



The Flightline



Volume 39, Issue 9

Newsletter of the Propstoppers RC Club

AMA 1042 September 2009

President's Message



Well it seems picnic/just fun fly was a real wash out although it didn't actually rain as forecast, but it was wicked humid and would have been a very uncomfortable time.

But all who came to past events had a great time and were looking forward for this one. So at the next meeting we will see if we would like to have the rained out Picnic on Sept. 12 2009 which would be the Sat after this next monthly meeting. We will need some help on picking up the supplies so I will be looking for volunteers.

Why don't we start the meeting at **6:30** because it getting dark early (we could fly more). This will be the last meeting at the field for this year. We will move to Middletown Library for the Oct meeting Oct 13th 7:30 doors open 7:00

Hope to see you at the last outdoor meeting bring your planes to fly, or save them for show and tell in October!

NOTICE Nominations for officers will be held at the October meeting; Article VIII in the bylaws

Dick Seiwell

*Agenda for September 8th Meeting
At the Christian Academy Field;
Flying from 5pm, Meeting 6:30pm.*

1. Membership Report
2. Finance Report
3. Nomination of Officers Process
4. Plans for Indoor Monthly Meetings
5. Show and Tell and more flying

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Minutes of the Propstoppers Model Airplane Club August 11th, 2009

At the Christian Academy field on hot and humid but very calm evening

Call To Order took place at 7:00 p.m. by President Dick Seiwell
Roll-call showed 18 members present

Minutes of the July meeting as published were accepted by the membership

Treasurer's report was deferred in the absence of the Treasurer

Old Business:

President Seiwell said the possible radio interference that occurred at the field on a previous Saturday is being investigated.

He also asked for suggestions on how many picnics the club should sponsor over the summer and how they should be run.

New Business:

President Seiwell discussed posting the GPS, coordinates and emergency data at the field and ways this could be managed.

Adjournment took place at 7:25 p.m. so the members could enjoy some fine evening flying.

Richard Bartkowski, Secretary



Mick Harris' Fairey Topsy Junior, now being flown by Mike Williams

Mike Williams is now flying Mick Harris' old Fairey Topsy Junior after a long sojourn in the back of Mick's garage. Fitted with a brushed Astro 035 and Robart shock absorbing struts it makes a fine flyer and Mike is putting it through its paces. But where is the Pilot Mick and Mike. Fine scale airplanes like this simply can't be flown with an open un-manned cockpit! But I do love that switch in the correct place on the panel.

Calendar of Events

Club Meetings

Monthly Meetings
Second Tuesday of the month.

Summer meetings at the Christian Academy Field.
Fly at 5 pm, meeting at 6:30 pm.

8th September

Tuesday Breakfast Meeting
Tom Jones Restaurant on Edgemont Avenue in Brookhaven.
9 till 10 am. Just show up.
Flying after at Chester Park 10 am.

Regular Club Flying

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

Saturday mornings 10 am
Thursday evenings
Tuesday mornings 10 am weather permitting after breakfast at Chester Park.

Beginners

Beginners using due caution and respecting club rules may fly GWS Slow Stick or similar models without instructors.
The club also provides the AMA Introductory Pilot Program for beginners without AMA insurance.

Propstoppers RC Club of Delaware County, Pennsylvania. Club Officers

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Propstoppers Web Site; www.propstoppers.org
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Need Batteries and Accessories?

I recently ordered a 2200mAh 3S LiPo battery from Sig Manufacturing to complement my Hyperion battery and a few others I had acquired for free from a friend. Looking forward to flying my newest plane, a "T-28 Trojan" from Horizon Hobby, I set out to charge all my batteries. Drat, they all have DIFFERENT balance adapters; what's a guy to do? Turn on the computer, hit the web and start searching. Web site after web site yielded little or nothing on balance adapters. Then I stumbled upon; <http://www.rclipos.com/>

It appeared to have every adapter known to mankind and I quickly went into a state of uncontrollable Zen. Not wanting to get burned again (so to speak); I called the company for some first hand advice. I left a message and within 30 minutes I received a return call.

A gentleman named Pat was very knowledgeable asking about the manufacturer of my charger and batteries. I was truly impressed that they had all the adapters for each of the batteries for my charger AND in Stock! It drives me crazy when I start drooling over a new plane or heli only to find "backordered or out-of-stock".

They answered all my questions about different battery brands and recommended POLY/RC by Enerland.

I gave the gentleman a credit card number and 3 days later all the goodies were at my door. RCLIPOS.com sold me 3 adapters for my Hyperion charger and threw in a fourth for free along with a nice discount on the two batteries. I can now charge any LiPo made!

The advice I received on the POLY RC / Enerland batteries was right on. I found they charged much faster than Sig's offering along with extended flight time to boot.

I rarely get nuts about recommending any company, but when someone answers all my technical questions, offers solutions, has the inventory in stock, blazing delivery and speaks ENGLISH; I'm impressed! In this day and age of overpriced balsa wood and cheap Chinese imports, it's comforting to find a knowledgeable voice in the wilderness with solutions and prices that work. These are the kind of people/companies we want to support.

Rclipos.com can be reached by web or at 1-800-699-7659

John "JOMO" Moloko

Editor's Note.

There appears to be four different primary balance adaptor configurations;

- Polyquest (Enerland)
- Thunderpower
- JST-XH
- JST EH / HR

With each battery manufacturer picking the one they like. As John says, if you collect enough batteries soon enough you will be looking for adapters to connect to your charger/balancer.

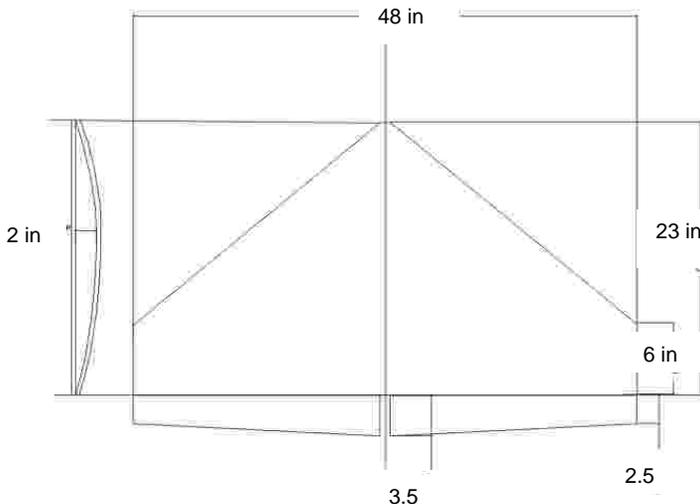
You can read more on this subject on the recommended site as well as [Hobby Lobby](#), [BP Hobbies FMA Direct](#) and [Nippon Dave](#). Here is a compatibility chart from Nippon Dave.

-XH Type Fits:	-HP Type Fits:	-TP Type Fits:	-EH Type Fits:
ALIGN	HYPERION	THUNDER POWER	KOKAM
DUALSKY	POLYQUEST	FLIGHT POWER / EVO	GRAUPNER
E-FLIGHT	E-TEC	APEX	ROBBE
ELECTRIFLY	POLY RC	VISLERO	NEU
HEXTRONIC	XCITE	DANLIONS	APOGEE
COMMON SENSE V1	MAX AMPS	MPX	VAMPOWER
COMMON SENSE V2	TRUE RC		
ESKY	IMPULSE		
VENOM			
AIR THUNDER			
KONG THUNDER			
GRAYSON POWER			
TENERGY			
DN POWER			
MEGA POWER			
ELECTRIC POWER			
TURBORIX			
ENERGY EC			
IMAX			
WOW RC			
FULLY MAX			

More on Foam Deltas; The Big One!

My saga on developing a simple crashworthy aerobatic model continued along the foam delta path since last month. You may remember that I had built three in succession with steadily improving results but still not satisfactory. The biggest problem was they were too sensitive in roll for my abilities. Rick Grothman found this too although he was able to tame his first attempt.

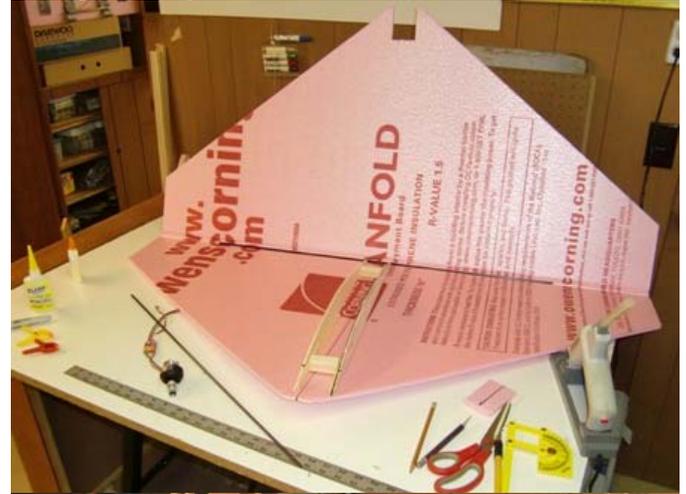
Thinking about what approach to take it occurred to me that bigger airplanes are slower to react and easier to see; the small deltas were getting hard to see if you let them fly for more than a few seconds in one direction. So I started to lay out a big one, as big as I could fit on one sheet of 4 ft x 2 ft pink Fan Fold.



As I started to lay it out it occurred to me that I could make a thick one by using two sheets, indeed if I took two sheets and used the common fold at the trailing edge I only had to join them in the front. I decided to install two ribs in the center spaced so as to accommodate any big LiPo I might want to use, protecting them from the abuse my LiPos have received from surface mounting. Also the spaced ribs would provide a base for a motor mounting platform. I thought about tractor and pusher designs and selected a tractor because this big guy might be hard to launch and I am quite concerned about the safety of launching the pushers (maybe a ducted fan...?). Here is my initial cut at the structure. I decided to make the trailing edge the natural foam fold. I cut the two ribs from hard 3/16 inch balsa, reinforced them at the forward end with a tapered piece of 1/8 inch x 1 inch pine and joined them at 2 1/2 inch spacing. Note the notch in the front for the motor mount. This is essential also to allow for the subsequent forming of the upper surface to the ribs and leading edge. Also shown in the picture is the graphite tube I installed at the trailing edge before closing up the structure. It does not run over the complete spanwise length but stops several inches short.



I glued the ribs to the lower surface using hot melt glue. Then I glued the top half to the ribs also with hot melt; work fast!



Next comes the tricky bit; gluing the leading edges together. This must be done on a large flat surface. First make a trial fit by pushing the upper leading edge down to the lower surface. Mark where the two come together, it will be about 1/2 inch back from the lower leading edge. This is important because you now know where to put the glue. The next thing you will need is a long strong and stiff fixture that will hold the upper surface down uniformly to the lower surface while the glue sets. I use a 2 inch square aluminum rod shown in the picture above. I couldn't get a picture of this step as it takes 2 1/2 hands to hold everything in place while the glue sets.

The next step is to cut the lower leading edge to match the top then sand the whole leading edge to a nice radius. Next I made the elevons, also from the Fan Fold material. It is a good idea to make control surfaces at least as thick as the wing trailing edge they mount to, so what better way than to use the same Fan Fold hinge as the leading edge. So I cut the pair from another pair of sheets. I made them with a greater chord at the center tapered to the tips. My earlier deltas were Ok in pitch but wickedly sensitive in roll, so the tapered surfaces would help in this regard by having a smaller area involved in the roll action. This was also the reason I modified the delta form to a finite chord at the tip.

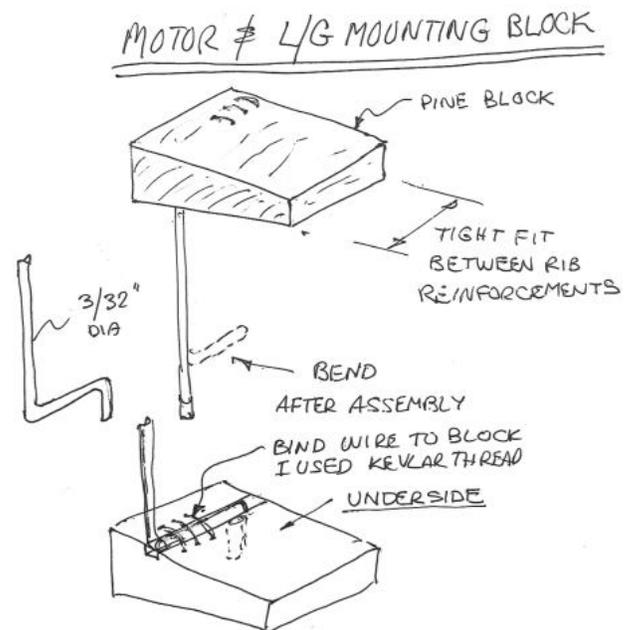
I mounted the elevons to the delta using 2 inch packing tape. I first taped them together on the top surface being careful to allow a small gap between the parts. Because these are long parts operated from somewhere near one end I wrapped them with a one-inch fiber reinforced packing tape to increase the torsional stiffness. I made long control horns from 1/16 inch ply and drilled three holes to allow for travel changes. These were glued to the surface by cutting slots top to bottom then inserted with five minute epoxy.



I decided to use full-sized servos as the surfaces are large and this beast could go quite fast. Also they are cheap and I had two hanging around for the last ten years or so. I mounted them somewhat outboard; a trade between putting them near the load center to minimize surface twisting and keeping them inboard to minimize roll inertia. I glued them in my usual way by first wrapping them in masking tape then gluing to that surface. I also wanted them to glue to both the wing lower surface and the upper surface edges to ensure the most secure attachment. This required padding the lower surface with the piece cut in the upper so as to raise the upper end clear of the upper surface. I also cut a hatch into the center section between the ribs to serve as a radio compartment. I wanted the radio to be behind the heavy stuff so as to avoid crushing it in a nose-in crash. This also let me run the servo wires inside for a neater appearance.



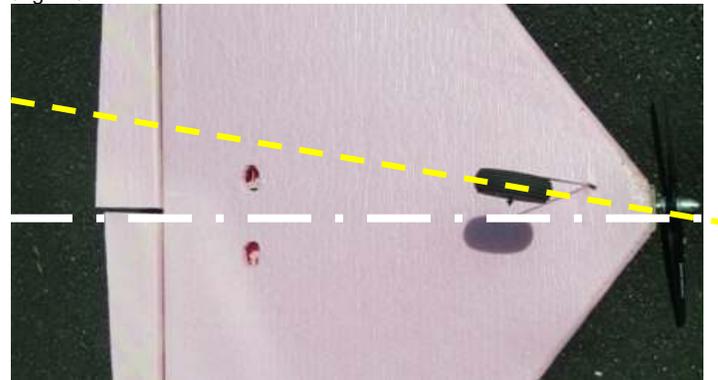
By now I had enough built and thought out to do a trial balance. Surprisingly it was about right on with an Aveox 1406/2Y with a 2:1 gearbox that I had laying around, and that was without the battery. I did some Motocalc runs and determined that the Aveox would be an ideal match giving excellent low speed thrust and high speeds with a range of props from 9 x 6 to 11 x 8. Now this motor is quite hot and turns these props at about 9000 rpm, so hand launching was becoming an issue and I decide to install a mono leg landing gear under the motor. I cut a pine block that fit between the ribs, tapered to match and yield down thrust. I cut the block so as to allow mounting of the L/G leg, which I bound in place with Kevlar thread then glued the whole assembly into place. The motor was mounted on an aluminum mount shown here.



Then I cut another hatch in the center where I installed the battery, a Neu Energy 4900 mah two-cell LiPo; I just happened to have two laying around. My plan was to install the battery behind some soft foam blocks. This allows moving it back and forth in the long cavity to make CG adjustments as well as providing a safe environment to protect these expensive items.

When I assembled the complete model I found the ground attitude pushed the elevons to a high position, probably beyond the commanded position when the radio is on, so I added a pair of sub-winglets glued to the tips to keep the elevons out of the grass.

I was ready to fly and the weather was good and it was a Thursday evening fun fly at the field. The first takeoff attempts resulted in a sharp left turn and spin out in the grass. Why? poor wheel alignment!



Gotta check these things you know.

OK, now see if we can hand launch this beast. Where to grab it? I tried the landing gear and my fingers in the control hinge but couldn't get a grip. This resulted in a nose-in arrival. Ok, let Rick try it, but when he held it up we both thought a pair of finger holes would be a good idea, and an easy fix. So we tried again.

Still nose in! Why now? Well, the first arrival caused the battery to move forward under the foam block so the CG had moved forward too. We moved the battery back and Rick made an excellent launch and we were off for the first flight.

What a dream to fly! Trims were off particularly the pitch trim. We ran out of Tx adjustment and had to fly holding in up elevator but the control response was just what I wanted; positive, smooth and not twitchy. I handed the controls to Rick who was also enthusiastic about the model. He landed and we adjusted the trims and control throws and made one more wonderful flight, exploring both high speed and low speed handling. Of course we all know deltas have great low speed handling qualities and performance and Rick made pass after pass low and slow down the patch.



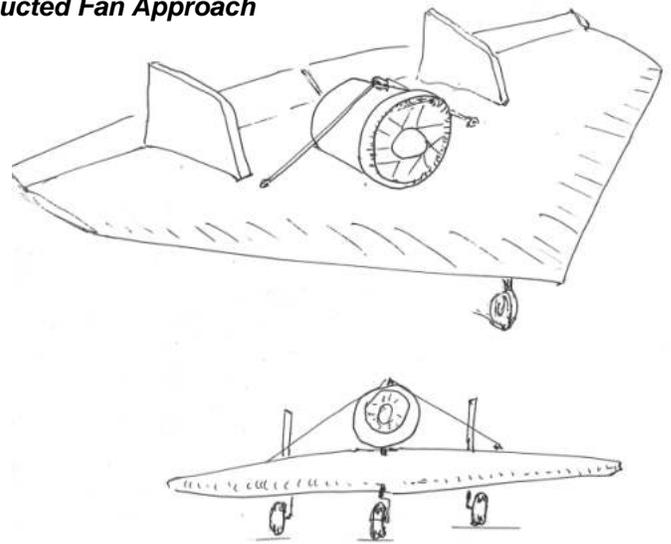
This model is a winner and several of the guys want them, but you know the racer's credo; if a little is good then more is better, so I began to think of improvements or other approaches.

Rick suggested we should build several of these and try formation flying etc. Good idea, but what about other versions, like an Electric Ducted Fan, EDF? Well, I just happen to have a Wemotech MiniFan from ten years ago or so, and I recently acquired a suitable inrunner motor from Hobby City. Don't know why I bought this motor at the time, but it fits perfectly so I guess it must have been Karma, or something like that.

So I have been thinking about how to do it. In fact I was thinking about using this powerplant from the beginning but couldn't think of a satisfactory way to mount the motor. The housing has two lugs on opposite sides. I thought if I mounted it vertically from one lug it would be vulnerable in all kinds of ways. But subsequently I have thought about mounting it vertically but using struts to stabilize the unit laterally.

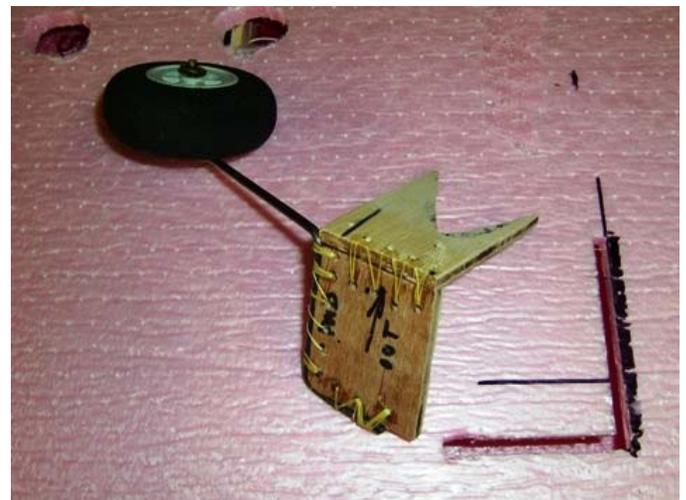
The other consideration from the experience of the two initial flights is a way to ease the launch situation and I decided it needed a full-up landing gear with steerable nose gear. So I developed a design concept to incorporate these features but preserving the simplicity and essence of the current model.

Ducted Fan Approach



At first I thought this might be difficult, particularly incorporating the structure inside the already completed wing. But the more I thought about it I came to the realization that I could add new main gear, including an adequate structure by inserting it through lower surface slots. So here is what I did. First I designed a simple structure that would add longitudinal and lateral load carrying strength as well as fixing for the wire gear leg. This would incorporate a degree of torsional compliance as well as a little aft cant so vertical loads would tend to cause an aft compliant motion. This structure needed to tie in to both upper and lower surfaces as well as the wire gear. I decided to make it from ply and glue and lash it together with Kevlar thread, then CA the whole thing. This is what it looked like before assembly.

As you can see I cut slots in the lower surface through which the structure can be inserted. I located the main gear just ahead of the CG and length to allow a slight nose-up stance. The structure needed to be glued to the upper surface to make a shear tie and also to the lower surface slots. I decided to use hot melt glue as it seems to work well in this application. I slathered it onto the bottom edges then partially installed it as shown above, the quickly added glue around the structure where it would attach to the lower surface. Then pushed it firmly in place.





It worked out pretty well as you can see here, but of course it needs to function before I declare complete victory.



The first attempt was at Chester Park after one of our Tuesday breakfasts. It was unsuccessful because the grass was just too long and wet. So we tried again on the Thursday evening fun fly at CA field.

This time it made it to speed, just, running cross the runway in the general direction that it was initially pointed. The second flight was more spectacular as it did a ground loop of about three wing span diameter then straightened out for a good launch. I can't say it is successful, perhaps if I incorporated steering it would be better, but it worked and I didn't have to ask for a hand launch.

Oh, the stats. It has an Aveox 1406/2Y with a 2:1 gearbox turning a 10 x 6 prop at 30 amps or so on a NeuEnergy 4900 mah two-cell LiPo. It weighs 50 ounces with this setup, so about 100 watts per pound. It won't go vertical for long but it is fast enough and slows down well for landings although it could use a sub-fin for a little more directional stability in slow nose-up flight.

So, how about the ducted fan version with retracts and nose wheel steering and maybe a scale like nose and markings. Are you ready?

Dave Harding

Memories from Past Walt Bryan Memorial Electric Fun Flies

Eric Hofberg with two North Jersey "ringers" ready for Zagi Combat



In **2002** we invited area electric flyers to join us and fly. Several guys from North Jersey came and introduced us to some fun contests they flew at their field. Here our Eric Hofberg is shown with two of our guests prior to the Zagi Combat event. Poor Eric was sandbagged as these guys were not only skilled at this event but also had hot brushless motors for more speed. Eric bravely lasted for a minute or so before being chopped from the sky. Another event they brought was the "Mission to Berlin". They had built a soft foam hack to fly as the bomber and target. This durable model was flown in a racetrack pattern while the erstwhile attackers made pass after pass trying to shoot it down. Well, like our own Cox Warbird Day mission the attackers mostly succumbed to target fixation, destroying themselves with ground contact.



Another visitor brought this fine Tiger Moth.

In **2003** we were honored to host the great modeler Leon Shulman who came down from North Jersey to fly some electric powered versions of his 1938 models. Here is with two Zombies talking with electric glider pioneer Carl Benson, a long time stalwart of our fun flies.



Leon Shulman with two of his recent foam Zombys in 2003



2005 saw Ed Goretzka bringing out his Frank Ehling Elf biplane, a real handful to fly, but fly it did and Ed. consigned it to the "done" pile.

Here is a picture of the Brooklyn Skyscrapers club flyers from 1938, Leon Shulman and Sal Taibi shown.
Brooklyn Skyscrapers.org



Sal Leon



Your editor flew his Piper NE-1 (Hanger 9 Cub in military guise). Another handful in our small fields.

We met Leon at a SAM Old Eagles meet in Hope NJ. Here is a picture of him with our Mick Harris. Mick is holding his Gladiator. Leon competed against the Gladiator before the war. Leon's grandson is the current AMA Precision Aerobatics Champion and is on the USA team



2006 Bob Crowel with an aerobat. Bob has left us so as to continue flying his vast fleet of glow powered airplanes.



Leon Shulman and Mick Harris

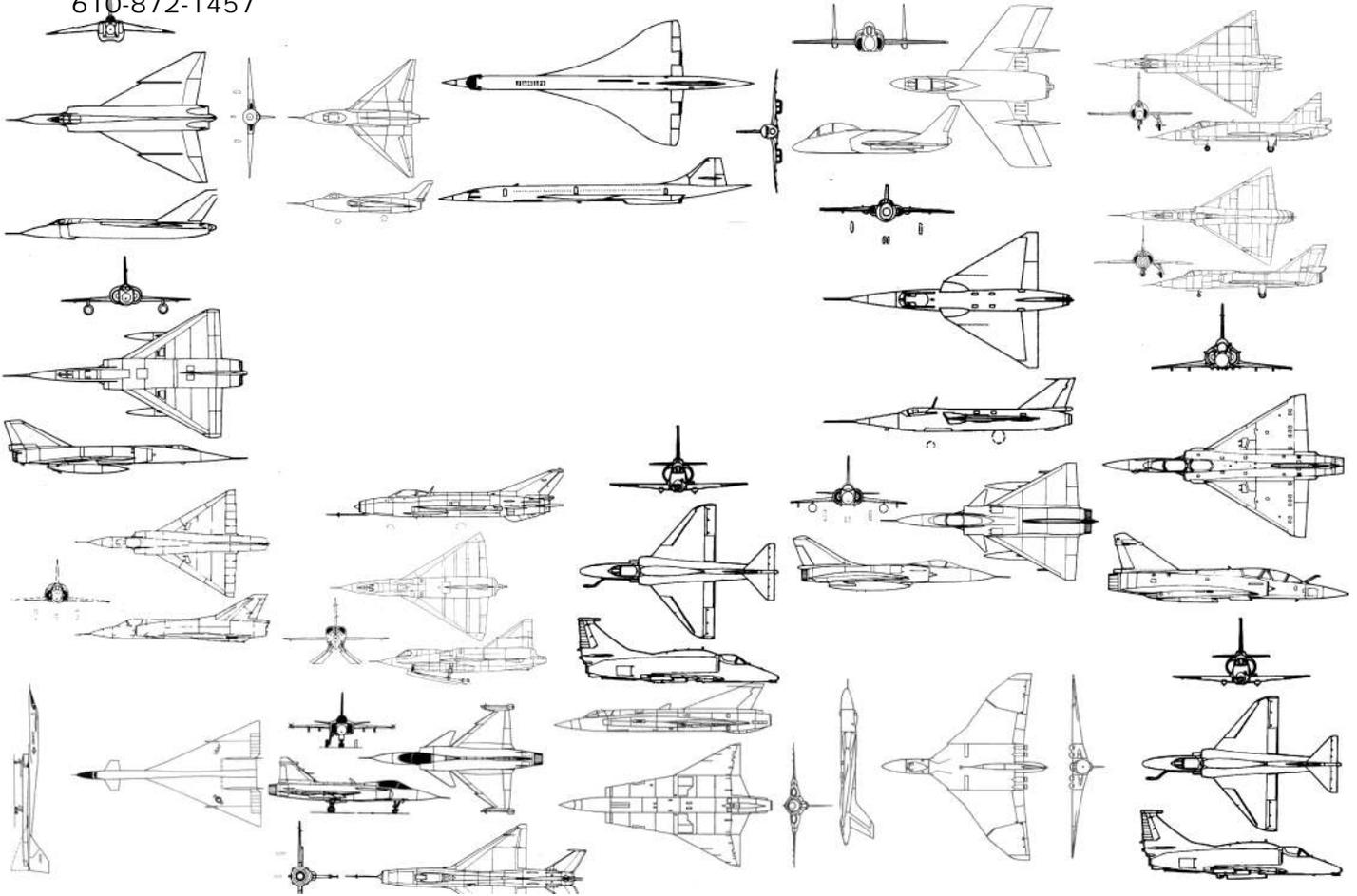
2004 at Sleighton Field one of our guests brought out his autogiro and burned up the field all day.



Dave Harding

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Propstoppers R.C. M.A.C



Propstoppers at the Field

Summer Monthly Meetings at the Field

Tuesday 8th September

Meeting at 6:30 this time.

Fall / Winter Monthly Meetings at
 Middletown Library

13th October; first meeting

Doors open 7 pm meeting at 7:30 pm

Propstoppers at Rep Lenz Senior Expo

Thursday 17th September 11 am till 2pm
 Brookhaven Borough Building Gymnasium
 Behind Burger King on Edgemont Ave in
 Brookhaven

Come on out and help man the booth, and bring an
 airplane or old magazines

So who is going to build a scale foam delta?



Fly with the Chester County Club
 Invitation from Eric Stein president of Chester
 County R/C club. Please let Propstoppers know that
 they are invited to join us at Sisk Field on
 Sept 19 th - CCRC / Propstoppers Fly In - 9am -