The Pileup

W4DXA

Newsletter of the CDXA

July 1999

N4PQX	Bob Burton	President
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CDXA Packet Cluster & other communications systems

W4DXA	Young Mountain, NC	144.93 (1200 baud) & 441.00 (9600 baud)
K4MD	Charlotte, NC	144.91 (1200 baud) & 441.075 (9600 baud)
DXWIN	Digi-peater near Wingate, NC	144.91
repeater 147.18 (+600) near Fort Mill, SC		
homepage: www.cdxa.org		

The Pileup is published 10 times a year; there are no issues in June or December.

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EDITORIAL

Coincidences happen throughout each of our lives. So much that I've always wanted to create bumper stickers carrying the phrase. Some coincidences seem almost too purposeful to be random chance. Others are simply that—chance.

Everyone's life is a story, events strung together from beginning to middle to end. Coincidences can resonate throughout your story, providing profound moments of meaning, or seem simply inane, even boring. They usually call attention to structure, making you wonder who's the author of your life. Jorge Luis Borges, the great Argentine writer, created several stories (very elaborate *ficciones*) using this theme. *LIFE* magazine documented a truly synchronistic period in the lives of 15 people in Beatrice, Nebraska in March of 1950. All these folks were members of their church choir, and were scheduled to practice at 7:20 PM one evening. There were 10 unique and separate situations delaying each of them, so that when the church building was destroyed in an explosion at 7:25, no one was there to be injured.

Lives were changed, certainly. Was it random chance—Lady Luck? Divine providence? Such extreme coincidence would certainly cause you to stop and think. Simply watching a mother and child for a few moments will create the same atmosphere of introspection. Phone calls, letters or other remembered moments "out of the past," will do the same.

I was thinking about an old Ohio friend, Tony, W8DOY (now N8KW), the other day, and that evening, I received an e-mail from him, wondering if K4ZA was his old friend. We've burned our way through a series of e-mails, and have talked on 75M—to catch up on old times, renew our acquaintance, and so on. Simple coincidence, indeed. Nothing as earth-shaking as the Nebraska incident, but thought-provoking nonetheless. And there's something to be said for thought-provoking moments in this cockeyed caravan. After all, it's all some people have. Which is the final line of Preston Sturges' great and hilarious movie, *Sullivan's*
***Travels* , which will cause you to think about such coincidences whenever you watch it.**

--K4ZA

HOUSEKEEPING

Some members have raised issues, some have asked questions, about the future of the club, or possible activities planned for the fall. Here are some ideas. We'd like to incorporate more of our "outside Mecklenburg County" members. One way to do this is to have an area "coordinator," who could, and would, gather news and/or information about members and their activities and forward it to your editor. Another idea has Don visiting every member's shack—real personalized journalism, but not quite practical, I'm afraid. Another plan is to promote operating in certain contests—specifically, the CQ WW SSB and ARRL 10M contest. We're looking at awarding plaques to the high-scoring CDXA member in each contest. We're looking at having the winners appear on national TV, too. Stay tuned. As usual, none of these ideas will work without support (meaning more than just interest and enthusiasm) from the membership. Let your officers know what you think ASAP. If you can be an area coordinator—say for the mountain area, the Winston-Salem area, or over in the tidewater, let us know.

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MEMBER PROFILE

BRUCE GRAGG, K4ZO

When he was 17, and still in high school, Bruce decided to go for a General Class license, bypassing the more common Novice ticket. So, he made an appointment to take the exam in Winston-Salem, where the FCC gave quarterly exams. Like many of us, Bruce remembers it well. The exam room was a gym, and the acoustics weren't too favorable for copying CW—with old school desks to sit in, all made for right-handed people. Bruce normally writes left handed, sending code with his right hand. He says this seemed convenient, so that's the way he taught himself. The examiner fired up the code machine with its paper tape feeder and the dits and dahs echoed around the gym. To the best of his memory, 43 people were there to take some exam—at least the code portion. After the tape ran and the papers were graded, only five remained. He went on to pass the General class written test and about two months later, received WA4EGP. Bruce wasn't real active because of extreme antenna restrictions at his parent's home. He even admits to other priorities, like cars and girls, though he did have quite a few ragchews on his persimmon tree dipole and Eico 723 and Hammarlund receiver setup.

After graduation in 1969, Bruce went to Western Carolina University for a year in the pre-engineering program. Vietnam was hot and heavy then, so he delayed his education to get married and spend four years in the Air Force. Bruce worked in crypto-communications, installing, removing, or destroying (as needs arose) secure communications throughout Vietnam, Thailand, South Pacific, Europe, and the US. He was active in Air Force MARS and at various base amateur radio clubs. His Elmers in those days were W4ENQ, W5BW, and W5SPX. All are now deceased, but they imparted much appreciated knowledge and experience. In 1973, Bruce was back stateside, in Mobile, Alabama. The FCC had a field office there, so he went in and passed his Advanced. He got out of the Air Force in August, 1975. With two kids to support, he headed home to the Hickory area, to attend Catawba Valley Technical College, studying Electronics Technology. He met Roger, N4ZC, on 2M FM, who'd just settled in Stanley, having retired from the Coast Guard. Rog was thinking of starting up a DX and contest club! Bruce put up a TA-33 Jr. on a roof tripod at his parent's house, sold his old HW-101 and bought a Drake TR-4C, a nice radio, but not much of a CW rig. He learned how to work split using the "calibrated wrist method." (*In case some newcomers don't understand, it means spinning the dial an exact amount each and every time, so your frequency shift remains constant—while calling in the pileup. Humbling, at best.* –Ed.) Bruce recalls working Clipperton and a few other expeditions this way. He built an amp—a Heath SB-200. Bruce says the amp didn't help much, but he was still able to get his country total around 230 by 1976, using that TA-33 and the old faithful persimmon tree dipole. He'd also started a radio club at CVCC and helped the school purchase a Drake C-line. They even built a homebrew amp with a pair of 4-400s. In 1977, just before he graduated, Bruce passed his Extra Class exam at the Charlotte hamfest and received AG4L. He also went to Atlanta, and passed the 2nd class Radiotelephone, 1st class Radiotelephone, Ship Radar, and 2nd class Radiotelegraph commercial exams.

"By this time, the GI bill had just about run out. I was forced to go to work. We'd also begun construction of our first house. I had a Rohn HDBX 48-foot tower installed at the house and put up a Cushcraft ATB-34 tribander. I traded rigs, ending up with a Kenwood TS-820S and remote VFO. I also got an Alpha 76. My country total was around 290 by the end of 1979. I retired the persimmon tree dipole and installed a 40M Bobtail curtain, a fantastic 40M antenna," Bruce writes.

"Then, I was simply inactive for the next five or six years. The only exception was 2M, participating with Catawba County RACES. We've built repeaters on Anderson Mountain and at the Catawba County Justice Center. I also went back to school at UNCC—working toward a BSEE, since my employer paid for it. After completing the degree, my interest in DX was rekindled. I traded rigs again, getting a TS-940S. My country total went up, and I received DXCC #1, prior to the addition of

P5.

"We decided to move to the country. We sold the house and purchased another, along with 25 acres in south Newton. This gave me the freedom to build taller towers and pursue other interests, like handguns and target shooting. First, I put up a 100-foot freestanding Rohn SSV tower. I'd always wanted a 40M beam, so I put up an M2 3-element job. Then, I added a Hygain DB-1217 WARC-band beam. K4SI helped me build 110-feet of Rohn 45G. Phillystran-guyed, it supports two KT-34XA tribanders—at 110-feet and down at 72-feet on a TIC ring rotator. Other antennas include a 3/2 wave loop on 80M, a 160M inverted-L, an 80M Bazooka, and numerous UHF/VHF antennas. And, I upgraded to a Yaesu FT-1000MP and an Alpha 89.

"Recently," Bruce says, "I switched to a Yaesu Quadra solid state amp, with fully automatic band-changing, antenna selection, and a built-in tuner. Such an amp will really spoil you. With the cluster, it's changed how I chase DX. In the past, 95% of my operating time was spent listening. This has created advantages as well as disadvantages—for each of us. My primary mode remains CW; it's habit, I guess. When the new vanity calls came along, I received K4ZO. It's hard to believe that was over two years ago...how time flies!"

--K4ZA

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LOOKING AT LOOPS FOR LOW BAND USE

Who among us can put up really tall towers, or afford beams for 40, 80, or, dare I say it, 160M? Wire antennas are the compromise of choice. But the choices suddenly seem endless: verticals, dipoles, slopers, inverted-Vees and Ls, and, of course, loops.

The loop represents a fair compromise. The article will present a loop design that has provided good performance on all the HF bands, while requiring little more space than an inverted-Vee. It does require some means of support at least 70-feet high, but in this part of the country, that perennial ham antenna support—the mighty pine tree—can serve well. Some advantage of this design are:

various feedlines can be used (coax or open-wire);

only a single support is required;

vertical angle of radiation, which aids DXing.

The triangle-shaped loop has been described in the literature for years. But it's usually a single band design, a variation on the full-wave loop. Some common examples are shown in figure 1. If the classic delta loop is "inverted," as in figure 2, a low angle, vertically polarized lobe is generated. But this design requires two high supports. We will look at the delta loop design fed at one corner, shown in figure 3.

This design concentrates the vertical angle of radiation, with the other advantages detailed previously.

Construction is surprisingly simple, as well as low in cost. Approximately 275 feet of insulated wire is erected with the apex at least 70-feet high. The corners are pulled out to suitable anchor points using insulators and nylon cord. The base should be about 10-12 feet above ground. An rf bridge or antenna analyzer will confirm resonance (probably around 3.5 MHz—adjust wire length accordingly). The radiation resistance will probably also be around 60-70 ohms. On the second harmonic (7 MHz), the resistance will be about 200 ohms, moving higher, of course, as you move higher in frequency. Open wire feedline will help eliminate losses from SWR. An antenna coupler or transmatch is recommended. It will help efficiency, reduce harmonics, and even help your receiving, by reducing overload. (A transmatch remains one of the easiest, and cheapest, things the average ham can still put together in the home workshop, too.)

--K4ZA

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ROTATOR HINTS & KINKS

If you've paid attention while turning your antenna with a HyGain rotator (anything from an old CDE Ham-M up to a T2X), you've probably noticed the system demonstrating one of those fundamental laws of physics. Namely, objects in motion tend to stay in motion. In other words, the turning array generates substantial forces, which are suddenly stopped when you release the brake. If you've ever been on the tower while turning the antenna, you'll have felt the tower's torque trying to screw itself into the ground.

One simple solution is the "Delay 5" circuit Lance Johnson Engineering (and others, like CATS, or Norm) offer for sale. It's a sinfully simple circuit, which you'll tell yourself you could easily build, but the honest truth is that for $25 it's not worth the hassle doing so would entail. Buy it, install it (it takes less than 20 minutes), and enjoy the benefits of having the brake automatically held open for five seconds—plenty of time for your antenna to stop turning. ***--K4ZA***

WEB WANDERINGS

http://www.ulio.com/ants.html
Look at an interesting new design for an 80/75 Yagi.
http://www.freeyellow.com/members3/yagistress/towers1.html
Check out some interesting facts regarding towers—stress loads, etc. Kurt's software is indeed impressive, as well as relatively inexpensive. (I bought it at Dayton.)
http://www.qsl.net/n8wrl/index.htm
Our very own N8WRL has documented his tower construction project, with words and pictures. Take a look.

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