

# The Flightline



#### Volume 44, Issue 5 Newsletter of the Propstoppers RC Club AMA 1042 May 2014

#### President's Message

We did support the Middletown Community Pride day but with a poor showing. We had four members supporting the commitment; Dave Bevan, Chuck Kime, Matt Borden, Dick Seiwell and three of them flew, .The crowd was the same as last year they all liked the flying and the Kids liked Dave's planes. Dave had a good time also. If we have a pride day next year we will use a signup sheet to ensure support. This is a nice event for the TOWNSHIP to which we were INVITED. Hopefully we can do better next year.

The field is very WET. Stay to the left and go right at goal post and go around field. Just remember the FIELD IS VERY WET. Try not to get bogged down!

The monthly meeting at the Community Church building will start 7:00 and will be done when all is complete and maybe we can get in some flying.

This is a good time to bring in show & tell there is lots of room.

Maybe we need the newsletter reworked so we all can get it. (Editor's note; the newsletter notice is sent to the Propstoppers Yahoo Group and in addition every email address in the club roster. If you are not getting it send me a message. Dave)

See you at the meeting; 7:00 Mick and I will unlock the building.

Dick Seiwell, President

#### Agenda for May 13th Meeting At

#### Gateway Community Church, At our CA Field site;

#### Meeting 7pm till 8:30?

- 1. Show and Tell
- 2. Membership Report
- 3. Finance Report

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#### Minutes of the Propstoppers Model Airplane Club April 8, 2014

The first meeting taking place at the Christian Academy meeting room

Call to order by President Dick Seiwell took place at 7:10 PM Roll call by the membership chair Ray Wopatek showed 16 members and one guest present

Treasurer's report was not presented this month Minutes of the March meeting as printed in the newsletter were accepted

#### Old Business:

Middletown pride day will be May 3 at the Middletown Penn state campus. We are invited to show our planes and fly a demonstration. The first club picnic of the year will be June 21 Saturday from 11 AM to 3:00 PM or dark. Food will be provided by the club and there will be flying at the Christian academy field

#### New Business:

Chuck Kime announced that we have indoor time on Tuesday mornings at the Brookhaven gym. Flying will be from 1030 to 1130 AM. This follows the informal Propstoppers geezer breakfast group at Tom Jones restaurant. Club members are invited whether they come to breakfast or not.

#### Show and Tell:

Larry Woodward showed a large rubber slingshot for throwing a weighted line over a tree branch to retrieve a plane. It could throw a weight to a good height.

He also showed his home built foam seaplane. The design is called the blue baby. He found this on the RC groups. He is ready to try it when he moves to Cape Cod for the summer.

John Dixon showed the body of a scratch built FW 190 he is putting together. He plans to make it electric. He is vacuum forming a canopy and producing his own fiberglass cowl.

Adjournment took place at 8:45 PM

#### Dick Bartkowski, Secretary

#### **Calendar of Events**

#### **Club Meetings**

Monthly Meetings

Second Tuesday of the month. Gateway Community Church at the Christian Academy. Doors open at 7:00 Next Meeting; 13th May

Tuesday Breakfast Meeting

Tom Jones Restaurant on Edgemont Avenue in Brookhaven. 9 till 10 am. Just show up. Flying after in the summer at CA or Elwyn Field 10 am. Weather permitting. Indoors at the Brookhaven Gym in bad weather 10:30-11:30

#### **Regular Club Flying**

At Old Christian Academy; Electric Only Monday through Friday after school till dusk Saturday 10 am till dusk Sunday, after Church; 12 pm till dusk At Elwyn Field; Gas or Electric Monday through Saturday 8 am till dusk Sunday 12 pm till dusk

#### **Special Club Flying**

Saturday mornings 10 am Wednesday Helicopter evening in summer Thursday evenings in the summer Tuesday mornings 10 am weather permitting after breakfast.

Check our Yahoo Group for announcements; http://groups.yahoo.com/group/propstoppers/

#### Beginners

Beginners using due caution and respecting club rules may fly Apprentice or similar models without instructors at Christian Academy Field. 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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### Show and Tell









While flying at Elwyn this past Monday, (it didn't look like the picture above! – Ed.) I was approached by our friend Bruce the groundskeeper. Bruce confirmed what we had already been told, that the farmer will not be using the land after this coming November, but he also added that the farmer will not be farming the center area due to the wet conditions caused by the underground springs. The indication is that we will not have to contend with fences on the edge of our runway this flying season. Bruce said that as time and manpower permits, the tilled land will be flattened and restored. Hopefully in the future, we will be able to once again take off and land on a north/south runway and put the sun at our back as needed.

Eric Hofberg





But the season has started and the usual events have begun. Here is Jeff's Cub stuck at the top of the tallest tree following electrical failure! Also here is Chuck giving his tree-loving slingshot its spring outing. A successful one too as he snagged the branch first shot, although the Cub suffered on the way down.

## Middletown Community Pride Day 2014

For the seventh year in a row the Club put on a display at this annual event. We do so to support the community where we have had our fields for the past twenty years or so. Club President is well connected with the community and this is a significant reason that he through his Middletown connections has enabled us to fly continuously for that twenty years. This year club stalwarts Chuck Kime, Dave Bevan and President Dick Seiwell with outstanding support from Matt Borden put on a continuous display of fixed wing and helicopter flights. Dave Bevan and Dick Seiwell provided a continuous effort to engage children in the wonders of flight through providing and instructing the youngsters with hand launched gliders. Well Done Team, the club members salute you for your dedication!



# Widener University SAE Aero Design Conclusion

Last month I reported on the flight testing of the Widener airplane first at the Glenn Mills school and then at our CA field. Both flights resulted in crashes, but also indication of improvements needed. The GM school flight indicated a pitch instability which was addressed by increasing the horizontal tail area by 50%. This was accomplished by increasing the span. The CA field flight indicated that the attachment of this rebuilt tail was inadequate, so that too was beefed up.

Rather than trying more flights the team decided to concentrate on making a series of new parts so repairs would be easier a the contest.

So on Wednesday 9<sup>th</sup> of April Chuck and Tina Kime and I drove south, breaking our 12 hour journey to Atlanta in two. The Widener students chose to leave late Wednesday evening driving through the night to avoid the Washington – Richmond traffic. In the event we all arrived at about the same time early Thursday evening. The Team got to work unloading their stuff and building up the flight model for the next day's inspection and possible flight testing. They were also required to make a technical briefing which, together with their design report were scored and counted together with the flight scores. The model was also subjected to a technical inspection. This was to determine the safety of the model and also to see that it conformed to the rules for size and payload loading time. The team thought both went well and formed a great basis for the flight program.



The flying site was a fabulous grassy field in the country with a paved runway and paved pit area with about 100 ft of covered model prep area with permanent benches. A large clubhouse sat in the middle. To give some idea of the possibilities we watched huge aerobats and two jets fly as we arrived.

There were at least two outstanding pilots flying these complex planes and we learned both were also pilots for the SAE program. Out team snagged the best of them and soon he was free to help. This started with him examining the model. The servo mechanisms didn't meet his standards so he had the Widener team make some mods. Then they were ready for flight.





### Here are some of the competitor's planes shown at the tech inspection and at the field.



They showed a wide degree of sophistication from "that will never fly" to truly awesome weight and strength optimization



First a steady taxi test. The model was carrying about ten pounds of payload. The maximum predicted performance was 30lb. Oh, the weather was perfect for the whole meet ~ 75 degrees, sunny and light winds.



The model took off smoothly and steadily gained altitude turning into the downwind leg when suddenly the tail fluttered and then departed the model, which, once again fluttered tailless into the tall grass. Damage was not too bad and the team had all the spare parts needed but it would take time so they gathered up the parts. The pilot made some suggestions for improvements and fortunately there was an outstanding model shop in the general area, so some stiff covering was purchased and the team drove back to the hotel for an all-nighter repair session.

The following morning was the beginning of the actual contest flying and after the pilots meeting the team was ready to go.



This time the model took off and handled well as it climbed for the first turn. Into the turn the dreaded power limiter began to interrupt the power and reduced it to a level where continued flight was not possible. So once again the model suffered damage on landing in the rough, but the team set to and with some repairs and some more spare parts they succeeded in repairing it for another flight. But with the same result; more repairs. This time the damage was more extensive and the team pulled yet another all-nighter arriving the following morning for their last opportunities to make a successful flight. I had asked Steve Neu, the manufacturer of Neu Motors and the fellow who designed and built the power limiters for this even, what is the problem with them. He replied that he designed the device to detect peak power but noise in the system was causing early cutoff. He said if he had it to do again he would include some integration of the data to smooth the peaks. Fat lot of good that did the Widener folks and half the entrants who never completed a flight!



So on Sunday morning, they were once again prepared to fly. This time concern with the power limiter the decision was made to fly with less payload and a smaller propeller further increasing the power margin with the limiter.

Success, the flight was perfect but the landing, one of many on this front end and nose gear attachment, resulted in further damage to the gear. Nevertheless, it was a successful flight made with 10 ½ pounds of payload and it counted as an official. A further flight attempt was made but the nose gear gave up on takeoff so the flight was aborted.

Here is the team after the flight waiting for post flight inspection with the wing removed for handling.



A video of two flights may be seen on YouTube here; https://www.youtube.com/watch?v=RApDtGFfbUs

#### SAE Aero Design East 2014 Postscript

This competition has been held for over twenty years. Our club elder and former VP, Dave Bevan, has been helping the Widener University program for all that time, as has Pete Noelle, the Boeing pilot who has flown every one of them.

Widener University does not teach Aeronautics and since this competition is for Senior Engineering students the team members have a huge learning process at the beginning of each year's activity. I have been helping for about five years now and have watched and participated in the process. Usually, not one of the team of six or so students has any experience in building an airplane much less designing one with competitive performance to a set of rules which change each year. This is a tall ask, which is also one of the reasons they probably learn more about the engineering profession in this program than they have in the prior four years.

Designing a model airplane involves exactly the same processes as for a full-sized one; a pretty complicated process involving many different disciplines. Learning how to do it then actually doing it in about six months is a really huge task. Competing against teams from all over the US and many other countries makes it an even bigger task. Many of the competing Universities have major aeronautics programs. Also, what becomes obvious if you go to several of these meets is some Universities have clubs where freshmen are recruited and stay with the program for their entire university education. This provides a significant amount of knowledge transfer and maintenance so those that design that year's model have built on all the prior experience.

Nowhere is this more apparent that the models of the Warsaw University of Technology from Poland. They won last year and took second this. To give you some idea of their level of technology I observed that they seemed to use an aluminum tube as the tail spar. Seemingly a vastly over designed part, unnecessarily heavy. When I asked them about it they said that actually it is an aluminum tube made from 0.002 inch high strength aluminum foil wrapped over the lightest balsa rod they could find; optimization indeed. Here are last year's winner and this year's second place, both aerodynamically and structurally optimized in the extreme.



The Widener Team came in a respectable 17<sup>th</sup>. Absent all the difficulties with the limiter they could easily have been in the top ten. But where they were really winners was the team spirit and fortitude to keep re-building and improving right to the last. Well done Team.

Pos.	No.	Country	School	P/L lb	Pos.	No.	Country	School	P/L lb
1	11	Brazil	Univ.Federal De Itajuba	28.32	22	46	United States	South Dakota School of Mines	7.66
2	44	Poland	Warsaw University of Technology	27.81	23	26	India	KIIT University	6.17
3	41	United States	Univ of Akron	24.99	24	19	United States	Lawrence Technological University	5.13
4	20	United States	Univ of Cincinnati	24.18	25	38	United States	Catholic University of America	4.83
5	13	Brazil	Univesidade Estadual de Campinas	23.98	26	36	United States	North Carolina A&T	4.28
6	2	United States	Univ of Virginia	19.37	27	43	United States	Polytechnic Institute of NYU	3.1
7	50	Canada	Montreal Polytechnique	19.07	28	33	India	Dayananda Sagar College of Engineering	2.52
8	18	United States	Florida International University	16.65	29	34	United States	Saint Louis University	0
9	27	United States	Georgia Institute of Technology	16.55	30	15	Canada	Universite Du Quebec a Trois-Rivieres	0
10	14	United States	Union College	15.94	31	40	United States	Stevens Institute of Technology	0
11	6	United States	Marquette University	15.71	32	48	United States	Drexel University	0
12	51	United States	Univ of Tennessee	15.32	33	45	United States	New Jersey Inst. of Technology (Newark)	0
13	5	Mexico	Universidad Iberoamericana	12.16	34	23	United States	Cedarville University	0
14	47	United States	Catholic University of America	10.35	35	35	United States	Rutgers University	0
15	39	Canada	Ryerson University	10.33	36	9	United States	Michigan Tech University	0
16	22	United States	Univ of Michigan	10.3	37	24	Canada	Ecole De Technologie Superieure	0
17	31	United States	Widener University	10.25	38	37	United States	College of New Jersey	0
18	16	United States	Old Dominion	9.11	39	25	Canada	Universite Laval	0
19	21	United States	Univ of Puerto Rico	9.01	40	29	United States	Univ of Central Florida	0
20	10	United States	Kansas State University	8.52	41	30	Egypt	Alexandria University	0
21	32	United States	Ohio Northern University	7.83	42	17	Canada	Ecole National D`Aerotechnique	0

# £4k fine for man who crashed model plane near nuclear shipva

#### **Daily Mail Reporter**

THE owner of a remote-control plane has been ordered to pay £4,340 in fines and costs after it crashed in a no-fly zone near a BAE Systems shipyard that builds nuclear submarines.

Robert Knowles lost control of the £2,000 delta-wing plane fitted with a surveillance camera and it ended up in the sea.

It was washed up weeks later and police traced the TV repairman because the cam-era had recorded his car registration number as the plane took off. The aircraft also bore the name of his company, Vision TV Repairs.

Knowles, 46, was convicted in his absence

of failing to comply with air regulations. He was found to be in control of an unmanned aircraft which travelled within 50metres of Walney Bridge in Barrow-in-

Furness, Cumbria, and over the nearby BAE shipyard. The air-craft, with a 1.35m wingspan and weighing 1.86kg, crashed into Walney Channel and was recovered by a BAE employee.

It is against air regulations to fly aircraft over the BAE facility without permission from the Civil Aviation Authority. Knowles failed to attend the

hearing and his defence lawyer



was withdrawn as a result. He had previously pleaded not guilty to two counts of failing to comply with air regulations on the basis that he was not in control of the plane

Last October Knowles, of Dalton, Cumbria, said: 'I think it's all a bit heavy-handed. I understand safety concerns, but at the end of the day I would not

have put my name on the plane if I was a bomber or a spy.' On Tuesday he was fined £800 at Furness Magistrates' Court for being both the controller and

operator of the plane. He was also ordered to pay £3,500 in court costs and a £40 victim surcharge.

District judge Gerald Chalk said: 'The aircraft had a camera

on it and the film has been shown to me. It shows the route the air craft took over the bridge and over the nuclear facility. It shows a man operating the aircraft and a parked car.' The court heard that Knowles

had carried out seven flights from Walney on the day last August. He used a sensor from the aircraft to follow each flight on a laptop. Alison Slater, prosecuting on behalf of the Civil Aviation



Authority, said that the video footage showed Knowles launching the aircraft, incriminating himself in the process. She said: 'The footage was

taken to Greater Manchester Police for analysis. The aircraft was in the charge of Mr Knowles and he was the operator of it.

In an email to Robert Webb, standards officer from the Civil Aviation Authority, Knowles said be lost sight of the aircraft and could not locate it.

He said he didn't know how he lost control of the plane, and couldn't rule out 'outside influ-ence'. He is said to be considering an appeal against the verdict.

# Extract from the Daily Mail - 3rd April 2014

#### Jeff Frazier Observes:

You know you may have a problem when.... you physically remove the seat in your car for a bigger plane! :)

This is our very own club member Chris Maruzzi's car.

