CR 914 NEWS

Volume 1 Issue 4 FEBRUARY 1997

NEW CR 914 CLASS RULES

The new class rules are effective March 15, 1997, in time for the coming sailing season. The entire text of the rules, including the sail plan, are included as an insert with this issue. Originally I had planned for you to correct the copy you received in the January issue. However, that copy is long and confusing because of the text giving the options, rationales and comments. And some of you may have misplaced them.

The plan is to include the rules in the package that goes to each person who registers a boat. I also hope to have them included in each 914 kit.

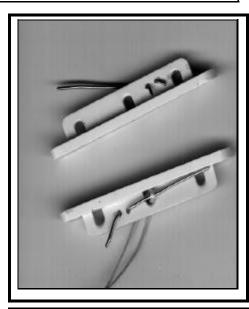
Rules Vote Results

Of the 134 registered boats, there were 28 ballots returned (21%). The percent figure is misleading because some owners have two or more boats registered. In addition there is no good way to know how many of the 134 boats still exist or how many registered owners are not active in any way.

Two owners have been nice enough to tell me that they have no further interest and/or have sold their boats. There are probably some others like these who have not taken the time to respond.

- The general rule changes were approved by 21 of the 28 voters (75%).
- Low stretch standing rigging (Option 1) was also approved by 21 voters. Five (18%) voted for the stock kit rigging line. Two owners voted no on both options.
- Twenty(71%)of the owners approved the stock kit sails. Seven voted for option 2 with one owner voting no on both options.

(Continued on page 2)



Shroud Quick Disconnects

The photograph shows a chain plate rework that provides quick disconnect convenience for the six side shrouds. Four pieces of 0.041 stainless lock wire secure the shrouds. Two holes in each chain plate trap the wires so they won't be lost. With the bowsers loosened, the shrouds can easily be slipped off the ends of the wires. Nicely rounded edges on the chain plate holes make the shrouds easily adjusted.

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Class News

Forty-four owners have subscribed to the NEWS. This month there are 134 boats registered. The class growth rate is encouraging.

Newsletter via email

Four NEWS were sent by email last month with better success than last time. This time the NEWS was sent as an attached file rather than in the body of the email. The only problem with this is the recipient has to have a reader capable of handling the attachment. Of the four sent the NEWS via email, three received it fine and one could not read the attached file. I use a PC with Windows 95, MS Word 7.0 and MS Exchange for email.

The next NEWS may not be mailed until the first week in April. Your editor is going on vacation for most of March..

CR 914 WEB SITE

The site is up and running. It's at http://www.agcr-914.com. Ric Naff has the CR 914 Directory operating. Check it out. There is more to come. Send us ideas for what you think would be valuable at the site.

E-Mail Communication

There are 31 owners who now use email. Some of you may have observed the exchange of views about the issue of how to vote for the options on sails. Keth Comollo started the dialogue because he felt it was important that owners have the freedom to make their own sails. The electronic debate continued for several days and was heavily in favor of the kit sails.

What seems important to me is that the Internet can provide a convenient and timely vehicle for the debate of issues

(Continued on page 3)

(Continued from page 1)

Two-third of participating owners are The following is a quote from one owner. required to approve rule changes. That "My Rationale: The fundamental issue requirement was satisfied. here seems to me to be manufacturer

Who voted and for what?

After sampling the opinions of a few owners, I have decided that the ballot will be semi-secret. That is, the names of those who voted will be published but not how they voted.

Hans Albertsen

Joe Burbeck

Keth Comollo

Sergio D'Antoni

Kevin Dooley

Debra Dooley

Bill Frank

Joe Frasier

Richard Frauenzimmer

Tony Johnson

Rick Laird

George LeBlanc

Rick Martin

Howie McMichael

Marcel Nyffenegger

Buttons Padin

Don Peacock

Rose Peacock

Bill Petynia

Victor Rotolo

Suzette Rotolo

Joe San Antonio

James Scheibner

Andrew Sheriff

Will Wendell

Chuck Winder

Greg Worth

Sears Wullschleger

Voter Response

All owners should be thankful for the 28 who took the time to understand the issues and vote. Some owners responded by simply returning their marked ballots. Others responded with thoughtful and detailed constructive comments. They had obviously studied the proposed rules in detail. Some used email to vote and send their comments.

All the input that I received, except one, were constructive and gentlemanly. All comments are appreciated and I will make an effort to discuss some of them in this issue. Some will be seen in future issues.

One Design Philosophy

The following is a quote from one owner. "My Rationale: The fundamental issue here seems to me to be manufacturer stock sails vs. custom made sails. That decision sets the tone and the direction of the class and the rest of the rule changes. If the 2/3rds majority opts in favor of the stock sails (hard to achieve but my preference) then I feel there are areas which could be tightened up a little more. Case in point; why now allow functional deck fittings that are other than stock (rule 4.5)?" And, he goes on, "Overall you are to be commended on what I consider a good first draft......" (Editor: The emphasis is mine.)

My feeling is that a one-design class rule has to be a living thing. It has to respond to the owners preferences as the class evolves. We have made a start. Your contributions are required to continue the work.

In the future I will attempt to summarize the content of the comments I received during the course of the balloting. Thus all of you will benefit from the thinking of other owners.

NEW FLEET NEWS

The newly formed Larchmont Model Yacht Club has elected Ed "Buttons" Padin their first commodore. The club consists solely of CR 914's. This may be a first in model yachting. My perception is that most model yacht clubs formed from a group of owners that sailed a wide selection of designs. I don't know if there is an AMYA historian that could shed some light on this.

The LMYC seems to be unique in another way. They sail year round despite being located where there is a definite winter season. A hardy group of enthusiasts!

The 14 boat fleet forming at **Essex YC**, CT, will also be an all CR 914 fleet, though we haven't heard from them in a while.

THREE INCH SAIL NUMBERS

The larger sail numbers are required for regattas. The problem is that the old smaller numbers may be difficult to remove without damage ro the sail. In any event, the 3 inch high numbers are required even if this means two sets of numbers on the sail.

Class Secretary

Standing Rigging Update

Since the "Drag and Sag" article in the December NEWS, "Spectra" kite string has been tested. The table compares most of the line tested to date. The green/white line used on most of the kit boats is considered the standard. It is shown in the table with a stretch of 100%.

The stretch of Spectra is only 7.8% as much as the green/white line. Kevlar $\,$

stretches 4.4% as much. They are all about the same thickness.

Spectra kite string cost \$2.70 for more than enough line to re-rig the entire boat. The kite industry is big, with several catalog houses around the country with 800 numbers.

Conclusion: The kite string is available, cheap and excellent for standing rigging. It's not quite as good as Kevlar.

Magic Marker colored the Spectra but wasn't test for fastness (color fastness, not boat fastness).

Rigging Line	Strength, lb.	Stretch, %	Thickness, 0.001 inch
Green/white	30	100	24.4
Blue - AG stock	30	90	21
Spectra, white	50	7.8	20
Kevlar, yellow	70	4.4	20.3

NEW REGISTRATIONS

Ernest Brown, #43 Route 2, Box 870 McGaheysville, VA 22840

Dick Condon, #57 PO Box 760 Waitsfield, VT 05673

Kevin Dooley, #97 (second boat)
265A Pleasant Street

Marblehead, MA 01945 (Kevin's mother Debra will race his

old # 98.)

Joe Fontanella, #373 1454 Old Orchard Street White Plains, NY 10604

David Lynn, #89 309 Red Fox Road Stamford, CT 06903

John Pierson, #58 68 Island Drive Rye, NY 10580

Ross Santy, #59 PO Box 270 Kittery, ME 03904

Class News continued

(Continued from page 1) important to the class.

Owner Survey Update

Owners at the 1996 nationals and the readers of the November NEWS were asked to respond to a survey. The December NEWS reported on the results of 18 respondents.

There now is a total of 25 who have responded and it seemed worth while to update the results:

13 are retired

- 15 use email
- 11 boats are white, unpainted!
- 24 built from kits.
- 18 use stock Ranger II radio
- 6 use Futaba radios
- 1 Ace radio

Batteries used in transmitter

- All use AA size
- 17 use NiCd AA
- 6 use alkaline
- 3 use RENEWALS

Batteries in receiver

- 23 use AA size (92%)
- 15 use NiCd AA
- 5 use alkaline AA
- 2 use RENEWALS AA
- 1 uses NiMH AA 5 cell
- 1 used NiCd 300 mAh
- 1 used NiCd 250 mAh 5 cells
- 16 Subscribe to the NEWS

Contributions to the NEWS

This issue of the NEWS was easier for me to get out because of the articles contributed by others. The "saltwater" article and Greg Worth's report on sail precisionare useful to everyone. I am sure that many of you have experiences that we can all benefit hearing about. Send them to me.

The NEWS has so far had very little on the activities of local clubs and individuals. The winter is a slow season for many of us, but Spring is coming. Send me your local news and I will publish it.

Source for AC graphics A new owner wants to paint his boat using the graphics of the actual America's Cup boats. If any one can help him, his address is:

Robby G. Smith 12511 Whispering Sands Court Houston, Texas 77041

Let me know, too.

Chuck Winder 19 Robert Road Marblehead, MA 01945 617 631 6727 chuckw88@msn.com

The Precision of Stock Sails

The following is an E - Mail from Greg Worth received on February 10. 1997:

"Chuck,

I had the opportunity to lay out 32 sets of stock AG sails (part of the Sperry job). After ironing them out flat, I checked them for repeatability on dimension tolerances. I was surprised how close they all were *(relative to the Sail Plan)*.

On the mains.

- -26 mains were identical.
- 3 had a luff length 1/16" under.
- 3 had a luff length 1/32" under.

On the mains, the entire luff was fine. 7/8s of the foot was fine, just the last bit of foot angled up.

On the jibs.

- 28 jibs were identical.
- 1 had the entire leach over by 1/32".
- 1 had the luff length short by 1/32".
- 1 had the foot length under by 1/16".
- 1 had the foot length under by 1/32".

I never had this many stock sails laid out in one stack. I thought you would be interested."

Greg is correct, I am interested. And I thought all owners would be interested, too. My conclusion is that AG Industries uses a process to make the sails which is suitably precision.

SAIL EMBLEM The original and new rules require the emblem on the sail. Some owners are not happy with this requirement. Some owners are happy with the requirement, but don't like our emblem design. Give me feedback.

- Should the Class require an emblem on the sail to race?
- Should the Class change the sail emblem through a design contest or other means?

Contributed by Keth Commollo:

We mean well and do ill, and then justify our ill-doing by our well meaning.

---Emerson

Surviving Saltwater Sailing

There are at least four CR 914 fleets that sail exclusively in saltwater. There may be more. In the future there will be regattas held in saltwater. It seemed to me that we all should consider addressing the issues that will give us problems when our boats are sailed in saltwater.

Saltwater is a multi-edged sword since not only is it very corrosive but it conducts electricty. When saltwater dries, it leaves behind a salt deposit. These deposits absorb moisture from the air to create a corrosive and conductive film.

Because of the usual natural laws of perversity, the salt film corrodes contact surfaces to prevent the flow of electricity when we want it. And it provides paths of current flow where we don't want it. The latter causes batteries to discharge more rapidly than they should.

Actually, even though we in Marblehead sail exclusively in freshwater, there have still been problems caused by water in the boats.

To that end, I have asked our saltwater sailors to tell us how they have handled this challenge.

Surviving Saltwater

By Rick Martin, Seattle Yacht Club

Because our Seattle CR 914 group races predominately in salt water I was asked if we had any tips to pass on about dealing with this corrosive environment.. Let me start with the biggest thing we have learned on this subject: if you doing nothing more than what you normally do to sail fresh water you are almost guaranteed to be plagued by breakdowns and frustration. Probably not immediately but eventually if you sail very often.

The second thing we learned is once you start to have problems they are very difficult to eliminate. So prevention is obviously a key to success in salt water.

The problems you will encounter in salt

water can be broken down into three categories; cosmetic, mechanical, and electrical.

The first two of these problems can be largely eliminated simply by rinsing your boat well. Our experience has shown that the sooner your rinse the boat after its sailed the better. We are lucky to have fresh running water on both of the docks we sail off of and can rinse the boats before we take them back to the car at the end of the racing.

I would even advocate rinsing the boat before you break for lunch during an all day regatta. This may seem excessive but remember that you're trying to remove salt and who knows what kind of marine organic compounds before the salt dries and crystallizes and the

At least four CR 914 fleets (and George Haines) sail exclusively in saltwater.

organics glue it in place. These are obviously a lot easier to remove in their dissolved state.

If you can't rinse the boat when you finish racing then it <u>must</u> be rinsed as soon as you get home. In this case I would recommend using warm water as it will do a much better job of dissolving anything that's started to dry. A bath tub with a hand held sprayer works great. Note though that wives and mothers usually aren't to keen on this practice.

And by the way always rinse your boat no matter how light the wind was.

Before we leave mechanical concerns, there are a couple of areas that need special attention. One is the keel and rudder shafts and their tubes. These places provide perfect environments for corrosion. The keel and rudder really should be removed after each salt water sail and the shafts and tubes rinsed.

Some of us use a water repelling lubricant on these parts which allows more time between removals. We've used Vaseline, WD40 and LPS3 successfully, but anything that repels water would probably work.

The other area is the gooseneck swivel pin and sheet turning block. These somehow get sticky over time in salt water in spite of rinsing and they need to be checked often and kept free wheeling.

Where you have a bit of forgiveness when it comes to dealing with the potential for mechanical problems when sailing in salt water, there is no forgiveness when it comes to the potential for electrical problems. You must keep any salt and therefore any salt water from getting into your electronics.

Once salt gets inside your electronics it will continue to attract moisture and cause problems even after you return to fresh water. Receivers are usually the first to become unreliable followed by non dust/water resistant servos. We strongly recommend dust/water resistant servos and receivers.

There are three lines of defense in keeping salt water out of your electronics. First try to keep salt water from getting inside the boat, second if it does get in, keep it out of the electronic boxes and third make your electronics impervious to moisture.

We have found that the majority of the water getting inside the boat comes in through the hatch cover. Our common solution has been to apply a small amount of Vaseline as a caulking around the three sides of the hatch lip and over the back edge of the hatch after it is closed. This is not as messy as it sounds but some of our members prefer to use plastic tape around all four sides of the hatch instead.

The latter method is not very convenient if you need to open and close the hatch often. Properly installed both methods keep all but a tiny amount of water from getting in and many of our members stop at that and take their chances, knowing that it is not a 100% solution.

Our most successful members add the second (Continued on page 5)

Saltwater survival continued

(Continued from page 4)

defense by enclosing all of the in- boat R/C equipment in a plastic bag. This may be a challenge depending on how you installed everything. In our case it's not difficult because most of us used the method for installing the radio equipment recommended in the AG manual. We used their (Worth Marine upgrade, Ed.) suggested modification of attaching the radio board to two strips of wood mounted laterally across the bottom of the boat, instead of gluing the board directly to the boat.

Prior to mounting in the boat, the entire radio board can be placed inside a plastic bag which is closed off around the antenna wire with double twist ties. A french bread bag cut to about ten inches long works fine. The two servo output shafts are pushed through the plastic bag making holes that are used to access the four screws which attach the radio board to the wood strips.

After securing the radio board with the four screws, the servo output shafts are reinserted in the their holes and the servo arms can be attached as usual. This may seem like a lot of bother but none of the Seattle group using this method has had a single radio problem.

If the plastic bag method is not practical because of your method for installing the electronics or you change batteries often, you might try a trick I use even in fresh water to keep water from coming in contact with my electronics. I cut a 4 inch diameter disk out of thin styrene sheet and attach it on top of the sail servo arm with a half inch square piece of double back foam tape.

The tape is applied over the servo arm attachment screw and the disk is centered on the tape. The disk rides over the top of the rudder servo arm and diverts any drips of water away from both servos, the receiver, battery and switch. Depending on your installation geometry you can size your disk accordingly.

Since trying this disk method I've been tempted to eliminate the plastic bag. I still like the added security of the bag,

especially when the wind starts to pipe up.

A third line of defense, that of making your electronics impervious to water, is not presently in use here in Seattle. It was suggested to me by Larry Mishou of Worth Marine in Marblehead. And that is to apply non conducting water proofing directly to the workings inside of the switch, receiver and servos themselves.

(Editor's Note: The stuff Larry mentioned is called "Stuff" and is available from Worth Marine.)

There are undoubtedly competing products available for this purpose all with various claims, advantages and disadvantages. These may well prove to be the best solution yet, but I'll have to leave that for a future update once some experience has been gained.

".... I don't think sailing in salt water is a problem if some care is taken....."

The following is from an email from Howie McMichael, Larchmont YC, NY, on Dec. 20, 1996.

SALTWATER

We sail only in salt water and take a quick rinse with a hose after each use to include the servos and bilge. Vaseline on the sliding hatch does a good job of sealing out water and tape does it even better in heavy weather.

I have recently installed Velcro on the servo platform to keep the battery out of the bilge. I have also used silicon rubber out of a tube to seal my rechargeable battery pack. The battery packs that come with the boats don't last unless the batteries are removed and rinsed after each use and stored separately.

We all have bow drain plugs which we check after each race or two for water. The only other problem is the ball joints on the steering arm and rust on the Allen screw on the tiller arm. (See the end of the article for info on stainless Allen set screws, Ed.) The oiler supplied protects them if you turn the boat upside down and

fill the ball joints occasionally. (I think this is "Stuff" from Worth. Ed.)

Probably the most important item to keep dry is the receiver which is not water resistant at all, but works for a while if wet. Although mounted on the underside of the deck, some have fallen into the bilge and needed disassembly and cleaning.

Rechargeable battery packs also are a must.

In summary I don't think sailing in salt water is a problem if some care is taken and the boat is stored in a dry warm room as ours are.

(Editors Note: A big advantage of the typical shrink rapped rechargeable battery packs is that batteries are connected by soldered wire. The battery boxes used for individual cells, tend to suffer corrosion at the box contacts and stop current flow to the electronics.)

The following write up is also from email. Joe Burbeck, American YC, Rye, NY, responded November 6, 1996, with his saltwater experiences.

As for sailing in salt water, I'll report on my limited experience.

I began sailing last spring and used my boat on an average of once a week all summer. After each use I hosed it down, inside and out, and left it in its cradle tipped toward the stern where I have drilled a drain hole.

All the local boats have installed drain holes since we seem to be unable to avoid taking on water. It can get rather choppy in our harbors and the hatch and orifices in the cockpit have less than perfect seals.

To that end, I note that some are using tape to seal the hatch, but I use winch grease extruded from a glue syringe around the hatch seam. I smooth off the bead after application with my finger, and towel off the residue at the end of the day. I think it works rather well and others seem to be adopting similar systems.

(Continued on page 6)

Saltwater survival continued

(Continued from page 5)

We have all added drain plugs, the others in the deck at the bow with a small rubber plug on a string to seal the hole. I decided the hole would be better in the transom and drilled accordingly. It works just fine and is less obtrusive, to my eye, than the bow hole. Also, it keeps my boat from looking like everyone elses. I use a very small plastic object that I found on the beach as a plug.

To seal the small horizontal slot where the steering arm enters the forward cockpit face, the others have found a fancy rubber

If we all work smart together on the problem of saltwater survival, it will cease to be a problem. Freshwater sailors will benefit, too.

gasket in a plumbing supply store. I use a small piece of foam rubber glued around the arm and saturated with Boeshield (with which I coat all the moving parts and servos, as well).

Some have sprayed the insides of the servos with assorted goop, but I'm not sure that's wise. My exterior spray job seems to keep them moisture proof without gumming up the interiors.

The one area where salt water has taken its toll on my boat is the keel pin. The last time I tried to remove the keel my aggressive tugging cracked the hull forward of the fin. I dug out the cracks a bit, epoxied them, and sealed the small opening between the fin and hull with caulk. So much for removing the keel for transport.

(Editors Comments)

Worth Marine has saltwater experience through sailing at the boat shows they attend each winter. They also have worked with owners who have sailed in saltwater. They will be asked to contribute their experience.

Some things Greg has mentioned:

Protecting electronic components in balloons.

How about condoms? Aren't we trying to protect our valuable parts from the environment?

• Using "Stuff" in and on the electronics.

The Stuff people advocate filling the servos, switches, and (I think) the receiver with it! Stuff has the appearance of thin lubricating oil. Worth has it in a small tube container with a needle type applicator.

Maybe Worth could get some good scientific data from the Stuff suppliers that would make us all more comfortable before we saturate our components in the stuff.

Rudder Pushrod Leaks I plan to use a commercially available model boat part to seal the rudder pushrod opening on my new boat. It is made by **Du-Bro, Part No. 3108** (see above). Model shops will have them or can get them. It is a rubber bellows which fits tightly on the rudder pushrod on one end . The other end is fastened to the aft face of the cockpit. They are two to a package for about \$3.

Greg Worth likes **Dean's connectors** for the battery to electronics connection. The gold plated contacts are excellent in a corrosive environment and they are



mechanically rugged. It is best to have the female portion on the battery lead. There is always the chance that the exposed pins of the male portion could be shorted by contact with something conductive.

Stainless set screws for rudder arm

I use a 6-32 x 3/8 in. Stainless Steel set screw (18 cents) marketed by Midwest Fasteners at True Value hardware store. The stock screw is metric and approximately 4-40 size. It is simple to

drill and tap the rudder arm to accept the larger screw. The rudder arm collar is thick enough to give adequate strength.

BATTERY MANAGEMENT

The **SAIL SERVO** will discharge typical NiCd batteries in less then 30 minutes if the servo arm is allowed to stall against the keel tube. Adjust the servo arm to assure it doesn't hit the tube when the transmitter control stick *and trim control* are at the full limit of travel.

Alkaline or NiCd for stronger sail servo? At no load and when new, four alkaline batteries will give 6 volts vs. 5.2 volts for four NiCds. But, when sail sheet loads stall the servo, it draws ~1 Amp of current. The battery voltage delivered at 1 Amp load is shown in the table. Alkaline battery internal resistance is the culprit.

% Discharged	20%	50%	80%
Alkaline	4.8	4.2	4.0
NiCd	4.9	4.7	4.5

Conclusion:

Sail servos are stronger when using NiCd batteries.

(Note: This data is from battery specification sheets, not my own actual test data.)



SUBSCRIPTION to the CR 914 NEWS

YES, I want to subscribe. (Note: Yacht Registration is only \$3 with a subscription to the **NEWS.**)

Chuck Winder 19 Robert Road Marblehead, MA 01945 617 631 6727

Send \$10.00 (\$13 if with a registration) check payable to "914 News/C. Winder"

NAME	PHONE	
ADDRESS	EMAIL	
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Note: Annual dues are payable in advance		
AMERICAN MODEL YACHTI APPLICATION R Memberships are: Family - \$27.50; Adu (Canadian members, please add \$2 for postage	ENEWAL for 1997 ult - \$25.00 ; Junior - 12.50	
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CR 914 YACHT REGISTRATION is \$5, (\$3 when combined with a subscription to the CR 914 NEWS)



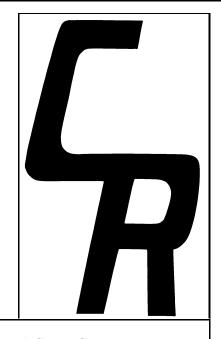
80 Washington St., Marblehead, MA 01945 617 639 1835

We are on the boat show circuit this season. Visit us for a chat and a free tune-up at the following shows:

Mar 20-23 Hartford, CT

April 24-28 Oakland, CA

Larry and Greg



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
- -Battery charging systems continuing
- -Surviving salt water continuing
- -Skipper conduct at races
- -Class measurement certificate
- -Race rule topics
- -An in-depth report on the 1996 Championship boat.
- -An analysis of the results, skippers and boats at the 1996 Championships
- -Technical assessment of Rayovac "Renewals" for use in the 914
- -Recommendations about sail numbers
- -Sail arm pulleys Strengthen

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.

CR 914 NEWS

Chuck Winder, Editor 19 Robert Road Marblehead, MA 01945 _

A SCENE FROM THE 1996 NATIONALS Tony Johnson (left),1995 National Champion, graciously accepts the prestigious "In the Tank" award from regatta hosts Charlie Berry (center) and Curtis Wright.

