrees above room temp with a temp gun) after that short charging time.

Back to the middle of the driveway with the video camera ...with welding gloves on, Paul started to tap a nail into the first cell that was a little deformed ... nothing ... not even smoke ... into the second (middle) cell ... it bloats quickly, then 'pops' ...a whoosh and *lots* of smoke! .... The third cell still looks in tact (The wrapping the cells are in is quite impressive - it protects a cell even when the one next to it erupts) - so the nail gets driven into the last pack ... it bloats a little, then a

whoosh, and a pretty sizeable flame lets loose. Flame got to over 3 feet in diameter and about 1 foot high, and burned for 10 seconds before putting water on it.



**Rick and Paul Grothman's LiPoly Experiment adds new information on this important subject.**

**You can indeed make them burn!**



I've ordered battery bunkers (<http://www.batterybunker.net>)

**Rick Grothman**

### Tech Note: Pull - Pull Controls

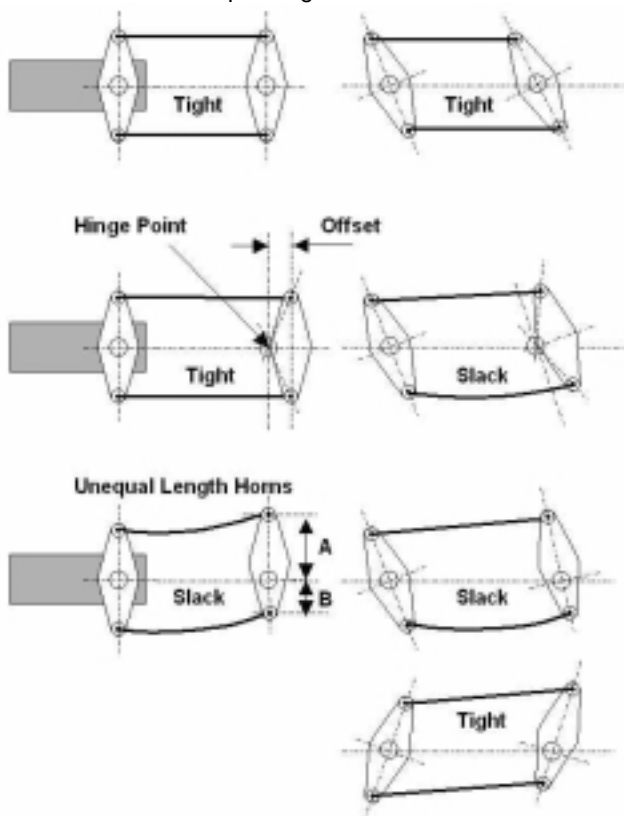
All kinds of RC airplanes can benefit from Pull-Pull controls. If properly designed, constructed and rigged they are light and stiff. But there are a number of pitfalls. This Tech Note addresses the major factors.



This picture shows the simplest execution on my competition Electric Wakefield model. The key here is the lightest possible controls, but they must also be stiff for precise control. I have mounted the servos so the control arms are fully exposed and the control runs, carpet thread, go directly to the control horns.

There are a number of geometric rules you must follow to make Pull-Pull controls work well; they are depicted in the figure below. If you violate these rules it will either cause the assembly to bind and introduce high loads into the servo bearing and surface hinge, or, you will need to set up the cables so they are tight at one point and slack everywhere in between.

For pull-pull controls to work properly the control horns surface must be of equal length; hole to hole about the surface pivot point and aligned so that the hinge point is exactly in the center between the two cable attachments. This is shown in the top configuration.

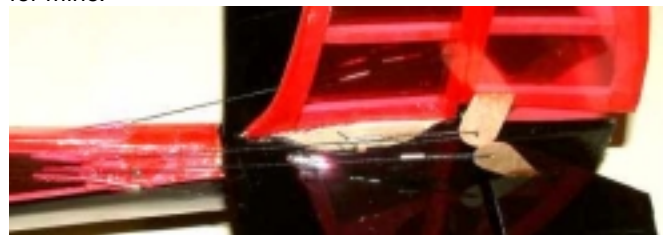
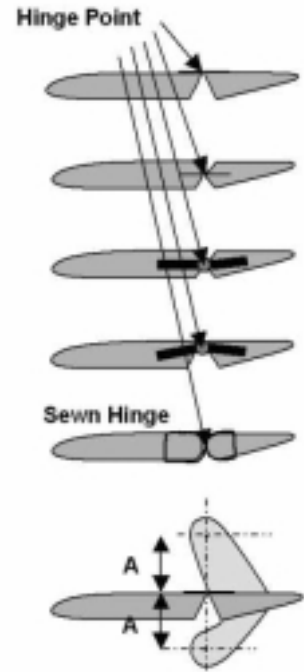


If you make the horns such that the connections are aft, or forward of the hinge the cables will go slack as you move off center.

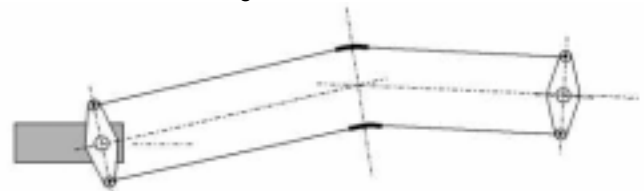
If you make unequal length horns the system will go tight at the extreme of travel in one direction, it will be slack everywhere else.

One of the difficulties is in identifying the actual hinge point. We use all manner of hinges on our surfaces and they have a variety of hinge points, some as a result of the process and others deliberately offset.

It is crucial to be able to identify the hinge point with pull-pull controls, as we must equally distribute the cables about it. At the bottom of the figure we can see the type of horn necessary when we use an upper surface mounted tape hinge. It looks like it is too big on the upper surface but if you examine it carefully you will see it is equally distributed about the hinge point. Furthermore, it is properly aligned longitudinally with the hinge point; the cable connections and the hinge point are vertically on top of each other. It is usually necessary to make your own horns to match these criteria. I use thin ply for mine.



Some installations, like my Stardust Special above, require the cables to be routed through guides, as a straight run is not possible. In this case it is good practice to align the control horns with the guide interface as shown below.



While we can accommodate some inaccuracies in a park flyer where some control slop or softness is acceptable, or there is sufficient flexibility to "swallow" the inaccuracies, this is not the case with highly loaded larger model controls. Some of the outsized aerobats are using pull-pull controls with steel cables and metal horns on servo and surface. In this case absolutely true installations and rigging are essential.

Dave Harding

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# Propstoppers R.C. M.A.C



*Propstoppers Paul and Rick Grothman, AMA President Dave Brown, Mick Harris and Joe Mesko at the WRAMS Show with some of their loot.*

*I wonder what you could do with something like this.*



And what was in that big box we brought back from the WRAMS show?