

# Winter Fun Fly Has Everything But Snow

by Bill Jennings

In spite of predictions earlier that week for a snowstorm, Mother Nature provided an almost perfect day for the Winter Fun Fly held on March 4th. The early morning temperature was only about 10 degrees, but it quickly warmed up to the low thirties with a mostly sunny sky.



**The pilots and pit crews at the Winter Fun Fly.  
(Photo by Bill Jennings)**

I arrived at the field shortly before the start time of 11:00 AM to find several cars and trucks already there. The field conditions were ideal with a light wind and the only visible snow in the shady wooded area to the south of the field. The runways were clear and dry and already being

put to use by several members. As I unloaded the food and hooked up the grill, other members continued to arrive and began to assemble their planes, eager to take advantage of the great flying opportunity and nice weather.

In addition to the regular group of die-hard all-season flyers there were also a few guests. Mike Buzzeo, who wrote the recent auction article that appeared at RC Universe, came to check out our field. The field photo he saw displayed at the auction must have impressed him. Mike brought along a friend who provided some great demonstrations of flying skill with a large-scale 3D plane.

There were also two helicopter pilots that visited for most of the day and flew some larger model helicopters, one of which was turbine powered. This was the first flight at our field of a turbine-powered model, either fixed-wing or rotary. Any new area of modeling presents a learning curve and a challenge to ensure safety. We have since learned that the pilot did not possess the required AMA waiver required to operate a turbine-powered model at a charter club field. Fortunately, the 3 or 4 turbine-powered flights were uneventful and were certainly enjoyed by all in attendance. More on this later . . .

**Continued On Page 3, Col. 1**

# From the President's Hangar

by Bill Jennings

Two events during the past month really highlighted for me the value of club membership. The first was the fourth Kit Building Workshop session; the second was the program at the membership meeting. I would not have had the opportunity to participate in either activity without the existence of the club.

The last kit building session was an unexpected surprise . . . While searching for an expert to provide some instruction in Monokote application, one name was mentioned frequently. It was 'Ted Carl' from the Crow River R/C Aeromodelers in Waverly, MN. I contacted him and he graciously agreed to help out with the workshop. I was hoping for a presentation in the basics of using Monokote that would allow the group to complete the next step toward completion of our kits. At the March 11th session, Ted provided a remarkable demonstration of heat-shrink covering techniques. In addition to showing us the proper way to apply wrinkle-free covering, Ted also provided a number of tips for bonding and preparing an ultra-smooth surface to accept the covering. He made the process look so easy that everyone was inspired to repeat the steps on his own project! Many thanks to Ted for helping out.



**Ted Carl doing some neat Monokoting. (Photo by Bill Jennings)**

The March program featured some very interesting examples of Giant Scale models. The twenty-six members attending the meeting learned a number of advantages to be achieved by moving up to giant scale. I've learned recently that flying a giant scale model doesn't necessarily require a 'giant' investment. There are bargains to be found each year at our annual auction, planes available for sale on Ebay and RC Universe, and even a few bargains to be found hanging from the ceiling at the local hobby shop. In fact, the only apparent down-side is having to meet the challenge of transporting your much larger model back and forth to the field. Thanks to all for sharing your planes and your expertise.

I continue to be amazed at the skills demonstrated by the various club members. Returning recently to the model plane hobby after an absence of many years, I'm still trying to absorb all of the positive changes that have occurred. Building materials, tools, coverings, adhesives, radios and engines have all evolved and improved dramatically. The many choices available today are mind-boggling. I have to constantly remind myself that many of you have been pursuing this hobby non-stop through the evolution process. The results of that dedication are really impressive to a relative newcomer! I have a lot of catching up to do, but I'm grateful for the chance to be a part of it again!

On a more serious note, it's becoming evident that with the increasing mix of activity at the flying field, some adjustments will be necessary to adequately and safely accommodate the interests of all our members. With sport and aerobatic flyers, pattern flyers, park flyers, 3D, and helicopters all sharing the same field at the same time, conflicts over the available airspace will continue to increase. The recent occurrence of non-qualified turbine flying has only served to highlight some of the issues involved. This is not a local issue; there have been a number of hobby magazine articles and Internet forum discussions recently. The challenge in the coming months is to find solutions that will enable all TCRC members to enjoy their interests as fully and safely as possible. Stay tuned for updates... See you at the field! ☺

**Fly Safely!**

# Winter Fun Fly

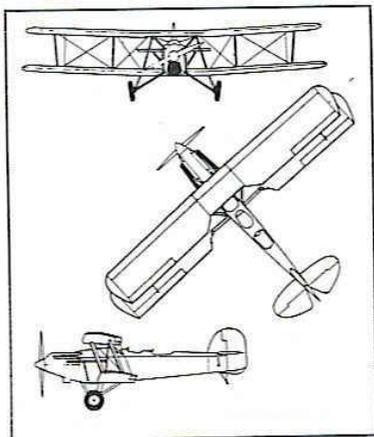
Continued From Page 1

The dinner bell was sounded shortly after noon and the hungry pilots managed to devour a total of 35 hot dogs! Also on the menu were baked beans, chips, pickles and an assortment of pop. Mother Nature presented a temporary challenge by providing some gusty winds that arrived just as the food was being served. While scrambling to retrieve a few airborne plates and napkins, I couldn't help but wish that our planned shelter enclosure had been completed.

With the exception of the meal break, the runways were kept busy all day with as many as four planes in the air at the same time. Everyone, including our guests, enjoyed their flights and the wind was at less than 5 mph for most of the afternoon.

Thanks to all of the pilots and guests who came out to the field and made my first stint at hosting a Fun Fly a memorable event. ☺

# April Mystery Plane



# A Very Nice Looking Jet Helicopter At The Fun Fly

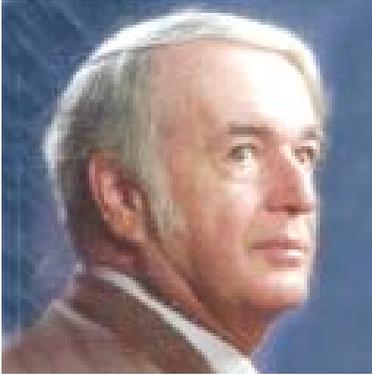


The turbine helicopter was pretty impressive in flight at the Winter Fun Fly. (Photo by Bill Jennings)

# Another Nice Looking Copter



The Nitro Heli that flew at the Winter Fun Fly on March 4<sup>th</sup>. (Photo by Bill Jennings)



**Donald A. Martin**  
 March 8, 1921 to  
 March 12, 2006

It is with sadness that we report the death of Don Martin, who was a member of TCRC for 27 years. Don was 85 years old at the time of his death, and had not flown for a number of years. He was a skilled kit builder who preferred building planes to flying them, although he enjoyed spending time at the field. In later years he concentrated on the Giant Scale WW I category. His favorite model was the WW I Fokker D VII bi-plane. He regularly attended the Bald Eagles breakfast gatherings each Wednesday morning in Richfield. Don lived in St. Louis Park with his wife Ardis. He will be missed.

## Work Shop Tours Well Attended

The new Workshop Tours that have been held each month have been very popular and have given club members some ideas on how they might organize their own workshops.



Just a small part of John Dietz's workshop.

## New Members

Two new members joined TCRC at the March 14<sup>th</sup> regular meeting.



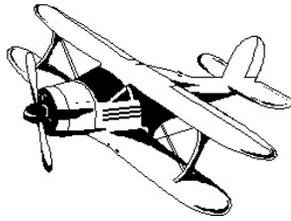
Mike Bellefueille lives with his wife Cindy at 10090 Amsden Way in Eden Prairie, 55347. Their phone number is 952-829-9713 and e-mail address is [cindymikeb@aol.com](mailto:cindymikeb@aol.com). Mike has been flying for two years and currently has a J-3 Cub, Arrow and Superstar.



Don Knauff lives with his wife Jackie at 20701 Huntington Way in Prior Lake, 55372. Their phone number is 952-440-4066 and e-mail address is [moparhemi34@integra.net](mailto:moparhemi34@integra.net). Don is new to the hobby and will be learning to fly Mode 2.

When you see Mike and Don at a meeting or the field be sure and introduce yourself and welcome them to TCRC. ☺

# Show & Tell



The March meeting yielded more nice airplanes.



**Chris O'Connor and his CMP ARF Yak.**  
(Photo by Jim Cook)

Chris O'Connor had a rarity for him – an ARF plane at the March meeting. While at the TCRC auction he had seen a China Model Products ARF Yak 5 go over the bidding block. He was impressed with the construction and decided to buy a new one – which he did. The Yak was done in yellow, white and lilac covering which he said wasn't Monokote and wasn't Ultrakote. He paid \$220 for the plane and was amazed at the quality of workmanship. The only negative was that it came with no instruction manual. The Yak had a 72-inch wingspan and was meant for a 120-160 glow engine. Chris put an Evolution 1.6 gas engine in the plane. As of the meeting, the Yak had not flown, but it will surely be in the air as soon as the runways are clear of snow.

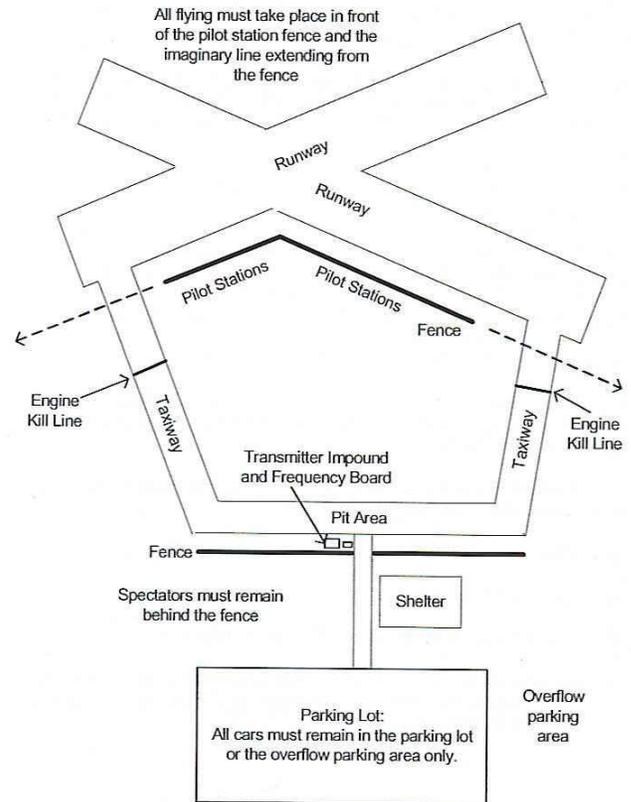
John Dietz had his newest plane at the March meeting. It was a very nice looking Great Planes Ultra Sport 40. President Bill had given this plane to John. He received it with the fuse, wings and stabs constructed but not covered. The plane was done in light gray Monokote with light blue accents. The underside of the aircraft was entirely done in white Monokote. The color scheme looked quite nice on the Ultra Sport. It was powered with an OS 46 SF 2-

stroke engine John had put an extra servo in the wings so that he could set it up for flaperons. As of the meeting John had not put the maiden flight on the plane but said it was ready to go.



**John Dietz and his nifty Ultra Sport 40.**  
(Photo by Jim Cook)

## New Field Layout In 2006 Roster



**TCRC Field Layout**

# Pictures From The March Membership Meeting



If you have a meeting on giant-scale, Ken Duncan's J-3 Cub certainly measures up!



Chris O'Connor led off the giant-scale with his beautiful Extra.



Bill Jennings' Lanier Stinger certainly fit in as a nice giant-scale.



Brian Duncan asks brother Ken how he got that big Cub inside his car.



Charlie Dempewolf's B-25 in the bones.

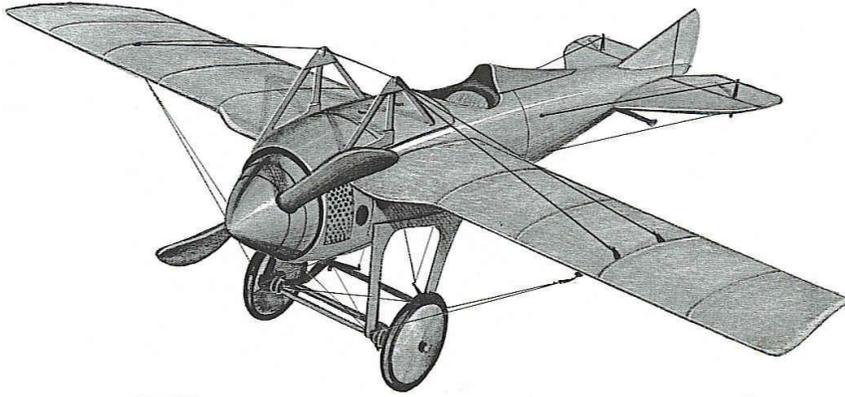


Dave Andersen and his Howard Pete.

# Deperdussin Racer

by Conrad Naegele

The March Mystery Plane was the Deperdussin Racer.



The years 1910 through 1912 were busy ones in the young aircraft industry. Of course it must be remembered that virtually all designers and builders were starting with a 'fresh canvass'.

Of particular importance was the Deperdussin monocoque racer. Even at this early stage, great efforts were being made to reduce drag and improve aerodynamic efficiency. This was to bear fruit in 1912, when Louise Becherau designed his aeroplane for high speed flying. He used a pioneering approach in using, for its day, a very streamlined, strong plywood monocoque fuselage, a large spinner, and as few braces and flying wires as possible; and for maximum power, a two-row Gnome radial engine was fitted. As a result, the plane was able to win the Gordon Bennett Cup with a speed of 108 mph. The plane won the first Schneider Cup in 1913, with a speed of 124 mph! In addition a float plane model, with almost no reduction in speed, swept the additional popular races as well.

For all its winning ways, the Armand Deperdussin Company did not survive, and went broke in 1913. It was bought by Louise Bieriot, and eventually ended up as the S.P.A.D. Company, and this eventually led to WWI and the renowned Spad X111, a superb biplane fighter flown by our own Eddie Rickenbacker.

For a few years this racer plus the float plane were world beaters. Designer Becherau was 'way out of the box', sort of, in my opinion, the 'Burt Rutan' of the early 1900's.

The Racer was powered with a 14-cylinder, air-cooled radial that developed 160 horsepower. It had a wingspan of 21' 10", a weight of 1,350 pounds and a top speed of 130 mph. ☺

## April Fools Fly

TCRC has another fun fly scheduled on April 1<sup>st</sup> – so naturally it should be an April Fools Fun Fly.

John Dietz is the CD for the event and he said the 10-10-10 rule will be in effect – that is, if at 10 AM, the temperature is 10 degrees or higher and the wind is 10 mph or lower, than the event is on.

Start time is 11:00 AM. John will have the grill lit, and be serving up hotdogs, chips, pop and all the trimmings to everyone who shows up.

In addition, he is hopeful that Chris O'Connor will have a demo on some aspects of pattern flying.

With the event just over a week away, it is questionable whether skis or wheels will be needed at the Jordan field. There is snow there at press time but the forecast indicates that some serious melting will occur.

Plan on being at the April Fools Fun Fly on Saturday, April 1. ☺

**TCRC meets every month on the 2<sup>nd</sup> Tuesday at 7:00 PM in Fellowship Hall of CrossPoint Church located on the southeastern corner of the intersection of 98<sup>th</sup> Street and France Avenue in Bloomington. Guests are welcome to attend these meetings.**

**TCRCOnline.com**

**Use It!**

## From The Co-Pilot's Seat

By Chris O'Connor

It's hard to believe it's April. The building season is coming to an end and the summer flying season is approaching fast. That means we can finally get those new planes we have been creating all winter long out to the field and flying. That brings up something that I always do at the start of each new season, before I go out flying. If it's a new plane that hasn't flown yet, I always make sure the engine starts and is running, the idle is set, there is no vibration problems, and nothing falls off. It's a lot easier to do this at home so when you go to the field you can enjoy the flying and not spend all your time adjusting. Also if it's the first flight and you have already adjusted your engine, that's one less thing to worry about. Remember to also check all your batteries, TX, RX, starting battery, remote glow battery, and engine battery. By checking them, you

charge and discharge each one twice and make sure they have their full capacity. It would be sad to lose a plane because of a bad cell in your battery pack. Make sure your glow plug works or your have spark on gas engines, the fuel lines are ok, all your hinges are good, any rips in the covering repaired, etc. A little time spent now is good insurance once you get to the field.

Remember our building contest is coming up in May, so let's get all those new planes out and have a huge turnout.

Our meetings continue to have a great turnout, but it could always be better. We are having some good programs, so plan on attending and walk away with some new ideas for your projects, or new areas of the hobby you might be getting into. This coming meeting in April, the second Tuesday of the month (April 11), the program will be on electrics. Bob Savre, past TCRC member will talk about electrics and also micro planes. Bob will have an actual plane at the meeting that he plans on flying. How do they

make such small R/C equipment? Bob is a very seasoned pilot and he has lots of info for us all. Next month (May), Dave Andersen will be put on a program. I'm not sure of the topic, but knowing Dave he will have a good one. Both of these meetings are a must see. **MARK YOUR CALENDERS** – April 11 – May 9. Remember, these programs are for your enjoyment, so plan on attending. ☺

## Spring Float Fly May 13

There may still be snow at the Jordan field, but even so, the Spring Float Fly is only a few weeks away.

The event is scheduled for the 2<sup>nd</sup> Saturday in May, which is May 13<sup>th</sup>, and the start time is 11:00 AM at Bush Lake Park in Bloomington.

Now is the time to get the floats out and install them on one or two of your airplanes. If you haven't flown off of water yet, this is the year! Be a part of the TCRC Spring Float Fly in May. ☺



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# Kit Building Workshops A Fun Way To Learn About R/C

by Bill Jennings

This year Kit Building Workshops have been held twice a month at CrossPoint Church. Start time has been 9:00 AM and the sessions last until noon.

The workshops have been attended by seven or eight participants and are structured to have a presentation on some part of hobby construction and then followed by actual kit construction. The guys work on their kits at home, bring them in to the session for additional construction and instruction.

The last two Kit Building Workshops scheduled for this spring are on April 15, which will have a presentation on pushrods and electronics; and on April 29, with presentations on CG, control throws and computer radio programming.

Come down to CrossPoint Church on one of those two Saturdays and see what the Kit Building Workshops are all about. ☺

## 2006 TCRC Roster Published

Pat Dziuk and Mike Timmerman had the new 2006 TCRC Roster at the March membership meeting on the 14<sup>th</sup>.

The new edition had been expanded from the previous year's roster and held a wealth of information about the members, the club and the hobby.

The members in attendance at the meeting received their copy of the roster and the remaining members will be receiving theirs in the mail this month.

Thanks to Mike and Pat for all of the time they have put into the 2006 TCRC Club Roster. ☺



# Safety At The Field

by Larry Couture

I have now returned from vacation and I had a very good time and talked with other safety directors from other clubs, and we all seem to have the same problems so it must have something to do with our activities.

It has been brought to my attention by Bill Jennings that there was an incident at the field with a turbine helicopter during the Winter Fun Fly. It was lucky that nothing happened during those flights because the AMA insurance that we have at the field may not have been enforceable because of the infractions to the rules that took place.

My recommendation to the board of directors is to post at the field that no turbine flying of any kind will be allowed except during special events and with approval by the board with all permits, waivers and safety equipment in place. I hope this measure will eliminate any future problems of this nature.

Getting back to the more normal everyday problems which are the three types of flying that takes places at our field which is Helicopter, 3D and Sport flying. These three types are not readily compatible and therefore must be separated for safety sake and equipment sake. If not sooner or later their will be some midair crashes and that in itself will create a large safety problem. My

suggestion would be to take turns with each type in the air alone on a rotation basis. This seems to be the solution that came out of all my discussions with other clubs and people on my vacation. Hope this doesn't create too many problems for our club members.

Last but not least I viewed four other fields on my trip and I believe our field will stand above most of them, and our members are much more friendly and cooperative to visitors and each other. So with that said have fun and fly safely 'til next time. ☺

## Building Contest May 20<sup>th</sup>

TCRC's annual Building Contest is scheduled for Saturday, May 20<sup>th</sup> at the Jordan Field.

CD for the event is Jay Bickford and the May *Flare Out* will have more details concerning the divisions and how the judging will be done.

Mark your calendars and put the finishing touches on your winter project and be ready to enter it in the TCRC Building Contest in May. ☺

## Jordan Field Clean Up May 6<sup>th</sup>

As of press time, a field clean-up and fun fly was scheduled for Saturday, May 6<sup>th</sup>. Watch for more info in the May newsletter and on TCRCOnline.com. Hopefully very little clean-up will be necessary this year. ☺

## Calendar

April 1	April Fool Flyer CD: John Dietz 11:00 AM
April 11	TCRC Membership Meeting, 7:00 PM Fellowship Hall CrossPoint Church Bloomington
April 15	Kit Building Workshop, 9:00 AM 'Electronics & Pushrods', 9:00 AM CrossPoint Church
April 15	Shop Tour Rick Smith
April 25	2 <sup>nd</sup> Quarter Board Meeting 7:00 PM, John Dietz
April 29	Kit Building Workshop, 9:00 AM 'CG, Control Throws & Radio Program, 9:00 AM CrossPoint Church
May 6	Jordan Field Clean-Up And Fly-In CD: Board
May 13	Spring Float Fly Bush Lake, 11:00 AM CD: Jim Cook
May 20	Building Contest & Fun Fly CD: Jay Bickford

**Don't Miss Any Of  
The Great Programs  
At The TCRC  
Meetings**

## Propeller Selection Made Easy

By Stan Leonard

During my sporadic visits to the flying field, I have seen some members having difficulty gaining enough ground speed to enable a safe take-off. This problem has also plagued my son Kevin with his Eagle 50. On many occasions I have delighted and wowed those who have watched me bobble Kevin's aircraft into the air -- sometimes even surprising myself when it finally becomes airborne.

The combination of marginal power and a grass field has proven to be a challenge to even our more practiced pilots. Choosing the correct propeller is very important and even critical to prevent a snap when forcing the plane to take off. Some experimenting is necessary to match the prop to your engine and aircraft. Although there are many factors that can enter into the picture to allow precision tuning of various combinations, what I am attempting to project is a starting point that will allow success for most sport pilots.

As a general rule, a larger diameter prop is used to increase pulling power.

Propeller pitch is the theoretical distance that a prop will move through the air in one revolution. Pitch and engine RPM are needed to develop speed.

A 10x6 prop size indicates a ten inch diameter and six inches of movement per revolution. If either of the numbers is changed, the load seen by the engine will change. What we try to do is increase one of the numbers -- and to decrease the other number in order to obtain the best combination of them for the plane and engine being used.

Increasing the load on an engine lowers RPM, and if carried below the design limit of the engine will cause excessive heat resulting in permanent damage to it.

Decreasing the load on an engine will increase RPM, and when carried too far causes a loss of efficiency. Can you imagine a 6x3 prop on Don's Waco? The engine would REALLY SCREAM, but the poor plane probably wouldn't even be able to taxi. By increasing one of the prop numbers and decreasing the other, we are only guessing as to whether our engine will handle the change. If only making this change by one step on either side of the prop recommended by the engine manufacturer, we can stay in the 'ball park' range. However, when making a change greater than this, we can find ourselves buying props that we can't use. If we take a two-step change such as 9x7 to 11x5, visualize the difference in blade width between the two. You would need to do a lot of whittling in order to narrow down that 11x5, and in the process you would make it so weak as to be dangerous!

A simple formula that helps us determine this difference between props of different sizes sure would be nice, and I happen to have it ready for you. If you multiply the cube of the diameter by the pitch, you come up with an approximate load factor.

For example, a 10x6 would be  $(10 \times 10 \times 10) \times 6 = 6000$  and a 9x7 would be  $(9 \times 9 \times 9) \times 7 = 5103$ . Do you see what I'm driving at? A 9x7 prop has quite a bit lower blade area, and that is why an engine turns faster when a change of this type is made. The plane (if it is a low drag type) flies faster for two reasons: the engine RPM is up; and you also have a higher pitch to move further for each revolution.

Without getting into too lengthy of an explanation, all of our sport planes are of the high drag type. We need a large diameter prop to give pulling power. But, we must team that pulling power with a prop pitch that will allow enough speed for lift-off and flying maneuvers. This is the trial area that gives us difficulty making selections.

The chart I have included can be used as a guide to the approximate prop load your engine will handle. If you have a Schneurl engine, or are using low nitro fuel in an engine that is designed for higher nitro (like the older Fox engines) you can use a higher prop load figure.

Another use for the prop load formula is for determining the prop load of multi-blade props. For a three bladed prop, first figure as for a two bladed prop, then take one-half of that number and add it back in. For instance, a three bladed 10x6 would be  $6000 + 3000 = 9000$ . This shows it will be about equal to an 11x7 two blade, and would be a .60 size three blade. For a four blade prop you would want to double the two blade figure. Simple isn't it?

Oh, by the way, we solved the problem with Kevin's Eaglet by moving up to an 8x8 prop, although a 9x5 will be tried as soon as I make my next.

Engine G.I.D.	Prop Load
.05	350-900
.10	1,100-1,700
.15	2,000-3,100
.20	2,400-3,700
.25	2,700-4,400
.30	3,100-5,200
.35	3,400-5,900
.40	4,100-7,155
.45	5,100-8,450
.50	6,200-9,725
.60	6,800-11,000
.80	10,000-16,000
.90	13,000-19,000

It is nearly impossible to damage our two-cycle engines by running them with a low prop load, but when approaching the high loading figure, be sure not to lug your engine below 10,000 RPM.

The four-cycle engines will lug a prop of about 35% greater load. For instance, a 60-FS will turn a 12x6 or 11.5x7 with ease. With a four-cycle you should not run a prop less than a 6 pitch due to their low top-end.

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## Superb Paint Job!



This is a close-up of the cowling on Chris O'Connor's giant-scale Extra that he has been flying this past 3 years. The blue-white checkerboard blends to all blue at the fuselage. Chris had to repaint the cowl many times until he liked what he saw. (Photo by Jim Cook) ☺

### THE TCRC FLARE-OUT Monthly Newsletter



### \*\* TWIN CITY RADIO CONTROLLERS INC. \*\*

**Purpose:** To preserve, encourage, and further develop the hobby of building and flying radio controlled model airplanes.

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