



PCARA Update



Volume 15, Issue 6 Peekskill / Cortlandt Amateur Radio Association Inc. June 2014

June's do's and dues

The May 10th Foxhunt went quite nicely considering the threatening weather — a few raindrops here and there, with ominous dark clouds. Karl, N2KZ zeroed in on the Fox secluded in a remote corner of



PCARA foxes, Mike and Greg were hiding in Depew Park, Peekskill. Details on pp. 2 - 5.

Depew Park near Lake Mitchell in the City of Peekskill. Here the Fox, Mike, N2EAB had set up a tape measure Yagi on a tripod and aimed it toward the Beach Shopping Center to the Northeast. A short while later the team of Malcolm, NM9J and Joe, WA2MCR arrived. A post-Fox-

hunt meal was had at the Westchester Diner where Karl was presented the 1st Place certificate. For his success, Karl also won the privilege of playing the Fox for the next PCARA Foxhunt, a role he knows well. Thanks to all who participated and to our talented Foxhunters!

The Mount Beacon Amateur Radio Club (MBARC) Hamfest makes its return on Sunday June 8, 2014 at the Employee's Recreation Center of the Downstate Correctional Facility, 83 Red Schoolhouse Rd, Fishkill, NY 12524. Details are available on the MBARC website at: <http://wr2abb.org>. We will decide whether PCARA will take a table at the June meeting.

PCARA is planning a road trip to the ARRL National Centennial Convention 2014 at the Connecticut Convention Center in Hartford, CT on Saturday, July 19, 2014. The June meeting is the last monthly meeting before the convention, so if you're interested in joining us, please attend. For further information on the Convention, please visit:

<https://www.regonline.com/builder/site/Default.aspx?EventID=1248082>.

Field Day 2014 will be here very quickly. On the weekend of June 28-29 we will be setting up at Walter Panas High School at 300 Croton Avenue in Cortlandt Manor, NY (pending final approval from the Lakeland School District). As in years past we **desperately**

need operators for the overnight hours. If you can help, please consider stopping by to operate in the wee hours. Discussion and planning will continue at the June 2014 meeting.

Finally, keep an eye on your *snail* mail for Membership

Renewal Notices. We depend on your continued support to keep us going (insurance, equipment maintenance/repair, postage, etc.). Thank You!

Our next regularly scheduled meeting is on Sunday June 1, 2014 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

President:

Greg Appleyard, KB2CQE, kb2cq at arrrl.net

Vice President:

Joe Calabrese, WA2MCR; wa2mcr at arrrl.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 news and neighborly information.

Adventures in DXing

- N2KZ

Fox Finding

Adventure began early in the day. Rain was threatening and it began to look like this might be the first PCARA foxhunt to ever be rained out. After a few e-mail exchanges and deep analysis of weather maps, it was decided that we would take our chances.

I assembled my fox hunting gear on my porch deck and experimented to decide my most effective combination. I immediately noticed I had an intermittent connection in my trusty 13 year old Icom IC-T7H handi-talkie. I disassembled it and saw the problem immediately. The final solder joint to the BNC antenna connector had again broken loose. Quick micro-surgery corrected that problem but it just added to the excitement of the day.

My gear had served me well in past hunts. Along with the Icom IC-T7H HT, I chose a short length of RG-8 flex cable, my Radio Shack TV antenna attenuator, a handful of CATV fixed resistor attenuator pads and a 1970s vintage broadcast auxiliary Yagi antenna



Karl (right) with broadcast auxiliary antenna prepares for the hunt alongside Malcolm, at the Beach Shopping Center.

(cut for the 161 MHz remote broadcast band) that I had pulled out of the trash decades ago and re-tuned for two meters. It is a light-weight design and has a nice tight and narrow 'nose' to its pattern. Finally, I also used my Radio Shack Realistic Pro-35 scanner, circa 1978, as a confidence receiver attached to a dual-band mag mount antenna on my mini-van's roof. It allows me to monitor the fox frequency (146.565 MHz) at all times regardless of what direction or position my Yagi is in.

The time came to head off to the starting point at the Beach Shopping Center off Route 6 in Peekskill. I started out from my home QTH near Goldens Bridge with my Yagi secured behind my mini-van's hatch lid. About midway on my journey across the county, the sky opened up and produced a good hearty rain. I called on the PCARA two-meter repeater and consulted

with Malcolm, NM9J. All signs still said 'Go!' There was no rain at the foxhunt starting site.

I pulled into the parking lot at about 2:40 pm. In attendance were Malcolm NM9J teamed with Joe WA2MCR and Henry KB2VJP teamed with Lovji N2CKD. We all compared and admired each other's equipment and map gear. I encountered some mild panic when I discovered my mini-van's trunk lid was stuck closed. With a little persuasion, Joe and I managed to get my Yagi free for some before-hunt pictures and eventual use. Whew!

Just after 3 pm, we heard the first transmission from the foxes: Mike N2EAB and Greg KC2CQE. I found a nice peak to the southwest and followed my instincts. It seemed to be in the direction of the Hudson Valley Hospital Center. I made a left out of the parking lot and headed down Dayton Lane making a right on Crompond Road before the next transmission. I found a spot to park along Crompond Road where there was a terrific scenic overlook to the north and waited for the second broadcast.



This time, I had a powerful signal peak, again to the southwest, right up the steep hill to my left. I made a left onto Wells Street trying to beat the end of the transmission. I found myself directly in front of Peekskill High School and pulled into a parking lot right across the street from it. I waited for transmission #3. Now the signal was extremely strong pointing behind the high school.

As soon as I obtained a heading, I jumped into my van and began frantically looking for an antenna or other clues to the fox den. By the time the transmission ended, I found myself behind the park's full-sized running track. My heading was now in a completely different direction. I got out of the van and began to add more in-line fixed attenuators to my feed line to bring the fox's signal down as low as possible.



Peekskill Red Devils' baseball field and running track in Depew Park, where Karl found strong signals from the fox.

Before I could assemble it back together, the fox came on the air again. I could hear the fox's signal with no antenna at all! I switched to the 70 cm harmonic frequency ($146.565 \times 3 = 439.695$ MHz) and could still hear the fox loud and clear with no antenna at all! I was very, very close!

I could not drive my mini-van around the track. The road in the direction of the fox was blocked and I was on a one-way street. I saw two vehicles parked together alone across the track (in the exact direction of my last heading,) so I ran across the meadow and up the stairs to see what I could see. I must have looked daft running diagonally across the track holding a HT with no antenna! Rats! No fox!



"A beautiful tripod topped with a horizontal Yagi."

tried yet. It was the top of Robin Drive. I made a right... and I was right!

The fourth broadcast had just come on when I drove in and I saw a beautiful tripod topped with a horizontal Yagi behind some cars. I pulled into the next available parking spot and there was Greg and Mike voicing the sound of the fox!

Just as I got out of the mini-van, Greg snapped a picture of me all hot and sweaty from my track sprints! The time was 3:39 pm. Was I first? Greg



Karl jumps out of his vehicle to find the fox. [Pic by KB2CQE]

By now, the fox was off the air again, so I ran by the Torpy baseball field, and then down around a parking lot on Robin Drive looking for obvious physical clues. No Yagis. No mag mounts. No fox! I quickly ran back to my mini-van parked by the swimming pool, looking frantically for anywhere else foxes might be hiding. No luck!

I jumped back into the mini-van and circled back to the front of the high school. By a process of elimination, I found one driveway in the park complex that I had not

said 'Yes!' I shook hands with the fox and made my way down to the final meeting place: The Westchester Diner off Welcher Avenue on Route 9A. Away I went victorious!



Mike, N2EAB voicing the sound of the fox from Depew Park, Peekskill. (Note the fox sign on the dash.)

I called my daughter Sarah who was home studying for her big AP tests. 'We won! We won!' I felt so bad she was not with me to enjoy it. I filled up the mini-van with gas at the next-door Mobil station. (My low-gas warning light came on during the ride up the steep hill to the high school!) I sat in the diner parking lot for about half an hour before Ray W2CH and Marylyn KC2NKU came to join the party.

Eventually, Mike N2EAB, Malcolm NM9J, Lovji N2CKD, Joe WA2MCR and his family joined Ray, Marylyn and myself for a nice dinner and the foxhunt awards ceremony. It was so nice to see everyone!



At the Westchester Diner, Mike N2EAB (right) presents Karl with his certificate for first place in the Foxhunt.

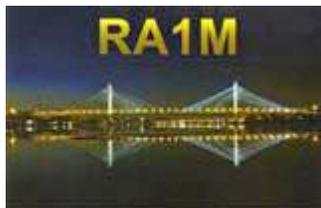
Malcolm and Joe found the fox after me. Needless to say, a grand time was had by all! For the next foxhunt, I once again will become the fox. I have a lot of research and scouting ahead of me to find a clever place to hide. Foxes like to live uncaptured and free. We shall see!

Cool QSL

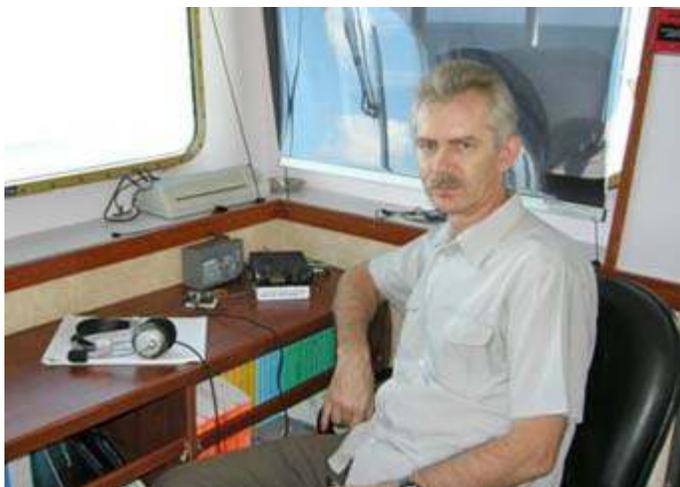
One of the best side benefits of being a ham is getting great mail. It doesn't happen very often, but sometimes true gems arrive in my mailbox. I received one just the other day. Covered with six elaborate

stamps and a return address of Sankt-Petersburg (Leningrad,) Russia was a QSL card from Stepan Tumanov, RA1M/MM. All I could say was 'Wow!'

This card commemorated a very unusual QSO. Don't let the callsign fool you! When I worked Stepan, he was on a shipping vessel off the south coast of the Dominican Republic using an Elecraft KX-3 running at 6 watts CW. I was running 5 watts into a homebrewed dipole facing the wrong direction (east-west.) The frequency was the well known 20 meter QRP watering hole of 14.060 MHz at around 2200 UTC (6:00 p.m. Eastern.)



QSL from RA1M/MM



Stephan, RA1M pictured at the maritime mobile operating position, this time with a Yaesu FT-817.

Stephan began his maritime career back in 1980 as a radio officer. He studied further and became a navigator and then graduated to being a full Captain of his vessel. What an honour to work a freighter captain aboard his ship via QRP CW! Both of us had a great time! We were astounded that we could copy each other so well via QRP CW. Stephan's English was very good and he understood my straight key FB. When was the last time you worked grid square FK48re? Amazing!

Remember to join us Thursday nights for the PCARA Old Goat's Net on our 2 meter repeater at 146.67 MHz at 8 p.m. Also, please check out our PCARA Facebook page. There are all sorts of entertaining and informative postings waiting for you there!

73 es dit dit de N2KZ 'The Old Goat.'



BARA Hamfest

The weather was mixed for Bergen Amateur Radio Association's Spring Hamfest, held Saturday May 24 at Westwood Regional High School in the Township of Washington, NJ. Here are a couple of photos of PCARA members taken during the event.



L to R: Ray W2CH; Jerry WA2ZOA; Luigi N2CWV and Marylyn KC2NKU, in front of Ray's outdoor table.



Lovji N2CKD was successfully selling radio and computer items from his vehicle in the outdoor area.

The date of BARA's Fall Hamfest will be Saturday October 11, 2014.

Foxhunt report

PCARA's latest foxhunt on Saturday May 10, 2014 was almost canceled — the National Weather Service forecast suggested showers and thunderstorms that afternoon. Fortunately, the heavy rain passed by just before the start and hunters were able to sign in at the Beach Shopping Center without getting wet. Teams included Lovji N2CKD and Henry KB2VJP; Malcolm NM9J and Joe WA2MCR, plus Karl N2KZ.



Hunters prepare for departure from the Beach Shopping Center, L to R: Henry KB2VJP, Joe WA2MCR, Karl N2KZ and Lovji, N2CKD.

The initial 3:00 p.m. transmission on 146.565 MHz from fox Mike, N2EAB was inaudible at the Beach, but a quick word over the 449.925 MHz back-channel to Greg KB2CQE brought the signal up to a reasonable level.

The initial bearing gave some trouble as the signal seemed to be changing — but then it settled down to approximately west and hunters were able to set off in their various different directions.

Karl, N2KZ set off down Dayton Lane then along Crompond Road/Route 202 in a westerly direction. Arriving at a section of road that overlooks Peekskill, he took another bearing then set off toward Peekskill High School. The next transmission led Karl into Depew Park, behind the track/playing field. While adjusting attenuators, he noticed that without any antenna connected, signal strength was still strong on both 2 meters and 440. Karl set out on foot across the field to investigate two nearby vehicles — but they did not contain the fox. A little further investigation brought Karl to the real foxes, tucked away in the parking lot on Robin Drive, near Rotary Knoll. Mike N2EAB and Greg KB2CQE recorded Karl's official arrival at 3:31 p.m. — an excellent time.

Meanwhile your editor and Joe WA2MCR left the

Beach on Route 6, proceeding west to Husted Avenue, to take another bearing at the top of the hill. The direction was WNW, which led to the Cortlandt Colonial Restaurant, site of last year's PCARA holiday dinner. From there, the direction had surprisingly swung around to SSE — and the line on the map later turned out to be right through the foxes' location at Depew Park.

We continued southward with further bearings taken at the First Baptist Church on Highland Ave, from the tip of North Broad Street and from Peekskill High School car park. Signals were becoming progressively stronger and continued to point toward Depew Park. The foxes were finally run to ground at 3:55 p.m. in the parking area near the Parks Department Garage building.

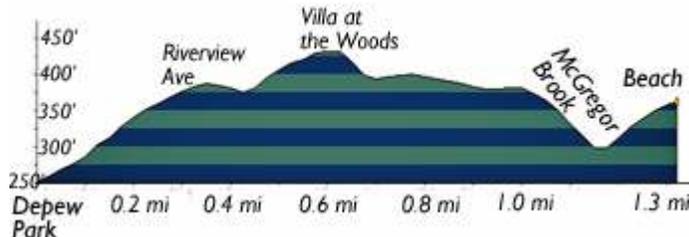


Our PCARA foxes, Mike N2EAB and Greg KB2CQE were hiding in Depew Park, Peekskill. Mike was using a hand-talkie with the tripod-mounted tape-measure Yagi visible behind the vehicles.

Meanwhile Lovji N2CKD and Henry KB2VJP had set out in the direction of Henry's compass, driving NNW toward Sprout Brook Park. They observed a strong signal, but without a good front-to-back ratio, and the signal stopped at the end of Sprout Brook Road. They came back to the old WHUD site, followed by a return to Sprout Brook again. Lovji observed that his Wouxun hand-talkie does not have a very good S-meter, and he resolved to build an attenuator for next time.

What was the reason for the misleading bearings? At the fox transmitting site, Mike and Greg were using a horizontally polarized tape-measure Yagi on a tall tripod stand. For the first half hour, the antenna was initially pointing NE toward the Beach Shopping Center, running a full 5 watts. Greg had then moved the antenna to point roughly WNW across Peekskill "to make things interesting." The path between Depew Park (260 feet asl) and the Beach Shopping Center (360 feet) is obstructed by higher land around Villa at

the Woods (460 feet). As a result, strong RF reflections were possible from nearby hills such as Blue Mountain (662 feet) and Manitou Mountain (774 feet), especially after the transmit antenna was turned.



Cross-section from the fox transmit location in Depew Park to the hunters' starting point at the Beach Shopping Center.

At the end of the chase, hunters were instructed to repair to the Westchester Diner on Albany Post Road. There we also met Ray W2CH and Marylyn KC2NKU — they had not participated in the contest, but came along to enjoy the post-hunt activities.



Map shows starting-point at the Beach Shopping Center, location of the foxes in Depew Park, plus other features of this year's hunt.

The first-place certificate was presented to Karl, N2KZ — so Karl will assume the role of Fox at the next event. Second place certificates were awarded to Malcolm and Joe.

Karl was last seen demonstrating his combination of fixed and variable attenuators to Lovji — and Lovji is already constructing an active attenuator ready for the next hunt. So perhaps the team of Henry and Lovji will be moving higher up the ladder next time.

Finally, thanks to our foxes Mike and Greg for leading the hunters on yet another merry chase.

– NM9J

Schnell, schnell!

During the Old Goats Net for Thursday April 10, Karl, N2KZ asked a Question of the Week which paid a visit to the year 1925. Karl's question was "What is a **Schnell two-step?**"

The correct answer has nothing to do with German quickstep dancing or with metabolic pathways — in fact the Schnell two-step is a **radio receiver** design, popular with amateurs of the 1920s. In 2014, the year of ARRL's centennial celebration, Henry, KB2VJP has now provided additional information on the origin of this design.

The name derives from Frederick H. Schnell 1MO/W9UZ/W4CF, who was active from the early days of radio in World War I.



Fred Schnell, 1MO

Two-way triumph

Fred Schnell is best known for his part in the first two-way amateur radio contact to span the Atlantic. At the time, he was Traffic Manager for the American Radio Relay League.

On November 27, 1923 Fred Schnell's station 1MO in West Hartford, CT successfully worked Léon Deloy, 8AB in Nice, France. F8AB was transmitting CW on a wavelength of 100 meters (3.0 MHz) while 1MO was sending on 110 meters (approx. 2.7 MHz). This was an early indication of the ability of short waves (less than 200 meters) to cover great distances at amateur power-levels, while the professionals were still using high power on long wave.

Back-issue bonus

Details of this achievement along with the equipment used were published in *QST* for January 1924 and February 1924. ARRL members have access to back copies of *QST* in the form of scanned PDFs of the individual articles. This is a wonderful resource as it gives access to the technology, language and camaraderie of our radio amateur predecessors.



Interested ARRL members can seek out the following contemporary *QST* articles on the League's web site at: <http://www.arrl.org/arrl-periodicals-archive-search> :

"Transatlantic Amateur Communication Accomplished",

QST Jan 1924, p 9;

"IXAM's transmitter", John L Reinartz, *QST* Jan 1924, p 26;

"Low Loss Tuners", S. Kruse, *QST* Feb 1924, p 8.

For a more recent description of a Fred Schnell receiver design, see this *QST* article: “A Historic Receiver from a Radio Pioneer—Fred Schnell”, Dan Clark W9VV, *QST* Feb 2004, p 33.

Distinguished career

That last *QST* article includes a short biography, revealing that Fred Schnell was not only Traffic Manager for ARRL — he was also a U.S. Navy Lieutenant who demonstrated the power of short waves to the Navy—while the fleet was visiting Australasia. He later worked for C.F. Burgess Laboratories in Madison WI and for General Household Utilities, the Chicago



Fred Schnell with the home-brew receiver that he used to work F8AB.

manufacturer of various “Grunow” radios in the 1930s. This was followed by a stint as Communications Officer for Chicago Police Department, and time at Motorola.

QST columnist John Dilks K2TQN has a description of the transatlantic accomplishments on his “Old Radio History” web site — see:

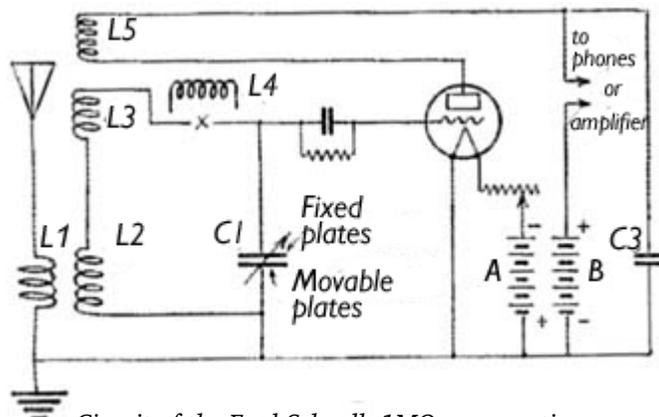
<http://www.eht.com/oldradio/awa/> – where you will find the following articles: “The story of the first Transatlantic contact by radio amateurs in 1923” and “View Stations 1MO and 8AB that made the historic first transatlantic two-way communication.” A further account with photos is available on the Ham Radio History site: <http://w2pa.net/HRH/the-fourth-times-the-charm/>

Radio regenerated

In the early 1920s, when vacuum tubes were relatively new and expensive, most receivers made use of the regenerative design originated by Howard Armstrong in 1912 and patented in 1914. In this design, a single triode amplifier has positive feedback introduced, from the anode circuit back to the tuned grid circuit. In Armstrong’s US Patent 1,113,149, he describes: “the provision of means supplementing the electrostatic coupling of the audion [triode tube] to facilitate the transfer of energy from the wing circuit [anode circuit] to the grid circuit, thereby **reinforcing the high frequency oscillations in the grid circuit...**”

By carefully controlling the amount of positive feedback in a regenerative amplifier, very large gains can be achieved — much higher than the usual gain

found in a single-stage of amplification. As the gain increases, selectivity also improves. The same circuit can act not only as amplifier, but also as a detector for amplitude modulated waves. By further increasing the amount of feedback to the point of oscillation, CW and SSB signals can also be detected.

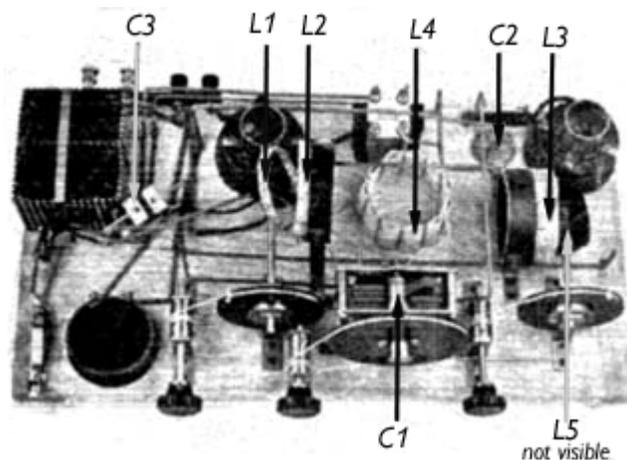


Circuit of the Fred Schnell, 1MO regenerative receiver with low-loss coupling as described in *QST*, February 1924.

The amount of feedback in a regenerative stage is highly critical, and has to be continuously adjusted while the receiver is being tuned and as different RF signals are encountered. Operating this type of receiver requires some skill on the part of the radio amateur — your editor is aware of this as the first two receivers he constructed in the 1960s were built from regenerative kits.

Pre-war link

In order to improve operation, the tuner circuit originated by Fred Schnell used **adjustable link coupling** between the inductors of the input tuned circuit and for the “tickler coil” that provided feedback from the anode. The photo on page 12 of *QST* for Feb



Regenerative receiver with low-loss coupling as constructed by Fred H. Schnell. Note the reduction-drive controls for the tuning capacitor and for the adjustable link coupling.

1924 shows an elegant arrangement of belted reduction drives with a ratio of 4¼ to 1 for both of the coupled coils. *QST* states: “The two-part secondary completely avoids inter-action between the tickler and the antenna-coupling. Either one of them can be moved without causing the note to slide around, as is the annoying habit of ordinary tuners.” (This is a 1920’s-



Modern reconstruction by WX4A of a Schnell regenerative receiver design.

style description of frequency-pulling of a VFO. – Ed.)

You can see pictures of a modern version of the Schnell receiver as constructed by

WX4A on the Antique Radios site at: <http://www.antiqueradios.com/forums/viewtopic.php?t=68701>.

Two-steps good

What of the “two-step” in Karl’s Question of the Week? This derives from the jargon of the time, when “two-step” meant a **two-stage** circuit as opposed to, (for example) a single-stage regenerative receiver that could only drive headphones. A popular arrangement was to use a Schnell-type regenerative receiver, followed by a “two-step amplifier”, providing sufficient audio gain to drive a loudspeaker — hence the “Schnell two-step.”

Ninety years further forward



Henry KB2VJP with Xiegu X1M transceiver at the May PCARA meeting.

Just to show how far amateur radio technology has advanced since 1924, here is a picture of Henry, KB2VJP with his recent acquisition — a tiny Xiegu X1M HF transceiver. This QRP transceiver produces 5 watts of CW or SSB on the five non-WARC HF bands between 3.5 - 29 MHz (for which there are internal low pass filters). Size of the rugged metal case is only 3¼ × 1¼ × 6⅞ inches. For more details see:

http://www.wouxun.us/item.php?item_id=302 .
- NM9J/KB2VJP

Encounter at NEAR-Fest

- W2CH

[The **New England Amateur Radio Festival** — or NEAR-Fest — is held twice a year in May and October. Location is Deerfield Fairground, near Manchester, NH and around 250 miles from Peekskill/Cortlandt. Ray W2CH and Marylyn KC2NKU attended the Spring 2014 event on May 2-3 and provided the following account of their visit. -Ed.]



Vendors at NEAR-Fest, May 2014. [Pictures by W2CH]

We left Westchester shortly after 11 a.m. on Thursday, May 1st, and drove up I-684, then more slowly up Route 22 to the Massachusetts Turnpike at the NY Border, east to I-290 by Worcester, then north-east on I-495 to US 3 North, to Manchester, NH — arriving at the Super 8 Motel after 3:00 p.m., having covered some 285 miles. We later had dinner and met other hams plus the KJI Electronics team, who were also checking in to the hotel that evening for NEAR-Fest the following day.

On Friday, we had some breakfast at the hotel then headed out for the 20 mile drive to Deerfield Fairgrounds and bought our tickets there around 9:00 a.m. We had a bit more to eat and looked around at the individual outside sellers and then the three build-



Outdoor area at NEAR-Fest on May 2nd.

ings with vendors such as KJI Electronics, Quicksilver Radio and Sauder Electronics.

We went back to the car and brought out my Grundig Satellit 800 receiver and Zenith Trans Oceanic 3000 receiver, along with my Four State QRP Power/SWR meter for sale. I set up in a clear area by the side and soon sold the two receivers to passers-by. So we went home lighter in our load, though the power/SWR meter failed to sell. After lunch, we left around 1:00 p.m. as there was nothing more to see or buy.



Outside vendors at NEAR-Fest.

Encounter at far-out

We headed back to the Super 8 Motel where I met **Al Weiner** from shortwave station WBCQ in Monticello, ME. He said to say “hello” to Karl, N2KZ who he knew as a fellow broadcast engineer. Al was checking-in to attend the NEAR-Fest on Saturday.



Unfortunately, for the trip back home, there were some vehicle problems, but we made it back OK.

- Ray, W2CH

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[For additional information about shortwave station WBCQ, visit <http://www.wbcq.com>. For more on Allan Weiner, see the article “Hunting Pirates” by Karl, N2KZ in the February 2010 edition of the *PCARA Update* and the following Wikipedia article:



License plate on WBCQ vehicle at NEAR-Fest. [W2CH pic.]

http://en.wikipedia.org/wiki/Allan_Weiner -Ed.]

Max TX factor

Three excellent video programs about amateur radio in the UK are now available on YouTube via the Internet. The **TX Factor**, sponsored by amateur radio store “Martin Lynch & Sons” along with Yaesu, provides a fascinating look at various aspects of the UK amateur radio scene.



The latest episode, released on May 16, includes segments on kite-born antennas, on G4BXD’s Military Radio Museum and a first look at the Wouxun KG-UV950P Quad Band mobile transceiver, plus a visit to the Exeter Radio Rally (UK equivalent of a hamfest).

Earlier episodes are just as interesting, including a visit to Marconi’s Poldhu location in Cornwall and to the WWII code-breaking HQ at Bletchley Park. The following Internet site has links to all the episodes: <http://www.txfilms.co.uk/txfactor/>

For a series of informative video programs on amateur radio from the USA, as recommended by Bob, N2CBH, pay a visit to the **HamNation** page on TWiT-TV:

<http://twit.tv/show/ham-nation>.

The HamNation shows are usually hosted by Bob Heil, K9EID, with Icom America and DX Engineering as program sponsors.



Care for hardware

Following the recent *PCARA Update* articles about the ‘demise’ of Windows XP, it may be worth adding some thoughts about care of your computer *hardware*. Whether it is a notebook PC or a desktop computer in the radio room, here are some suggestions to ensure a long life.



Keep your cool

The first thing to check is location of the computer with regard to good airflow.

Notebook computers usually have small feet to raise them high enough above a desk or table to allow cooling air to flow through ventilation slots in the base. Do not operate this type of computer on a soft surface such as a rug, carpet, upholstered furniture or bed-cover. If fabric blocks the ventilation holes, then airflow is reduced and the computer could overheat.

With a desktop or tower computer, make a note of where the ventilation holes are located. Cool air is usually sucked in through a perforated metal cover at the front or sides, then vented out at the rear by one or more fans. Do not place air inlet vents close up against a desk or wall — otherwise the computer may overheat and suffer damage. I came across an unusual HP “small form factor” desktop a while ago, where the airflow



HP Compaq DC5000 SFF (small form factor) computer from 2004 had an unusual sideways airflow.

direction was side-to-side instead of front-to-back. The owner jammed this computer up against his office wall and completely blocked the airflow. Oops!

From time to time, check that your cooling fan is running correctly. You can do this by holding your hand in the airstream or tying a small, tissue-paper ‘windsock’ to the outlet grill. I have seen the damage done when a cooling fan stops rotating — it’s not pretty.

Some tower computers have small feet so they can suck air in through the base. It is not a good idea to stand these systems directly on a rug or carpet as the feet sink in and the air inlet can be blocked. If you cannot find a higher spot or an area of bare floor, slide a sheet of metal or plywood between the computer and the carpet to stop it sinking down.



Just look at the amount of white dust that has collected on the air intake vents of this (tilted-over) mini-tower.

Keep it clean

Placing *any* equipment directly on the floor is not recommended as dirt, dust, pet hair and creepy crawlies can all find their way in. Wherever you place a desktop or mini-tower computer,

I would strongly recommend that every few months

you give it a careful cleaning. Switch off, remove the power cord and clean the air intake vents. Remove the cover and inspect within. You will probably find an accumulation of dust bunnies, spider webs and other disgusting stuff. Areas to check include the CPU — which will probably have its own heat sink and fan — the power supply, video adapter and any other locations with heat sinks and fans to encourage the flow of cooling air.

Be careful when cleaning inside the case. Use of a domestic vacuum cleaner nozzle is *not* recommended. You don’t want to disturb electrical connections or break anything fragile. And you should avoid static discharge caused

by a stream of high-velocity air or by touching sensitive parts. Use of a compressed gas duster is recommended, but don’t get too close to computer components when you



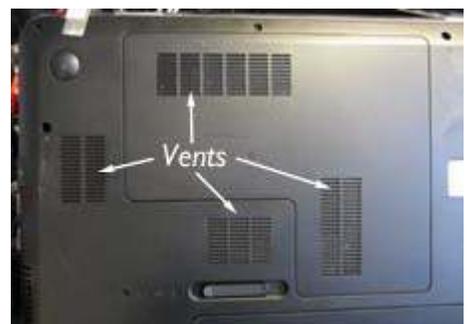
Using a ‘canned-air’ duster to blow dust and debris away from inside a PC.

are blowing dust out of the way. Remember that aerosol-style dusters contain liquefied gas that could be flammable and that has a strong cooling effect (and possible static generation) if sprayed directly on electronic components.

If you have not cleaned your desktop computer for some time, you may be surprised by just how much dust and debris can accumulate around the air intake and within.

Take note

Notebook computers can also suffer from dust build up. Inspect and clean the air intake slots, then make sure the fan is running correctly. Some models have fans that speed up and slow down according to CPU load. A gentle puff from a compressed gas duster should dislodge any dust from the internal air ducts. Newer notebook models with a low-power CPU and solid state drive might not have any ventilation slots at all.



Check and clean the air intake vents on a notebook computer.

If you have other equipment with an air intake that is left running for long periods of time, it would not hurt to check for dust build up there. Examples include oscilloscopes, switch-mode power supplies, digital TV sets, DVD and Blu-ray players.



Notebook computers are prone to more problems than desktops because of their portability. Try to avoid sudden knocks and drops while the machine is in use, especially if it contains a spinning disk drive. Keep your notebook away from extremes of temperature, for example don't leave it exposed to direct summer

sunlight, or lying in the trunk of a car during freezing winter weather.

Another piece of advice comes from experiences with our forgetful senior staff of long-ago... never leave your notebook behind on the seat of an airplane, or on the roof of an automobile!



Key to cleanliness

Place some paper on the workbench, then turn your keyboard over on top of it. Give the keyboard a few sharp taps — you may be surprised by how much dirt, hair, crumbs, staples and paper clips fall out. After you have dislodged the heavier items, use a compressed gas duster to blow out the lighter debris.

Clean screen

Once the computer system has been dusted off, it's worthwhile cleaning the monitor screen. Modern monitors are usually based on a liquid crystal display (LCD) composed of thin, fragile layers of glass, plastic and chemicals. Clean your monitor gently, using products made for the job such as "Windex Electronics" wipes and sprays.



Steady power

Reliability of the power supply is an important consideration for all computers. If power fails in the middle of an important operation, consequences can be severe, especially if a disk write is underway at the time. For a desktop computer running off AC mains,

you should assess importance of the data it contains along with the number of power outages and brown-outs in your area. If you are sufficiently concerned, install an uninterruptible power supply (UPS) which will provide AC power long enough to shut the system down properly. Notebook computers are less of a worry because the built-in battery will usually keep the system running during an unexpected power outage.

Another concern is what to do during an electrical storm. Switching off will help! But your computer might have external connections that could carry a voltage surge. For example, you might have a wired connection to an HF transceiver with its outside antenna — plus cables for network, phone and fax that are fed from overhead wires. Surge protectors are available that protect not only the AC power line, but also phone, network and antenna cables.



- 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 and July/August break.

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 June 1: PCARA meeting, Hudson Valley Hospital Center, 3:00 p.m.

Sat-Sun June 28-29: PCARA **Field Day**, Walter Panas High School, Cortlandt Manor. (Subject to approval).

Hamfests

Sun Jun 1: LIMARC Hamfair, Briarcliffe College, 1055 Stewart Avenue, Bethpage, NY, 9:00 a.m.

Sun Jun 8: Mt. Beacon ARC Hamfest, Downstate Correctional Facility, Employees' Recreation Center, 83 Red Schoolhouse Rd, Fishkill, NY. 8:00 a.m.

Sun Jun 8: HOSARC Hamfest, New York Hall of Science, 47-01 111th St., Flushing Meadows, Queens, NY. 9:00 a.m.

Sat Jun 21: Newington ARL NARL-Fest, St Mary School, 625 Willard Ave, Newington CT. 8:00 a.m.

VE Test Sessions

Jun 1: Yonkers ARC, Yonkers PD, Grassy Sprain Rd., Yonkers. 8:30 am Contact John Costa, (914) 969-6548.

Jun 7: Yonkers PAL Ham Radio Club, 127 N Broadway, Yonkers. 2:00 p.m. Michael Rapp (914) 907-6482.

Jun 8: Mt Beacon ARC Hamfest, Emp Rec Cnter, 9:00 a.m.

Jun 12: WECA, Westchester Co Fire Trg Cen, 4 Dana Rd., Valhalla, NY. 7:00 pm. S. Rothman, 914 831-3258.

Jun 16: Columbia Univ VE Team ARC, 531 Studebaker Bldg, 622 West 132nd Street, New York, NY. 6:30 pm. Alan Crosswell, 212 854-3754.



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