



NEWSLETTER

VOL. 7 NO. 2

President - Dave Thomasson
Vice-President - Reggie Lewis
Treasurer - Dave Hoffman
Secretary - Donna White
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PRESIDENT'S CORNER

HO, HO, HO! It's coming close to Christmas-time and time for us to have a get-together. Our next meeting will be a Christmas party, to honor those spouses who let us play with our toys each weekend. Bring someone and some munchies and have a good time.

I regard to a good time.....A large group got together a couple of weeks ago for dinner and drinks at the Tokyo Gardens and a fine time was had by all. My thanks to Sandy Lee for planning a fine evening.

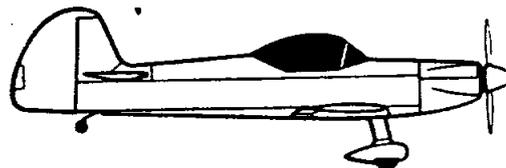
I received a bad news phone call informing me that an RC person had been visited by some thieves. Seems they took only RC equipment, and planes. If you get an offer to buy cut-rate RC equipment, and planes, get as much information as you can. Be sure you know the person well before buying -- you may be getting stolen property!

In the past 4 months we have had 5 examples of why we have the rule, "No flying over the pits." Only because in each case the pilots were following the rules was the potential to injure someone nil. We have had 4 wings disintegrate in flight, and one horizontal stabilizer break off. In each case the remaining parts became un-guided missiles. In each case there was no warning prior to the accident. We have a good rule: Let's keep following it. Remember -- the unexpected can happen.

For those who can't make the meeting, "Merry Christmas and a Happy New Year!"

--- Dave Thomasson

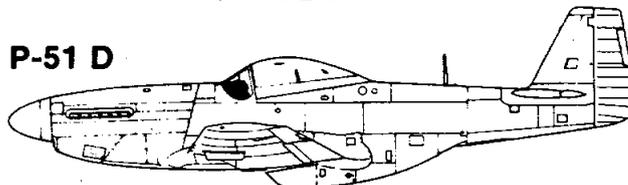
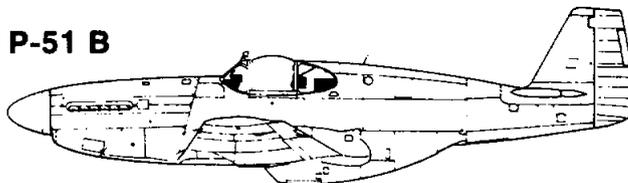
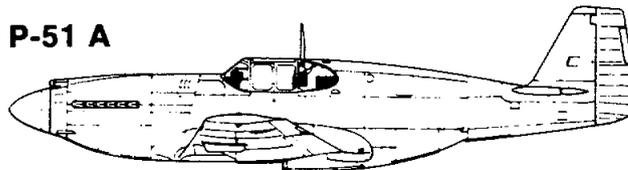
DATE : THURSDAY 9 DEC. '82
TIME : 7:30 - 10:00 PM
PLACE : CLEAR LAKE PARK BUILDING
PROGRAM : PARTY !!!



It's Christmas again, and I wish all you RCer's a very happy holiday season. Don't forget that next month there is no "real" official meeting, just the Christmas Party. BRING YOUR SPOUSE!!! For coordination please call Sandra Lee (481-9062) or Donna White (332-6898). I hope to see you there!

Last meeting, Model of the Month went to Reggie Lewis with his Sagitta 600, a very nice 2 meter glider.

MICHAEL M. MOORE



THE ARITHMETIC SAYS CHARLIE WAS RIGHT!

(OR: LET'S KEEP THE WEIGHT DOWN)

Those of you who were familiar with the late Charlie Palermo's last giant scale models know that he took great pains to keep the weight down. His goal was to stay below 25#, with 20 being the target. This range was deduced by watching and testing heavier birds which staggered around the sky when pulled by the 2 in.² 2 hp Quadra engine. Before Charlie passed away, he saw this corroborated by Don Godfrey, giant scale designer and columnist for M.A.N.: try not to exceed 12# per in.³ engine displacement, or 24# for a Quadra. (J-3 Cubs could go heavier but WWII fighters should be lighter)

A few months ago, a pilot-type friend gave me a reprint on dynamic scaling factors from Sport Aviation magazine, the EAA publication.

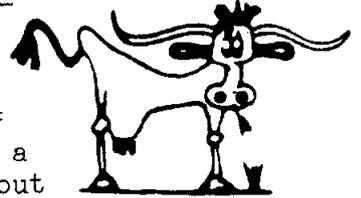
It was directed toward those homebuilders who are turning out 3/4 size F4U's, 3/5 Mustangs, etc., and provided the equations to predict power loadings, roll rates, wing loadings (WL's) and other good stuff. There have been articles in the model mags on the same subject. He also gave me the specs on the Steen Skybolt biplane so I could compare it with Charlie's Skybolt built from the popular Bob Dively kit... 1/4 scale. All this good stuff got lost in the bottom of a desk drawer until the other day when a nice Dively Skybolt was pictured in a contest article and reminded me of it. The airplane was said to weigh 30# with 5# of this being lead in the nose. This seems to be typical for that kit.

Now let's plug into the equations. λ is the scale factor and $= 4$ since we are scaling-up. The power relationship is expressed by $\lambda^{3/2} =$ about 130: therefore, the 2 hp Quadra would yield 260 hp in the theoretical Skybolt. All well and good, since Skybolt specs show power from 125 hp at sea level for sport up to 260 hp for aerobatics. But now consider weight. This is $\lambda^3 = 64$. Therefore the 30# model is equivalent to 1920# in the real world. Well, the specs say that empty weight should be around 1080# and gross at 1650#. The theoretical machine is nearly 300# overweight unfueled and my friend says this would be a real "doggy" airplane, even with all sorts of power.



I HATE FACTS!

Now when Charlie got his kit, he was somewhat horrified at the structural overkill -- especially at the tail end. He substituted lighter wood in places, cut lightening holes, threw out some 1/2" ply (not part of the firewall) and came up with about a 20# airplane! So what did it accomplish? Well, $20 \times 64 = 1280\#$, so if you stick in a pound for fuel, it comes out 300# under the target gross. Friend says this would be an absolutely fantastic machine...which isn't surprising since the model would knife-edge, do 4-pointers, etc. with no trouble on a Quadra!



NO BULL!

What is all this leading up to? Well maybe the giant scalers are doing what sport scalers started years ago: build too heavy and add more power to move it. 3.5 to 4 hp engines are now available, just like some sport scale models designed for .60's now use .90's. Makes 'em go very fast (the Ted White school of flying) and the high WL's mean they better go fast! One alternative, of course, is to build light and finish light, especially at the tail end. Excess paint and primer are deadly enemies. A scratch builder could also consider building a little larger than usual. I've always felt that the Top Flite kits, for example, would be much better if they were scaled-up from 60" span to 65" with no changes in wood sizes, etc. This would give about 100 in² extra area with very little increase in weight and would help compensate for the retracts and other items which are added-on. Might be worth the trouble. As an example, assume a 60" P-51 has 600 in² at 8# for a WL of 30.7 oz/ft². Enlarging it to 65" ($\lambda = 1.08$) raises the area to $\lambda^2 \times 600 = 700$ in². If the extra wood and finish added 1/2#, then the WL would be 28 oz/ft² -- quite an improvement since for similar performance the bigger model would have its WL scaled-up by λ which would make it around 33.2 oz/ft². The performance should change considerably, since as Charlie used to say, "It's flying more on the wing and less on the prop."

(Tim Brown)