

❖ CR 914 NEWS ❖

Issue 15

NOVEMBER - DECEMBER 1998

Merry Christmas and Happy Holiday to All



THIRTEEN BOATS AT THE START 1998 Nationals at Redd's Pond, Marblehead, MA

Steve Denis, #1, follows Tagg Zurmuhlen, #(1)881, who is in danger of being luffed over the line by Sasha Kavs, #7. To leeward of Sasha is Marcel Nyffenegger, #33. Ahead of Marcel is Andrew Sheriff, #771, following Rick Meyers, #30.

Almost hidden behind Andrew is Kevin Dooley, #97, who went on to be the 1998 Champion. To leeward of Rick Meyers is Dave Ramos, #238, fifth place. Ahead and to leeward of Rick is second place Chuck Winder, #888, (with the dark camber stripes), and further along the line is Jose Venegas, #222, fourth place. At the upper left Steve Cruse, #23, third place, has mounted the port side stern of Geoff Langdon's, #6, and they head away from the line. Approaching them is Hank Buchanan, #110, who may have to tack to avoid them.

Bill Mint photo

RENEW YOUR SUBSCRIPTION TO THE CR 914 NEWS

For many owners, the subscription to the NEWS expires with this December issue. There will be a warning label affixed to your NEWS if that is the case.

The rest of you have subscription expirations spread throughout the year. The subscription is for one year. When your subscription expires, you will see a label telling you that on the front page of your last NEWS. When you see that label, stop and send in your renewal before you forget. That will be the last NEWS you will receive if you do not renew.

Your Editor

Inside This Issue

Local Hobby Shop's	2
Painting a CR 914	3
Battery Management	4
Fleet News	6
Report from Japan	7
Reliability	8
New Members	9
Registration Package	9
Boat Maintenance	10

Class Secretary's Report

Belated Happy Holiday The plan was to get the NEWS to you before the holidays. Better late than never someone once said.

AMYA Change-of-Guard

The latest issue of the AMYA quarterly magazine, *Model Yachting*, issue 113, illustrates the improvement achieved by the new organization with a stronger staff of editors instead of just one to carry the burden. The layout is fresh and new, much easier to use.

In the past it has been almost impossible to have anything on the CR 914 published in *MY*. In this issue there were three CR 914 regatta reports.

(Continued on page 2)

(Continued from page 1)

AMYA TO THE RESCUE

The CR 914 Nationals were budgeted for 25 entrants, but only 16 entrants came to the races. The result was an over-run of \$160.

Having heard that AMYA had a policy of subsidizing ACCR's up to \$10/entrant, we appealed to them for help. The Board generously agreed to help and new Treasurer Dick Hein sent a check for \$160 to cover our embarrassing loss. Thank you AMYA.

We were advised, however, that AMYA is planing to reconsider this policy. In the future the subsidy may not be available.

Registrations

This month there are 413 boats registered, an increase of 14. Of these, 261 subscribe to the NEWS.

New owners are listed elsewhere in the NEWS.

CR 914 Web Site

Ric Naff has closed the web site. Visitors to the site are now redirected to the AMYA site.

Mark Zurmuhlen, Commodore of CBMRA, plans to have pages at their club's site to support the CR 914. He will provide more details at a later date.

Chuck Winder



JOIN or RENEW YOUR AMYA MEMBERSHIP

AMYA membership expires on December 31. Send your renewal now before you forget. (See bottom of page 11.)

Dear Owner,
I encourage you all to support the AMYA by joining or renewing your memberships for 1999. The AMYA has a new slate of talented and aggressive officers that promise a rebirth of the organization.

The editorial staff of *Model Yachting*, the quarterly magazine, now consists of several editors instead of just one. They each have a special area to cover. Their first effort, issue 113, has demonstrated the wisdom of this new approach.

So join up. The AMYA is an organization important to our sport.

Your Class Secretary

SUPPORT YOUR LOCAL HOBBY SHOP

The local hobby shop in many places around the country is in danger of extinction. Environmentalists have labored to tell us that many species are, or will be, extinct because of the actions of man.

The local hobby shop is an endangered species. One cause is our too simple desire to buy things at the lowest possible price. The proliferation of huge catalog houses and the price control they exert feeds our desire.

It is easy to forget that a local hobby shop owner may have spent many hours helping solve our problems and never charged a penny for his expertise. It is difficult for a local shop to match the prices of the big houses. Their volume is small. The cost of maintaining a huge inventory is prohibitive.

Worth Marine is a classic example. Greg Worth spends untold hours on the phone with customers who need help building or repairing their boats. There is no way to charge for that time. But his advice has real value to those who need it.

When people who have received help from their local shop buy new products, do they buy, instead, from the lowest cost

catalog house? Do they factor in that a place like Tower Hobbies charges \$7 for shipping and handling? Tower can never answer detailed questions about a specific model such as a CR 914, for instance.

The local shops maintain a stock of the things we need in a hurry. Many shops have hooked up to a supplier that can deliver on short notice almost anything a large catalog house offers.

For many of us, if the local shop ceased to exist, we would be in trouble. Where would we get the advice to solve those problems that arise as we enjoy the hobby? Where would we get the things we need in a hurry? Where would we find a place that could make the repair or adjustment that we can't do ourselves?

A Solution

Use catalogs as a resource of information, but buy your products from the local shop. Remember to include the shipping and handling costs of a catalog house when thinking about price.

PAINTING A CR 914

by Chuck Winder

A frequent e-mail request is for advice on how to paint the CR 914. I am not an experienced painter but the second boat I built had a paint job I was very pleased with and it received a lot of compliments. Greg Worth, whose store is conveniently close, gave a lot of useful advice. This article tells how that paint job was done.

What coating to use?

My only experience painting 914's is with professional quality automotive acrylic lacquer in aerosol cans. Use the Yellow pages to find a store that supplies body shops. I used Dupont Lucite, but the product sold by your local store will work fine.

I can give you no advice on the use of other coatings because I have not used them.

(Worth's upgrade kit recommends Martin Senour lacquer products sold by NAPA auto parts store. Local NAPA stores no longer carry that brand though they offer the store brand. I have no experience with them.)

Outstanding results can be achieved by carefully following instructions on the cans and using any advice the people at the paint store will supply.

The paint store will fill a 12-14 oz. aerosol can with the finest lacquer of any color you might want.

1. Pick your color. I chose BMW bright red. (A BMW parts department supplied the paint code which was used by the paint store to prepare the color.) Find any car color you like and tell them that is what you want. Or they will prepare a color from a sample you bring to them.
2. Have them prepare sandable lacquer primer tinted that color.
3. Then have them make up the color coat. I used one 12 oz. can and part of a

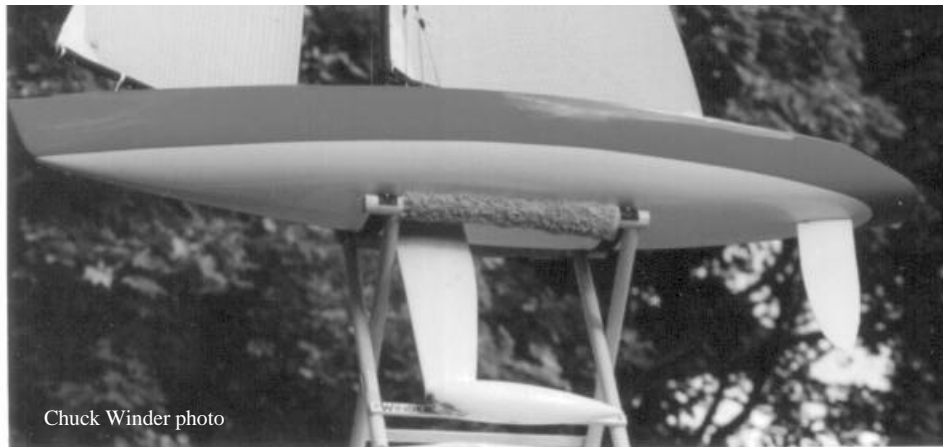
second. If you are careful, one can might be enough.

4. Also buy a clear coat compatible with the color coat.

PREPARATION

Wet sand the hull (use water) starting with 80-100 grit removing the imperfections. The largest imperfections are the die marks near the bow. The hull is thick enough to sand those out without the need for filler. A filler can be used but it is more work and cost. It is heavier, too.

Minimize sanding with fingers and/or palm. Use small rubber sanding blocks available from the paint store. They are about 1/8 inch thick and come in different sizes. You can cut them to any size that



Chuck Winder photo

seems appropriate.

Avoid sanding too thin where the hull and deck join and around the keel molding in the bottom of the hull. The molding process makes the hull thinnest at those locations.

Wet sand with progressively finer paper using 120, 220, 320 and finally 400 grit. Carefully visually examine to assure you have no scratches.

MASKING

Mask the deck by cutting a piece of plastic wrap to be smaller than the deck. Tape this to within ~1/4 inch from the deck edge. (I also taped a cut-to-shape piece of thick terry cloth over the plastic to protect it when sanding.) Then use 3M Thinline tape to tape up to the deck edge.

Waterline Option

I decided to have the topsides red to the water line and leave the bottom the white of the plastic to avoid the labor of painting it.

Marking the waterline was discussed in the March-April NEWS, page 2. Locate the waterline where it would look good on a full scale boat. The models actual waterline is too high to look good.

Mark where you want the water line at bow and stern. Level these two marks fore-and-aft and from side-to-side with the hull resting upside-down on blocks on a flat surface.

To mark the waterline, devise some way to hold a pencil at the level of the waterline while sliding it around the boat on the flat surface.

Masking the Waterline

First use plastic and tape to mask the bottom close to the waterline as was done for the deck. Then use one piece of 1 inch wide Thinline tape for the

whole waterline. (The wide tape makes it easier to have a smooth line where the waterline is fairly straight.) Start at the stern. Use an Exacto knife or scissors to locally cut the tape thin enough to follow the curvature at the bow and stern.

This takes practice. If it doesn't look right, remove it and do it again.

COATING

Coat using the tinted primer. **The secret with the primer and the top coat is to make each coat a mist coat.** Don't attempt to cover the white hull color with one coat. It takes several mist coats before the white disappears. Allow about 10-15 seconds to dry between mist coats. Repeat this until you have completely covered the hull. You want to continue adding mist coats even after the white is covered to

(Continued on page 7)

BATTERY MANAGEMENT

BATTERIES COMPARED

by Chuck Winder
CR 914 Class Secretary

This article is aimed principally at the new owner or the owner who is considering switching from alkaline to rechargeable batteries.

A radio control model sailboat owner can choose between several kinds of batteries. This comparison attempts to put the choices into perspective.

Only AA size batteries are discussed. AA batteries are 9/16 (0.56) inches diameter and 1 15/16 (1.94) inches long.

SUMMARY

Alkaline, non-rechargeable These last the longest of all batteries tested. They last 2.5 - 3 times longer than a standard 600 mAh NiCd when used in a transmitter (Tx). Cost trade-off between alkaline and rechargeable batteries will be addressed below and shown in the table.

RAYOVAC® RENEWAL® (rechargeable alkaline) Not recommended for model boats.

Nickel-Cadmium (NiCd) Has been the standard in model airplanes for many years. Life is marginal for racing sailboats. The standard 600 mAh battery may last more than 2 hours at the pond depending on the radio used, the boat and wind strength.

Nickel Metal Hydride (NiMH) The emerging future standard for model boats. Will last more than four hours at the pond. More costly but prices will come down.

Performance of the batteries is presented in the table.

Rechargeable Lithium batteries have recently appeared. They will not be discussed here because the author has not tested them. Because of safety issues, it may be a long time before they are available to amateurs, according to a

technical representative of a large battery company.

DISCUSSION

Alkaline Batteries will last longer at the pond than freshly charged NiCds. Effective capacity of alkaline batteries is strongly influenced by the average current drain of their load. See the first line in the table

New CVS brand alkaline batteries were tested in two Tx's. The test was stopped when the flashing red low battery warning light appeared. The table shows battery life is 6.5 hours in a *hitec Ranger II* Tx (265 mA load). *Futaba Attack-SR* Tx (160 mA load) batteries lasted 12.5 hours.

Note: Tx battery warnings are designed for NiCds, not alkaline batteries. The *Futaba Attack-SR* Tx will operated for over an hour on alkalines after the red light starts flashing and the warning sounds. The *hitec Ranger II* Tx will last at least half an hour.

There is no risk to the boat to operate with flashing red. When control is lost turn off the Tx for several seconds. Turn it on and point the boat for shore and then turn it off. Keep this up until the boat is safely ashore. The same technique works with NiCds, but there is much less time to get ashore.

Actually, I have used the above technique to finish two legs of a race course to finish a heat.

Cost is the only criteria for choosing between the many brands of alkalines. Consumer Reports, my own testing and other sources all agree. *Costco* discount warehouse stores are the lowest cost at \$0.23 per cell (Kirkland brand, \$8.99 for a 40 cell package). Typical cost for alkalines at local stores is \$0.40-\$0.70 each. *Radio Shack* cost is \$0.67 each. All these batteries should perform the same.

Duracell Ultra and **Eveready "Advanced Formula"** were introduced in 1998. They are advertised as having higher capacity in

"high tech" devices. The *Ultra* cost from \$0.71 each at *Costco* to \$1.35 at a local store.

Four *Ultras* were tested in the CR 914 Lab at 300 mA drain. The tested capacity was only 12% more than a regular \$0.23 alkaline battery. They are definitely not cost effective for use in the Tx.

Consumer Report, December 1998, reported that when used in a digital camera using flash and display, the new batteries gave ~70% longer life than a conventional alkaline. However, the load characteristic of a boat radio system is different.

It is possible the newer technology would perform better in the boat where the sail servo can cause periods of high current. It is doubtful they would ever be cost effective until the price is reduced..

The conclusion is the more expensive high capacity alkaline batteries offer nothing for model boats.

Rechargeable Alkaline Batteries are not recommended. On first use they have almost as much capacity as a normal alkaline. But, RAYOVAC engineering data predicts that after 25 charge cycles, the capacity is reduced to half. They can only be charged by a *Renewal* charger

They are costly because they tolerate so few charge cycles. Twelve cells and chargers for twelve are ~\$48.

NiCd Batteries have been the standard in radio control model airplanes for many years. However model airplanes are flown for short times compared to model boats.

In model sailboat racing the life may be marginal, requiring changing batteries at the pond. If you regularly sail more than 2 hours, you will need two sets of batteries.

Today the least expensive NiCds have a capacity when new of 600 mAh. Lowest price seen for the respected Sanyo brand is ~\$2/cell delivered, a Tower Hobby sale price. A Futaba FBC - 8B charger for ~\$20 will simultaneously charge both the Tx and Rx batteries. A 12 cell set with charger would be ~\$44.

BATTERIES COMPARED

Comments	Panasonic			
	Alkaline	NiCd	NiCd (4)	NiMH
Capacity, mAh (Tx load - 265 mA/160 mA) (1)	1750/2000 (2)	600	~1000	1200+
Usable Cycles	One	200 +	200+	300+
Max. Continuous Output Current, amps	~1	~5	~5	3
Transmitter Battery Life, Hrs. (265 mA/160 mA)	6.5/12.5	2.5/3.8	3.8/6.3	5/7.5
Boat Battery Life, Hrs. (assume 300 mA average)	~6	2	3.3	4
Alkaline Cost - 12 cells (\$0.40 a cell used for this table)	\$4.80 (3)			
Alkaline cost per hour	\$0.80/\$0.53			
Rechargeable Cost - 12 cells with \$20 charger		\$48	\$40	\$76
Cost for 50 days of 2 hrs of sailing (100 hrs)	\$80/\$53	\$44	\$40	\$76
Weight , oz. (4 cells) Add ~0.6 oz. for a battery box.	~3.2	~3.2	~3.2	3.4

- (1) Average current drain for a hitec Ranger II/Futaba Attack - SR,
- (2) Alkaline capacity is dependant on the average current drain. Lower current gives higher capacity
- (3) Cost of alkaline batteries vary from \$0.23/cell to \$0.80/cell, depending on where they are purchased.
- (4) Specifically, the *Super-High Capacity Panasonic®* NiCd cells

Good quality NiCds should last three years.

Caution: My experience was poor using Radio Shack 600 and 850 mAh NiCd batteries. In less than a year individual cells started to fail, refusing to hold a charge.

Recently, *Super-High Capacity Panasonic®* NiCd cells were tested and gave 1000 mAh capacity, 66% better than the Sanyo NiCds above!. The packaging claims 1100 mAh and hundreds of charge cycles. A six cell package was \$9.99 (\$1.67 each). They are sold at Costco and BJ's stores. Twelve cells with the \$20 charger above is only \$40.

Or, there is a package of four *Panasonic* cells with a 5 hour charger for \$14.79. A 12 cell set with chargers is \$44.37.

But a word of caution. The *Panasonic* capacity test was done in the CR 914 Lab on one sample of four cells. We have no data on performance after years of use and hundreds of charge cycles.

NiMH Batteries

These may be the future standard for our sport. They have twice the capacity of standard NiCds. Currently, the delivered cost is ~\$4.67 per cell, but that will come

down in the future. The same \$20 charger as above will charge both Tx and Rx batteries. (They *must not* be charged using NiCd "peak" chargers.)

A full set with the \$20 charger would be ~\$76. That is 60% costlier than standard NiCds, but you get twice the capacity. You can race all day, more than four hours, and never change batteries. If you sailed that long you would need two sets of standard NiCds for \$80.

Order NiMH's from TechAmerica, 800-877-0072, Cat. # 960-0298. Advertised capacity is 1300 mAh. After one year of hard use and at least 80 charge cycles, my Tx and Rx batteries tested at 1290 mAh and 1450 mAh, respectively.

Caution: Three sets of *HydriMax™* NiMH AA cells purchased from Tower Hobbies failed to meet advertised capacity by a large margin when new and were returned. They are more expensive than the TechAmerica cells. The paradox is that one *HydriMax* Rx flat pack tests at 1750 mAh after one year of use!

The table above attempts to present the information for easy comparison.

BACKGROUND INFO

A Tx uses eight AA size cells. They have

low battery warning systems such as a meter or different colored lights. Some have an annoying audible alarm in addition. Typically, the red warning light and the alarm start when the voltage has dropped to 8 volts.

Receivers (Rx) are designed to operate at 4.8 to 6.0 volts. CR 914 class rules limit the choice to four or five AA cells. In other classes some owners use smaller batteries to reduce boat weight and some may use larger batteries if their servo loads are large.

Five cells does not increase battery life at the pond. Use five cells only if you need a stronger sail servo. Five cells are a problem because a 6 volt charger is required.

Battery "packs" of rechargeable AA cells soldered together and shrink wrapped are commonly used in the Tx and Rx. They are neater, lighter and a more reliable.



FLEET NEWS

Privateer Yacht Club Chattanooga, Tennessee

New fleet being formed

Six "big boat" sailors recently made a fleet purchase of CR-914 kits. Three are completed, with the remaining closing fast. We planned on holding our first regular Sunday racing on December 6th, but it was rained out. An additional six boats will be under construction in the New Year.

Children of some of the skippers are getting involved and we see a Jr. Fleet in the works.

The CR-914 will offer our adult sailors the opportunity to sharpen their sailing skills, and serves as a refresher on the rules of racing.

Rob Fowler conceived the ideal of starting a CR-914 Fleet at PYC. Rob is the consummate racing sailor who felt he needed even more sailing challenges. So in October, he bought six kits to get the fleet rolling. He quickly completed construction of one boat, admittedly a little "rough" on finish. The first weekend in the water he sold the remaining five kits! Besides being a skilled sailor, Rob is a great salesman, architect, dreamer, and hustler.

Interclub competition with the Atlanta fleet is being considered. It is only a two hour drive.

Bill Denes
bdenes@mindspring.com
(423) 877-7630

Cottage Park Yacht Club Winthrop, MA

The "Hangover Regatta" is planned for New Year's Day. The fleet now has about 16 boats with regular attendance being about eight boats.

Mike Gahan
hubbleg@aol.com

Chesapeake Bay Model Racing Association Annapolis, MD

The Iceberg Series II at the Annapolis Chart House started at 11:00 am Sunday, October 25th, and will continued for six consecutive Sunday's.

A new Heat Race Director (HRD) program is being tried. The program assigns skippers to "sit-out" when they are the HRD and awards them average points for that heat.

Twenty boats raced November 29! So far there is no plan to go to a split fleet system as was done at Larchmont.

Tagg Zurmuhlen
mjz@bellatlantic.net

Larchmont Model Y C Larchmont, NY

A split fleet system was adopted after the November 14 race when 18 boats came to the line. That was too many for good racing. Cumulative scores up to that day were used to split the fleet into *Blue* and *Red* fleets. The split fleet idea works, racing has been better.

Here are the standings for the first 9 day series ending November 14. At that time, we were averaging well over a dozen boats per day and broke into two divisions based on performance. Sixteen boats qualified of the 24 that sailed. The top five are:

1 Monte-Sano, Bizzy,	0.744
2 McMichael, Howie,	0.689
3 Burbeck, Joe,	0.665
4 Watt, Dave,	0.656
5 Padin, Buttons,	0.621

There were 21 boats racing on Dec. 12!

The fleets sail together when there are 12 or less, though they are scored separately. When there are 13 boats or more, the *Blue Fleet* starts followed immediately with a second sixty second start sequence for the *Red Fleet*.

The fleet has also changed to the 720 alternate penalty. The 360 was judged to be insufficient penalty for good racing.

The **Pumpkin Pie Regatta** (19 boats) was won by 60 year old Carl Olsson in the nine boat *Blue* fleet. Bill Ferris won the *Red* fleet with ten boats.

One of the reasons we have had such good racing is that we have had dedicated race officials, Ruth Campanelli and Ondria Prina, calling the line and scoring for us.

Racing was from 1 - 4 PM for the traditional **New Year's Day Regatta**. There was a party following the racing.

Buttons Padin
erpadin@aol.com

Marblehead MYC Marblehead, MA

Frostbite racing is every Saturday from 1 to 3 PM all winter. Redd's Pond froze Christmas week. Racing will be at Boston YC in Marblehead Harbor until ice-out in Redd's in mid-March.

The First Frostbite Series averaged seven boats each of six races. Fourteen boats were entered. Results are:

1 Kevin Dooley	6
2 Chuck Winder	10
3 Ben Martin	14
4 Stewart Neff	16
5 Jose Venegas	17

The next series starts January 9.

Chuck Winder
chuckw88@msn.com

(Continued from page 3)

build up some thickness for sanding.

An old bar stool was used as a *Lazy Susan*. The hull was mounted inverted on the stool. This made it convenient to apply the paint to one side and then rotate the hull to do the other side.

Wet Sand, carefully, with 320 progressing to 600 grit. Look for scratches and any imperfections. If they can't be sanded out, prime again and repeat the sanding. You are done when there are no imperfections or white showing. Wet sand this with 600 grit or finer

Color Coat Use the same light mist technique to apply many coats with 10-15 seconds dry time in between. Continue until you feel you have sufficient thickness for sanding.

If you have used the waterline option, remove the masking tape at this point.

Let the paint cure until it is ready for sanding. Ask the paint store for a recommended time.

Wet sand the entire hull with 1000 or 1200 grit, or finer if you want. You may need to carefully use slightly coarser grit to remove the paint edge at the waterline.

Clear Coat the same way, use many light coats until you see that a nice even gloss is achieved.

At this point you may be satisfied with the appearance. If not, wet sand with 1200 grit to remove any imperfections. Use even finer grits if you can find them.

Final Polish

The final step is to polish to a high gloss. Greg Worth did this for me and the result was outstanding. If I had to do this myself I would consult with the paint store or go to a friendly body shop to see if they would do the polish.

That's the way I do it. Good luck.

Chuck Winder

Report from Japan

by Rick Martin

Rick is currently working in Japan for Boeing Aircraft. His home is in Seattle and he owns two CR 914's. Rick was third at the 1996 CR 914 Nationals. In the December 1996 NEWS he reported to us on the 11th Japan Super Mini America's Cup held in Nagoya, Japan, in 1995. He sent me an e-mail, December 18, 1998, on the model racing scene in Japan. It has been edited for the NEWS.

Racing here is a once a month Sunday activity. I have only made it twice due to conflicts. The site is a small lake at a park about an hour and a half out of Tokyo by train. They use a corner of the lake which is surrounded by huge Oak trees about 20 feet from the waters edge. To say that the wind swirls is an understatement. About 20 show up and the fleet is divided in half using an antiquated matrix system.

It's a bit of a free for all as they race four different classes of similar size ARF boats of comparable performance. [ARF is an acronym for easily built kit boats like the CR 914.] Besides the 914 there is the Kyosho SeaWind, the "GRACIOUS", a narrower, lighter and longer version of the 914 with more sail area, and a Tamiya one meter which is just out and looks a lot like a blow-molded Marblehead Class.

Each boat type seems to excel in a different condition so in the constantly changing conditions everything more or less equals out. The 914's suffer in the light stuff, can hold their own in medium conditions and are faster in heavy weather when the others get overpowered. I sense that interest in the 914's is giving way to the newer designs. The Japanese perception is that the newer types are faster and they are probably correct but a well sailed 914 is still very competitive.

I was 7th overall in my first attempt and 2nd the next time out, but first of the 914's both times. The caliber of the competition however is well below that which I observed at the Japan CR 914 Mini America's Cup championships in 1995. I missed the 1998 running of that too due to travel commitments.

By the way, I met the creator of the 914, a Japanese naval architect named Takei and I hope to get a chance to interview him for the NEWS. He is in Osaka, 3 hours south of here. I don't know exactly when I will visit him, but if you have any questions you would like me to ask, send them to me. I plan to visit the AG Industries factory in Osaka at some time and will

report on that.
Regards,
Rick



Sally Wild Photo

A Start at the Region 1 Regatta at Redd's Pond

Left-to-right: Sasha Kavs, #7; Kevin Dooley, #97; Jaye (sitting), line judge; Marcel Nyffenegger, #33; Bill Follett, #177; Wendy Lull, #753; Chuck Winder, #888; Don Wild, # 67; Steve Denis, #1; Greg Worth, #181; Jose Venegas, #222 and Hank Buchanan, #110.

RELIABILITY

HULL LEAKS ON DECK

Preventing water from entering the boat is the most important single thing one can do to assure reliability of the electronics. It's insidious. Each time you get a little water in the boat some amount of electronic damage is done. It doesn't take a *Rocket Scientist* to know that.

Until you develop some confidence that leaks are under control, on windy days the boat should be drained between each heat. When you see that you are not draining any, or only a little, water, then you can go a few heats before checking for water.

Our goal should be no water in the boat after sailing all day in breezy, broaching, submarine-ing conditions.

Preventing hull leaks below the deck line was covered in the September - October 1997 issue of the NEWS. The same information is included in the kit by Worth Marine. In each registration package sent to new owners there is a page on the same subject.

Deck Leaks

There are only four primary leaks on deck:

1. The rudder rod opening,
2. The main hatch,
3. The aft common sheet hull exit to the turning block, and
4. The common sheet exit to the cockpit cleat.

There are numerous deck fitting screw holes but these appear not to leak. If you are concerned, simply use Vaseline when installing them. Don't glue them in. You may want to change them sometime.

The **rudder rod exit hole** is a huge leak. Would any of us tolerate a 5/32 inch diameter hole in the starboard side of the hull? Of course not!

But the hole in the cockpit where the rudder rod enters the hull is that big a leak. The large "race track" shaped hole is completely under water when the boat is on port tack on a breezy day. The size of that slot is the same as a round hole 5/32

inch in diameter! It's big!

(One solution is to sail only on starboard tack on windy days.)

My boats use a piece of soft rubber foam ~1/8 inch thick glued to the inside of the hull to cover the hole. The foam has a snug fitting ~1/16 inch hole for the rudder rod. The rod is lubricated with grease. (Don't use Vaseline, it may get too stiff and sticky when it is cold.)

This is effective and easy to do. There is no indication that rod friction is a problem. Just be sure that the hole for the rod is correctly angled in the foam so that it doesn't bind on the rod.

Another solution to this leak is to install a boot as was described in the February 1997 issue of the NEWS, page 6. My experience is that the boot does not have very long life. For the boot to fail and go unnoticed may be worse than other approaches. And it is sort of ugly. I have used it. I don't recommend it.

Somewhere out there an owner may have the perfect solution to stop this big leak. Let us know and it will be published here.

The **Main Hatch** is a large leak because the 17 inch perimeter of the hatch is so long. If the gap around the hatch is only the thickness of paper (0.003 inches), the leak area is equal to a 1/4 inch diameter hole!

Most people have good success using Vaseline, or some kind of waterproof grease, carefully spread around the entire hatch perimeter. It is a good idea to coat the surfaces around the hatch opening *before* sliding in the hatch itself. And then, after it is closed, lay in a fillet at the hatch edges on all four sides.

We should all arrive at the pond with Vaseline to seal up the main hatch.

Class rule: *4.3 Hatch cover material and design are optional.* The intent of this rule is to give freedom in the search for a solution to hatch leaks. Hopefully someone will invent a simple, practicable design that is leak proof without needing

to use Vaseline.

The **common sheet exit hole** on deck at the aft port end of the cockpit is a leak that can't be avoided. Fortunately the hole faces aft so the forward motion of the boat minimizes leakage. We can thank the CR 914 designer, Mr. Kazuo Takei, for this feature.

If the hole has somehow become enlarged, it should be made as small as possible and very smooth on the inside to allow the sheet to run freely.

The **common sheet exit to the cockpit cleat** is a small leak that can be stopped by using Vaseline. Another solution is to terminate the sheet inside the boat and plug the hole. If you choose to do that, carefully think out how to do it. Like all design changes, this one can be done wrong.



Sherlock Holmes and Dr. Watson

went on a camping trip. As they lay down for the night, Holmes speaks: "Watson, look up into the sky and tell me what you see."

Watson: "I see millions and millions of stars."

Holmes: "And what does that tell you?"

Watson: "Astronomically, it tells me that there are millions of galaxies and potentially billions of planets. Theologically, it tells me that God is great and that we are small and insignificant. Meteorologically, it tells me that we will have a beautiful day tomorrow. What does it tell you?"

Holmes: "Somebody stole our tent!"

Anonymous E-mail source

REGISTRATION PACKAGE

When an owner registers his boat he is sent a package of material. The package has changed over the years to respond to what is perceived as his needs. Each package takes at least 30 minutes to assemble. This doesn't count the creating and reproduction time for the items in the package.

The objective is get it in the mail the same day or the day after the registration application is received. If the owner has an e-mail address, he is sent a welcoming message which also checks-out that the address is good.

Contents

1. Form letter welcoming the new owner
2. Pair of sail emblems
3. Full size print of the assigned sail number which can be traced onto the sail and instructions on how to put on the numbers and the sail emblem
4. A list of the available sail numbers in case the owner has a favorite number
5. An article on how to prevent the leaking hull cracks at the keel
6. CR 914 Class Rules
7. Index to all CR 914 articles in the CR 914 NEWS
8. A simplified version of the racing rules by Dave Perry
9. The latest issue of the CR 914 NEWS. If the new owner does not subscribe to the NEWS, he is sent one issue anyhow marked Courtesy Copy.

The package is sent in a 9 x 12 envelope and the postage is usually \$0.78 for 2+ ounces mailed First Class.

Suggestions?

Send me your ideas on how to improve the package.

Class Secretary



NEW MEMBERS

First Name	Last Name	City	State	Sail Number
Bruce	Baker	Marblehead	MA	277
Stephen	Braverman	Arlington	MA	628
Bucky	Buchanan	Annapolis	MD	833
Jerry F.	Christofel	Annapolis	MD	528
James	Coll	Cambridge	MD	255
Peter J.	Cramer	Annapolis	MD	254
Bill	Denes	Hixson	TN	257
Patrick	Duffy	Baltimore	MD	721
Morton	Gibbona-Neff III	Chestertown	MD	259
Steven W.	Kaminer	Washington	DC	159
Shawn	O'Neill	Skokie	IL	611
David H.	Sands	San Francisco	CA	258
Dave	Siegal	S. Dartmouth	MA	253
Lewis A.	Wallner, II	Annapolis	MD	252
Robert	Young	Rye	NY	304



Chuck Winder photo

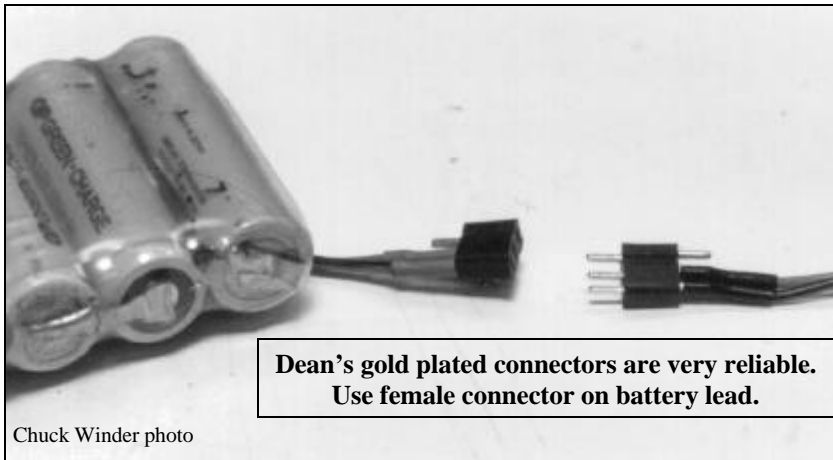


JR LeBlanc photo

“But I was on Starboard!”, lamented Wendy Lull, #753.

Actually, that's not the way it happened. Wendy entrusted *Athena* to Chuck Winder for safe keeping while she moved to her new home. While in his garage, a ferocious inflatable dinghy leaped from a shelf and attacked *Athena*. Chuck is in process of repairing the boat as reparation for the dinghy's indiscretion.

BOAT MAINTENANCE



Chuck Winder photo

BATTERY CONNECTOR CORROSION

Power is occasionally lost to the boat electronics because of corrosion of the contacts in the connector. We all hate it when that happens.

Standard battery connectors for all radio control systems are made of an alloy that will corrode, especially if exposed to saltwater. In fact, all the connectors in the boat will corrode, but the battery connector is the only one often immersed in bilge water. The other connectors are in the receiver which should be attached to the underside of the deck out of bilge water.

Because corrosion products are non-conductive, power can eventually be lost as the corrosion progresses.

An immediate solution to the problem is to remove the corrosion by repetitive unplugging/plugging the connector. If that doesn't work, scraping the connector contacts can work. Greg Worth showed me that the connectors can be disassembled to make this easier. Careful scrutiny of the connectors will reveal how to do this.

A more positive solution, also suggested by Greg, is to change to *Dean's* connectors which have corrosion proof gold plated contacts. The photo shows what they look like. Correct polarity is assured by using the three conductor plug shown.

Both my boats have had *Dean's* battery

connectors for a couple years and have never had a problem. The boats are sailed a lot and get regular exposure to saltwater.

Important The photo shows the female part of the connector is on the battery lead, not the lead to the switch. I chose to do this because the male connector can be inadvertently shorted if it touches a conductor. The short will discharge the batteries, if not destroy them. It is even possible to have a fire under the wrong conditions.

The contacts can be removed from the rubber housing by gently tugging on them with a pliers. That makes soldering much easier. Always use rosin core 60/40 solder.

No matter what connector is used it is good practice to have some arrangement that keeps it out of bilge water.

BOAT BATTERY SWITCHES

The switch is another place that corrosion can stop your boat. The switch actuation arm is in an opening in the switch and faces upwards. Water can run directly into it.

Some Solutions

1. Squirt "*Stuff*" into the switch. *Stuff* is a product offered by Worth Marine for water proofing electrical components. The switch in one of my boats became erratic. *Stuff* was squirted generously inside the switch. Since then it has worked correctly.
2. Eliminate the switch by plugging the batteries directly into the receiver. This requires replacing the connector with one that will fit the receiver. It may be possible to modify the existing battery connector or the receiver case using a razor knife, but I have not done that. It is a little inconvenient to have to remove the receiver to change batteries.
3. Eliminate the switch by replacing it with a connector.
4. Replace the switch with a water proof one. The only problem with this is that no one has found such a switch. If anyone finds that switch, let us know.

Good luck.



Worth Marine Web Page

<http://www.worthmarine.com>

Many owners call and e-mail Greg Worth and me asking questions about how to build the CR 914. Some things are difficult to describe in words. Someone once said, "A picture is worth a thousand words."

So, those of you who are either building or modifying boats and have questions might benefit from seeing the excellent pictures at Greg's Web Page.

Find and click on the CR 914 picture. When that page appears, scroll down and click on "*close up shots for building assistance*".

The Editor

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

Circle Choice(s):	Registration (a one time only fee)	\$5.00
	Subscription/Renewal to the NEWS	10.00
	Registration and Subscription	13.00
	Transfer between AMYA members	5.00

NAME _____ Date ____/____/____
Birth Date (Optional) ____/____/____

If this is a transfer, purchased from: _____ PHONE _____

ADDRESS _____ E-MAIL _____

CITY, STATE, ZIP _____

AMYA NO. _____ PREFERRED SAIL NO(S). _____

CLUB AFFILIATION _____

Send check to Chuck Winder payable to: C. R. Winder/AMYA

Chuck Winder
19 Robert Rd.
Marblehead, MA 01945
781 631 6727

Note: Annual dues are payable in advance by December 31 each year.

AMERICAN MODEL YACHTING ASSOCIATION

____ APPLICATION _____ RENEWAL

Memberships are: Family - \$27.50; Adult - \$25.00 ; Junior (under 19) - \$12.50

PLEASE ADD \$5 US PER YEAR FOR CANADA AND \$10 US FOR OTHER COUNTRIES

Send check payable to AMYA to:

Harry Robertson
29081 US Highway 19 N
Lot 224
Clearwater, FL 33761,
888-237-9524
amyasec@worldnet.att.net

Name _____

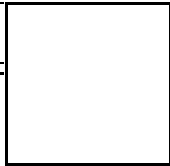
Address _____

City, State, ZIP _____

Telephone _____ email _____

AMYA Number _____ Club Affiliation _____

A courtesy of the CR 914 NEWS



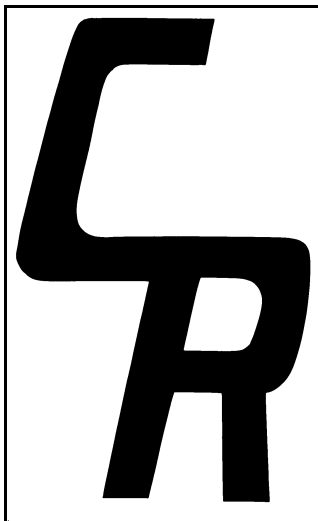
Chuck Winder
19 Robert Rd.
Marblehead, MA 01945



79 Washington St.
Marblehead, MA 01945
781 639 1835
Fax 781 639 0936
worth@worthmarine.com
<http://www.worthmarine.com>

Worth Marine Boat Show Schedule

Cleveland, OH	January 15 - 24
Chicago, IL	January 28 - 31
Atlantic City, NJ	February 4 - 7
Miami, FL	February 11 - 17
New England Show	March 18 - 21
Oakland, CA	April 14 - 18



**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
- Battery management - continuing
- Surviving salt water - continuing
- Race rules of sailing topics
- Why do radios "glitch"?
- Class Rules Interpretation - continuing
- Maintenance and repair of radio components
- Building and maintenance - continuing
- Internal Antennas
- Scoring systems
- Boat switches
- Conduct of a model race

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