

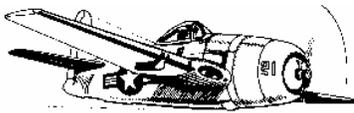


The R/C Flyer

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Next Meeting – August 9, 2007, Clear Lake Park Building– 7:00 PM



In The Pits

By Michael Laible

Well, if you missed last months meeting, you missed a treat. One of our members, Ryan Mueller, set up our meeting to be hosted by the Collings Foundation at Ellington field. We all met at the hanger and proceeded to have a very short meeting and then turned it over to Don Daniels of the Collings Foundation.

Don showed a 20-30 minute slide show and video on the Collings Foundation and then turned it over to another gentleman (his name escapes me) for the tour.

This first picture shows the entrance of the main hanger. The Foundation is looking for several scale airplanes to hang over the counter. If anyone has one to donate please consider donating it. Just give me a call and we can work it out.



The picture below shows the wonderful gentleman that gave us the tour. I believe he is standing in front of a TA4 Skyhawk.



The third picture is a Huey H1; the actual aircraft is the one that Stephen Pless flew in the Vietnam War. He received a medal of honor for retrieving four men from the battle field in this particular aircraft. The guys are proud of this machine.



Below find the P33 Shooting star, real nice looking aircraft. It was getting ready for a new canopy.



Ryan and his flight simulator, not for home use. He gave us a demonstration and some members got a hands on test flight. Real nice.



It was a special treat to tour the aircraft and I want to thank Ryan for lining up the tour. Now for normal business.

I finally got over the trauma of loosing the hellcat and started gluing parts for the replacement aircraft. The picture below shows the tail feather as cut from 1/16" ply and my replacement of 3/32" balsa. The complete tail feather with leading edge and ribs weighs in at 50 grams and the 1/16" ply piece (to the left) weighs 51 grams. So I concluded the one elevator, with my new design will weigh 50 grams versus 90 grams. Most of the 90 grams is past the hinge line and the new design is somewhat balanced. This should solve the flutter problem.



Well, that's about all for this month. Lets get together and discuss modelling at the next club meeting, see ye there.

Until next month,
Safe Landings,
Mike

July Meeting Minutes

By: Phil Elting

The meeting was held at Ellington Field in the Collings Transportation Museum and Foundation hangars.

There was a short business meeting where it was decided to move the Fun Fly to late August or early September. We will decide the exact date at the next meeting. The Fun Fly was postponed due to vacation schedules of contest directors.

The Collings folks treated a large gathering of club members and guests to a discussion of the history of the Collings Foundation and information about their aircraft. The Foundation has the only flying true B24 Liberator (the other one flying is not an actual B24 but a related version) which continuously barnstorms around the country with the Foundation's B17 Flying Fortress. We were also entertained by some good videos of their various aircraft in flight. We then toured their hangars and got close up and personal with their P33 Shooting Star, TA4 Skyhawk ("Scooter"), F4B Phantom (only privately owned F4 and it actually flew with the Air Guard group at Ellington at one time – the "Rhino" is one "bad" aircraft), UH1 helicopter and F2F Tracker. We also got to play with a flight simulator that is being developed for the F4.

Many thanks to the volunteers of the Collings Foundation including our own Ryan Mueller for their hospitality. They would appreciate the donation of any old cell phone equipment. They make some money from their sale for recycle. Bring them to the meetings if you have any you want to donate.

Weight Reduction

By: C. Teixeira

Some of you may recall the Wing Mfg B-25 I had (yes HAD) a year or two ago until a fatal spin did her in. Don't know why, but pilot error comes to mind. It was Model of the Year back in 2004, and was a beautiful airplane, took over a year to build but had one downside; it was a bit over weight at 21 lbs.



Wing Mfg B-25 #2

I had bought another kit (same Wing kit) over the Internet at a good price "for spare parts" not knowing I was going to need every last piece. I decided to build the same plane again using the "spare parts" kit and salvaged parts including radio, retracts, servos etc, from the first plane. But this time I set a goal to build 2 lbs lighter than the first one. I gave it some thought and decided it was doable so I started to build last October and finished this past June keeping the color scheme basically the same as on the first bird.

Following is a summary of the things I did to save weight and at the end will sum it all up keeping in mind some items I had no way of quantifying exactly how much weight I saved.

As to whether I met my goal of cutting 2 lbs or not, you will have to read to the end.

The first weight item I attacked was the 16oz of ballast I had to add to the nose to balance the first plane. I moved the primary and backup Rx batteries to the very nose of the plane. This required a change to the color scheme in the nose area but that was OK. I also went from having two onboard glow batteries (one for each engine) to a single, higher capacity glow battery, also in the nose instead of in the wing. Servos were moved as far forward as possible.

The other change I made was to glass the plane with .5 oz cloth (vs. .6 first time) and used one coat of resin. I also did not glass the tail feathers figuring every added oz of weight back there would require ~4-5 oz in the nose for balance. The wood grain shows a little and I will have to put up with hanger rash but that was an acceptable trade. I used automotive (Dupli-Color) filler/primer (great stuff!) which finished filling in the weave and was compatible with the Chevron Perfect Paint warbird colors I was going to use. I was also determined to use as few coats of paint possible. On the first plane I must have gone over with my paint sprayer 3-4 times till I got the color just the way I wanted it. This time, one coat of color and one coat of clear sealer (again Dupli-Color) was it. Lightening holes were drilled in the rudders (x2) and I used the lightest balsa I could find on the tail feathers. (You are not required to use the balsa they give you, be selective). Speaking of balsa, I noticed that one of the wing tip blocks, pretty big on this plane, was a full 1.0 oz heavier than the other one. The no brained thing to do was use the heavier block on the Port side where I knew I would need some weight due to the side-mounted engines. This probably saved me a couple of oz when balancing the plane laterally.

The wheels I had used were 3 ¾ in dia and I opted to go with 3 ½ in wheels which were slightly lighter and also gave me more clearance in the wheel wells.

The other area that can have serious weight consequences are the servos, 10 required on this plane. If you are like me, you tend to use what you have and that is what I did on the first plane. This time around I was a lot more careful in determining how much torque I thought was needed and the weight of the servos. In some cases I even went with higher torque servos but found servos that were lighter. It just took a few more bucks!

There were many other fractions of an oz here and there which added up. For example, three belly pan latches bought commercially saved me 1.0 oz over my home built made of brass tubing.

When I finally finished and put everything together to check the CG, I got a good vibe when this time around it took just 4 oz in the nose to balance the plane compared to 16 oz last time.

Here is a summary of the “measured” weight savings. Where I could not measure the weight savings I listed an estimate or none.

-nose ballast (4 vs. 16 oz)	12.0 oz
-one coat resin, lighter cloth	?
-smaller wheels	.5
-single glow battery etc	1.3
-servos	3.6
-wing tip blocks	1.0
-Batt of Amer RX pack (x2)	.5
-belly pan latches	1.0
-misc (one coat paint, etc)	?

total measurable savings	19.9 oz

But the ultimate test was the measured weight of the finished airplane—19 lbs, so a

lot of the items I could not measure added up. (Yes I did use the same scale, no cheating here!). At 19 pounds this bird should fly a lot better than the 21 pound version, although pilot skill is still the immeasurable here.

In summary, there are many ways a builder can save weight, particularly on a large or scale airplane with many servos and "extras". True, some of the weight reduction items above are unique to the particular model (e.g. two engines, two rudders etc) and some of the weight reductions I tried on this plane I may not use routinely on other planes. But hopefully this article will provide some ideas and highlight weight items that can add up resulting in a plane that just does not perform well due to excessive weight. Watch that weight; it is not your friend!

A CHANGE OF PACE

By
Herman Burton

One of the pleasures of this sport is the variety of airplanes to choose from when deciding to get a new model. Sometimes, the necessity of a new model comes upon you before you are really ready to make that decision. Such was the case recently, when my favorite Fun Fly plane, the Dazzler, a simple 40-size aerobatic plane I built from a Great Planes kit, went into the ground when I lost orientation (and way too much altitude!) during a simple split S. There was little to salvage from the sudden stop of this plane, after it made an unexpected nose first collision with the soft mud beyond the grass runway perimeter fence at the Texas City RC field, where I am also a member. The engine and electronics were salvaged, and appeared to be usable.

After the usual mourning period of losing yet another airplane to "dumb thumbs", or lack of

piloting ability, or inattention during a maneuver, or whatever the cause was this time around, I decided to try an ARF. I have always enjoyed the building part of this hobby, and enjoy the process, so ARFs have never had any appeal to me. However, since this year I have been building a giant scale P-47, I did not want to spend a lot of time building a new airplane from a kit, so I decided to try an ARF.

Odyssey Hobbies had several ARFs to choose from. After reviewing the types available, I bought Great Planes "Reactor", a .46-size 3D airplane. One of the appeals of this particular model was the advertising on the box which stated I could have the plane in the air in "...as few as 4 to 6 hours." Well, even if they were off by a factor of two, that was still very little time to get the plane completed and in the air.

So, I bought it, took it home, and got to work. Like so many imported items these days, it had been packed in China, and had been secured with enough clear plastic tape to hold it securely, with absolutely no jiggling for the long and arduous trip to the US. Upon opening the box, the instruction manual suggested doing a complete inventory of all the pieces to make sure nothing was missing. Everything was present, and not one ding was evident in any part of the pieces. The main components were a completely finished fuselage except for the tailfeathers, two wing halves, and the tail feathers. All the control surfaces were separate, but had slits pre-cut for the CA hinges.

I used the recommended epoxy glue to join the horizontal stab to the fuselage through a pre-cut opening that was an exact fit. Good engineering! Next, the fin was glued on, and the wings very neatly slipped onto an aluminum joiner rod, with 2 small bolts holding the tips of the wing to a recess saddle

on the side of the fuselage. Anti-rotation hard wood dowels were added to the ends of each wing half at the fuselage, to prevent rotation.

One of the features of this plane that is appealing is the fact it is designed as an electric 3D, but can be converted to glow power at the discretion of the builder. A disadvantage of glow power is the instructions stated some 6+ ounces of lead would have to be added to the tail if a glow engine were used. With that as a forewarning, as I was setting up the onboard battery, RX and servos, I pushed them as far aft in the radio compartment as I could.

The Reactor is designed for the new E-digital servos, and the openings for digital servos are much smaller than that required for my older Futaba S3003 and S3004 standard servos. However, Great Planes had visualized this problem in their planning, and had provided extra large lite ply mounting plates at the rear of the fuselage for the rudder and elevator halves, which could be easily cut out to the size required for the servos of the builder. Neat planning on their part!

The parts went together without a problem, everything that was needed was in the box and except for glue, not one red cent had to be spent for anything, except the choice of power and on-board electronics.

The color is vibrant, it is very light (I think it weighs about 5 pounds), and I have set the control throws at the lowest setting possible for the maiden flight. I had hoped by now to have accomplished the first flight, but the weather just does not want to settle down, and rain continues to come at unpredicted times.

However, here is a photo of this nice little Fun Fly airplane, and I am looking forward to drier weather and flying! Happy landings!



Upcoming Events

9/14-16/07 : B-17 Gathering and Big Bird Scale, Monaville, TX. CD is Nick Stratos, 281-471-6762.

Club Officers

President: Mike Laible 281-474-1255(H)
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Vice-President: Phil Elting 281-333-1125 (H)
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