

Next Club Meeting

July 29th, 2006 @ 12:00pm

Aug 26th, 2006 @ 12:00pm

Brooks Field

THE WRIGHT STUFF

www.gastonrcflyers.org

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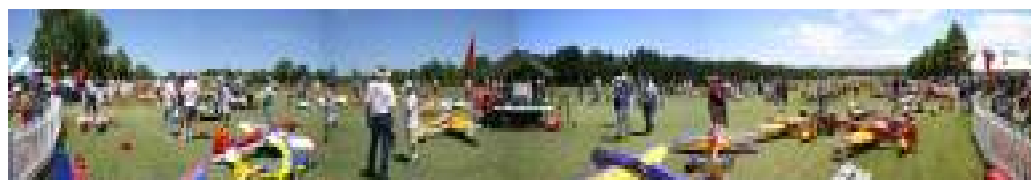
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MY FIRST TRIP TO JOE NALL

Some may ask how can this be? The Mecca of all R/C enthusiasts and I've never been! Well, one thing after another just got in the way. But this year, calendar's were cleared, plans made around "The Nall" and I was ready. I only spent two days there, but I did purchase the DVD! The drive out wasn't too bad, about an hour and forty minutes. I drove through the huge main gate for Triple Tree Aerodrome and as if my eyes had been opened magically I began to see the flying aircraft, the sounds of the engines and all the hustle and

bustle of a fly-in boasting almost 500 registered pilots. There were RV's everywhere and even a large area with tents. This, incidentally, will be my preferred method of attendance in 2007. Now I've been to a few fly-ins in my time, but I really wasn't prepared for the size of the airplanes. Sure, I'd see some at our field, and seem even more on the television. But it just doesn't get you ready to see so many large aircraft all in one place. I wondered up and down the flight line, being surprised that you can get right out there with the planes

and see them up close and talk to the owners and pilots. Then walking through all the vendor tents, and down vendor row was pretty cool too. The obvious oversight on my part was not bring money! You can spend several thousand dollars there very easily! The flying was awesome. It's really awesome to watch a 42% extra 260 knife edge the length of the runway five feet off the ground. You really owe it to yourself, if you've never been, to go. Take a chair, get there early and bring a camera! Oh, and I'd suggest some sunscreen too! The Nall



SOME FIELD IMPROVEMENTS

You may have noticed that there have been some improvements to our flying site. First. Let me thank Randy Frady for coming out and once again repairing our flight stations. The effort is greatly appreciated. The Allen brothers have also spent a lot of time at the field cutting grass and ridding us of some slithering nuisances. Brandon Berckman has also contributed much of his time with

cutting the grass as well as Jim Billups. Thank you all very much for your time and effort. We all benefit from your work. We also got the county to come out and put down some more gravel. From Abel road all the way to our parking area has gotten some new gravel. David Mays has also arranged for them to come out once a month now, and mow the grass. This will help us a lot too! Now if we

can just get our club house and pool installed, we'll be good to go!



FUN FLY COMING IN JULY



Another big one from the Joe Nall!



Yep, that's broke!



Tim's Sun Dancer!

Don't forget! Coming this July 15th is our fun fly! If it flies, bring it! We're going to have a great time. This is an opportunity to get the R/C community together to enjoy some camaraderie and friendly competition.

One of the other exciting events to occur this day is the planned maiden flight of the "Manta Minor" project that Tam Splawn and Brice Bairey have been working on. Check out the website for some more photo's of the construction process. This plane is modeled after a real UAV be-

ing built by a local company, Defense Technologies, Inc, located in Ranlo. David Mays has the honors of being the pilot for this flight. This plane will be equipped with an on-board video camera and I believe a still camera as well. So watch for some pictures and even some video from the Manta.



RECENT HAPPENINGS

John Bloom had a close call while flying his Sukhoi. The horizontal stabilizer broke in flight. On the left, it snapped off right at the fuselage. The added stress apparently then caused the right side to break. However, the covering material held up and allowed for a not so bad landing. Talk about fortunate.

Tim Plonk brought a new

airplane to the field. It's the Sig Sun Dancer ARF. He's flying it with a Quadra 52 in the nose. Sure is a nice plane! But the muffler did decide it had had enough and departed the aircraft for a more wooded location.

Kyle Allen showed up with his newly acquired red and white J3 Cub. And as all their cubs, this one looks sweet flying!

Gerry Davis made another appearance with his 42% extras. If you haven't seen them fly, it's certainly a site to behold!

Steve Quinn has been missing in action lately. If anyone sees him, tell him to come flying!

COUNTY TO ASSIST WITH MOWING

David Mays has worked out a deal with the county to come and mow the field once a month. They will cut all the grass, including the pit area. This should be a great help to us. So, before you decide to come out and do any mowing, please contact David and find out when the county is going to be out here to mow. We don't want to be mowing at the same time they're here. Plus, we'd like to get some

idea as to how they mow and what it will look like.

On that note, another thanks to Brandon, Kyle, Lee, and Jim Billups for helping us to have a nicely mowed flying site.



NEWSLETTER GOING BI-MONTHLY

As you know, the club's newsletter has been coming out every month, sort of. Because of work constraints and other things taxing my time I've decided that the newsletter will go back to it's former bi-monthly release.

As always, I'd appreciate your contributions to the newsletter in the form of stories, articles, building tips or anything the R/C world might find interesting. Photos are a welcome addition too. So if you have any good pictures you'd like to see

in the newsletter, send them on. Please include a brief description of what we'll be seeing.

This edition will be the July/August issue (my apologies to the missing June 2006 issue). The issues will be as follows; January/February, March/April, May/June, July/August, September/October, November/December. I will try to get these out by the 2nd weekend of the first month in each of the sets. (January, March, May, July, September and November).



This Dalton Aviation plane will be raffled off at the Don Lowe Masters at Triple Tree!

PROPPING FOR HIGH THRUST

BY BRICE BAIRY

Very little has been written in modeling magazines about propping your engine for maximum thrust. Prop **diameter** is the primary element in propping for thrust. Prop **pitch** is a secondary but important element. Why diameter? Think about it in a moment; a propeller is simply a rotating airfoil (wing) that creates lift in a forward direction. Now, consider that for a given airspeed, greater wing area creates greater lift and, by the way, greater drag. The effective "wing area" of a propeller in motion is called the "swept" area.

Swept area of a propeller is the circular area covered in one revolution of the propeller. The area calculation is determined by the common equation for the area of a circle.

Area, square inches = (Diameter, inches/2)² X 3.1416

Example: a 10" prop has a radius of 5" (diameter divided by 2). 5 squared is 25. That number is multiplied by 3.1416, yielding 78.54

square inches of area. The resulting number is the swept area for one propeller revolution.

Taking a look at the following table titled "Propeller Swept Area Comparisons", jumping from a 6" diameter prop to a 7" increases the swept prop area by 36.12% - - - a huge increase in forward "lift" potential. However, there is a proportional increase in drag which will reduce engine RPM. To get the benefit from the greater "lift" area of the larger prop, a **decrease in prop pitch** is necessary. As a general rule, jumping to the next larger diameter should include use of the next **smaller pitch** number to regain some of the lost RPM. Decreased pitch means a smaller angle of attack of the prop; hence, lower drag.

With a lesser "bite" of air each revolution, airspeed of the aircraft will drop a bit. The change in airspeed can be roughly estimated using some arithmetic as follows:

Airspeed, mph = engine rpm divided by 1056 multiplied by prop pitch. Calculate values for both original and new pitch number for estimating airspeed decrease; you'll need both a tachometer and a calculator.

Although decreased airspeed is a penalty, the benefits of larger diameter and lower pitch are greater rate of acceleration on throttle application, improved rate of climb, greater rate of deceleration on throttle reduction; all of which are great when performing maneuvers such as Spins, Cuban Eights, Immelman turns, Split S's and setting up for landing approaches.

Finally, to use the comparison table, find the line corresponding to the prop diameter currently in use. Drop to the next larger diameter and read the percentage of increase corresponding to the new diameter. Corresponding to the new diameter. Jumping two diameters may cause engine overheating and generally poor flight performance.





PROPELLER SWEEP AREA COMPARISONS

BY BRICE BAIRY (CONTINUED FROM PREVIOUS PAGE)

Prop Diameter	Swept Area	% Increase from previous
6"	28.27 in ²	-----
7"	38.38 in ²	36.12
8"	50.27 in ²	30.64
9"	63.62 in ²	26.56
10"	78.54 in ²	23.45
11"	95.03 in ²	21.00
12"	113.10 in ²	19.02
13"	132.73 in ²	17.36
14"	153.94 in ²	15.98
15"	176.72 in ²	14.80
16"	201.11 in ²	13.80
17"	226.98 in ²	12.86
18"	254.47 in ²	12.11
20"	314.16 in ²	23.46
22"	380.13 in ²	21.00
24"	452.39 in ²	19.01
26"	530.93 in ²	17.36

