



NOVEMBER 2008



# ZERO BEAT

<http://www.hcra.org>

## The Annual HCRA Auction

### November 7, 2008

(see the included flyer for details)

#### Antenna Array and Tower For Sale:

1. 54 Foot Rohn 25 fold down tower with guys and anchors.
2. 3 Antennas: 4 element 6 meter beam, 11 element 2 meter beam and 22 element 432 Mhz beam.

Needs to be taken down. Call Steve, WA1EYF at 537-7335. Price: negotiable.

\*\*\*\*\*

Last chance on these radios before they are listed on the internet.

Try before buying. Can be put on the air at my home.

1. Ten-Tec Argonaut V HF Transceiver (Model 516) \$600. This radio has less than 10 hours of operating time on it and was used by a non smoker.
2. Kenwood TS 870S HF Transceiver with Astron RS-35M power supply \$1295. This radio was used only for about 18 months by a non smoker.

Call Steve, WA1EYF at (413) 537-7335.



**Grand Raffle Prize**  
**\$250.00**  
HRO Gift Certificate



# AUCTION

***November 7th !!!***

***Turn your old 'stuff' into cash!***

- *Set-up at 6:30 PM*
- *Auction starts at 7:30 PM*
- *Win a \$250 Gift Certificate to HRO!*
- *Coffee & Donuts!*
- *Lots of bargains!*



Contact Jim, KK1W, for details - 413-245-3228 or [kk1w@arrl.net](mailto:kk1w@arrl.net)

**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

Talk-in on the 146.94 repeater



**AUCTION RULES:**

***Please—no computer monitors***

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.

Maximum fee - \$10.00

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

**More info: [www.hcra.org](http://www.hcra.org)**

# the COAX (In English)

by Jim, K1JAW



The last time we discussed a dipole having an impedance of 70 ohms (more or less) and using a 1:1 balun. Some dipoles are 300 ohms (or more). If we wanted to build a dipole that was 300 ohms, and feed it with 75 ohm wire, we might have to use a 4:1 balun ( $300/4=75$ ). Pretty simple, eh? But for the moment we will stay with our basic dipole at somewhere between 50-90 ohms. (Note that the standard assumption for a dipole is 75 ohms; Also remember that the standard assumption for a vertical antenna is 35 ohms)

Balance feed line is great. It allows your 40 meter dipole to be used on any frequency between 40 and 6 meters when used with a good transmatch (antenna tuner), and using a few tricks, it could be used on 75/80 meters as well. However, balance feed line cannot be routed next to a metal downspout, up an antenna tower, be buried, and can lead to having RF in the shack if you are not careful. It can also be difficult to get it into the house and to the station. We will cover this in detail next month.

Coax on the other hand, can be run almost anywhere, fed through small holes in the house, be buried (some types), keeps the RF inside of the coax (you hope), and uses simple connectors. However coax does not like high SWR and will have a high loss if you try. (A 10:1 SWR = a 3db loss =  $\frac{1}{2}$  of your power =  $\frac{1}{2}$  an Sunit at the other ham's receiver) Coax when used properly does have more loss than balance feed, and you do need to seal the connectors from the weather because the braid loves to soak up the water like a sponge which will render it useless, but it is easiest to use.

Never skimp on the coax. Learn to read the specs for both frequency and db loss per 100 feet for the highest frequency planned. A 3db loss is half of your power! Spend a little extra and buy good quality – it will be cheaper in the long run. (The following is my pocketbook). Don't accept a coax specification that says good, better, or best! NEVER !

< Loss per 100 feet >

TYPE	IMP ohms	VF	CEN- TER	DI- ELEC	JACK- ET	30 Mhz	50 Mhz	150 Mhz	400 Mhz
RG59	75	.66	Stranded	PE	PVC I	2.5	3.1	6.2	11.2
RG213	50	.66	Solid	FS	PVC IIA	1.2	1.6	2.8	4.9

**Impedance** is obvious. I like 75 ohms for dipoles and 50 ohms for verticals & mobile. The **Velocity Factor** is the speed that the radio wave travels through the cable. The higher the better and the lower the loss. **Center** conductors are sometimes solid but in mobile installations and when used with rotors you should always choose stranded due to the flexing that can occur. **Dielectric** is the stuff that keeps the center conductor and the braid separated. (My preference is solid teflon "ST", or **Solid Polyethylene "PE"**). I do not like foam (FE/FS) because it can allow the center conductor migrate toward the braid when flexed (not good), and can also absorb moisture (real bad). The **Jacket** should be a quality jacket (My preference is a PVC white); special jackets/coax are required if it is to be buried. The braid (*shield cover*) should be a tight weave (95% or better). This is critical for keeping your signal in, and noise out! One other coax that is becoming popular is RG8x for HF. It is a little larger than RG58 or RG59 with less loss. Be sure to purchase the right adapter if you are using a PL259.

**Losses** need to be evaluated at the highest frequency that you are using the coax at. This is where you look at your length and the amount of loss that you are willing to sacrifice. A 3db loss is equal to half of your power and 6 db equates to a 75% loss. You would not want to run 100 feet of RG59 at 150 Mhz but 18 feet in a mobile installation would be acceptable. (The equivalent cable at 50 ohms is RG58 ).

Next month we will discuss open wire / window line, the advantages & disadvantages.

**This month's recommended website is KOBG.com for mobile installation's.**

## From the Shack...



### 96 – and counting!

A big thank you goes out to everyone renewing before the end of October's meeting. After the dust settled and the winner of the Tom Tom GPS was drawn, HCRA is 96 strong and growing. The numbers show our club is 'hopefully' doing what interests and excites both us and our hobby. Fox hunts, kit program, Holiday Party, and Field Day are just a few of the interesting things in store for our members this year. What would you like to do to make it even better?

### And the winners are...

The October meeting was a lucky one for three of our members. We drew for the winners of the 'Sign-up Raffle' and the 'Shack of the Year' contests. This year's Sign-up winner was Bob, KB1BXL. Bob just returned from a trip to Arizona and will pick up his prize at the auction. Sounds like he is a travelling man and will make good use of his prize. The other October winners were Norm and Betty, W1BMK and KB1CPZ. Norm and Betty's shack was picked as best looking in the 'Shack of the Year' contest. The pictures submitted over the past year were beautifully displayed by KC1V along with a ballot box for voting by our members. Norm and Betty will be the recipients of a \$50 HRO Gift Certificate for their efforts. Congratulations!

### Holiday Party Planning

This year we have made a big change in the Holiday Party by moving it from the usual meeting hall and out to a real restaurant. John, Kx1x is heading up coordination for the party and he is looking for some support from our members. Would someone like to work with John to keep track of the invitations and their menu choices? Also we are looking for help with postcard mailings and telephone follow-up. Could you help us out?

The restaurant offers a great menu and relaxed atmosphere coupled with the charm of an old railroad depot bordering active rail lines. Please look at the menu listed elsewhere in this month's Zero Beat and watch for the invitation in your mailbox. We need to get as good a handle on who will be attending and their meal selection so we can make this the best HCRA Holiday Party ever.

### Going, going GONE!

The annual HCRA auction is almost upon us. If you haven't started getting your stuff ready there isn't much time left. Make yourself a note to get right on it after you finish reading this month's Zero Beat. Clean it up, tag it and bring down for 6:30 on Friday. The economy is tight so what better way to stretch your ham dollar than the HCRA auction. Don't forget to bring a friend!

### Are you in for the 10 meter contest?

We are really looking for biggest club participation ever in this years ARRL 10 meter contest. This is an easy, fun contest that we can enter as a club but actually participate from home. The contest starts at 7:00 PM on December 12<sup>th</sup> and ends at 7:00 PM on December 14<sup>th</sup>. Rules can be found on the ARRL website. Be sure to see HCRA's 10 meter page at: <http://www.hcra.org/tutorial.htm> where you will find a tutorial as well as our past efforts. Sunspots are finally starting to show up; this could be an outstanding weekend!

See you at the auction,  
Jim, KK1W

# HCRA Holiday Party

Join your friends for a relaxing evening at the Steaming Tender Restaurant in Palmer, MA. Absorb the charm of a turn of the century railroad station while savoring award winning cuisine with your best friends from HCRA. The perfect way to escape from the holiday rush!

## When

December 8th

Cocktails at 6:00 PM – Dinner at 7:00 PM

## Where

Steaming Tender Restaurant

28 Depot Street

Palmer, MA 01069

## Menu

Fresh Fruit Cup

Fresh Garden Salad w/dressing

Seasonal vegetable and fresh baked rolls

Garlic Mashed Potato or Rice Pilaf

## Entrée choices (choose 1)

☐ 10oz Roast Prime Rib of Beef Au Jus

☐ Chicken with Wild Mushrooms

☐ Baked Scrod New England Style

Cake and Ice Cream w/coffee or tea

## Cost

HCRA Member \$15/person

Non-member \$25/person

Please mail your menu choice, attendee(s) and your check to:

HCRA, P.O. Box 562, Agawam, MA 01001

Members - take a \$5 Early Bird discount if reserved prior to 11/15/08





## HAMTOON



## At What Frequency Does Lightning Transmit?

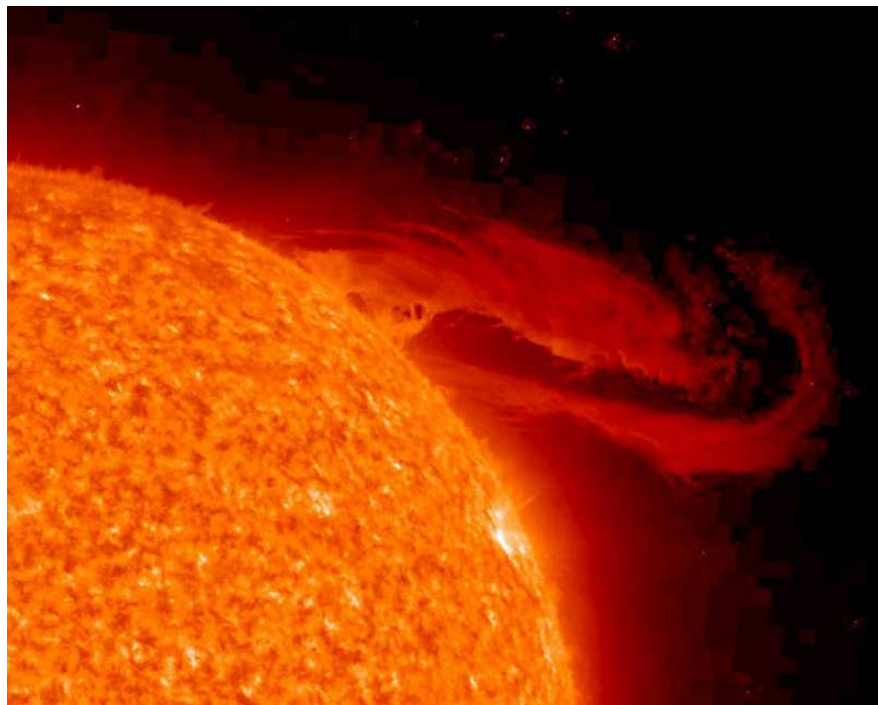
Lightning emits a wide range of radio frequencies, but is mainly concentrated in the very low frequencies, ranging from a few hundred hertz to 10 KHz. Lightning can produce radio waves farther up the spectrum, which is why it can sometimes interfere with AM radio reception, but is never a problem with FM radio reception.

Thanks to Bob Swanson of USA TODAY

## HAMTOON



## Solar Update



### A Solar Prominence Unfurls

Credit: [STEREO Project](#), [NASA](#)

**Explanation:** On September 29, this magnificent eruptive solar [prominence](#) lifted away from [the Sun's](#) surface, unfurling into space over the course of several hours. Suspended in twisted [magnetic fields](#), the [hot plasma](#) structure is many times [the size](#) of planet Earth and was captured in this view by the Sun-watching [STEREO \(Ahead\)](#) spacecraft. The image was recorded in extreme ultraviolet light emitted by [ionized Helium](#), an element originally identified in the solar spectrum. Seen against the brilliant solar surface in visible light, such prominences appear as dark [filaments](#) because they are relatively cool. But they are bright themselves when viewed against the blackness of space, arcing above the Sun's edge.



# BSA Venture Crew 510

NE1C - New England's #1 Crew

*BSA Venture Crew 510 is chartered by the Hampden County Radio Association*



## **BSA VENTURE CREW 510 Contacts**

Youth President Jake Krainson, KB1NSN [krazyfisherman@comcast.net](mailto:krazyfisherman@comcast.net)

Adult Advisor John Pise, Kx1x [kx1x@arrl.net](mailto:kx1x@arrl.net)

## BSA Venture Crew 510 Returns To MassJam

Every few years, the Boy Scout Massachusetts Jamboree (MassJam) takes place on Cape Cod. This year, on October 11<sup>th</sup> and 12<sup>th</sup>, over 6,000 people in green and red socks converged on the Barnstable Fairgrounds in anticipation of a great event.

Along with classic scouting activities, such as a climbing wall, a rope tying competition, air guns, and archery, BSA Venture Crew 510 (Crew DX) was on hand to give a demonstration of amateur radio to anyone that would listen. Each scout patrol in attendance was required to visit four midway exhibits (of which the ham radio demo was one) to earn the "Baden Powell Patrol Award." This brought many scouts to our 'shack', which was actually a two car garage. We required that each patrol listen to a ten minute presentation about what ham radio is or to make a contact on-the-air with the help of crew members before we would sign the paper for the requirement.

Presentations and on-the-air help was given by our Crew President, Jake Krainson, KB1NSN as well as Jimmy Machia KB1PRA, Chris Fotopoulos KB1PQU, Joe Pelletier KB1ODC, and Jacob McCurdy KB1PQW. Adults were there to advise the youth, and to fill in when there were too many scouts visiting our shack. Thanks to adults Jim Machia KB1PRB, Ed LaCombe KB1NWH, Blake Edwards KB1OEV (and I was there, too). Much thanks to the HCRA for the use of a portable tower and TA33jr tribander beam. With two HF radios and a 2m, we were able to be on 20m and 40m as well as IRLP. '73 de Kx1x



Venture Crew  
**DX**

Crew DX member Chris KB1PQU, works on the portable tower as Ed KB1NWH and Jake KB1NSN look on.

**Zero Beat Contributions:** Anything of interest is welcome.  
Please submit your ideas, articles and more to  
wb1dby@comcast.net. Thank you,  
Larry, WB1DBY, Zero Beat Editor

## **HCRA 10m Net**

Join NCS, Tom Doyle (n1muv),  
each Monday night at 7:30 PM (local) on

# **28.375 MHz**

Get the latest local word, join good friends,  
take part in good conversation each week!!!  
Anyone can join in, don't be shy!!!

## **Have you tried IRLP yet?**

IRLP is the Internet Radio Linking Project, connecting radios  
over the Internet. With your 2m radio, you make contacts all  
over the world. HCRA sponsors an IRLP node, in South Hadley,  
MA. It is there for your use, please give it a try (at least turn  
it on and listen) 146.46 simplex, 114.8hz PL Kx1x, Node #7270,  
South Hadley, MA.

For a list of IRLP nodes and other IRLP information, go to:  
<http://www.irlp.net/>

## **WE NEED YOUR SUGGESTIONS**

We are asking for your suggestions and ideas for future  
HCRA meetings. The recent success of HCRA has been,  
in part, because of its interesting and timely  
key speakers and topics.

If you can help, please contact Jim, KK1W at  
kk1w@arrl.net or (413) 245-3228.

*Questions, Comments, and Suggestions  
Can Be Directed To:*

## **HCRA OFFICERS**

### **President**

*Jim Mullen, KK1W  
(413) 245-3228 [kk1w@arrl.net](mailto:kk1w@arrl.net)*

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### **Secretary**

*Ed LaCombe, KB1NWH  
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## **HCRA DIRECTORS**

### **At Large**

*Irv Slitsky, W6IS  
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### **Program**

*Open—your name here!*

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### **W1NY Trustee**

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### **WB1Z Trustee**

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### **IRLP Trustee**

*John Pise, Kx1x  
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## Elmering CW Ops

By Dan Romanchik, KB6NU

I have a reputation for being a CW zealot. It's a reputation that I quite deserve, thank you very much, and one that I'm proud of. Working CW is a heckuva lot of fun, and I want to help as many hams as I can enjoy it as much as I do.

Unlike some OFs (e-mail me if you're not familiar with that CW abbreviation) who just complain that no one operates CW anymore or bemoan the elimination of the code test, I try to walk the walk as well as talk the talk. Here are some of the things I do to get guys to operate CW:

I always carry around copies of the K7QO Code Course on CD-ROM (<http://www.kc5cqm.org/pmwiki/pmwiki.php?n=Main.K7QOcwCourse>). K7QO has graciously allowed this version to be distributed freely, and when I'm at a ham event, and anyone expresses even the slightest interest in CQ, I pull one out of my briefcase and hand it to him or her.

I try to keep one or two inexpensive paddles around to sell to interested folks. Bencher BY-1s are good starter paddles, and you can often find them at hamfests or on EBay for fifty to sixty bucks. I usually keep one or two "in stock." When someone asks about paddles, I offer to sell them one of the ones I have for exactly what I paid for it. Since they know me, they get a good feeling that they're getting a decent paddle at a decent price. And once they have it in the shack, it takes away one excuse for not operating CW. I also, provide technical support. By that I mean I help them get the key and keyer adjusted properly and help them use it properly.

I never denigrate or complain about hams that never had to pass a code test. That's a sure turnoff. As soon as people get the feeling that you're looking down your nose at them, you lose all credibility with them and they just stop listening to you. My personal opinion is that if more folks have ham licenses, then the pool of potential CW operators is bigger.

I never denigrate or complain about hams that don't operate CW. See above.

I acknowledge that Morse Code can be difficult to learn. I often apologize for the fact that I got into it when I was young and it was easier for me to pick it up then. I also apologize that I seem to have at least a limited talent for Morse Code. I acknowledge that this is not something one learns overnight. You're more likely to win someone over if you sympathise instead of criticise. I like to challenge them to learn it, noting that once they've acquired the skill, it's something that they can be proud of. Not only that, it's a lot of fun!

I try to show them how much fun CW is! I have an Elecraft KX-1, which I take to things like club picnics. Throw up a simple antenna and I am on the air making contacts. I also invite guys to my shack and show them in person how cool it is.

Finally, I give presentations to just about any club that invites me, if I can make the arrangements. On my blog at <http://kb6nu.com/a-cw-presentation-for-your-club/>, you can find the text for the slides I used for my presentation, "CW is Fun!" Feel free to use them to give a presentation to your club.

Who knows? If you give this presentation to your club, maybe you'll even get one or two guys interested enough in CW to learn the code and get on the air. If every current CW op Elmered one other ham every year, the CW bands would be chock full of activity. We'd be complaining that it's impossible to find a clear frequency instead of complaining that it's getting hard to find a contact.

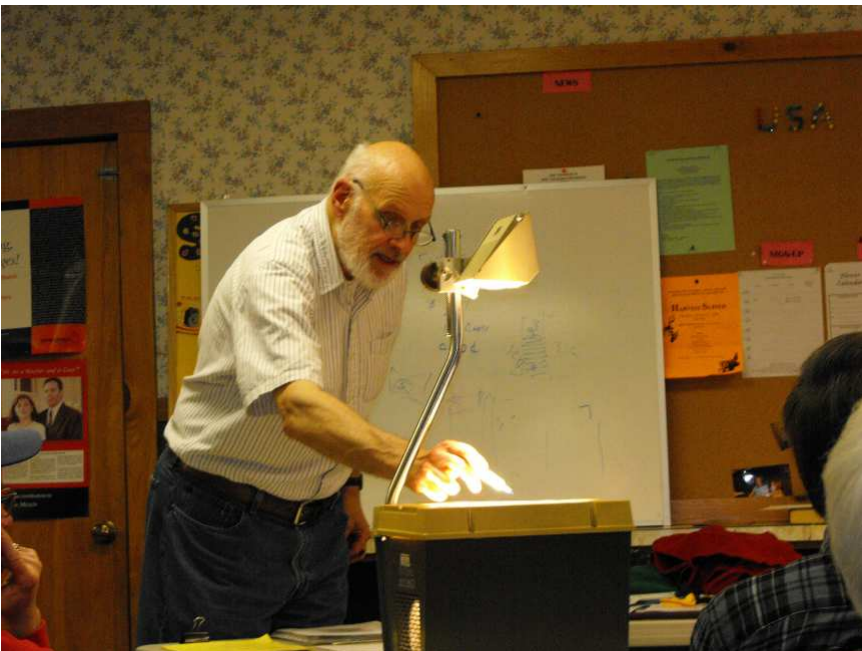
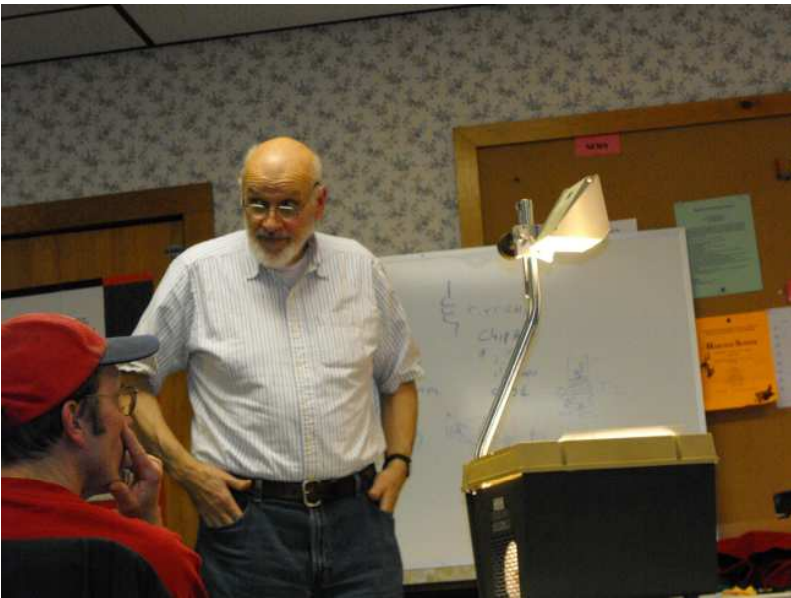
## Pics from the July 4th Parade in East Longmeadow



## Pics from the October HCRA Meeting







Meeting Location:  
Meetings are held  
at the  
Feeding Hills  
Congregational Church

21 North Westfield Street  
Feeding Hills, MA 01030

*Parking is in back  
of the church.  
Access is HP accessible.*

## Next Meeting: Friday Night

November 7th, 2008

Annual  
HCRA  
Auction  
(details inside)



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



PLEASE HAND CANCEL

# Boy Scout Venture Crew DX (510) Sponsored by the HCRA

On the weekend of October 10-13, otherwise known as Columbus Weekend, Venture Crew DX headed for Cape Cod. They were to put on a demonstration of amateur radio; try to get some scouts interested enough to earn their license; to some 8000+ scouts and leaders from Massachusetts and Rhode Island. Here are some pictures of that trip. Do you recognize any?

