

# ***NCLRA***

## ***NATIONAL CONTROLINE RACING ASSOCIATION***

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October 1995

Editors: Dave McDonald & Lari Dziak

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### **What's in this issue:**

**Presidents Corner**  
**1995 F2C Team Trials**  
**Fox Racing**  
**Contest Calendar**  
**Plus More**

### **Presidents Corner**

Lari Dziak

I would like to take a moment and thank all those who worked the recent F2C Trials, Dr. Laird "Doc" Jackson, Walt Perkins, Kenny Perkins, Kenn Smith, plus a big thanks to all of the Muncie Controliners who worked as counters, timers, checked lines, and did all the other necessary tasks that were asked of them. I would like to also thank the AMA, especially Steve Kaluf and Teresa McKee of the Competitions Department who along with Dave McDonald worked from October of 1994 to make the F2C Trials a success. Also a big thanks goes to the competitors who put on one of the greatest F2C Trials which saw almost all of the teams having a chance right up to the last race. More F2C coverage in this edition.

Can you believe that the 1996 Nats planning meetings are getting ready to happen? Dave will be attending a 1996 Nats meeting October 7th, so look for more information in future editions. I can tell you that the NCLRA is planning on running the same schedule in 1996 as it did in 1995. The Nats are scheduled to begin July 8 with Controline, and remember it is never too early to start getting ready.

In the August edition we included a questioner about the NCLRA, along with a section on what supplemental event would you like to see run at the Nationals if any. Well, the majority responding said they would like to see some form of Fox Racing. I guess the next step is to bite the bullet and come up with a recommendation of NCLRA "Fox Racing" rules. Now before anyone gets upset, we are not mandating any rules to any club or area. We are attempting to come up with a recommendation as to some beginning guide lines to standardize the event. So the rules you will see in the **Fox Racing** section of the newsletter are not etched in stone, they are open for constructive comments and refinement. Remember we must have a starting point, so if you have comments about the rules send them in, please explain why you think any changes should be made, we will publish comments if any in the December edition. Please remember you cannot please everyone, we all have to compromise some for standardization.

For those of you who volunteered to write articles watch that mail box as you will be getting a letter asking for your contribution.

## **1995 F2C Team Trials**

Dave McDonald

First I would also like to thank all of those who helped make this a truly outstanding F2C competition. I hope that all of the participants enjoyed themselves in Muncie, and liked the site, as that is what you will have for the 1996 Nationals.

This years F2C trials saw some of the closest competition imaginable. There were eight teams at this years trials, and anyone of the eight could have made the team. The weather in Muncie all week was super, Friday was sunny around 80° with a light wind.

Practice times ranged from 17.5 to 19.0. Most of the equipment was Vorobiev, with a couple of Mazniak, and a Sabashov present also. Saturday dawned with little to no wind and again sunny and mild. Practice flights started around 7:30am, with the first race going at 9:30am. (The Jury did an excellent job along with the competitors in getting the heats started on time.) The first race of the trials was between the teams of Arce/Whitney, Ballard/Lambert, Mogi/Long. The team of Ballard/Lambert quickly set the standard for the weekend with a very good 3:32.83 for the 100 laps. In the third heat the current number # 1 team of Willoughby/Oge, flew against the team of Braun/Kusik who also represented the United States in China, and the Arce/Whitney team. The Willoughby/Oge team posted a time of 3:47.18 while the other two teams had problems and did not post a time. The next race again put the team of Ballard/Lambert against the teams of McCullom/Lee and Braun/Kusik. Again the Ballard/Lambert team posted a very quick time of 3:27.20, while the Braun/Kusik team ran a very good time of 3:30.62, and the McCullom/Lee team posted a fine 3:35.47. This was probably the best race of the day with the action being fast and non-stop. Before the day was over the McCullom/Lee team posted a super 3:19.60 to take fast time of the day, which would later prove to be the fast time of the weekend.

Day two was almost a carbon copy of the first days weather, and the flying again was extremely close. The first race of the day put the teams of Dziak/McDonald, Braun/Kusik, and Mogi/Long locked into battle. The first year team of Dziak/McDonald posted a personal best of 3:38.13, while Braun/Kusik turned a 3:53.55, and the Mogi/Long team ran a 4:00.53. In the next heat the McCullom/Lee team posted a 3:38.52, and the door was starting to get closed on the top two positions, with the Ballard/Lambert team in control, while the McCullom/Lee team was making a move to wrap up a spot on the team also. The real question was which of these two teams would be number one, and number two? The scramble was now on for that third spot, and all of the remaining teams were clearly capable of taking that third spot. The team of Willoughby/Oge had some very bad luck with not one, but two faulty backdoors on engines and were forced to pass on one of their races. The final spot on the team was not secure until the final race of day two. With two races to go four team were still fighting it out for that third and final spot. The team of Ascher/Ascher stepped up and controlled their own destiny in the final race by running a 3:32.61 to move into that third spot by approximately 15 seconds. This is very close after running six races, and taking your three best times.

The final results put the team of McCullom/Lee on top, with Ballard/Lambert second, and Ascher/Ascher third. The alternates are Braun/Kusik and Dziak/McDonald. If you thought the racing was close this year, just wait, I have a feeling that it will be even closer next time around, and with the closeness of competition the United States should become even more competitive in future World Championships. We wish the 1996 Team the very best of luck and a safe trip to Sweden. ( the next page has all of the official times)

## **1996 Nationals Schedule:**

It may seem early to start thinking about the Nats, but here is the racing schedule for 1996. So make plans to attend as this promises to be a special Nats.

<b><u>Monday July 8</u></b>	<b><u>Tuesday July 9</u></b>	<b><u>Wednesday July 10</u></b>	<b><u>Thursday July 11</u></b>
Mouse I	Scale Race	Slow Rat	F2C (morning)
	Fox Racing	Cox Program	Rat (afternoon)
		NCLRA Banquet	

## Final Results F2C Team Trials

Team	Race 1	Race 2	Race 3	Race 4	Race 5	Race 6	Total	Place
Bill Lee/John McCullum	DNF	3:35.47	3:19.60	3:38.52	3:28.55	DNF	10:23.62	1st
John Ballard/Dick Lambert	3:32.83	3:27.20	3:28.55	3:57.02	4:04.59	3:33.67	10:28.58	2nd
Aaron Ascher/Leonard Ascher	DQ	3:49.46	3:33.80	DNF	3:45.08	3:32.61	10:51.49	3rd
Dave Braun/Jed Kusik	DNF	3:30.62	3:42.81	3:53.55	DNF	DNF	11:06.98	4th
Lari Dziak/Dave McDonald	DNF	4:20.69	3:40.25	3:38.15	3:52.43	4:08.53	11:10.81	5th
Stewart Willoughby/Bob Oge	3:47.18	4:00.47	4:03.23	Pass	3:38.56	DQ	11:26.21	6th
Ken Mogi/Dale Long	4:01.71	DNF	DNF	4:00.53	3:55.63	4:23.28	11:57.87	7th
Pastor Arce/Bob Whitney	DQ	DQ	DNF	Withdrawn from Competition		No time		8th

**\*\* Italics show times used, along with total and place.**

**DNF = Did Not Finish**

**DQ = Disqualified**

**Pass = Passed on that race**

**Dave McDonald CD**

## **NCLRA Proposed "FOX RACING"**

The Officers/ and members

What we would like to do is to formulate a set of standardized rules for the much popular Foxyhazel, Foxberg etc. racing that is currently being run across the country. We feel that a standardized set of rules would lead to growth and continued attraction to newcomers. It is not the intention to dictate to anyone that they should change their rules, however, it is increasingly imperative that we set a standard for the event. Please remember if you don't like something please let us know, and we will share it. From the recent questioner it is obvious that some form of Fox Racing is wanted. Rules have to start somewhere, and we have tried to come up with a middle of the road to bring in everyone.

### **Purpose:**

The intent of this event to provide the competitor a racing event using similar equipment which is readily obtainable and operates in a basic fashion.

### **General Rules:**

AMA Unified racing rules to apply/ along with AMA Safety Provisions, with the following exceptions.

### **Airplane:**

Any present or passed .35 size kit or kit planned airplane with a minimum wing area of 300 sq. in. Obscure or rare kits, some documentation, such as a set of plans may be required by the contest director for confirmation of the airplanes kit status. In board cheek cowls are permitted. Airplane must ROG one wheel permitted. Planes are to be of the profile type.

### **Engine:**

Box stock Fox .35, Permitted alterations are: Needle valve / Spray Bar, different bolts may be used. No metal removed or added, No Hemi heads, button heads, stuffer back plates etc. Engines must be stock. Claim it rule to apply equal to list price of new Fox .35.

### **Props:**

Props to be 9-6 or 9-7 wood or plastic commercially available. Only re-work to be permitted is balancing

### **Lines:**

60 feet line length +/- 6" as measured by AMA guidelines, .015 braided dia. No Solids. Pull test to be 35lbs

### **Fuel system:**

2 oz. tank maximum (home made tanks subject to being checked) No pressure, vents may be directed forward, fuel must enter tank through 1/8 dia. tubing.

### **Races:**

Races to be 100 laps with 2 mandatory pit stops. Races should be flown 3 up.

### **Prohibited Equipment:**

No Hot Fingers, Shutoffs, Fast fills.

### **Spirit of the Event:**

The Contest Director may disqualify any entrant who in his opinion is not keeping with the spirit or intent of this racing event.

## **NCLRA Points Leaders**

<b><u>Goodyear</u></b>		<b><u>Slow Rat</u></b>		<b><u>F2C</u></b>	
Howard Shahan	12pts	Melvin Schuette	12pts	Ascher/Ascher	12pts
Bob Fogg	6pts	Mike MacCarthy	9pts	McCollum/Lee	8pts
Dave McDonald	5pts	Jerry Meyer	6pts	Ballard/Lambert	7pts
Mike Shahan	4pts	Dave McDonald	5pts	Braun/Kusik	4pts
<b><u>Fast Rat</u></b>		<b><u>Mouse I</u></b>			
Mike Shahan	8pts	Paul Gibeault	12pts		
Howard Shahan	4pts	Robert Boling	12pts		
Bob Fogg	2pts	Mike MacCarthy	10pts		

current as of 10-1-95.

## **Engine Performance Testing**

Paul Rice

Engine performance testing is an essential part of competition. This is especially true when engine modifications are performed, which often result in a loss of performance! Do you ever find yourself denying unfavorable test results? It's tough to admit failure! How do you get honest test results? The key is to:

- 1) Achieve control over the test variables.
- 2) Test only one modification at a time.

### **Control of Variables**

Variables that can have a significant effect on test results are:

- \* Weather conditions
- \* Fuel
- \* Engine load
- \* Tachometer accuracy
- \* Vibration
- \* Engine condition
- \* Fuel mixture

Any one of these variables can influence engine speed by more than 200 rpm, which may be more than the effect of the modification!

Here's how I attempt to control these variables:

### **Weather Conditions**

A temperature change of 5° F can make a noticeable difference. If possible, select test conditions similar to typical contest weather.

### **Fuel**

Select a test fuel very similar to contest fuel, and use it throughout the tests. Fuels containing propylene oxide should be avoided, as the propylene oxide evaporates readily from the fuel mixture, and will cause inconsistent test results.

### **Engine Load**

Select two propellers for all tests, and use only those props. One prop should simulate static (ground) rpm, and the other should simulate flight rpm (usually at least 10% higher than static). One reason for using two props is that a series of tests with two different speeds for each modification can help pinpoint a flawed test. For example, if most tests showed a 10% difference in engine speed between the two props, a test that showed a much less (or much greater) difference in speed would be suspect.

### **Tachometer Accuracy**

Assuming the tachometer used is of the photo cell variety, it is important to have good light conditions. Shadows in the test area can cause erratic readings. If testing can only be done in poor light, use of an audio tachometer could be the best answer. Even a chromatic pitch pipe can be used, although accuracy is poor. Different tachometers give different results, so always use the same device for each test.

### **Vibration**

An engine mounting system should have a high enough natural frequency to avoid getting "in tune" with the engine frequency. If the mounting system does happen to hit it's natural frequency (or a harmonic), the amplitude of vibration can get really wild. Some engines that have rather flexible mounts "built in" (such as the plastic firewall mounts on a Cox 1/2a) will vibrate so badly when connected to a massive, stiff test stand, that bench testing is practically useless. In that case, operation on the model will give better results, as the energy of vibration will be dissipated by the model with less engine motion (amplitude).

In any case, excessive vibration will reduce maximum speed and cause erratic operation.

### **Engine Condition**

An engine that is well broken in, but not worn out, will give the opportunity for reliable test results. Engines that are very new, or very worn will typically give unsteady runs, which causes difficulty in obtaining a reliable tachometer reading. As a new engine wears in, metal particulate will affect the ignition quality of the plug, and thermal distortion of the piston and liner will cause

extra drag. Old engines usually suffer from a loss of compression at operating temperature, and excessive crankcase leakage.

### **Fuel Mixture**

One way to avoid mixture variations is to set the needle once, and then leave it alone. This technique usually works well for a series of test conducted on the same day, when weather conditions are relatively constant. If one must "dial in" the mixture for peak speed for each test, there are several things to note while watching the tachometer:

- \* The presence of one's hand behind and near the prop often disturbs the airflow enough to affect engine speed noticeably.

- \* Watch for consistency in the amount of exhaust smoke.

- \* Listen for crackling in the exhaust, which typically indicates detonation.

Hope these are of some help and good luck testing.

### **Contest Calendar**

#### **October**

14 Eugene, OR, AMA Events 311, 312, 313, 314, 317, NW. Sport Race, NW Super Sport Race, Flying Clown. Site; Eugene Airport, Contact John Thompson 295 W 38th Ave. Eugene, OR 97405 TX# 503-465-1088.

15 Sewell, NJ, 1oz Goodyear, .21 Goodyear, Foxberg. Site Gloucester Co. Inst. of Tech. Contact George Hubschmidt Rd #1 Box 318 Glassboro, NJ 08028 TX# 609-881-0052.

#### **November**

12 Middlesex, NJ, AMA Events 311, 312, Foxberg. Site Mountain View Park Contact John Waskiewicz 309 Randolph Ave So. Plainfield, NJ TX# 908-755-1646.

### **NCLRA Renewal**

It seems like it was just last year when the renewal period was upon us, well here we go again. Dues run from January - January. The December issue will include names of those members who have renewed if you are unsure, but if not renew today and get ready for 1996.

Name _____	Address _____
City _____	State _____ Zip _____
Country/Province _____	AMA# _____ TX# _____
New _____ Renewal _____	Specific Interest _____

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**Dues are \$10.00 US, and \$12.00 Outside of the U.S.**

**Send to:**

**Jerry Meyer**

**8 S. Grace**

**N. Aurora, IL 60542**

We are at the bottom of the Mail Bag, so We Must Have contributions. Just jot it down we will take care of the rest. We must have your support to keep this Newsletter in operation, so if it's a question, article, etc. send them, to Dave McDonald PO BX 384 Daleville, IN 47334

### **What's Coming**

***Your Contributions***

***Presidents Corner***

***How to get around a racing circle.***

***Plus More***