



The Flightline



Volume 48, Issue 20 Newsletter of the Propstoppers RC Club AMA 1042 December 2018



President's Message

Happy Holidays and best wishes for the New Year.

For all of you that want to fly indoors, we again have arranged for use of the Brookhaven Community Center Gym once a month on Saturday night. The schedule is: Dec. 15, Jan. 12, Feb. 16, Mar. 23, and April 13.

I have some things planned such as Races, Balloon Bust, Carrier Landing, etc. Let me hear your suggestions. We fly 7:00pm – 9:00pm. Typically, we fly in time segments to accommodate different types of aircraft as determined by the participant interests. You have to be a Club and AMA member to fly. There is a \$2.00 charge each night that goes to the Center's janitor.

This month at our annual Christmas Party/Indoor Picnic former President Dick Siewell will be presented with a plaque honoring his service to the Club and naming him President Emeritus. All who know him will understand why he deserves this honor.

Please make an effort to join us for this special event and all-round good time. You will enjoy it. Please give me a call or send an email telling me you plan to attend, so I can plan for enough hoagies.

Chuck Kime
President

INSIDE THIS ISSUE

1	President's Message
2	December Meeting Agenda
3	Novemberr Meeting Minutes
4	Editor's Note
5	An Aeronautics Challenge By Dave Harding
6	"What's So Great about That?" By Larry Woodward
7.	Flying a Spitfire from Biggin Hill By Dave Harding
8	Toy Train Open House By Eric Hofberg

Agenda for December 11th Meeting At

Gateway Church Meeting Room
7:00 pm till 8:30

1. Call to Order and Roll Call
2. Approval of minutes
3. Treasurer's Report
4. President Emeritus Presentation
5. Holiday Party and "Indoor Picnic"
6. Adjournment

Minutes of the Propstoppers Model Airplane Club

Taken by Pete Oetinger in the absence of the Secretary.

November 13, 2018 at the Gateway Community Church meeting room

Call to order took place at 7:05 PM by the President Elect.

Minutes of the October meeting as published were approved by the membership.

Roll call showed 14 members were present.

Treasurer's report presented by Pete Oetinger showed a current balance of \$2400.

Old Business:

Expenditure was approved to purchase an award plaque for the

President Emeritus presentation in December.

Revised bylaws have been forwarded to AMA for their records.

VP elect Pedro Navarro will convene a Safety Committee (P. Navarro, E. Hofberg and R. Schurman) review of the field safety rules and make recommendation for a vote.

It was voted and approved that the Sunday flying time for Elwyn Field would be 10:00 am to Dusk.

New Business:

December meeting and Holiday Party plans were discussed. Hoagies and soft drinks will be purchased by the club. It was suggested that the Church be asked if we could set up in the hallway.

Membership Chair Ray Wopatek reported that eight members were still delinquent for 2018 dues. The members agreed that they should be dropped from the rolls and informed that they are not eligible to fly at our fields any longer. The Membership Chair was asked to develop a policy and procedure to maintain and distribute a list of currently active (paid up) members that could inform the membership who is eligible to fly at our fields.

It was reported that CA Field was very wet and muddy under a frozen crust. Keep to the roadway to avoid getting stuck, even when the ground is frozen.

Dave Harding reported that this fall's class of Drexel Engineering students would be holding the final flight testing of their designs at Elwyn Field on Saturday November 17th. All members are invited to come out and support the students.

Show and Tell: See following page.

Adjournment took place at 8:00 PM

Propstoppers RC Club of Delaware County, Pennsylvania. Club Officers

President Chuck Kime (610) 833-5256	chuxtruk@yahoo.com
Vice President Pedro Navarro (610) 331-2536	pedronv@gmail.com
Secretary Richard Bartkowski (610) 566-3950	rbartkowski@comcast.net
Treasurer Pete Oetinger 610 627-9564	Pete202@juno.com
Membership Chairman Ray Wopatek 610 259-4942	raywop@gmail.com
Safety Officers: Eric Hofberg 610 566-0408	bgsteam@comcast.net
Ryan Schurman	Throttle152@hotmail.com
Newsletter Co-Editors: Dave Harding (610)-872-1457	Davejean1@comcast.net
Larry Woodward 610 891-7936	Woodward.larry@gmail.com

Propstoppers Web Site; www.propstoppers.org

Material herein may be freely copied for personal use but shall not be reproduced for sale.

2018/19 Indoor Flying at the Brookhaven Gym

Saturdays 6:30-9:00 pm.

Dec. 15, Jan. 12, Feb. 16, Mar. 23, Apr. 13

Flying after Tuesday Breakfast 10.00am

SHOW AND TELL

RESURECTION

Larry Woodward showed an EDF model of the T-33a, an early jet trainer, dressed in USAF “Thunderbirds” livery. It was assembled from an old brushed motor Kyosho kit that was resurrected from Dave Harding’s basement. Larry reports that the model flies very well after conversion to a brushless fan unit and modifications to accommodate a battery hatch and cg ballast.



MINI POPWING COMBAT

Mike Black showed his Mini Popwing modifications for combat and offered a general challenge to all members to join the fun.

He and five others have purchased and are adapting these little planes from pushers to tractors as shown by

the motor mount in the picture. “We are planning to do Mini Popwing Combat. “We are using all standard parts that come with the kits from Motion RC (Sale Price \$59-\$89.) Standard motor, ESC and battery in the range of what is suggested. Everything comes in the ARF BUNDLE kit except for a receiver and battery. Make any adaptation you would like without adding any other components. Add carbon fiber rods for strength if you wish. As you can see, I moved the motor mount from the rear to the front. I sliced off a piece of the nose and reinforced the leading edge near the front of the plane with 2 pieces of carbon fiber rod. FYI the noses of these little planes are weak. I still have to add the winglets and adapt an area of the bottom to support the battery.

I purchased crepe paper that will be cut into 1/2inch x 3 – 4 foot lengths to tape onto the back of the planes. The object is to cut the crape paper from your opponent’s plane.

Buy one and join us for some aerial combat in the spring.

Betcha can’t catch me – NaNaNaNah !!!:

[Motion RC Mini Popwing ARF 600mm 24”](#)

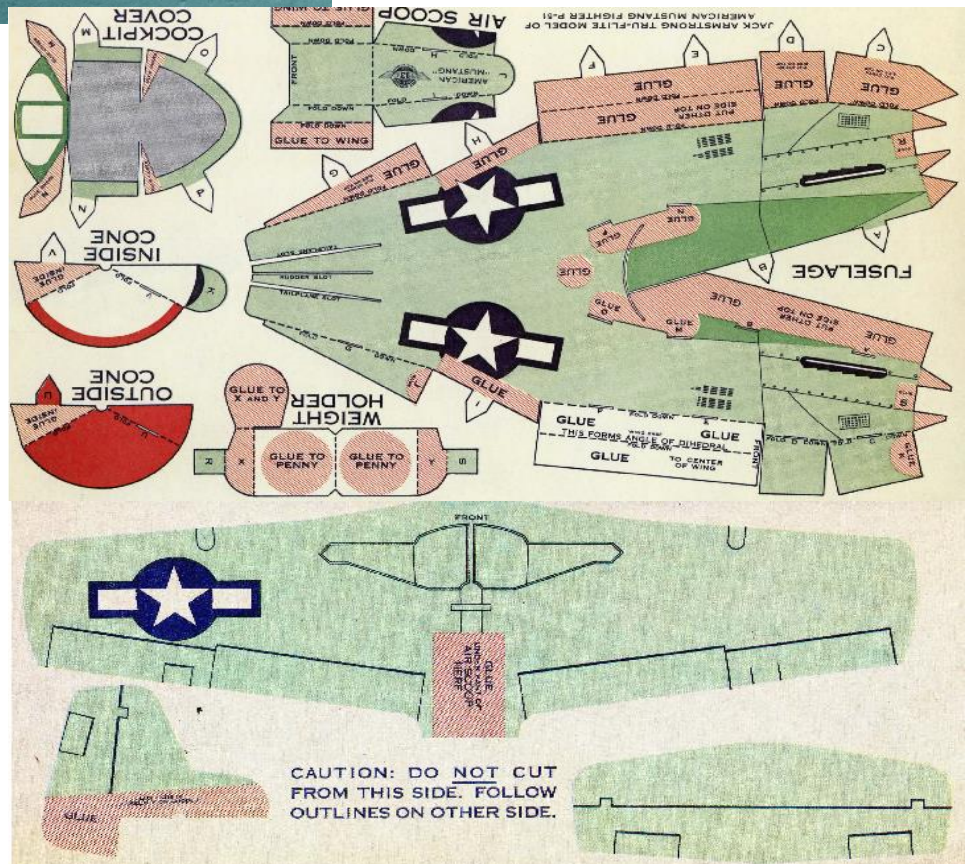
Mike

“WHEATIES BOXTOP FIGHTER” STILL FLYING

Andy Peterson showed an antique paper flying model from his youth in the post WWII era. “In 1944, General Mills, the makers of Wheaties and sponsor of the Jack Armstrong Radio Show, introduced a series of paper models of the most well-known fighter aircraft of WW2. General Mills gave thousands of these models to wounded servicemen to help with their recovery. These models flew so well that a National Championship Contest was organized during the 1940's. Wheaties also offered these models to us kids for two box-tops in 1944, resulting in lots of Wheaties being eaten, and lots of planes made and flown. These models were reintroduced in 1966 for us older kids to enjoy. Sets of these airplanes (14 different models) have been available until a few years ago, when the distributor apparently died, thus no more planes. I managed to get three complete sets while they were still being sold.



Propstoppers is planning to have these plans scanned and made available to members for printing out on suitable card stock. Stay tuned for a possible indoor challenge based in these models.

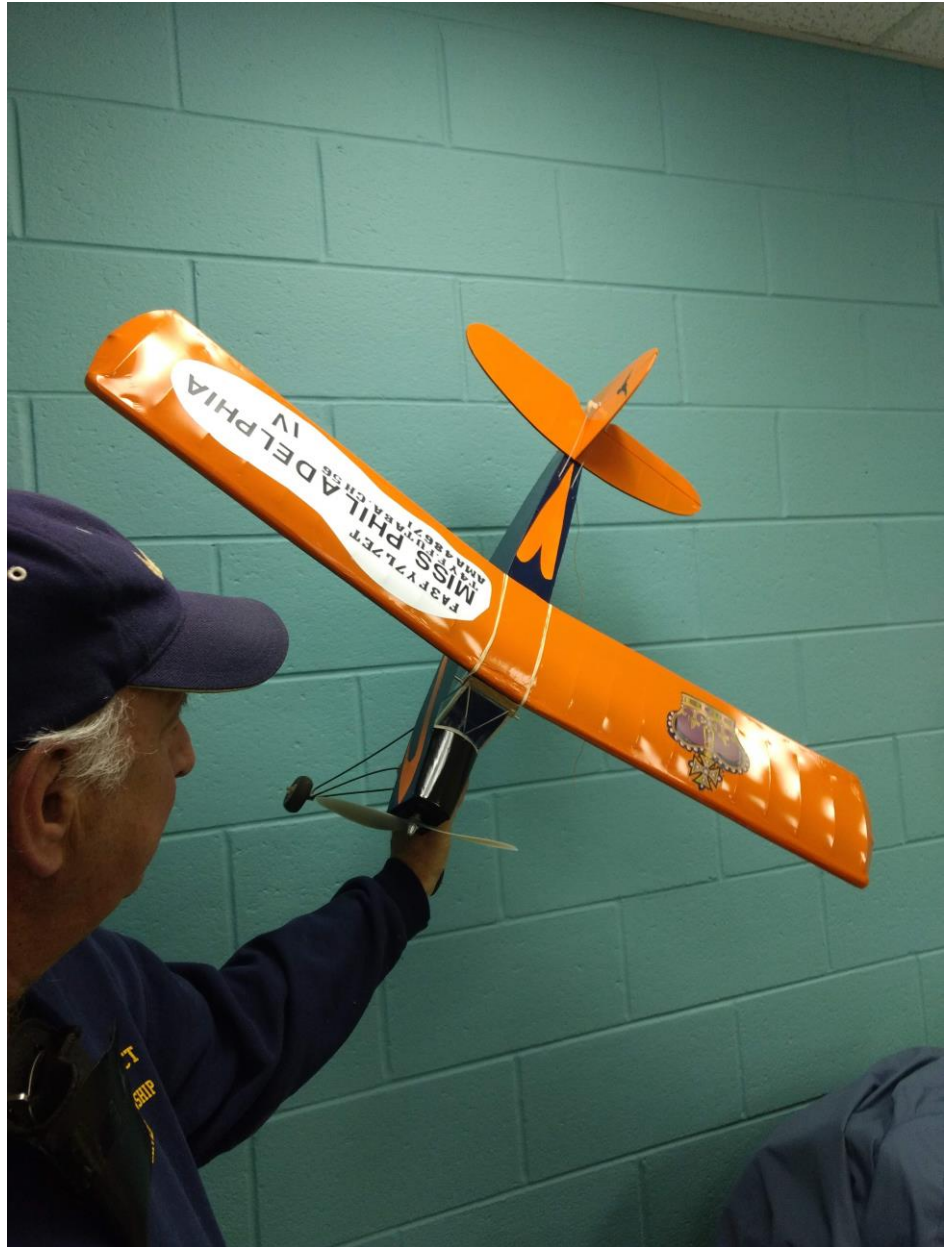


“MISS PHILADELPHIA” UPDATED

"Al Taburro presented a beautifully crafted model of a classic gas freeflight updated for RC and modern materials.

The venerable “Miss Philadelphia” design dates to the 1930’s and was offered in several versions by its designer Maxwell Bassett. Al acquired free copies of the original design plans from [Outerzone Plans](#). Al reported that the high wing, constant chord design was relatively straight forward to build. He was able to complete the whole project in only one week and scratch built the entire model from scrap balsa.

Some modern updates include a speed 400 equivalent brushless outrunner motor and ESC as well as a unique [Corona Synthesized Receiver 6Ch 72Mhz](#) from Hobby King. This receiver binds uniquely to most 72Mhz transmitters emulating frequency hopping technology to allow multiple 72Mhz models to fly concurrently on a single channel (Chrystal). At only \$11.00, it is a very simple solution to keeping your old 72MHz transmitters in the game.



The entire model was covered in Doculam film and painted with Rustoleum 2X spray paint, which Al says is the best he has found for adhering to film coverings.

The modifications also include a unique design of Al's for a break-away landing gear made from coat hanger wire and thin metal tubing.

Do we see a build article in the future, Al?

DAVE'S LANCASTER CHALLENGE

Dave Harding showed a scratch built foam Lancaster Bomber he built some while back for indoor electric freeflight. It was originally based on small brushed motors with nicad batteries. This was state of the art for the time and relatively simple to set up without needing a complicated speed control. He is now looking into updating the model for lipo technology. See the article later in this issue for a history of the project and the latest updates.



Calendar of Events

Club Meetings

Monthly Meetings
Second Tuesday of the month.
Gateway Community Church. Doors open at 7:00

Gateway Church Meeting Room

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.
Flying Indoors in winter at the Brookhaven Gym 10:00-11:00 (subject to availability of the gym).

Regular Club Flying

At Old Christian Academy Field (Gateway Community Church); 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
INDOOR Flying, see attached dates.

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.

2019 DUES ARE NOW COMING DUE

Membership renewal for 2019 is now required. You can renew by mail or at the club meeting

Bring cash or check and your AMA card.

Dues are \$60.

To renew by mail, please send a check made out to the *Propstoppers* to:

Ray Wopatek
1004 Green Lane
Secane, PA. 9018

Please enclose a **copy** of your current
A. M. A. Membership card,

***And Please, Please enclose a
Stamped self- addressed envelope.***

Ray Wopatek Membership Chairman

Editor's Note



Bill Tomasco

We heard recently from Thelma Tomasco, wife of longtime member Bill Tomasco, that he has been diagnosed with progressive dementia and is now living in a memory care facility in Wilmington.

Bill is one of the Boeing employees cited in last month's article on the history of rotor wing aircraft development in the Delco area. He was a very accomplished drafter and produced a number of excellent plans for model aircraft. His skill in stick and tissue building is legendary.

Bill is now located at [Arden Courts, 700 1/2 Foulk Rd Wilmington, DE 19803](#)

Mrs. Tomasco says that it would be a wonderful gift if any of Bill's old friends from Propstoppers would stop by and visit with him. Visitors are welcome any time without notice.

Mrs. Tomasco, herself, is feeling the strain of the situation, especially in this holiday season, and I am sure would appreciate a call. She has been hit with the flu at the same time her plumbing system has given out. A little support from old friends will go a long way.

Thelma Tomasco, ttomasco@comcast.net (610) 449-4102

An Aeronautics Challenge

By Dave Harding

First, a little history.

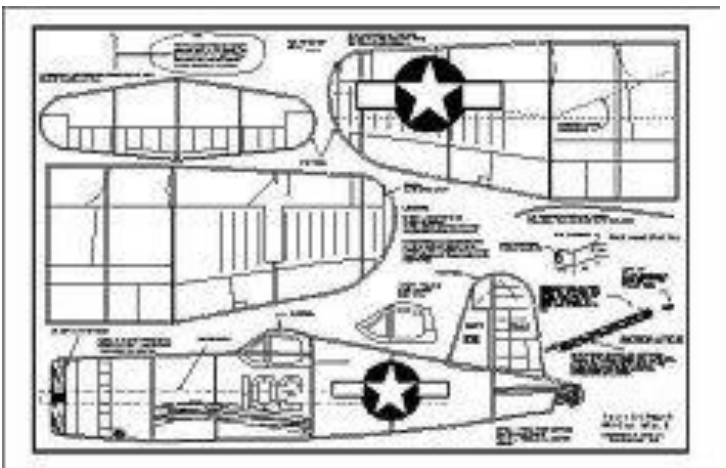
An Aeronautics Challenge, You know how it starts; "Dave what are you building for the indoor"? Well I'm dusting off the Lightstick and finally building my IFO. Should be enough for the first time out. Here Dave, why don't you think about making a small free flight electric powered model? Here are the parts you need; a molded foam sheet 17 inch wing with a flat center section and dihedral tip sections, a minute N20 motor and 3 inch prop.



"Should be able to build a model light enough to fly with two 50 mah nicad cells". There are a variety of Nocal profile scale designs on the web, why not make a Hurricane?

"Oh come on Dick, it is hard enough to finish the IFO and Litestick as well as get all the stuff ready to load and fly." By Friday morning (the day of the meet) I was well enough along to think about it. First of all that wing is ideal for a Corsair. One cut in the middle, a little sanding and glue it back together so I began the search on the web for what I needed. First the Nocal plan. I found one on the web.

Scale it up to 16 inches span, easy. Print it out and cut and glue the wing. Hey, I have started to build it! Quick cut out the stab and fuselage from thin sheet foam. Need to put some doublers in the usual forward fuselage



area, how about that, I can bury the motor.

Wow, its finished! Wonder if it will fly?

Now I 'fessed up to Dick that I had done it. What does it weigh he said. 24 grams says I. Should fly says he. So it was that at the first Propstoppers indoor I had a Corsair free flight model. It didn't quite fly, it was stable and did impressive long powered turns to the ground. What now Doc? This really bothered Dick as he prides himself on doing the analysis ahead of time so the event is less of a crap shoot. This one he said would fly. Oh well, we have a month before we try again. Not good enough for the Doc. A couple of days later he called to say that he was wrong with the prop and he had another for me to try. Well it's a calm day why don't we try it outdoors this afternoon at the ball field by the school? Fantastic, after a few trimming attempts a little too much charge and away it went circling slowly up and up until it was flying over the tall trees. Oh oh, I am allergic to trees, but it clipped the top branch and fell through to the ground. There were two more giggling little kids on the field that day. The lady with the dog was amused to find that their combined age was somewhere over a hundred! Its still magic folks, a new plane that flies unexpectedly well, no matter how big or uncomplicated. We were high for the rest of the day!

I thought about that feeling, how we all experience it occasionally with a new plane so I decided to write a piece on it. You know, the description of the "kit of parts" etc. but I had used up the parts and didn't have a picture so I asked Dick if he had another wing, motor and prop. Yes, actually he had bought a pack of six wings and 10 motors from Takeoff2000, so I could have some more. I picked them up the next day. Meanwhile I got the e-mail inviting us to the Delaware club indoor meet on the 18th; four days away! First I wanted to finish the Corsair so that its looks matched the flight performance. Magic marker finish was a disaster so I bought some foam safe enamel and printed some markings from the computer.



But you know how it goes with this hobby, you dream of airplanes you would like to build and challenges you would like to take. The gray matter processed this and using the "Racer's Credo" I thought, If one wing and one motor is good (very good) then two motors with two wings is better. In no time the mind was sorting the alternatives. Actually the scale effect obeys the "square - cube law". For now let's just say that when airplanes get twice as big they get more than twice as heavy and require a lot more than twice the power. In the case in point, I intended to join two wings so the span would be double but the chord would only increase slightly however the weight would be more than double so the wing loading and therefore the flight speed would increase somewhat. Double the area and higher flight speed certainly means more than twice the power so I began to think about four motor planes.



I have been developing an 80 inch B-24 but that has a very high aspect ratio wing and that did not fit the form factor of the foam wings and in any case high aspect ratio wings would be heavier. The B-17 has a low aspect ratio wing (which is one of the reasons it had less performance than the B-24) but it has a circular fuselage and by now I was not thinking profile. How about a Lancaster? Quick search on the web found a three view and a vast array of photos.

Wow, what a simple slab sided fuselage. Piece of cake. Hmmm. Could I? Sure, I have four days! What I'll do is make it as light as I can so I can use two motors if they are enough but provisions for four if needed.

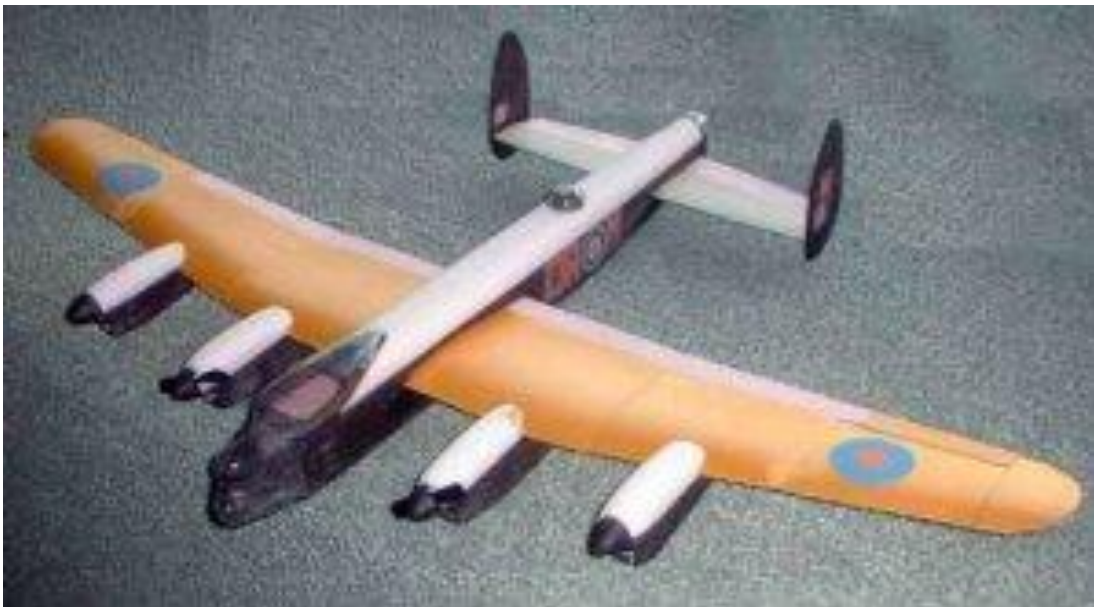
I joined the foam wings and added some sheet foam to complete the wing planform. The fuselage was made in the conventional way with a combination of 1/16 in balsa sheet and foam for the sides with thick foam top and bottom hollowed to shape with a shaped tool in a soldering iron. Empenage is from balsa with foam control surfaces. The nacelles are carved from foam and split horizontally at the thrust line to aid motor installation and wiring. I planned to install the motors and wiring into the inner nacelles but leave the outer nacelles empty.



By Monday the 17th it was beginning to take shape and I began to wonder "would it fly"? By now I was up to 60 grams. What I needed was a test flying session but the weather had turned sour. As luck would have it my grandson was attending his seminar class with the teacher who teaches aeronautics in one of her units. She also runs the Science Olympics at the grade school and our family have helped her on many occasions (in fact I have had four grandsons in her class, two currently). So I made a written proposal to fly in their gym after school and that is what I did.

I confirmed the flight performance of the Corsair then made several attempts with the Lancaster. The CG was off initially but after a few tries I got it right and tried a somewhat powered flight. It made one large gentle turning descent to a satisfactory landing. Houston, we have a program. I thought that with a fully charged battery pack (using three cells this time) I would have the power to fly on two motors.

But now the model cried out to be finished. Of course, I will need spinners or it wouldn't look right, and canopies too, five of them! What to do? Still need to keep it light. I made the spinners by turning light celluloid sheet backing plates and then added foam spinners which I formed by sanding. The canopies were made by carving wood patterns then stretching / shrinking blow molded packaging over the patterns with a heat gun and manual labor. You really don't need a vacuum machine.



All of this was immeasurably aided by constant trips to the computer and searches on the web for photos of the part I was making.

Was it worth it?
You be the judge.

Did it fly? Not quite, at 77 grams with the detail added it made another long gently turning descent. But the wizard, Doc tells me that I still have the wrong props and it should fly. If not I can add the other motors. Of course, there is the Racer's Credo again, so what to do? Add power, and so it was with four cells and the reduced diameter propellers the Lanc flew beautifully, just look at that grin!

If you want to see it fly try this movie and listen carefully at the beginning.

[Video for Windows Media Player](#)

[Video for Real Player](#)



[Home](#)



The Continuing story of the Lancaster etc.

I took many of these indoor models to the UK on my visits to my mother. The UK has a significant indoor program.

By the mid 2000s I became quite involved in my California daughter's new house and began spending a good deal of time there, especially in the winter. So my indoor activities slowed to an almost halt. But I did build a 1930s Handley Page airliner using two motors from the then popular Air Hog models

Vampire, Corsair, Manchester and Spitfire, all with N20 motors and small NiCads.





RC indoor Bleriot XI built from original full scale plans. Took this one to England too.



Handley Page HP 42 Airliner https://en.wikipedia.org/wiki/Handley_Page_H.P.42



But my indoor activities pretty much came to a halt with the advent of LiPo batteries.

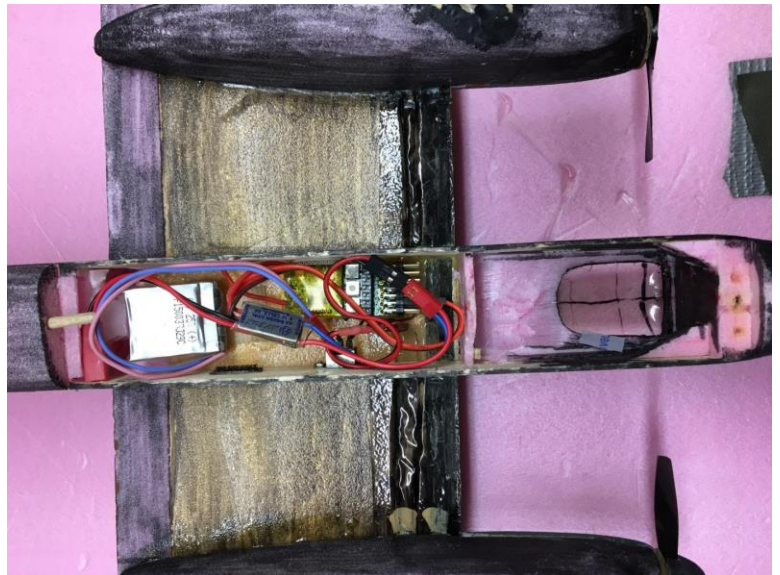
With the free flight NiCad powered models you only need to charge them to a level which produces the desired climb to the ceiling then long powered glide to descent. You can't do that with LiPo batteries because running them below 3 volts causes them to die. What is needed is a digital controller which allows setting of power level and cutoff time. These are available but I didn't care to play with them. Truly micro RC stuff was only just beginning to arrive but I was still spending most of my winters in California

Now I am spending most of my time at home and with our club active indoor program began to think about getting something going again. I started with the Lancaster which I had last converted to four motors, I think for outdoor flying on calm days. Anyway, that is the way it is now configured so I began to think about how to fly it indoors.

The key to free flight indoor flying is the control of power and turning. You want to launch the model into a steady climb close to the ceiling while turning safely within the confines of the room. Turning is initially a situation requiring trimming the surfaces to yield the necessary turn under all power conditions. Getting the right climb profile with LiPo batteries is more difficult. Mick Harris tells me there are now digital controllers that allow setting multiple power levels with different durations. But I don't have one so thought I could do the same with a lightweight RC setup.

Have to wait till next month's indoor session to see if it works.

Dave



“What’s So Great About That?”

By Larry Woodward

I received two separate internet links this month for suggested inclusion in this month’s Flightline. Both articles were on the topic of a recent accomplishment in “Personal” VTOL aircraft. As I thought about how to edit them for the newsletter, it occurred to me that the most interesting thing about the articles was not their individual accomplishment, but the implication in their similarity.

The first article was about the latest roll out from Astro Aerospace of their Elroy *PassengerDrone*, a slick and expensive attempt, among many, to capture the personal VTOL market. From their report you would think they had just conquered space.

Astro’s Elroy Blasts Off

6 NOV 2018

“The exclusive story of the origins and progress of the *PassengerDrone*

By Kenneth I. Swartz

Astro Aerospace holds the distinction of being one of a handful of electric aircraft developers in the world to have successfully flown a piloted electric vertical takeoff and landing (eVTOL) aircraft. (More details on Astro and links to more resources are available at:

www.eVTOL.news/passenger-drone.)”



Now, the second article was a fun project from YouTube where a guy has put together a “personal VTOL” based on a small fiberglass bathtub fuselage.

A Flying Bathtub

“Imagine your reaction if you saw a guy flying a bathtub land in your grocery store parking lot and then go inside to do his grocery shopping like it’s perfectly normal”

https://youtu.be/EQK9m_OBVgY (Watch the video.)



What struck me most is that this is a perfect example of the nature of “technology” and how it may shape progress in the 21st Century. Much of the technology that enables our “toys” was certainly cutting edge, and possibly top secret, before the turn of the century. Two things we all know to be true. One, technology advances at an exponential rate and, two, technology gets exponentially cheaper to produce over time. Just look at the growth rate in computer memory for example.

The third truth, I just realized, is that as a consequence of the first two truths, 21st Century technology gets exponentially more accessible over time. By that I mean to say, because it gets cheaper and better, especially smaller and more user friendly, it is more available for “anyone” to adapt and use. So that is why before this billion dollar industry got their personal VTOL to market, a whole lot of motivated people just put one together in their back yard.

What a fabulous future awaits us!
Larry

Flying a Spitfire from Biggin Hill

By Dave Harding



The Supermarine Spitfire is one of the most iconic, most loved airplanes of all times. It played a key role in protection of the free World as defenders of the British Isles from threat of Nazi invasion in the Battle of Britain in 1940. https://en.wikipedia.org/wiki/Battle_of_Britain
It was continued in production for the entire duration of WWII and more Spitfires were produced than any other British airplanes. But few remain in flying condition.
https://en.wikipedia.org/wiki/Supermarine_Spitfire

Biggin Hill was one of the key fighter bases during the Battle of Britain and although long abandoned by the RAF it still houses a special museum together with a fleet of flight worthy Spitfires. Better yet, it has two two-seater versions available for you to experience a flight. And this is exactly what my friend and fellow Boeing engineer Dave Woodley planned during our trip to the UK in October. http://www.bbc.co.uk/history/places/raf_biggin_hill.



After suiting up the process begins with a rather lengthy and scary briefing on emergency procedures; how the pilot will order you to bail out, and how to do so, among them..... But then you get to climb in and receive another batch of cockpit procedures.



Then it is off to the wide blue yonder where the pilot proceeded to make barrel rolls and other exciting maneuvers. But as a pilot, my friend was handed the sticks and proceeded to fly it himself; what a blast! Dave is an experienced pilot, but not of course in such a powerful machine. He was amazed at how well it handled. They flew down to the Channel Coast and over the iconic White Cliffs, where people enjoying the summer day were thrilled by a Spitfire fly over.



We can only imagine how Dave was feeling after this once in a lifetime experience.

But we can experience a bit more of it in the video here;

<https://www.dropbox.com/s/r9ebiylie39fe9w/Dave%20Woodley%27s%20Spitfire%20Adventure.mp4?dl=0>



Dave Harding

TOY TRAIN OPEN HOUSE



Eric and Peg Hofberg invite you to their annual Toy Train Open House:

Saturday, December 29th, 2:00 to 5:00 p.m.
836 Surrey Lane, Media.

They have two permanent train layouts: an antique Standard Gauge layout on the main floor and a large O Gauge layout in the basement. Bring your family and friends to this very informal open house.

Peg and Eric welcome contributions of non-perishable food items (or cash) to be donated to the Delco Interfaith Food Assistance Network (DIFAN) pantries.