



The R/C Flyer

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Next Meeting – June 9, 2011, Clear Lake Park Building– 7:00 PM



In The Pits

by Michael Laible

As I write this, 10 PM on Sunday night, the wind is still howling at an average of 12 mph and peaks of 18 mph. To say the least, this is the strangest weather I have seen – to much wind and not enough water. All of Harris county is still in a burn ban so the JSC RC Club special rules are still applicable. The JSCRCC Safety Officer, Dave Bacque, will keep us informed of projected humidity.

You may have noticed but the wind finally settled down to 10 mph and allowed for Pavecon to perform the field striping. Everything turned out great and I think it looks great. Now we have something to aim for while landing – the center stripe.

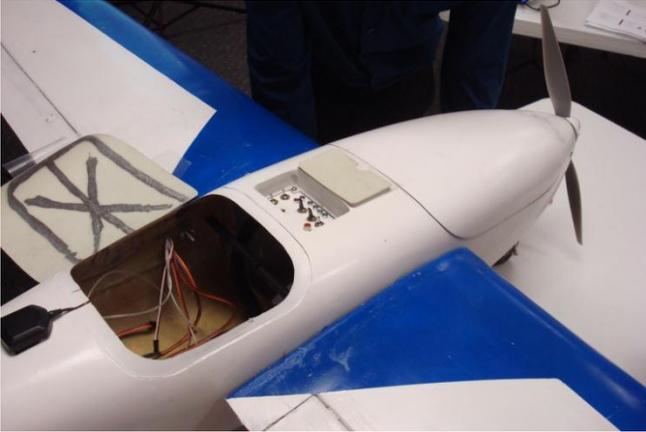
I have two projects that I want to talk about this month.

One is a project by students at UT. I didn't get all the names or a lot of the specifics, but the next three pics illustrate the project. It is a student competition that you must design and build an autonomous aerial vehicle that can follow a set of way points and return. In between these way points are several 4x8

boards on the ground painted a solid color with a letter or number of a different color. The vehicle must locate, log, and describe the color and shape of the board and letter. WOW, what an assignment.

Here I am with the Happy Students.





The second subject I have written about before. This is the engine installation of the Zirolli B-25. Dad, Bob Laible, the St. Louis production plant, has installed the engines and cowls. To get a perfect fit he used some jigs. I told him the jig was excessive and adds cost and labor to the project. I guess I will overlook these over budget items since the end results are looking great. He has all the hatches and access doors complete.

It's coming down to final assembly and prime. I am schedule to pick it up sometime in October.

That's all for now, until next month, Godspeed and Safe Landings.

Mike

(Editor's note: I finished this newsletter sometime after 10 pm on May 29th. I saved the file and my hard disk reported sectors errors and my machine went into Windows recovery. I was right in the middle of my daughter's graduation and about 20 in-laws heading towards Seabrook. So I just sent it to EPO. They finally figured out it was a virus and now it is up and working, new hard disk, and all my files were present. So I am sending it on late – better late than never.)



B-24 LIBERATOR – THE DOORS

by Mike Laible

The fuselage of the B-24 is coming along. I made the decision that after about 10 hours and the bomb bay doors nowhere near complete and not working, I would abandon the rail sliding doors. That really was a hard decision to make but once I did I came up with the idea of inward opening doors. Much easier to fabricate and in the air it has the same look. I completed four doors in about 5 hours. Now that was a good decision.

Door view with servo



2 front closed and 2 rear open.



All four doors open and the gear door mechanism functional.



The servo mechanism for the gear door.



B-24 LIBERATOR – LANDING GEAR

by Herman Burton

Production has resumed on the giant 146" B-24 Liberator again, and substantial progress has been made this spring. The second wing half structural frame has been completed, the top has been sheeted, the second Fowler flap has been constructed, the aileron is complete, and the landing gear has been installed.

The installation of the Century Jet Retracts was straight forward, but it became apparent the Don Smith plans were designed for retracts by another manufacturer. Using only the materials called for on the plans, the air cylinder fouled the main top spar sufficiently to require the spar to be completely removed along several inches of its length in this location. Since the bottom spar had already been removed close to this location to make room for the 6 ¼" diameter landing gear wheel, removing both spars close together was not an option.

Instead, the original ½" x ½" hardwood rail was left in its designed location, and another rail of hard maple was added to the top of the first rail, moving the gear almost ½" vertically, just enough to clear the main spar. An added advantage of this additional main gear rail is the fact that six 1" long #8-32 threaded fasteners could be used to attach the gear frame to the rails. With an estimated finished flying weight of 40+ pounds, a robust landing gear structural system is a necessity. On all three war birds the author has constructed to date prior to this aircraft, in spite of some fairly hard landings, no structural failure has occurred with the landing gear or its supports.

Figure 1 below shows the Century Jet Retracts installed in place, and the second

hardwood rail can be plainly seen on top of the bottom rail. [NOTE: The airplane wing is upside down on the building board, and references to "top" or "bottom" are meant only with respect to the wing's position during this phase of construction.] The reader will also note the large 5-ply triangular reinforcing pads added to the side of the rails, and attached to each rib. At each end of the rails is a plywood rib doubler, added to the light ply rib for additional strength. This triangular plywood reinforcement has been shown to substantially increase the strength of the landing gear support elements, with very little weight added to the plane.

Figure 1 also shows two parallel black ink marks on the top of each rib, toward the leading edge in the foreground. This marks the location of a secondary rib that will be installed on each side of the wheel well where the bottom spar has been removed. The builders thought this was a small amount of weight for the additional strength to this area of the wing.



FIGURE 1 – Century Jet Retracts on double hardwood rails. B-24 Liberator

Figure 2 below shows a close up of the air cylinder arm that activates the main landing gear arm. The air cylinder clears the main

spar less than 1/16", after the second rail was added to the original rail. The socket head #8-32 bolts are also seen in this photo. Century Jet Retracts provides holes in the landing gear mounting plates for 6 bolts, three on each side. With one inch of threaded fastener in each mounting hole, it is expected the landing gear will be able to withstand some hard landings with no damage. The author has seen landing gear pushed up through the top sheeting of the wings of aircraft after a seriously hard landing at more than one RC event, and has taken what are hoped are sufficient steps to prevent that from happening to this B-24.

This airplane will have a first for both builders – brakes! Disk brakes have been purchased to add to each of the main wheels, and the wheels were manufactured so that disc brakes could easily be added. The discs will be air operated, and coupled to the elevator servo. Full “down” elevator will lock the brakes for running up the engines to full power prior to takeoff. As a “Heavy Metal Warbird”, the brakes will come in very handy for stopping on short runways.

In a future article, the engines and fuel tank installations will be discussed, and how the builders solved access to the fuel tanks without resorting to cutting open the nacelles. ‘Till then, happy landings!

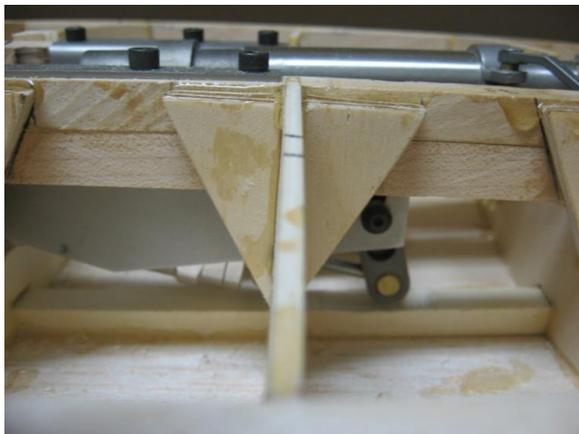


Figure 2. Air cylinder piston arm on Century Jet Retracts.

MAY MEETING MINUTES

by Kent Stromberg

JSC RC club meeting 5/12/2011

No Guests

Discussion of Burn ban and agreement with JSC

Rules will be posted. Mike will send out Specifics by email and Rules will be posted on site.

Dave purchased a fire extinguisher and it has been placed in the Awning enclosure. The burn ban rules are posted at the field.

Discussion of adding Turbine powered air craft to ban. We have none in the club at this time.

Stripping should occur next Wed afternoon.

We will provide JSC with a Space Act Agreement. Which they have suggested

Refreshments next month - Joe Schmidt

Model of the month Kent Stromberg
Neiuport 17

Model Of the Month

by Mike Laible

I guess I lost the picutre

Kent Stromberg with his Neiuport 17.

Upcoming Events

June 18 Texas Scale Masters
Fort Worth
June 25 Kingsbury Shupe Fly In

Club Officers

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Phil Elting 281-333-1125 (H)

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Dave Hoffman 281-479-1945(W)
832-689-620(Cell)

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Safety Officer:

Dave Bacque 281-486-1695(H)

Instructors

Chief Instructor:

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Articles and Want Ads may be submitted to the Editor, Whoever that may be

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