



Scuttlebutt

February 2015

Issue 230

Next Meeting: General Meeting
Saturday, February 7th – 1:00 pm – 4:30 pm
Holiday Inn, Enfield, CT

Captain's Cabin

Tony Brock-Fisher, K1KP

In my last column, I asked some provocative questions about how to better involve today's youth in ham radio. I apologize if that column was a bit fractured; my excuse is that it was written hastily the Friday afternoon before CQWW CW. In that article I buried a hidden test to see if my column actually got read – readers were invited to email me with their thoughts on the subject. I was pleased to actually receive over a dozen replies! Thanks to all who found and responded to my 'breadcrumb'.

In case you missed last month's article, there were two main points:

-There are statistically many more Techs in the general ham population than in the YCCC population – what should we be doing to bring these hams into YCCC?

-The appeal of ham radio to young people seems to be less than it was for our generation. What new, out-of-the-box approaches can be used to attract youth to ham radio? Can Contesting be the *entry point* for newcomers to ham radio?

I'm going to shelve the first point for now, and work towards the second point. I received many suggestions for techniques that YCCC could use locally to help inspire a few new hams. Quite frankly, while these were good ideas for action on a local scale, I had something *much bigger* in mind.

Two and a half years ago I read a series of articles in NCJ written by Brooke Allen, N2BA, "Game Design for Contesters". You can read them at his website at <http://brookeallen.com/pages/archives/918>. In these articles, Brooke answered the question I have asked myself many, many times while slugging along at 30 per hour on the low bands in the wee hours of Sunday morning: "Why do I do this"?

The obvious answer is because it's 'fun'. OK, so maybe the slow, hallucinating-from-lack-of-sleep hours are 'less fun', but overall, it *is* fun. In order to have a big score at the end, you have to have those late-night multipliers to go along with the big QSO totals from the Saturday and Sunday morning runs.

N2BA explains 'fun', or more accurately 'flow', in terms of Game Theory, and it fits perfectly with the 'game' of contesting, which is actually one of the earliest multi-player interconnected games in existence. He accurately pinpoints the key elements of contesting that make it fun. And the cool thing is, if you know the key, you can make it more fun!

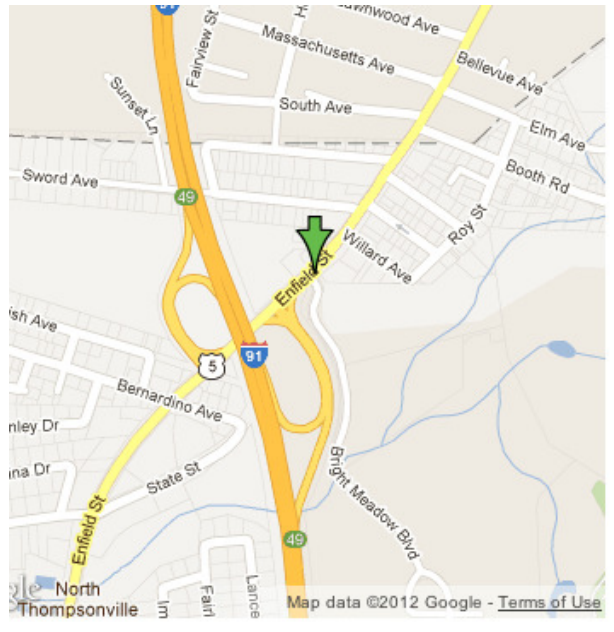
This is what got me to thinking, can we use the similarities of CQWW and say, World of Warcraft, to engage youth in ham radio? Many of the old appeals to teens that made ham radio cool in our generation are gone. The world has gotten smaller. Free Long Distance calling has done more damage to ham radio than TVI ever did. Social Media has changed the teenage landscape forever. So I believe it is time to discover new ways to market the true fun of ham radio. And by new, I mean 2015 new, not 1978 new!

(Continued on page 5)

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Directions to Meeting



From Springfield: Take 291 West to Interstate 91 South. Take exit 49 (the first exit in Connecticut). Take a left at the lights at the end of the ramp. Go through one set of lights. Take a right at the next set of lights onto Bright Meadow Blvd. The hotel will be on your left.

From Boston: Take Mass Pike (I-90) West to exit 6. After toll booth, take a left on 291 To Interstate 91 South. Take exit 49 (the first exit in Connecticut). Take a left at the lights at the end of the ramp. Go through one set of lights. Take a right at the next set of lights onto Bright Meadow Blvd. The hotel will be on your left.

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Potential Remedy for Stuck Hygain Tailtwister Rotators

Tony Brock-Fisher K1KP

Everyone is probably aware that the T2X series rotators get stuck. Common knowledge has it that the brake wedge gets stuck, and to fix it, one can 'rock' the rotator in the opposite direction to get the brake unstuck, then move in the desired direction. This 'T2X rock' is a standard part of many automated rotator controllers like Green Heron and Retro-EZ.

But often this does not work for my rotator. I have replaced the rotator and still had the problem. I replaced a thrust bearing above the rotator and still had the problem.

The problem recurred during the RTTY contest. I had a chance to play around with it and accidentally learned something that may lead to a cure. Thinking that sometimes the brake got stuck and sometimes it didn't, it seemed like there was something marginal about it. Maybe if I just drove it a tad harder it would work. So I hooked my rotator controller (standard Hy-Gain, with Rotor-EZ mod) up to a variac, with the idea of feeding it a slightly higher line voltage. And low and behold, I discovered that when in this 'stuck' state, the rotator control box (and rotator) brake drew ****LOTS**** more current from the AC supply than usual. When I finally got it unstuck, retracting the brake drew a normal amount of current. The critical observation was that the current draw was ****drastically increased**** when the brake was stuck.

So here's my working hypothesis:

The rotator gets stuck, when the gear backlash and motor are forcing the wedge against the sides of the wedge channel and the grooves in the bottom housing. (Bear in mind that the cheaper Hy-Gain rotators use this gear ratio as the primary brake). One would think that releasing the brake (which is actuating the solenoid) and rotating the motor in the right direction would release this load and allow the brake wedge to retract. However, the solenoid is an inductor. The inductance changes as a function of position. In normal operation, the brake solenoid quickly retracts, and the moving iron core completes the magnetic circuit, resulting in a high inductance, which limits the current in the brake circuit. With the brake wedge stuck, the solenoid is stuck in it's low inductance position. The circuit consists of a transformer, switches, the rotor cable, and the brake solenoid. The only thing that limits the current is the inductance of the solenoid and the resistance of the cable. So when the solenoid is stuck extended, it's inductance is very low and tons of current can flow. This high load current on the secondary of the power transformer saturates its core and reduces the voltage available for the motor to start moving. Therefore the motor cannot start to move to release the solenoid. Catch-22, everything is stuck.

My experiment:

I added a simple switch in series with pin 2 of the rotator cable so I can open the brake solenoid circuit. When the rotator gets stuck, I *open that switch*. This allows me to activate the motor to do the 'T2X rock' without allowing the stuck brake solenoid to load down the available voltage. I do a quick back and forth with the motor with the brake engaged. Then I close the switch, which allows the brake solenoid to retract. Voila! It moves again. So far, this has worked several times. Obviously, if attempting to move the motor with the brake stuck doesn't hurt anything, moving the motor with the brake engaged wont either.

So the common knowledge about stuck T2X rotators may be incomplete, and it might make sense for automated rotator controllers to do the 'T2X Rock' with the brake solenoid de-energized.

Try it and let me know if it works for you!

p.s. The transformer does have a thermal cutout, which will open if it gets too hot, then close again on cool down.

Comments:

From: Chuck ONeal K1KW

I had that problem on my Wilson WR-1000's and fixed it by running the brake solenoid on DC, using a big output cap to handle the initial inrush current. AC solenoids work very well on DC the DC will not work on AC.

The other issue with AC solenoids is that their initial pull in force is dependent upon where in the AC cycle it gets switched in. At the peak of the voltage waveform, the initial force will be much greater than at a zero crossing which results in a "soft" increase in force over the cycle and is less likely to break free a stuck brake..

From: Jerry, K0CQ

All of the HAM-M or HAM-IV rotors have had a similar brake. Some with V teeth, some with square teeth. The TR-44 and TR-45 slide the motor armature against a brake pad but magnetic field centers the armature and releases that motor brake. I

think the HAM-M and TX2 use same motor brake as a back up simply to use the same hardware in the rotor with or without brake. The brake is housed in the extension below the bell connection.

Over decades of use the brake mechanism wears and for me more often fails to lock than to release.

Since the brake solenoid does take a large initial current and considerably more than the motor, its usually suggested the rotor cable have larger conductors for the brake pair. Vendors offer only two selections, usually all 18 gauge or six 18 and two 16. For a long run that 16 gauge for the brake may not be enough, might need 14 or larger. I'm sure there are control cables available from electrical suppliers as well as big box home center electrical departments with adequate conductor sizes at reasonable prices. I've been making note at Lowes for when I next put up a tower. A ten conductor cable all 18 using two 18 in parallel for each of the brake wires gives 15 gauge effectively for the brake wires and last I looked was on the shelf at the local mini Lowes.

Applying DC to an AC rated solenoid may lead to problems of the core and plunger becoming magnetized and so not releasing. I had a similar problem with the indicator solenoid in an Alliance "Clacker" control box about 50 years ago. On the bench with short wires to the rotor on the same bench, the clapper of the solenoid wouldn't release, it stuck fast magnetically. I soldered a shim of brass to keep it from making tight contact and then it released. It worked fine with the normal length of wire between control and rotor.

Planning on rocking the rotor back and forth with the solenoid not powered will fail when the rotor is at the end of rotation and has opened the end rotation limit switch. And if the square toothed brake didn't mesh it can have been moved to the end stop by wind. Then it might recover with the wind direction changes.

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YCCC ARRL Youth Scholarship Raffle!

Prize: Elecraft K3/100 Kit !

Street value: \$2150 !

Tickets are \$25 per chance (cash or check)

Tickets ONLY sold at meetings

Drawing at April meeting (assuming enough tickets are sold)

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Announcing: The YCCC 2015 Winter Contest University

Date: Tuesday February 10th, 2015
Time: 6:00-9:30 pm
Location: ARRL Headquarters
225 Main St.
Newington, CT

This will be the ONLY Contest University held this winter. We will have top contesters on hand as 'Professors' to share their tips, secrets, and words of wisdom on Contesting! Learn the winning strategies from the winners! This will also be a Local Meeting; New Members may apply for membership and join YCCC at this time. Newbie or Barnacle-encrusted, come one, come all and join us for a great evening of contest discussion!

We will gather for dinner around 5pm at Yanni's restaurant:

Yanni's Pizza Restaraunt
296 Main Street
Newington, CT 06111

see www.yannispizzarestaurant.com

If interested, **PLEASE RSVP** to k1kp@yccc.org, and let me know if there are any specific topics you would like to see covered.

(Captain's Cabin: Continued from Page 1)

All Contests are Drag Races

In the course of looking at what makes contesting fun, I came up with a personal discovery. With the exception of Foxhunts and the Poisson d'Avril, almost all ham radio contests are drag races! They all follow pretty much the same format – he who makes the most QSOs wins – in other words, the operator that makes QSOs faster than his competition finishes first. And like drag racing, the technical sophistication element drives performance and cost as well, with the element of driver skill also being a lesser contributor to the outcome. In an effort to make the sport appealing to more contestants by reducing the effect of economics, both contesting and drag racing have implemented distinct classes of competition. In contesting we have Single Ops (assisted and non), Multi 2, Multi-Multi, etc. Drag Racing has Top Fuel, Pro Stock, Pro Modified, and so forth on down the line. We also have 'Classic Overlay' or 'Single Tribander and Wires' which are sort of like 'Wednesday Night Race what you Drove Here' nights. But whatever you drive, it boils down to seeing who can go the fastest. It's pretty obvious that a Super Stocker with an excellent driver will get beat by a Top Fueler with a so-so driver every time. There is no doubt, that on an equal footing, skill makes the difference – that's what WRTC is all about, like the IROC series of racing. But hardware trumps skill in both sports.

Why not have a radio contest where *skill* is the major element of success? We already have plenty of contests where station effectiveness is measured – can we come up with a contest format where hardware is *less* important than operating techniques and knowledge of propagation? When Ward Silver, N0AX came to speak to YCCC, he gave examples of many contest formats different from the current 'drag race' style. How about a contest where the number of contacts is only a small contributor to the score, but accuracy is the major factor in winning? Can we make the exchanges more complicated than a sync byte (59) and Zone? With computers and the internet available to all, can we make the exchanges change in real time from QSO to QSO?

Again, it's time to think out of the box! YCCC could formulate and actually sponsor such a new contest, where skill, and maybe a little but of luck, with less emphasis on hardware, wins the contest. Can you invent a new contest like this? Would you like to try?

At the upcoming YCCC meeting, we will take a close look at both these concepts. You will choose which you would like to get involved with, and together we will get started shaping the future of ham radio!

In closing, N2BA wrote:

“Pay attention, because nothing less than the future of our hobby is at stake. I do not mean just contesting; I mean all of ham radio. You will save this thing we love. Or you won't — in which case it will die. Let me explain”.

Come to the February meeting to hear Brooke explain this bold statement, and get started shaping the future of ham radio and contesting!

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YCCC General Meeting
Feb 7th, 1:00pm – 4:30pm
Enfield CT Holiday Inn

YCCC is very pleased to have a Special Guest speaker, Brooke Allen, N2BA, present material from his series of NCJ articles. Brooke wrote a four-part series “Game Design for Contesters” which you can read on his web site at: <http://brookeallen.com/pages/archives/918>

This meeting will depart from our tried and true meeting formula of technical presentations and DXpedition slides. After the break, we will give the members a choice of working on new ways to get today's youth involved in ham radio through game design, or, designing new contest concepts that focus less on station hardware and more on operator skill.

N2BA writes:

“Pay attention, because nothing less than the future of our hobby is at stake. I do not mean just contesting; I mean all of hamradio. You will save this thing we love. Or you won't — in which case it will die. Let me explain”.

Come to the meeting and listen as N2BA explains. As a member of the leading contest club in the Northeast, you will have a chance to influence the future of contesting and Ham Radio. It all starts with this meeting!

December 7, 2014 Meeting Minutes

Tony K1KP called the December 7th General Meeting, Holiday Luncheon and Yankee Swap of the Yankee Clipper Contest club to order at 12:30 by announcing that the lunch buffet was ready. Chet N8RA was collecting money for the Luncheon, Dues and K3 Raffle tickets.

Tony K1KP reconvened the meeting at 1:20 with a roll call of members and guests present.

Brian NJ1F gave the secretary's report and Chet N8RA gave the treasurers report. Paul K1XM made a motion to accept the reports, which was seconded by Rich K1CC.

Tony K1KP asked if there was any unfinished business, there was no unfinished business.

Tony K1KP made an announcement that the officers of the Yankee Clipper Contest club would entertain a motion for a donation to the World Wide Radio Operators Foundation WWROF from the floor. Craig K1QX made a motion that the Yankee Clipper Contest Club make a \$500 donation to the WWROF which was seconded by Paul K1XM. Tony K1KP opened the floor for discussion on the motion. Craig K1QX and Tony K1KP explained that the WWROF is an organization that pays for the computer costs of processing logs and maintaining the results databases for the CQ contests, puts on Webinars on contest operating, advancing the technology of Amateur radio and encourages amateurs worldwide to get on the air. Several members asked about the clubs budgeting process. Both Tony K1KP and Chet N8RA explained how per the clubs constitution they arrive at a budget that covers the clubs yearly expenses. Several members had comments on what else can the YCCC do to encourage other hams especially youth to become active and experience the hobby. At the conclusion of the discussion a vote of the members present was taken and the motion carried with unanimous support.

Craig K1QX made a motion to donate \$100 to support the N1MM logging program which was seconded by Ed WA1ZAM. Tony K1KP opened the floor to discussion by asking for a show of hands who used N1MM's logging program in the past CQ contests. The majority of members present use N1MM. At the conclusion of the discussion a vote of the members present was taken and the motion carried with unanimous support.

Tony K1KP announced that there will be a winter Contest University to be held before the ARRL DX contests, information will be posted to the website soon.

Tony K1KP announced that all the meeting slides for all presentations and meeting minutes will be posted to www.yccc.org shortly after every meeting.

Eric KV1J gave an update on the W1QSL Bureau. In the past year the Bureau sorted and processed 182,000 QSL cards and have already received over 100 pounds of incoming QSL cards for the various W1AW/XX operations. The Bureau was recently made aware of a couple of boxes of QSL cards that were "lost" because a sorter became a silent key. The family members recently discovered the boxes after about 10 years and notified the Bureau. These cards will be in your most recent mailing. A box tracking procedure was put in place many years ago to prevent this from happening again. The Letter D and U sorters have recently retired after 36 years of service. Eric announced that the Bureau is looking for a letter "B" sorter if you are interested please contact Eric. The Email address is going to be changing effective January 1st 2015 to W1QSL@W1QSL.ORG. Finally in closing Eric thanked Dave K1TTT for all of his programming and support of the Bureau. There was a round of applause to all those who make the Bureau run so smoothly.

George W1EBI recognize Dave K1ZZ who was present and the ARRL for the W1AW/X operations which have taken place during the past year. This has be a wonderful way to promote Amateur Radio and get licensed Amateurs on the bands.

Alex W2JU gave a presentation on the scores for the just completed CQWW contests. While it appears the YCCC is going to again be victorious. Alec pointed out a trend that the FRC is closing the gap by getting more members on.

Rich K1CC gave a presentation on operating at HK1NA with fellow YCCC member Dave KM3T during the CQWW SSB contest.

Tony K1KP announced the Kickoff of the Yankee Clipper Contest Club Youth Scholarship Raffle for a K3 by reading a note from Bob W2OSR the winner of the last K3.

Tony K1KP announce a 15 minute break for purchasing tickets and socialize

After the break Tony asked if there was any one present who wanted to become a member of the YCCC. John K1JSM was welcomed aboard.

Tony K1KP introduced Larry W1DYJ who presented about his modeling and building of a ¼ 40 meter vertical.

Brian NJ1F then conducted the Yankee Swap.

A motion to adjourn the meeting was made by K1XM and Seconded by W1UE.

Meeting adjourned at 4:15

Submitted

Brian Szewczyk NJ1F
YCCC Secretary

Worldwide Radio Operators Foundation, Inc
PO Box 10424
Midland, TX 79702
Tax ID: 27-1435449

Donor: Yankee Clipper Contest Club
Date of Receipt: December 8, 2014
Type of Contribution: Cash
Amount of Contribution: \$500.00 U.S.

Dear Yankee Clipper Contest Club:

On behalf of Worldwide Radio Operators Foundation, Inc., thank you for your generous donation as noted above.

WWROF is dedicated to improving the skills of amateur radio operators around the world , utilizing education, competition, advancement of technology and scientific research, promoting international friendship and goodwill , and preparing them to better serve society in times of communication need.

Donations are tax deductible under IRS 501 (c) (3) provisions. No goods or services were provided to you for this donation.

Sincerely,

Worldwide Radio Operators Foundation, Inc.

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Subject:[YCCC] Fwd: Fw: Thank You! from the N1MM Dev Team
Date:Tue, 16 Dec 2014 10:18:29 -0500
From:N1MM <tfwagner@snet.net>
To:YCCC <YCCC@yccc.org>

I would like to forward this note from K8UT to N8RA and add my thanks for the kind donation.

73,
Tom - N1MM

From: Larry Gauthier (K8UT) <mailto:k8ut@k8ut.com>
Sent: Monday, December 15, 2014 6:24 AM
To: chetsubaccount@snet.net <mailto:chetsubaccount@snet.net>
Subject: Thank You! from the N1MM Dev Team

Hi Chet,

Saturday's postal mail included your generous donation from the Yankee Clipper Contest Club. Please extend my thanks and those of the N1MM Logger Development Team to all of the YCCC members.

There are nine hams involved with the development and delivery of the N1MM Plus contest software, and you're probably aware that they are all unpaid volunteers. Despite the free labor, there are other costs associated with N1MM Logger – things like domain name registration, website hosting, application development software, and the code registration certificate. The donation from Yankee Clipper Contest Club helps us cover those costs.

Thanks again and 73!
-larry (K8UT)
member, N1MM Logger Development Team

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YCCC CLUB RESOURCE INFORMATION

DUES AND MEMBERSHIP STUFF Dues for the year are payable as of January 1st. The YCCC has adopted a multi-tiered membership format as follows: Please note that payment of dues IS NOT a prerequisite for contributing scores to the Club aggregate, but IS for the various YCCC Awards Programs

Full Member - \$15/yr (Eligible for YCCC member benefits and electronic "Ebutt" delivery of Club newsletter)

Full Member - \$30/yr (Eligible for YCCC member benefits and paper delivery of Club newsletter)

Family Member - \$0 (Grants full membership to all amateurs residing at one domicile on payment of one member's "Full Member" annual dues and entitlement to one Club Newsletter sent to one domicile or email address. All members of said family are eligible for YCCC member benefits.)

Student Member - \$10 (Grants full membership to students at a reduced level. Eligible for YCCC awards programs and paper or electronic delivery of the Club Newsletter.)

Subscription - \$** (A "supportive friend of YCCC" - not a member but a possible candidate for future membership. Only receives club newsletter in paper or electronic form. \$10 for electronic "Ebutt" delivery domestically or overseas or \$25 for domestic paper delivery.)

Club members who move out of club territory and so are not eligible to contribute to club aggregate scores can continue to participate in the Club's e-mail reflector and receive the electronic "Ebutt" delivery of newsletter at no cost.

You can tell if you owe dues by checking your 'Butt mailing label or the Club roster in the Members Only section of the website.

NOTE: If your dues are paid to a March 31 date, then you now need to synchronize to the calendar year. Please see the "Dues" area on the Members Only section of the website for the pro-rated dues amount for a partial year.

Mail your dues to the club treasurer, Chet Slabinski, N8RA, 462 W. Hill Rd, New Hartford, CT 06057.

SCUTTLEBUTT ARTICLES should be sent to the Scuttlebutt editor, Steve Rodowicz N1SR, by E-mail at n1sr@arri.net. The deadline for each issue is the 10th of the preceding month..

Scuttlebutt Advertising: Nominal Business Card sized ad, \$50 per year (6 appearances)

CONTEST SCORES should be sent to the club scorekeeper, Alec Berman, W2JU, preferably by E-mail at scores@yccc.org. Please include details such as numbers of QSOs, QSO points (if appropriate), and multipliers (all types); entry category; and power.

CLUB GOODIES

BADGES YCCC badges are available from Tony, K1KP. Send \$3, name and call desired on the badge, and your mailing address to Tony.

APPAREL Contact Richie, W1STT. Email: richd1313@aol.com

YCCC LOGO ITEMS <http://www.cafepress.com/n1k>

QSL CARDS are ordered through Dennis Egan, W1UE. To order, send Dennis an email at egan.dennis88@gmail.com, detailing card information per "QSL Request" form available at http://www.yccc.org/members/yccc_qsl.htm. You will receive a proof by email. Approve the proof, making any corrections, and return to Dennis *with payment* (make checks out to Dennis, not YCCC). Current price is \$50 (delivered) for 1,000 cards. Also available is the glossy version for \$70/1000.

MEMBERSHIP ROSTER is posed on the YCCC website. Updates are published in 'Movers and Shakers' when members move or change call signs.

COMPUTER STUFF INTERNET REFLECTOR There is an Internet mailing list for YCCC members. To subscribe, send mail to yccc-REQUEST@yccc.org. Insert only the word "subscribe" in the subject of the mail message. (Do not send messages to the reflector that have file attachments, HTML formatting, use boldface or other fancy fonts, etc.)

WWW HOME PAGE Come visit us at <http://www.yccc.org> Our Webmaster is Lyn Glagowski, WB1CCL.

ADMINISTRATIVE STUFF The W1 QSL BUREAU is sponsored by the YCCC. More information at: www.w1qsl.org
Address: W1 QSL Bureau, PO Box 7388, Milford, MA 01757-7388. Email address: w1qsl@yccc.org

ARRL COMMITTEE REPS are:

CAC: New England Dennis Egan, W1UE **Hudson** George Wilner, K2ONP **Atlantic** Charles D Fulp Jr, K3WW

DXAC: New England Bob Beaudet, W1YRC **Hudson** John Sawina, NA2R **Atlantic** Chris Shalvoy, K2CS

VUAC: New England Ed Parish, K1EP **Hudson** Frederick Lass, K2TR **Atlantic** Joe Taylor, K1JT

ARRL LIAISON: Sean Kutzko, KX9X
