The Pileup

Newsletter of the CDXA

The Carolina DX Association

Southeast VHF Society Convention Recap

By John Scott, K8YC

I wasn't sure what to expect when I learned that the Southeast VHF Society was going to have their Convention in Charlotte this year. I don't yet consider myself an aficionado of VHF/UHF, but it's beginning to grow on me. I'll admit that bouncing signals off of the moon in an Earth-Moon-Earth (EME) QSO is certainly DXing of a pure variety, if only on the basis of distance. Yet, when I considered the investment in time and money juxtaposed with the infrequency of the contacts, I had put the EME guys on the "lunatic" fringe—no pun intended!

After spending a weekend with the big guns of VHF/UHF, I realize that these folks are at the forefront of radio technology, much like the hams of the 50s and 60s were to HF radio. As I sat through 1-1/2 days of forum topics, I learned that there is an extreme amount of experimentation going on in the VHF/UHF world. I'll even go so far as to say that it is the "new frontier" of the hobby. And, it is a broad frontier ranging from 6 meters to 24 Gigahertz with a lot of stops in between.

I'll provide a few examples for you. On Friday morning, before the forums began, there was an antenna range set up in the parking lot, and a noise measuring contest set up inside the forum room. The noise measurement area was outfitted with laboratory grade measuring equipment which was used to measure the noise figure of homebrew preamplifiers for any of the VHF/UHF bands. A person could enter his/her "pride and joy" into the competition, and certificates of accomplishment for the winners were awarded later in the conference. The antenna range was also equipped with lab grade instrumentation to measure antenna gain of homebrew antennas against gain of a reference antenna. Antennas from 6 meters to the microwave region were being tested. One could even bring a commercial antenna to see how well it was doing vis-à-vis manufacturer's specifications. Needless to day, commercially built antennas could not be entered into the competition. That probably would not have mattered, because the homebrew models would have blown them away! One of my favorites, which had been an earlier winner of this competition was a "backscratcher" antenna for 1296 MHz. The "boom" was about 18" long made from—you guessed it—a bamboo backscratcher. The backscratcher had been a giveaway by Mouser Electronics at an earlier conference, and everyone thought it would be "cool" to use the giveaway as a basis for build-

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CDXA PacketCluster & Other Communication Systems		
W4DXA (11 mi. NE of Mooresville)	144.93 MHz (1200 bits/second)	441.00 MHz (9600 bits/second)
K4MD Charlotte, NC	144.91 MHz (1200 bits/second)	441.075 MHz (9600 bits/second)
K4MD (AR Cluster via Telnet)	k4md.tzo.com	
CDXA Repeater 147.18 MHz (+600)	W4DXA, Near Fort Mill, SC	
World Wide Web Homepage	www.cdxa.org	
Wednesday Luncheon (11:30 AM)	Shoney's, 355 Woodlawn Road, Charlotte, NC (704-525-4395)	

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ing an antenna at the following year's conference. As I recall, this little gem of an antenna produced something better than 15db of gain! For next year's conference, an ordinary yardstick will form the basis of antenna support.

The AA4ZZ team brought a few of their commercial antennas down to be measured, just to be satisfied that they knew how their antennas were performing compared to manufacturer's specifications. By noon and the kickoff luncheon, all antennas and preamps had been measured.

Guy Titman (W4NUS), Ken Boyd (K4DXA), and John Scott (K8YC) confer about measurements being made on the antenna range.

The Pileup

Official Newsletter of the Carolina DX Association

Published monthly 10 times per year, excluding the months of June and December.

The purpose of the association is to secure for the members the pleasures and benefits of the association of persons having a common interest in Amateur Radio.

Members of the CDXA shall adhere to "The Amateur's Code" as published from time to time in *The ARRL Handbook for Radio Amateurs*, and shall consist of those valid licensed amateur operators having an interest in promoting amateur radio. Long distance communications (DX) is of special interest to members of the association, but said interest is not a requirement of membership.

Dues are $30 per year for those using the PacketCluster maintained by the Association, $15 otherwise, payable each January. Dues are payable by check to the Secretary/Treasurer:

Jim Miller, K4SQR
11600 Hilda Court
Charlotte, NC 28226

Address, telephone, and email address changes should be directed to the Secretary/Treasurer at the above address or via email at: k4sqr@juno.com.

The technical content of the forums was very good. Paul Drexler (W2PED) spoke about how to modify waveguide filters produced for the commercial 23 GHz microwave bands for use on the 24 GHz amateur bands. Our own Paul Trotter, AA4ZZ, explained how he modified a Yaesu FT-736 to "hear" better by installing some custom filters in the IF section. Ray Rector (WA4NJP) traced his 19 year effort to earn the first WAC award ever issued with a 6 meter, EME endorsement. An added plus of this event is that the ARRL publishes the papers as a set of "proceedings" which is well worth the price of the conference.

I'll bet you thought that you had problems figuring out how to find the skewed path from that far-off DX in Southeast Asia. Only one degree of freedom—a cinch—maybe two if you have a stack to account for sky wave angle. Consider the EME or satellite guy who tracks the moon/satellite in azimuth, elevation, AND, polarization. Yep, the signals passing through the atmosphere change polarization in a both a predefined way as well as a non-defined way due to Faraday rotation. Three degrees of freedom! Wow, and you thought you had it bad.

Discussion was not limited to only radios and antennas, either. Jay Liebmann (K5JL) presented ways to save a decibel here and there in the receiving path by paying attention to the use of connectors. At UHF frequencies, even the best connectors may introduce losses, and when added together these losses may mean the difference between making a QSO or not—particularly in the small signal environment of EME! I found particular fascination in a presentation by Ray Rector (WA4NJP) about some failings of the well received "N" connector. If carrying high power with an unmatched load, an N connector's center contact will be turned to "dust" before long. How to fix it? Ray showed a homebrewed connector assembly, produced using two connectors of German origin, affixed to a machined aluminum block drilled and tapped to accommodate the connectors. Thereafter a more robust electrical conductor interconnected the two center pins and the connector "block" was filled with a Dow-Corning silicone dielectric to negate entry of any moisture into the assembly. Problem solved.

Not everything was purely technical. Charles Osborne

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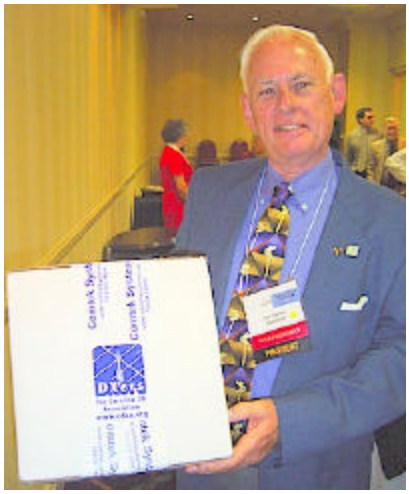
(K4CSO) is fascinated by radio astronomy and was invited to visit the Arecibo Radio Telescope in Puerto Rico by a member of the radio astronomy community. His presentation with pictures of the site provided insight into the inner workings of the radio observatory as well as how the antenna feed assembly steers the beam of this 1000 meter wide spherical dish.

Mike Melum (KL6M), an EMEer from Alaska, showed how he converted a surplus "portable" earth station acquired from AT&T to his own backyard EME dish. A pivoting baseplate from a 17 ton crane was affixed to Mike's custom fabricated base to carry the large loads produced by the 30 foot dish. The complete process is depicted at http://www.qsl.net/kl6m.

In attendance at the conference were Ken Boyd, Gary Dixon, Bill Fisher, Ted Goldthorpe, Kim Hinceman, Tom Wright, Paul Trotter, and yours truly. At the banquet on Saturday night we were joined by Itice Goldthorpe, Cindy Wright, and Josh Fisher. A picture of the "CDXA Gang" is shown above.



CDXA offered support to the conference by donating an 8 position antenna switch from Comtek Systems for the winner of the antenna gain contest. Winner was Ott Fiebel (W4WSR), shown at left making off with his prize!

Sound like fun? Next year's venue will be Greenville, SC, just "down the road". Put it on your calendar and prepare to learn something interesting about VHF and UHF radio technology.

Spirit of N4SU Lives On At Discovery Place

By John Scott, K8YC

In February, I received an email from Bill Tippett, W4ZV, advising me that the late Dave Kennedy's widow, Sonja, wished to donate Dave's Geochron Clock to the Radio Education Center at Discovery Place. After conferring about 10 seconds with Station Manager John White (WB2NHQ), the answer was a resounding "YES". In the recent past, there had been a Geochron Clock on the wall just outside the radio room, and the volunteer operators made good use of the clock for propagation predictions as well as to educate visitors on how sunlight and solar flux affects radio propagation. Unfortunately, a youngster involved with some "horseplay" in the hall had been injured by the clock and Discovery Place executives decided to remove the clock to a "safer" location, leaving the radio room without this useful tool.

The opportunity to again have a Geochron Clock accessible to the radio room was a dream realized. Bill Tippett picked up the clock from Sonja Kennedy and delivered it to me at the Charlotte Hamfest. I, in turn, delivered the clock to Discovery Place. It is now installed within the confines of the radio room never to be "lost" again. A plaque on the clock reads:

In Memory Of
Dave Kennedy, N4SU
63 Years On The Air, An Avid DXer

If you didn't know Dave, a wonderful insight into life with Dave can be found in the September 2001 and October 2001 issues of the *Pileup*, available on the CDXA website. And, who provided this insight? Sonja Kennedy. Now, every time I show up to do my turn as a volunteer operator at Discovery Place, I'll be reminded of Dave and Sonja, OM and XYL, balancing their "normal" lives along with DXing! We'll all be thinking of you, and thanks for the memories.

Field Day 2005 is Just Around the Corner

Did you realize that Field Day 2005 is just around the corner? We're a little late in ramping up, but the officers and a few others have been kicking around some ideas for this year's campaign. In our first entry in a number of years, in 2004 CDXA turned in a respectable performance. One of the things we learned through a post-contest critique session was that we did not meet our goals as regards CW contacts and that we did not do as well on 40 meters and 75 meters as we should have. Scoring counts two points for each CW and Digital QSO, while phone contacts count only one point each, so the most productive way to increase overall score will be to go after the CW QSOs. At this juncture, we believe we'll be operating as 2E or 3E (two or three transmitters, emergency power, from a home location). Don Daso has offered to sit in a chair pounding brass for 24 hours straight if we'll keep him supplied with coffee and Coca-Cola.

Assuming we'll operate in the 3E category, we'll shoot for one station to be exclusively CW, another to be predominantly a CW station moving to phone if the rate on CW won't hold up, and the third station to be our phone station. We're investigating options for a home location at present, but won't be able to name the location until details have been worked out. Everyone who participated last year fully enjoyed working Field Day. It has the flavor of a contest, but also provides the satisfaction of knowing we can put together a fine station running under emergency power by aggregating physical and mental resources. If you'd like to be involved in this year's effort—even if only to help in setup and teardown—contact John Scott (k8yc@adelphia.net), Tom Wright (n4hn@arrl.net), Jim Miller (k4sqr@juno.com), or Ted Goldthorpe (tgoldthorpe@bellsouth.net) to make your interest known.

The Toolbox

By Don Daso, K4ZA

Hams don't use lubricants often, but when they do, questions often arise. "Should I oil this bearing, or not?" "What's the difference between greasing or oiling?" "Can't I use one lubricant for everything?" Herewith, a few words on lubricants. (Along with a suggestion: Don't type that word into GOOGLE and expect to read more on what I'm about to discuss! On the Internet, the word has a wider interpretation, along with vastly different applications.)

When folks ask about one lubricant for everything, I always indicate that it's possible, but only for a finite amount of time, with varying results. Selecting lubricants means you must understand something about the properties of bearings, so let's begin there. Lubricants are designed to: minimize friction at the points of contact in bearings; protect the polished surface in the bearing from becoming corroded; dissipate heat; remove or prevent foreign particles from getting into the bearing.

There are two basic types of lubricants—oils and greases. Each has advantages and limitations. Being liquid, oil can lubricate all surfaces and dissipate heat more readily. It retains it characteristics over a broad range of temperatures—making it ideal for high speed and high temperature jobs. Oil levels can usually be carefully controlled and monitored. Being thicker, grease can seal a bearing better than oil, simplifying seal design. It can easily be confined inside a bearing, allowing you to "pre-lube" fittings, for instance, as it "clings" to surfaces better than oil. As such, it lasts longer than oil.

Since hams are more likely to use grease, let's look at it more closely. Grease is made up of three elements—a base oil, thickeners, and additives. About 95% of grease is oil, either mineral, synthetic or biodegradable. Thickeners are what give grease its density—its ability to stay in place, but also play a role in lubrication. The thickener allows the oil to "come out," as it's needed. Common thickeners include lithium, which is the most commonly used. Lithium is popular because it's very water resistant and holds up well over a broad temperature range. Aluminum complex greases are also common, because of their thixotropic properties, meaning they thin out under load, and harden when not being worked. They also pump readily, making them popular for hand use. Lubriplate is a typical example. Polyurea and calcium thickeners are used in hydraulic and for corrosion resistant protection, respectively.

Additives help meet specific problems in lubrication. Molybdenum disulfide (simply called moly) is the most common, used in extreme pressure applications. Graphite and zinc are also common. Tackifiers make grease sticky, meaning the grease will stay in place. Rust-inhibitors do exactly that.

Compatibility can be an issue in using lubricants, as not all greases agree with one another. Polyurea-thickened greases are incompatible with lithium or aluminum thickened greases, for example. Some synthetic oils do not mix well with mineral oil. These are usually not critical issues, but something you should be aware of, meaning if you see your grease getting harder, or softer, than you expect it to be, you may have a compatibility issue. Simply putting enough of the new, different grease into the bearing, effectively flushing out the old, is usually the solution.

Even the best grease or lubricant won't do you any good if it's incorrectly applied. Some applications require more grease than others. You can over-grease anti-friction bearings, causing them to run hot. And extreme environments require your attention—any water or dirt in or on bearing surfaces can destroy the effectiveness of all your efforts.

Tower bearings are always a hot topic: should I grease my thrust bearing or not? The typical Rohn bearing is designed to run dry. The speed is so slow that little heat will be generated. However, let's consider some basic physics. When a ball in such a bearing is motionless, the load is distributed symmetrically on the ball and the race. When a tangential load is applied, causing the ball to roll, the material in the race will "bulge" in front of the ball, while "flattening out" behind it. Since not enough heat is generated from sliding friction in a typical thrust bearing, metal pickup or welding, does not occur. But, the race can show evidence of wear—since it's a softer metal than the ball bearings, it will deform first, often to the point of seizure. Lubrication will not solve that problem. Nor will it hurt.

What lubricants are in my toolbox? *Penetrox*—for dissimilar metals use. *Lubriplate*—for tool use. *White lithium grease*—for tower assembly and stainless connectors. And that old standby of homeowners, *WD-40*—for water displacement, which is exactly what the name means, it's formula #40 from an extensive series of tests. And *STUF*—for coax connectors. What's in your toolbox?? **—K4ZA**

Welcome New Members!

Now that the dust has settled from the stir of the Charlotte Hamfest, we are happy to report the presence of several new members to the ranks of the Carolina DX Association. One name you'll recognize immediately is **Cliff Wagoner**, W3ZL. Cliff has been a regular at the weekly luncheons since suddenly showing up last October. He was a Vice President of CDXA before returning to his "roots" near Allentown, PA several years ago after living in Charlotte for many years. Rumor has it that Cliff forgot how cold those Pennsylvania winters can be before moving to Davidson, NC. Glad to have you back in Charlotte, Cliff.

Lou Dietrich, N2TU, will be relocating to Mooresville from Massapequa, NY in a few months. Lou already has his antenna in place at his new QTH. He won't have too much to chase, however, because he's already "Top of the Honor Roll" for DXCC. He's also on the Honor Roll for CW, SSB, and RTTY. DXCC Challenge and IOTA are now his challenges.

Kenneth Fath, N4KF, joins us from Burlington, NC. Looks like we'll have to have an "Interstate 40 Chapter" of CDXA for the folks in Winston-Salem, Greensboro, Burlington, and Raleigh.

Harvey Hutchison, NK0S, fills out CDXA membership in the southeast corner of NC from his home in Wilmington. Harvey will have to rendezvous with Nyles McKeithan (Lumberton), Mac Murray (Topsail Beach), and Robert McNeill (Morehead City) during hurricane watches.

Bill McDowell, K4CIA, joins us from Raleigh to fill out the "I-40 Chapter". Those who do the bulk sort for the W4 bureau will recognize that call, because Bill gets "lots" of QSL cards through the bureau.

Steve Peterson, K4CDX, comes to CDXA by way of Boone. He probably got tired of all that VHF/UHF RF raining down on him from the AA4ZZ team from atop the mountain near Boone. If you can't beat 'em, join 'em, huh, Steve?

Larry York, K4MU, helps hold down the northwest corner of North Carolina from his home in Leicester. We suspect from the size of Leicester that Carl Smith (N4AA) and Larry are neighbors!

Observing Duke Power's Charlotte BPL Trial

By Gary Pearce KN4AQ

(Gary Pearce is the Principal Information Officer for NC ARES and the editor of the SERA Journal. He has been an active watchdog of BPL activity and recently was very effective in disclosing interference created during Progress Energy's BPL trials near Raleigh.)

I had the pleasure of talking to the MARS club about BPL at their March meeting, and I thought I'd follow up with some more information, and hopefully motivate a few Charlotte area hams to form a local "BPL Team" to work with and monitor Duke Power's trial. Duke Power has been running a BPL trial since last spring in a neighborhood along Carmel Rd. on the south side of Charlotte, but it doesn't look like they have much oversight from the ham community. They recently announced plans to expand the trial dramatically.

In the current trial, Duke uses hardware from Main.net. This is a spread-spectrum system that puts a crackling "Geiger counter" sound across the HF spectrum from as low as 2 MHz to as high as 22 MHz. I'll say up front that the Duke BPL system makes a good attempt at avoiding interference inside the ham bands by notching the BPL as it crosses that spectrum. But it's not perfect, and my mobile monitoring has its limitations. The Charlotte area needs a few hams who can stay on top of this trial and learn more about how the Duke BPL system is performing. Keep reading for details.

At the MARS meeting I asked how many in the audience had HF mobile. I was surprised how many did – maybe 15 of the 50 or so hams present. Of those, only three or four had looked for BPL signals in the trial area, and none had heard anything they could identify as BPL.

That didn't surprise me. I wasn't able to identify the BPL the first time I monitored in the area either, for several reasons. My first problem is that I only had a rough idea of what to listen for. I was very familiar with the "Amperion signature" of BPL from Progress Energy's trial near Raleigh. That system uses thousands of individual carriers, each modulated with a little data, and all added together to make one broadband data stream. Those carriers are easy to spot, whether the system is idle (they sound like dead carriers, 1.1 kHz apart), or carrying a lot of data (they sound a little like packet that never ends as you tune across the spectrum). I'd only heard the Main.net "crackle" on video from Ed Hare W1RFI, the ARRL's BPL expert. But that's not what I seemed to be hearing in Charlotte.

What I *was* hearing was ordinary power line noise, and lots of it. I don't know if the noise was caused by the BPL system or not, but it fell off as I drove out of the immediate area. It reached S9 anywhere near the power lines, and obscured the BPL signal. There is a big difference in sound between the Main.net BPL and regular power line noise, but blended together it's all just one hash, especially if you aren't really familiar with the sound.

Since I live in Raleigh, trips to Charlotte to listen were infrequent. But over the past few months I've accumulated enough time there that I've learned what to look for and where to look for it. Trips to listen to the Main.net systems in Emmaus PA and Manassas VA helped me fine-tune my ears.

It's still not possible to do a comprehensive analysis of the Charlotte system's effect on the ham bands on all frequencies at any location because of the line noise, but I've gotten a much better handle on it. I'd like to pass that experience on to local hams who can follow up and keep track more consistently than I can.

Location, Location

The key to hearing BPL instead of power line noise came from the realtor's mantra: location, location, location. Duke's trial brings BPL up the overhead lines on Carmel Rd. from behind the Post Office near NC 51, and distributes it to neighborhoods west of Carmel Rd. on underground lines. I've concentrated on listening to the overhead line, where the signal is stronger. In the Raleigh trial, I was able to hear signals on the underground lines. That's still an unknown in Charlotte. But to get away from the power line noise, I parked a block off of Carmel inside one neighborhood. I was rewarded by being able to clearly hear the BPL crackle for the first time.

It was S5 to S7 outside the ham bands. This system attempts to keep interference out of the ham bands by using "notches" – DSP filters that reduce the signal in and around the ham bands. The notches began 50 or more kHz from the band edges, giving them a wide margin. From a block away on a mobile antenna, I could hear no

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trace of BPL inside the ham bands. But at that distance I didn't expect to.

Next, I trolled up and down Carmel, looking for any sweet spots with low power line noise. The search was complicated by the fact that you hear this BPL best by turning the noise blanker off. Sorry, Duke, a noise blanker is no cure for the crackle, but it does take the edge off it a bit. But with the blanker off, ignition noise wipes me out. So I did a lot of stopping and parking.

I found a few places where I could get pretty close to the line with minimal noise on at least some ham bands. I also experimented with modes and filters. S3 power line noise with a 2.6 kHz wide filter in SSB became S0 with the 1.8 kHz filter, but it jumped to S8 in AM with a 6 kHz wide filter. Changing filters and modes had minimal effect on the BPL strength, though, so I could "fine tune" my receiver for the conditions at each site.

Under the power line at one spot along Carmel Rd., I found S9 BPL outside of 40, 20, 17 and 15 meters. The lowest frequency I heard it was about 6 MHz, though it might have gone lower. My Outbacker antenna becomes very selective on those low frequencies, and doesn't hear signals between 40 and 80 meters very well. The BPL topped out at 21 MHz, and I heard none above 15 meters.

Good News In The Notches

With S9 BPL 500 kHz outside of these bands, and given the limits of my mobile reception, I could not detect *any* BPL inside the bands. That's pretty good news – better than I've seen on any other system. On the Amperion system with S7 to S9 BPL outside the band, I still heard plainly audible BPL across any notched ham band. The Duke system's guard band around the ham bands was wide, maybe 100 kHz most of the time. This is important because the BPL spectrum doesn't end abruptly. It tapers up and down into the notches and band edges.

It's important to temper this observation with some caveats. The mobile antenna I was using is very inefficient compared to a home antenna, even a dipole. In Raleigh, mobiles were able to hear the BPL signals for only 300-500 feet when moving perpendicularly away from the line. However, home stations heard the signals 2000 to 5000 feet away. There are no home stations in the Charlotte trial area, and I can't predict if a home station within a block or two of a line would hear the signal or not. Also, the system didn't see to be carrying much data traffic. At idle, it crackles and pops. When it's carrying lots of data, you hear more of a "ripping" sound. The spectrum is used more densely, and the strength might be higher. A test with an idling BPL line is not conclusive.

Perhaps hams here can try a test we never got around to back in Raleigh – get permission from a homeowner to set up a "Field Day" type station with some serious antennas a reasonable distance (150-500 feet) from an overhead line and see what it sounds like. It would be better to do this in cooperation with Duke Power, and have access to a computer on the BPL network. That way you could create traffic by downloading some big files. You could also see if there's an "ingress" problem. That is, you can see if a ham signal interferes with the BPL operation. Tests with Main.net systems in other areas suggest there might be. I completely stopped BPL downloads with just 5 watts on 20 meters in Emmaus, PA, on an earlier generation Main.net system.

One Hot Line

Just as I was feeling pretty good about this system, but wondering if I'd missed something significant and worrying that hams would think I was whitewashing Duke Power's BPL, I looked in one more spot – the parking lot behind the Post Office. That's the first place I looked last spring, the first place I found so much power-line noise that I couldn't determine if there was BPL there or not. This time, I found BPL galore. Just outside 17 and 15 meters the BPL signal was S9+40dB, the strongest I've ever seen anywhere. Inside those bands, the notches were bringing the BPL down to S5 to S7. That might be as deep a notch as the other lines, but the much stronger signal overall meant the notched signals were quite readable. And ought to be heard by a home station at several hundred feet.

What could cause this? Well, the signal level is adjustable, and it sounds like this one was cranked up high. The question is why? It could have been an error. I don't know what kind of feedback the system operator gets on system parameters, but it evidently doesn't include a big flashing red light that says "OVERPOWER." On the other hand, they may have

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needed that much signal to reach the next box down the line, and maybe overcome some power line noise.

I'd guess that Duke doesn't sweep the area with an HF receiver listening for their signal. That introduces one of the big problems I see with BPL. Utilities and their equipment vendors are using HF spectrum, ours and other's, for their own convenience. They are, in a sense, all mouth and no ears. They don't listen to the racket they create, and have little "sensitivity" to the effect it has on ham radio. They all say that they do not want to cause interference, and most say they believe their systems do not interfere (hams have plenty of evidence to the contrary). But they aren't listening with *our* ears. They don't appreciate weak signal reception the way we do. Who else would find tuning across nothing, looking for a barely perceptible RF energy from a QRP DX operator to be an important use of the spectrum?

These trials are small, but if BPL is successful, the area covered will grow to cover whole cities and suburbs. This small trial has at least one "problem" line. How many might we see in a real rollout? We will be depending on the utility to watch and maintain a huge infrastructure, and be responsive to problems it causes us. We will want, and deserve, rapid reaction. The utilities worry that hams will lodge frivolous complaints, or will mistake some of the many other bleeps and blurps heard across HF for BPL and send them on wild goose chases.

Hams, and other spectrum users, should not file frivolous complaints. But the utilities should bear the burden of checking out claims, accurate or not. They are attempting to operate a *major* communications infrastructure under no-priority Part 15 authority. They are borrowing spectrum from licensed services to do it. The cop on this beat, the FCC, has not shown much interest in making them toe that line. We have yet to see how it will play out.

There is a lot of information about BPL published in *QST, CQ*, the *Repeater Journal*, and especially on the web that I'm not going to try to repeat here. In some ways it's way too much. It takes some dedication and time to come up to speed on the whole topic. I don't claim to know all there is to know. The only person I know who comes close is Ed Hare W1RFI, the ARRL's lab manager. The ARRL has dedicated most of Ed's time to BPL, and he is tireless. Go to www.arrl.org/bpl and you'll get a sense of the quantity of information he's been dealing with, along with audio and video recordings of various BPL systems as heard on the ham bands.

But Ed needs lots of help from the field, including Charlotte. I urge you to work with clubs, work with ARES, but put a team together quickly.

When Duke Power began their BPL trial last year, their representatives spoke at a MARS club meeting and promised no interference, and cooperation with local hams. They talked about setting up a test apartment with ham equipment and antennas to see how the system affected ham radio. They have done some of this "in-house," but not in cooperation with local clubs. There's been no independent oversight of their efforts. And checking BPL for interference isn't a one-shot deal. The systems are dynamic, and require frequent observation if you really want to know what you're dealing with.

The Raleigh BPL team, Tom N4TAB, Frank W4FAL and I, will be glad to help. Drop me a line at kn4aq@arrl.net and let me know who I'm working with!

Ten and Twenty Years Ago. . . .

Twenty Years Ago:

Ron Wright, ZL1AMO had just returned from Tonga, producing over 12,500 QSOs for the deserving. He was presented with the DX Hall of Fame Award in April of this year. Ron is still handing out QSOs from rare places all over the Pacific Ocean. He's now on the Board of Directors of INDEXA. . . .A disappointed amateur radio community learned that Bouvet Island was not to be activated. A research vessel arrived at the island, transported key personnel to the island via helicopter to perform scheduled tasks but departed the same day leaving too little time to conduct radio operations. . . Orders were being taken for a VHS video tape about the Navassa Island DXpedition. Was this the last time Navassa was activated?

Ten Years Ago:

CDXA was having a minor crisis this year. There was no newsletter editor, and only three issues of the Pileup

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were to be published all year. Bill Taylor, now SK, stepped up to edit one of the issues. . . .Joe Simpkins served as President this year. . . The steep learning curve of the newly implemented PacketCluster system was giving a number of the technical gurus of CDXA some fits, but things were improving. . . .A reminder that it was time to do a thorough once-over of your tower was the topic of the hour. Checks should be made of clamps, preforms, guys, anchors, cables, rotors, thrust bearings, and trees likely to fall on guys and take out your tower. (Some things never change, it seems. Have you checked your tower yet in 2005?)

In The Contest Trenches

This word came in from Steve Sullivan, KZ2I, shortly after the last issue of the *Pileup* was published....

> It ain't DX but thought you'd like to hear that I took 1st place for Roanoke Division and 10th nationwide in low power class in the ARRL Phone Sweepstakes. So CDXA has a top ten listing! Broke the 1000 QSO mark for the first time (in 30 odd years of SS). Results are on ARRL website and will be in the June QST.
> —73 de Steve, KZ2I

Congratulations, Steve, on your accomplishment.

Ted Goldthorpe (W4VHF) offers Steve Sullivan (KZ2I) congratulations on his Sweepstakes effort while at the recent Charlotte Hamfest.

CQ Annuonces Annual "DX Marathon"

(Visalia, California, 4/16/05) - CQ magazine today announced the revival of the long-dormant CQ DX Marathon, last run in 1948. The new CQ DX Marathon will essentially be a year-long DX contest, with stations competing to contact as many different countries ("entities") and CQ Zones of the World as possible over a full-year period, then starting again at zero at the beginning of the next year. The new CQ DX Marathon is part of CQ's broader "Waking Up DXing" program, whose goal is to reinvigorate DXing. The program was outlined for the first time at the International DX Convention in Visalia, California on April 16.

"DXing has always been the heart of ham radio," says CQ Editor Rich Moseson, W2VU, "and it continues to be the biggest thing that sets us apart from other forms of electronic communication. Healthy DXing activity is vital to the long-term health of amateur radio."

Scoring will be very simple, consisting of the total number of DX entities and CQ zones contacted over the course of a year. There will be no multipliers and each country and zone will count only once. In the case of a tie, the station whose last qualifying contact came earliest in the year will be the winner.

Complete details and rules for the new CQ DX Marathon will be published in the May issue of CQ magazine and will be posted on the CQ website (www.cq-amateur-radio.com) after the issue is in subscribers' hands. The first running of the event will be in 2006.

Now There's a Nice Rover Rig!

Paul Ponak (AD4IE) sent along this picture taken at the Morganton hamfest. He couldn't find the owner to learn more about it, but with that big solar panel, and the Ku-band dish, this rig seems to satisy all the comforts of home.

The Back Page

The **Pileup** will not be published in June while the editor takes his semi-annual hiatus from the publishing business.

If you didn't attend the **Southeast VHF Society Conference** held recently, you missed a great event. A synopsis of the event starts on the Front Page. Put this one on your calendar for next year when it will be in Greenville, SC.

CDXA will participate in **Field Day 2005**. We are working to be on top of the heap at the conclusion of this year's event. See writeup on Page 4.

Gary Pearce provides some observations on **Duke Power's Charlotte BPL trial.** Since Gary lives in Raleigh, he can use a few "watchdogs" who live in the vicinity of Charlotte. Read Gary's article starting on Page 6.

CQ Magazine announces its second initiative to encourage DXing—**The DX Marathon**. Details of this new award program/contest can be found on Page 9.

Have you been to the **Dayton Hamvention** recently? Why not make an event of it. Visit the Air Force Museum at Wright-Patterson AFB and stop in Holmes County, Ohio to experience Amish hospitality and culture. Sandwich the Hamvention in between (along with the ARRL National Convention) and you'll have had a great time of it.

Upcoming **Contests**:

Date(s)	Event	Comments
June 11-13	ARRL June VHF QSO Party	See May 2005 QST, Page 99 for details.
June 25-26	ARRL Field Day	See May 2005 QST, Page 100 for details

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See something wrong with your address label? Notify K4SQR at once, please.