

# ❖ CR 914 NEWS ❖

Issue 9

NOVEMBER DECEMBER 1997



Merry Christmas and Happy Holiday to All

## SET UP YOUR BOAT TO WIN

At the banquet meeting at the nationals owners expressed interest in a "tuning guide" for the CR 914. The AG Assembly Instructions and the Worth Upgrade give good advice. But how did the top skippers at the Nationals set-up their boats? What they did is probably not the fastest tuning that will be used in the future as the class develops. But it was good enough for them to do well at the 1997 Championships.

The tables on pages 8 and 9 give data that show how some of the winning boats in the class were set up. There is a lot of information there. Don't let your self be overcome by the volume of data.

One way to do it is to pick one of the boats and set up your boat like that. Another way would be to measure your boat and see how it compares. The bottom line is that your boat has to work for you, for the way you steer.

For example, look at the large variation in sail draft between the four boats. They all go fast and are capable of winning if they are sailed well.

Good luck!



### GOING TO WINDWARD AT THE 1997 ACCR

Tony Johnson, 77, points higher but in bad air as he chases Chuck Winder, 888, to windward. The boats show that the sailing conditions were perfect at Xenia in October.

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## RENEW YOUR SUBSCRIPTION TO THE NEWS

from your Editor

***This will be the last issue you will receive unless you renew your subscription.***

*This article is repeated from the last issue, with some small changes, because the message is still the same. Many have already renewed for 1998 and that is gratifying. Every one currently subscribed will get this last NEWS. If the subscription is not renewed before the next issue, which is scheduled for early February, this will be the last issue you will receive.*

Your Editor

Now comes the real test of the NEWS. It

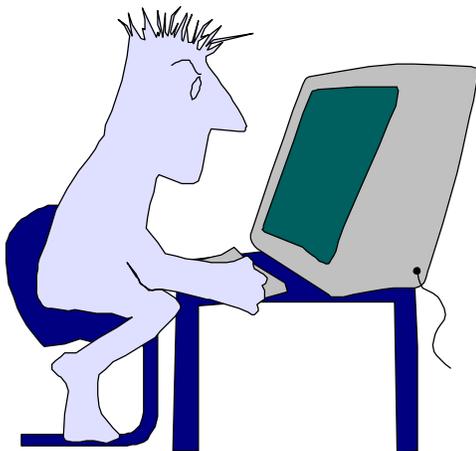
(Continued on page 6)

## 1998 NATIONAL CHAMPIONSHIPS

The Marblehead Model Yacht Club will host the next nationals at historic Redd's Pond in Marblehead ,MA. Marblehead is a scenic vacation destination with a large harbor filled almost 2000 full scale boats. The date will be a weekend in early to middle September. Details will be given in future NEWS.

The internationally popular Marblehead Class boat originated at Redd's in 1932, designed by a local model builder. Redd's has been used for model racing for over a hundred years.

The pond is a challenging venue. The winds are quite variable because of topography, trees and buildings. To be competitive requires constant trim and course changes. But as at all sailing venues, the best skippers win in any conditions.



Your Editor Creating Errata

### Errata

The September-October issue of the NEWS incorrectly identified Tony Johnson's sail number as 770, not the correct 77. Tony uses 077 on his sail. That is what confused me. The zero is not required by the rules and, at least for me, can be confusing.  
(Many of you will be dismayed that the NEWS had an error. There may be others, too Ed.)

**RENEW  
YOUR  
AMYA  
MEMBERSHIP**  
**AMYA membership  
expires on December 31.**  
**Send your renewal now  
before you forget.**

My recommendation is that we all support the AMYA with renewal of our memberships for 1998. For reasons never explained to the members, this is a financially lean period for AMYA. But with our support, the volunteer officers who labor to keep the organization going will have a chance to keep it going. It is an organization important to our sport.

*Your Class Secretary*

## FLEET NEWS

*This column was omitted last issue because of lack of space and there had not been much news reported to me.*

### MARATHON SAILING CLUB Marathon Key, FL

Pierre Digeon has started our newest club at Marathon in the Florida Keys. The club is a "big" boat club with an active racing program.

Pierre decided on the CR 914 as the model of choice to start a model racing program. There are at least five boats: Pierre's, Valerie and Bard Dean each have a boat and Bill Scott has two. From the sound of things there will soon be an active model racing program.

### LARCHMONT MODEL YC Larchmont, NY

The LMYC has relatively little activity until the big boat season ends and they can use the yacht club floats. Most of the owners have big boats and don't race the models in the warm season. But when they

start in the fall, they start with a bang.

The race on Saturday, October 18, brought out six boats. "Buttons" Padin won it with nine firsts in 14 heats. Dave Lynn and Peter Overzat were second and third. Nick Langone got his first first.

On November 22, seven boats raced 11 heats. Howie McMichael won it with nine firsts in the eleven heats! Padin and Carl Olssen were second and third. Hank Buchanon was fourth. He was fast but missed three heats because of technical problems.

### PUMPKIN PIE REGATTA, November 29, 1997

Sun, temperatures in the 50's and a moderate and variable wind welcomed 16 boats to this inaugural regatta. Nine heats were staged off the Eastern Dock and a good time was had by all.

The large fleet was challenging, but overall, was well behaved and people "did their turns." Bizzy Monte-Sano observed about model racing, "They sure haven't managed to scale-down the aggravation!"

Howie McMichael won the day with constant top five places followed by Peter Kelly, Bizzy Monte-Sano and Dave Lynn.

Patty O'Donnell did a great job as the Race Committee. The newly approved LMYC Burgee was flown for the first time.

The **Fall Series** has had seven days of racing and a total of 57 heats. There are four more Saturdays scheduled in December to conclude the series. Of those having enough races to qualify, Buttons Padin has the series lead with Dave Lynn and Carl Ollson in second and third.

There is little question that Buttons has organized an outstanding program for LMYC. LMYC also participates in the evolution of the class by helping with well thought out opinions and votes on the class rules.

### DUKE CITY MODEL YC Albuquerque, NM

Things are happening at DCMYC. New

*(Continued on page 3)*

(Continued from page 2)

Commodore Bill Petynia reported that Albuquerque is selling Tingley Beach, the clubs sailing venue, and will build an Aquatic Park including a model boat pond. A dedicated facility is a rare thing and should mean that weeds and algae can be controlled.

Sergio D'Antoni is Hobbies 'N Stuff Cup series leader with 9 points. Joe Frasier is second with 20.25 and Jim Scheibner is third with 36 points.

Joe Frasier is the editor of DCMYC's excellent monthly newsletter that covers a wide range of subjects such as racing rules, tactics, etc.

## MARBLEHEAD MODEL YC Marblehead, MA

Nineteen skippers and their partners attended the second annual awards banquet in November. Kevin Dooley, the 914 national champion this year, won the season's championship in the men's division. Wendy Lull won the women's division.

The MMYC CR 914 fleet had a full summer season of racing. Racing started in March when the ice was out and continued until mid-November. There were 530 heats scheduled and Kevin sailed and won most of them.

This year the club started Frostbite Racing at Redd's Pond until it froze about November 10. They then moved to the harbor. The harbor hasn't frozen in about twenty years.

## ANNAPOLIS FLEET

### Annapolis, MD

Tucker Thompson, (410)971 6980, is the organizer in Annapolis. He sent the following message to the local 914 owners. I have edited it somewhat. Ed.

Dear 914 Racer,

Welcome to our first frostbite fleet at the Chart House Restaurant. This unique style of racing remote control boats from *inside the building* will finally be a reality. The Chart House has graciously allowed us use of their window tables during their Sunday Brunch. **We will race every Sunday**

**from 12:00 p.m. to 2 or 3:00pm (depending on the conditions). Racing will start Sunday, December 7th and go until April.** (Dec. 28 will be a break for Christmas)

The racing format is informal. Sailors who show up on a given Sunday will need to run their own races. Marks will be at the Chart House with the management. In the mark bag will also be extra channel crystals if needed. Included is a phone list of all current members to help organize races. Please call me if your information is not listed or incorrect. Email addresses are helpful too.

I look forward to seeing all of you at the Chart House this winter. With a fireplace

***This unique style of frostbite racing remote control boats from inside a building will finally be a reality.***

on one side and a starting line on the other, this winter will provide you with the most unique style of sailboat racing ever! Bring all our friends for brunch and introduce them to 914 racing.

Tucker Thompson

*I hope that the above racing conditions don't develop a group of wimps who can't tough it out in the cold like the skippers from Larchmont and Marblehead. (Jealousy is ugly, isn't it?) Ed.*



## BRINGING RADIO RECEIVERS BACK TO LIFE

*Excerpted from an e-mail from Tony Johnson, #77:*

When a boat radio has stopped operating or is operating erratically, here are some things to try.

Radio problems are often caused by bad connectors. The problem can sometimes be corrected by unplugging the wires and re-plugging them several times to remove dirt or corrosion. This should be done before removing the radio.

If water has entered a receiver, remove the receiver and disconnect the servos and power. Some receivers require that the crystal be removed as well. Use a small flat blade screwdriver to remove the plastic case from the receiver. Insert the it into the small snap holders in each end of the case and then pry the case open.

Once open, observe if water is present and if the circuit board looks clean. If water is evident, blow it out. Use alcohol or a "tuner cleaner" to rinse or spray the board or by using a soft brush. A tooth brush can be used on the bottom side of the board but be careful not to flex any components on the top side of the board. Once every thing is clean allow to dry for a minute. Alcohol as the cleaner speeds drying. Reconnect the components to test whether the radio is working. If every thing works replace the case and remount it in the boat.

If the receiver has corrosion on the board and no alcohol or cleaner is available, water can be used as the cleaner. Using a brush with the water will help to assure that all corrosion is removed from between the tracks on the board. Water will not hurt the components but takes longer to dry. Blowing on the radio board will speed the drying process.

Alcohol combines with water moisture and then evaporates rapidly. The same thing can be accomplished using "TV tuner cleaner" or de-greaser available at Radio Shack in aerosol cans.

Tony Johnson

## BATTERY MANAGEMENT

### GOOD NEWS FOR USERS OF RECHARGEABLE BATTERIES

by Chuck Winder

***IT IS NO LONGER  
NECESSARY TO SWITCH TO  
A "TRICKLE" CHARGE IF  
YOUR REGULAR CHARGE  
RATE IS 60 mA OR LESS.***

#### Trickle Charge of Batteries

Recent conversations with technical representatives at GP Batteries, Tower Hobbies and some better airplane model shops, were very enlightening:

**1. NiCd Batteries** - For modern, good quality NiCd's, a trickle charge of 60 mA is OK! The original industry standard trickle of C/20 for 600 or 800 mAh NiCads was 30 and 40 mA, respectively. But the C/20 trickle rate was based on earlier technology

***You can come back from  
the pond, put the batteries  
on charge and forget them.***

Modern batteries can take the higher trickle charge with no damage. (This confirms 1995 advice from Ed Slegers of Slegers International, a model sail plane guru.)

**2. NiMH batteries** - 60 mA is an acceptable charge rate *and trickle charge rate* for NiMH AA batteries of 1200-1300 mAh capacity. This is confirmed by both GP Batteries and Tower Hobbies.

This is very significant. Most of us use chargers having a charge rate of 50 or 60 mA. You can come back from the pond and put the batteries on charge and forget them until you want to use them again. There is no need to remember to change to a trickle charge after some number of hours. The batteries will not be harmed.

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### DISCHARGE RECHARGEABLE BATTERIES

#### FOR LONG TERM STORAGE

For many, late fall is the end of the sailing season and the model is laid up until spring.

The best thing for rechargeable batteries is to store them discharged. Discharged means the battery voltage is 1.0-1.1 volts/cell under a small load. For the transmitter that means ~8 volts with the Tx turned on. For the boat batteries it's ~4 volts.

To discharge the transmitter batteries is easy. Just turn the Tx on and wait until the battery remaining-charge indicator moves into the red or danger area. Then turn off the Tx and disconnect the batteries.

Discharging boat batteries is different. If you use individual snap in batteries in your boat and Tx, then it's easy. Just snap eight boat batteries into your Tx and discharge as above. Start with eight fully charged batteries, though. With NiCd batteries in the Ranger II Tx, it will take about 2 ½ hours. With a Futaba it will take about 3 ¾ hours.

If your boat batteries are a shrink wrapped battery pack, it's not as easy. Unless you own a voltmeter. (Some folks would say if you own a house, car or a boat, you *should* own a voltmeter, even a multimeter.) Buy a 10 Ohm, 10 watt resistor from Radio Shack and connect it to the battery. When the output voltage of the battery gets to 4 volts, it's discharged.

It's easy for me to discharge batteries because I own a charger which can be set to discharge a battery pack and then shutoff when the pack is discharged. It was expensive and unnecessary to do the job.

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## Class News

This month there are 227 boats registered vs. 187 in August. (See page 5 for new owners.) Through December 1997, 138 subscribe to the NEWS. Fifty-four have renewed subscriptions for 1998.

**Renew Your Subscription** See the lengthy dialogue starting on page 1.

#### E-mail Communication

Eight-three owners are on the CR 914 e-mail distribution list.

#### Index to NEWS Articles

The index to NEWS articles was well received. It will be included in the package that goes to each new owner when he registers.

The **CR 914 History** is almost complete. As before, there was no room for it in this issue so expect it in a future issue.

#### CR 914 WEB Site

Ric Naff has been unable to maintain his excellent web site because of Carpal Tunnel Syndrome in both wrists. He has been having bouts of severe back problems, too. He is recovering from his first wrist surgery and the other wrist will be operated on in late December.

However, because of Ric's design, the site remains fully functional. The only thing noticeable is that the directory has not recently been updated.

The Forum is an especially attractive feature of the WEB Site. It could be of great value to us if we became accustomed to using it. Being an old dog with difficulty learning new tricks, I haven't used it to the degree I should have.

**Errors in the NEWS** will happen in a publication like this where the editor, writer and proof reader are often one and the same. Thankfully, Greg let me know when an error was made that is important to us all. (See page 10 on CA glue.) All of you can help by notifying me when you find an error of any kind. We try to research the stuff you see here, but mistakes will occur.

A **CR 914 Photo Album** has been started. Many photos have been given to me and I have a lot of my own on the 1996 and 1997 Nationals and other events in this young class. In the future it will be nice to

(Continued on page 5)

(Continued from page 4)

have an archive of photos recording the history of the class.

I have no photos for the 1995 nationals. That was the class' first national event. If any of you have photos of that event, or any other event of importance, please send them to me for the album.

**CR 914 Column in MODEL YACHTING**

There isn't one in issue 109 and I apologize. I confess to not being enthusiastic about sending copy to MY because when I do it seldom is used. I asked Paul Brown, editor of MY, to look in the NEWS to pick what he thinks is appropriate. That didn't work. So I will start submitting CR 914 articles to MY and hope for the best.

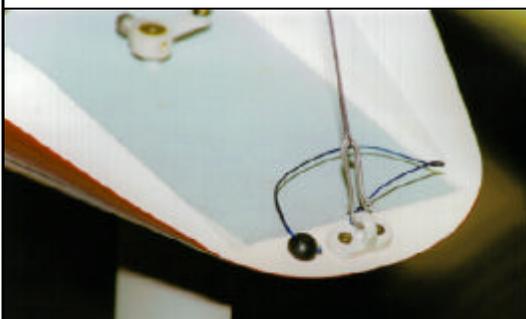
*Chuck Winder, Class Secretary*



**NEW MEMBERS**

First Name	Last Name	City	State	Sail No.
Ted	Allen	Marblehead	MA	135
Tony	Allott	Marblehead	MA	137
Dean	Bard	Islamorada	FL	139
Valerie	Bard	Islamorada	FL	140
Judy	Boebert	Albuquerque	NM	26
Anthony G.	Bollers	Columbia	MD	94
John	Broderick	Tiburon	CA	133
Patricia	Brown	Silverspring	MD	126
Michael	Carr	Vero Beach	NY	375
Richard	Collingridge	Newport	RI	127
Mike	Compton	Wilmington	NC	215
Hans	Dahll	Vero Beach	FL	124
Russell	Dexter	Boston	MA	105
John	Driscoll	Long Lake	MN	136
Harry	Dunning	Annapolis	MD	212
Hugh	Fletcher	Stamford	CT	383
Mary	Fleury	Salisbury	MD	132
Bill	Follet	Rye	NY	177
Rob	Follet	Rye	NY	184
Standley	Goodwin	Marblehead	MA	141
Steven W.	Gregory	St. Inigoes	MD	205
Linda	Henson	Little Rock	AR	118
Patrick	Hines	Hockessin	DE	129
Jon	Kaplan	Albuquerque	NM	131
John L.	Kendal	Waltham	MA	106
Peter	Kiellerup	West Grove	PA	114
George	Lee	Cordova	TN	108
Arthur	Lee Jr., MD	Atlanta	GA	116
Diana	Meacham	Vuaba	VA	125
Mrs. Doug	Megargee	Kennedyville	MD	109
Tom	Miller	Lutimonium	MD	120
Andrew	Newman	Weston	FL	103
Peter K.	Overzat	New Rochelle	NY	377
Shawn	Price	Annapolis	MD	121
William	Scott	Marathon	FL	?
Norm	Seifort	Winthrop	MA	107
Charles	Soley	Fresno	CA	130
Stephine	Stron	Philadelphia	PA	115
Mark	Sullivan	Cummington	MA	
Jean-Marc	Tasse	Severna Park	MD	119
Art	Turowski	Arnold	MD	122
Charles	Wall	Greenville	SC	123
Willis	Wendell, II	Menands	NY	777
Mark	Zurmuhlen	Washington	DC	124

**DRAIN PLUG**



The photo illustrates an alternate location for the necessary drain hole plug. The other location is on deck at the extreme tip of the

(Continued from page 1)

is time to re-subscribe for 1998. Use the form at the top of page 11. The last issue for all current subscribers is the November/December 1997 issue

When the NEWS was started there was no way to know if it would be successful. It seemed to me there was a need for *something* to bring the class together and provide a way to help the new owner get started. I started in model boating in August of 1995 and all the things that baffled me when I started were still fresh in my mind. Much of the content of the NEWS has been aimed at helping the new owner. That must continue as the class grows and continues to have new owners.

As the class matures, there will be more material tailored to the experienced owner.

Based on our experience this year, each new subscription will yield a minimum of nine issues over the span of a year. Depending on the costs of operation as time goes on, it may be possible to increase the number of issues received. It is hard to make predictions in an operation like this.

**The Issue of Back Issues**

In the first year of publication my practice was to give each subscriber all the back issues when he first subscribed. It seemed like a good idea at the time and it still does. The content of the NEWS was for the most part reference material for the new owner.

The only problem with the above, that I have just now recognized, is that recent subscribers are now asked to re-subscribe in November/December for another \$10. There may be some who won't be happy since they just paid a \$10 subscription in September or October. The bottom line is that \$10 buys nine issues.

**The New Subscription Plan**

The plan is as follows:

1. All 1997 subscriptions received through the end of October received all back issues since the start of publication in November 1996.
2. All subscribers in this inaugural year will get a total of nine issues. That is: November 1996 through the

November/December 1997 issue.

3. Those inaugural subscribers who renew their subscription will get a minimum of nine issues starting January 1998.
4. Starting in November 1997, all new subscribers will receive a minimum of nine issues.
5. Back issues are available by order for \$1.50 an issue. There is an index of the articles that appeared in back issues in the Sept. - Oct. issue.

An index to past articles will be include with each new subscription so that each new member can see what is available to him. The index will be modified to remove obsolete articles.

Ultimately the back issues will be culled for articles that are still useful and organized into packages on particular subjects. These will be made available at cost when available

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**CLASS RULES INTERPRETATIONS**

**SAIL NUMBER LOCATION**

(Robby Smith, # 271, used e-mail to ask about legal placement of sail numbers. Rule 13.13)

The interpretation is that the class rules suggest where to put the numbers and class emblem. The rule has the objective of easy identification of a boat during racing and to achieve a level of uniformity in the appearance of our beautiful boat. There was considerable input from owners on that rule.

The class is a "one-design racing boat". The location of the numbers do not effect boat speed. Rule 13.13 will be rewritten to give more flexibility and submitted for vote.

*Chuck Winder  
Class Secretary*



**STANDING RIGGING**

**Adjusting Bowsers** is hard for me to do. My fingers won't grip the line well enough. The way I do it is to use pliers with smooth jaws that won't damage the line.

To tighten the shroud by 1/8", the pliers grip the line 1/8" above the bowsie. The bowsie is then slid up to the pliers. This works for me.

**Changing Rigging Tension**

Standing rigging often becomes more slack as racing progresses, especially in heavy air. Two reasons for this are slipping bowsies and rigging line "relaxation".

**Slipping Bowsies** Howie McMichael writes: "I mark my rigging in the center of the bowsie with a permanent marker and find the bowsies slip rather than the rigging stretching."

Greg Worth and Tony Johnson both suggest running the line through all three

holes in the bowsie to improve slip resistance. I have done that on my new boat and the bowsies do not slip when tested in the shop. **But it may be the leeward bowsies that slip** when they are under no tension and are flogging in the wind. I don't know how to test for that.

Another idea is to use the rosin used for string instruments. It increases the friction of the string. I haven't tried that or tested it, but it sounds attractive.

**2) Relaxation of the rigging line**

I did some testing in the shop. All the rigging on the boat had been loose for a several days. All the side shrouds were then tightened to be just snug. The boat was heeled using the mast with the hull on a flat surface and keel unsupported. That simulated the shroud loads of a heeling boat.

When the boat was allowed to return to

(Continued on page 10)

## Weed Control in Boating Ponds

by Chuck Winder

Now is the time to start planning for control of pond weeds for next season. From our experience in Marblehead, it takes a long time to put a program in place. The application of a herbicide to stop grass has to be done when pond water is between 60 and 70 degrees Fahrenheit. At Redd's Pond in Marblehead, that is the first part of June. The date for your pond will vary depending on the pond's location, depth and water source.

### The Problem at Redd's Pond

For the last several years the aquatic grass problem had steadily worsened. Finally, it became virtually impossible to sail models from mid-June until the end of August. In the North, that is almost half of the sailing season. The only power boats on the pond are electric or steam propelled and it was impossible for them, too.

### The Problem Solved

This past summer we had no grass problem! There were a few strands of grass seen in late May. A herbicide and algaecide were applied June 2. There was no grass seen the rest of the season. The algae present in June disappeared until later in the season.

As the water warmed in August there was an unpleasant looking algae bloom which persisted until the end of September. It can easily be prevented, however, we did not have the funds. The algae did not interfere with model racing.

### No Observed Adverse Effects

The pond supports a healthy fish stock which is not stocked annually. It also supports a large unnatural population of Mallard ducks and some Canada geese which contributes to the algae problem. There were no observable adverse effects on the pond from the treatment.

### Find a professional

The first thing we did was to find a company that specializes in the restoration of ponds and lakes. We talked to local water departments and cemetery managers (for cemeteries that have ponds). These organizations have to prevent weeds and

algae in their water. They usually have a program of their own or hire a company to do the job. In any event, they are a source of information.

The company we used was Aquatics Control Technologies, Inc (ACT). They gave us a quote to do the entire job with a cost breakdown that gave us some options to control costs. We chose to get the permits ourselves in order to save about \$1000. ACT was very supportive of our effort. Their quote to get the permits was at or below their costs based on our experience doing the job.

The one pond treatment of herbicide and algaecide was \$1100. The Town of Marblehead Recreation, Parks and Forestry Department paid for it and gave us a lot of support in the whole process.

### Obtain the necessary permits

This was by far the more complicated and time consuming part of the process. In Massachusetts, and probably most states these days, there are severe restrictions on what can be done on or near a body of water, a wetland or a waterway. Application of chemicals must be done by licensed professionals. Town and state permits are required. The planned activity has to be thoroughly publicized to the pond abutters as well as the whole town. Following this a public hearing is held to get final approval from the town Conservation Commission.

Start this process early if you want to treat your pond next summer. We had collected information since May of 1996 and started the permitting process in January, 1997. The first treatment was June 2, 1997.

### References:

Aquatic Control Technology, Inc.  
PO Box 742  
Northborough, MA 01532  
(508)393 8846, fax (508)393 8647  
e-mail - lakes@tiac.net

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**Hans and Peggy Albertson**  
(Hans is on the left) admiring their awards at the 1997 ACCR. The fountain is in beautiful Shawnee Park Lake in Xenia, Ohio.

## WORTH MARINE'S 1998 BOAT SHOW SCHEDULE

### Mid-America Sail and Power Boat Show

at the I-X Center, Cleveland, OH  
Jan 16 - 25

### Strictly Sail 98

Navy Pier, Chicago, IL  
January 29 -February 1

### Sail Expo 98

Atlantic City Convention Center, NJ  
February 4 - 8

### Strictly Sail 98

Watson Island, Miami, FL  
February 12 - 18

### Pacific Sail Expo

Jack London Square, Oakland, CA  
April 23- 27

At all the boat shows there will be in-water demos and racing with the CR 914. If the water is inside, fans are used to create a breeze. This activity has been very popular with show attendees.

**CR 914 SET UP and TUNING DATA**

Kevin, Greg, Tony and I, provided the data in the tables on pages 8 and 9 as a basis for a new owner to set up his boat. *These boats have demonstrated good boat speed. Using this data won't assure that you will win races, but your boat will be capable of winning. The skills you develop through practice will determine if you win.* **Ed.**

Place	1997 Nationals Champion	Second Place at 1997 Nationals	1996 Nationals Champion	1995 Nationals Champion, 4th in 1997
Date data was obtained	Nov. 20,1997	Oct. 2, 1997	12/9/97	12/10/97
Owners Name, Sail Number	Kevin Dooley, 97	Chuck Winder, 888	Greg Worth, 181	Tony Johnson, 77
<b>Hull, keel, rudder finish for low drag</b>				
Final sand paper grit, wet or dry	600 grit, wet	Polished to high gloss	Polished to high gloss	Paint, 1200 grit, wet, then waxed
"Wetting" or "non-wetting" finish	wetting	non-wetting	Non-wetting, except keel fin -wetting	non-wetting
Jib topping lift installed?	No	No	No	Yes
Jib battens installed?	No	No	No	No
Telltails used on jib/main?	Yes/?	Yes/Yes	Jib only	No
Wind Hawk at mast head?	Yes	Yes	Yes	No
<b>Radio System</b>				
Make/model	hitec Ranger II	Futaba Attack SR	hitec Ranger II	Futaba Attack R
Transmitter batteries	Alkaline	NiMH	NiCd	Alkaline
Sail servo - Make/model	hitec 700BB	Futaba S 3801	Futaba S - 3801	IC Servo, 176 in/oz 180°
<b>Boat Battery Pack</b> - No. of cells and type/flat or square	Four Alkaline/ square	Four NiMH/flat	four NiCd /flat	Four Alkaline/square

**Comments for table on page 9** →

1) Tight **jumper stays** and **lower shrouds** will bow the mast aft which increases the draft and power of the main. **Sliding adjusters** makes it quick and easy to adjust tension. The adjusters can be as simple as a loop of string tied snugly around both shrouds. Sliding the loop down tightens the shrouds.

2) In light air a loose **backstay** allows the mast to be bowed aft by the jumpers and lowers. This adds draft to the main. The low tension in the headstay allows it to sag and add draft to the jib. A tighter backstay flattens both sails.

3) The **rake** listed is a starting point. Adjust the mast rake using the headstay, leaving the jib halyard and backstay loose. The mast should be raked forward or aft to achieve helm balance that allows the boat to sail to windward with very little steering input. Shortening the

backstay measurement by 7/16" will move the mast tip aft about 1". (Before measuring rake, loosen the jib halyard and backstay tension. Measuring rake from under the transom allows hooking the tape measure under the transom to measure distance to the center of the top of the mast head fitting.)

4) To **adjust main and jib sheets**, center the main boom. Do this using the sail servo to tighten the common sheet. Adjust the jib sheet so that the aft end of the boom is the correct distance measured from the mast. See the table for the value. Skippers obviously differ in their preferences. Experiment to find what works best for you.

5) **Draft** in the lower portion of the main and jib is set by sliding the clew attachment fore and aft on the boom. Measure the draft by applying gentle

pressure at the center of the sail foot with a ruler and measuring to the center of the boom. The draft in the upper part of the sails is more influenced by mast bend for the main and headstay sag for the jib.

6) **Batteries weigh about 4% of the total boat weight** (3.8 oz./(6 lb.- 4 oz.) = 3.8%). That would be about 2100 lbs. (or twelve 180 lb. crew members) for a 55000 lb. America's Cup boat. Since 914's tend to pitch pole in strong winds, weight well aft might encourage exciting planing instead of a pitch pole. In light air forward location of the weight trims the boat down at the bow and should reduce the wetted area to reduce hull drag.

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**CR 914 SET UP and TUNING DATA (See annotation for this table on page 9.)**

Place	1997 Nationals Champion	Second Place at 1997 Nationals	1996 Nat'n's Champion	1995 Nationals Champion, 4th 1997			
Date data was obtained	Nov. 20,1997	Oct. 2, 1997	12/9/97	12/10/97			
Owners Name, Sail Number	Kevin Dooley, 97	Chuck Winder, 888	Greg Worth, 181	Tony Johnson, 77			
<b>WIND STRENGTH</b> for the settings listed below							
	<b>Light</b>	<b>Heavy</b>	<b>Light</b>	<b>Heavy</b>	<b>Medium</b>	<b>Light</b>	<b>Heavy</b>
<b>Standing Rigging</b>							
Jumpers tension (1)	Tight	Looser	Tight	Looser	snug	Medium	Medium
Sliding adjusters?, position	Yes, down	Yes, up	Yes, down	Yes, up	No, no bowsies either	NO	NO
Lower shroud tension (1)	Tight	Looser	Tight	Looser	Low	Tight	Medium
Sliding adjusters?, position	Yes, down	Yes, up	Yes, down	Yes, up	No	NO	NO
Mid shroud tension	Very	Very	Loose	Loose	loose	Tight	Medium
Upper shroud tension	Very	Very	Loose	Loose	loose	Tight	Medium
Back stay Tension (2)	Very	?	Very	Variable tension	snug	Very	Tight
Mast rake, in. (from under transom to masthead center)	53 15/16	53 15/16	53 9/16	53 9/16	53 3/16	53 3/4	53 3/4
Jib tack height, in. - (Deck to jib boom centerline)	1.0	1.0	1 1/2	1 1/2	?	1 1/2	1 1/2
<b>Running Rigging</b>							
Main down haul tension	Loose	Loose	Loose	Loose	snug	Loose	Tight
Jib boom trim, inches, vs. main boom trim (4)	1.0?	2 1/8	1 7/8	1 7/8	1 9/16"	1 1/2	1 1/2
Jib draft - inches (5)	1 3/16	15/16	1 5/8	1 5/8	3/4	1 1/4	1
Main draft - inches (5)	1 7/8	15/16	1 5/8	1 5/8	3/4	1 1/2	1
<b>Boom Fitting Locations</b> measured from jib boom tack or goose neck pivot pin, inches							
Jib boom forward end	2 3/4	2 3/4	3 1/4	3 1/4	2 7/8	4	4
sheet fairlead	7 3/4	7 3/4	7 3/4	7 3/4	7 3/4	6 3/4	6 3/4
Main vang attachment	5	5	4 3/4	4 3/4	4 1/2	5 1/2	5 1/2
Sheet fairlead (on boom)	7 5/8	7 5/8	7 1/4	7 1/4	7 1/8	7 1/4	7 1/4
<b>Main Sheet Fairlead Ring</b>							
- inside diameter, in.	~7/32 (a)	~7/32 (a)	~7/32 (b)	~7/32 (b)	~7/32 (a)	1/2	1/2
- distance aft of mast, in.	7 5/8	7 5/8	7	7	7 1/2	6 5/8	6 5/8
- height above deck, in.	2.0	1 3/4	1 3/8	1 3/8	1 7/16	1 3/4	1 3/4
<b>Battery Location</b> can be changed for improved weight distribution	Forward against aft edge of servo board	Well aft	Forward against aft edge of servo board	Well aft, touching rudder post	Fwd in lite, aft in heavy air	beside mast step - stbd. side	beside mast step - stbd. side

(a) The stock kit fairlead ring is about 7/32 inches inside diameter.

(b) The ferrule inside diameter in a custom mainsheet fairlead bridge.

**CRIB SHEET**

Kevin Dooley is our '97 champion (did anyone notice his sail number is 97, too). He used a "crib sheet" to keep track of the many adjustments in the set-up of his boat. He is the only one I know of who did that. As one can see from the information on pages 8 and 9, there are many adjustments

that can be made to a boat. Kevin had a table of key adjustments he found best for different conditions. By referring to the table he was reminded of what he should do. My personal experience supports the use of a "Crib Sheet". Many times after a session of racing I discovered that I had not made

the correct adjustments. For me, the environment at a race causes me to forget things that in a calmer setting would be no problem.

The above tables grew from my initial efforts to create a crib sheet of my own.

*Chuck Winder*

## HULL LEAKS

RE-VISITED

*In my haste to go to press on the Hull Leak problem in the last issue of the NEWS, there were some errors and omissions. These are addressed herein.*

### CA Glues are waterproof

The article said not to use CA (Cyanoacrylate) glue for the critical keel and rudder tube joints. It was stated that CA may not be waterproof.

Greg Worth told me that was wrong. He and others have been using CA as a glue on many different boat model with no problems. My mistake was to accept anecdotal pond side opinions and write them up with out doing a little research. I will do better in the future.

The facts are that CA glue is fine for use under water. Telephone conversations with two industry sources assure me that when fully cured, CA glue is excellent for underwater use. When cured it is a plastic similar to Plexiglas. My sources were Tower Hobbies(800 637 6050) and Balsa USA (800 225 7287), a leading supplier of quality CA glue.

**Note:** 1) Allow a CA joint to cure for an hour, preferably 7 hours, to reach full strength and, 2) the presence of water at a joint when the glue is used will degrade the performance of CA.

### Quick Cure Epoxies are NOT waterproof!

Greg's experience offers another important fact. Fast curing ("Five-minute" or "fifteen-minute") epoxy glues are not water proof.

This was a surprise to me. Technical sources in the industry confirmed Greg's experience. The excellent West System epoxy Greg supplies in the kit is definitely waterproof.

*Chuck Winder*

### Howie McMichael writes:

Hull cracks in my opinion can be prevented by using a roughly 2"x3" glass mat cut with a vee front to back. The mat is epoxied in front of and on either side of the mast step/ke-el molding in the bilge

after a good roughing the hull with 100 grit paper for adhesion.

The above also works to repair leakers but it is best done by removing the servo platform for access.

Avoiding running the boat into solid objects is also recommended.

*Howie McMichaels*

### Joe Frasier, #13, offers this approach to hull cracks:

Hardware stores sell epoxy putty for plumbing repairs. It comes in either stick or roll form. One cuts off the desired amount and by rolling the material in your hand the two parts become mixed. (A little heat helps.) This stuff becomes rock hard and adheres to the hull.

Pack it around the area to be reinforced and wait 24 hours. No cutting or fitting is required. I use this with all my 914's during construction.

My original, and still the race boat of choice, is over four years old and has never had a crack.

I never carry the boat to the water, or transport my boat, with the keel attached. Others do and nearly all of the their boats have developed cracks.

*Joe Frasier*

### Jon Kaplan, #131, asked:

*Should the mast compression post be used since it loads the keel molding and contributes to hull cracks?*

Without a compression post the loads pass into the keel molding through through the keel tube.

Greg found that without a mast compression post, deck cracks often occurred caused by the mast loads. The compression post stops the deck cracks. All full size boats have compression posts, it is just a mandatory design feature.

The hull at the keel molding is not strong enough. Properly reinforced, the hull will never develop cracks at the keel molding.

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*(Continued from page 6)*

level, all the shrouds were slack! None of the bowsies had slipped. (All three holes on the bowsies were used.)

The above result surprised me, but explained the problem I had had at the nationals.

Repeating this sequence several times resulted in the shrouds being relatively snug when the boat was returned to level.

In all the line testing I have done, one characteristic was always present. When a previously unloaded line was loaded and then unloaded, it never returned to its original length. It was always longer.

This "relaxation" is caused, in my opinion, by the nature of plastic braided line. (Dacron (polyester), Kevlar, Spectra, etc are all plastics.)

When not under tension the braided strands become loose with spaces between strands. And the untensioned plastic strands gradually return to close to their original length. When the shroud is loaded, the strands stretch and are squeezed together, the spaces between strands are removed and the line becomes longer.

When initially unloaded, the line does not return to its original length and the rigging is looser than before loading. After several minutes or longer for some plastics, the line returns to close to its original length.

**SO WHAT!** Now that I have learned what happens and why, I still don't know what to do for best performance. That will come later. Stay tuned.

\*\*\*\*\*



## CR 914 YACHT REGISTRATION AND SUBSCRIPTION TO "CR 914 NEWS"

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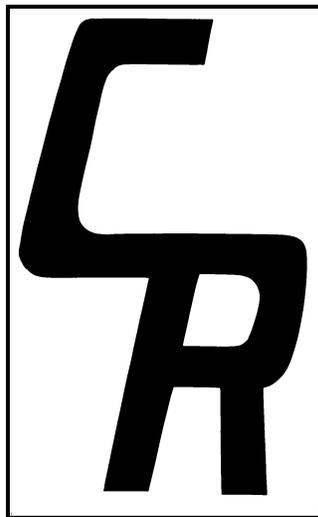


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**Happy Holiday**

See our 1998 Boat Show schedule on page 7.

*Greg Worth*



**CR 914 SAIL EMBLEM**  
**Full Scale**

### **Future articles in the CR 914 NEWS**

The following is a list of articles that are planned for future 914 News. What will actually appear depends on input from you owners in the form of contributed material and requests for particular information.

- History of the class
- Tuning for best performance
- Battery management - continuing
- Surviving salt water - continuing
- Class measurement certificate
- Race rule topics
- An analysis of the results, skippers and boats at the 1997 Championships
- Why do radios "glitch"?
- Weed and algae control at the pond
- Increase of the minimum boat weight
- Class Rules Interpretation - continuing
- Maintenance and repair of radio components
- Building and maintenance tips
- How to make a cheap wind hawk

### **START YOUR OWN MODEL YACHT CLUB**

There are probably some owners who would like to race but don't have a local club. Start your own by getting three AMYA members together. That's all it takes! (Though it helps to have a place to sail such as a pond.) Ask me for a "NEW FLEET" package if this interests you.