

From: National Control Line Racing Association
Bill Bischoff 1809 Melody Ln.
Garland, TX 75042



TO

SPECIAL: PILOTING ISSUE

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Torque Roll Issue #131
April 2017



PRESIDENT- Bill Bischoff

Welcome to the Piloting issue! Hopefully it's full of all the tips, tricks, and information you need to become a (better) racing pilot. Thank you to all of you who took the time to share their knowledge and expertise. And don't forget, the June issue will be the Pit Man (Pit Person) issue. That's right, we have to give them equal time or else they get cranky. As always, member contributions are appreciated and encouraged, so scribble down your favorite technique or humorous pit man story and send it in.

I've got a mixed bag this month, so let's start with the easy stuff. We are in an election year for district representatives. The ballot will be in the June newsletter. All Rep's except Ron Duly have indicated their willingness to run again. Ron didn't say no, he just hasn't said yes yet. I will also run again, but would gladly step aside if someone else wanted to take the reins for the South Central district. After all, why should I have all the fun? And don't forget, it's ok to challenge the incumbents, but please keep in mind, District Reps are required to submit a report for every issue, even if it's just a few paragraphs. So, if you're still inclined, drop me an email and tell me you would like to run. Again, the ballot will be in the next newsletter.

Do you know anyone who would like to sponsor an NCLRA event at the 2017 NATS? We are seeking sponsors for Quickie Rat, Super Slow Rat, and Clown Race. Sponsorship is \$125 per event, for two sets of first, second, and third place plaques. Alternately, sponsors may supply their own trophies or plaques, but we need awards for both the pilot and the mechanic. Anyone who is interested should contact me by email at billbisch@hotmail.com.

Tony Stillman, AMA Technical Director, is asking the racing community to consider a couple of rules-related topics. First; If there are AMA racing events that aren't even being flown at the NATS, do they still need to be in the rule book? He is suggesting some house cleaning be done to delete "dead" events from the rule book. Those on the other side of the fence ask, what does it hurt to leave them in the rulebook, especially when the event may be the basis for some other local or regional permutation. For example; even if no one is flying AMA slow rat, NCLRA super slow rat refers back to the AMA slow rat rules. In a related topic, Tony wonders why we don't make some of our time proven unofficial events into official rule book events. The main opposition to this seems to be related to the rule change process itself. If somebody finds a loophole in the rules, changing AMA rules takes a two-year cycle to accomplish. Unofficial events can be fixed much sooner.

Part of what we do as an AMA Special Interest Group is solicit and report group opinion to the CL Racing Contest Board. I am asking all racers to weigh in on these topics by sending me an email with their thoughts. We will report to the Contest Board, who will then initiate action on whatever changes are deemed favorable.

SOUTH CENTRAL REPORT

Bill Bischoff

I would like to begin by inviting everyone to our Spring Warm Up contest April 28-30 in Dallas. We will be having F2C, Quickie Rat, Sportsman Goodyear, AMA Goodyear, Super Slow Rat, Fox Goldberg and Mouse I. All contestants will get a T-shirt. Rumor has it we will have a contestant all the way from South Africa! It'll be a good one!

PRESIDENTS' DAY RACE, DALLAS TX, Feb 18

Once again, all of our fun plans for Sunday got changed by a questionable weather forecast, so we ended up flying on Saturday and just having back to back finals for everybody. Patrick Hempel had the enviable problem of deciding which of two new airplanes to fly. Patrick had recently finished the first Knotty Girl built from my plans, but also had an unflown Fox powered Polecat built by his father Gene at least 20 years ago. As it turned out, the Polecat was quite fast, but the Knotty Girl flew and landed better so Patrick flew it. Mike Greb turned a very fast 8:08, thanks to skipping one of the three required pit stops. Oops! It wasn't hard to tell that none of us had raced since last October. Bill Lee looks like he will continue to be the one to beat. Thanks to team Phil/Dale for flying traffic so everyone could fly 3-up.

SPORTSMAN GOODYEAR 160 laps

1) Bill Lee	8:34.01 (8:49.48)
2) Patrick Hempel	8:51.20 (11:35.72)
3) Bill Bischoff	9:05.62 (9:40.34)
4) Dale Gleason	9:16.78 (155 laps)
5) Mike Greb	10:35.91 (DQ)



Top, Patrick Hempel attaching lines to a couple of Sport Goodyears, note the newly built "Knotty Girl" on the right, built from Bischoff Plans. Bottom, A side view of Full Size Formula 1 racer "Miss Min".

SOUTHWEST – Ron Duly

Racing results for Feb. 2/12/2017 at Whittier Narrows

We welcomed the “Ready and Enthusiastic Racing Team” of Jim Holland and Doug Mayer plus Pete Cunha from upper-California for the day’s events. Jim flew in from England just to enjoy our beautiful mid-70’s California winter weather. Pete also wanted to enjoy actual sunshine as opposed to the wet winter plaguing his hometown. The Callas/Kusik SSR entry seemed to be running very hot and kept quitting on takeoff in practice. Switching from 10-10-10 synthetic fuel to 10-20 castor oil fuel cooled it down for an excellent run. SCAR supplies both blends of fuel for our contests. The Hull/Long B25 powered plane was lapping everyone from the start. An unfortunate pit accident ended their race. Pete Cunha’s entry was powered by an OS25FP WITH MUFFLER! Compared to the other engines it was almost like an electric motor. Pit man had to watch for when it quit rather than relying on the sound.

SCAR Goodyear is alive and well in SoCal. SHOCK!!!! Six teams raced and all posted times. One thing noticed was how loud the OS 15 CVA engines were (especially compared to Pete’s muffled engine). The Enya-powered entry suffered from FOD (dirt in the NVA) for an on-and-off run. Restarts were great, though.

Mouse 1

Kusik/Johnson	3:55.12	6:27.09
Hull/Callas	4:39.36	6:55.07

Jr. Mouse

Mayer/Mayer	DNF
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Super Slow Rat

Callas/Kusik	7:08.46
Mayer/Holland	7:46.13
Cunha/Kusik	8:34.67
Hull/Long	28 laps

SCAR Goodyear

Holland/Mayer	5:07.79	Outrageous/Moki
Kusik/Johnson	5:33.53	Smith kit?/OS CVA
Hull/Long	5:37.19	Shoestring/OS CVA
Mayer/Holland	6:14.75	Mike Argander/ Russian engine?
Duly/Johnson	6:19.41	Lil Rebel/EYNA
Callas/Hull	7:03.71	Shoestring/OS CVA

Texas Quickie Rat

Holland/Mayer	8:30.05
Callas/Johnson	DNF



Jed Kusik with the Callas/Kusik SSR entry.

RACE PRACTICE FOR NON-RACE PILOTS Bill Bischoff

If you’re not a racing pilot, but think you might like to be, here are some things you can work on every time you fly.

One of the most important skills to develop is the ability to always get your plane back to your pit person, no matter where the engine stops. Understanding some basic concepts will make this easier. Concept #1) Airspeed is what keeps the airplane flying. When the engine stops, drag reduces the airspeed until the airplane will no longer fly. By whipping the airplane, the pilot can maintain enough airspeed to keep the airplane flying. By knowing when to stop whipping, the pilot can make the airplane land where he chooses. This is the goal. Simple enough, right?

Concept #2) There is a right way and a wrong way to whip. Backing away from the airplane is not whipping. That’s what you do to regain line tension in an emergency. Proper whipping is pulling or leading the airplane around the circle to maintain forward movement (airspeed). The easy way to illustrate the difference, and in fact to learn the proper technique, is by practicing with an airplane (any airplane) while the engine is running. While flying level, fly a couple of laps with your arm

extended, then quickly pull the handle towards your chest. Doesn't make the airplane go any faster, does it? Next, with the plane flying level and your arm extended, start pulling the airplane forward like it was a stubborn mule. It may take a bit of fiddling, but you will find a body position where you can do this comfortably. It should be easy to tell when you are actually making the airplane go faster. That's proper whipping. Now, do that when the engine quits. You will discover that you can significantly extend the airplane's glide. The final trick is figuring out where to stop whipping to make the airplane land where you want. Fortunately, every landing with every airplane is an opportunity to practice. Whenever you fly, make the effort to get your airplane back to your starting point. Wheels, no wheels, grass, pavement, every situation will be different, so keep practicing.

As you practice, you can also practice proper handle positioning. Normally during a race, you should be flying with your handle in the center of your chest, just below your collar. Keeping your handle pulled into your chest means you are flying the smallest possible radius, so practice until it is comfortable. Also practice with the handle held straight high above your head. You may need to do this to get your lines over the head of a tall pilot when passing. While you're at it, practice walking as small a circle as possible. During a race, there will be contact between the pilots, so don't worry about walking too small a circle. Just be sure you're not standing in one place and pivoting, because that's not allowed!

Get Your Race face On – The Pilot By Bob Heywood

The race pilot's task is to fly his racer as efficiently as possible in order to make as much speed as can be had from the set-up.

The first thing a race pilot needs to learn is the right way to fly in a race. This is not as simple as it might sound. Because there may be two or more planes in a race, the pilots must walk a circle. Pivoting in the center doesn't work. The vintage Flying Models magazine cover (below) shows some early C/L team racing action. The planes and pilots are all nicely spaced around the circle and no one seems pushed. Well, it rarely goes that way.



Hats are an obvious no-go, but there are a couple of other points to take away from that photo. First, the pilots are walking a much larger circle than they should be. You must learn to get as close to the center as possible. The second, and perhaps less obvious point is the position of each pilot relative to his racer.

How the pilot lines up with the center of the circle and his racer is absolutely critical to having a successful race. As the pilot, you must learn to position yourself on a line drawn from the center of the circle out to your race plane. In the picture, the three pilots in front are pretty close to optimum but the fellow on the other side of the circle looks to be about a quarter lap behind his plane. Again, imagine the line from the center to your plane as 12 o'clock. That pilot is in a position more like 3 o'clock relative to his plane. It becomes a big deal when an overtaking plane is trying to make a pass.

Look at the other photos (below), taken by Pete Soule, of a mid-60s Rat Race in Southern California. Here the action is a lot more intense. The guy wearing the South Bay Piston Poppers shirt is in the classic 3 o'clock position. When this happens it's not good for anyone. As the overtaking pilot begins to move up, he is forced with the not so good option of passing his lines over the other Pilots head before the faster plane actually gets by the slower one. The last thing you want to have happen is to try and walk out to a larger circle to get behind a pilot who is flying this way. You'll run yourself ragged in no time. Practice by yourself at first to learn where to be so it becomes second nature. Have your pit crew coach from outside the circle.



Once you have the basic flying part down it's time to race. Be sure to read all of the official rules covering pilot conduct during a race as I'm only going to hit a couple of high points.

When you take off, don't zoom to altitude. Climb gradually as you move to the pilots circle and work your way into the flying order. You have to rely on your peripheral vision to accomplish this.



As you begin to overtake a slower plane, raise your arm to get your lines over the other pilots head. Get past the other pilot as quickly as possible and complete the pass with your racer. It's kind of hard to describe, but I sometimes found it necessary to walk the circle and sort of pivot to the left at the same time to make the pass and get back into line. It's something that only experience can teach. Get back down to normal race altitude as quickly as possible. I like to fly as low as allowed for in the rules. It's the fastest way around the race course.

If you're the one being passed just fly your race. Never duck. It's the passing pilot's responsibility to make the pass.

No two races are ever the same and every pilot you will fly against has their own style. It's important to have eyes in the back of your head and be aware of everything that is happening in the center. Typical lap times are 3 seconds or less so things can happen quickly. You have to be able to run your own race while at the same time be ready to deal with rapidly changing situations.

When everything goes right, it's a real thrill!

"Fly low...Fly fast..."

F2C Tips

By Steve Wilk

I've been making and selling Carbon Fiber propellers for over 20 years now. I fly a variety of CL events including Speed, Combat and Racing. I also work with Stunt fliers, Free flight and RC Pylon. A question I get all the time is: what is the best prop for (name your event)? I reply with the following:

There is no magic prop or a formula for picking the best prop or one thing that makes for a fast rig, we found that it is a combination of things. It is not an easy process. The following is referring to F2C Team Race I sent to a fellow flier. To follow are many things that will help you no matter what racing events you fly.

Plane and engine. Not all planes and engines are created equally. When we first started out flying F2C, we bought whatever we could get. For engines, we bought Profi's, Learner's and SV's, some new and some used, we were just looking for deals. For planes, we bought new Cobras and a variety of used planes. We were able to make the USA team with a Cobra and a Profi with a 3:30 in 2008. But to be competitive, we needed something better, so we bought the best equipment we could get, which at the time was Yugov engines and a Kramaranko planes, these were what the top teams were using. We were still slow but now we had equipment with promise.

We learned many things along the way: engine up-keep is important, good bearings, keeping the piston and liner clean from carbon – all of these things can rob speed. Also, the plane's cooling is a big part of the engine performance. If restricted and you will have proper cooling, the engine will heat up and it will go over and slow down. If you have too much cooling, it will never get up to operating temp and you will be soft, but this can be fixed by taping up part of the air intake and air outlet. Then again, some planes are just not fast, they're too heavy, the thrust is not in-line with the wing, engine thrust or line rake are not correct. We always buy new now, as we've learned that if someone is selling their spare gear, there is a reason.

Our next step in finding speed was the pilot. Dave needed to get in shape, he had to learn proper body position/posture and handle position while flying. He watched lots of races on YouTube to see how the good pilots flew and what to avoid. He needed to lean to tuck with the other pilot, stand up straight and keep his handle in front of him, never off to the side. A pilot who is out of shape and out of position will slow the plane down. We proved it to one of the American teams when Dave took their handle and flew their plane, he picked up .5/sec for ten laps with the same setting. The pilot needs to fly or even push the plane but not let the plane fly the pilot.

The right fuel mix makes a difference, including the type of oil, lead or lead substitute % of DiI – each element makes a difference. Buy the purest ingredients you can get and mix (1) Liter at a time. You will get the most accurate mix and if you screw up it is only a liter of fuel. We were able to pick up speed by using different oil, at the same time keeping an eye on carbon build-up on the piston.

Every engine/plane combo will use a different propeller. Finding the right prop is a trial and error process, but it can be hard to compare with the variety of different blade shapes, thickness and designs. What we found is that Super Cool offers several F2C props, great props, all with the same blade shape. This makes for easier

comparisons. We bought 6 of each, then took 3 of each pitch and cut them to 5.9", 6.0", and 6.1". That gave us a combination of 18 different props to test. We started out with 6" diameter to find which pitch was the fastest. Once we found the fastest pitch, then we experimented with length. We discovered that you might increase speed with a shorter diameter but you will also lose laps. Next - how does the engine sound? Does it sound happy or is it straining? This will take a keen ear and a mentor to help you. We owe a lot to Dick Lambert and Tom Fluker who worked both with Dave and me. We listened, and applied what they told us. Dick's favorite saying is "Don't tell me, Show me!" You will hear a lot of theories on how to go fast, but they are just theories. You need to be organized and methodical in your testing to maximize your performance. Most importantly, you need to know the difference between a test setting where you are maximizing speed and a racing setting – which is a little softer, so when you are flying 3-up with traffic that will slow you down and heat up the engine, you are able to maximize speed.

However, the fastest plane does not always win the race. Now you need to put it all together and not just flying for a 10/lap time, but for a 100 laps race with a start and 2 pits. Every engine starts differently, so working with one engine style makes life a lot easier. You need fast starts and 1-flip pits. If it takes more than 1-2 flips, you will turn a slow time even if you have a fast plane. I've watched many races where a slow plane won while the fast plane was on the ground with the mechanic flogging away on the prop. Our best decision was to sell everything we had, and then buy all new equipment - just type one of engine: Yugov and one style of plane: Kram. This made my life much simpler and we were able to progress much faster. Most importantly, this is a Team event, hence the name "Team Race". Dave and I flew combat for years before we started flying F2C and the team work we developed flying combat really helped us in TR. Dave has great circle awareness, he knows where the other 2 pilots are from years of flying combat. It helps his passing, landing and pitting in a race. As a team, we know what the other is thinking and I instinctively know what changes to make without any verbal communication.

I know this may not be the answer you were looking for, but the processes we used really helped to maximize our performance. F2C is a challenging event to fly. To be successful requires a lot time, testing, time and \$\$.

Steve

CONTEST CALENDAR

NOTE! Confirm all contest details with Contest Director!

NCLRA cannot be held responsible for errors or omissions! This calendar is compiled from data collected at the NCLRA website nclra.org. and other published sources. Members can log in to NCLRA.org and submit contest details.

NORTHEAST DISTRICT

2017 RACING SCHEDULE

South Jersey Aero Modelers

Contest Site: Mountain View Park, Middlesex, NJ

Come out and enjoy Control Line Racing.
Inquiries...call Phil Valente-610-692-6469

23-Apr

1 OZ GOODYEAR, FOXBERG, CLOWN RACING-SPORTSMAN,
CLOWN SPEED, FOX 35 SPEED, PERKY SPEED
PHIL VALENTE AMA#16155
1523 ULSTER WAY
"WEST CHESTER, PA 19380"
(610) 692-6469

5-Nov

1 OZ GOODYEAR, FOXBERG, CLOWN RACING-SPORTSMAN,
CLOWN SPEED, FOX 35 SPEED, PERKY SPEED
PHIL VALENTE AMA#16155
1523 ULSTER WAY
"WEST CHESTER, PA 19380"
(610) 692-6469

19-Nov

1 OZ GOODYEAR, FOXBERG, CLOWN RACING-SPORTSMAN,
CLOWN SPEED, FOX 35 SPEED, PERKY SPEED
PHIL VALENTE AMA#16155
1523 ULSTER WAY
"WEST CHESTER, PA 19380"
(610) 692-6469

NORTH CENTRAL DISTRICT

None

NORTHWEST DISTRICT

May 26-27-28

46th Northwest Control-Line Regionals, Roseburg Regional Airport, Roseburg, Ore.

Racing is on Sunday. Events are: "Geezer Clown" Race, NW Clown race, NW Sport Race, NW Super Sport Race.

Sponsored by the [Northwest Regionals Management Association](#) in conjunction with other Northwest clubs and individuals.

[Download a flyer](#) with all the details or [email for information](#).

[Download a discount advance entry form](#).

MIDWEST DISTRICT

July 16-22

91st Annual National Aeromodeling Championships

AMA Contest site, Muncie In.

Control Line Racing July 17-20

Monday- AMA Scale Race, DMAA Sportsman Goodyear

Tuesday- 1/2A Mouse 1, NCLRA Quickie Rat

Wednesday- AMA Slow Rat, NCLRA Super Slow Rat

Thursday- F2C Team Race, NCLRA Clown Race

SOUTHEAST DISTRICT

None

SOUTH CENTRAL DISTRICT

April 28-30 DMAA Spring Warmup

*Friday: F2C *Saturday: Quickie Rat, Super Slow Rat, Sportsman Goodyear *Sunday: AMA Goodyear, Mouse I, Fox Goldberg

June 10

Quickie Rat, Super Slow Rat, Sport Goodyear, Fox Goldberg, Mouse I.

Sept 2 same events as June 10

Sept 29- Oct 1 DMAA Fall Finale same events as April 28-30

SOUTHWEST DISTRICT

2017 Whittier Narrows Speed, Combat, & Racing Contest Calendar

Whittier Narrows Park, S. El Monte, Ca., 34.042737, -118.070392

PRELIMINARY-rev A

June 3-4

Bill & Bev Wisniewski Memorial Speed and Racing

All speed events including electric, 301-310 & 334,335 + perky & NASS Sport Jet & C Speed.

Racing Sunday only: SCAR Goodyear, NCLRA Clown, Super Slow Rat/Fox Race and Quickie Rat

CD & Speed ED: Joe Brownlee h: 714-895-1857

c: 714-393-1940

Racing ED:

Sept 9-10

Wayne Trivin Memorial Speed and Racing

All speed events including electric, 301-310 & 334,335 + perky & NASS Sport Jet & C Speed.

Racing Sunday only: SCAR Goodyear, NCLRA Clown, Super Slow Rat/Fox Race and Quickie Rat

CD & Racing ED: Ron Duly h: 818-843-1748

Speed ED:

Oct 21-22

Virgil Wilbur Memorial Speed, Combat, and Racing, sanction #17-284

All speed events including electric, 301-310 & 334,335 + perky & NASS Sport Jet & C Speed.

Combat: 75mph slow, F2D fast

Racing Sunday only: SCAR Goodyear, NCLRA Clown, Super Slow Rat/Fox Race and Quickie Rat

CD & Speed ED: Howard Doering h.714-638-4937

c.714-394-5304

Racing ED:

Combat ED:

Dec 2-3

TOYS FOR TOTS Speed, Combat and Racing

All speed events including electric, 301-310 & 334,335 + perky & NASS Sport Jet & C Speed, Torquette Speed, Hollow Log Speed.

Combat: 75mph slow, F2D fast

Racing Sunday only: SCAR Goodyear, NCLRA Clown & Super Slow Rat/Fox Race and Quickie Rat, Musciano Log Racing

Entry fee: 1 new unwrapped toy, approx value \$10-\$20.

CD & Racing ED: Charlie Johnson

Speed ED:

Combat ED:

NOTES:

1. **Contact CD or ED to confirm contest dates before traveling long distances.**
2. All Racing events Sunday only
3. Same four Racing events each contest
4. Clown will be flown on 60\2019 lines per NCLRA NATS rules
5. Other Racing events may be flown if two entrants show up ready to race
6. Combat and/or Navy Carrier events may be added to some contests.

NATIONAL RECORDS

SLOW RAT (.25 engine)

Op (70 laps) 3:01.52 Jim Gall/ Les Akre 7/04/11
(140 laps) 6:17.59 Russ Green/ Bill Lee 7/07/09
(no Jr or Sr record)

½ A MOUSE 1

Jr (50 Laps) 2:37.57 Scott Matson 7/15/99
(100 Laps) 5:17.68 Scott Matson 7/17/99
Sr (50 Laps) 2:44.68 Dave Rolley Jr 7/15/99
(100 Laps) 5:20.11 D.J. Parr 7/16/98
Op (50 Laps) 2:12.3 Jim Holland 7/16/04
(100 Laps) 4:22 Ryan & Gibeault 7/15/99

½ A MOUSE 2

Op (70 Laps) 3:01.24 MacCarthy/Kerr 7/11/03
(140 Laps) 6:18.13 Whitney/Hallas 7/10/09

SCALE RACING

Jr (70 Laps) 2:50.65 Bob Fogg III 7/16/91
(140 Laps) 6:08.55 Bob Fogg III 6/23/92
Sr (70 Laps) 3:15.12 Doug Short 7/11/00
(140 Laps) 5:40.05 Bob Fogg III 7/11/95
Op (70 Laps) 2:39.38 Willoughby/Oge 7/15/97
(140 Laps) 5:33.04 Bob Fogg Sr 7/16/91

F2C TEAM RACING

Op (100 Laps) 3:42 Fisher/Wilk 7/13/15
(200 Laps) 6:43.32 Fisher/Wilk 7/16/12

F2CN (NCLRA RULES)

100 Laps 4:14.84 Bill Lee/ Russ Green 7/07/11
200 Laps 8:37:10 Wallick/Brozo 7/15/13

NCLRA 'B' TEAM RACING

Op (35 Laps) 1:24.34 Burke/Duly 7/12/05
(70 Laps) 3:05.73 Green/Lee 7/10/09
(35+70 Laps) 4:33.91 Green/Lee 7/10/09
(140 Laps) 6:08.80 Green/Lee 7/10/09

RAT RACING (.15 RULE)

Op (70 Laps) 2:44.6 Jim Holland 7/15/04
(140 Laps) 5:33.1 Jim Holland 7/15/04

Jr-Sr No record established

NCLRA FOX RACE

Jr (100 Laps) 5:57.11 Scott Matson 7/11/99
Sr (100 Laps) 5:28.09 Scott Matson 7/16/02
Op (100 Laps) 5:32.55 Tim Stone/Bob Oge 7/10/05

NCLRA CLOWN RACE

Op (7 ½ Min.) 150 Laps Bischoff/ Lee 7/15/15
Op (15 Min.) 284 Laps Bischoff/Lee 7/15/15

NCLRA TEXAS QUICKIE RAT

Op (70 Laps) 2:58:72 Bill Lee/Bill Bischoff 7/18/13
(140 Laps) 6:07.01 John McCollum/Bill Lee 7/14/05

NCLRA SUPER SLOW RAT

(100 Laps) 5:14.30 Bill Lee/Russ Green 7/05/09

SUPPLIERS

BRODAK MANUFACTURING

Everything c/! 100 Park Ave, Carmichaels PA,15320
724-966-2726 email flyin@brodak.com

CS ENGINES AMERICA

113 North Chase Ave., Bartlett, IL 60103
G/Z .049/.061 Engines; sales, service & parts. (Bill Hughes)
e-mail williamhughes4@comcast.net 630-736-6036

DARP

969 Cedar Street Allouez, MI 49805
DARP Speed Pans for classes including
A, B, D, and 21 Sport. (Barry Tippett)
e-mail: Barry@Petrockfarm.com 906-337-4533
www.Petrockfarm.com

JIM DUNKIN

Engine reference books 816-229-9671
dunkin@discovernet.com

ELIMINATOR PROPS

Steve Wilk 3257 Welcome Ave. N. Crystal, MN 55422
763-531-0604 e-mail swilk@cpinternet.com
Online store <http://eliminatorprops.com/store/>

STEVE EICHENBERGER

Custom Fiberglass Performance Props: Moulded tops. Steve
Eichenberger 480-730-0016

GOODYEAR PLANS- DOUG MEYER

Douglas Mayer 5010 W. 123rd Place
Hawthorne, CA 90250 310-676-4240 Home
310-463-0525 cell
mayer@kmd-arch.com

JUST ENGINES LTD

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(<http://www.justengines.unseen.org>)

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785-266-7714 - Sales@LeeMachineShop.com
www.LeeMachineShop.com

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Fuel ready mixed top quality finest ingredients.
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Solid Wire Sets and other C/L needs
Contact Melvin Schuette, PO Box 282 Auburn KS 66402
1-785-256-2583. mbsmodelsupply.com

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Full line of quality Glass & Carbon Fiber props for Control
Line Speed & Racing.
Contact Mike Hazel at: 503-859-2905 Day Phone or 503-871-
1057 24 Hour Phone. Email: zzclspeed@aol.com

NELSON COMPETITION ENGINES

121 Pebble Creek Lane, Zelienople, PA 16063
Manufacturer of NELSON Racing Engines and parts, FAI Pans
for F2A & FIC Custom Button Heads, Nelson Glow Plugs, many
other specialty engine items. (Henry Nelson) Phone: (724) 538-
5282 e-mail: nelcomp@fyi.net

MARC WARWASHANA

Rubber fastfills, vintage Dons' racing wheels.
11577 North Shore Dr.
Whitmore Lake, MI 48189-9124
Phone: 734-449-7355 E-Mail: whellieman@gmail.com

OLD MAGAZINE PLANS & MORE ON CD

Tom Wilk, 301 W. Redwing St., Duluth, MN 55803
Phone: 218-724-0928(hm) E-Mail: tawilk36@cpinternet.com

ZALP ENGINES

Zalp F2C&F2D engines- Bob Whitney
456 Garvey rd sw, Palm Bay FL 32908
f2cracer@aol.com

BISCHOFF'S SPORTSMAN GOODYEAR RACING PARTS

ASP/ Magnum 15 VENTURI		\$10.00
1/4" ID, 4mm spraybar, fits 10mm hole		
RSM Supertigre style needle assembly		\$10.00
aluminum landing gear struts		\$12.00
.090" 2024-T3, drilled & tapped, with screws		
Edges pre-rounded.		
wheels and axles		\$6.00
1 1/4" Williams Bros. wheels, 1/4" axles		
1/4" axles w/o wheels		\$2.00
with hardware- requires 1/4" hole in wheels		
1 oz fuel tank		\$20.00
per Margaret June plans		
bellcrank button kit		\$2.00
includes hex buttons, eyelets, screws		
fuel shutoff trigger wire		\$1.00
per Margaret June article		
fuel bottle with fill fitting	8 oz.	\$10.00
	16 oz.	\$11.00
deluxe fuel bottle with spring valve	8 oz.	\$14.00
	16 oz.	\$15.00

racing handle, 3" spacing **\$25.00**
metal frame, wooden grip, stainless cable
(other spacing available by request)

Shipping \$7.00 per order including fuel tanks or bottles /
\$3.00 per order without fuel tanks, bottles. I accept paypal or
personal checks.
Paypal: billbischoff@hotmail.com/ mail checks to William
Bischoff, 1809 Melody Ln, Garland TX 75042. For questions,
call (972)840-2135 or email billbischoff@hotmail.com

DMAA Spring Warm-up

**Gene Hempel Memorial
April 28th, 29th & 30th 2017
Control Line Racing & Speed
Site: Samuell Hobby Park**

Northwest Highway & Garland Rd. Dallas, Texas 75218

Class AA AMA Sanction # 452 GPS 32.866867, -96.671400

Pilots Meeting at 9:30 AM Friday, Saturday & Sunday

Friday 04-28

F2C
Record Ratio Speed
NASS Sport Jet
NASS Perky Speed

Saturday 04-29

Texas Quickie Rat
Super Slow Rat
Sport Goodyear
Record Ratio Speed
NASS Sport Jet
NASS Perky Speed

Sunday 04-30

AMA Goodyear
Class I Mouse
Goldberg
Record Ratio Speed
NASS Sport Jet
NASS Perky Speed

Speed events all three days. All events are (JSO). Helmets required for racing pit crews.

Entry Fee: \$15 first event, \$5 each additional event, \$25 maximum.

**Contest Director: Patrick Hempel
For additional info.
See DMAA Web Site
www.dmaa-1902.org**

**Sponsored by
Dallas Model Aircraft Association
Fuel and awards provided
By NASS & DMAA
AMA: License & Entry fee required**

Racing Event Director: Bill Lee



Academy of Model Aeronautics

5161 East Memorial Drive
Muncie, Indiana 47302
(765) 287-1256 – Voice
(765) 289-4248 – Fax
(765) 286-3303 -- Competitions Fax
www.modelaircraft.org
E-mail: cpierce@modelaircraft.org



March 20, 2017

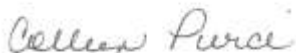
Dear F2C Control Line Race Team Selection Members and Participants:

We are now accepting bids to host the 2017 F2C Control Line Race finals for the 2018 F2C World Championship Team. If you or anyone you know is interested in hosting the finals, please send a bid to my attention at 5161 E Memorial Drive, Muncie, IN 47302 by **April 17, 2017**. Announcement of the finals site will be announced no later than April 1, 2015. The following are the guidelines for submitting a bid to host the finals.

- **Provide the location of the site**
- **Provide map of the site if available**
- **Provide information regarding the site such as type of field, asphalt, grass, facilities, camping facilities, size, etc.**
- **Provide information about the club wishing to host the finals**
- **Provide local information (local hotels, restaurants, airports etc.)**
- **Provide climate information for the area**
- **Provide desired dates for the event**
- **Provide suggested event fees**
- **Provide any frequency restrictions**
- **List equipment in place to operate the event**
- **List equipment needing to acquire to operate the event**
- **Provide contact information**
- **Provide name of contest director**
- **Provide staffing details**
- **Provide a budget for operation of event**

If you have any questions or concerns regarding this information, please feel free to contact me at (765) 287-1256 ext. 252 or my e-mail is cpierce@modelaircraft.org.

Sincerely,



Colleen Pierce
FAI Coordinator

2017 F2C Team Selection Contest (Team Trials) Muncie, IN July 22-23, 2017

The following shall constitute an official bid to host the F2C Team Trials.

Date of event: July 22-23 2017

Location; AMA National Flying Site, Muncie, IN.

Organizer: Dave McDonald

CD: Dave McDonald

Entry Fee: \$125 per team. This is an increase of \$25 over historical entry fees the increase will be used to help fund workers for the event or to increase the available funds for the team.

Jury: Dave McDonald, John Ballard, TBD

FAI Jurist: Organizer will provide suggestions for the FAI EC appointment.

General help (counters and timers): We will be asking for volunteers from the racing community to assist in this endeavor, in addition the organizer will be asking the local CAP Cadet Squadron for volunteers, and if need be contestants not flying will be asked to assist.

Pre-event meeting: A meeting of contestant will be conducted on Friday evening prior to the event. Further information regarding location and time with TBA.

Processing of Models: Basic processing will be held the morning of the event on site. The Jury reserves the right to do a full processing of any model during the event if circumstances warrant. The Jury also will reserve the right to do a complete processing after the finals of the top five (5) finishers.

Races: Races will be held according to the FAI Rules that will be in effect for the World Champs for which this team is being selected.

Accommodations: See the AMA www site for a list of hotels in the area.

Map: See the AMA www site for a site map

General comments: The event is at the conclusion of the AMA Nat's, thus the site will be race ready with equipment. Participants will have Friday as a practice day, as well as be able to utilize the site each day at the conclusion of the Nat's activities or during the day if there is availability with the understanding that during the Nat's completion and during the day Nat's racing participants will have priority on the practice circle.

I am also asking the AMA to waive the Sanction Fee, as this fee will simply be taken from the budget to offset the charge to the Organizer.

Any questions should be directed to the CD at his e-mail address

Regards,

Dave McDonald
DSMGolf62@comcast.net

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Torque Roll is the official publication of the NCLRA. Published bi-monthly. All submissions are valuable & will be considered for publication subject to editing. Preferred format for publication is as a MS Word document using 10 point Times New Roman font. Any photos should be sent as a separate jpeg file, medium res. Email all as an attachment to Les Akre at the address given on this page.

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Basic membership is free. Simply apply on the web site : <http://www.NCLRA.org/> You will get the Torque Roll newsletter electronically every other month. In addition, you will get voting privileges for whenever a vote by the membership is required.

If you would like to receive a paper newsletter

A paper copy subscription is \$10.00 for US and non-US residents. Send payment to the Secretary/Treasurer listed above.

USING PAYPAL-To pay with Paypal, first log in to your Paypal account, then send the paper subscription fee to; Treasurer@NCLRA.org

Note that a \$.90 (\$1.10 for foreign membership) surcharge is added for the PayPal charges.