



ZERO BEAT

Meeting Update!

The Holyoke Hospital has opened their meeting room to us once again. Beginning in September in-person meeting's are back!

Need directions?

www.hcra.org/meeting-location/

Welcome New Members

No New Members this Month

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Our 74th Year as a Club!

October 2022

From the editor,

In-person meetings at the Holyoke Hospital Auxiliary room with no restrictions and live guest speakers are back! If you're unsure of the meeting location go to hcra.org/meeting-location for complete directions.

How would you like a chance at winning a DX Engineering Gift Card worth \$150? Check out page 3 for all the details on how to enter.

The October issue features another article by Bill, W1FMX, who wrote a great article that's all about kit building!

Project BIG E is under way and on it's final week at the time of this publication. So far the Ham Radio Booth in the BLC has been a huge success with the ISS contact coming up on Sept. 27th. It's supposed to be a beautiful sunny day too!

The HCRA November Auction is back! More about this plus details on the Holiday Party in December beginning on page 10 of this issue.

A new change to Zero Beat is the addition of a clickable Table of Contents.

If you have a submission for Zero Beat please email it to kd1ku@arrl.net. Don't forget the 10 meter net every Monday at 7pm now that we're back to the winter schedule. I hope to see everyone at the October meeting, in-person!

73, Ken - KD1KU

October 7th Meeting

In-Person at the Holyoke Hospital!

In-person meeting's are back at the Holyoke Hospital! Doors open at 7 pm, meeting begins at 7:30. If you missed last months meeting don't miss October! Need directions? Click: <http://www.hcra.org/meeting-location/>

This month's guest speaker is Rockwell, WW1X, who will be presenting and demonstrating Remote Ham Radio, LIVE from Holyoke Hospital's auxiliary room. Don't miss this exciting presentation!

Septembers in-person meeting was recorded and is available for your viewing pleasure at <http://www.hcra.org/category/videos/> plus on the HCRA YouTube Channel at: <https://www.youtube.com/user/HampdenCountyRA>

Upcoming Meetings and Guest Speakers



Tim Duffy, K3LR will be our September guest speaker. Tim is from the K3LR SuperStation in West Middlesex, PA. Don't miss his presentation!



This month's guest speaker is Rockwell, WW1X, who will be presenting and demonstrating Remote Ham Radio in-person from the Holyoke Hospital



HCRA's Annual Auction is Back at the November Meeting! Ham Radio Gear and Related Accessories ONLY! NO Computers, Monitors or PC Parts!



The Annual HCRA Holiday Party at The Steaming Tender Restaurant Dec 5th. Join us for a Night of Great Food and Fun with your Fellow Hams. (details subject to change)



Guest Speaker To Be Announced



Guest Speaker To Be Announced



Guest Speaker To Be Announced



Guest Speaker To Be Announced



Guest Speaker To Be Announced



Elections, Field Day Prep and More. Please Consider Running for a Board Position, HCRA is a Better Club when you're Involved

ARE YOUR DUES PAID?

Pay Your HCRA Dues Before October 31st and WIN \$150!

To: YOUR NAME HERE 

Thank you for supporting HCRA!

Amount: \$150.00

Date Issued: 9/15/2022



Gift Card #: 0123456789

Have you paid your HCRA dues yet? If you have, or will do so before October 31st 2022 you could be the lucky recipient of a DX Engineering Gift Card worth \$150 smackeroos at DX Engineering!

Each member that renews their dues before October 31st will have their name automatically entered into a random drawing to win the above gift card for DX Engineering in the amount of \$150!

Each year, HCRA's fiscal year ends on August 31st with the new fiscal year beginning on September 1st 2022. Not sure if you paid your dues already? Go to: <http://www.hcra.org/current-members/> and look for your name on this list. If your name appears here then your dues have been renewed or they are valid until the date on the far right of the screen. Standard memberships are only \$15 per year and can be renewed as noted below.

Renew your membership by credit card using PayPal even if you don't have a PayPal account! It's the fastest method and secure. <http://www.hcra.org/online-new-membership-application-and-renewal/>

Your dues can also be paid the old fashioned way by snail mail, simply download the application form using this link: <http://www.hcra.org/files/HCRAApplicationForm2013.pdf> and mail a check in.

The best way to renew is by coming to the October meeting and pay HCRA Treasurer, George, KC1V with cash and you might consider adding a donation to help your club!

No Matter How You Pay... Please Renew Soon!!!



October 2022 - From the Presidents Shack

21 months ago, I started the Big E Project. For years I had been thinking that we could always do a better booth than the one that was last done by a CT group years ago.

I did a presentation at the 2021 New England Division Cabinet meeting and was shot down by the then New England Division Manager. But everyone else loved it, so we moved forward with the goal of a booth at the 2022 Big E.

Now, 21 months have gone by, lots and lots of planning and the booth is happening now (as of 9/19). We have over 100 hams from around New England, eastern NY and northern NJ that are in the schedule to staff the booth. Within all those hams are 12 clubs that have club days.

The HCRA is able to staff a full day. But we could not get a full day of HCRA members there, unfortunately.

The following members have volunteered for HCRA Day:

- WIBOB
- KC1LWF
- NIJE
- NFIG
- K3FEC
- KP4JLD
- W2BUD

In other sessions during the 17-day run, the following HCRA members spent time in the booth:

- KC1IKA
- WIBCC
- WIAEZ
- W1AST
- NICB
- WIIRL
- KC1AEO

That is roughly 10% of the club's members. Why didn't YOU volunteer?

October is the start of the contesting season. It's a great time to track down some needed DX during the DX contests or needed states for awards. Both CW and SSB and other modes as well.

Continued on page 5

FROM THE PRESIDENTS SHACK CONT'D

Contests can be a lot of fun and it's up to you to decide how much effort to put in. A few hours can be very enjoyable. No one except you can set goals for how much time and how many contacts or multipliers you want.

This summer, while camping, I ran across an hour-long contest where you give your report and name. All in CW and it was quick fun and made me want to participate more. I was using just 5 watts and an end-fed antenna from where I was camping. Of course, camping from the Northern Kingdom of Vermont at 1800 feet ASL was ideal as I heard a lot and was heard quite well with my little power.

Contesting can be a lot of fun. You should try it if you do not already. It does not have to be on a large scale either. If you want to try, but need some assistance, there are plenty of people in the club that can mentor and coach you. All you need to do is ask.

Last month's meeting was the very first in-person meeting the club has had since before Covid began. For those of us present (all 41 of us), it was great seeing everyone and talking with them in person. It's great to have a tiny bit of normalcy returning to our lives.

In-person meetings are here to stay, hopefully. We have the room at the Holyoke Hospital reserved up to next June.

Now is the time to mark your calendars for the FIRST Friday of every month for a HCRA meeting. Come and join us. If you are not sure, wear a mask, you will not be the only one and there is no reason to be shy about it. No one will question you. Come join us.

For the November meeting, the HCRA Auction returns. Ham radio and electronic gear only. Absolutely nothing computers. All gear should have a sticker with your call sign on it. The club will take 10% of what your item sells for. Bring your for sale or those items you were thinking about selling, but haven't quite yet. This is a meeting that everyone benefits from. More info in ZeroBeat.

Reserve Monday, December 5th for the HCRA Holiday Party. The details are being worked out and we hope to present them to you very soon. Stay tuned and reserve that date now.

Last year we had 50 people attend, this year should be even better. Plan to attend!

I'm looking forward to seeing even more people than last month at the upcoming October meeting on the 7th. Doors open at 7 pm and the meeting will start promptly at 7:30 pm. I hope to see you there!

73,
Larry, W1AST
W1AST@arrl.net

All Meetings are on the HCRA YouTube Channel - Don't forget to click subscribe!

Did you miss any past club meetings? Maybe you want to re-watch all or part of a past meeting?

Use the following link to view past meetings or search YouTube for HCRA past meetings

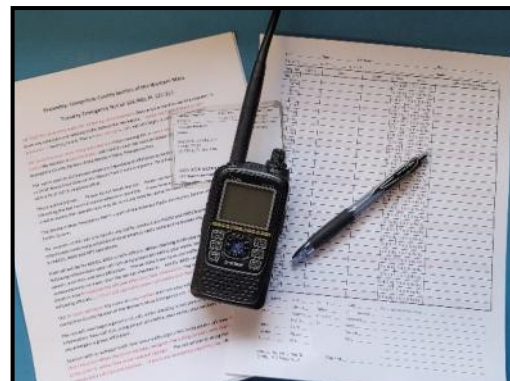
<https://www.youtube.com/user/HampdenCountyRA>

ARES NET UPDATE

WMA ARES Update by Smitty, KC1IKA ~ ASEC Net Manager

As you read this, we have already had our September club meeting in person. It was great seeing everyone, and a fantastic presentation was enjoyed by all.

By the time you are reading this, the Big E will be in full swing and the Amateur radio booth will be recruiting more members to our community. Big thanks to Larry, W1AST, for coming up with and spearheading this project. As part of the EmCom community, I hope we get lots of interest in all aspects of emergency communications.



We have supported some severe weather events in the area this summer. Luckily, most of the severe weather was out of the area. It would be nice to get more participation during the Skywarn nets. There are a lot of area hams who are members of Skywarn. A simple plastic rain gauge would enable rain quantity reports during nets. There can be quite a difference between “official” weather stations and areas a mile or two away.

Finally getting my portable station better established at my campsite. A new desk and better support of the VHF/UHF antenna make it a lot easier to do the Sunday morning ARES nets. Not as many people signing in but I’m hoping that is due to summer travel. We will see what the cooler weather brings.

There is a section of the net where we are looking for anyone to announce club meetings or nets. Please feel free to sign in to promote your net or club meeting.

Still looking for additional Net Control Stations. If you have any questions or would like to sign up for training, please contact Smitty, KC1IKA at KC1IKA@ARRL.net. Smitty is the Assistant Section Emergency Coordinator and Net Manager for Western Mass ARES.



73,
Smitty, KC1IKA
ASEC, Net Manager, WMA ARES



SHOW YOUR SHACK!

October Features the Shack of Gary, KC1JZR



(above) The heart of Gary's shack is his Yaesu FTDX-3000-D transceiver, Matching External Speaker with audio filtering network, Ameritron 811-A amplifier fitted with Penta Labs 572-B tubes, MFJ 962-D induction roller tuner, 2 Alpha Delta switches, Uniden 'Grant' SSB/AM 11 meter transceiver, Turner Plus 3-B microphone with everything being powered by an Astron 35-A power supply.



(above) True Ladder Line antennas of Vermont, 600ohm true ladder line fed into a flat top doublet for all of Gary's HF operations, 160 - 10 meters



Gary's vertical for VHF/UHF & 6m. Diamond V-2000 Tri-Band ground plane for 6 meters through 70cm

Continued on page 8

SHOW YOUR SHACK! Cont'd

Octobers shack is that of Gary, KC1JZR



(above) Gary's Kenwood Line is a beautiful thing, The TS-830-S Transceiver w/GOLD Logo (last units made) with Ameritron ARB, 704 Electronic TX/RX Electronic Relay w/ALC for Kenwood 830-S, SM-220 Monitor/Scope with Optional Pan Adaptor Card, VFO-230 Optional, External STABLE Frequency Control for the TS-830-S with the Ability to Memo-rize Favorite Frequencies, SP-230 external speaker with audio filtering network, and a HC-10 World Clock



(left) AM Station: 'SDR Play' SDR receiver ordered from factory in the UK (England), connected to another Dedicated HP laptop for FULL SDR receiver functions with auto muting during transmit operations, Radio Engineering Associates, Amplitude Modulation Station Monitor, which is also displayed on the laptop screen (top left) along with the SDR band scope

(left) RickRider power distribution module by FURMAN to supply power to the station, 4 space road case rack for, Behringer 'Ultragrain Pro' microphone preamp WITH 12AX7-D vacuum tube - Behringer 'Ultra-Curve Pro' High Resolution audio processor - K7 1500w class D AM transmitter for operations on 80 / 40 meters - Bose wave system as an SDR receiver audio monitor.

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SHOW YOUR SHACK! Cont'd

Octobers Shack is that of Gary, KCIJZR



(left)

VHF-UHF Station: Desk for HF & High Band NCS duties. Dedicated HP laptop with wireless keyboard and mouse for Net Logger software as seen on the display. UHF / VHF station.

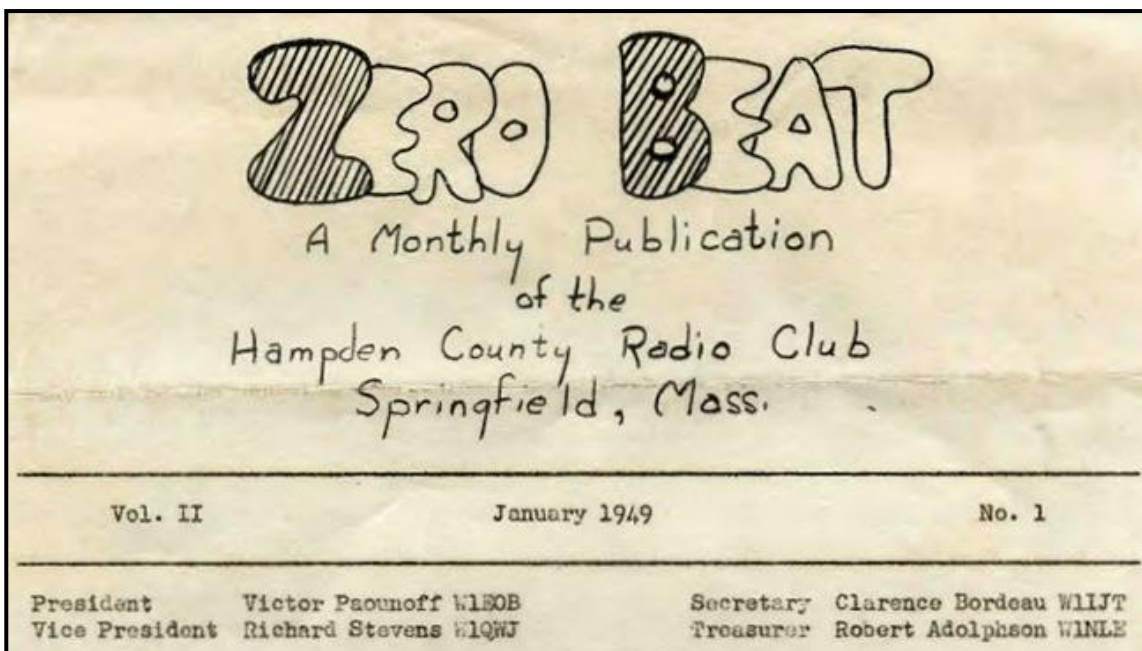
(left)

Lower Shelf (near floor), Astron 35A power supply dedicated to power the Toptek PA-200 VHF RF amplifier

Gary has found his niche in our hobby by taking on several Net Control Station (NCS) duties both past and present, with just a few of the nets being the former HCRA New Ham Net, ECOM, the HCRA 10 meter net plus the Maine Potato Net on 3.961 KHZ. More info can be found at: <https://themainepotatonet.net>

Preparation for the 75th Anniversary of The HCRA in 2023

According to the Zero Beat archives the 1st issue came out in Sept 1948 but it was not named Zero Beat till Dec of 1948! The first two issues were not even named until December 1948 issue when it became ZeroBeat!



HOLIDAY PARTY

The 2022 HCRA Holiday Party at The Steaming Tender Restaurant

- ◆ **When:** December 5th 2022
- ◆ **Where:** The Steaming Tender Restaurant
- ◆ **Location:** 28 Depot Street Palmer, MA. 01069
- ◆ **Time:** 6:30 - 9:30 pm
- ◆ **Menu:** To Be Announced
- ◆ **Cost:** To Be Announced

(Spouses/Significant others & Friends are welcome as are well behaved children over 14 or young hams)

If you did not attend last year's Holiday Party you missed a great time!
Great food, great venue, and great company makes for an enjoyable time by all.
Watch for future details with menu and price information.



September Meeting YouTube Link

The September meeting was the first in-person meeting since the Pandemic began! If you didn't attend, this is your chance to view it.

Please don't forget to click on subscribe before leaving!

https://www.youtube.com/watch?v=bo_Qd2NF2HA



HCRA ANNUAL AUCTION

The Annual November Auction is Back!

After a long absence the Annual HCRA November Auction is back! The November meeting will mark its return on Nov 4th 2022. Doors open at 7 pm and the auction will begin at 7:30 pm.

Your club is proud to bring back the Annual November Auction beginning at the November 4th meeting!

Everyone is invited to bring items they wish to sell. Please mark the item(s) with a starting price or a desired price and/or reserve price and the item will be auctioned off with the club collecting 10% of the final sale price of the item and then issue you a check for the remainder.

Only ham radio gear, equipment and related accessories are allowed!

ABSOLUTELY NO computers, components, monitors or accessories. Only ham radios and electronics.

Anything that does not sell **MUST** go back with you! NO dumpsters are available at the meeting location.

Club donations are always welcome and will be gladly accepted!

Gather your ham gear that you wish to have auctioned off but again, please leave computers and computer related accessories at home as it will NOT be auctioned off.

If you have any questions regarding the auction contact Larry, W1AST at w1ast@arrl.net

Another Excerpt from the January 1949 Zero Beat

AS WE PROMISED last month, here is a tabulation of as many of the Western Mass. sweepstakes scores as we could round up - those marked with an asterisk are Hampden County boys:

CALL	STNS.	SECTS.	SCORE
*W1JYH	717	67	120,097
*W1EOB	616	70	107,800
W1KJO	495	66	81,262
W1MUN	326	63	41,076
W1JFE	183	53	24,181
W1KKG	185	49	18,130
W1PKI	210	35	15,700
W1BEF	193	34	13,022
*W1APA	110	37	10,175
*W1RHU	117	31	8,990
*W1BVR	42	27	2,268
*W1KEV	40	28	2,240
W1ROS	38	19	1,825
#*W1QWJ	23	18	828
*W1LJT	21	16	672

#*W1QWJ was our only phone entry - tsk! tsk!
The total club score submitted to ARRL was 253,070 points which is pretty sad considering the number of members we have - oh well, maybe next year-----?

FREQUENCY COUNTER METER KIT

1Hz-50MHz Crystal Oscillator Tester / Frequency Counter Meter Kit

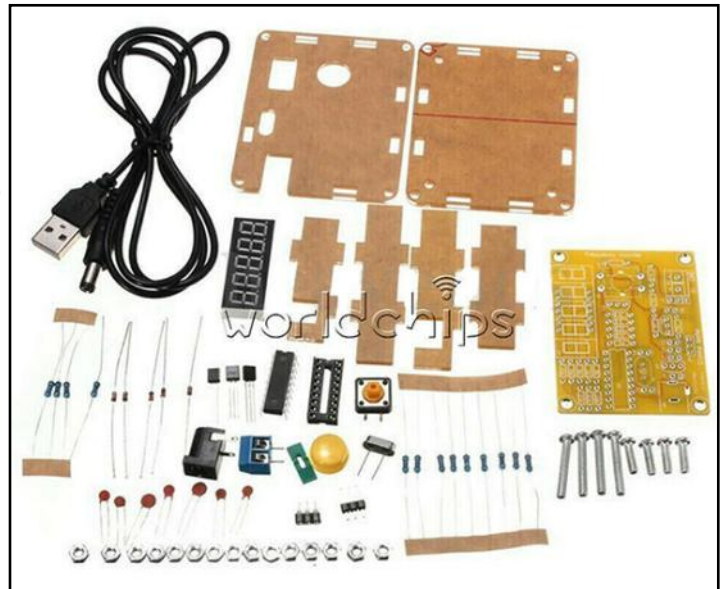
Sold on eBay Price: \$11.19 (\$15.62 with shipping)

Ref: [Frequency Counter Crystal Oscillator Tester meter 1Hz-50MHz 1MHz-1.1GHz DIY Kits | eBay](#)

For those Hams who use vintage equipment, being able to check the frequency of a crystal for use with a transmitter, or the frequency of an oscillator is important for troubleshooting. The kit described in this article is useful for both tasks, and it is a good project for someone who has basic electronic technician skills. If you can read a simple schematic, solder, use a Volt-Ohm Meter (VOM), and identify the values of disk capacitors, then you have the ability to complete this kit.

The kit arrives with a couple of small plastic envelopes containing all of the components. The kit has a simple and clearly marked printed circuit board (PCB). A few different values of resistors are included, but you will either need to read the color codes on them to identify their values or use a VOM to do the task; I would suggest using a VOM anyway as it is a good practice to verify that the resistors are in fact the values that they are supposed to be. There are disk capacitors, an IC chip, a crystal, a couple of transistors, and a voltage regulator, as well as an LED Display. The case is made of clear plastic pieces that are covered with brown protective paper; screws are used to assemble the case.

It is best to begin by reviewing the parts list included with the instruction sheets so that you will be familiar with all the parts and will be able to be sure that everything was included. I found that all the parts were included in the kit I purchased. The instruction sheets were hardly legible, so I contacted the seller and quickly received an electronic version of the parts list, diagram, and instructions. The actual instructions are very limited, essentially suggesting which parts (for example, the resistors) are best to install first on the PCB.



(photo 1) All of the necessary pieces to complete the kit



(photo 2) Useful tools for kit building: "Hand Free" Holder, Wire Cutters, Solder, and small tip for soldering Iron

For those who are new to kit building, there are some things to keep in mind. First, the PCB is very small (approx. 2" W x 3" L), so a "hands-free" holder is useful to secure the board while you are soldering the components. Also, you'll want to use a pencil-tip soldering iron with a small tip and solder that has a small diameter (for example, .031"/.75mm). A magnifying glass is also helpful in reading markings on small components such as transistors.

Continued on page 13

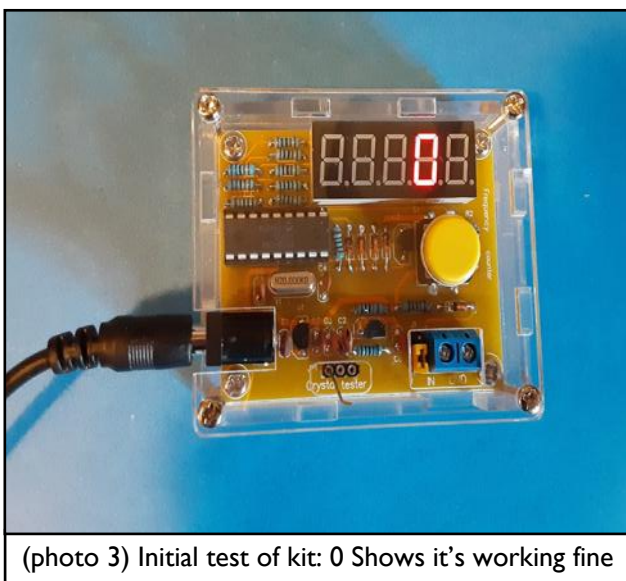
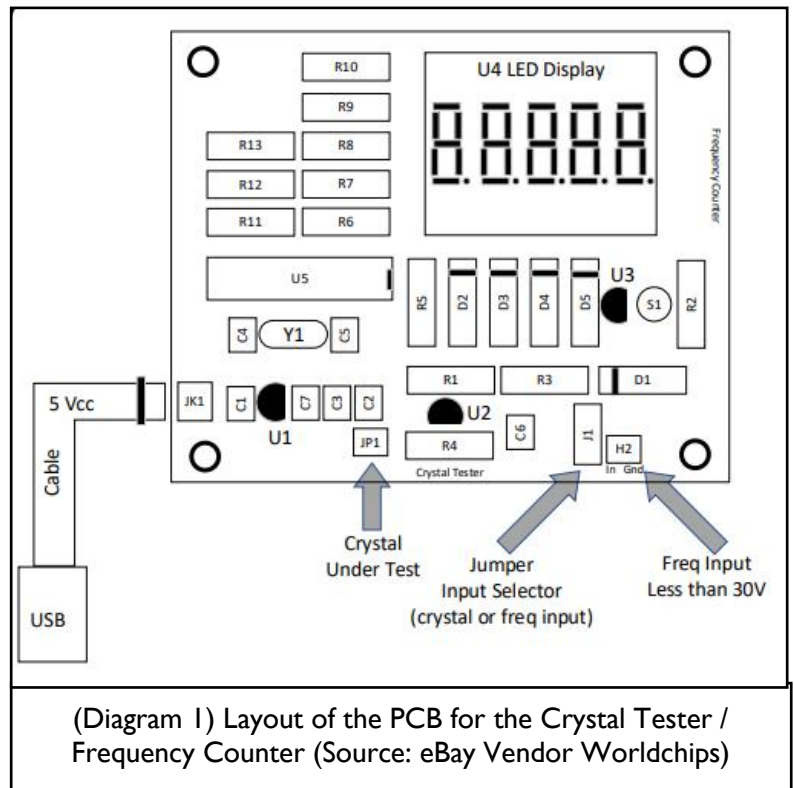
FREQUENCY COUNTER METER KIT

1 Hz-50MHz Crystal Oscillator Tester / Frequency Counter Meter Kit

After verifying that all the parts are available, the first step will be to solder all the resistors, diodes, capacitors, and the crystal to the PCB. The instructions suggest that these items should be soldered from the top of the board, and this is easier to do. Next, you'll solder the connectors, the switch, the LED Display, and the socket for the IC chip. The LED Display and socket, as well as the switch and connectors, are soldered from the underside of the PCB. As you finish soldering one group of components, it is a good idea to trim away the protruding leads.

When installing the IC chip, if you have not worked with these devices before, keep in mind that you should ground yourself to avoid damaging the chip with static electricity. You may have to adjust the IC Chip's pins slightly to ensure each set of pins fits into the socket properly. There are IC insertion tools available to buy, but you can install the chip manually if you work carefully, making sure that all the pins are seated into the correct individual sockets; also, note that the chip has a crescent-shaped cut in one end – that end with the crescent cut should be oriented so it is to the right side of the socket as you look at the PCB. Finally, when you are done, the chip should be firmly and completely settled into the socket.

The LED Display is oriented on the PCB by making sure that “dots”, which are at the bottom of the display, are matched to where they are marked on the circuit board. The leads from the LED display extend through to the back of the PCB, so that is where you should solder them. Again, when you have finished soldering, trim away the excess leads.



Continued on page 14

FREQUENCY COUNTER METER KIT

1Hz-50MHz Crystal Oscillator Tester / Frequency Counter Meter Kit

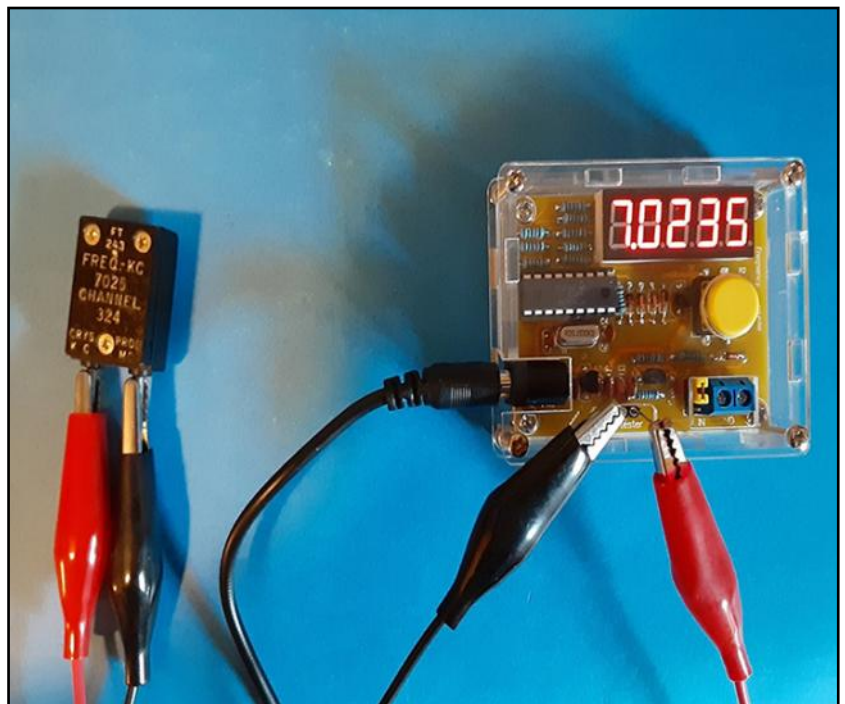
When all the components have been installed, you can do an initial test of the device by connecting power – if everything is working correctly, you will see a “0” on the LED Display. The unit comes with a USB 5v. D.C. power cord or you can connect 5-12v.D.C. power supply to the unit. There is a jumper that is used to switch between testing crystals and using the device as a frequency counter. I found that I needed to press the yellow button on the circuit board until the LED display read “Zero” before I could test a crystal.

Pins 1 and 3 of JP1 on the left side of the PCB. To use the Frequency Counter, input is connected to H2 on the right side of the PCB – the maximum signal input is 30v. I tested an FT243 crystal (using jumpers) and, with a signal generator, then checked the frequency counter (remember to change the jumper to do this function); both measurements were accurate and clearly visible on the LED Display.

To complete the project, you must install the PCB in the plastic case. After removing the protective paper covering on the plastic pieces, you’ll use the supplied screws and nuts to assemble the case. The plastic pieces in my kit fit very snugly, and only one side piece was slightly off.

In conclusion, this author has found that the inexpensive kit is easy to assemble in an evening and works as advertised, becoming a useful addition to the workbench.

Bill Cook, W1FMX



(photo 4) FT 243 Crystal Test: Shows it is 7.0235 rather than 7.025

STORE - https://www.ebay.com/usr/worldchips?_trksid=p2047675.m3561.l2559

ITEM - 223262822481

WANTED! SOMEONE FOR HYBRID MEETINGS

Somebody To Create A Hybrid Zoom/In-Person Meeting

Your Club Needs YOU to Record and Share Meetings via Zoom!

We need a HCRA member to volunteer to turn our in-person meetings into a Hybrid Zoom meeting!

This is necessary as some of our members who live too far away to drive to the Holyoke Hospital. A hybrid meeting will benefit any member that cannot make it to the meeting for any reason.

The meeting and guest speaker will need to be videoed and broadcasted via Zoom where a link will be sent out prior to each meeting via the Reflector so anyone wishing to can watch from home!

Besides broadcasting the meeting it will also be recorded for future viewing by the membership.

This is an easy but very important option for some of our members who have expressed a desire to be able to watch the meetings via Zoom.

Can YOU do this easy task? Please volunteer to help your club expand and grow with Hybrid meetings!

Please contact Larry, W1AST at w1ast@arrl.net if you can help with this task

NEAR-Fest

New England Amateur Radio Festival

NEAR-Fest XXXII

October 14 & 15, 2022

Deerfield, NH

NEAR-Fest is an international event run by and for all radio hobbyists and enthusiasts, including "hams". NEAR-Fest is held twice annually, spring and fall, rain or shine, at the Deerfield Fairgrounds in Deerfield, NH beginning on Friday at 0900 and ending Saturday at 1500 hours

More info can be found at the link below:

<https://near-fest.com/>



ITEM'S FOR SALE & WANTED

HCRA Members Items For Sale, Trade or Wanted

FOR SALE!

Malahit-DSP SDR receiver that covers 50 Khz to 2 Ghz (less cell phone freqs)

Receiver Details:

- ♦ Covers 50 Khz to 2 Ghz (less cell phone freqs)
- ♦ Long Life Internal Battery
- ♦ Touch Screen
- ♦ SMA adapter
- ♦ Head Phone Jack / Ear Phone Jack
- ♦ Internal Speaker
- ♦ Charges via USB Port

Barely used and is in excellent condition.

Asking \$195

Contact Larry, W1AST at hamop.w1ast@gmail.com

FREE Tower and Antennas (must take down)

From the estate of Norm, W1BMK (SK) for sale by his XYL, Betty.

FREE:

Tower and antennas must be removed, along with any accessories that may come with it. Exact details are unknown however the tower is believed to be a R-25. See photos on the next page. Tower is approximately 35ft tall.

Images on the next page so you can decide if this will work for you. It is not known exactly what the antennas are but one is a Mosley TA-33Jr. Tri-band, 3 element yagi and a 6 meter yagi beam as well as other antennas.

FOR SALE:

Rotor is a Yaesu 800 G-800DXA with controller and cable: Only \$325

Please see the photos on page 15.

Contact John, K1VOI k1voi_jp@charter.net

Continued on page 17

Do you have an item(s) that you would like to sell? Or something you are looking for?

If it's computer or ham radio related please list it here by emailing kd1ku@arrl.net

ITEM'S FOR SALE & WANTED

Cont'd

HCRA Members Items For Sale, Trade or Wanted

FOR SALE!

FREE Tower and Antennas

From the estate of Norm, W1BMK (SK) and offered by his XYL, Betty



Please contact John, K1VOI for any further info on these items

John, K1VOI
k1voi_jp@charter.net

Do you have an item(s) that you would like to sell? Or something you are looking for?
If it's computer or ham radio related list it here by emailing kd1ku@arrl.net

DX CODE OF CONDUCT

This is nothing new yet it is something we should all know & practice!



- 1) I will listen, and listen, and then listen again before calling
- 2) I will only call, if I can copy the DX station properly
- 3) I will not trust the DX cluster and will be sure of the DX station's call sign before calling
- 4) I will not interfere with the DX station nor anyone calling and will never tune up on the DX frequency or in the QSX slot
- 5) I will wait for the DX station to end a contact before I call
- 6) I will always send my full call sign
- 7) I will call and then listen for a reasonable interval. I will not call continuously
- 8) I will not transmit when the DX operator calls another call sign, not mine
- 9) I will not transmit when the DX operator queries a call sign not like mine
- 10) I will not transmit when the DX station requests geographic areas other than mine
- 11) When the DX operator calls me, I will not repeat my call unless I think he has copied it incorrectly
- 12) I will be thankful if and when I do make a contact
- 13) I will respect my fellow hams and conduct myself so as to earn their respect

Re-Published from <https://dx-code.com>

THE NEW HAM

What is a Fan Dipole Antenna?

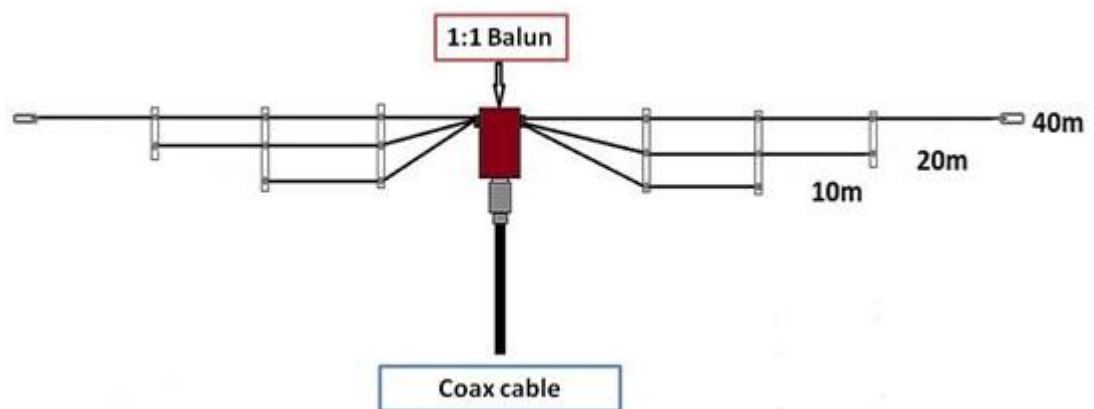
A dipole is the go-to antenna for many hams, but why is it so popular?

Because it's an inexpensive, yet effective antenna you can build yourself using wire, insulators and rope that you may already have in your junk box. Plus, you're not just limited to one band. You can enjoy the benefits of multiple dipoles on different frequencies, connected at a single point, and use only one feedline. These multiband antenna combos are commonly known as fan or parallel dipoles.

How it Works

The way in which HF multiband parallel/fan dipoles operate is each dipole presents a low impedance at the feed point on its resonant frequency. As the signal frequency moves away from the resonant frequency of one dipole, its impedance increases and it does not radiate power. But at the resonant frequency of another dipole, the impedance drops and it will take power at the feed point.

Each element will radiate as a resonant dipole on its own frequency, making this an easy way to provide multiband capability on a number of different HF bands. In the figure below, the first element is tuned for 40 meters, the second for 20 meters, and the third for 10 meters. You get three bands in the space occupied by a single-band antenna.



Multitasking With Dipoles

Making a fan/parallel dipole is a relatively easy way to create a resonant multiband antenna by building several individual dipoles. Cut the elements a little longer than estimated using the standard quarter-wave formula: $\text{Length} = 234/\text{MHz}$. Except for the longest dipole, the others need to be a few percent longer to resonate properly. This is likely due to the result of additional capacitance caused by coupling to the dipole elements running parallel.

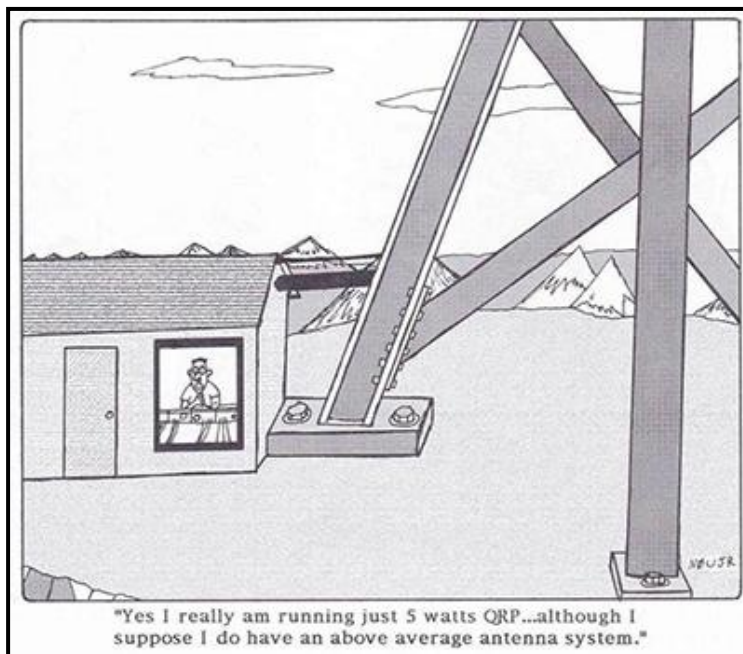
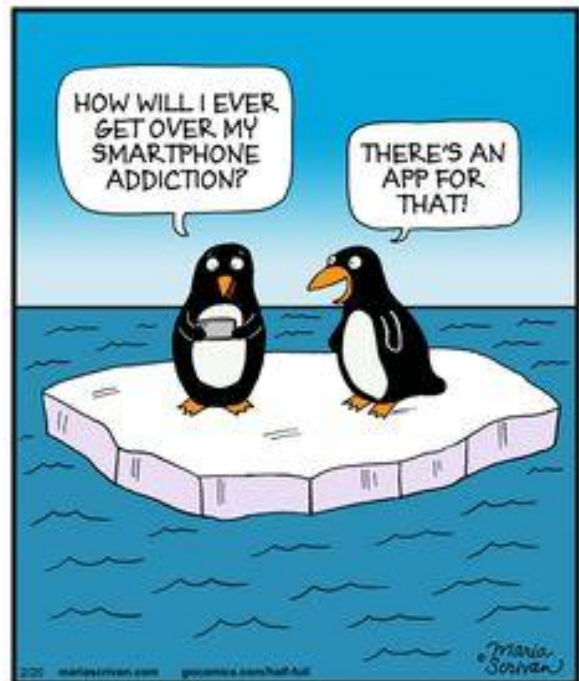
The next step is adding a center connector and creating a support system for the wires. Typically, small diameter PVC pipe ($\frac{1}{2}$ ") is used as a separator because it's easily available and can also be utilized for end insulators. For parallel dipoles, 5-6" should be sufficient separation between elements. However, more separation provides less interaction between elements and easier tuning.

Keep in mind that dipole elements do not have to be exactly parallel. Another strategy is to spread the elements out like spokes from a wheel. Tuning is done much like any other dipole. Elevation affects SWR, so hoist the antenna all the way up for measuring, then lower it to make any necessary adjustment. Adjust both sides equally.

The above short article was re-printed from DX Engineering's On All Bands. Read more below.

<https://www.onallbands.com/ham-radio-101-what-is-a-fan-dipole-antenna/>

For more articles like this checkout this link: <https://www.onallbands.com>



ARRL STUFF

By John, N1JIE

Things are happening in the world of Amateur Radio. ARRL is our advocate for Government, education, and organization. I hope everyone that is a member of HCRA is also a member of ARRL. To learn more about ARRL membership, and how it can benefit you, visit: <http://www.arrl.org/membership>

Well, with all the energy going onto the Big E demonstration, I wonder if there is anything left to tell about the ARRL... well, I'll start with our biggest hit of the Big E—the ISS contact. This is a youth activity, supported by the ARRL and many adults. What else do we have for youths?

Well, interestingly, youth is a big focus for ARRL, and hams in general. Everyone jokes that a YL is +6db, but I bet a kid on the air is +9db.

Did you know that ARRL will reimburse the \$35 FCC fee, as well as reduce the VEC fee to \$5 for new hams under 18? Well, today I learned! See the details at <http://www.arrl.org/youth-licensing-grant-program>. This is a new program this year.

Not necessarily for youth, but for teachers (who influence kids) is the Teachers Institute on Wireless Technology. ARRL has multiple sessions during each summer, expenses paid, professional development class open to motivated teachers. They cover communications, electronics, weather, etc. More information is at <http://www.arrl.org/teachers-institute-on-wireless-technology>. If you know a teacher that would be interested, please tell them about this!!



There are also “On The Air” events—Youth on the air contest, school club roundup, Jamboree on the air (with Scouting), Kid’s Day contest. Generally listed in the monthly Contest Calendar, keep an ear out on these contests, answer their CQ, and tell them how nice it is to have a QSO with them. Follow up with a card. Even if they are operating under the direction of a licensed ham, send the QSO card, and a note to have the ham pass it on.

ARRL Foundation Scholarships. These scholarships are provided by individuals and clubs in the form of an endowment to provide for a continuous future scholarship. This year (2022) 137 students received over \$900,000 in scholarships. This is up by over \$350,000 over last year. The largest scholarships (Amateur Radio Digital Communications—ARDC) range from \$5000 to \$25000 and are to multiple individuals. Other scholarships run from \$500—\$5000. For some of the scholarships, the recipient need not be traditional college age. Many of the individual scholarships have requirements set by the original donating group / family. This is a lot of money on the table for young hams heading off to college. More information can be found at <http://www.arrl.org/scholarship-program>.

ARRL Division and Section leadership for Youth and STEM—This is a closer to the ground effort—coordinating with local clubs to support youth and STEM (science, technology, engineering, mathematics) activities. The NE Div assistant director is Dan Norman N0HF—see his section page at <https://nediv.arrl.org/programs-initiatives/youth-and-stem-outreach/>

The goal to all of this is to bring new people into the hobby. I’m fairly new, but I started just before I turned 60. Hams have a (probably deserved) reputation as odd old men in the basement. We need to liven things up.

I’ll finish with a link to the ARRL CEO editorial in Feb 2022 QST—it’s not just about youth...

<http://www.arrl.org/files/file/QST/This%20Month%20in%20QST/2022/02%20Feb/2022-02%20EDITORIAL%20%202022.pdf>

Western Massachusetts Section News: <https://wma.arrl.org>

ARRL New England Division: <https://nediv.arrl.org>

ARRL Western Massachusetts Section Manager - Raymond P. Lajoie, AA1SE - aa1se@arrl.org

To learn more about an ARRL membership, and how it can help you - <http://www.arrl.org/membership>



Clublog update: Clublog can be accessed at <https://clublog.org/league.php> Signup is free, and there are a number of ways to lookup information. Give it a try, who knows... you just might like it!

This is the HCRA Clublog for 2022 - you can see who has been on the air hot and heavy so far this year!

HCRA Clublog Information Updated on September 29th 2022



Filter by club/continent:

HCRA - Hampden County Radio Association

Generate DXCC League

League for HCRA - Hampden County Radio Association

Rank	Callsign	160	80	60	40	30	20	17	15	12	10	6	DXCC ▼	Slots	Range
1	W1RM+1	33	68	0	138	45	168	83	182	80	124	28	237	949	59 yrs
2	NF1G	0	21	0	35	63	107	89	143	115	95	34	211	702	38 yrs
3	KK1W+1	38	55	0	73	21	121	35	115	16	51	26	206	551	46 yrs
4	KX1X	16	59	18	103	98	121	92	134	68	86	3	172	798	25 yrs
5	NE1C	4	59	0	82	0	95	0	101	0	54	0	127	395	20 yrs
6	W1AST+1	2	8	0	39	15	59	49	63	59	35	1	126	330	13 yrs
7	K1NZ+1	10	22	27	20	76	44	45	40	61	75	0	123	420	11 yrs
8	K1VOI	1	30	0	44	29	75	26	69	15	34	0	110	323	21 yrs
9	W1NU+2	0	16	11	10	20	54	43	53	37	57	2	109	303	7 yrs
10	N1TA+3	1	28	0	25	8	42	8	40	2	29	0	85	183	21 yrs
		160	80	60	40	30	20	17	15	12	10	6			
11	N1JIE	1	3	7	19	22	33	32	39	15	13	1	77	185	5 yrs
12	N1FTP	0	0	0	31	6	59	19	6	3	16	1	76	141	14 yrs
13	W1JA+1	1	6	3	3	26	0	17	7	5	29	7	68	104	53 yrs
14	W1PY+1	0	0	0	1	0	26	0	14	0	1	0	42	42	12 yrs
15	AB1XW+1	0	0	0	2	0	29	0	17	0	6	0	41	54	10 yrs
16	NT1K+2	0	8	0	12	0	19	0	10	0	7	0	38	56	12 yrs
17	WD1S	2	2	0	19	0	27	0	14	0	4	0	37	68	10 yrs
18	NV1Q+3	0	0	0	1	1	7	1	1	0	0	0	8	11	43 yrs

Do you know what Clublog is and what it can do for you?

If you have never used Clublog, need a refresher, or simply have the desire to learn as much as possible about Clublog or most anything else, go to the [HCRA YouTube Channel](#) and learn. All meetings are recorded and posted on hcra.org plus video links are listed in Zero Beat. The link to the April 2021 meeting where Clublog was the topic of our guest speaker is listed below.

<https://www.youtube.com/watch?v=qj2lKcQRNbE&t=1s>



HCRA STUFF

HCRA is an ARRL Special Service Club



Hybrid Meetings Needed!

The HCRA is in need of someone who can broadcast the video over Zoom and record the in-person meetings for future uploading to <http://www.hcra.org>. The purpose of having someone to do this is that this will allow some of our more distant members who cannot make the long drive to the meetings at the Holyoke Auxiliary room a way of participating in a live meetings. All that is needed is a laptop with a camera that can be aimed towards the guest speaker and club President, Larry, W1AST when he is speaking. If any of our members can get this done or are not sure what type of equipment it will take to accomplish this task. If you would like to learn more about this or have any questions please contact Larry, W1AST at the following email, w1ast@arrl.net

10 Meter Net Winter Schedule

The HCRA 10 meter net will return to its Winter schedule on Monday, September 5th, and every Monday evening afterwards at 7pm for the Fall / Winter months. Gary, KC1JZR is NCS. This is a great way for our newest HCRA members with a Tech license to get some time on HF. Everyone is welcome to join us on 28.375 USB regardless of affiliation. Have any questions? Contact kd1ku@arrl.net

Join Brown Baggers for Lunch

For the benefit of all HCRA members Brown Baggers is a friendly lunch get together that happens on the 1st and 3rd Wednesday of each month. It is held at [The Munich Haus Restaurant](#) in Chicopee Center at 12:00pm (Noon). Located at 13 Center St, Chicopee, MA. Across from City Hall or click the link above.

Enjoy lunch, conversation and camaraderie with your fellow hams. Everyone is welcome!

Memorial Page

All members now have the opportunity to honor club member SK's in the all new Memorial Page on hcra.org. This can be done by sending in the SK members name and callsign along with any text, stories and can also include photo's too. Send them to our webmaster, Vanessa, W1IRL at the following email address: webmaster@hcra.org

**Please check-out the HCRA You Tube Channel and while you're there don't forget to click subscribe!
I hope that many members are working on their short video's for the club's You Tube channel.
For more info see the April issue of Zero Beat. The You Tube Channel link is below**

For Sale Items

There is a For-Sale section that is for HCRA members. Any members who have a want, something to sell or even to trade.

Send item description and photo(s) to:
kd1ku@arrl.net

HCRA Social Media Links

You Tube: <https://www.youtube.com/HampdenCountyRA>

Facebook: <https://www.facebook.com/groups/HampdenCountyRA>

Twitter: <https://twitter.com/HampdenCountyRA>

Instagram: <https://www.instagram.com/hampdencountyra>

DOTS & DASHES

THINGS THAT DON'T FIT ANYPLACE ELSE!

Hurricane Watch Net

The Hurricane Watch Net and the operation of WX4NHC at the National Hurricane Center in Miami are manned entirely by volunteers. When activated, you will find us on 14.325 MHz (USB) by day and 7.268 MHz (LSB) by night. If either frequency is in use, we always ask permission to use them. It is our practice of being on the air ahead of the amateur radio station, WX4NHC. For more info go to <https://hwn.org>

Club Commission Program

One of the benefits of being an ARRL Affiliated Club is that you receive a commission for recruiting new ARRL members and securing timely ARRL membership renewals. The structure for this program has been updated, the process has changed to make things easier for the clubs. The complication of adjusting funds around credit cards, checks, and cash has been eliminated. ARRL is now responsible for all of the processing. Clubs receive \$15 for each new membership or lapsed membership, for renewing members, clubs will now receive \$5. For more info visit: <http://www.arrl.org/affiliated-club-benefits>

Contests and Special Event Stations

ARRL Contest Search - <http://www.arrl.org/contest-calendar>

Worked All Germany Contest | Oct 15th - 16th | CW & Phone | 3.5 - 28Mhz | 1300z - 2359z

For additional details visit: <https://events.darc.de/>

YLRL DX/NA YL Anniversary Contest | Oct 22-24 | Begins 1400z - 0200z | SSB/CW/Digital

For additional details visit: <https://ylrl.net/contests/>

Special Event Station Search - <http://www.arrl.org/special-event-stations>

Fire Prevention Week SES | Oct 9th - Oct 16th 2022 | Begin 0400z - end 2359z

For additional details and rules visit: <http://hamfire.com/>

Search for more Special Event Stations at: <http://www.arrl.org/special-event-stations>

HCRA Member Outgoing QSL Service

QSL's will be sent to the ARRL Outgoing QSL Bureau quarterly on the following approximate dates

April 15th, June 15th, Sept 15th, and **January 15th 2023**

Go to <http://www.hcra.org/dx-qsl/> for complete information

or

Contact Paul, NF1G at nf1g@arrl.net



Local Nets & Happenings

Sundays: 0845 Western MA. Emergency Net on 146.94, PL 127.3 W1TOM/R

Sundays: 0915 Western MA. Emergency Net on 443.200, PL 127.3 W1TOM/R

1st Monday:

RACES Drill, 1845, 146.49 Simplex

Mondays: 1900 7pm (Local) **HCRA 10 Meter Net 28.375** usb

New topic each week. Have an idea for a topic? kd1ku@arrrl.net

Tuesdays: 1930-2000: 146.94, PL 127.3 - W1TOM/R - Hampshire County Emergency Net

Wednesdays: 1930: MTARA Info net followed by the swap net & the N1RLX simplex net on 146.94, PL 127.3 W1TOM/R

2000: MTARA Swap net: 146.94, PL 127.3 - W1TOM/R

2000: MTARA (N1RLX) Simplex Net, Check-in's 146.94, PL 127.3, then goes to 146.42 Simplex Immediately following the swap net

2100: Weather Net (Roger, K1PAI), 1st Thursday of every month: 147.090 MHz, All other Thursdays: 147.000, PL 127.3 - W1TOM/R

Join or Renew Your ARRL Membership!

ARRL members enjoy:

- QST Magazine
- Members-Only Web Services
- Technical Information Service
- Member Discounts
- Outgoing QSL Service
- Continuing Education
- ARRL as an Advocate
- Regulatory Information Branch
- Public Relations for Amateur Radio
- ARRL Field Organization
- ARRL-sponsored contests
- Operating Awards
- Local Clubs
- Amateur Radio Emergency Service
- Hamfests and Conventions
- Volunteer Examiner Coordinator Program



Club Meetings and VE Sessions

1st Friday of the month at 7:30pm HCRA Meeting. In-Person meetings will begin on Sept.9th. Meetings start with a meet & greet session with other members at 7pm followed by the regular meeting at 7:30pm sharp.

<http://www.hcra.org/>

2nd Monday of the month 7:00pm, Franklin County Amateur Radio Club meeting. Virtual meetings via Zoom until it is safe to meet in person at the Greenfield Community College. <http://www.fcarc.org/>

Saturday before the FCARC meeting at 8am. Breakfast at Dennys Pantry in Greenfield (as Covid allows)

Event: FCARC Pioneer Valley Experimental Net

Location: 10 Meters 28.354 MHz

When: Every Wednesday morning, 9:00 am – 10:00 am

Organizer: Brad Councilman bc@councilman.com

Note: As things are opening up after the Covid Pandemic you should contact any meeting or VE session if you are planning to attend to be extra sure they are back on their normal schedule!

<http://www.arrrl.org/membership>

HCRA Contact List

President - Larry Krainson, W1AST
w1ast@arrrl.net

Vice-President - Ez Morales, W1AEZ
Edwin.Morales@me.com

Treasurer - George Collins, KC1V
hcra.kc1v@gmail.com

Secretary - Paul Kelliher, NF1G
nf1g@arrrl.net

Programs - Gary Thomas, AA1UE
aa1ue@amsat.org

Membership - John Plaster, K1VOI
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At Large - Bob Jeffway, WA1OJN
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Newsletter - Ken Dion, KD1KU
kd1ku@arrrl.net

Website - Vanessa Oquendo, W1IRL
webmaster@hcra.org

W1NY trustee, John, N1JIE
n1jie@arrrl.net

WB1Z trustee, Vanessa, W1IRL
webmaster@hcra.org



**Here is your exciting new
Issue of Zero Beat!**

**Plenty to Read Preparing for the
Anniversary Edition**

**Hampden County Radio Association
P.O. Box 562
Agawam, MA 01030-0562**