



KEY CITY AMATEUR RADIO CLUB

October 2003

Meeting Minutes

Kent West, KC5ENO

The KCARC meeting for 8 September 2003 was called to order by President Kent West, KC5ENO, at 7:02pm. Rearranging the usual order of business, he asked Bill Shaw, KJ5DX, to introduce a guest speaker, James Bryan, the Emergency Manager for the City of Abilene.

Bill first mentioned that Skywarn 2002 has been scheduled for Saturday, February 28, at ACU. He then introduced James.

James talked about the role of amateur radio operators in a local emergency concerning hazardous materials (HazMat). He mentioned several areas in Abilene that present a concern:

- There are four 7- to 8-inch pipelines running behind the Mall of Abilene, under the parking lots of the north side of Rebecca Lane. These pipelines carry different materials at different times, some of which are hazardous in some way.
- The rail line running through the center of town often carries hazardous materials; in addition, if a derail should occur, one of the city's main antenna towers could be damaged, as it's alongside the railroad, making ham operations even more important. A train passes through about once every hour, at speeds up to 65mph. This area has a lot of businesses, and therefore people, who would be at risk in the event of an accident.

- I-20 is one of only two roads in the nation that hosts a special breed of truck, run by WIPP (Waste Isolation Pilot Plan). These trucks carry discarded radiation suits and the like. Although the radiation these materials have been exposed to are the least toxic of the three basic types of radiation, their transport across the state is closely monitored, by State Troopers, by regular checkpoints, and by satellite tracking.

- Industries in town deal with hazardous materials, and spills and explosions and the like can present hazards to the city's population.

James also mentioned that since 1997 there are no longer any nukes at Dyess, although they still have other hazardous materials.

John Dyer, AE5B, followed up with information on the ARRL Emergency Plan, saying that we should have a completed plan by the end of the year.

Randy Robinson, N5JZH, asked John about the ARRL Emergency Training, and John replied that there are three classes, offered via the web through the ARRL web site (<http://www.arrl.org>), and he recommends everyone take at least the first one.

Randy read the minutes from last month's meeting. Wayne Dorothy, KB0JOS, motioned that the minutes be accepted; Deborah Gant, KD5VOT, seconded. The motion passed.

John then read some funnies (see "You Know You Are A Ham If . . .").

Randy briefly mentioned that his

son, who never completed the tests to get his ham license, is now in the Marines, and aced a test that landed him a position in electronic communications. Randy asked his son how he knew all the electronic theory and etc on the test, and his son replied "You taught me in the fifth grade." Randy didn't think he had been paying attention. Atta' boy!

Kent mentioned that the September newsletter got lost in email before getting printed, but that it is published on the web (<http://www.qsl.net/kcArc>). He also showed a 64MB flash drive such as the one mentioned in said newsletter. Kent also mentioned a display of a laptop for sale that Gerald Dugan, N5OGD, had set up. He also mentioned a flyer provided by John, concerning the upcoming Permian Basin Amateur Radio Club's "First Annual Swapmeet and Tailgate", scheduled for the following Saturday (13 September) in Midland. The flyers were left on the table by the door so that members could pick one up on the way out of the meeting.

Karla Dyer, K5RLA, then motioned to adjourn, and it was so.

BPL Threat

Submitted by John Dyer, AE5B

Joel Gilly, N3GXY, spent some time riding shotgun with Ed Hare, W1RFI, the ARRL Lab Manager as Ed made some test measurements in the Emmaus, PA area. The Emmaus area was selected as a test bed for BPL. I think

that his comments concerning the interference should be taken as a warning of the problems we will experience if BPL becomes nationwide. The potential for the death of HF as we know it is very real. More information can be found at:

<http://www.arrl.org/news/features/2003/07/08/1/?nc=1>

The deadline for filing your comments online with the FCC was August 20, 2003.

>----- Original Message -----

>From: joel gilly

>Sent: Thursday, July 31, 2003

11:41 AM

> Subject: BPL in Emmaus, PA and My Meeting with Ed Hare.

Gentlemen,

As I had mentioned previously, Ed Hare WIRFI and ARRL Lab Manager, was stopping over in the Lehigh Valley, PA on Wednesday as part of a three state sweep to monitor and collect data about BPL. I had the pleasure of meeting and spending time with Mr. Hare on Wednesday morning and had the opportunity to witness the effects BPL has on the Amateur HF bands.

On Tuesday night, my cell phone rang and when I answered, it was Mr. Hare. He was in the Valley, in Dorneyville, and wanted to touch base with me before our meeting the following morning. I was in West Chester at the time visiting my son, but Mr. Hare had mentioned that he had already swung through Emmaus that evening to make a preliminary assessment of the area.

On Wednesday morning, I met Mr. Hare at the Comfort Suites in Dorneyville.

After the introductions, during which he presented me a copy of the "ARRL RFI Book", we discussed a rough agenda, then loaded into his well-used Subaru wagon replete with measuring equipment and a Buddipole portable compact dipole strapped to the roof rack, and headed off towards Emmaus.

The area in Emmaus that is being used by PPL for the BPL test is in the area of Pine St. just behind Emmaus High School and the East Penn School

District Administrative building. We drove around to find a spot where we could setup to do some measurements. Mr. Hare had selected a spot the previous evening that he thought might be a good area to listen to and measure BPL's radio signature. We parked outside a residence and he began setting up his equipment.

Mr. Hare is using a very simple setup in order to make an estimate of the field strength of signals that he is interested in. Strapped to the back seat of the Subaru was a wooden palette that contained a deep cycle battery, an inverter, a step RF attenuator, an ICOM PCR-1000 receiver, and his laptop computer running custom data acquisition and processing software that Mr. Hare authored. As mentioned before, he used a Buddi-Pole compact loaded dipole mounted in a tripod strapped to the roof rack as the antenna. The measurement process involves using the sound card in the laptop PC as an audio voltmeter. It is first desirable to calibrate the system by first measuring the noise generated by the soundcard and the receiver without the antenna attached. The antenna is attached, and the attenuator is adjusted until the desired signal is audible just above the noise floor. The software is then used to sample the audio and that is processed to determine the RMS value based on the 9 kHz bandwidth that the FCC specifies for emissions from Part 15 devices in the HF band. A calculation is then performed against this value taking into account the parameters of the receiver system (radio, feed line, and antenna) to determine the dbuV/M field strength of the signal. It is a simple and elegant system that Mr. Hare feels will produce the consistent and high quality data that will be needed to address the Amateur Radio communities about BPL to the FCC.

The real eye-opening part of the day was to listen to BPL in action on the HF bands. Mr. Hare disconnected the PCR-1000 and replaced it with a Kenwood TS-440 and we listened to several amateur bands. The type of BPL used in the Emmaus area (there are several "flavors" which Mr. Hare

showed later) creates an impulse type noise on the bands. It sounds very much like a Geiger counter. The noise generated is very broad banded and can be heard continuously up-and-down the bands. It seemed to be strongest on 21 MHz and faded below 5 MHz and a little above 24 MHz, but this may have been due to our receive antenna not being optimized for those frequencies. BPL created a consistent S5 to S7 noise level on the bands. We listened for a while to 14.060 MHz to hear what it would sound like on a popular frequency. Some faint CW stations in the background could be heard, but the opinion was that they would be "un-copyable" under the circumstances. We then got back in the car and began driving around the area listening to the radio and the noise. As we got farther away from the test area, the noise faded dramatically. A few blocks from our initial location, the noise level had dropped dramatically to S1 to S2, the typical "quiet band" conditions.

We then drove to an area that had BPL, but had it's electrical service delivered through underground feeds. In this case, we pulled up outside a residence that was owned by an engineer Mr. Hare had contacted about BPL and who had an Amateur Radio operator living near him. In this case, the noise generated was somewhat reduced, but still around the S5 level outside the residence. It was clear from this example, that if you were a ham living next door to this person, your operating conditions would be greatly compromised.

Later, we drove around again to attempt to find a "hot spot". In the areas that had BPL, it was interesting to note the changing profile of the noise as we roved around the area. Every time we passed a utility pole, the noise level peaked dramatically. We arrived at one area that exhibited a significant increase over neighboring areas. This area happened to be a pole that contained a BPL injection point. The noise present at this location was unprecedented. On the Kenwood, I noted a consistent S9 to S9+10 noise level. I tuned up to around 14.200 and found a

5 call area station in QSO with CY9A. The five was copyable, but CY9A was much weaker, and the noise would have rendered a QSO with the station unmanageable. Mr. Hare then disconnected the TS-440 and made some field strength measurements. His measurements revealed field strengths well in excess of FCC limits.

We then packed up and stopped for lunch. During lunch, we discussed the ARRL ARIA project and BPL. Mr. Hare explained that while the aim of the ARIA project is much broader than BPL, it will be instrumental in gathering evidence to support the ARRL's position on BPL. He also touched on some ancillary issue regarding BPL. One of the interesting points regarded the limits on conducted signals versus radiated signals from BPL. He explained that some BPL systems are looking to use very high power levels and that these levels could exceed the design limits of other devices plugged into electrical outlets. Another point was that the FCC mandated field strength levels were specified under certain conditions. The vagaries of the various BPL schemes and implementations can provide "wobble room" for BPL implementers pass the FCC requirements while still creating systems that will adversely affect amateur communications. As Mr. Hare pointed out, an overhead electrical line is just a large radiator of an arbitrary size. The radiation pattern developed by such a line could take the main lobe outside of the test measurement area, but still present a significant problem for amateur radio signals. Therefore, an integral part of the project is to gain "real world" experience about the affects of BPL on amateur communications. Still another question is how BPL will affect other users of the HF radio spectrum. Right now, the Amateur Radio community is the only organized response to BPL. Mr. Hare hopes that when the data he and others are gathering is made public, other organizations will come on-board and voice their concerns about BPL.

After lunch, we went out to the parking lot of the hotel and talked some more. Mr. Hare showed me a

video tape he had made of his visit to Briar Cliff Manor, NY (near White Plains), another BPL test site. In that video, he is shown driving around with the TS-440 tuned to the 20m amateur frequencies. As he drives around the area, he tunes around the band. It can be heard clearly that on frequency after frequency, block after block, the band is filled with extremely loud "birdies". It almost made the Emmaus experience seem bearable. The frightening thing about what I saw was that the situation will only get worse. The interference that I heard in Emmaus is directly related to the amount of internet activity. As more and more users come on-line, the crackling of the "Geiger counter" will get more and more persistent. We saw BPL in the day at low usage levels. I can only imagine what it might be like at peak usage hours.

All-in-all, it was one of the most enlightening experiences I have ever had.

I am extremely thankful to M. Hare for inviting me along. I hope that in the near future, I can organize my material for the purposes of making a presentation to the DLARC and possibly the LARC.

You Know You Are a Ham If . . .

Submitted by John Dyer, AE5B

- you buy electrical black tape in ten-packs.
- you've stripped wire with your teeth.
- you've told your son that, "One day, all this will be yours", and he doesn't respond.
- you'd rather help a buddy put up a new tower than mow the lawn.
- you've grabbed the wrong end of a soldering iron.
- you start giving out RST reports when you are on the telephone.
- the propagation forecast means far more to you than the local weather forecast.
- the microphone or visual aids at a meeting don't work and you rush forward to fix it.

- you tell the XYL, when she notices a new rig, "Why that's been there for years."
- your watch is set only to UTC.
- at night, when you pray, it starts off something like: CQ CQ CQ GOD DE (your call).
- you ever had to patch your roof after an antenna project.
- Ham radio magazines comprise more than 50% of your bathroom library.
- you ever put a GPS tracker in the XYL's, car, just so you could watch her on APRS.
- you and the XYL took a cruise so you could visit the radio room.
- you ever tapped out HI in Morse on your car horn to another ham.
- you ever had an antenna fall down.
- your teenager refuses to ride in the car because it looks like a porcupine.
- you know the Latitude and Longitude of your home QTH.
- you go into the local Radio Shack store and the clerk asks you where something is.

West Texas Section News September 2003

by John Dyer, AE5B

Lots of news and activities throughout West Texas this month. The Panhandle ARC participated in the nationwide Route 66 special event and made 1176 QSOs. They are already planning for next year. The PARC is also planning a camping trip in Palo Duro Canyon. With regular events like this, it is obvious that the PARC is an active club. The Permian Basin ARC also had a little camping excursion this month but they went all the way to western New Mexico. They were scouting a Field Day location near McKinley Peak in the Black Mountains of New Mexico. Lots of pictures at their club website <http://www.pbarc.net/>. The PBARC's first annual hamfest was a success with approximately 100 in attendance. You can find pictures of the swap meet also on their webpage. The Lubbock Amateur Contest Club also held their first hamfest

this month. I was at ARRL HQ that weekend and was unable to attend but received the word that they also had about 100 people throughout the day. The most important thing is that both clubs were able to cover their expenses and make a small profit. In today's economy, a local hamfest that ends the day with a little change left over is to be congratulated. I was invited by the Plainview ARC to attend their annual officer's installation and picnic this month. We had a great time in the park and their potluck supper has a permanent place on my calendar. The program was an ATV demonstration that had a few technical difficulties. Typical ham radio project and that was what made the meeting interesting. It is amazing how a little loose smoke can liven up a ham radio meeting. Lots more fun than a business meeting. The Plainview club also assisted with the 5th Annual "Flat as Hale" Mountain Bike Race. The Secretary of the PVARC has a new call. Bill traded in KC5WDM for his original novice call WN5GDV. The Midland ARC is sponsoring a special event Sept27-28, 2003 using W5CAF in conjunction with the CAF Air Show. The PBARC will be using W5PBR on Oct4-5, 2003 from Regan County in a special county hunters event. The Big Bend Amateur Radio Club passed a significant milestone this month when they received their charter as a 501c3 Texas Cooperation. Past President Barbra Stone, KM5VM was honored by the BBARC for her work on this very important project. The BBARC provided communications support for the Big Bend Balloon Bash. Several members provided support on the ground. WA5ROE and pilot KM5CA provided support from the air. Check out the pictures at <http://homepage.mac.com/km5ca/PhotoAlbum11.html>

The next big event in West Texas is the John Foster WTX Open Road Rally in October. Members of MARC and PBARC will be assisting the organizers both from the ground and the air. Alan, N5NA, is the coordinator of the event and can be contacted at n5na@arrl.net.

Now that was one long paragraph and it was entirely about local club activities. What about your group? Why was it not included. There are two possibilities. Either nothing happened or no one told me. Which was it?

Two Midland ARC members were recently honored with Badges of Excellence in Midland's First Responders Day. An awards banquet was held in the honor of Firefighter/Driver Allan Moore, N5SVM, of the Midland Fire Department, and Sgt. B. John McDaniel, KE5PL, of the Midland County Sheriff's office. Thanks guys. Robert Wood, W5AJ, also of the MARC slipped out of the country a few months ago and operated the ARRL DX Phone Contest from Antigua as V26P. Robert borrowed the Frankfort Radio Club's V26B super station and piloted it to a world high score in the low power category.

The federal Homeland Security grant that has enabled the ARRL to offer the Level I EMCOM training on a tuition-reimbursement basis has been approved for another year. Accountability is key word in all Federal grants and this program is no exception. Good documentation is essential for continued success of the program. EMCOM graduates and non-graduates alike need to complete a Public Service Activity Report each time you participate in any event. Parades, drills, bike races, etc. are all reportable events and along with all emergency events, should be documented on form FSD157. The Public Service Activity form FSD157 is available from the ARRL at <http://www.arrl.org/FandES/field/forms/fsd157.pdf>. Complete the form and send a copy to ARRL HQ and a copy to the West Texas Emergency Coordinator WA5ROE.

SEC, Bob Ward, WA5ROE, and his assistants continue to work on our Section Emergency Plan. If you are interested in the Amateur Radio Emergency Service, contact your local ARES Emergency Coordinator or WA5ROE. The Texas State ARES Net meets on 3873 KHz at 7:30 PM local time every Monday. We need more participation from West Texas.

You do not have to be a member of ARES to participate but we are always looking for new recruits.

Recent silent keys include Cleon Ligon, KA5BYB, of Amarillo, Floyd Gravitt, W5ERT, formerly of San Angelo, and Johnny Reynolds, N5NOM, ARRL life member and EC of Andrews County. It has also been reported to me that the Horned Toad Intertie System may also become a Silent Key. Nothing is ever static and it is becoming increasingly difficult for individual maintained systems to survive. West Texas users owe system operator Pat England, KB5MBK, their thanks for a decade of service. What are you doing to support your local repeater systems?

COMING EVENTS

Texas QSO Party Sept 27-28

<http://www.txqp.org>

Belton Hamfest October 11

<http://www.tarc.org>

13th Annual DX Bash Oct 10-11

www.dxbash.com

El Paso ARC ARRL Hamfest Feb

28 <http://www.qsl.net/w5es>

Want to try something new. How about the microwave band? How about 10GHz? For reference, that is in the frequency range that many of the speed radars operate. I met up with K5WO and WA5YWC on a dusty dirt road south west of Merkel, TX in grid DM92. They had found a location with a great view of the horizon to the east. With a small 6 element beam they established solid contact with the metroplex stations on the liaison 2 meter frequency and proceeded to work W5LUA and N5PYK on 10 GHz CW. Now all this was done with 2 foot dishes and 2 watts of output. Unbelievable. Best distance was a little over 200 miles. Now if we could somehow get access to those mesas with all the wind turbines! Who in West Texas is ready to challenge this new frontier of amateur radio? Maybe it is time to do something just because it is fun.

Recently I had the opportunity to attend the Section Manager's Workshop at ARRL HQ in Newington. The feelings that this West Texan had as we approached HQ and the small red



Nearing the end of Hamfest 2003.

brick building that is recognizable world-wide as W1AW came into view is indescribable. My first QSO with W1AW was over 40 years ago. The idea of someday visiting and operating the “mother ship” station was as foreign to that teenager as getting old, gray-headed, and having grandchildren. Those things happen to someone else. I am not real good at operating fancy menu-driven radios and I sat down at the only operating desk that had a rig that I thought I could operate without messing up. It happened to be on 15 meters. I had no idea which way the beam was pointing but cared less as long as I could make a contact from W1AW. I switched on the radio and tuned across the band, stopping at the first signal. Out of the speaker came a familiar voice that definitely was not from New England. It took me a few seconds to recover before I said,

“K5TRW, K5TRW this W1AW, W1AW, hello Clay”. Now it was K5TRW’s time to fall out of the chair. Clay is President of the El Paso Amateur Radio Club, former West Texas Section Manager and presently is one of your Assistant Section Managers. Against all odds and totally unplanned, Clay and I each had a “first”. Life is good; ham radio is fun. See you on the air.

Tidbits

Kent West, KC5ENO

- Tuesday and Thursday nights at 7pm, Jim Richard, K1UQI is conducting an Amateur Radio class at Berry Lane Baptist Church. At the last meeting we strung up a long wire antenna (get it as long and as high as you can) and connected it to a radio. It was a good experience

for those who had never actually done so. Perhaps you have a friend or relative who is interested in becoming a ham. Or perhaps you just want to brush up on some skills/knowledge. There is no charge for the class (although Jim does have some copies of the class text "Let's Start Talking" available at nominal cost). Even if you can't make all the classes, feel free to drop in during a session and sit-in.

Club Meeting!

Kent West, KC5ENO

- Remember to attend the Key City Amateur Radio Club meeting, Monday, 13 October, on the second floor of the city library.
- Our Christmas Dinner is scheduled for Friday December 5th at 6:30pm. in the East Dining Room.

Key City Amateur Radio Club, Inc.

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