



ZERO BEAT

<http://hcra.org>

June 2016

Special points of interest:

- [Visit the HCRA facebook page.](#)
- Don't forget to check out hcra.org
- [Visit Summits on the Air](#)
- [Visit POTA413 facebook page](#)

June's Meeting

**Join us Friday June 3rd at 7:30, in the Holyoke Medical Center
Auxiliary Conference Center .**

2016/2017 HCRA Annual Meeting And Election of Officers

Don't forget

FIELD DAY 2016

June 24, 25, & 26, 2016
School Street Park
Agawam, Ma

HELP WANTED!

Come to the meeting Friday
night June 3rd



Radio Set, Go

Innovative QRP Radio Designs

AND

HCRA Field Day 2016



For directions to The Holyoke Medical Center Auxiliary Conference Center:

<http://www.hcra.org/meeting-location/>

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PROPOSED SLATE OF OFFICERS FOR 2016/2017

President -	Jeffrey Bail NT1K
Vice President -	Harold Woering N1FTP
Treasurer -	Juergen Malner NV1Q
Secretary -	Dave Fant WM1B
Membership -	John Plaster K1VOI
Technical -	Bob Meneguzzo K1YO
Program -	Larry Krainson W1AST
At Large -	Open
Zero Beat Editor -	Gary Fields WA1MOW

Thank you everyone that volunteered to fill a position! There still is an open slot for "At Large". If you would like help our club grow, we could use your help, fill the open slot, or let us know how we can be better. If you would like to fill a position let Jeff NT1K know.

NATIONAL PARKS ON THE AIR - HAM EXCHANGE

DAN VIERNO KB1VWQ



JFK National Historic Site
Brookline, Ma
NS41



Springfield Armory National Historic Site
Springfield, Ma
NS66

Dan Vierno, KB1VWQ and co-founder of POTA*413 of Western MA has arranged the first ever (we believe) "Ham Exchange" for the 2016 ARRL 100th year centennial for the National Parks On The Air Event. Since Dan has secured a (SUP) Special Use Permit for The Springfield Armory for the year long event, he has come up with a plan to conduct a ham exchange with KC1DKY, Nick Mollo of Wilmington, MA. Both Nick and Dan wanted to help fellow hams get involved with NPOTA, so they made a trade with each other. Nick who has a SUP for NS41 The John Fitzgerald Kennedy National Historic Site within Eastern MA is offering to trade an operators seat with POTA*413 for a chance to be able to work NPOTA from NS66 - The Springfield Armory located in our historic rich Springfield MA. Nick's operation will be first on May 28th, and since Danny could not attend... He wanted to send both KC1AEO, Rich Laviolette and HCRA President - NT1K, Jeff Bail. I am sure both Rich and Jeff will have a great time operating from this never before activated National Park for the centennial event and provide the club with many photos and stories. In return for the exchange, Danny and POTA*413 will welcome Nick into the June 12th activation from The Springfield Armory to work with his team on rotation.

Pictures from the activation of NS41 - John F. Kennedy National Historical Site
Saturday May 28th, 2016



Rob W1AFP Jeff NT1K



Nick KC1DKY Rich KC1AEO Rob W1AFP
Seated Jeff NT1K

MY EXPERIENCE WITH JT65

BY BOB LAFLEUR, NQ1C

I have been aware of the digital operating mode JT65 for a while now; it is not a new mode, having been created in 2003. I have not been familiar with the specifics of it though, except thinking of it as a “quirky” mode that requires precise transmit and receive timing, and of course I’ve heard the “musical tones” on the air. I never spent any time looking into exactly what would be required to operate it.

During my holiday vacation time, I had a spare afternoon with not much going on. People in the house were taking a nap so I could not operate on the radio using voice. On a whim I said to myself that I should look into what it takes to operate JT65. A few searches on Google showed me that it wouldn’t be hard to set up, so I decided to give it a try for a few hours. Once I got the software installed and configured, a few hours of operating turned into pretty much the rest of my vacation from work. Once you start operating JT65, a few hours, or even a whole day, can go by pretty quickly!

JT65 was developed in 2003 by Joe Taylor, W1JT, originally as a digital mode for use with EME (Earth-Moon-Earth) where signals can be very weak to almost non-existent. JT65 has since been adopted for use on the HF bands allowing for weak signal contacts. Supposedly JT65 can be used to make contacts where signal levels are at, or below the noise floor. However, transmission is very slow. Each station transmits during even or odd minutes and receives during the opposite minute. To transmit a message and receive a response takes two minutes, one to transmit, and one to receive the response. For the most part, message formats are very stringent, comprising of two call signs, and a signal report, “RRR” or “73”. Custom messages with a maximum of 13 characters in length can be sent, but you can imagine how limited a QSO would be with it taking two minutes to send, and then receive, 13 character messages.

Operating JT65 is similar to operating other digital modes. You need a computer, some software, and an interface between the computer audio and transceiver’s receive and transmit circuits. You can use a rig interface such as a “Rig Blaster” or other similar interface, or in the case of newer radios, a direct USB interface from the radio to the computer. My Yaesu FTDX-3000 has a USB port which provides both CAT radio and PTT control, and an audio interface on the same USB cable so this is what I chose to use. One requirement of JT65 is to make sure that your computer’s clock is synchronized within less than one second of standard time – this is so that the JT65 software will know to transmit exactly when the receiving station is ready to receive, and vice-versa. I am running Windows 7 so I installed a small program called NetTime which runs as a service and keeps the computer’s clock synchronized to standard time. For the JT65 software, there are basically two choices, Joe Taylor’s WSJT (and the newer variant, WSJT-X) and JT65-HF. WSJT will handle other modes that Joe Taylor has developed, and the newer WSJT-X can also report any stations you hear to the internet PSKReporter system so you can see where your signals are reaching. However, the JT65-HF focuses solely on JT65 for the HF bands, and has a much simpler interface. I chose to begin with JT65-HF. The download and installation only took a few minutes. In this article I will focus solely on the use of the JT65-HF software. WSJT offers mostly the same options but the details of how they function are slightly different.

Configuring the software is a little trickier, but still fairly simple compared to other software for digital mode use. The main things that you need to set up are the audio in and out, levels, and PTT control to your radio. You don’t need to get involved with CAT control for frequency queries, etc from the radio. I chose my radio’s USB audio devices in the setup screen, and I also set PTT control to use the RTS line on my radio’s virtual COM port, and I set my radio to utilize the RTS line for PTT control. Setting the levels can be tricky; I had a hard time because the audio output level from the FTDX-3000’s USB audio is very “hot” and you need to use a menu selection to change the level. I had to get the level down to a reasonable value and then use the computer’s “recording” audio control to fine-tune the level. The main goal is to get JT65-HF’s waterfall display to show mostly blue with yellow for signals or slight yellow dots for the noise floor. There are three areas where you have control – the radio’s output level (a menu on my radio, but might be a knob on an interface module), the “record” level on the computer’s sound mixer, and finally JT65-HF has a fine tuning input level slider. Remember that the receive levels in the software are actually the “microphone record” levels, and the software’s transmit level is the “speaker output” level. This is the opposite of your transceiver, and can sometimes be confusing to wrap your head around what you need to change and where. Setting the transmit level was easier, since you can use the computer’s “volume” control and the radio’s “mic level” control to adjust the output level, and you can use the radio’s “monitor” function to listen to the audio and make sure that it’s not distorted. I also set my levels to just the point where the ALC meter begins to deflect on transmit, and then back it off a hair.

Once I got my levels adjusted to the point where everything seemed good and the JT65-HF’s waterfall display showed a correct display, I was not decoding any signals, even though they appeared to be on the band (I could hear them on the radio’s speaker and I could see them in the JT65-HF’s waterfall display). It took me a little while to realize that when I put my radio into “data” mode, it defaulted to “Data LSB”. By convention, JT65 is run at “Data USB” on all bands. There is no technical reason why we couldn’t run JT65 in LSB, but we just don’t – we use USB on all bands. Once I rectified this, I was able to receive and decode signals.

JT-65 CONT.

The JT65 QSO is very specific. You call CQ, or answer a CQ, exchange signal reports, acknowledge, and say 73. Sometimes people will transmit a short message stating their power and antenna, however, with the long transmit and receive cycles and 13 character message length limit, you're not going to have a whole conversation with someone else. First, set your radio's VFO to one of the standard JT65 frequencies. Set other radio settings, such as antenna tuner, and I recommend turning AGC off. You may also wish to change other settings such as band pass to receive about 2Khz around the center dial frequency.

Standard JT65 Operating Frequencies	
Band	Frequency
160M	1.838 MHz
80M	3.576 MHz
40M	7.076 MHz
30M	10.139 MHz
20M	14.076 Mhz
17M	18.102 MHz
15M	21.076 MHz
12M	24.917 MHz
10M	28.076 MHz
6M	50.276 MHz

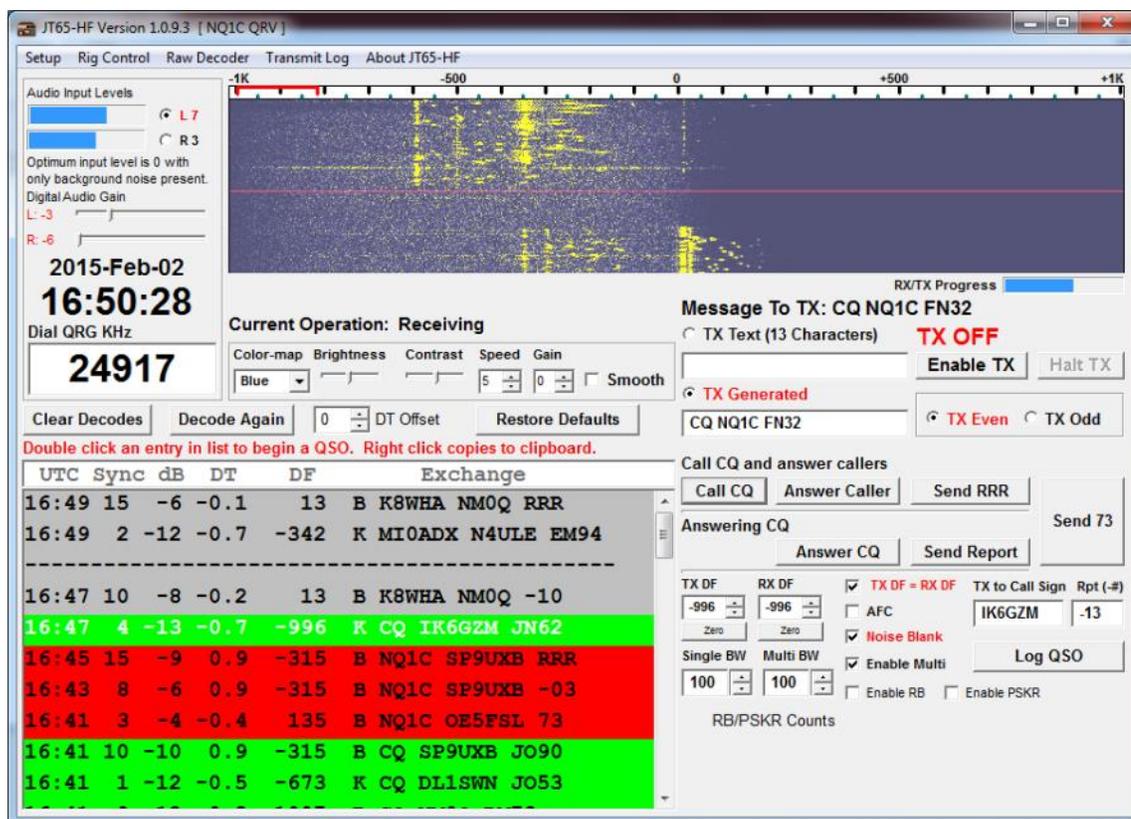
Once you set up your transceiver for the proper frequency, JT65-HF has a box where you can type that frequency in. You should do this immediately upon setting your radio so that you don't forget. This frequency will be used when you log your contacts. Enter the frequency in KHz, for example, if you are on 17M, you would enter 18102 into the box.

Multiple stations operate within the same dial frequency setting by offsetting their signal either a small number of Hz up or down (usually within 1 KHz of either side). You select your offset by clicking in JT65-HF's waterfall on an area that isn't being used, or by double-clicking on a station in the decode listing, which will match your offset to theirs. If you want to call CQ, choose a clear area, click on it, and click Call CQ and then click on Enable Transmit. You can also choose to transmit on even or odd minutes. At the appropriate time, your radio will key up and begin to transmit the CQ message. If you see a station calling CQ that you want to answer, double-click on that decode line and the software will prepare a response message and transmit it at the appropriate time. Once you get a response (either to your CQ, or to your response to someone's CQ), double-click the most recently received decode line from that station and the next message in the "QSO sequence" will be generated and sent. A QSO might look like this:

CQ NQ1C FN32
NQ1C JH1ABC PO97
JH1ABC NQ1C -15
NQ1C JH1ABC R-13
JH1ABC NQ1C RRR
NQ1C JH1ABC 73
JH1ABC NQ1C 73

JT-65 CONT.

The second call in each line is the call sign of the station transmitting. The first call is the station the message is for, or “CQ”. The 3rd part of each line is either the grid square of the station calling CQ or the station responding, a signal report, acknowledgement, or 73. In this example, NQ1C is in FN32, and JH1ABC is in PO97. The first signal report -15 shows that NQ1C is receiving JH1ABC at -15dB below the noise floor. The next report of R-13 shows that JH1ABC is receiving NQ1C at -13dB below the noise floor. The “R” before the signal report means that they acknowledge the received report. NQ1C then sends RRR to show that they have received the report from JH1ABC. Finally, stations optionally send 73, although often the 2nd 73 is never sent in an effort to make the contact faster. Also sometimes a variant of RRR is used in combination with 73 such as RR73, although this type of shorthand does not play well with the JT65-HF software. Once each station has sent and received a signal report, they can log the contact by pressing the “Log QSO” button. JT65-HF automatically adds all of the information (station call signs, date/time, and signal reports) to an ADIF format log file. The ADIF log files is stored in the “Application Data” directory, in the LocalJT65-HF folder. This location may vary based on your Windows version. As a rule, after each day of operating, I move the ADIF log file from that directory and store it in another location, renaming it with the date. Next time I log a contact in JT65-HF, it will create a new ADIF file. Doing this allows me to keep each day’s log, and I can easily upload these files to LoTW, eQSL, GlobalQSL, or any other log processing service that I want, or I can import them into other logging software.



Above is a sample screenshot from JT65-HF operating on 12M. The waterfall display is in the upper section of the screen. In the lower left corner is the decode area. Green lines are stations calling CQ, and red lines are decodes of an ongoing QSO with my station.

Operating JT65 takes quite a bit of time. I think of it as long periods of waiting and then a frantic few seconds where you need to make a decision. You transmit from seconds 0 through 47 of one minute, and then receive from seconds 0 through 47 of the next. At minute 48, the software will decode and display what was received in the previous 47 seconds. Often this decode process can take a few seconds itself. So you usually have ten seconds or less to decide on what to do – did the station you were calling respond? Did they respond with what you expected? Did you call CQ and get a response but maybe another station called CQ that you would rather respond to? Maybe you got multiple responses to one CQ? Lots of things can happen and you only have a few seconds to decide how to respond before your transmit cycle begins. Furthermore, it is tempting to do something else during the first minute and 47 seconds (your transmit, and then receive cycle) such as look something up on QRZ, or even do something unrelated to radio. That time can go fast, and before you know it, you’ve missed your window to make your response.

JT-65 CONT.

Something might happen just within those few seconds when you need to make a response. This makes operating JT65 boring, but also exciting! You have to do a lot of waiting but you can't go too far away from your operating.

There are some tricks to operating JT65. Remember that you transmit either on the even or odd minutes, and receive on the opposite minute. While you are transmitting, you cannot receive, so theoretically you can only "hear" half of the stations that are operating on the band. If you are calling CQ for a while, you might want to change from the even to the odd minutes, or vice-versa once in a while. You can also determine what stations are transmitting at the same time you are by looking at the first call in each decode line – these are the calls that the other stations you can hear are working. If you want to work a particular station, you might need to do a little planning to make sure that you are transmitting a CQ or call to them when they are receiving. When calling CQ, you should take care to set your signal in a position in the band pass (by clicking in the JT65-HF waterfall display) where you won't be right on top of another signal. It's not a bad idea to watch a few minutes in receive mode to make sure that both the even and odd minutes are clear. You should also note that when you are in a QSO, "Enable Multi" is cleared which means only messages for your specific station will be shown in the decodes. When you call CQ, "Enable Multi" is checked, which means all signals within the band pass will be decoded and displayed. Sometimes even when you are in a QSO you may want to see all signals decoded, so you can manually clear "Enable Multi" to make this happen.

Another interesting exercise you can do is to leave the radio on and the software running, and you can come back later to scroll through the decoded messages and check what types of stations are heard on the band at different times. You can see when a band opens and what the first stations heard are, or what time it closes and what the last stations heard are. You can also check the PSKReporter website to see where your transmissions have been received around the world.

After spending a few days making numerous JT65 contacts, I got the hang of operating and not even needing to hear the radio audio at all. The program is relatively easy to use, with minimal typing and mostly mouse clicks to operate. I spend a lot of time each day commuting to and from work on the train, and I thought it might be neat if I could utilize some of this time making contacts on JT65. I installed a product called Parallels Desktop on my shack computer which allows me to remotely access it from another computer, or from my tablet, connected to the internet. The tablet interface of Parallels Desktop is different than many other similar products because it focuses on one application at a time, rather than your whole Windows desktop. This makes it easier to control any given program. After some experimenting with this method, I was able to use my cell phone as a hot spot for my table, and use Parallels Desktop on the tablet to run JT65-HF and make contacts while on the train. I was also able to use the PCC-3000 companion software that simulates the FTDX-3000 front panel to change my radio settings, monitor the ALC, transmit power, etc. The public wi-fi on the train wasn't fast enough for Parallels Desktop to establish a reliable link to my shack computer. However, this does use my cell data allotment fairly quickly as the continuous waterfall update takes a fair amount of data. I used about 6GB of data with maybe 15 hours of operating. Also, I have to be aware of where the dead spots are on my commute route so that I'm not at a critical time where I'll need to make a quick operation when we're near the dead spot. JT65-HF does have a built in safeguard that if it transmits the same message more than 15 times, it will stop any more transmissions. This is good because if I were to lose my remote connection and not be able to get it back, the system would not transmit more than 15 cycles (30 minutes) of the same message and then halt.

It is said that JT65 can handle signals at or below the noise floor. Most of the time, if you tune to one of the standard JT65 frequencies, you will hear the familiar musical tones. However, there have been times, especially when a band is just opening or closing, when I've listened and could not hear anything, or just barely hear tones, but they are so weak that if they were CW, they would be impossible to copy. Yet I have been able to work stations under these conditions. This makes JT65 an ideal mode to use when a band is just opening or closing, and voice or CW would be impractical. I have been amazed at what the software can decode in the noise that my ears can barely even detect is there, if at all.

Another advantage of JT65 is that there are rarely pileups like there are on voice and CW. The JT65 user community seems small enough that at any given time there are enough stations to work, but not an over abundance of stations. On the other hand, after spending a little more than a month, I'm starting to notice many of the same stations are always there, so there's not a huge variety of stations to work. Yes, there are always new stations to work, but the JT65 user base probably isn't big enough yet where the very rare stations will show up on this mode often. You will still probably need to resort to voice or CW to chase the rare DX. In a little more than a month I have made over 375 contacts and worked 32 DXCC entities on JT65 utilizing bands 80M-10M; I haven't heard any stations on 160M, and only a few CQ's on 6M. The 30M JT65 frequency seems to be shared with other digital modes so contacts there are more difficult than some of the other bands.

All in all, operating JT65 has been a fun and rewarding, if not time consuming experience.

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CPR**

1

Call 911

2

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the center of the chest.**

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BOXBORO!

2016

September 9, 10, & 11

The ARRL New England Division Convention
at the Holiday Inn, Boxborough

For ham radio operators or those interested in learning more about Ham Radio!



PURCHASE TICKETS ONLINE AT WWW.BOXBORO.ORG

at participating retailers, or at the door

DXCC CARD CHECKING ▪ LICENSE CLASS ▪ HAM RADIO (VE) EXAMS
Free to paid Attendees: Screening of the Movie "Frequency" on Friday Night

Admission \$15.00 per person, Flea market \$10.00 per space. Tickets valid all days.
Friday DX Dinner \$40. Saturday Banquet is \$40.
"Whole Convention" package – Admission + both Banquets \$90
Special discounts for groups that want to reserve a table at the banquet or DX dinner.

Ample free parking is available outside the flea market.

The Holiday Inn Boxborough, MA is located on Route 111 just off I-495 at Exit 28.
Full details and maps are available on the official 2016 Boxboro! Web Site www.boxboro.org

HAMPDEN COUNTY RADIO ASSOCIATION

ZERO BEAT NEWSLETTER MEMBER PROFILE

This month's Member Profile is Jason Panda Phillips KC1BTA.

Jason is a 2016 graduate of Northampton High School, and will be attending Westfield State University, majoring in Movement Science- Sports Medicine.

Jason is also an Eagle Scout, earning a whopping 130 Merit Badges!

1) **Name:** Jason Panda Phillips

2) **Town:** Westfield, Ma

3) **Callsign:** KC1BTA

4) **Previous Callsigns:** None

5) **License Class:** General

6) **Main station equipment:** Kenwood 440S, G5RV Jr,
HF6V Butternut Vertical

7) **Favorite Band(s):** 10, 20, & 40 Meters

8) **Favorite Mode(s):** SSB & PSK31

9) **Year you were first licensed and license class:** 2014 Technician

10) **How did you become interested in amateur radio?** I became interested from J.O.T.A (Jamboree On The Air) out in Cape Cod with the Boy Scouts of America.

11) **What are some of your favorite aspects of the hobby?** Talking to people from all over the world.

12) **What is your most memorable experience in the hobby?** Meeting my Elmer's, Dan KB1VWQ, Chris NU1O, and Dave N1MFL, when they came over for an antenna party. As well as the great memories at P.O.T.A. activations.

13) **If different from the above question, what was your most memorable contact on the radio?** When I contacted Australia on 10 Meters with only 100 watts.

14) **What do you feel ham radio operators must do to help ensure the future of the hobby?** We must get younger folks into the hobby, doing more events out in the communities, especially operations at Scout Camps.



FROM THE SHACK

JEFFERY BAIL NT1K



Field Day is just around the corner. Please support your club and either volunteer to help out with setup and operations or just stop by and say hello. This year we are bringing back FOOD!!! Thanks to Alan Dove (AB1XW), he volunteered to help with cooking food. We will have Hot Dogs and Hamburgers available with some snacks. Please stop by and enjoy some food.

Speaking of Field Day, that's when we normally roll out with our annual raffle. Some HCRA members went to Dayton OH the other weekend for the Hamvention and kept their eyes open for potential raffle items. Elecraft released the KX2 which is a smaller, almost HT size HF rig. The price is very attractive. Kenwood will soon be releasing a brand new HT. It will feature APRS, GPS and D-STAR. We will still need details and price. There is also the Icom-7300. It's an excellent new HF base station that uses a direct conversion receiver. There has been many spectacular reviews. However the price is on the high side at around \$1500. Since any of these items will be purchased for over \$500, The directors will present this at the next general meeting on June 3rd.

The June meeting will also be elections. All positions are open. If you feel you can represent HCRA and help out with local amateur radio, please show interest and the directors will help you out. Don't worry, we're all not stepping down. We feel that we should give anyone that wants to help a chance.

Please note that there will not be any meetings this July or August as it will be our summer break. Please use that time to get on the air and make some contacts. The 2016-2017 season is looking promising. We have excellent guest speakers lined up, more "Share the knowledge" classes and possibly another license class in the fall.

Finally, I would like to thank Dan Vierno (KB1VWQ) and Rich Laviolette (KC1AEO). I had the honor to be invited to help activate the John Fitzgerald Kennedy National Historic Site (NS41) for the first time. Even though I resisted at first, I just had to do it. I was a bit worried at first but it turned into a very excellent day. Operating conditions were rough due to being in an urban environment but we all managed to make at least 10 contacts. I would also like to thank Nick (KC1DKY) and Robert (W1APF) who were the ones who helped make it happen by organizing with NPS.

Reason I brought this up is because we've had many people stop by and were asking about what we were doing and our setup. We even got a couple spectators to get on the air and say hello. It's an excellent promotion tool for amateur radio. I ask that you help support National Parks On The Air by either activating or even chasing activators on the air.

FOR SALE:

If you have a piece of Ham Radio equipment to sell, send photo and details by the 20th of the month, to walmow@arrl.net. All submissions will be screened for appropriateness, and content. The decision to publish is at the discretion of the ZB Editor



Kenwood "Gold Label" TS-830 with external VFO-230, and external SP-230 Speaker. Includes MC-50 desk Mike and spare set 6146B finals. All narrow CW filters installed. Prefer to sell as complete package.



Kenwood TL-922A 1KW Amplifier not modified for 10 meters, but do have the instructions, and operators manual. Wired for 220volts



Kenwood TS-940sat with MC-85 desk mike. Includes original boxes and manuals.

Reasonable prices.....Contact Paul Kelliher NF1G paulkelliher@comcast.net

DOTS & DASHES: Things I can't think where to put, but are interesting.

SHARE THE KNOWLEDGE : HCRA'S CONTESTING CLASS

Matt W1MSW and Jeff NT1K will be hosting the HCRA's version of "Contesting College" this Fall. If your new to Amateur Radio, or want to get started in contesting, this "Share the Knowledge" session is for you. Stay tuned for details.

9/11 NPOTA ACTIVATION AT THE SPRINGFIELD ARMORY

Dan KB1VWQ is a looking ahead and trying find 1st responders to work with him to make the Sept 11th activation at the armory a sort of POTA*413/NPOTA 1st responders day at the Springfield Armory. Looking for Police, Fire, and EMS amateur radios operators to be on the air to help commemorate this tragic day. Operator's on LoTW can use their OWN callsign .. Operators NOT on LoTW will be using MY callsign to accommodate the NPOTA chasers. Contact Dan via email KB1VWQ@arrl.net if interested.

Editorial Comment: I myself plan on attending, to represent both LEO, and EMS. If you are a 1st Responder, please join us for this special day to honor not only the hero's lost on 9/11, but the hero's who 1st respond everyday!

FREE TO A GOOD HOME

Rich NL7FJ has free to a good home, a Extra class license manual, 10th Edition, with CD available for whomever wants it at no charge . Contact Rich at spacman91@hotmail.com if interested.

INTERESTING HAM RADIO WEB SITES:

Did you ever drive by a radio tower and wonder who uses it, or what is on it? Here is a website that list almost 2 million towers across the U.S. It give the information on who owns it, and who's on it. It also gives information for antennas not on towers. It only lists towers and antennas that are registered.

www.antennasearch.com

AREA SWAPFESTS:

No area summer flea markets/HamFests

CONTESTING:

JUNE'S CONTESTS:

Jun 4	Alabama QSO Party	www.alabamagsoparty.org	CW,Ph
11	ARRL June VHF Contest	www.arrl.org/june-vhf	CW, Ph, Dig
18	West Virginia QSO Party	www.qsl.net/w/wvsarc	CW, Ph, Dig
	ARRL Kids Day Contest	www.arrl.org/kids-day	CW, Ph, Dig
25/26	ARRL Field Day	www.arrl.org/field-day	CW, Ph, Dig

JULY'S CONTESTS:

July 1/6	13 Colonies Event	www.13colonies.info	CW,Ph, Dig
1	RAC Canada Day Contest	www.rac.ca	CW, Ph, Dig
4	10-10 Inter. Spirit of '76 QSO Party	www.ten-ten.org	10 Meter SSB Only
16	No. American RTTY QSO Party	www.ncjweb.com	Dig

AUGUST'S CONTESTS:

Aug 6	10-10 Inter. SSB Summer Contest	www.ten-ten.org	10 Meter SSB
	No. American CW QSO Party	www.ncjweb.com	CW
13	Maryland/DC QSO Party	www.mdcqsoparty.w3vpr.org	CW, Ph, Dig
20	No. American SSB QSO Party	www.ncjweb.com	SSB
27	Hawaii QSO Party	www.hiqsoparty.org	CW, Ph, Dig

Local happenings

Sundays: 0845: Western Mass Emergency Net 146.94, PL 127.3 - W1TOM/R

First Monday: Southwick Regional RACES Drill, 1845, 146.49 Simplex

Mondays: 1930: HCRA 10m Net 28.375

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

Wednesdays: 1930: MTARA Info net 146.94, PL 127.3 - W1TOM/R - includes NTS Net

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

2000: MTARA Simplex Net - starts on 146.94 - PL 127.3, then goes to 146.42 direct (simplex) Usually starts immediately following the swap net.

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

Fridays: 1200: BB's (Brown Baggers Luncheon)
Munich House
13 Center Street
Chicopee, MA 01013

Join the ARRL or renew your membership!

ARRL members enjoy:

- QST Magazine
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- Member Discounts
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- 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



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

Club meetings & VE sessions

1st Friday of the month 7:30 PM, HCRA Club Meeting, Holyoke Hospital Auxiliary Conference Center, 575 Beech St. Holyoke MA 01040 (no meetings held in July or August.)
<http://www.hcra.org/meeting-location/>

3rd Friday of the month 7:30 PM, MTARA Club meeting, Red Cross building, [150 Brookdale Dr. Springfield, Mass.](#) (no meetings held in July or August)

4th Friday of the month 6:00 PM, Technician, General, and Extra Class License Exams, Holyoke Hospital Auxiliary Conference Center, 575 Beech Street, Holyoke, Mass. Hosted by the Western Mass VE Team (WMVET). Contact: David Cote, w1fab@arrl.net

Third Monday of the month 7:00 PM, Franklin County Amateur Radio Club meeting, Greenfield High School (no meetings held in July or August) <http://www.fcarc.org/>

4th Monday of February, May, August, November 7:00 PM, FCARC VE Exams, Unitarian Church, Main Street, Northfield <http://www.fcarc.org/>

HCRA contact list

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Field Day 2016
School Street Park
Agawam, Ma**

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