



Torque Roll

From: **National Control Line Racing Association**
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National Control Line Racing Association

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Welcome!

Welcome to the first NCLRA newsletter under the new officers. We hope this newsletter helps communicate the happenings within NCLRA as an organization as well as news of what's happening in Control Line Racing in the United States (and elsewhere as we find it interesting).

As you probably already know, new officers were elected at the NATs NCLRA meeting. They are:

Bill Lee - President
Jim Holland - Vice President
Mike McCarthy - Secty/Treas.

In addition, the bylaws define Districts and each District is supposed to elect their representative, but none were elected. Consequently, District Representatives have been solicited and appointed, and they are:

Southwest - Doug Mayer
Northwest - Mike Hazel
Central - Melvin Schuette
Midwest - Stew Willoughby
Southeast - Bob Whitney
East - Brian Silversmith

Please look later in the newsletter for addresses, etc., for all of the officers.

This newsletter is a new experience, and we, the officers, ask for your comments and input. We hope that this newsletter strikes a chord with you, and if it doesn't, let us know. (You can let us know if it DOES, too! :-) By necessity, this first issue will be a lot of words of an organizational nature, but we hope to have added technical content in the future.

This first issue of the Torque Roll is likely not representative of the long term look of the Newsletter. As we get into publishing on an ongoing basis, it will change. And this first time, we have been able to take advantage of some one-time help in the copying of the newsletter, allowing for some color content. Such will probably not be the norm in the future.

One person who has not yet been identified is the Newsletter Editor! If you're interested, please contact one of the officers and volunteer. Yes, it's a big job but perhaps the most important position in the association.

Bylaws Revisions

The new Bylaws adopted at the NATs NCLRA meeting are a BIG step forward. However, there is one area where they need revision: the definition of the NCLRA Districts. As they were identified in the Bylaws, there are a lot of states that are poorly aligned. A different alignment was proposed but not in time to be considered in the adoption of the new Bylaws.

Consequently, they are proposed here, and a ballot is included in this newsletter for you to return with your vote indicated.

The proposed District alignment is

Southwest: California, Arizona, Utah, Nevada, Hawaii

Northwest: Oregon, Washington, Idaho, Alaska

South Central: Texas, NM, Oklahoma, Kansas, Colorado, Missouri, Arkansas, Louisiana

North Central: Montana, N & S Dakota, Nebraska, Minnesota, Iowa, Wisconsin, Wyoming

Midwest: Indiana, Ohio, Kentucky, Tennessee, Illinois, Michigan

Northeast: everything north of North Carolina and east of Ohio, Europe

Southeast: Everything south of and including North Carolina and east of Louisiana

This proposal adds one more District, splitting

the Central into a South and North Central. It shifts several states into more logical groups. As an example, the current Southwest District includes everything from Texas to Hawaii while the Southeast District extends all the way from Florida to West Virginia.

2003 NATs Schedule

The Schedule for the 2003 NATs has been set. Pending any sort of change dictated by the NATs Executive Committee (which meets in October), the schedule is as follows:

Sunday

NCLRA Fox Race (starts at Noon)

Monday

AMA Slow Rat

NCLRA Flying Clown

Tuesday

AMA Scale Race (starts at 10:30)

Wednesday

F2C

Classic B Team Race

Thursday

NCLRA Quickie Rat

.15 Rat

Friday

Mouse I

Mouse II

All events start at 9a.m. unless otherwise noted, and model processing will be from 7:30a.m. of the day of the event.

Notable changes this year are the inclusion of Clown Race on Monday after AMA Slow Rat, and the change in Rat to a maximum of .15cu. in. (2.5cc) engines. At this writing, the actual rules we will use for Clown Race have not been finalized. (There are some differences in parts of the country.) The NCLRA Clown Race rules will not depart in any major degree from those in use in the Northwest although there are some fine tuning changes which need to be

incorporated. Please keep an eye on the Delphi CL Racing forum on the internet where we will post late-breaking information.

Note that Scale Race will start a little later than the other events to give everyone a chance for a final needle setting in case Clown runs late on Monday

F2C National - aka Profile F2C

A new NCLRA event has been defined with the intention of attracting folks into the world of diesel 15s and flying styles as defined for F2C. Note that this is NOT an event intended to attract newcomers into CL Racing since the use of a diesel engine in the United States is a daunting obstacle. Rather, it is an event that will encourage those who may already be racing to try the technology and flying requirements of F2C with the purpose of possibly taking up F2C in the future

Note that this event is **NOT** being flown at the NATs! The NATs is not the place for new, untried, untested events to be first flown. If this event does indeed "take off", than inclusion in some future NATs will be warranted.

A complete set of F2CN rules will be found later in this newsletter.

Vice President's Corner

By Jim Holland

Newcomers can be the lifeblood of control line racing. We need them if this sport is to live and grow over the next few years. We were all newcomers to racing at one time. Looking back at the time I spent in racing as a teenager in England, I feel that I served a fairly hard apprenticeship. My pitman and I joined the Elliot club in 1975 and it took us a little over a year of building planes and practicing before we were able to finish races consistently. I still remember the first time we made the final at one of the club Goodyear races (We finished second behind an ETA .15 powered Ginny)! Maybe I'm wrong, but it seems that back then beginners did not

receive the help that many of us believe is needed today.

One of the things I like about participating in this sport today is that I am in a better position to help out. I attend just about all of the Southern California Air Racers (SCAR) events that are held and while I enjoy seeing new faces show up (we have had a few this year), I don't particularly enjoy seeing them failing to finish every race they start. One of the ways to address this familiar problem is to take the time to offer them your help. This can be done by making a commitment to help a newcomer out with prepping, pitting or flying their entries. Other ways include giving away surplus airplanes, helping to make some of the much needed hardware, or passing on information on how to obtain all those strangely alien looking bits and pieces that everyone needs.

SCAR will be holding its last major race of the season (The Virgil Wilbur Memorial) on October the 19th and 20th at Whittier Narrows Recreation Area in east Los Angeles County. Everyone who competes will be given the opportunity to vote for the SCAR "Newcomer of the Year", with the winner receiving a new and ready to race Sig Buster for use in the SCAR Goodyear class. To make sure the plane is used, eligible newcomers will need to have entered in at least 2 SCAR supported races in the last 2 years and not have won an event. These restrictions will (hopefully) make sure that the plane goes to someone who will actually use it! I hope that the established racers who have taken the time to read this far will find it possible to do something similar for newcomers in their areas. I see this kind of effort being an investment in my own enjoyment of the sport as well as its long-term future.

The following events will be run at the Virgil Wilbur contest: Saturday: NCLRA Mouse II, AMA Scale Race, NCLRA Fox Race, Northwest Flying Clown and Orange Crate Derby. Sunday: AMA Mouse I, SCAR Sport Goodyear, NCLRA Quickie Rat, NCLRA

Classic B Team Race. Registration will start at 8:00 AM on both days with awards presented on the Sunday.

See you there!

District Representatives



East District: Brian Silversmith

I first saw Controlline flying in the summer of '56 and as soon as the U-Reely was placed in my hand, the addiction was created. For the next four years I built Navy Carrier planes with McCoy 60's, Fox35 powered Ringmasters, Fox 26 powered Clowns and even a Sterling Flying Fool.

I participated - "competed" - with limited to no success at the Mirror Meet in Brooklyn, NY, as well as contests in Union NJ, Randall Island NY, and up in Hartford Connecticut as well. I got my younger brother, Roger, involved and he was flying the big 60 ships when he was 8 years old. H*ll, I was an old man of 11 running Supersonic Speed and Power Mist fuels with no parental supervision. It's amazing that I still have 10 fingers and working ears.

From 1960 until 1974 when I rediscovered some of my old stuff, I was basically out of

time, money and airplanes. Then my three year old son, David, started asking questions and he was flying before he was 5. Then his younger brother learned to fly as well. During this period in the late 70's I started getting serious as a Navy Carrier competitor and have remained as such to the present time.

Around 1994 or 95, my good friend Jim Gall finally talked me into trying Foxberg Racing. I really enjoyed the low nitro, low cost, low tech nature of the event but more importantly - really enjoyed the team approach which is basically found only in Controlline Racing. I gravitated towards being a pitman while Jim became my pilot of choice. Before long I found myself pitting for more and more people as Jim and I branched out into more events. I will modestly say that we have had a good measure of success over the years.

As for giving something back and promoting Controlline flying, I have been involved with a number of clubs and organizations. In the 50's I flew with the Flushing Model Airplane Society. In the 70's and early 80's I was President of the New York Crazy 8's Club in Queens and in the 90's to present I have been President of the Middlesex Modelers in central New Jersey. I am also an active member of the South Jersey Aeromodellers, Garden State Circle Burners, Flying Dutchmen of Reading PA and the S.C.A.R racing group as well.

I have participated with reasonable success at the American NATs - 80, 83, 85, 92, 93, 02 and at the Canadian NATs of 83. I fully expect to compete at and enjoy as many NATs as possible during the coming years.

I have seen many good ideas and good people come and go. This hobby/sport is only fun when you are around enthusiastic, knowledgeable happy participants. I have been very fortunate to be surrounded by some really friendly competitors - they include Phil Valente, Jim Gall, Raul Diaz, Tom Schaeffer, Byron Bednar, George Conners, Ed and Walt Gifford, H David Wallick - just to name a few. Geez! We were

lucky to be a bunch of big boys with lots of fun toys.

Aside from competition the Middlesex Modelers runs a Learn to Fly program during the summer months for the children in our community. Even though it has not produced any new members it does keep us as an asset to the community and our in-town flying field does not seem to be coming under any fire.

Regards,
Brian B. Silversmith

Central District: Melvin Schuette

I am Melvin Schuette and I have volunteered to be one of the District representatives. Bill has already asked me to do the hardest part of the job and write something for the newsletter.

I have been flying C/L model airplanes since 1979. I started competition flying in 1981, and attended my first Nationals in 1985. I currently fly Class I Mouse, Scale Race (AMA Goodyear), Slow Rat, along with local and regional sports races. And travel to contests in Iowa, Colorado, Texas, Indiana, Nebraska, Missouri, and Kansas.

Three years ago my wife and I started MBS MODEL SUPPLY, a Control Line specialty mail order business, which we take along with us to contests.

My philosophy on Control Line Model Airplane Racing is, first we need to apply the FAI rules governing pilot conduct to all AMA racing events, and that we teach people to fly by these rules from the beginning and not only at the Nationals. The events that we have need to be set up in such a way that you can start out as a beginner at a local level with either a sport racing event or Class I mouse, with Class I mouse being an AMA event. The planes are simple to build and fly. Sometimes the motor can be a little troublesome, but nothing the average modeler can't overcome. Class II would be the next step by adding a little more

complexity to both the planes and engines, but still nothing beyond the abilities of the person whom has advanced to this level. From there you can go two ways, either Scale race or Sport Team Race. These planes require a little more building and flying experience to build and fly, but are still something you can fly relatively easily. Then the final step up would be to Team Race, something that you could fly not only at the national level, but compete on the World Level with. The problem with both Rat and Slow Rat is not the availability of equipment, it's the physical demands on the pilots, and we are running out of people who meet the demands.

Sport Racing Rules are great events to have on the local level, and there is even a need to have rules that are used across the nation. For a person is more likely to build an airplane for an event that he can compete with two or more times a year with, rather than one that he can only compete with at one contest. And if Clubs are going to have racing events at contest they need to add one or two AMA events, to get people from out of town more of a reason to attend a contest. They would also know that the planes that they fly at their home contest will be legal at an out of town contest.

Well, enough soap boxing for now.

Melvin Schuette

Southwest District: Doug Mayer

This is a long message, but I hope you take time to read it and digest it. I recently volunteered and accepted the office of "South West Regional Officer" for the NCLRA. Who am I, and where did I come from. Let me tell you a bit about myself. My name is Douglas Mayer. I flew control line planes when I was a kid and then I took a 20-year hiatus. About 7 years ago I blew out my right knee big time. I couldn't do any of the extreme sports that I was doing at the time so I started sketching pictures of model airplanes. I'm an architect and artist and designer so this renewed interest in model airplanes fit a perfect spot in

my life. I built a few airplanes from scratch based on old drawings or memory and I was immediately aware of the fact that control line was nothing like it was 20 years ago. I was able to find bellcranks in dusty packages, but no metal tanks or perfect wheels or any of the stuff that was readily available when I was a kid. I realized that if I was going to do control line aero modeling that it was going to be a difficult task. And difficult it was. The local hobby shops just down right failed at meeting most of my needs. I was almost ready to give up on the whole thing and I probably would have if it weren't a childhood dream to have a fancy Goodyear racer.

This is the turning point of my story and the message that I want to share with everybody. What saved my interest in control line racing? I went to a contest in Los Angeles and started talking to the guys who were racing. I met Mike MacCarthy (who looked at me with doubt and suspicion) but at least he talked to me and gave me his phone number. He showed me a couple of his planes and explained what types of things he was doing with his equipment. Geezzz, maybe there is hope. I got a hold of a mailing and phone number list for the SCAR guys, (Southern California Air Racers). Since I lived in San Francisco at the time, the next guy I called was Vic Garner. Vic invited me over to his house and showed me his garage full of planes and his machine shop. Hmmm, this is getting better. For the next couple of years I struggled along without a partner, but I always recruited some help from Mike and Rich McIntyre, Dale Long or some of the other LA guys. Over the next couple of years I came into my own by designing and building my own planes. I learned so much information from Mike and Rich and Vic and I want to truly thank these guys because they helped me get from an absolute novice to a national competitor. Of course a lot of hard work and dedication on my own behalf got me where I am today, but without fellow modelers this would have been impossible.

This is such a critical message to everyone

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Some People Talk About F2CN!

(My Opinion by Charlie Johnson)

Some people talk about Profile Team Racing, blah blah, push-pull head, blah blah, thirty more teams blah blah, Mejzlik super plane, blah blah blah?. BUT WE DID IT!

The idea of promoting an entry level racing event such as F2C National came about as Peter Lott and I pondered ways to promote racing at the 2003 South African Nats (www.geocities.com/ncb2). We'd get somebody to build a bunch of ready to fly planes and sell them at cost to likely entrants. A very unlikely tale turned into reality when Conrad Cloete

(conrad.cloete@crn.alstom.com) accepted our offer to build 8 planes complete with engine, tank, shutoff, filler valves, lines and handle, some fuel and even tutoring to get it running right.

Three months later I was flying from San Diego to Johannesburg just as Peter Lott was flying in from Jeddah where he works for the United Nations. Conrad also made the trip to Jo'Burg from Capetown for the rollout of the first batch of models. Our concept was to use a very simple model, see page 14 of this issue for details, and a cheap engine. We were able to acquire MVVS front intake engines from the local importer, Keith Renecke (krenecke@netactive.co.za), for the modest sum of \$38.00 and the engines were left basically stock (see Jim Holland's article on the MVVS in this issue).

The engine could best be described as "robust" but both diesel and glow versions are much better than I expected though a touch porky. We tried to use a local hobby supplier for a lot of the items but in the end Peter and I purchased items here in the USA and shipped them over.

The hobby business is very different (and expensive) over in South Africa and you soon figure this out when one dealer in Capetown is known as HandsUp Johnny. During the weekend testing we immediately found out that a PAW is much lighter than a standard

MVVS and the models designed for a PAW were nose heavy with the porkier MVVS, "rock on a string" pretty well describes landings. Not much to do except add weight to the tail, move the engine back when we get back to the shop, and all the kit planes had their wings moved forward 12mm. Things are never so simple because with the wing forward the wobbly wheel box was too far back and the plane would nose over. New titanium struts were made with the wheel forward in the correct location. Was that titanium that was mentioned? No trick parts? Well, we got the titanium at a dirt cheap price and Conrad is able to cut it at work easily, so the old girl gets a little tarted up.

Paul Smit (wcf@dwaf.gov.za) made up a bunch of filler and bottle valves for the models as well as a batch for sale here in the USA. It's a similar system copied from Ed Needham. The valve on the tank as well as the valve on the filler bottle use o-rings to seal so the tank vents properly and the filler bottle can be squeezed without fuel running out. As the two valves mate fuel rushes in under whatever pressure you were applying. Real neat, quick, and it doesn't waste much fuel and if you don't want the bottle to roll away you can tape a stick to it or use an oval bottle. Someone suggested we tie a bungee cord to it so once you filled the tank the bottle would be pulled out of the way.

It's possible to hook up a primer line too but that's off in the future. One other decision was made to standardize on APC 7-5 and 7-6 propellers, they work well and are pretty inexpensive and have enough mass to help start a diesel. Ultra light weight carbon props look trick, have more potential performance, but they're hard on novice fingers and an expensive "bow tie" when novices grind them down.

So how did they go? During some practice heats the best time was a 5:07 turned by the wife/husband (pilot/pitman) Charmaine and Lionel Smith. The rest were nearly 30 seconds back. Lionel earned the title "three

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flicks" because that was all the work he had to do for the start and two pits (he must have read Jim's column on the MVVS). Charmaine did an excellent job piloting. Lionel's speed secret, "oh, an hours running on the bench and an hour flying." Charmaine makes a face, "a lot more than an hour flying!"

Modest success on the first phase, 6 teams isn't a lot but we expect to sell the remaining models so there's a possibility of a dozen teams for the Nationals. Modest performance too, with speeds in the 27sec/10 lap range a 5:07 is pretty good especially at over 4600 foot elevation. Another test session the end of November and one in January (remember, the seasons are reversed south of the equator, it's nice weather there when we're freezing).

Would the event work in the USA? Probably on the local or regional level, it's not meant to be a professional level event. But the best part, we're flying and not talking about it.

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reading this letter. Each and every one of us HAS TO HELP NEWCOMERS!!! Do not turn your back, or keep your secrets. We regularly have newcomers coming into our Los Angeles Racing Scene and I do every thing that I can to help the new guys. I remember how much help I got from my mentors and what a pain in the ass it was to get started in a sport that is extremely competitive, complicated, and generally not geared towards beginners. I am currently trying to give back to control line racing as much as I can to help keep this sport alive, and don't fool yourself, your actions at the flying circle next time someone starts asking you questions could be the difference between a new dude on the circle, and some one who gets frustrated and discouraged and never comes back. This sport depends on all of us. And this is how I got where I am today.

I volunteered to start writing a newsletter for SCAR and before I knew it, I was the president, treasurer, secretary, editor and contest director. I have the box of timers, score sheets and bullhorn in the garage and a big-old mailing list of half of you guys in the USA. Yes, I'm out-spoken, I'm into politics and I'm down right rowdy, but my heart is in the right place. There are many racers with big hearts and good souls. We are a family of underground enthusiasts. Control line racing will never be "BIG", however there is no reason why it can't be healthy.

I can personally attest that several things have helped the California/Arizona scene stay healthy and recently grow. Our newsletter and regular contests are one big reason. I know that a newsletter is a lot of work, but it seems to reach out to a lot of people. Jim Holland's' web page "controllineracingwest.com" also brings in a lot of new interested people. Vic Garner's K&B .40's and my airplane plans for sale also seem to bring in quite a bit of interested folks. So I guess my message is this: Volunteer, make something, sell something, give something, write an article to the NCLRA or SCAR and share some of your knowledge so

that you may pass your knowledge to another generation. Our sport depends on you, not me or the NCLRA or any of the "other guys". Give something back. Your sport and fellow modelers thank you.

Northwest District: Mike Hazel

Hi Gang! Looks like I am the new Northwest district rep. I very recently rejoined the NCLRA, and Bill asked if I would take this position. As he must have caught me in a weak moment, I said yes.

It was requested that I provide a bio, and so with no further adieu, here it is É.

After learning how to fly CL as a youngster, the rat racing activity that I saw at a couple of local contests intrigued me. And so believe it or not, the very first CL plane that I built was a Skat Rat from the Goldberg kit, which was powered by a Fox 36X. This was in 1965, and I have been racing ever since.

For awhile I concentrated on only racing, but other diversions diluted the efforts somewhat. First it was combat, and then I also got into speed flying. Now I also dabble in stunt and other sport flying type activities, but the racing has always been there.

As already mentioned my racing started out in rat, and over the years I have campaigned entries in just about every racing class. Goodyear, Mouse, F2C, Q-Rat, and the NW varieties of "do-dah racing", including Sport Race, Super Sport, and Flying Clown.

Way back in 1976, I developed and promoted the rules for the original NW Sport race event, which eventually became the basis for many of the Fox 35 events today.

Now it's been many years since I have actively flown fast rat (hey, who's flying it now anyway?), and at present mostly just fly the NW region events with my main partner, John Thompson. I am happy either at the handle end, or flipping the prop.

Besides my racing and other CL competition interests, I also spend a bit of effort in putting out a regional newsletter, and contest directing and promoting. Other bits of time are used in the manufacture and sale of composite props for various competition events. (yes, including racing!)

The status of racing in the Northwest has gone downhill a bit in the last few years, with several participants fading away. Now some of the clubs in the region do not even include any racing in their contest schedules. With a limited number of NW contests offering racing events, efforts to keep up racing interest have been a bit discouraging. However, I keep seeing signs of a possible resurgence of activity. Meanwhile, we will keep plugging away.

Yours for racing, Mike Hazel

Southeast District: Bob Whitney

I started flying in 1953 with my dad. We flew open Rat since there were no Jr's. We used a K&B 35 on a profile model.

We built a Redskin with K&B 23 for first KOI. Dad pitted and we won first, but I don't know how!

In 1957 I won Jr Rat & Combat at KOI, went to my first NATs. What a shock! I left all my speed ships in the car.

In 1961 I set the Sr 1/2 A speed record of 103 mph. I added FF to my racing and speed flying: flew hand launch glider, (first, open at KOI), 1/2A, A1 Towline & B FF.

In 1966 I was #2 on the USAF team (we won). I won 5th in 1/2A speed (100 mph). Won 5th Open Combat at the 1967 NATs.

I took off several years to race motor cycles.

In 1984 I got back into planes, mostly speed. I set the first 21 sport speed record, 134 mph. I have placed in Jet, D, FAI and 21 Proto at NATs.

I got back into racing, flew all events, tried F2C and fell in love. I have had good luck the last couple of years at the NATs placing in Mouse I & II, F2C, and B TR.

I have flown every CL event in the book, placing at least once in all but carrier & scale. I design most of my own planes, and do most of my own engine work.

Midwest Representative: Stew Willoughby

I am an ex-Brit dentist living in the Chicago area. I have flown control line planes for 40+ years and been racing them for 30. I fly mostly FAI T/R and Goodyear but have piloted in all the other events at one time or another. I have been National Champion in Goodyear and FAI T/R more than a few times, and have flown on the US F2C team eight times since 1984.

My address, home phone and email address are here in the newsletter and I ask that the district guys send me their contest results, etc., for inclusion in the column.

A Users Guide to the MVVS Diesel By Jim Holland

The NCLRA has just adopted a new set of rules for a Profile F2C class of control line racers. One thing that these rules mandate is the use of diesel engines with iron and steel piston and liner assemblies. I have written this article to try and help anyone who is thinking about building a plane to compete in this class, but is a little hesitant because they have little or no experience operating diesel engines. I have been using MVVS front rotor diesels pretty successfully for the last three years in local rules (Southern California Air Racers) Goodyear competition. My MVVS diesel powered Ginny currently holds the 100 lap heat record (52' lines) at 4:37.

While this article is focussed on the front rotor MVVS, a fair amount will also apply to the

rear rotor version and other iron/steel engines. I have tested a couple of the rear rotor engines, but problems with rotor breakage, combined with the fact that I found them to be slower and less fuel efficient than the front rotor version, led to me putting them back on the shelf.

Getting Started

(Thanks to Peter Lott for some of the ideas here). A new MVVS should preferably be stripped, cleaned and inspected prior to break in. I have sometimes found that the bearings are not perfectly square in the case, or, have been installed the wrong way round. At this point you will need to decide if you want to run the engine as a side or rear exhaust. I make this decision by separating the 2 piece case and seeing in which configuration the transfer ports match up best. There seems to be no difference in speed between side and rear exhaust versions. I have heard that some people try to lighten the engine (it is heavy!) by shaving the cooling fins or trimming the exhaust stack. I really don't recommend shaving the fins as these engines can already be a little 'picky' with their settings. Trimming the exhaust may work. I have opened up the crank on a couple of my engines and it may contribute a slight rpm gain. I have not bothered to retune them and would advise against this for anyone other than an experienced engine person.

Break In

Unless you can lap the piston/liner fit, you should expect a relatively long break in period for these engines. Make sure all the storage grease is cleaned out of the liner before you begin the break in. - The engine will be hard to start and set unless you do this. I break my engines in on a test bench using a fuel that contains 20% castor oil - this seems to work pretty well. I use a 7x5 prop and set the engine under compressed (popping) in a rich 2 cycle. I will run it for 3-4 minutes per tank with a long cooldown every second tankfull. Each engine gets around 40 minutes break in time this way. Once the engine will hold a properly compressed (no

popping but not laboring) setting and a fully leaned needle setting without notably slowing down through a tank run I will air test it.

Racing

I recommend always putting at least one good practice session on one of these engines before racing it. If you find the engine will not pull a load and has to be set notably undercompressed to avoid burning down, you will need to break it in some more (I have owned an engine that needed over one hour break in). At the end of a practice session (assuming no problems with the airplane) you should be getting close to 1-2 flip restarts and a good race setting on the engine. I recommend the following fuel mix for these engines: 14% Castor Oil (I use Sig or similar thick AA grade), 33% Ether and 53% Kerosene. I add 2% DII on top of this. You may want to experiment with your percentages, but I do not recommend going below 14% oil with these engines if you want to get hot restarts and something approaching reasonable engine life.

These engines are extremely susceptible to lacquer build up, so strip and clean them reasonably often (I don't see this as being necessary after every race unless you really like to practice a lot between races). Tell tale signs of lacquer build up are loss of airspeed and hard starting.

Finally, be sure to test different props. These engines scream away on an APC 6.5x6, but I know of at least one other plastic prop that will give you almost 1 second more airspeed and a lot more laps. The APC 6.5 x 6.5 is a reasonable starting place. Using a decent prop and a good fuel blend, this engine should be able to give you 33+ laps on a 15cc tank with pretty decent airspeed.

Have Fun!

Contest Reports
Charles Ash Memorial - Dallas
Labor Day Weekend - 2002
 By: Linda Gleason

Contest Reports
Fall Brawl - Bunnell, Florida
September 28-29, 2002

We had fliers of repute come to check us out and they were rewarded for their efforts. While some events (Slow Rat, Mouse) were lightly attended, Quickie Rat brought the Flukers (Jr and Sr) out, Bob Whitney and Dave Hallas came from Florida plus "locals" Bill Lee, John McCollum, Russ Green, and the usual Greb, Hempel, Team Phildale crowd. Look at the heat times in Quickie: 3:22 to 3:37! A 15 second spread for seven airplanes! Sport Goodyear had a 33 second spread for 6 ships. World Competitors Lee and McCollum broke 5 minutes in Mouse with the Florida guys around 5 and a half.

Slow Rat

1) Mike Greb 5:52.26

Goldberg

1) John McCollum 10:05.23

2) Dale Gleason 12:31.25

3) Dave Ek 13:08.54

Sport Goodyear

1) Dale Gleason 3:50.25 7:59.53

2) Gene Hempel 4:14.50 8:54.80

3) Bob Whitney 4:19.61 10:07.54

4) Phil Dunlap 4:21.03

5) Mike Greb 4:23.14

6) Russ Green 4:23.53

7) John McCollum 37 laps

Mouse

1) John McCollum 4:51.48

2) Bill Lee 4:55.91

3) Dave Hallas 5:23.70

4) Bob Whitney 5:48.80

Quickie Rat

1) Mike Greb 3:22.22 6:58.31

2) Russ Green 3:23.13 7:24.24

3) Tom Fluker, Sr. 3:26.62 7:43.60

4) Tom Fluker, Jr. 3:26.83

5) Dale Gleason 3:28.75

6) Bill Lee 3:35.44

7) Bob Whitney 3:37.78

Mouse 1

Dave Hallas 3:32:21 2:34:37 5:12:84

Gabe Manfredi 2:46:25 2:54:91 5:29:39

Bob Whitney 2:38:09 2:37:04

Ralph Aaberg 4:47:07 no start

Mouse2

Ralph Aaberg 4:06:09 4:05:50 8:33:96

Gabe Manfredi 3:42:70 3:50:48 8:41:91

Dave Hallas 4:56:50 4:50:74

Bob Whitney DNF DNF

Slow Rat

Dave Wallick 3:17:88

George Lieb 5:15:68

Gabe Manfredi DNF

Scale

George Lieb

Wayne Trivin

Fox

Ralph Aaberg 6:33:81 6:46:16

Gabe Manfredi 6:09:49 DNF

Bob Whitney 6:24:78 DNF

Al Stebbins DNF

Dave Wallick DNF

Gene Wielms DNF

Dave Hallas 8:04:16

Quickie Rat

Wayne Trivin 3:06:81 6:41:37

Dave Hallas 3:18:96 7:22:84

George Lieb 3:14:47 4:23:49 DNF

Ralph Aaberg 3:43:70 3:19:92

Dave Wallick 3:36:95 3:33:81

Scott Jenkins 4:10:12 3:51:06

Bob Whitney DNF DNF

Gabe Manfredi 3:28:23 3:13:47 DNF

Clown

George Lieb 149 294

Dave Hallas 146 291

Bob Whitney 145 283

Dave Wallick 140 280

Gabe Manfredi 124

Al Stebbins 117 (Clown Category)

NCLRA F2C National Class

Introduction

The purpose of this racing category is to encourage control line aeromodellers to participate in a competition, less complicated than the FAI F2C Category. It is intended to be less complicated in construction and tuning, and less expensive, than F2C, while still making a competitive and exciting race format. These rules are written to compliment similar events flown throughout Europe and provide an introduction to the FAI Team Race Event. With the major intent, for the entrant to gain experience and the skills needed to participate competitively in FAI F2C Team Race. These rules should be reviewed by the National Control Line Racing Association on an as "need basis".

Definition of the Model Aircraft

A Model aircraft in which the propulsion energy is provided by a piston motor and in which lift is obtained by aerodynamic forces acting on the supporting surfaces, which must remain fixed in flight, except for control surfaces.

The model aircraft must have a profile fuselage that resembles that of a conventional airplane in the side (profile) view and appears as a thin flat sheet in the plan (top) view. The engine shall be completely exposed from the mounting lugs to the cylinder head and shall not have any type of fairing. Additional reinforcements such as inboard cheek cowls are permitted as long as they do not exceed the maximum total fuselage width. Cheek cowls may extend from the prop drive washer to a point 25 percent of the root cord back of the leading edge at the root, and may be faired in.

Technical Characteristics of the Model Aircraft

1. The engine is to a diesel type with suction feed, and has an iron and/or steel piston and sleeve assembly, AAC and ABC are not allowed.
2. The engine's maximum swept volume is 2.5 cubic cm.
3. Engine must have a safety nut on the propeller shaft.
4. Maximum fuel tank capacity (including associated tubing and refueling valve) shall be 15 cc.
The tank may not be faired in, and cannot form a fairing behind the engine.
5. Refueling is restricted to squash bottle or bulb only, MFV and pressurized refueling with finger valve is prohibited.
6. The model must be equipped with an effective engine-stopping device, enabling the pilot to terminate the flight.
7. Model must ROG and have at least one wheel with a minimum diameter of 25 mm.
8. The minimum total flying surface area is 12 dm sq. based on the plan view (for conventional aircraft, the wing, stab, and elevator area combined will be used to figure the total area)
9. The model must have a canopy with pilot. The canopy may be clear or, one may be painted on in a contrasting color with a pilot drawn in on at least one side.
10. The model's minimum height is to be 10 cm, measured from any point on top of the canopy, to the corresponding vertical perpendicular point on the bottom of the fuselage.
11. Maximum fuselage width is 25 mm
12. The maximum flying weight is 900 GM

Competition regulations

This is considered to be an individual event and not a team event, the entrant may be the pilot or mechanic.

Anything not specified in these regulations is to be governed by the normal FAI F2C T/R regulations.

NCLRA .15 RAT RACING

1. **Applicability:** All rules from the Unified Control Line Racing rules apply to this event except as modified, appended, or specified here.
2. **Model Specifications.**
 - 2.1. If the model is of cast pan construction (two (2) or more parts held together by screws or bolts), it must be, in the Contest Director's opinion, as strong as the methods suggested in the CL Speed section.
 - 2.2. Only constant diameter exhaust extensions are allowed. Such extensions shall be no more than 5-1/4 inches in length as measured along the center line from the center of the piston bore to the end of the pipe.
3. **Engine Specifications.** The Maximum engine shall be a .15 cu.in (2.5cc) displacement
 - 3.1. There shall be no restrictions on the type, size, or location of the needle valve assembly.
4. **Races.**
 - 4.1. Each contestant shall be allowed two (2) qualifying heats of 70 laps in length. One (1) refueling stop is mandatory in each heat.
 - 4.2. Final races shall be 140 laps in length with three (3) mandatory refueling stops.
5. **Flying Regulations.**
 - 5.1. All flying shall be done between six (6) and twenty (20) feet altitude.
6. **Field Layout.**
 - 6.1. The Inner Circle shall be 68-foot radius.
 - 6.2. The Outer Circle shall be 76-foot radius.
7. **Lines.**
 - 7.1. For the .15 engine, lines are to be .014 solid.
 - 7.2. Lines shall be 60' +/- 6"

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