C Modified Quarterly C Modified Quarterly V1-I1 / Winter 1999

Introduction

I am happy to introduce **cm-q**; the quarterly newsletter dedicated to the competitors and followers of the SCCA Solo II C Modified class. In a moment, I will elaborate on the reasons behind this newsletter and what it will contain, but allow me to first introduce myself.

My name is Chris Pruett and I will be your editor. I call my racing entity "pru" which is short for pruett racing union. I attended my first autocross in 1990 running a 1990 DS Civic Si. After two years of competing in DS, I moved to CM after purchasing a 1964 Beach Solo Vee from Gordon McIndoe. I ran the Solo Vee until late 1995 at which point I worked a trade out with Nick Scott for his Formula Ford. I have had the pleasure of competing in CM with the 1985 Reynard 85F (the Swift "look-a-like") ever since. Which brings me to why cm-q is being published.

Through the exchange of information, I wish to enhance the excitement of running the FF / S2 in CM. From my interactions with you in person or via the net (autox-cm@team.net), it seems that I am not alone in my thoughts. I have yet to find a CM competitor who would not freely provide help, advice, or opinions regarding a given problem or issue.

My favorite example of this CM camaraderie comes from the first day of the 97 Solo II Nationals. After our first runs, my co-driver and I suffered an electrical failure that would not allow the car to restart. Although we were unable to locate the problem until after the heat (DNS runs two and three), there were numerous competitors who provided assistance in grid and impound. We determined the problem to be a shorted out battery, and we faced the dilemma of finding a suitable replacement for the next day. As news of our situation spread, we had competitors offering us racing batteries they had as spares. This assistance was totally unexpected, yet I have come to realize that this is common to CM.

In addition to relaying such experiences as the above, it is my hope that **cm-q** will provide a forum that CM competitors can use to trade technical FF / S2 information. With that said, allow me to outline the general format as well the contents of this issue of **cm-q**:

<u>General</u>	<u>V1-I1</u>
Editor's	Expanded Introduction
Details / Letters	Submissions
Technical	Gearing / gearbox
Contacts	My Libraries
Driver / Car	Charlie Mathews / Lola T644
Ads / Products	Classifieds / EZ-up / Preview

In conclusion, I ask that after you review this first issue of cm-q that you forward a donation (suggested amount: \$5 / year) to cover the costs of publishing.

Keep in touch!

pru 50 cm 1985 Reynard 85F



9/98: the 85F at Grattan / photo by Andy Yanka

Details

Editor

Chris Pruett 3405 Boston St. Midland, MI 48642 (517) 832-8970 (h) (517) 636-5577 (w) ckpruett@dow.com

Contributing Photographers

Robert Seamon Andy Yanka

Subscriptions

To become a cm-q subscriber, please forward the editor your U.S. Mail address along with a donation (suggested amount \$5 / year) to cover the cost of publishing.

V1-I1 Statistics			
Issues Printed	30		
Issues Mailed	25		
Issue Printing Costs *	\$20		
Issue Mailing Costs *	\$8		
Ads / Donation Income	\$0		
99 Surplus / (Deficit) *	\$(28)		

* rounded to the nearest dollar

Commercial Ads			
Business Card	\$10 / year		
Half Page	\$15 / year		
Full Page	\$25 / year		

Disclaimers

This newsletter encourages your submissions. The views expressed by a given author are not necessarily those of the publication.

All drawings, photos, or tables are by the author unless otherwise noted.

The information in this newsletter is accurate to the best knowledge of the editors. All recommendations found within are made without guarantee on the part of the author, editor, or publisher. Any liability incurred in connection with the use of this newsletter is expressly disclaimed.

Letters / Books

A Special Thank You

As many of you know, this was a very difficult year for me due to health and other problems. I would like to thank Bob Lenz, George Williams, Galen Williams, Tom Reichel of Mid-Atlantic Motorsports, Bruce Foss of Hoosier Tire, Josh Sirota, and the entire C-Mod class for making this the successful year and enjoyable that it was. I can not thank all of you enough for your support when I needed it most and I could not have competed without your support. I am looking forward to seeing all of you next season.

Charlie Mathews 83 Lola T642

Charlie,

I'm glad we had the opportunity to compete against each other in 1998. I was inspired by your will to not let any problem stop you from running the Lola. Looking forward to another great year in CM,

pru

Recommended Reading

Carroll Smith's "Prepare to Win" is the one book that I feel every cm-q subscriber should own. The basics of car preparation that this book covers have not changed in the 20 + years since its initial publishing. Most, if not all, of your madding mechanical problems will disappear if you closely follow the advice offered in this book.



PREPARE TO WIN: The nuts and bolts guide to PROFESSIONAL RACE CAR PREPARATION ISBN: 0879381434 Date: January 1978 Approximate Price: \$20.00

Can be purchased from Barnes and Nobel and Classic Motorbooks.

Technical

Solo II Gear Selection

One of the biggest advantages of those who road race versus autocross the FF / S2 has to be in the area of gearing. There are a huge number of sources that can be referenced to determine the "optimum" gearing for virtually every road course in the United States.

As we all know, those who run the FF / S2 in Solo II competition have absolutely no way of knowing in advance the layout of a given course. CM competitors find themselves forced to compromise in the area of gearing to provide for a wide variety of courses. I have found that how one chooses Solo II gears to make this compromise is, for the most part, a personal preference.

The intent of this column is not to say that any one selection of gear ratios is "better" or "worse" than another. Instead, I will outline how I came to choose the gear ratios in my transaxle to provide those who are new to CM a "general" method on which to base their own selections.

At this point I would like to note that you should own, or at least be able to access, technical drawings for your gearbox. I highly recommend picking up a free catalog from Taylor Race Engineering that includes a number of these drawings plus bunches of other valuable gearbox and gearing information.

Before proceeding further, we will review a few basic terms that relate to gearing and gearboxes. Please refer to any gearbox technical drawing that you may have.

<u>Gearbox / Transaxle</u>. The unit as a whole. There are roughly a dozen or so different types, but the vast majority of FF / S2 in CM utilize the Hewland Mk 9. Note that, although we will refer exclusively to Mk 9 for the remainder of this discussion, all of the basic concepts and terms apply to the other types of gearboxes.

<u>Ring and Pinion</u>. The portion of the gearbox that determines the "final drive". The pinion inputs power to the ring. The ring then sends this power out to the axles via the differential. The most common ring and pinion sets found in the Mk 9 are numbered 9:31 and 10:31. These numbers refer to the number of rotations the ring takes in relation to the pinion. That is, 9 or 10 rotations of the ring occur for every 31 rotations of the pinion. Most of us live with the ring and pinion we are dealt because of the cost / effort required to change it (pull the box, send it in, pay \$500 to \$900 in parts plus \$400 to \$600 in labor).

<u>Layshaft</u>. The portion of the gearbox that transfers engine power, via the clutch shaft, to the pinion. The layshaft is coupled to the pinion through the gearset. When you take your gearbox apart, the layshaft will be the part of the assembly removed from the main case. <u>Gearset</u>. The portion of the gearbox that determines your 1st through 4th gear ratios. Two physical gears make up any gear ratio, hence the name gearset. A set of numbers specifies a gearset. For the Mk 9, over 35 gearsets are available ranging from 12:28 up to 27:24. The first of the two gearset numbers refers to the physical gear that resides on the layshaft. The second gearset number refers to the physical gear that slides on to the pinion. These numbers also relay the number of rotations the layshaft makes in relation to the pinion. For a 12:38, 12 rotations of the layshaft will rotate the pinion 38 rotations.

Keeping the above terms in mind, we can proceed on to the selection of Solo II gear ratios.

The basic tenant of my Solo II FF gear ratio selection is four equally spaced ratios. Top speed in any gear achieved at 7000 r.p.m. I believe that equally spaced gearing gives you the greatest flexibility over a wide variety of Solo II courses. With this stated, I will outline my Solo II gearing method.

Step one is to determine the maximum velocity that you would realistically see at any given Solo II event. With this decided, you will choose a 4th gear ratio that most closely matches this speed.

The second step is to determine a 1st gear ratio yielding the lowest possible top speed. This turns out to be a function of your ring and pinion as well as available gear ratios. How you chose this ratio will become apparent when we outline actual gear ratio selection.

Step three is to decide your gear to gear spacing m.p.h.. For equally spaced ratios, take the top speed in 4th minus the top speed in 1st and divide by 3. Add the gear spacing m.p.h. to the top speed in 1st gear to calculate the top speed in 2nd. Subtract the gear spacing m.p.h. from the top speed in 4th to calculate the top speed in 3rd. As with 4th, you will select 2nd and 3rd gear ratios that most closely match these speeds.

The forth and final step is the actual gear ratio selection. Several methods exist to pick gears. The traditional method is by way of a gear selection chart.

For a given ring and pinion and tire size, a gear selection chart plots various gear ratios on a grid with the one axis segmented by r.p.m with the other axis segmented by m.p.h.. Examples of these types of charts exist within Taylor Race Engineering catalog. One of the main drawbacks of gear selection charts is the fact that they are specific for a given ring and pinion and tire size.

An alternate method to make gear ratio selection is to use the following formula:

Speed = (Diameter * RPM) / (R&P * Gear Ratio * 336)

Technical - Continued

Speed is in m.p.h.. Diameter is the driven tire diameter in inches (22.5 in the case of the FF). Gear ratio is pinion to layshaft (i.e., 37:13). R&P is your ring and pinion ratio as pinion to ring (i.e., 31:10).

In case you do not know your ring and pinion ratio, there are several ways to determine it. The easiest is to ask the former owner. In my case, the former owner Nick Scott was "pretty sure" that the ring and pinion was a 10:31. I wanted to know absolutely, so I asked Nick if he knew of a way I could verify the ratio.

Nick stated that he knew for a fact that the installed 4th gear ratio was a 20:30. He suggested that I place the car in 4th and count how many flywheel rotations would occur for one rotation of the tire. I could then compare the number of flywheel rotations with the calculated number that should occur with either a 9:31 or 10:31.

I calculated that if the car had a 9:31 ratio the flywheel would need to rotate a little over 5 times (5.16 = 1 / (9:31 * 20:30)). For a 10:31 the rotations would number just over 4.5 times (4.65 = 1 / (10:31 * 20:30)).

Using one of the timing marks as a reference point, I found that the flywheel rotated roughly 4.5 times for one tire rotation. I did indeed have a 10:31.

A few words of advice if you are going to use the above method. The FF / S2 have open differentials, so you will need to have the car on the ground. If possible, have someone help push the car or count the flywheel rotations. It's hard to do both at the same time. Use the highest known gear ratio and pull the spark plugs! It makes pushing the car easier.

A final method that I was not aware of when I conducted my flywheel rotation experiment is to simply check the end of the pinion. The stamped ring and pinion ratio is usually on the end of pinion between the splines.

At this point you should have all the information you need to make your gear ratio selections. By way of example, I will now go though all of the steps used to select Solo II gear ratios.

Step 1. Select maximum top speed. For my FF, I have chosen a 4th gear top speed of 85 m.p.h. I upped my top speed after a few years of running a 78 m.p.h. 4th gear ratio. 78 m.p.h. proved to be to restrictive. At some events, I was hitting my "soft touch" rev limiter way before the next corner.

Step 2. Determine a 1st gear ratio yielding the lowest possible top speed. The lowest available 1st gearsets are "fixed first" gearsets. Due to the small size of the layshaft gear, "fixed first" gearsets have gear teeth cut directly into the layshaft. The lowest known "fixed first" gear is a 12:38. With my 10:31 ring and pinion, a 12:28 "fixed first" gear would yield a top speed of 48 m.p.h.. When I

purchased the car, it was running with slightly higher "fixed first" gear of 13:37. This gear yields a top speed of 53 m.p.h.. Since they are in essence entirely new layshaft, these "fixed first" gearsets are very expensive (\$275 to \$325). Because of the expense, I decided to live with what I already owned.

Step 3. Determine gear to gear spacing m.p.h.. Using the calculation outlined in step 3 above, I need to select 2nd and 3rd gear ratios yielding a top speed of 64 and 74 m.p.h. respectively ((85 - 53)/3 = 10.6).

Step 4. Actual gear ratio selection. Since I did not have a gear selection chart with my ring and pinion and tire size, I used the formula given at the bottom of page 3. I did have access to the software program Excel, so I created a spreadsheet using the formula to choose my gears. By substituting various gear ratios in the spreadsheet, I was able to pick a set of gear ratios that matched my m.p.h. goals. Check out the resulting table for my actual gearing.

Gear	1st	2nd	3rd	4th
Ratio	37/13	36/15	35/17	32/18
Speed	53.13	63.00	73.44	85.06

As you can see, my 2nd and 3rd gear ratio selections are not quite at the calculated spread, but for all practical purposes they are close enough.

By using an r.p.m. range of 0 to 7000, I also used the Excel spreadsheet to make my own gear charts. The following gear chart shows the gear ratios selected above.



I am well aware that there are some who disagree with my "four equally spaced" gearing philosophy. As I stated at the beginning of this article, how one chooses FF / S2 gearing for the unique nature of Solo II is really a matter of personal choice. I hope that I provided a reasonably accurate description that will allow those new to CM a logical and informed way to make gear selections.

In closing let me state that I had planned a review of gearbox maintenance, but this article has reached my self imposed 2 page limit. Taylor Race Engineering's Craig Taylor will provide Solo II FF / S2 gearbox maintenance recommendations in the next issue of **cm-q**.

Contacts

Below you will find a partial listing of my "racing" related contacts that I have built up since I started competing in CM.

I am reasonably sure that all of the information listed is correct, but if you find an error, please let me know so I can correct it in time for the next issue. I have successful utilizing products and services from virtually every business listed, but I am not ready to endorse any specific one.

Please forward any additional contacts that you would like to see listed.

pru 50 cm

Apparel	Phone	World Wide Web	Products / Specialty
Ford	800 444 4503		
Speedgear	800 777 1848	www.speedgear.com	

Books			
Barnes and Noble		www.barnesandnoble.com	
Classic Motorbooks	800 826 6600	www.motorbooks.com	

FF / S2 Specific	Phone	World Wide Web	Products / Specialty
Formula Ford 1600 Information		www.azstarnet.com/~ragan/ff.html	
FormulaFord.com		www.teamdbr.nl	Zetec Series
race-cars.com	973 316 6808	www.race-cars.com	Cars & Parts For Sale
Race Cars For Sale		home.hiwaay.net/~wesnor/rcfs/rcfs.cgi	Cars For Sale
RacecarAds.com		www.racecarads.com/ff1600.htm	Cars & Parts For Sale
Races Network		www.racer-net.com/scca.htm	Cars For Sale
Reynard Motorsports		www.reynard-racing.com	Manufacture
Tim's F1600 Race Links		www.chebucto.ns.ca/~chesnutt/Racelinks	Links
US FF200		www.usFF2000.com	

News / Information	Phone	World Wide Web	Products / Specialty
10 Tenths Motorsports		www.ten-tenths.com	
Atlas F1		www.atlasf1.com	
BFG CenDiv Championship		www.tirerack.com/cendiv	
CART		www.cart.com	
ESPN	860 585 2236	www.espn.com	
Ford Motorsports		www.ford.com/motorsport/	
Racer	800 999-9718	racer.com	
SCCA Rally / Solo	303 779 6622	www.scca.com	
USA Today		www.usatoday.com	
Weather Channel		www.weather.com	

Parts: Drivetrain	Phone	World Wide Web	Products / Specialty
B.A.T.	941 355 0005		Engine Parts
Hewland	011 44 1 480 433 280		Manufacture
Hi-Tech Exhaust	714 581 2181	www.hi-techexhaust.com/	Exhaust
Quicksilver	301 698 9009		Engine Builder
RPM	517 895 8606		Engine Builder
Taylor Race Engineering	800 922 4327	www.taylor-race.com	Gear / Gearbox Specialist

Contacts - Continued

Parts: Suppliers	Phone	World Wide Web	Products / Specialty
Averill Racing Stuff	248 585 9139		
Citation	317 487 1953		Manufacture
Coast Fabrication	714 842 2603	www.coastfab.com	Aircraft Hardware
Continental Motorsports	888 459 4588	www.cincy-racing.com/continental	Crossle
Essex	770 889 4096		
Fibre Glast	800 821 3283	www.fibreglast.com	Fiberglass
Fulmar	011 44 1 480 433 280		Reynard
Indy Competition	317 273 0089		
International Racing Products	800 793 0496	www.formulacars.com	Reynard
JCWhitney	312 431 5625	www.jcwhitney.com	
Pegasus	800 688 6946	www.execpc.com/~pegasus/	
RaceQuip	800 678 7223	www.racequip.com/	Safety Equipment
Racer Wholesale	800 886 7223	www.racerwholesale.com	
Simpson	800 654 7223	www.simpsonraceproducts.com	Safety Equipment
Solotime	316 683 3803		Solo Stuff
Transatlantic	800 533 6057		
Truechoice	800 388 8783		
Parts / Suspension	Phone	World Wide Web	Products / Specialty
Carrera	770 451 8811		Manufacture
DSP Suspension Software		www.rahul.net/dennisp/suspension/	Software
Hypercoils	219 753 6622	www.hypercoils.com	Springs
Penske	610 375 6180	www.penskeshocks.com	Manufacture
TDI	815 389 4599		Light weight parts

Parts: Tires & Wheels	Phone	World Wide Web	Products / Specialty
Competition Tire	517 592 6681		Goodyear
Goodyear	330 796 4589		Manufacture
John Berget Tire	414 740 0180		Used Racing Tires
Mid-Atlantic Motorsports	248 852 5006		Goodyear / Hoosier
Panasport	310 373 0071	www.panasport.com	Wheels
Tire Rack	888 362 8473	www.tirerack.com	

Schools	Phone	World Wide Web	Products / Specialty
Bridgestone Racing	631 966 0866	www.goodman-motorsports.com	
Derek Daly Academy	702 643-2126	www.derekdaly.com	
McKamey Autocross	777 830 0043	www.autocross.com/mckameyschool	

Tools			
Craftsman	800 377 7414	www.sears.com/craftsman/	
Eastwood	800 345 1178	www.eastwoodco.com	Restoration tools
Griot's Garage	800 345 5789	www.griotsgarage.com	
Harbor Freight	800 423 2567	www.harborfreight.com	Discount tools

Tracks / Event Sites / Hotels	Phone	World Wide Web	Products / Specialty
Grattan		www.wmr-scca.gen.mi.us/grtinfo.htm	
Waterford Hills		www.waterfordhills.com/	

Driver / Car

The honor of being the first to be highlighted by this column goes to Charlie Mathews. My thanks to Charlie for a most candid interview.

cm-q: What's your full name? **CM:** Charles H. Mathews.

cm-q: Do you have any nicknames: **CM:** Charlie.

cm-q: What is your age? **CM:** 16. Just ask anyone that knows me!

cm-q: Where do you live? **CM:** Ottawa, IL.

cm-q: What is your occupation?CM: Nuclear Power Plant Inspector for the State of IL.

cm-q: What is your SCCA Region / Division? **CM:** Central IL Region which is part of Cen-Div.

cm-q: How long have you been a SCCA member? **CM:** 13 years.

cm-q: How long have you been autocrossing? **CM:** On and off for 23 years since 1976.

cm-q: What cars have you autocrossed?

CM: I started off with a 1975 Chevelle Laguna. Then a 1977 Ford Pinto Cruising Wagon. It had bubble windows and bean bag chair in the back! Next was a 1969 Triumph GT6+. After that, a 1980 Capri Turbo. Really fast. I ran my 1981 VW Diesel Rabbit a couple of times. It handled real good, and I never ended up last in my class! Then I got my first real autocross car. A 1986 Dodge Shelby GLH-S. This was my main car until I bought the Lola in 1991. I ran a Mazda 323 at Nationals.

cm-q: How many Solo II Nationals have you attended? **CM:** 12.

cm-q: What is your best Nationals result? **CM:** I was 2nd in CM in 1992, 1993, and 1996.

cm-q: Have you ever Solo I or Club Raced your CM car? **CM:** No.

cm-q: How many years have you run in CM? **CM:** Since I bought the Lola in 1991. That would make it 8 years.

cm-q: Why did you pick CM?

CM: I wanted something I could tow behind my minivan. I was going to buy an EP car, but the deal fell though. I found the Lola while paging through Sportscar. It was the

same car that Jim Gary took last CM trophy in 1990, so I knew it had to be a good car.

cm-q: What CM number do you normally run? **CM:** 92 when I run alone. 137 when I have a co-driver.

cm-q: Why did you pick those numbers? **CM:** Earlier in his career, Aryton Senna ran the number 12. I used 12 up until the Nationals at which point I turned the 12 into a 92. I wanted a number in the 90's, so I picked 92. 137 came about when added a co-driver. It was the easiest number to make out of the existing number 92.

cm-q: How did you acquire your current CM car? **CM:** As I said before, I found it in the back of Sportscar. It was located in Salt Lake City. A friend and I drove straight there and back to pick it up. 21 hours on the way out, and 23 hours on the way back.

cm-q: What year and model is the Lola? **CM:** It's a 1983 T642 with T644 updates.

cm-q: What are the serial / logbook numbers? **CM:** Lola number 55. SCCA logbook number is 96-551.

cm-q: Does your Lola have any significant previous owners and/or results?

CM: In 1983, importer Carl Haas shipped the car to Arnie Loyning and told him to make it a winner. Arnie had the defending FF Runoffs winner Bob Lobenberg drive the car. The car won every race it entered and easily qualified for the 1983 Runoffs. At the Runoffs, Lobenberg sat on the outside pole next to R.K. Smith who was driving the newly introduced Swift DB-1. At the start, the two of them sped away from the field with Lobenberg taking the lead. Bob lead most of the race and most thought he would take the win, but for some unknown reason he slowed way down. R.K. took the lead and went on to win the race. Some accused Lobenberg of throwing the race, but this has never been proven. Check out page 99 of "The Anatomy & Development of the Formula Ford Race Car" by Steve Nickless. It has a picture of the 1983 Runoffs with Lobenberg in my Lola leading R.K. Smith in the first Swift.

cm-q: Who currently prepares your car? **CM:** I do now. I did have Jeff Reid preparing the car when he was still in business. Jim McKamey also did some work on it.

cm-q: What tires and compound do you normally run? **CM:** Hoosier R25. I am really happy with the Hoosiers.

cm-q: What type of rain tires do you run? **CM:** Bridgestone. I bought them the first year I owned the car.

Driver / Car Continued

cm-q: How many sets of wheels do you use? **CM:** Three sets of Compomotives.

cm-q: Are your wheels center lock or bolt? **CM:** Center lock. They are a lot easier to change, but I did a have problem at the 1992 Nationals when one the nuts started backing off. The only thing that held the wheel on was the pin.

cm-q: Who builds / maintains your engine? **CM:** Loyning. The engine and gearbox are "black boxes" for me. I don't do anything other than pull them in and out.

cm-q: Who builds / maintains your gearbox? **CM:** TDI. As I said before, I don't do any work on these parts of the car. I get yelled at every time I bring the box in to be serviced. They tell me I should at least open the box up once a year to look around and change the oil.

cm-q: What gears / ring & pinion do you run? **CM:** I don't know off the top of my head. I can tell you that they are the same ones that came with the car. I have never changed ratios. People say that I have a fairly "wide" box, but it works for me. I don't see any reason to change.

cm-q: What type of shocks do you run? **CM:** Bilstein and Penske. This was an expensive experiment.

cm-q: What type of brake pads do you run? **CM:** Ferodo. I haven't change pads in over 5 years. I don't use the brakes. When I'm in tech, I tell them not to bother checking the reservoir because I just going to disconnect the brakes when they are finished with the inspection!

cm-q: What type of battery / jump do you use? **CM:** Yuasa. I don't use a jump battery. Probably should.

cm-q: What type of clutch do you run? **CM:** AP Racing. I got it used. I was told that it's good up to 12000 r.p.m. Never had any problem with it.

cm-q: What type of oil do you run? **CM:** That's a secret.

cm-q: What type of coolant do you run? **CM:** Water and Redline Water Wetter.

cm-q: What type of gas do you run? **CM:** Low Lead 100 Av-gas.

cm-q: Have you made any special modifications?CM: Nothing specific.cm-q: Do you normally have a co-driver?

CM: Not normally, but Davie Looman co-drove the car at the 1997 Nationals and Josh Sirota co-drove the car at the 1998 Nationals. For the 1999 season, Chuck Sample will be my co-driver

cm-q: What the name of your team / sponsor? **CM:** Maplewood Products by way of Chuck Sample.

cm-q: What's the "ideal" CM car? **CM:** The one that wins! It's about time for a Lola!

cm-q: What's the "coolest" CM car? **CM:** I would like one with wings, but I know that's not allowed.

cm-q: What do you like the most / least about CM? **CM:** The most has to be the people and the rules stability. The least is the SEB messing with the class.

cm-q: What would you do to improve CM? **CM:** Nothing. The class is fine just the way it is.

cm-q: Do you have anything you would like to add? CM: The finish I am most proud of has to be the 2nd I had at the 1992 Nationals. After the first day on the north course, I was in forth place only 0.8 behind even though I ended up going really wide and running into the marbles on my best run. I set FTD on the south course on my last run which was after I had the problem the wheel nut backing off on my second run. I remember running back and forth to my van getting tools to fix the nut. When I tried to back the nut off, I started to strip the threads, so we decided put it back together and tell everyone it was okay. I told a friend that I would go to the first corner and see what happened. If it held, I would go for it. If it didn't feel right, I'd just back down and coast off course. It held and that's the run I set FTD. It was quite a moment given all the problems.

cm-q: The car was for sale in 1998. Is that still the case? **CM:** Due to my health problems, it was, but after I got a reasonable report from my doctors I decided to keep it. Besides, I was having so much fun, I didn't want to get rid of it. I just got a very good report from my doctor last week. Not out of the woods yet, but it was the best one to date.

cm-q: I'm sure the readers will be glad to hear. Thanks for your time, and I'll see you on course.CM: Looking forward to it.



9/98: Charlie at Topeka / photo by Robert Seamon

For Sale

1979 Dulon MP-21 FF CM #57

Set-up for Solo II and Pro Solo. Rebuilt suspension and shocks '98. Fresh engine and trans. '97. Current CENDIV champion. Second at Nationals '98 CML. Many Pro Solo wins. Panasports (2 sets), fresh rains, gears, single axle trailer, misc. \$7500obo.

Contact Gary Godula for more information at 248 374 9305 (h) or 734 523 3351 (w).

1979 Tiga FFA Serial #85

New Parts. Complete frameup winter 1998. Williams Engine 1998. Shocks(Carrera). Springs(4 or 5 Sets). Rod ends throughout. All new hardware. All new wiring, floor pan, bulkheads, hoses, starter, radiator and fans (electric), new dash (polished aluminum). Replated all suspension parts

Other stuff. Spare nose. Spare lower body (Old Style, ground effects look). 1 set Revolutions. 1 set Ultralight Panasports (New last year). 1 set Rains on steels. Spare front A-Arms. This car has been spared no expense. \$6500.00.

Contact Mike Bultemeier via e-mail at hottvr@tfs.net or by phone at 816-461-1600 (h) or 816-224-5852 (w).

1985 Van Diemen RF85 Formula Ford

1 SCCA national road race on complete professional frame-up rebuild by Andresen Engine Development, including powder coated frame. Fox Shocks prepped by Stimola, TDI lightened CV's, Fast Forward hollow axles, 2 sets Panasports, 1 set Compomotives w/ mounted rains. 1 race on Andresen rebuilt motor. Hi-Tech Exhaust, 3 noses, Fresh Red/Black Paint. This car is available completely prepped, including alignment by Andresen Engine Development immediately. A nationally competitive Formula Ford or C Mod autocross car. \$13,500 complete.

16' Pace enclosed trailer available separately.

Call Tom Andresen for more information at 815 338 3966 or fax 815 338 3967.

Wanted

225# 6.5" 2.25" I.D. Springs

I am trying to locate an "odd" specification coil spring for my 1985 Reynard FF1600. I have factory documentation that states that my car was originally equipped with 225# 6.5" 2.25" I.D. rear springs.

Contact Chris Pruett at 517 832 8970 (h).

MK9 17:35 Gear

Looking for a used 17:35 Hewland MK9 gear.

Contact Chris Pruett at 517 832 8970(h)

Products

I will tell you that the \$189.00 I sent Harbor Freight Tools for the 8' x 12' "DOME" EZ-up canopy is by far the best money I spent in 1998. The canopy large enough to put your car under, but I found it's more useful as a nice place to sit under after a long day in the sun or rain. The one piece unit takes about 2 minutes for one person to assemble. Be aware that you need to securely anchor the canopy if there is any kind of wind.



For more information check out the EZ-up web site at www.ezup.com. To purchase, check out Harbor Freight Tools at www.harborfreight.com.

V1-I2 Preview

We all have our favorite events that, for whatever reason, we just have to go do. For V1-I2, I would like to publish a listing of notable **cm-q** events. Please send your favorites to me along with the reasons why they make your list (please note that these events need not be autocross related).

The V1-I2 technical article will continue our FF / S2 gearing and gearbox discussion. Part 2 of this article will focus on gearbox maintenance as recommended by Craig Taylor of Taylor Race Engineering.

I have a person in mind that I would like to interview for the next Driver / Car column. I am not ready to print a name, since I have yet to confirm that they are willing to participate.

I am considering alternating between issues the listing of contacts and a listing of current **cm-q** subscribers. This listing would include your U.S. mail and e-mail address as well as car information. If you do not want your information listed, please let me know. If a majority opposes this idea, it will not happen.

As always, I welcome submissions of any type. The deadline for the next issue of cm-q is May 1st. V1-I2 will be mailed to your home on May 15^{th} .