



PCARA Update



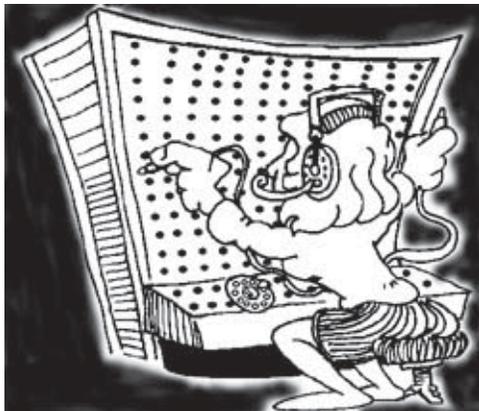
Volume 4, Issue 9

Peekskill / Cortlandt Amateur Radio Association Inc.

September 2003

The Blackout of 2003

Where were you when the lights went out? I was on my way to a dental appointment and needless to say I didn't make it! I tried calling my wife on the cell-phone to ask her to call the dentist, and see what was going on regarding my appointment. The operative word was *tried!* The cell sites were swamped with calls and/or power problems, and as a result calls weren't going through very well. I resorted to the old-fashioned technology of amateur radio and managed to get hold of someone (Bob, N2CBH) to relay a message for me to



"When the power went out, so did their electrically powered telephone system."

my wife, via landline. The dentist's office wasn't answering their phones. I later learned at my re-scheduled appointment, that when the power went out, so did their electrically powered telephone system. I did

feel sorry for the patients who had their dental work finished by flashlight. That evening when I got home I was able to power a fan from an inverter, using a deep cycle marine battery that I keep around for just such occasions. The power came on at about 7:00 PM, briefly went out a couple of times and then stayed on for the rest of the evening.

The next day (8/15/03), the power went out at home once again at about 9:30 AM while I was at work. This was apparently due to rolling blackouts imposed to help keep the power grid from crashing again. I left work early to come home to fire up the generator to power the refrigerator, since the power had been out for about six hours. I learned that my 1,850 watt generator wasn't quite big enough to handle the momentary 2,240 watt power draw that the fridge

needed to start the compressor. The lights sure looked nice when I opened the door though! For the half-hour or so that I ran the generator, the goldfish really seemed to appreciate the fresh oxygen and filtered water that the generator helped supply. Commercial power returned just after 4:00 PM. About a week later, I ordered a larger generator.



The northeast went dark from Canada to New York City on August 14.

As we approach the second anniversary of one of the most heinous series of events in our nation's history, it is once again time for resolute remembrance and reflection. **Let us never forget.** We must ask ourselves, "Are we better prepared today than we were two years ago to deal with emergencies, be they man-made or natural in origin?"

Compared to what happened two years ago, a regional blackout seems like a very minor inconvenience to endure. I thought I was all set with my generator, only to learn that all wasn't as I had presumed. We were fortunate that the power was restored relatively quickly. We were lucky that the outage wasn't due to weather, i.e., an ice storm or hurricane, which may have taken down many power lines (and phone lines) that may have taken days if not weeks to repair and/or replace.

As I'd learned many years ago as a Boy Scout, the motto "Be Prepared" seems more relevant than ever.

I hope to see each of you at the September 7th meeting at Hudson Valley Hospital Center.

— 73 de Greg, KB2CQE

Go Fox! — N2KZ

PCARA will hold a radio direction-finding foxhunt on Sunday, September 21, 2003. To join in the fun, come down to the Beach Shopping Center in Peekskill. Check-in begins at 2:30 pm. Malcolm, NM9J, will host the starting site. The hunt begins promptly at 3:00 pm. Karl, N2KZ will be the fox and will be awaiting your discovery! Bring your skill, your gear and maps, and a lot of good luck!

Why should you be a hunter?

It's a great chance to test your skills as a radio direction finder! Foxhunting is a valuable and practical test of our abilities to discover the location of unknown transmitters in times of emergency; or to find pirate operators interfering with licensed transmissions.

Best of all, few ham radio contests are as much fun as a foxhunt!

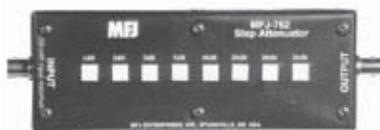
The challenge is to race to find the fox before your friends do. At 3 pm, the clock begins to tick and the fox hits the air! You can travel in groups or by yourself. You can use any kind of equipment you like. You do not have to be a licensed ham because this is a receive-only event. The only person allowed to transmit is the fox! It's a great chance to spend the afternoon with your friends. And in the end, everyone gathers to compare notes, raise some smiles (and antennas!) and have a great meal. When the hunt is over, we all gather at a local eatery to discuss the afternoon's adventures. The winner and the runner-up will receive framed award certificates. And the winner becomes the next fox! When was the last time you had a dinner discussion peppered with the word "Yagi"?

Ingredients for a successful hunt

If you can, use two receivers. Your best receiver should be connected to the Yagi antenna you will point towards the fox. Yagis with more elements add additional directionality providing more precise bearings. Many hunters include an adjustable attenuator between the antenna and receiver, like the MFJ-762 or the Radio Shack 15-678, to lessen signals when you get close to the fox. This adds a helpful element of control.

The second receiver should be attached to an omni-directional antenna, such as a car whip, to allow

towards the fox. Yagis with more elements add additional directionality providing more precise bearings. Many hunters include an adjustable attenuator



MFJ-762 81 dB step attenuator



Radio Shack 15-678 TV/CATV 75Ω attenuator

you to monitor when the fox begins and ends transmissions. It will also give you an important relative indication of signal strength while you are on the move.

Remember to beat the clock! Don't wait for the fox to end his transmission before moving on. Time is your biggest enemy in your quest! Move on fast! Take a quick bearing and move along! The fox will be transmitting for three minutes before it goes silent. If you are fast, you can make two bearings per transmission bringing you closer to your goal. Watch your watch and make sure you are synchronized with the fox! Be parked and ready before the next transmission begins. Take your bearing fast and move on faster!



Tools for a foxhunt: protractor, ruler, pencil and map

Maps, a compass, and a protractor can be important tools. Use a map that displays a relatively large area on one page. You don't want to waste time paging through an atlas! Also, consider the importance of a compass. During the last hunt, I worked as a one-man team. It was quickly apparent that using a compass and interpolating the bearing onto a map is a time consuming pursuit. I used a four element Yagi with a reasonably tight pattern. I could obtain a good reading, take a quick look at the map, and head off in the proper direction. Mapping the bearing can kill precious time if you are alone. Having a friend map the bearing while you both hop into your car might be even better!

Program two frequencies into your receivers: 146.565 MHz and its harmonic 439.695 MHz. When you approach the fox, the signal of the primary frequency may be overpowering and hard to null. The strength of the 70 cm harmonic will be at least 60 db lower than the primary 2-meter transmission. If you can hear the harmonic, you are very close to the fox! Your nulls of this microwatt signal should be profound and lead you into the fox in the crucial last mile!

Practice is another vital factor. In the days before the hunt, try to hunt fellow ham's signals on two

meters. See what receiver/antenna combination works well for you. Make sure you can get your antenna in and out of your car in a hurry. Is it easier and faster to carry your antenna in your trunk or your back seat? Consider everything that will make your hunting fast and efficient. Try everything first before you leave home! You don't want to spoil your fun by forgetting an essential item. Be familiar with how everything works!

If you participated in the last hunt, you will find some minor changes in this fox's plan on September 21. The restaurant will be revealed to hunters only when they actually find the fox. To reveal the location of the restaurant is too much of an early clue to the hunters! When all the hunters have found the fox, the location will be announced on the air. Any hunters who cannot find the fox will be talked-in to the restaurant via the PCARA 2 meter repeater.

The transmissions will begin promptly at 3 pm on 146.565 MHz FM simplex, horizontal polarization, with a power of 6 watts. There will be a ten-minute cycle to the fox's broadcasts. The fox will talk for three minutes, and then go off the air for the next seven minutes. The fox will be hiding somewhere readily accessible to cars. The fox will be significantly sneakier compared to the last foxhunt!

A quick word about hunting etiquette: The fox will never reveal its location on the air, or give any indication that a hunter has discovered the fox. All hunters are prohibited from transmitting, in any fashion, during the hunt. Please drive with safety in mind! Remember to have fun!

To see pictures and a detailed article about our last foxhunt, see the June 2003 PCARA Update at: <http://www.cortlandtech.com/PCARA/pcud0603.pdf>

Complete rules of the foxhunt are available alongside.

Please drop me an e-mail at n2kz@arrl.net if you are thinking of participating. This will help the restaurant plan for our visit. Don't miss the most entertaining event of the season! Join the hunt!



The fox will be ready to go again on September 21.

PCARA Foxhunt Rules

Saturday September 21, 2003

1. Transmission – FM simplex on 146.565 MHz, horizontally polarized.

2. Transmissions start at 3:00 p.m. for 5 minutes, followed by 5 minutes off. Second transmission commences at 3:10 p.m. 3 minutes on, 7 minutes off. The fox will not move during this time. This cycle repeats at 10 minute intervals until the last transmission ends at 4:30 p.m. when the fox will announce its location.

3. The opening transmission will include a time check for watch synchronization.

4. All contestants who wish to be eligible for a prize must book in at the **Beach Shopping Center car park**, in Peekskill before the start. Contestants will count as one team if more than one person occupies a car. (i.e. if three in a car, they don't get first, second and third prize.)

5. No contestant is allowed to move his/her car until the end of the first transmission, so take your time with the first bearing and make it a good one. The transmission will be audible from the start without a super-sensitive receiver.

6. Radio silence will be maintained by all contestants on all frequencies from the first to the last transmission.

7. No excess mileage penalty will be incurred but all contestants are reminded at all times to stay within the law and observe speed limits, parking restrictions etc.

8. The fox will be hidden not more than 5 miles from the start. The location of the fox will not be on property which is inaccessible by car.

9. Upon a contestant finding the fox, please do not shout or in any way give the location away to other contestants. Report your name/callsign to the fox and retire to the place of refreshment immediately. This will ensure that other contestants do not "discover" the fox because a group of people is hanging around nearby. It is requested that you maintain radio silence even though the fox has been found and the fact that you have found the fox should not be revealed to anyone until the place of refreshment has been reached.

10. The first competitor to locate the fox and positively identify him/her will be presented with a certificate. This competitor will be invited to assume the role of fox for the next foxhunt event.

11. Competitors should convene from 4:30 p.m. at the place of refreshment, which will be announced on-air by the fox.

Rules adapted from Bury Radio Society Fox Hunt
– Malcolm, NM9J

- 73 de Karl, N2KZ

Repeater Linking -NM9J

PCARA has three VHF/UHF repeaters, and at the August meeting, Bob N2CBH raised the topic of repeater linking via the Internet. Ray W2CH offered to carry out an information search and I started turning over some past ideas.

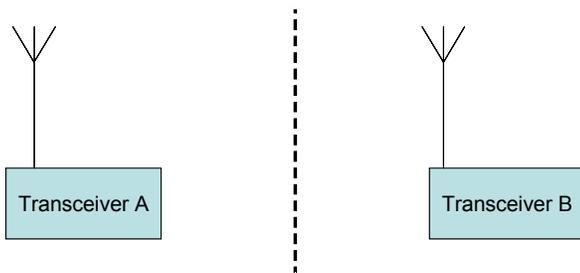
During a vacation visit to England in 2002, two of my old friends from the Southport area, Harold, G3LWK and Mark, G4EID suggested that my local radio club should set up an **IRLP node**. They gave me some interesting demonstrations of the capabilities of IRLP then left the idea to take seed.

Back home from vacation, I found that the Rockland Repeater Association's machine on 443.850 MHz was already IRLP node 4030 and courtesy of N2ACF succeeded in having a contact with Harold back in the U.K. I thought about something similar for PCARA – but unfortunately Internet linking requires a continuously-on connection and all I had at the time was a dial-up phone-line connection to Computer.Net.

Fast forward to August 2003 – by the time N2CBH raised the topic of Internet linking, I (and several other members) had cable modem connections to the Internet that are “always on” and capable of several megabits per second download speeds. Assisted by Ray's findings, I carried out some further research and decided that the project was now a practical possibility.

What is IRLP?

IRLP stands for **I**nternet **R**adio **L**inking **P**roject. The system was designed by David Cameron, VE7LTD, with the first node coming online in Vancouver in 1998. The pictures below show the basic idea of an IRLP connection.

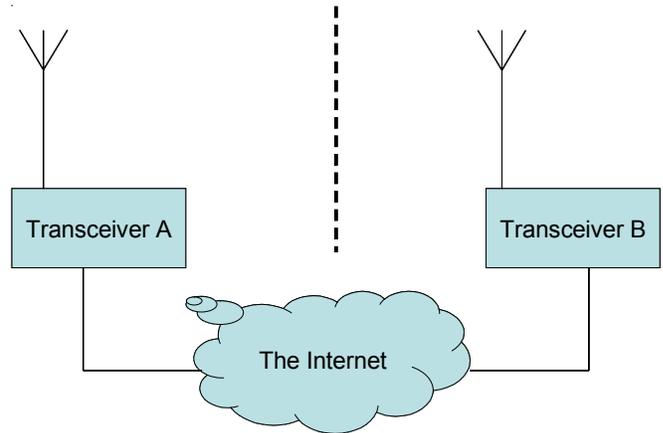


First of all, imagine two different simplex transceivers – or repeater stations – that are geographically separated so they cannot contact each other via radio. Normally operators contact just one of these stations and operate completely independently of each other.

Now suppose that these two transceivers are linked via the Internet. We show the Internet as a “cloud” because we don't care what goes on inside it – all we need to do is send packets with the correct addressing, and they will emerge at the correct location

a little while later. If those packets contain encoded voice signals, the technique is known as “Voice over IP”:

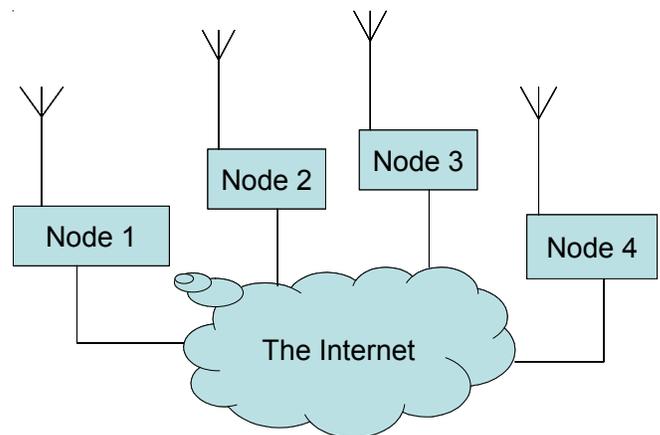
If the connections are made correctly it should be possible for radio signals received at transceiver A to be converted to a digital stream – and passed over the Internet to transceiver B where they are transmitted for all to hear. When the station contacting station B wants



to talk, the direction reverses and audio received at B is digitized and sent over the Internet back to transceiver A, where it is then transmitted to the local listeners.

Since the Internet has a world-wide reach, it would be quite possible for Transceiver A to be a UHF radio in the U.S.A. and Transceiver B to be a VHF radio in England.

Now imagine a situation where there are hundreds or even thousands of transceivers around the world, all connected to the Internet. The picture would look something like this:



By issuing suitable commands the users at Transceiver A – or “Node 1” could connect via the Internet to “Node 3”. Meanwhile the people at Node 4 might want to make a connection to Node 2. At any one time there could be many links taking place, all independent of each other.

This is the essential idea of IRLP – linking of amateur radio stations through the Internet. The

transceivers could be simplex base stations, or they could equally well be repeater stations. Setting up of the Internet calls is carried out by sending DTMF touch-tones from your radio to the node, the same way you would set up an autopatch.

One important point about IRLP is that all calls begin and end at an amateur radio station. It is *not possible* to join an IRLP contact from an Internet-connected PC with a microphone and headphones. This is a significant difference from Echolink, the other main method of amateur radio Internet linking. Incidentally, our near neighbors at the North West Amateur Radio Association employ Echolink on the WB2IXR repeater at Yorktown, on 147.015 MHz.

Progress to date

As well as a radio and an always-on Internet connection, there are other requirements for an IRLP station. The IRLP software runs under Linux, and needs a Pentium PC with a Soundblaster sound card and network adapter. I found just the thing at the Ramapo Mountain ARC hamfest. An IRLP card goes inside the computer and connects to the parallel port and radio. I ordered the IRLP card with Linux software from VE7LTD and had it in my hand from Canada within the week.

I had nominated a Yaesu FT-8000 purchased a while ago from WA2ZOA, but the 2 meter receiver and battery back up were having problems, so I switched to an FT-7100. Wiring the radio to the IRLP computer is the builder's responsibility – I opted to use the FT-7100's packet radio mini-DIN connector and made up a cable using a PS/2 mouse extender from Radio Shack.

Installation of Linux on the PC went well, and the hardware checked out as being ready to go... then disaster struck. The Linux PC has to download a script from the IRLP FTP site... and the server was unavailable. Furthermore, the IRLP web site, <http://www.irlp.net> stayed unavailable for days on end. I checked with my friends in the U.K. and with the support team and found that due to a number of circumstances, including the fires in British Columbia, a key IRLP server was down, resulting in a temporary inability to do installs and reinstalls

What's to come

Assuming the IRLP servers come back up and I can successfully download the software, here's what to expect. We'll start by testing the equipment on a 440 MHz simplex frequency... possibly 445.000 MHz with a PL of 179.9Hz. Simplex operation does *not* come under FCC rules for automatic control, so the station can only transmit when the control operator is present. (See *QST*, Feb 2003, p45.)

Since the station is not operational yet, the following instructions are necessarily very tentative!

If you want to receive a call from another IRLP station, just remember that the other station is handling the call. All you do is transmit and receive on 445.000 MHz with 179.9 Hz PL as though you were making a regular simplex contact. Wait a few seconds for break-ins before transmitting, then pause a couple of seconds before talking to give the Internet connection time to start relaying. You will hear appropriate announcements from the IRLP software.

To initiate a call to another IRLP node, the first thing to do is find the node number. There is a list of active nodes around the world at <http://status.irlp.net>. Listen for a while to make sure the local node is not already busy, transmit on 445.000 with 179.9 PL and make an announcement of your call sign and the node you are trying to reach — then key in the node number on your touch-tone pad and release the PTT. You should hear the called node identify with call sign and location. Wait a few seconds to check that the frequency is clear then make your call, announcing your call sign and location, for example “This is KB2CQE in Peekskill, New York listening on IRLP via NM9J”. When you are finished, turn off the link by keying “73” on your DTMF pad.

Assuming the simplex trial is satisfactory, PCARA will probably transfer the node to one of the club's three repeaters. There are additional technical requirements for repeater operation, so be prepared for some experimentation.

Further reading: see “From Ether to Ethernet” By VE3SY, *QST*, May 2003 pp 28-32

—73 de Malcolm, NM9J

Hide! - N2KZ

The PCARA radio direction finding foxhunt begins in a few days. Several people will be rushing to find me! I must stay hidden as long as I can! It isn't easy!

Here are the criteria: The den must be in a public place that is accessible by cars. It must be a place where you can sit, for over an hour, without drawing attention to yourself or trespassing on private property. Your signal must reach the starting point at the Beach Shopping Center with good signal strength and you can't be farther than five miles away. (My only device of VHF transmission is my five-watt Icom IC-T7H HT, so transmission field strength is an added challenge.) The events of 9/11/01 add another level of caution. You do not want to appear to be a member of a clandestine covert operation about to seize the local Dairy Queen! Finally, you need to be relatively close to a restaurant that can handle a crowd of 15 people or more, which provides varied and edible food!

Considering the population density of this area, these criteria eliminate about 98% of all sites within the five-mile radius! I searched high and low for a site! On four different scout missions, I discovered several potential sites that were eventually eliminated.

My initial plan was simple. If you need a good place to transmit on VHF, you look for height. I revisited a remarkable place in my old village of Croton-on-Hudson used for the local police repeater positioned high above the world. It was hidden, but still accessible. I could hit the Beach Shopping Center pretty well from there. Bingo! But, it was not to be! Not only did I worry about interfering with the local gendarmes, but also a little sign at the bottom of the tower stated “No Parking Anytime.” The place I would park was just 50 feet or so from someone’s living room window. This was way too conspicuous. End of story!

The next perfect den was an amazing one. I found a lovely and picturesque site on the edge of the Hudson River where I could reach nearly every local repeater with ease. It proved remarkable since my transmission trials were made sitting inside a car with an HT at sea level. This would be a great maritime view to watch and ponder while I was waiting to be caught. The only problem was its proximity to Indian Point. You could easily see Homer Simpson in his control room from this site!

Another possible site was also worthy of an Ansel Adams photo shoot, inspired by our Field Day adventures. It was a public place with a large parking lot and reasonably good height. It was the lofty pull-off on the way to the Bear Mountain Bridge. I nixed this idea simply because it was so difficult to turn around if you missed the site. I even toyed with the idea of going to the top of Bear Mountain and camping on Perkins Drive. Alas, it was outside the five-mile limit.

The search continued another day with an endless tour of Continental Village and Van Cortlandtville. I took a cue from our first fox, Malcolm, NM9J, and found a dandy high school parking lot with lots of height. One minor problem: Its location was just outside of Westchester County and probably off some people’s maps. It was the new Putnam Valley High School complex near Oregon Road. Lots of height and beautiful views! We should encourage them to start a ham club!

Restaurant proximity played an important part in the search. I found a couple of potential spots for the fox den that lost favor because the only nearby eateries were scary renditions of pizzerias or Chinese food take-outs. I could not bring myself to punish my fellow club members in this respect!

I also courted the idea of sitting at the abandoned WLNA/WHUD studio site on Radio Terrace. It is a sorry sight to see these days. The multiple “No Trespassing” signs posted everywhere dissuaded me. It was a forbid-

den place, but it enjoyed a nice view and plenty of height.

Discouraged, I also looked for a site somewhere on a quiet street that was not within the view of a house, where I could sit and not be noticed. If you want an extraordinary challenge, find a place like that! My survey, lasting several hours, completely verified how difficult it must be for builders to find sites for new housing projects in this area. I was also amazed how clever home builders had been in the recent past. I saw many areas, on my ten-year-old dated map, which had now been filled in with new subdivisions on uncharted little streets.

So, now you know many places where you should not look for me! I have found a quite challenging place to hide that will provide some valuable experience in real-world direction finding. In some respects, it will be quite easy. To others, it will prove very frustrating! Always remember: The fox is a clever and sneaky species that will do anything to avoid capture! I welcome the hunt and hope you will join in the fun! The foxhunt check-in begins Saturday, September 21 at 2:30 pm at the Beach Shopping Center on Route 6 in Peekskill. Bring your Yagi and determination! If you don’t participate, I may be waiting forever!



— 73 de N2KZ Karl “The Old Goat.”

Back to the Sixties?

In a recent *Financial Times* article entitled “Back to the Sixties”, columnist Richard Tomkins argued that the high point for the industrialized west came and went in the 1960s. He points out that auto manufacturers are nowadays taking inspiration from models like the Volkswagen Beetle, BMW Mini and Jaguar S-Type. The 1960s are variously seen as the golden age of television, pop music, motoring, art-house cinema and air travel. That was a time when standards of living were rising and almost everyone could afford television. Technological progress stretched from the first man in space to the first man on the moon, and from the pill to the first heart transplant.

I would argue that the 1960s were also the golden age of amateur radio and everything since has been a case of refinement. (This might have something to do with my first license being granted in the 1960s, and my knowledge of earlier times being a bit sketchy... but that’s not going to stop me!)

Let’s take a look at a “modern” amateur radio station of the 1960s and pick out some of the key

characteristics. Just as the TV set became affordable, so too did the one-box transceiver. A progressive station of the 1960's would certainly have had an HF transceiver, rather than a separate receiver and home-brew transmitter. Sharing of common circuitry and use of one VFO in the transceiver's single enclosure reduces cost, size and complexity. Transceivers are much easier to operate than separates – just imagine running Field Day with a station where you have to net the transmitter to the receiver every time you change frequency.

That HF transceiver was probably capable of operating single sideband and CW. The sixties saw the decline of amplitude modulation and growth of SSB. While some amateurs were home-brewing SSB transmitters, most SSB operation was with commercial equipment. Many of the manufacturers were U.S. companies such as Collins, Swan, Drake, National and Hammarlund, but by the end of the sixties, the door was opening to the Far East and those fine radios were being joined by the likes of Yaesu. Something else you would probably notice in a 1960s shack would be a good proportion of home-built and kit-built equipment, with at least one item from Heathkit.

The 1960s were a time when VHF and UHF operation began to assume significance. At the beginning of the decade, most of this operation would have been crystal-controlled AM, but as time went on, people began building transverters to shift their HF SSB/CW signals up into the VHF bands. As a result of the greater efficiency and improved receiver sensitivity, operating convenience improved and DX range increased dramatically.

Much of the 60's equipment used vacuum tubes. Today's enthusiasts may view this as a power-thirsty, quaint, dead-end technology – but it was tremendously successful at the time and those conveniently-sized vacuum tubes could be changed without difficulty — meaning that equipment could be serviced by the radio amateur himself or herself. Compare changing out a pentode RF amplifier tube with replacing a microscopic surface-mount GaAsFET today! As well as being easy to service, vacuum tube equipment was excellent in the area of strong signal RF performance – we are still trying to match the dynamic range of classic tube equipment from the '60s.

Let's take a look at a mobile station from the 1960's... some of those commercial HF SSB transceivers were capable of running from 12 volts DC as well as AC power. The tube heaters were wired in series/parallel to match 12 volts, and a transistorized inverter would step up the available battery voltage to 800V for the output tube anodes. A mobile HF station running 100 watts PEP of single sideband could work the world when conditions were right. It's much the same today, except that the transceiver has become a lot smaller and those

tubes have all been replaced by semiconductors – but the basic functionality of an HF mobile transceiver is just the same.

The one place where 60's technology did not point the way to the future is the handie-talkie. By the end of the '60s, small HTs for 10 meter A.M. were available and semiconductors had advanced to the point where one or two watts of RF could be produced at 2 meters by the home constructor. VHF handie-talkies did not become popular until a little later, in the mid 70s, when FM repeaters took off and a crystal controlled VHF transceiver could be housed in a hand-sized case along with the nickel cadmium battery.

So here's your mission, should you choose to accept it – can you think of one item of today's popular amateur radio equipment that would come as a complete surprise to a time traveling ham from the 1960's?

-de Malcolm, NM9J

PCARA Officers

President:

Greg Appleyard, KB2CQE kb2cqe @ arrl.net

Vice President:

Bob Tarsio, N2CBH; n2cbh @ arrl.net

Secretary/Treasurer:

Mike Aiello, N2HTT n2htt @ arrl.net



PCARA table at the Tri-State ARA Hamfest, Matamoras PA on August 3. Left-to-right Sean KC2IDN and Joe KR2V; Bob N2CBH and Mike N2EAB

Peekskill / Cortlandt Amateur Radio Association

Mail: PCARA, PO Box 146, Crompond, NY 10517

E-Mail: w2nyw@arrl.net

Web site: <http://www.pcara.org>

PCARA Update Editor: Malcolm Pritchard, NM9J

E-mail: NM9J @ arrl.net

Newsletter contributions are always very welcome!

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.

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 Sep 7: September meeting, 3:00 PM. HVHC.

Sun Sept 21: Foxhunt, check-ins start at 2:30 p.m. at the Beach Shopping Centre. Hunt begins 3:00 p.m.

Hamfests

Sat Sep 6: Saratoga County R.A.C.E.S. Association Hamfest, Saratoga County Fairgrounds, Ballston Spa, NY., 7:00 A.M.

Sun Sep 7: LIMARC Hamfair, Briarcliffe College, 1055 Stewart Ave., Bethpage, NY. 9:00 A.M.

Sun Sep 14: Candlewood ARA Hamfest, Edmond Town Hall, Rt 6, Newtown CT, 8:30 A.M.

Sun Oct 5: Hall of Science ARC, NY Hall of Science, 47-01 111 St., Flushing Meadows, Queens NY, 9 A.M.

Sat Oct 11: Bergen ARA Fall Hamfest, Westwood High School, 701 Ridgewood Rd., Washington Twnshp, NJ 07676, 8:00 A.M.

VE Test Sessions

Sep 7: Yonkers ARC, Yonkers Police Dept., 1st Precinct, E Grassy Sprn Rd, 9:00 A.M. Contact: D. Calabrese, 914 667-0587.

Sep 16: W5YI VEC Pel Hams, Pelham Doronco Town House, 20 5th Ave., Pelham, NY, 7:30 P.M. Michael Cifferi, (914)738-5775.

Sep 22: Columbia Univ ARC, Watson Labs, 612 W 115th St. New York, NY, 6:30 p.m. Contact Alan Crosswell, 212 854-3754.

Sep 27: PE.A.R.L., EOC, Putnam County Office Bldg, 40 Gleneida Ave., Carmel, NY. 9:00 A.M. Contact NM9J, 736-0368.

Oct 5: Yonkers ARC, Yonkers Police Dept., 1st Precinct, E Grassy Sprn Rd, 9:00 A.M. Contact: D. Calabrese, 914 667-0587.



Peekskill / Cortlandt Amateur Radio Association Inc.
PO Box 146
Crompond, NY 10517