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Newsletter Editor

Dennis McMahon



BEND AERO MODELERS

March, 2021



BAM Members,

I hope this note finds you and your family healthy and enjoying this mild (so far) winter in central Oregon! We have written in the newsletter about one of our favorite pastimes during the winter involving building and repairing planes in our hangars but I thought it might be fun to spotlight actually FLYING during the winter!

I have flown five times so far since the beginning of the New Year. The most recent experience was on Thursday, February 5 and it was fantastic. I have learned to watch the weather closely as it changes rapidly in particular with regard to the wind forecast. While I have learned to fly with the wind present, it's always more fun when a gentle breeze rather than when a gale force cross wind is present at Popp's Field! February 5th was one of those days that promised to be warm by February standards (high temperature was about 45 degrees) and partly cloudy with little or no wind. I sent a quick email to the club members to let anyone available not working (or who could sneak out of work for an hour or two). I was joined by James Fredericks, Tim Peterson, Bill Broich. Also, Charlie Bates showed up briefly on his way to an appointment to enjoy watching the flying as well.

When I arrived at the field I was very relieved the weather forecast was spot on with very little wind and mostly sunny skies. I flew a recently repaired plane (Sensei) which will become one of our club trainer planes to insure my repairs were good and help shake off some of that winter flying rust. I then flew one of my FW 190 (also some repair done after a hard landing in windy conditions) which flew really well. Tim brought multiple planes including one of the many versions of a Timber showing he hasn't lost his flying ability. He also flew a Leader 480 with a hopped up BL15 electric motor that pretty much screamed through the air performing some nice rolls and loops on a 3 cell battery. As a current owner of this same plane and motor set-up I can tell you the plane flies fantastically (ARF plane for under \$150 without electronics) but you need to be very careful on your landings as it has a pretty high stall speed so landing are rather



(Continued on p. 2)

brisk. Tim made the landings look smooth, making me think he has been practicing in his field when not at the club! James flew a balsa plane called a "Slow Ride" which is now out of production but considering its size that I would estimate at a 65 inch wing span. It is extremely light at under 3 pounds. Combining large control surfaces with a massive power to weight ratio, this plane in expert hands (James) really can perform some outstanding 3D maneuvers that wowed the rest of us. He also flew one of the other versions of a Timber which he performed more impressive maneuvers in the blue sky. One of the most exciting flights of the day was a maiden flight by Bill of his new P-51D Mustang 1.5M wingspan by E-flight. This is the first time I have seen this plane in person and it has a considerable level of detail and features. The plane has landing gear with sequential doors, retractable tail gear, 6 cell electric power and the plane looks impressive given its size and excellent finish. Bill's maiden went extremely well. With a little coaching from Tim and I (of questionable value!), Bill got the plane into the air (lots of P factor thanks to that big 4 bladed prop) and quickly established level flight with the wheels up and flaps retracted. This in part to him doing his work prior to arriving at the field, assembling and setting up the plane with CG and control throws recommended by the manual. This plane offers AS3X as well as SAFE and Bill chose to fly it without SAFE on to allow him to properly trim the plane and get the 'feel' of it. After making several laps with some very minor adjustments he practiced a couple of landing approaches, then landed the plane smoothly, signaling a very successful maiden. At Bill's request I tried to video the plane while he flew it but due to technical difficulties on my part, the video did not function properly. I look forward to seeing Bill flying this plane again in the near future. It was fun to watch.

Not every trip to Popp's field in the winter works out as well as this one. For example, Tom Rainwater and I joined a prospective member, Dallas Ingles at the field on Saturday, January 30 as Dallas was eager to get an introduction to RC flying from Tom. I arrived at the field about 9:30 and flew my P-51 twice in some pretty strong winds and decided I better ground myself as the cross wind was gradually picking up. When Tom and Dallas arrived, the wind continued to increase, making any training flight impossible—not to mention the wind chill factor made it pretty uncomfortable! Welcome, Dallas, to Central Oregon flying!

Keep watching the weather and in particular the wind forecast and be ready to jump in the car to enjoy some of that excellent winter flying! Hope to see you soon!

Joe Newman

President, Bend Aero Modelers

Editor's Note: Kudos to President Joe Newman for springing into action and applying Dave Reiss' estimates in submitting BAM for an AMA Flying Site Improvement Grant !!! We received one in 2014 for our safety fence and hope to enlarge our runway and do other improvements this year.

Rhomboidal Wings

Check out this link: <https://newatlas.com/drones/fly-r-rhomboidal-wing-drones/>

Rhomboid: Traditionally, in two-dimensional geometry, a *rhomboid* is a parallelogram in which adjacent sides are of unequal lengths and angles are non-right angled. A parallelogram with sides of equal length (equilateral) is a rhombus but not a *rhomboid*.

Now that we all understand that, a Brit named E. W. Edwards built this contraption and tested it in 1911, but there's no record of it having left the ground.



Fast forward to today, and at least one company is developing a drone using the rhomboidal wing.

Note that there is no tail section. The radical wing design is expected to allow for shorter wingspans.

How about one of you adventurous geniuses out there coming up with your version of this concept? A couple bucks worth of Dollar Store foamboard and some of the left over propulsion and control components you've scavenged from aircraft who have met their Waterloo could be hot glue gunned together to see if it could fly. Probably one of the trickiest parts would be figuring out the CG.



Editor's Blurp: NEWSLETTER NAME? I hope this newsletter is helping to fill a void in the pursuit of our fine hobby as we negotiate the winter, compounded by our Covidly Constant Companion. In the archives, this newsletter carried the name of "Flight Report." I'd like to begin using some kind of title and I have no problem with Flight Report, but what are your thoughts? We can certainly pick up a new title. Please give it some thought and forward your ideas to:

dennismc@bendbroadband.com

Welcome New Members

We are happily welcoming four new members. We regret that with no in-person meetings feasible due to Covid, we don't have their pictures to help everyone get acquainted. Nevertheless, we're glad to see our membership growing with the addition of the following RC pilots:

Travis Reid

Mike Chappell

Craig Goodenough

Blake Judson

Of note is that Blake's grandfather, Regan Scott, made it possible for Blake to become a BAM member, joining existing member Jessie Floyd, another of Regan's grandsons. It's always especially exciting to see younger members join our ranks and carry the hobby forward, some with expanded future interest in STEM aspects carrying over to careers in aeronautics and astronautics.



Also From Trouble: Flash from the Past: This crash happened a few years back at Popp's Field. Apparently due to radio problem or pilot error. However, the car and the plane belonged to the frustrated pilot.



Side note: I was comparing notes with Bill Broich on adhesives; such an advancement from the days when we used Ambroid or double-glued Titebond and waited eternally for it all to set up. In fact, Bill Hand told me about how slick CA works on balsa when we were doing the Sniffers. (Bill sent a note from AZ about RC Soaring Magazine now back in production. Looks pretty good at <https://medium.com/rc-soaring-digest>). Believe it or not, this Lancaster is a cliff soarer in the UK.



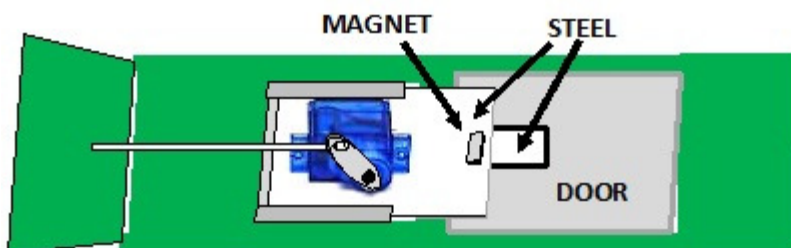
From The Editor: Internal Bomb Bay

In our Fun Fly events, we usually have some type of drop exercise, maybe a cup mounted on top of the plane holding a weight attached to a streamer dropped from inverted flight, or some other contraption. I threw together a plane out of Dollar Store foamboard and got a couple Disney "Toy Story 4" green army men with parachutes on Amazon and figured it would be fun to contrive some type of internal bomb bay for their deployment. Shown below is the idea I came up with, kluging together illustrations as best I could with Microsoft Publisher; I started from scratch without researching for other methods. There could probably be one or more out there using the same concept I devised. At any rate, it was fun thinking my way through the project.

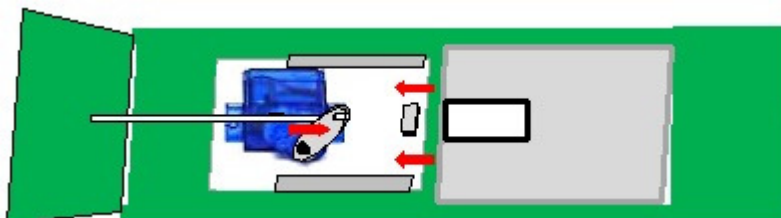
Here's the finished product. Just a servo mounted to a small platform of steel with a magnet attached to one end. The pushrod on the left goes back to a fixed anchor point in a bulkhead aft of the mechanism. The servo pulls itself back and forth on its little platform in response to a 2-position switch on the transmitter.



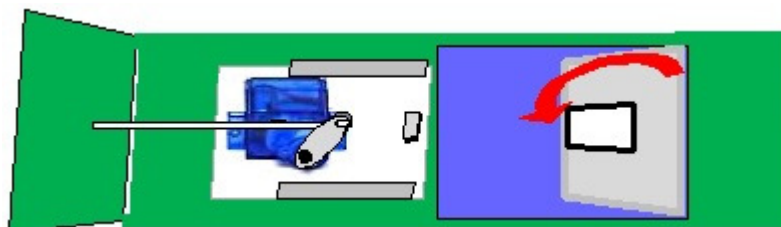
1. Normal State: Platform holding servo and magnet in forward position making contact with steel piece on door.



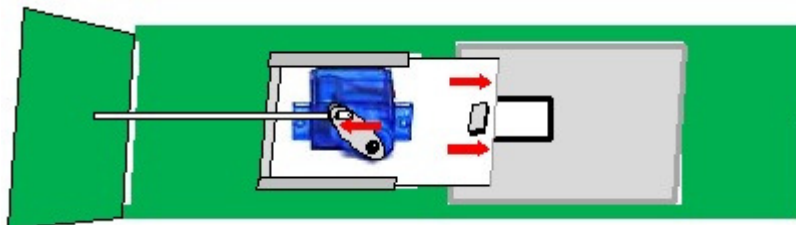
2. Servo activated: Servo pulls itself toward the rear, riding on its steel platform. Magnet no longer contacts steel piece on door.



3. Immediately, door opens and drop occurs -- "Geronimo" (Google "Geronimo Parachuting" if you don't know why I use it here.)



4. Return to Normal State: Immediately after deployment, servo is activated in opposite direction to return magnet to original location while airflow causes door to return to original position, magnet again holding door closed.



Editor's note: This is just a proof of concept prototype. A lot more could be done to make it more compact, reduce weight, etc. But, we might want to consider having an internal bomb bay event in a Fun Fly. So, at this point I throw down the gauntlet to all you ingenious BAM Pilots--Build an improved version of this or do me one better with a totally new design and let's have some fun with an airdrop! (More on this thing at the bottom of the next page)





The Safety Corner

Jim Stuart
BAM Safety Officer

"Fly By Night" Safely

Hi guys, from Arizona. I'm enjoying the RC flying down here at a local club's field. I brought several airplanes down with me and since I have access to a nice long paved runway they were mostly EDF airplanes. These are fun to fly but not exact-

ly relaxing for me so I decided to try the EFlite Timber for a fun airplane to fly. I'll have opportunities to fly at night so I went with the Night Timber. **Reversing Motor:** This is a great airplane and can be set up for SAFE Select or just with the AS3X flight gyro when you get the BNF version of the plane. I chose to just use the

AS3X. I installed the included optional wing slats to make the airplane a real STOL version. The airplane will get airborne in just a few plane lengths and a spot landing is a real hoot. It was fun to get the Timber flying almost over my head at an altitude of several hundred feet, select full flaps, power off, and then put the Timber into an almost vertical dive. It doesn't pick up much speed and then with a flare and a touch of power it touches down to a great spot landing. If the plane keeps rolling I just select reverse on the



Night
Timber

motor and you have brakes. For fun, I taxied back to the pits, backing up. You can set this airplane up as a real basic trainer and later on all the way up to flying 3D. Fun

P.S. A follow-on note from Jim: He's up to 7 planes already and is flying in the warm weather off of a long, paved runway.



Our man
Jim --
Livin' the
Dream in
AZ!

Bomb Bay, Continued

The Dollar Store Foamboard Airdropper. Note the folding prop from a Calypso glider; really nice when there's no landing gear.

The plane maidenied well, but I needed to add weight to the paratrooper to keep the airflow over the fuselage from preventing door opening.



BUILDERDASH ! (Part 1)

Balderdash [bawl-der-dash] senseless, stupid, or exaggerated talk or writing; nonsense.

Builderdash [bill-der-dash] senseless, stupid, or exaggerated assembling of model aircraft; nonsense.

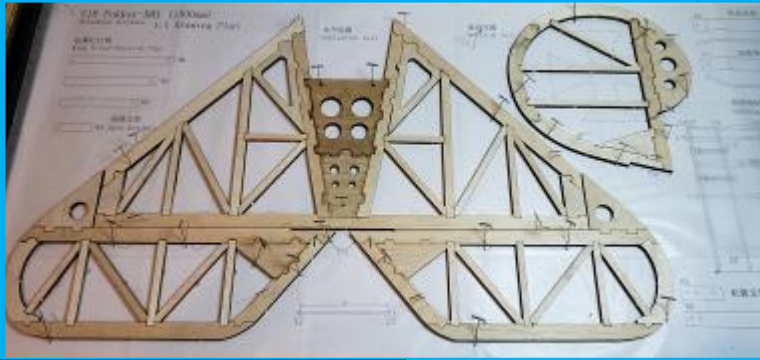


As announced in the last issue, we have another serious builder in the club, in the person of Bill Broich. This month, it's a delight to get a look at his build and initial review of the Dancing Wings DR1 Fokker Triplane. Following is Bill's excellent writeup:

As mentioned in a previous newsletter, I am working on a 60 inch wing-span Fokker DR-1 kit from Dancing Wings Hobby. I was a little reluctant getting this kit, as I know of no one that has built a plane from them. Bored this summer from shelter in place, I decided to take the plunge.

It arrived in a beautifully engraved light plywood box, and survived the trip from China intact. Hardware seemed adequate and the included servos, motor and ESC looked up to the task. The instructions were limited, three pages front and back of photos and minimal words. The laser cut parts were expertly done, and marked as to what part of the construction. That is, LW 4 for lower Wing rib 4, F5 for fuselage former 5, etc. I

dry fit the parts in a stage of construction to insure i wasn't doing something out of order and took my time.



I am very pleased with how smoothly it is going together. It uses a lot of interlocking parts, and relies on very thin plywood for most of the formers and ribs. An online review complained of parts that don't match up in construction, but I have not had any issues. If you look closely at some of the pictures you can see the high degree of engineering in this kit. It even stays true to the full size original, with the fuselage wood sheeting ending about 2/3 back in a taper.

I will cover this in Doculam, and have decided on Valspar Fabulous Red for the paint. I'll submit more when I get farther along.

I enjoy building, I'm just not the best at it! I anticipate a Spring maiden for this plane.

(Editor's Note: If unfamiliar with it, Google Doculam or find it on Amazon)



Here's a page dating back to when America was fighting World War II. Some of us remember these Comet wooden models. This page probably stands out a bit more to the Editor than to many in BAM, with its date of January, 1944. Hmmmm . . . Just 9 months before the Editor's birthday! Guess Dad wasn't building any planes just then . . . And, soon he'd be heading to Italy as a MSgt in the US Army Signal Corps, finally meeting his "War Baby" son at war's end.

Nostalgia—More From Jim Young

Jim is supplying hundreds of pix of Yesteryear BAM. Below are a couple pix of Bruce Tharpe, kit manufacturer since 1994, now in Rogue River, OR who accepted BAM's invitation to a 2008 Fun Fly.



Bruce's 132" wingspan "Super Flying King"

Jim says a highlight of Bruce's demo was his ramjet-powered "Shock Wave!" Bruce fueled it and fired it up and took it straight up almost out of sight. The fuel ran out and he flew it like a regular RC plane to a nice dead-sticked landing.

BUT: Check out Bruce's website and scroll down to the last article and click on the Super Hauler and watch how the Discover Channel's Storm Chasers employed it!

<http://btmodels.com>



The SHOCK WAVE!



James, 3D Master!



Steve Younger after a rather rapid, firm landing in 2013!



Darrell Loveland, Kim Waterhouse and Chris Rankin 2013



How about this participation? Just 8 years ago — 2013!



Trouble + An Old Bird—You decide which!



Preparing for Pylon Race 2013

R/C Airplane For Sale

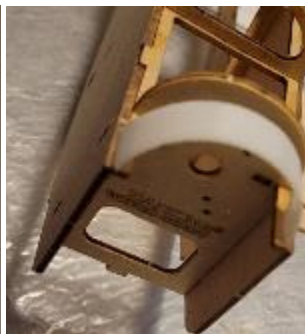


You can pick this one up for nothing down. Or, "Zero Down," so to speak.

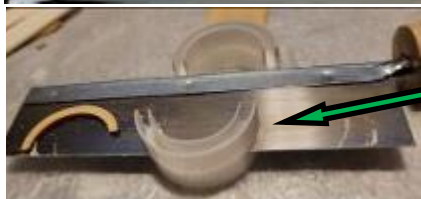


BUILDERDASH ! (Part 2)

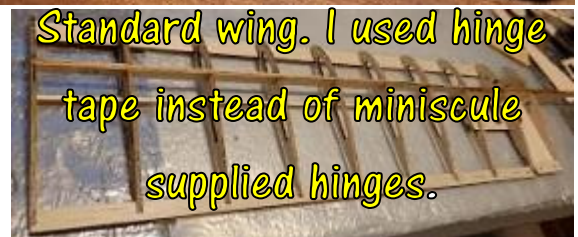
OK, so if we can fly, we need to get out and do it, right? After all, we are PILOTS! However, we aren't Banana-Belting it for the winter like our friends **Jim Stuart**, **Roger Bladholm**, and **Bill Hand**, so what do we do? We build! So, we'll try to feature some of your efforts each month. Please fire in some pix of your progress, to include, if you're scratch-building from plans, your evaluation of the plans, their source, their completeness and accuracy, problems you solved, etc. The same for any kits you are assembling. This hobby consists of dozens of opportunities to encounter and solve problems, and aircraft kits are replete with those little things that don't quite fit; adequacy of instructions, to include conformance to the brand of English we tend to be used to, etc. This month, we'll lead off with a project from your editor; exactly only the second plane he has attempted to assemble from a box of balsa sticks except for one during his brief RC stint in about 1977. His first recent build being the Super Sniffer he finished in a retro-USAF Thunderbirds scheme that was planned as a club winter project a couple years ago but was overcome by events, though he did successfully maiden it. His latest attempt is a delicate little 30" bird called Aero Max, from Dancing Wings Hobby. Despite the cutesy name, DW puts out a pretty well-designed kit with nice laser-cut parts. And, with the Aero Max, most pleasingly, color pictures of the assembly that make the written instructions usable.



Above is an example of a problem solved. The front of the plane has a 1/32" balsa arc intended to provide the front support for the cowling.



It was ridiculously flimsy, so I cut an arc out of an empty Scotch tape roll and glued it in place.



Another thing I changed: The wing is held on by a single peg and two small screws thru the wing into about 1/16" plywood. I glued a block of balsa to the wing underside and passed a dowel through the fuselage for more strength. Speaking of more strength, the .7mm pushrods supplied in the kit were not strong enough to transmit motion to the control surfaces, so I substituted 1.2 mm. To the right is the finished bird. Had to try that transparent blue Coverite, but also added some neon orange trim on the control surfaces to enhance visibility.



According to this video, the Aero Max does fly(at least in its national environment in front of a pagoda) https://youtu.be/87BDNzw7k_k