



PCARA Update



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Hunting for signals



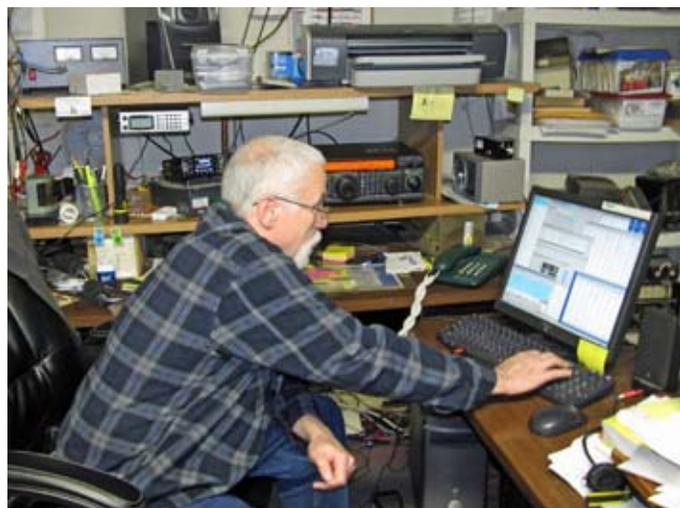
On Saturday May 12, 2012 a favorite PCARA event will be returning. Please clear your calendars for that date because another famous PCARA Foxhunt is in the works! As in years past we will meet at the Beach Shopping Center, hunt the Fox, and then retire to a local watering hole to recount and critique the day's adventures.

So dust off those Yagis, maps, and compasses! Further details will be provided at the March meeting.

Antenna circus



Lovji, N2CKD (right) energizes his 4-element quad on 2 meters while Bob N2CBH (left) measures the signal strength around the antenna at the February meeting.



Greg, KB2CQE operating from Joe, WA2MCR's station during the CQ WPX RTTY Contest on February 11.

Our next regularly scheduled meeting will be Sunday March 4, 2012 at 3:00 pm at Hudson Valley Hospital Center in Cortlandt Manor, NY. I look forward to seeing each of you there.

- 73 de Greg, KB2CQE

PCARA Officers

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Greg Appleyard, KB2CQE, kb2cq 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.

Adventures in DXing

- N2KZ

Seeing CMK

Have you ever dreamed of seeing The Emerald City? Nearly everyone has seen *The Wizard of Oz*. After a long and trying journey, your eyes are blessed with a prize. In the distance, you'll witness an apparition with all its splendor and glow. Are these dreams only for girls from Kansas carrying



little dogs? No, it can happen to radio nerds, too!

Fortunate am I to have the radio equivalent of an Emerald City right in my back yard! Only a few minutes away from my QTH, on unassuming Waccabuc River Lane, sits a VOR/DME known as CMK. Let me translate: It is a Federal Aviation Agency navigation beacon operating on avionics Channel 113X 116.6 MHz. Pilots refer to it as 'Carmel' although it really is in South Salem. Tune in with a simple hobbyist scanner and you'll hear slow Morse Code spelling out **C M K** along with a low-modulated advisory concerning weather, visibility and airport conditions especially pertaining to nearby Westchester (White Plains) Airport known as HPN.

VOR/DME? Nothing is more confusing than an unfamiliar acronym! VOR is **VHF Omnidirectional Range**. It's a very clever system that compares a reference carrier to another carrier that is slightly out of phase with this reference that is proportional to your position from the beacon. The phase relationship varies precisely with where you stand. Using this system you know exactly how you relate to this beacon and how on-course you may or may not be with your destination. DME is **Distance Measuring Equipment**, adding another aspect to your positioning by calculating your distance and relative slope from the beacon. Got it?

Beyond these technicalities is the design and architecture of these beacons. Don't they resemble an alien spacecraft or other odd vehicle just landed on Earth? The round part of the beacon houses the VOR system consisting of multiple radials fanning out from the center, like horizontal spokes, above ground. The DME portion is seen as a softly-shaped white vertical spike rising from the middle of it all. Simply put: It looks very intriguing and very unusual! Just what is that thing?

Adding to its mystery, The Federal Aviation Agency has gone to great lengths to keep these bea-



Typical VOR/DME installation. This one is at Pole Hill (POL), north of Manchester, England, photographed by the Editor in 1984. VOR technology is over 50 years old, but still in worldwide use for air-navigation, despite some inroads by GPS.

cons out of view. Wander up Waccabuc River Lane and you'll see that this public road turns into a private one as you head up the hill. Make brave and continue into this private territory and you'll finally discover an odd fenced-in right-of-way going up a hill to a plateau completely out of sight. A rusty warning sign gives you a sole clue: 'Federal Aviation Administration property - KEEP OUT.' So close and yet so far!



*FAA Aeronautical Chart shows location of VOR/DME beacon **CMK**, along with the frequency 116.6 MHz and dots and dashes of the Ident.*

Tall trees and low brush line the beacon's property and no other road comes near it. CMK's territory is absolutely land-locked. No road shall pass! No sight lines can see it (unless you just happen to live in the

house next door!) It is tucked away and safe, just as the FAA would want it. CMK (and dozens of similar beacons nationwide) are part of a vital network of navigation tools used as guiding references for all kinds of air traffic. Every caution needs to be taken to keep it on the air. The FAA's design and location planning has certainly met this challenge!

After making several attempts to take even the slightest peek at CMK, I remained crestfallen, discouraged and frustrated. Never did I ever think I would see it 'for real.' The closest views to reality are available on-line. Several sources captured blurry satellite pictures of CMK from above. Recently, a clean and crisp birds-eye-view image was released on-line by Pictometry International Corporation based in Rochester, New York. CMK now can be seen with depth and dimension like never before! Still, an electronic snapshot is only a dream and not a reality.



*Aerial photo of VOR/DME **CMK***

One recent morning remarkable visions appeared for the first time. It was about 10:30 am, beautiful and bright, with the winter's sun blazing at a low angle. I was driving, high up in the captain's chair of my Toyota mini-van, returning from a visit to the Pound Ridge Library. Heading northbound on NY 124 Salem Road, right after the intersection with Boutonville Road, I came around a turn and something brilliant and white caught my eye. Could it be? I made a U-turn and came back pulling off the road just past an access path to adjacent Ward Pound Ridge Reservation. It wasn't a specter or ghost. It really was CMK!

I could only wonder. Did the October 29th Halloween blizzard take down enough trees and branches to make it visible? Was I just at the right place at the right time? Lord knows, I have been up and down that road many, many times - but not very

often at this time of day, especially northbound. There it was, off in the distance, just like a spaceship at rest and as clear as day: CMK!

I returned the next day to try to capture the site on camera. Unfortunately, the vision is tiny to the eye. From a distance of about a mile or more away, there wasn't too much to photograph. All that can be seen is a little white point in a very blurry image. My next



Aeronautical beacon CMK glimpsed at a distance by Karl.

challenge is to travel the trails of Ward Pound Ridge Reservation County Park and see what I can see facing north. Maybe I can find a place to get a closer view! Now that I know where to look, I notice it whenever I come up Route 124 in bright daylight. A radio nerd's quest fulfilled! I have seen the elusive CMK!

New TV in New York

Yet another new virtual digital channel has begun broadcasting from Manhattan. Riding on the carrier of WCBS-DT, on over-the-air RF Channel 33, comes the latest entry to a growing roster of stations. It's called 'CBS NY +' and features recycled clips from WCBS' local newscasts and lots and lots of commercials. Always remember that television is a business. If there is a way to sell more advertising, go for it!

The on-air presentation is busy and cluttered. Motion video clips are pushed back to the upper left of the 16x9 palette. The right side of the screen carries still graphic tabs that chronicle today's events. Adding to the m el e is a quick-moving lower fifth crawl of more news fact one-liners. I find it very hard to watch for any length of time. The content is very repetitive. CBS NY + has not yet been formally announced. You'll find no sign of it on the CBS local web site <http://newyork.cbslocal.com/>. Maybe this content is just a test before they launch the real thing!

It all began back in November with a CBS press release announcing a new channel would be launched

before the end of 2011. In mid-December, a blank channel was noticed using virtual channel 2.2. The only clue to its identity was its metadata stating: "CBSNY+ News, Weather, Traffic and Sports." This lasted just a day or two then disappeared. Mid-January brought back the mysterious new channel but this time with a bouncing little blue box. CBS Engineering was testing the affect of the new channel's use of bandwidth compared to its main HDTV 2.1 channel. CBS has always held the highest quality picture standards for its HDTV presentation. They showed great caution adding this new secondary feed.

The little bouncing blue box test was shut off after just a brief test.



Distorted widescreen WCBS-DT virtual channel 2.2 "CBSNY+" as captured by Karl.

A couple of weeks ago, Channel 2.2 once again reappeared this time with full 16x9 color bars and a little white box moving in the center of it all. Finally, around 6 pm on Tuesday, February 21, CBS NY + was put on the air. Now we'll have to see how the channel develops!

Another new network is about to appear to over-



the-air viewers. You'll soon be seeing Bounce TV on WWOR-TV's virtual channel 9.3. Bounce offers a variety of new and retro programming aimed

at Afro-Americans. It's already on the air via New Haven's WTNH-TV on their virtual channel 8.2. Sample Bounce and you'll see current shows like Judge Hatchett and re-runs of Soul Train. It's simply amazing how many programming choices can be jam-packed into the new world of digital television!

Until next month, 73 and dit dit from N2KZ 'The Old Goat.'



Forgotten foxes



At the February PCARA meeting, there was agreement to revive the PCARA Foxhunt in 2012. One of the first questions asked was — whose turn is it to play the Fox? (You should find out at the end of this article.)

It's been four years since the last foxhunt, longer than most people thought. For members and friends who have not attended a PCARA

Foxhunt before, the first team to find the fox traditionally takes on the role of fox for the next occasion.

Let's look back at some noteworthy events from PCARA's foxhunting past.

First hunt - May 2003

PCARA's first fox hunt was a bit of an adventure as most members had not participated in this type of event before. I had based the rules on successful hunts organized by my last radio club in the UK, Bury Radio Society. Karl N2KZ publicized the event, so we had participants who turned up with all sorts of interesting antennas.

Hunters gathered at the "The Beach" shopping center to take a first bearing. The rules state that after the first transmission, the fox will go into a 10 minute cycle of 3 minutes on air, followed by 7 minutes off.



Karl, N2KZ homes in on the fox at the Panas Tennis Courts, during PCARA's first foxhunt in May 2003.

This gives hunters a chance to stop, take a bearing, then drive to the next parking spot and take another bearing. Although bending the rules slightly by not being at “The Beach” at start time, Karl N2KZ was first to find the fox. NM9J was hiding by the Panas Tennis Courts at Walter Panas High School, on Croton Avenue in Cortlandt Manor. Nowadays, members are more familiar with this location as our Field Day site. Close behind Karl in second place were Ray W2CH and Marylyn, followed by Mike N2HTT in third place.

Starting another tradition, participants met up after the event for a meal at a nearby Diner. They shared experiences, compared strategies and saw the winners presented with a framed certificate.



A flock of PCARA's first foxhunters display their directional antennas outside the New City Diner.

A short mention about equipment — although a conventional Yagi antenna was used by first place hunter N2KZ, this foxhunt was the first time we had also seen DF antennas based on steel tape measure elements — as used by N2HTT and others. Construction details by Joe, WB2HOL are available at this web page: http://theleggios.net/wb2hol/projects/rdf/tape_bm.htm – and in the latest ARRL Antenna Book.

Second event - Sept 2003

PCARA's second foxhunt was scheduled for a few months later, with previous winner Karl, N2KZ taking over the role of fox. The hunters set off from the Beach Shopping Center in an easterly direction, but were soon confused. The signal strength seemed to be changing from one transmission to the next, and on one scheduled transmission there was no signal at all. When Karl's signal returned, the signal strength was varying during the transmission — what was going on?

Karl was hiding in his wife's Toyota minivan, in the car park behind the United Artists Cineplex at Cortland Town Center. He was using a hand-held four-element Yagi antenna, which he pointed in different directions from one transmission to the next — and even panned around during one transmission. After each 3 minute transmit period, Karl would get back inside the van, so there was no external antenna

visible. One transmission was actually from inside the van.



Hunters seeking the second fox in Sept 2003. L to R Marylyn KC2NKU, Clint KB2ZRJ, Ray W2CH and Greg KB2CQE.

Hunters looking for a visible antenna with a steady signal (including your Editor) were thoroughly misled and it took over an hour for Mike N2EAB and Bob, N2CBH to finally track down this cunning fox, using radiation from the 439.695 MHz harmonic close-in, instead of the 146.565 MHz fundamental. Well done, Mike and Bob!



Mike N2EAB and Bob N2CBH approach the minivan containing PCARA's second fox, Karl N2KZ.

Third hunt, June 2004

Hunt number three took place in June the following year. Mike N2EAB and Bob N2CBH were the foxy team. They reported that several hunters drove straight past them, including the NM9J/WA2MCR team, Kevin N2KZE, followed by Karl N2KZ. The fox was alongside the AC Moore building at Staples Plaza

on Route 202, using a horizontally polarized whip antenna. The two foxes were sliding down in their seats whenever a hunter came by and managed to stay hidden, out of sight. By the end of the hunt *nobody* had located the cunning foxes.

Fourth event, Oct 2004

Mike N2EAB and Bob N2CBH made a return appearance as foxes for our fourth hunt in late 2004. Bob and Mike took turns with transmissions from their mystery location, which they had chosen to be a little easier than their previous hiding hole. First to track



Wires, KC2FYY uses a tape-measure Yagi during a previous PCARA Foxhunt.

down the foxes was the team of Marylyn KC2NKU and Ray W2CH. They did not have to go far to the Town of Cortlandt Community Center on Westbrook Drive. Mike and Bob had parked near the skate park,

and this time they stayed in view when the hunters approached.

Full list

Here is a list of all the PCARA foxhunts to-date. Were you a fox or a hunter at any of these?

No. - Date	Fox	First finder	Location
1 - 5/10/03	NM9J	Karl, N2KZ	Panas Tennis Courts
2 - 9/21/03	N2KZ	N2EAB, N2CBH	Cortlandt TC
3 - 6/6/04	N2EAB	"Nobody"	Staples Plaza
4 - 10/16/04	N2EAB	W2CH, KC2NKU	ToC Community Cntr
5 - 6/4/05	W2CH	N2EAB, W2JJG	Treetops, Lexington Ave
6 - 10/15/05	W2JJG	Malcolm, NM9J	Lents Cove, Buchanan
7 - 5/6/06	NM9J	Karl, N2KZ	Chiusa Ln, Cortlandt Rg
8 - 10/7/06	N2KZ	NM9J, WA2MCR	Beach Shopping Center
9 - 5/20/07	NM9J	Wires KC2FYY	Hudson Highlands G Pk
10 - 11/10/07	KC2LLC	"Nobody"	Lakeland Ave
11 - 5/10/08	NM9J	N2EAB, WA2MCR	Woodcrest, Jacobs Hill

A brief mention of some of the highlights of these later events. On Foxhunt number 8, Karl N2KZ con-

fused everyone again by selecting a location that was *in sight* of the hunters' starting point at The Beach Shopping Center. Most people set out away from the Beach, then had to turn around and drive back again. For this hunt, Karl mentioned people visible at the starting line and was reading from a script that described

Southport and its miles of golden sand — hint-hint.

Foxhunt number 10 in November 2007 was unusual for a couple of reasons. Our previous winner Wires, KC2FYY was away at his college studies,



Sharon, KC2LLC demonstrates the equipment and stance that kept the hunters at bay in November 2007.

so Sharon KC2LLC was deputizing as fox. Instead of the usual 3 minutes on - 7 minutes off transmitting cycle, Wires had left behind an automated CW beacon that was keyed for one minute on, followed by two minutes off. This disturbed the rhythm for the hunters and nobody found the fox in her lair overlooking the



Winners of the eleventh PCARA foxhunt were Mike N2EAB and Joe WA2MCR.

Cortlandt Town Center — though several people came close.

PCARA's most recent foxhunt took place in May 2008 — almost four years ago. Your editor decided not to make things too difficult, and chose a location close to the Beach Shopping Center. As with hunt

number 7 at Chiusa Lane on the new Cortlandt Ridge development, I chose a location on a new street that would probably not appear on paper maps. The fox was tucked away on Jacobs Hill Road by the (then new) Woodcrest development. First to find the fox were Mike N2EAB with Joe, WA2MCR. They were closely followed by Marylyn KC2NKU and Ray W2CH.

If you would like to read further details of these famous foxhunts from PCARA's past, take a look at the articles in archive editions of the *PCARA Update* available on the Internet. I would recommend the following issues: Jun 2003, Oct 2003, July 2004, Nov 2004, July 2005, Nov 2005, Nov 2006, Jun 2006, Jun 2007, Dec 2007, Jun 2008.

- NM9J

Special Event

The QSY Society Amateur Radio Club will be hosting a Special Event at the Samuel F. B. Morse Estate (Locust Grove) in Poughkeepsie, NY on Saturday April 14th from 8:30 am to 1:30 pm Eastern. This Special Event is a celebration of the invention of Morse Code by Samuel Morse around 1832.

Radio Amateurs who have a confirmed CW contact with the QSY Society's Special Event Station K2QS in Poughkeepsie, NY on the frequencies

7.034 and 14.034 Mhz will be able to obtain a Certificate and QSL Card to commemorate the occasion. These can be obtained by contacting David Ruth at 48 Hoof Print Road, Millbrook, NY 12545.

Radio equipment and antennas will be set up starting at 7:30 am and club members will begin making contacts using Morse Code at 8:30 am.

All Amateur Radio Operators who can send and receive CW are invited to help celebrate Samuel Morse's invention of Morse Code. Both slow and fast operators are welcome. Give it try.

Additional information can be obtained at the QSY Society web site www.qsysociety.org and by contacting Scott Dunlavy N2NTV the event manager at sdunlacey@optimum.net.

- 73, Henry KB2VJP, QSY Society PIO.



Locust Grove on South Rd (Rt 9), Poughkeepsie, was remodeled for inventor and artist Samuel F. B. Morse in 1851-52. The four story tower provides panoramic views of the River Hudson.

Sixty meter signals

Changes are coming to sixty meters. The FCC issued a Report and Order on November 18, 2011 that comes into effect on Monday March 5, 2012. The main changes are as follows:

- Channel 5368.0 kHz is replaced by 5358.5 kHz
- Maximum ERP is raised from 50 watts to 100 watts, relative to a half wave dipole.
- CW and certain digital data modes are permitted, in addition to USB voice.

ARRL has now published recommended practices for the 60 meter band. (See [here](#) - PDF)

The five frequencies permitted from March 5 are designated as follows by ARRL:

	USB carrier	CW / center freq
Channel 1:	5330.5 kHz	5332.0 kHz
Channel 2:	5346.5 kHz	5348.0 kHz
Channel 3:	5357.0 kHz	5358.5 kHz
Channel 4:	5371.5 kHz	5373.0 kHz
Channel 5:	5403.5 kHz	5405.0 kHz

If you have a modern transceiver, capable of 60 meter operation, it might be worthwhile storing these five frequencies into memory with the mode set to USB voice or data. For CW, you must operate at the center of each channel, so the CW frequency must be set 1.5 kHz above the USB carrier frequencies. Some radios adjust the frequency display automatically when switching to CW, others do not, so take care.

The NTIA (National Telecommunication and Information Administration) has requested radio amateurs to limit digital operation on sixty meters to PSK31 and PACTOR III only. Channel center frequencies must be the same as for CW. With computer sound-card operation, set the USB carrier frequency to the first frequency shown in the table (for example 5330.5 kHz), then in the PSK31 sound card software, select an audio frequency of 1.5 kHz (1500 Hz) for transmission and reception.

ARRL advises monitoring these channels with a wide filter setting. We are only secondary users, so if you hear another voice or a wide digital signal, it is probably a primary user and you should move to another frequency. CW and digital operations should start on channel 1, then work up. Voice operation should start on channel 5 and work down. Keep transmissions short to avoid interference. Channel 5, 5403.5 kHz, has been adopted as a DX channel so try to avoid local contacts there. Our justification for gaining access to 60 meters was readiness for disaster and emergency communications — so keep it in mind when operating on this special band.

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

Sun Mar 4: PCARA monthly meeting, Hudson Valley Hospital Center, 3:00 p.m.

Hamfests

Sun Mar 4: LIMARC Long Island Hamfair, Levittown Hall. 201 Levittown Parkway, Hicksville, NY., 9:00 a.m.

Sun Mar 18: Southington ARA Flea Market, Southington High School, 720 Pleasant Street, Southington, CT. 8:00 a.m.

Sat Mar 24: Splitrock ARA North Jersey Hamfest, Roxbury Senior Center, 72 Eyland Avenue, Succasunna, NJ. 8:00 a.m.

Sat Mar 31: Orange County ARC Hamfest, Town of Wallkill Community Center, 2 Wes Warren Drive, Middletown NY. 8:00 a.m.

VE Test Sessions

Mar 4: Yonkers ARC, Yonkers PD, Grassy Sprain Rd, Yonkers, NY. 8:30 am Contact Dan Calabrese, 914 667-0587

Mar 8: WECA, Westchester Co Fire Trg Center, 4 Dana Rd., Valhalla, NY. 7:00 p.m. Contact Stanley Rothman, 914 831-3258.

Mar 19: Columbia Univ VE Team, 2960 Broadway, 115 Havemeyer Hall, New York NY. 6:30 p.m. Contact Alan Croswell, 212 854-3754.

Mar 31: Orange County ARC, Town of Wallkill Comm Center, 2 Wes Warren Dr, Middletown NY. 9:00 am. Contact Thomas R. Ray, 845 391-3620.



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