



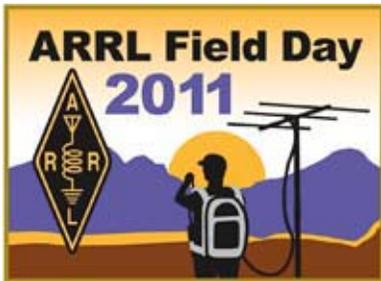
PCARA Update



Volume 12, Issue 7 Peekskill / Cortlandt Amateur Radio Association Inc. July 2011

Field strength

Another Field Day is in the books! Our “keep it simple” theme



seemed to work well since there were no major issues all weekend (except for the report of coyotes). Thanks to all those who stopped by to operate! When the total score is

calculated, I believe it will be in the top five high scores for PCARA Field Days.

The *PCARA Update* received the 2010 Hudson

Division Newsletter of the Year Award! The Update had been chosen as Hudson Division Newsletter of the Month Award three times in 2010! *PCARA Update* Editor Malcolm, NM9J will receive his award at the Hudson Division Awards Luncheon on November 13, 2011 in Paramus, NJ. Please join with me in congratulating Malcolm for a



Life imitating art: Nathan AB2ZU, Joe WA2MCR and Greg KB2CQE raise the 6 meter antenna at PCARA's ninth Field Day.

much deserved honor!

A Thank You to all the members who have sent in their annual membership renewals in response to the notices sent out previously! We are now in much better shape to meet expenses, especially our annual liability insurance premium. If you haven't had a chance to send in your renewal, there's still time.



Remember that there are no monthly meetings for July and August, so **enjoy your summer!** Our next regularly scheduled meeting is at 3:00 pm on September 11, 2011 at Hudson Valley Hospital Center in Cortlandt Manor, NY. I look forward to seeing each of you there.

- 73 de Greg, KB2CQE

PCARA Officers

President:

Greg Appleyard, KB2CQE, kb2cqe at arrl.net

Vice President:

Joe Calabrese, WA2MCR; wa2mcr at arrl.net

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Net night

Peekskill/Cortlandt Amateur Radio Association holds a weekly net on the 146.67 MHz W2NYW repeater on Thursdays at 8:00 p.m. Join net control Karl, N2KZ for neighborly news and technical topics.

Adventures in DXing

- N2KZ

Imagine a perfect radio. It can receive all your local AM and FM stations with perfect clarity, even all the low-powered ones that you can only hear in some places. You can take it anywhere you would like to go and it is always static-free in perfect stereo. Good enough? Add access to every city and town in the world including all the shortwave stations you knew as a kid. Finally, throw in a nice variety of scanner feeds and other nifty finds. No antenna needed! Impossible? Not anymore! Welcome to the world of 3G radio!

My wife recently upgraded to a Motorola Droid2 Global cell phone with 3G capability. She loved it right from the start. From the very first day, she was downloading all sorts of new applications to provide miraculous information and entertainment. A few days later, it occurred to me that there might be an application to stream radio stations through it. After a little research and trial and error, I discovered TuneIn and a new world began.

People have been enjoying Internet radio via WiFi for years. TuneIn, combined with a cellular phone service Internet delivery system, creates a new experience that is



hard to beat. It provides a single portal to thousands

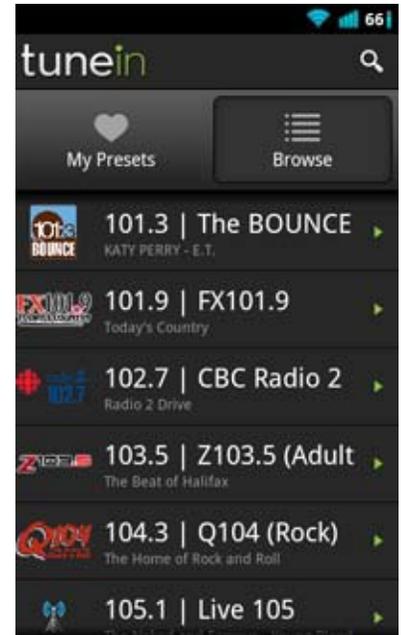
of radio stations, around the world, all available with a couple of swipes of your fingers. Now you can enjoy Internet radio everywhere. Suddenly and unexpectedly, every radio I've ever owned became obsolete.

I connected the Droid phone to my car's AUX jack and took a drive. Here I was, in broad daylight, listening to WJR in Detroit in full stereo. There was no picket-fencing or fade outs. It was solid as a rock. I decided to push the limits and listen to the live stream of Radio Australia. No problem! I drove into difficult terrain and through rocky valleys known for eating RF signals. I drove under long bridges and into steel and concrete parking garages. Nothing killed the signal.

Scratching my head for a while, it occurred to me why these feeds were so resilient to attacks. The Droid phone has a phenomenal error correction scheme. Obviously, there was a lot of processing going on inside. Comparing a live traditional over-the-air feed of WCBS-AM to the version delivered by TuneIn revealed a time lag of about a minute and ten seconds long. Some feeds are even later in arrival. What you eventually hear has been received from nearby cell sites, stored briefly and then played back when it has been reconstructed. Although you may sometimes lose a

cellular phone call, the Droid phone's bucket-brigade data error correction scheme has enough memory to dispel all but the longest lapses in data reception. It is very hard to beat.

The one thing that will end your fun is the complete lack of cellular coverage. Last weekend, we drove through the wilds of the Adirondack Mountains in upstate New York. In deep-woods areas like this, cellular-delivered radio will not work. If you are anywhere near civilization, you will be ready to go. Make sure you have a 12 volt connection



TuneIn Radio app on Droid phone

cord for your phone or PDA. Using a phone as a full-time radio eats up a lot of power. I found the Motorola cell phone will only last a little more than an hour without external power via a cigarette lighter plug cord.

Another variable is having a stream to play. Believe it or not, some radio stations still do not stream on the Internet or prohibit distribution in certain areas. Others wrestle with technical issues such as not being compatible with common methods of delivery. For example, WFAS-FM White Plains requires the Microsoft Silverlight plug-in to receive their stream. This is very Android unfriendly and eliminates it from being listed on TuneIn.

What you hear is often determined by your current IP address. Here in New York, certain feeds of the BBC and U.K. local radio stations are unavailable due to copyright restrictions. When I recently visited Montreal, all CBS-owned radio stations were blocked out due to my location. Nearly every other American station was still available. TuneIn knew where I was! I touched the 'local stations' tab and I had a full roster of Quebec stations to choose from.

If a station is not listed on TuneIn, you may be able to stream it in by going directly to the station's direct web site. TuneIn is incredibly handy and comprehensive, but it is not altogether necessary to hear feeds. It simply makes surfing so much easier. No cell phone? TuneIn is not just for Android and Apple iPhones. TuneIn is also free for PC and Mac computers. Anyone can start right now by visiting <http://tunein.com/>

Pictures Too!

As amazing as non-stop portable Internet radio can be, I wanted more! I decided to push the limits by attempting mobile video streaming. I couldn't stop shaking my head in amazement. I went to the site of the Canadian network CTV and tried watching their stream of a CTV newscast. Granted, this is a lower resolution stream but the quality was excellent.



CTV newscast streaming on Android phone

Pushing a little farther, I then went to the video streams of RTE in Ireland. I called up an HD recording of 'Saturday Night with Miriam' and saw it immediately in crisp 16:9 perspective. The images were quite sharp and the sound was flawless stereo. I can only imagine what a 4G cell phone might be capable of!

The implications of 3G cellular delivery of Internet radio and TV are profound. You can see and hear nearly everything anywhere you go! Suddenly, all stations can become international broadcasters. You



"Saturday Night with Miriam" from RTE on cellphone

no longer need to be a licensed entity to be a broadcaster. If your stream is on the Internet, you have complete parity with 'the big boys.' Firms representing the legacy broadcasting establishment, such as The National Association of Broadcasters and iBiquity (purveyor of the HD Radio multicasting scheme,) need to re-group and reconsider their place in the world. It will be interesting to see if they make a last in-vain stab at retaining their dominance. Does satellite radio now have any purpose? Why listen to traditional

radio, with endless commercials and clutter, when there are thousands of new choices to enjoy?

Local content remains a curious issue. As we have seen in the past couple of decades, big conglomerate radio groups like Clear Channel, Citadel and Infinity have realized that nationwide broadcasts are much more cost-effective than dozens of local stations doing their own thing. They have done everything in their power to eliminate local content in a quest to increase profits. Along with local newspapers failing to stay in business, local radio is becoming harder and harder to find. No one is providing local content, so no one is listening to local content! Emergency notification needs to be moved to address cellular phones directly instead of reliance on the outdated radio-delivered EAS system! Broadcasting alerts is pointless if no one hears them.

It is becoming harder to earn a profit with over-the-air radio. The trend of selling unprofitable stations to religious and ethnic groups shows no signs of slowing down. I can only wonder if today's radio streamers will ever be able to revive the local appeal once held by mom and pop AM radio in the 50s, 60s and 70s. Will we all disappear into our own private little Pandora streams? Time will tell! One thing is for sure: We have come a very long way since the advent of the AM transistor radios of our childhood! Cellular-



Radio Shack Flavoradio alongside Motorola Droid 2 mobile phone running TuneIn Radio app.

delivered Internet radio and TV is a fascinating and exciting look towards the future. Isn't technology amazing?

On the Road

I recently visited Montreal, Quebec on business. It was very interesting to see and hear so much media *en Français*. Being a couple of hundred miles farther north, sunset came even later in the day with dusk ending around 10:30 pm. Reception of my favorite AM stations was quite good from my third floor hotel

room outside the big city. I could hear most 50 kilowatt stations from New York City with very good clarity. WCBS-AM sounded stronger in Montreal than my home QTH at night! WJR Detroit and WBZ Boston were easy catches.

Two local stations dominated AM with English broadcasts: 800 CJAD with a full service 'news/talk' format and 990 CKGM 'The Team' featuring 24 hour a day sports. My TV sound band found some utility. Canada will not switch



to digital TV until this August, so all local TV stations are still broadcasting with



analog transmitters within the grasp of my Sony Walkman radio. I found CBC TV on Channel 6 and CTV on Channel 12 both in English. SRC, the CBC's French TV network appears on Channel 2 and TVA, also in French, occupies Channel 10. This may be the last time I ever hear analog TV sound over-the-air!

There is an active amateur radio community, as well. My good friend Luc, VA2KSH, introduced me to his local ham club *Radio Amateur du Quebec*. They operate several VHF/UHF repeaters with the nifty callsign VE2RIO.

I also had a day trip to the Adirondack Mountains, northwest of Albany, New York. Here, there was a magnificent lack of radio broadcasting going on. My destination was Long Lake where you could put your car radio on scan and not catch a single station on either AM or FM! What a great place to DX! I now understand why General Electric first designed their classic GE Superadio AM/FM portable radio for GE executives vacationing up there. You need a lot of horsepower to bring in Schenectady superpower WGY 810 especially in the daytime! For decades, WGY was the cornerstone station owned by General Electric. Still at 50,000 watts omni-directional, it is now operated by Clear Channel Communications.

Enjoy the summer and enjoy amateur radio! Remember to check the PCARA Facebook page for the very latest in ham radio news! The Old Goats Net continues every Thursday at 8 pm on the PCARA repeater at 146.67 MHz. See you in September!

73 de N2KZ Karl 'The Old Goat'



Field Day 2011

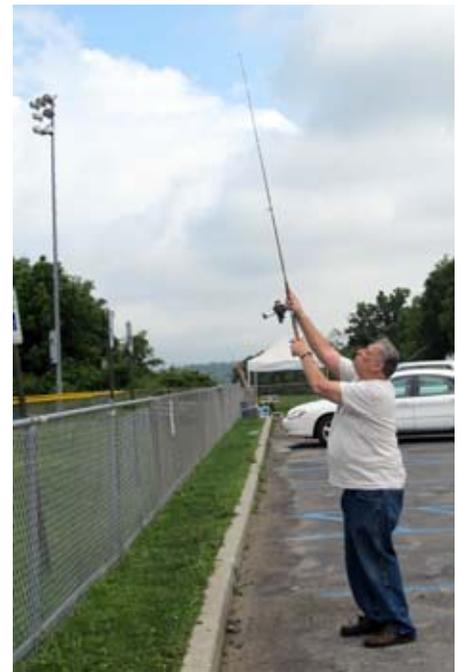
Last time PCARA held a Field Day, operation was hard work. Back in 2009, on our third visit to Walter Panas High School, high temperatures, low antennas and even lower sunspots worked against us. Then in 2010, the availability of several Field Day stalwarts was in doubt and the whole operation was postponed to the following year.

As Field Day 2011 rolled around, a good deal of planning was undertaken by Joe, WA2MCR and Greg KB2CQE. Greg issued a presidential order that we should "keep it simple" and led the way with a slimline gasoline generator, purchased specially for Field Day.

On Saturday morning, June 25 Greg, Malcolm and Bob N2CBH arrived at Joe's house to load Field Day supplies onto Bob's truck. There was less heavy metal to lift than in past years since Joe was not taking the TH3Jr triband beam this time.

Arriving at Walter Panas High School, the two tents were pulled up in order to provide shelter from possible bad weather ahead. Next on the agenda was antenna erection, where Joe used his fishing pole method to launch a tennis ball over our antenna supports — lighting towers and tall trees. We pulled up the G5RV and 40 meter multiband dipole that had worked well in previous years. These wire antennas were significantly higher than in 2009.

Two more antennas had to be arranged. Bob connected an experimental "Musco Special" which consisted of a bottom-fed light pole with wire radials laid on the ground, while Greg assembled a 3-element Yagi for 6 meters, rotated by the Armstrong method.



Joe WA2MCR demonstrates his expert casting technique to loft an antenna support over a light tower.

Equipment problems overcome

With the stations assembled, Greg fired up his “Chicago” 800 watt generator. Results with Joe’s TS-530 transceiver were mixed. It seemed the little power house could provide enough juice for one HF station, but it would need a switch-mode power supply to cope with the voltage variation. When we added further stations plus computers, ‘Chicago’ was overburdened. So the NM9J Coleman



Ultra-compact Chicago 800 watt portable generator from Harbor Freight was tried out on Field Day.

generator was substituted, and ran for the rest of the weekend. With the TS-530 retired, Joe had to move his Icom IC-7000 transceiver from the 6 meter station to the “blue” HF tent, while Greg brought along his Icom IC-706 MkIIg to fill the VHF gap. The second HF station used another IC-706MkIIg from NM9J.

Operations began at 2:00 p.m. Saturday with the bands reasonably active. One point noted immediately by the “white tent” was that computer logging was misbehaving. We were using the N3FJP Field Day logging software once again

(<http://www.n3fjp.com>). Each computer was connected to the local area network, sharing a common database on Joe’s PC. First thoughts were that the Linksys



The FD logging software suffered problems after this Linksys NR041 router overheated and continuously reset itself.

router was being overloaded by RF, but it was later clear that the unit was resetting itself at more and more frequent intervals. This was exasperating for Nathan AB2ZU and Lovji N2CKD as they had to exit from the logging program and restart it every time they lost connection to the database. The problem was fixed by rearranging network connections to bypass the balky router.

Operating fun

Over in the blue tent, Joe had arranged a visit from Dan NT2I, with sons Elliot KC2ZAB and Nicholas. Both youngsters had a great time operating on the HF bands and earned additional points for youth participation. While the two HF stations made good use of the horizontal wire antennas, Joe reported that the 50 foot

“Musco Special” light tower vertical also gave excellent results on 80, 40 and 20 meters.

The additional VHF station which is allowed as part of our “2A” operation was having a particularly good time with band openings on 6 meters throughout Saturday and some of Sunday. Many contacts were made with the mid-west and south, as well as one VE3.



Nathan AB2ZU operates during Saturday’s band opening on 6 meters.

As night fell, some of the daytime operators left for a few hours of sleep, and several old friends — Jim N2KLC, Jerry WA2ZOA and Gerry WA2GF — came along to keep Bob company. We also had a visit from a group of youngsters who reported — rather disturbingly — that there were coyotes nearby. The youngsters were followed in turn by two NY State Troopers who were also concerned about the coyote report.

Joe and Greg kept the stations running overnight and fortunately, not one of them was dragged off from



Despite a warning that coyotes were nearby, Joe WA2MCR operated the HF station throughout the night.

Field Day 2011 by a pack of wild coyotes. Your editor returned to the site early on Sunday morning to find both of them fully intact and wrapped up against the cold.

As operations continued on Sunday, the higher HF bands seemed in far better shape than previous years, with plenty of stations to work on 20, 15 and 10 meters. In order to avoid interference from three stations running in close proximity, it was helpful to include the Array Solutions bandpass filters in-line. Three filters were purchased for 20, 40 and 80 meters at the bottom of the solar cycle. The lack of filters for 10 and 15 meters may have to be corrected next year.



Youth participation — Dan NT2I supervises junior op Nicholas during a good run at the HF station.

All over

Before long, it was 2:00 p.m. Sunday, ARRL Field Day 2011 was over and it was time for tear down. Bob, N2CBH was unavailable but fortunately he had persuaded XYL Diane KB2SFV to bring the truck for carrying the heavier items back to Joe's location. By 4:00 p.m. the site was clear and the grounds of Walter Panas HS had returned to normal use.

With the "keep it simple" approach advocated by KB2CQE, we did not have as many bonus points as in previous years, but operating was fun and the score was encouraging. Here is a summary of the claimed score, alongside results from previous years.

Peekskill/Cortlandt ARA, W2NYW

	2001	2002	2003	2004	2005	2007	2008	2009	2011
QSOs:	450	718	733	968	853	1019	1109	694	879
Power	2 (<150W)								
Partcpts:	16	15	11	12	10	14	10	10	14
Tot scor:	1,540	2,096	2,328	2,996	2,798	2,906	3,460	2,746	2,602

A big thank you to everyone who contributed to PCARA's Field Day score! Let's look forward to more sunspots and even more points next time. - NM9J

Essential₂ News

In celebration of the PCARA Update's recent Hudson Division award, we take a look at newsletters of the past.

Editing and producing amateur radio newsletters is something I've been involved in for quite a while. Let's take a look at some of the more interesting techniques.

Back at college in England, I produced a newsletter for the Cambridge University Wireless Society. In those days before Xerox machines, this involved typing out all the content on a manual typewriter with a special sheet of Gestetner stencil paper. This multi-layered assembly had a thin wax coating that was displaced by the typewriter's typebar. For the sharpest impression you moved the typewriter's fabric ribbon out of the way and struck the stencil directly with the metal type.

Cutting that stencil required a lot of care. The wax-coated sheet was quite delicate. Strike a closed-letter key such as the "o" or the "e" too hard and you could punch a hole right through the stencil. If you made a mistake, there was no "delete" function to rectify the error. Instead, the incorrect characters had to be brushed over with special correction fluid. The fluid was left to dry before retyping the correct letters through the fresh coating. This process was only good for one correction — if there were too many mistakes, the best thing to do was throw the whole stencil away and start afresh.

Once the stencil was complete, it was time to walk over to the Student Union building, where there was a rotary duplicator (mimeograph) in the basement. The stencil's wax paper layer had to be separated from the backing paper, turned over and clamped onto the drum of the duplicator. Ink was squeezed from the drum, through the cut parts of the stencil master onto sheets of paper which were picked up by the rotary mechanism and ejected into a tray. This was a messy, hands-on process, and I usually returned from the Union with a box of duplicated paper and ink-covered fingers.

I never did become an "ink stained wretch" (aka professional newspaper writer), but I suppose some of that duplicator ink must have entered my blood, and turned me



Gestetner stencil rolled into a typewriter



Gestetner duplicator

into a “journalist *manqué*”.

To put stencil duplicator technology into its historical perspective, David Gestetner was a Hungarian inventor who devised the stencil method in Vienna after having to produce multiple copies by hand. He moved to London and in 1881 established the Gestetner Cyclograph Company to manufacture the stylus, stencils and ink rollers needed for his duplicating process. Business took off after the typewriter became popular in the early twentieth century, and the Gestetner stencil was produced for insertion into a standard typewriter. This allowed short runs of duplicated material that could not justify being typeset by a professional printer. The technique remained popular for schools and ‘fanzine’ newsletters until photocopiers and word-processing equipment arrived in the 1970s and 1980s. The Gestetner Company grew until it was acquired by Japanese office equipment company Ricoh in 1996. Rotary duplicators are still encountered in third world countries where they can provide low-cost paper copies without computers or electrical power.

Moving on into the 1970s, my next assignment was editing the newsletter of Southport’s local RAYNET Emergency Radio Group. By this stage I had moved on to an old Remington electric typewriter. Unlike the manual variety, pressing a key on an electric typewriter does not operate the typebar directly. Instead, an electric motor drives the entire mechanism — pressing a key causes power from the electric motor to be directed through a moving belt to actuate the desired type bar and strike the paper with consistent force. This design also reduces the tendency for the typebars to jam when too many keys are pressed together. Photocopier technology was also advancing, and I was able to make use of a copier at work to produce copies on coated paper.

Fast forward to the mid 1980s, when I became editor of Bury Radio Society’s newsletter. By now I had an IBM PC clone manufactured by local defense contractor Ferranti, complete with twin floppy disks and WordStar software. This move away from mechanical typewriters to word processing was a great advance for all writers and editors, allowing the correction of mistakes with minimal effort. No more stencil masters, carbon paper, or correction fluid. Hurrah for automation! The only manual steps were the addition of article headlines with a pen stencil and mounting of photographs onto the final printed page.

But how to produce that printed page? My first home computer was equipped with an early dot matrix printer, but this was definitely inadequate for newsletter production. I acquired a Juki daisy wheel printer, which produced high quality copy onto standard typing paper using a rotating type wheel. This plastic wheel



Plastic daisy wheel for Qume-compatible printers.

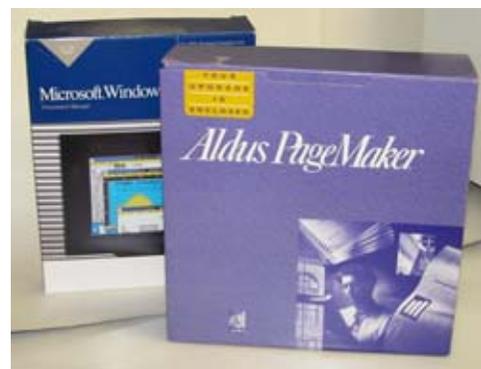
looked rather like a flower, with the individual characters molded onto each end of the “petals”. If you wanted to

change typeface, then the first daisywheel had to be removed and replaced with another one. Daisy wheel printers were rather slow and noisy, but they did produce excellent results, especially with a carbon ribbon.

By 1985, Xerographic copying had become common, and the BRS newsletter “Feedback” was produced from my daisy wheel masters on a modern plain-paper photocopying machine at the club’s permanent home in Bury.



In 1986, I made the big move from northwest England to the Chicago suburbs with several colleagues from the chemical company that I still work for. Once again, I was tapped to become newsletter editor, this time for the Bolingbrook Amateur Radio Society. I was still using word processing software on an IBM PC clone, but I was able to move up from MS-DOS with Multimate and WordPerfect to an early copy of Microsoft Windows and Aldus Pagemaker for “WYSIWYG” page composition. I went from daisywheel printing to a 24-pin dot matrix printer, but the big breakthrough came when the price of laser printing dropped. I purchased an HP LaserJet IIP for less than \$1,000 and never looked back. Proportional spacing, multiple fonts, and scanned photographs could all be printed out at 300 dots per inch on plain paper. This was



perfect for handing over to the radio club’s resident printer, who worked for a large copier company.

We jump forward another decade to 2001 when I took over the reins of PCARA’s newsletter from our first editor Joe, KR2V. Joe produced the newsletter by computer, but was still photocopying pages and distributing through the U.S. Postal Service. With growing use of e-mail by club members, it became practical to circulate the newsletter electronically. The first issue that I edited — December 2001 — was also the first produced as an Adobe PDF. Most copies were distributed electronically, with only a handful sent by snail-mail. Use of the PDF format gave another leap forward since it allowed color text and photographs as well as rapid distribution. These days you can read the newsletter on your computer, print it on a color printer or you can view it on your favorite e-reader. - Malcolm, G3VNQ, NM9J

Peekskill / Cortlandt Amateur Radio Association

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Newsletter contributions are always very welcome!

Archive: <http://home.computer.net/~pcara/newslett.htm>

PCARA Information

PCARA is a **Non-Profit Community Service**

Organization. PCARA meetings take place the first Sunday of each month* at 3:00 p.m. in Dining Room B of the Hudson Valley Hospital Center, Route 202, Cortlandt Manor, NY 10567. Drive round behind the main hospital building and enter from the rear (look for the oxygen tanks). Talk-in is available on the 146.67 repeater. *Apart from holidays.

PCARA Repeaters

W2NYW: 146.67 MHz -0.6, PL 156.7Hz

KB2CQE: 449.925MHz -5.0, PL 179.9Hz

N2CBH: 448.725MHz -5.0, PL 107.2Hz

PCARA Calendar

July - August: Summer break

Sun Sept 11: PCARA monthly meeting, Hudson Valley Hospital Center, 3:00 p.m.

Hamfests

Sun July 10: Sussex County ARC Hamfest, Sussex County Fairgrounds, 37 Plains Road, Augusta, NJ.

Sun Aug 14: Tri-State Amateur Radio Assn Hamfest, Matamoras Airport Park, Matamoras, PA. 8:00 a.m.

Sat Aug 20: Ramapo Mntn ARC Hamfest, new locn Camp Veritans, 225 Pompton Rd, Haledon NJ. 8:00 am

Sun Sept 11: Candlewood ARA Hamfest, Edmond Town Hall, 45 Main St (Rt 6), Newtown CT. 8:30 a.m.

VE Test Sessions

July 3: Yonkers ARC, Yonkers PD, Grassy Sprain Rd, Yonkers, NY. 8:30 a.m. Contact Daniel Calabrese, 914 667-0587.

July 14: WECA, Westchester Co Fire Trg Center, 4 Dana Rd., Valhalla, NY. 7:00 p.m. Contact Stanley Rothman, 914 831-3258.

July 15: Orange County ARC, Munger Cottage, 183 Main St, Riverlight Park, Cornwall NY. 6:00 p.m. Contact Thomas R. Ray, (845) 391-3620

July 18: Columbia Univ VE Team, 2960 Broadway, 115 Havemeyer Hall, New York NY. 6:30 p.m. Contact Alan Crosswell, (212) 854-3754.



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