

Zero Beat

OCTOBER 2010

<http://www.hcra.org>



Jim Whitehouse, K1JAW, Silent Key

December 15, 1943—September 21, 2010

Folks,

We're all saddened with Jim's untimely passing and I know we will all miss him dearly. The HCRA has sent flowers to his service but we would like to do more.

What we are asking is for donations in Jim's name that will be given to the ARRL Foundation. If you would like to contribute to this fund please send your contribution to the club's PO box and mark it K1JAW donation.

We will add these donations to those we collect at the October 1st club meeting

and send them to the ARRL Foundation in Jim's name.

It's never easy losing an active club member like Jim. He did a lot for amateur radio over the years and added a lot of new ideas to HCRA during his tenure on the board. From kit building to QRP, Jim's advocacy and enthusiasm benefited us all.

Your donation will help his name and accomplishments live on well past today.

Thanks & '73...

Jim, KK1W

From the Shack

What's happening at HCRA — October, 2010



YCCC visits HCRA

Tom Homewood, W1TO

This month's meeting is something a bit different from our usual fare. Our guest speaker is also the WMA Area Manager for the Yankee Clipper Contest Club. YCCC is one of, if not the, largest contest clubs in the US and is based right here in good ole' New England. W1TO will fill us in on the role clubs like Yankee Clipper play in the advancement of amateur radio. In order to be competitive they are always pushing the performance envelope of rigs, antennas and operating practices.



Like HCRA this club's goals are very similar, including "promoting fun, satisfaction and competitive thrill". Although you may not be a "contester" at the moment rest assured some of the features found on that new rig you're lusting after came from suggestions of a contester. If you've thought about radiosport but we're afraid to give it a try I'm sure Tom will can give you some great suggestions to get you started! In addition tonight's meeting will also be an 'official' YCCC meeting so if you want to join New England's premiere contest group you can do it tonight. Read more about YCCC and upcoming events at:

<http://yccc.org/>.

November is Auction Time

Don't miss our best attended event of the year!

Without a doubt, HCRA's annual auction brings more people to Feeding Hills than any other club event. Join over one hundred bargain hunters and return home with something new for your shack. There's no eBay or shipping fees at the HCRA auction.

Donations are a big part of the fun at the auction. If you or someone you know have items to donate for the auction give me a call. These donations are tax deductible and go a long way in helping HCRA put on activities and events throughout the year. To make donating even easier we will even come to your house and pick it up! Nothing too big or small but please limit the donations to radio & electronic items only (no printers or monitors please). Contact me at 413-237-4666 or at kk1w@ar1.org if you can help.

Speaking of help we're looking for a few more folks to help with managing the flow of purchases at the auction counter. Why not join Bob, Matt and others to help make the auction even better for everyone involved.

There is as usual a super raffle accompanying the auction. This year the prize is a dual band HT from Wouxun. This little gem does 2M/440 and even includes a drop-in charger. Tickets are on sale now for the usual donation—\$1/each or a book of 6/\$5.

Auction rules this year have changed just a bit. Starting in 2010 there will be a \$1.00 minimum charged by HCRA on all sales. Over \$10 the usual 10% fee applies to the balance. If you have a lot of small items why not box them up into groups that will hopefully bring \$10 or more on the auction block? This will give you the most bang for your buck and help move the auction along more quickly too! Please don't bring printers/monitors or computer items that belong in a museum instead of a ham shack. Our experience is they don't sell and starting this year we will not include them in the auction.

As always we offer free admission to everyone, buyers and sellers alike. Bring a friend and have fun!

October is renewal time!

Lend your support to HCRA!

This is your last chance to join or renew your membership with HCRA and perhaps go home with a nice Yaesu HT for your support. This month we sent out a meeting notice/application to many of our past members reminding them it is renewal time. If you received one in the mail fill it out and either bring it to the meeting or mail it in so we receive it before October 1st and you too will be entered into the drawing.

If you're renewing and your address, email and preferences haven't changed just fill out your name & call at the top and check the box below the renewal choice. Make sure we have your correct email so you won't miss a single copy of Zero Beat and please fill out your interests once again as they may have changed even if your address hasn't.

If you've already renewed/joined—thank you! You are entered in the drawing. The raffle prize will be drawn at the end of the October meeting. Don't miss your chance, sign up early.

It really is very important we get our renewals in early. Besides allowing the board the opportunity to plan future events it also means we can concentrate more on club activities rather than chasing down membership and that benefits everyone at HCRA.

Speaking of activities, what do you think HCRA could do to increase interest in amateur radio here in the valley? Please drop an email to any board member with your ideas and let's see what happens when we work together to make HCRA the best it can be.

Happenings at HCRA

What's in store so far this season

HCRA's Holiday Party will be returning to the Steaming Tender this year on the evening of December 6th. The buffet menu is still be worked on but the ticket price has been set at \$15/person. Marty/W1MJB with help from John/WA1JAE will be keeping the event on track! Ideas, suggestions or help are always welcome.



John/WA1JAE has volunteered to take care of refreshments at our monthly meetings. If you would like to give him a hand talk with him at the October meeting. Thanks John!

There will be some surprises at this year's Holiday Party. Just what, that's a secret but you won't know if you don't go!

Scott Anderson/NE1RD will be our January speaker. He's an active ham that will get you re-invigorated with our hobby. From QRP to DXpeditions he's done it all and will share some of his adventures.

I spent a few hours in the 'Flying Pigs Run for the Bacon' contest. After a while you don't remember you're running QRP until you try to hold a frequency! (<http://fpqr.com>)

Congratulations to Marty/W1MJB for making his first CW QSO's this month! Nice work Bo!

See you this Friday!

73... Jim, KK1W

Special Event Station

Rich, N1KXR is heading up a Special Event Station on Saturday, October 23, 2010.

The event will be the inaugural **Franklin County Pumpkinfest**, and the location will be in Turners Falls, Massachusetts

Here is a link to the page:

http://n1kxr.webs.com/pumpkinfest_2010.htm

73

Richard H. Wheeler - N1KXR

<http://n1kxr.webs.com/index.html>

<http://www.facebook.com/N1KXR>

Zero Beat Contributions:

Anything of interest is welcome. This is YOUR Newsletter.

It's not interesting without
YOUR ARTICLE SUBMISSIONS.

Please submit your ideas, articles and more to wb1dby@comcast.net. Thank you,

Larry, WB1DBY, Zero Beat Editor

Unique Telegraph Keys

<http://sites.google.com/site/oh6dccw/stangecwkeys>

73, Jim k1jaw/qrp (now SK)

Upcoming Flea Markets

2 Oct Manchester NH NHAntqRC @Bingo \$10 @7:30 \$3 @8:30 Charlie 603 898 4821

3 Oct Queens NY HOSARC @HoS [\\$5@9](#) [\\$10/sp@7:30](#)
Stephen WB2KDG 718 898 5599 W

10 Oct Wallingford CT Nutmeg Conv \$20/sp
[\\$7@8](#) John N1GNV 203 440 4468 (Good One)

15,16 October Deerfield NH Nearfest VIII
@FG Mike K1TWF 978 250 1235 T (Good One)

17 October Cambridge MA FLEA at MIT
Nick 617 253 3776
Third Sunday April thru October

30 Oct Gales Ferry CT TCARC Auction @FireCo @10
Darryl WA1DD 860 443 7799

31 Oct Hicksville NY LIMARC @LevitHall Richard
K2KNB 516 694 4937 A

5 Nov Feeding Hills MA HCRA Auction
@CongCh @6:30PM Jim KK1W 413 245
3228 (The Best One!)

6 Nov Londonderry NH IRS @Lions
N1NAZ 603 421 0940

H
a
m

10 Week Course
Holyoke Hospital Auditorium
Tuesdays, 7:00
Starts: September 28, 2010
Cost \$0. \$25 for book.

**Anyone
is
Welcome
to attend**

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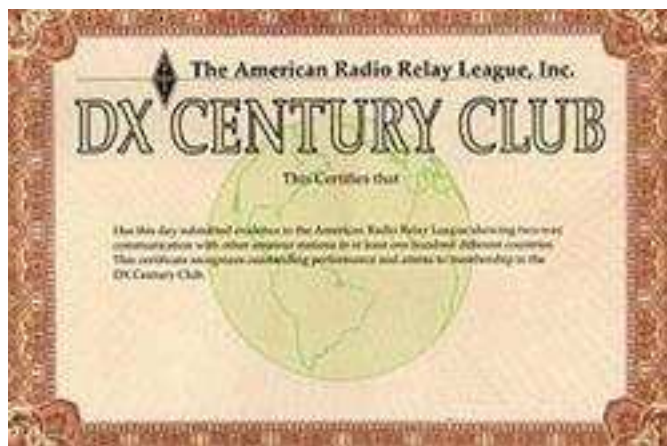
They have 10 people signed up,
and have ordered books.
I can get books for those who
don't have them, \$25. They'll
have them by week 2.

I will be there most weeks, but I
know there is at least one week
(October 12th) that I will not be
able to do.

I would appreciate help from any-
one interested in teaching some
of the modules. I wouldn't be
looking for a 10 week commit-
ment, 1 week, 3 weeks, all 10
weeks ... its up to you. Please let
me know when you would be will-
ing to help out, and which topics
you'd be interested in teaching. I
am currently working on power
point presentations. Please let
me know if you would like to do
your own powerpoint.

73,

John, KX1X
kx1x@comcast.net



To clarify the administrative process by which the anticipated changes to the two existing Netherlands Antilles DXCC entities will be made, the ARRL Awards Committee has determined that at 0400 UTC (12:00 AM local time in the islands) on October 10, 2010, the two Netherland Antilles DXCC entities will be deleted.

Commencing at 0400 UTC (12:00 AM local time) on October 10, 2010, operation from the islands of Curacao, Bonaire, Sint Maarten, Saba and St Eustatius will count for a yet-to-be-determined number of new entities under the DXCC List Criteria and Political Entities, Rule 1 and/or Rule 2 Geographic Separation Entities.

When the Awards Committee determines what Rule 1 or Rule 2 actions apply, it will announce the final disposition of the entities on the DXCC list. The DXCC desk will not accept confirmations for these new entities until after January 1, 2011.

Hampden County Radio Association

Board of Directors Meeting Minutes

Tuesday August 17th, 2010

Attendees: Dave Cain AA1YW, Marty Bowen W1MJB, Frandy Johnson N1FJ, Larry Krainson WB1DBY, Jim Mullen KK1W, John Pise KX1X, Matt Wilhelm W1MSW

Absent: Ed LaCombe KB1NWH, Jim Machia NN1Y

Meeting called to order at 7:10 PM, at the Mullen Estate in Brimfield, MA.

Officer Reports

Vice President - John Pise KX1X

WB1Z Award Criteria - See Old Business.

Fall Classes- Marcel Lapierre has approached KX1X with a request to hold a 10-week technician level license class for local hospital staff. The Holyoke, Mercy and Bay State Hospitals have received a grant to facilitate hospital staff licensing. The class will be held at the Holyoke Hospital auditorium on Tuesday evenings for a period of 10 weeks commencing the 28th of September. John KX1X is attempting to add regular students into the mix, if Marcel Lapierre agrees to do so. John expects an answer from Marcel within a week. If the answer is yes, the class can be opened to the general public.

Crew DX report - Jacob Krainson is President of the DX crew with six members and 13 associates who are comprised of scouts too young to meet the minimum age for full explorer scout membership. Four of the members are currently learning CW. The crew is considering the NEQP in May for crew participation. There was Board discussion as to how to bolster the lagging activity level of the crewmembers in amateur radio events. No immediate solution was found.

Treasurer - Dave Cain AA1YW

Report: Dave needs to get archived bank statements and checks from George to complete the transfer of the clubs financial records.

Current member count - 88

Club Balance - \$4672.31

Field Day financial report, including all expenses, raffle income & Dufresne refund - FD lost \$106 (except for the park rental).

In order to speed up check processing Dave will get the PO box key from Ed and will pick up the mail going forward.

Secretary - Marty Bowen W1MJB

The Board reviewed and accepted with changes the June minutes. The minutes will be revised and sent to Larry for publication in the August Zero Beat.

Tech Report - Ed LaCombe KB1NWH-Not Present

Boxboro Bus Trip Update: - 1 van, 11 seats confirmed, 1 open seat. Presently and subject to change, the cost of Boxborough tickets and transportation to and from the event is \$35.00, payable by cash or check to Ed KB1NWH

A decision was made to post tech activities out on the HCRA list.

Zero Beat Editor - Larry Krainson WB1DBY

Deadline for article submission- Aug. 22nd

Membership - Matt Wilhelm W1MSW

One new member, Chuck KB1JFQ

Matt will contact the ARRL seeking a list of new hams/ members in the area.

During their first year of membership, new members will be called prior to upcoming meetings.

At Large-Frandy Johnson N1FJ

A plan for reward certificates will be unveiled at the next board meeting.

Program - Jim Machia NN1Y-Not Present

September - K1SFA from ARRL - John to follow up and confirm.

October - W1TO from YCCC - Marty to follow up and confirm.

November - Auction - Marty has volunteered to be an

auctioneer along with Jim.

December - Holiday Party - Marty volunteered to chair the event, if no one else steps up.

January - NE1RD - Jim to follow up and confirm

February - Open ?

March - Show & Tell

April - Open

May - Open

June - Tailgate Party

Old Business

WB1Z Plaque Criteria - Dropped- The WB1Z award will be issued to an individual when merited not as an annual award or on any other periodic schedule.

Use of Agawam EOC for BOD meetings- awaiting answer from Steve N1SR (KB1NWH)

Field Day Report (KK1W & W1MSW) everything went well, in spite of poor club member participation during both the preparation stage and the actual event. Discussion was opened with topics ranging from cancellation of FD altogether, to scaling back the size of the FD effort. Further discussion will be included in the agenda for future board meetings.

What to do with stuff at church? The Rubbermaid Totes have been purchased. Ed KB1NWH will repack the Club's property presently stored in the church storage room and coordinate with KK1W to store all items not essential for meeting use in KK1W's garage.

New Business

A suggestion was made to eliminate the December board meeting-discussed and tabled for future consideration.

The schedule for the remainder of 2010 meetings now held at the Hampden Bank in West Springfield.

September 8th

October 6th

November 10th

December 8th.

Holiday Party-Tentative Plans-Place: Steaming Tender Palmer, MA Date: Monday December 6th Fare: Buffet

Chairperson needed.

Auction Planning- minimum fee of \$1.00, no limit, no exclusion- add Marty W1MJB as auctioneer and Matt W1MSW as staff

ARRL 10 Meter Contest Planning - Matt W1MSW volunteered to be the chairperson for this important event which is a club sponsored contest event open to Technician licensed members as well as those with holding higher licenses.

Kx1x suggested perhaps Sweepstakes as another club event. This will be scheduled for discussion on a future date.

Due to the possibility of increasing rental cost for our monthly meeting site, the board is actively exploring alternate sites. One possible monthly/BOD meeting place located in E. Longmeadow (info from KB1PKJ) is under consideration. The board anticipates holding a BOD meeting at the location to better get a feel for the facility and its location.

A decision was made to give away a 2 Meter HT for the 'sign-up' raffle and the 'auction raffle'. We will shop for HT's at the Boxboro convention.

It was decided to print and mail ZB to 100% of the members for September. It was decided to look back at least one year and mail to those members as well. (W1MSW & N1FJ)

HCRA Summer Picnic-Tabled due to lack of interest shown at FD dinner. (KK1W)

Can we get an HCRA@arrl.net address? (W1MJB)

Respectfully submitted on this date - August 25th, 2010 - Marty Bowen



Grand Raffle Prize
2 Meter HT
w/battery & charger



AUCTION

November 5th !!!

Turn your old 'stuff' into cash!

- *Set-up at 6:00 PM*
- *Auction starts at 7:00 PM*
- *Win a 2 Meter HT*
- *Hot dogs, soda, coffee & donuts!*
- *Lots of bargains!*



Auction held at:

Feeding Hills Congregational Church
21 North Westfield Street
Feeding Hills, MA 01030

Just North of the Pride station at the
intersection of routes 57 and 187

AUCTION RULES:

Amateur radio or computer related items only.

Mark all items with name/call and minimum acceptable bid.

Items without minimum will sell at any price!

10% of selling price goes to the HCRA.

Minimum fee = \$1.00

If it doesn't sell - you bring it home!

One of the Dumbest Things I've Ever Done in Ham Radio

By Dan Romanchik, KB6NU

Mark, W8MP, and I often argue about what's dumber—his county hunting or my collecting QSL cards from stations whose call signs spell words. It's one of those arguments that will never be won. When you get right down to it, they're both pretty dumb.

Well, one Wednesday morning, I got a call from Mark. He asked, "Hey, want to do something really dumb tonight?" When I asked what he had in mind, he replied, "Well, one of my county hunter friends, Tim, W8JJ (he's the guy looking nervous in the black cap below), claims to have confirmed all 3,077 counties. He needs at least two General Class (or higher) hams to check his QSL cards and sign off on his application for the USA-CA award sponsored by CQ magazine. I guarantee that this will be one of the dumbest things that you ever do in ham radio. I also guarantee that it will be a lot of fun."

After a fine salmon dinner with some very chewy noodles (that Mark claims his son, KD8EEH insisted that he make), we cleared the table, and Tim got out his box of cards. Mark then explained how we should proceed. I was kind of curious about this, as it's clearly impossible to check all 3,077 QSOs in a single evening.

Basically, what the two checkers are supposed to do is to check random contacts until they are satisfied that the applicant does indeed have a QSL from all 3,077 counties. To select the contacts, you might choose counties where you lived, or counties that you have visited. I hit on the idea of having Tim produced the confirmations of all 16 counties in Massachusetts. Clark, who is more familiar with which counties are the most difficult to confirm, asked Tim to produce cards from some rare counties in Colorado and Hawaii.

Above all, though, the idea is to give the applicant as much grief as possible during the process.

Mark came up with the idea of calling several county hunters that he had phone numbers for and asking them to verify in their logs some of the QSOs that Tim was claiming. He first phoned Jim, N9JF, and we asked him about a 44 report that he'd given Tim seven years ago. He wasn't near his logbook, but he said that he did remember that contact and even rattled off the county (Wahkiakum, WA)!

Next, Mark phoned Guff, KS5A, who confirmed a contact, but was off by almost seven minutes. A long discussion ensued regarding the details of how a mobile logs contacts while out driving. In the end, we accepted the seven-minute discrepancy.

Finally, Mark phoned Larry, WOQE, to confirm a few of the MRCs that Tim had from him. (MRCs are records of multiple contacts. Using them instead of QSL cards makes the process of managing all these QSLs a lot easier.) Mark joked that it looked like one of the MRCs had a forged signature. Larry replied that all of his MRCs are stamped.

"Aha," Clark exclaimed, "this MRC doesn't have a stamp!"

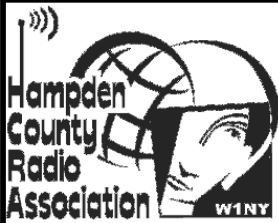
I don't know what was going through Tim's mind at this point, but it probably wasn't good. Larry then explained that he probably sent out that MRC before he got the stamp. When we confirmed those dates, I think Tim breathed a little easier.

In the end, Clark and I signed off on Tim's application. And, even though Mark and I joke about how dumb this activity is, it's really only a joke. In my mind, it's quite an achievement. It takes a lot of persistence, too. It took Tim nearly ten years to do it.

Another cool thing about the county hunting sub-culture is the camaraderie amongst the county hunters. It's the nature of the beast that you'll be contacting many of them multiple times, and it's inevitable that you'll make friends with many of them.

As we were leaving, Tim said, "My wife asked me the other day if I could get now get rid of all my radios since I've talked to everybody." She obviously doesn't understand this ham radio sub-culture. Tim's only just begun.

You can keep up with all of Dan's dumb ham radio activities by reading his blog at www.kb6nu.com. When Dan's not doing dumb ham radio things, he programs websites and does community-service type stuff as a member of the Ann Arbor (MI, USA) Rotary Club. You can email him at cwgeek@kb6nu.com.



HAMPDEN COUNTY RADIO ASSOCIATION

P.O. Box 562
Agawam, MA 01001

Application for New or Renewal Membership



DATE: ___ / ___ / ___

NAME: _____ CALLSIGN: _____

ADDRESS: _____ LICENSE CLASS: _____

CITY: _____ STATE: _____ ZIP: _____

PHONE: Home (____) ____-____ Cell (____) ____-____

Work (____) ____-____-____ext ARRL Member: ☐ Yes ☐ No

Type of application: ☐ New ☐ Renewal (see below)

If renewal use data already on file?: ☐ Yes ☐ No

Class of application: ☐ Regular ☐ Family

*Donations are tax
deductible!
Thanks!*

Please list additional family members:

Name	Call	ARRL Member	e-mail
		<input type="checkbox"/> Yes <input type="checkbox"/> No	
		<input type="checkbox"/> Yes <input type="checkbox"/> No	
		<input type="checkbox"/> Yes <input type="checkbox"/> No	

My interests: (please check all that apply, even if renewing)

<input type="checkbox"/> Alternative Power	<input type="checkbox"/> Digital Modes	<input type="checkbox"/> QRP
<input type="checkbox"/> Antennas	<input type="checkbox"/> DX'ing	<input type="checkbox"/> Satellite
<input type="checkbox"/> Board of Directors	<input type="checkbox"/> Emergency Communication	<input type="checkbox"/> Teaching Ham Classes
<input type="checkbox"/> Club Events	<input type="checkbox"/> Field Day	<input type="checkbox"/> Training (Elmering)
<input type="checkbox"/> Contesting	<input type="checkbox"/> Fox Hunting	<input type="checkbox"/> VHF/UHF
<input type="checkbox"/> CW	<input type="checkbox"/> Kit Building	<input type="checkbox"/> ?

Thoughts for improving 'our' club:

Dues are \$15/year for regular membership. Additional family members are free.

Annual Dues: **\$15.00**

Donation: \$ ____ .00

Total: \$ ____ .00

Received by: _____ Date: ___ / ___ / ___

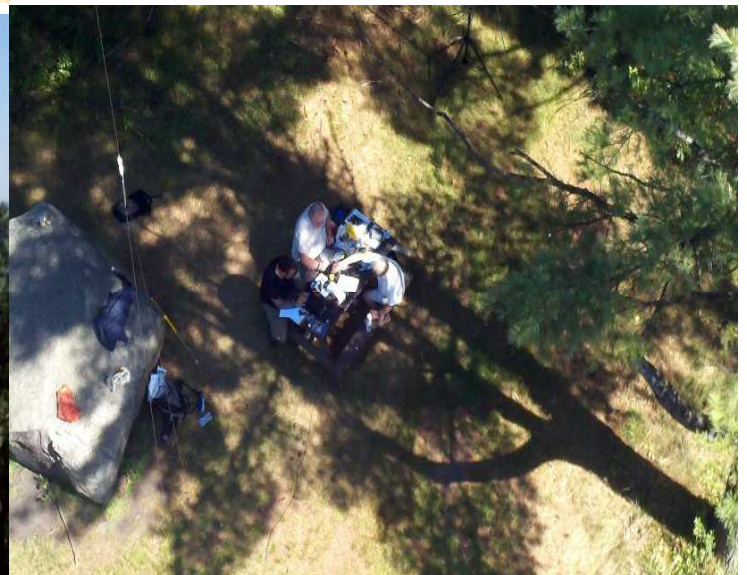
SOTA Fun

Photos by KK1W

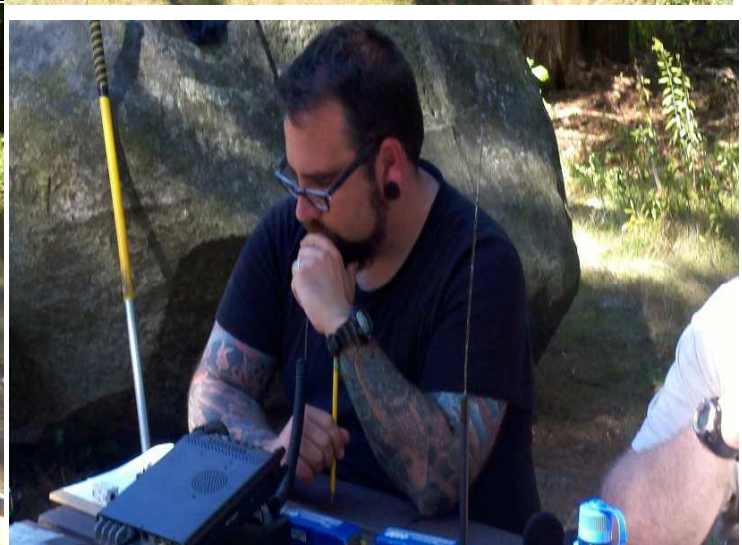


Comfy operating station setup

Tremendous view at the top of the hill



N1FJ, W1MSW & W1MJB



So You Want to Plant a Tower? (installed at N1FJ's house)



Hole First



How many bags of concrete mix to fill that hole?



Leveling the first tower section before pouring



Mix that concrete good!



KK1W & KB1NSN build a box



You want the concrete in the hole



Mixing bags of concrete, one at a time is not a speedy process!



Nearly perfectly level vertically



It's getting there



Base done and looking great! Now to assemble tower and install antennas



Worker food? Blech!

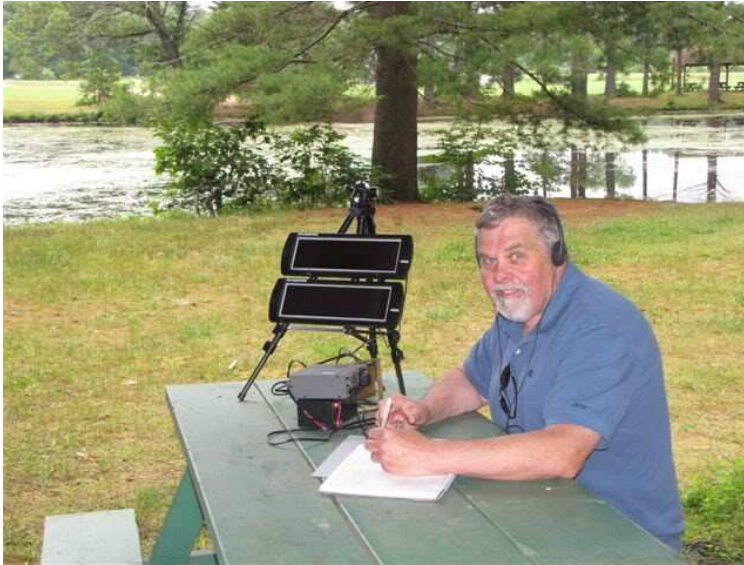


Looking good before the final pours

QRP Corner

*reprinted from last month in Jims honor
as his last ZB Article before he became a Silent Key on 9/21/2010*

As I write this, I have just returned from a beautiful week of QRP (and other family activities) in sunny Kitty Hawk NC and what a blast. Using a 40m dipole at 20 feet, and my Elecraft K1, contacts were made in 7 states and one contact in VE land. Who said you can't have fun with QRP? As for the local club, they are as inviting as their website suggest. Check into .940 and every Monday they invite visitors to lunch! AWESOME!!!!



In preparation for this trip, it appeared that I was going to be forced to use a vertical as all of the research that I did showed no trees to hang a dipole but alas, with a friendly neighbor, a dipole between the two rentals proved to be just the right formula. For the first time I actually had contacts with folks back home....what a blast! Too bad that they didn't last long due to QSB and local QRM but it sure put a smile on my face! Many other contacts rounded out a very rewarding week. A big thanks to Frandy (FJ) and Steve (HFF) for the contacts as tough as they might have been.

In the radio department, I have been experimenting with a new (or very old) battery chemistry - NiZn. The purported claim is that they are designed to provide high current with 1.6 volts per cell. Unfortunately, I have two cells that do not meet specs after four recharge cycles and that tends to significantly reduce the performance of all of the cells sooner than I would expect. At \$18 for the 8 cells, it would have been perfect for the internal battery pack of my K1, and I may pick up a couple of replacement cells but failures "out of the box" put these batteries on a wait and see list. Too bad!

I have also put the 44' multi-band doublet (*portable version*) on the back burner. While the one being tested at the home station is working flawlessly on 10 - 40 meters, and is tunable on 75/80 (*we won't talk about efficiency - or the lack thereof on 75/80*), the tuner in the K1 just doesn't compete with my tuners at home. This is a Cebik (SK) design and he called it a broad-band doublet. If you are property challenged,

this should be a real consideration. See http://www.w8ji.com/short_dipoles_and_problems.htm for W8JI's evaluation. (*See, I give you the resource for 'the rest of the story'*)

Most of you know that I am not a contester, but there are a few that I indulge in. Some are 'for the club' such as Field Day in June, and the 10 meter contest in December (*both at QRP levels*); others are for fun. The type that I really like are the QRP sprints which are typically for 2-4 hours such as the Home Brew sprint, and my favorite, the FYBO (*freeze your butt off*). I usually score in the lower third but that is not important. It is the casual, more relaxed, and friendly environment of these sprints. (*Yes, these are CW but the speed is much slower than Field Day!*) So if you are like me and don't get excited about contest, consider some of these sprints - - - just for fun! (*Don't forget to crank down the power*) <http://www.qrparci.org/content/view/6134/130/>

'That's all folks' and in closing, a BIG THANKS to the new board of directors, and we all wish them well for another great year. 73 and GO HCRA.

Jim k1jaw/QRP

Meeting Location:

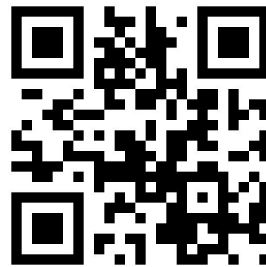
*Feeding Hills
Congregational Church
21 North Westfield St.
Feeding Hills, MA 01030*



Next Meeting:

**October 1st
@ 7:30pm**

**W1TO from the
Yankee Clipper
Contest Club**



What is the funny bar code looking picture to the left? It's a QR code.

Scan it with your smart phone and let it take you to the web link that comes up.

View the full color, multi page Zero Beat online at <http://www.hcra.org/zerobeat.htm>
or delivered directly to your email inbox



The Hampden County Radio Association
P.O Box 562
Agawam, MA 01001



PLEASE HAND CANCEL