MOUNTAIN SPARK GAPS

NPARC - The Radio Club for the Watchung Mountain Area

**N2XJ
Club Callsign**

Broadband over Power Lines
Monday May 10th, at the Salt Brook School

From: The Prez

"The Pen is mightier, etc…." (We hope!)

BPL (Broadband over Power Lines) is a major threat to the HF spectrum utilized by Hams and other services. I would urge all club members to let our politicians in Washington know about your concerns by writing them a letter.

The club will make it easy for you. Just show up at Monday's club meeting and we will print copies of letters that have been drafted by the ARRL. You can then review and sign them. We will even supply the envelopes and mail them for you!

Anyone who has seen and heard the various video recordings of real time interference to HF from BPL will agree that our club has a responsibility to address this issue. So please make every effort to be at the May 10th meeting .

In other matters, several club members volunteered their time to demonstrate Morse code and ham radio to several groups of youngsters at the Mountain Park School in Berkeley Heights on April 16th on their "Hobby Day". It always amazes me how fascinating Morse code is to kids. We made HF contacts with stations in Italy and Disney World. The kids were thrilled. (Thanks to K2GLS, K2JV, KC2IZK and AB2CM.)

Regarding Field Day, Andy, WA2DKJ, has informed me that we have been given formal approval for the use of the back field at Governor Livingston HS. And the Class F set-up at the NP Firehouse is shaping up. So reserve June 26 and 27 on your calendar for "NPARC FD '04"!

73 es 88 and cu at Dayton!
Al K2AL

Working Meeting to Prepare Protest Letters

We must inform our elected representatives that BPL interference is real and is a huge threat to the existence of amateur and all of shortwave radio. It's extremely unfortunate that the stewards of the radio spectrum are not properly taking care of it.

The club leadship supports the ARRL grass roots letter writing campaign to ban BPL. We have received sample letters from Bill Hudzik W2UDT.

We will print out the ARRL-approved letters to President Bush, Senator Lautenberg, Senator Corzine, and your local congressman. You are welcome to pen your own letter if you are so inclined.

It is important to note that we are not against broadband. We are against the interference of BPL. There are numerous other ways to deliver broadband without radio interference.

Hobby Day at Mountain Park Elementary School

Surrounded by eager Kids, Club President Al Hanzl K2AL is control operator on 20 meters during a QSO with a station in Orlando Florida. Elsewhere in the classroom, other Club Members are working with the Kids on Morse Code, and other Ham Radio activities.

Climatological Data for the Watchung Mountain Area
Provided by WB2QOQ, Month of April

	2004	2003
Maximum Temp.. °F:	86	84
Minimum Temp. °F:	28	27
Average Temp. °F:	52.7	48.5
Total Precip Rain/Snow (in.):.	5.4/0	2.84/5.0

The above information was provided by WB2QOQ, who has been recording daily weather events at his station for the past 22 years.

Calendar of Coming Events

May 7th: AUCTION at the Salt Brook School. Get your stuff ready!!!

May 10th: REGULAR MEETING at the Salt Brook School at 7:30PM.

May 14 - 16: DAYTON HAMVENTION. It's HERE!!! There may be rooms and rides available.

May 24th: PROJECT MEETING at the Salt Brook School

June 14th: REGULAR MEETING -- Field Day Organization

June 19th: KIDS DAY operation from the Gazebo in Centennial Park New Providence. Setup at Noon, OTA from 2PM till ????

June 26 - 27: FIELD DAY Set up similar to last year. Preparation Meeting will be Monday June 14.

Code Oscillator Kits
A Big Hit at *Salt Brook Statics*

At our April 26th meeting of the *SALT BROOK STATICS* radio club we handed out about 25 Morse Code Oscillator Kits to a bunch of very excited kids. We expect to hear very soon that many of them are completed and working.

Some of the kids went right to work and started assembly. Did they read the instruction manual??? probably not. But they can't go very far astray since they have all seen the completed oscillators at the meetings.

They couldn't wait to get them home, so the assembly started immediately. (L to R) David DiBenedetto, Steven Bude, and John Esposito

At the next meeting (on May 10) we'll probably need a few more kits for those kids who weren't present last Monday. After that we'll have a few left over for sale to members who want them for grandchildren, etc. You may also expect to find a few available at the Auction, and the Club has received one inquiry so far as to whether they will be available for general sale.

Kids Day is Coming on Saturday, June 19

Members of NPARC will activate N2XJ at Centennial Park in New Providence as we did last year. One major difference will be that we have our order placed for a beautiful early summer day, as opposed to the washout we suffered in 2003.

Kids Day isn't really a contest, but it's a great opportunity for the Club to get our message across to the community that "Ham Radio is Fun."

Kids, with or without licenses will have a chance to speak with other kids all around the country. They will learn to pass a "message exchange" which includes their name, age, location and favorite color. They will receive a similar message from the station contacted.

NPARC will deliver a suitable certificate to all kids who visit the station and make a contact.

This is an important publicity activity for the Club and for Ham Radio as a whole. It occurs on a Saturday afternoon. All Club Members are urged to attend, if you have kids or grandkids -- bring 'em!!

We will need operators for this event as well as some help in setting up a temporary antenna at the Gazebo in the park. Antenna setup is scheduled for Noon on Saturday, operation commences at 2PM. Contact K2JV, and/or K2AL!!

TCRA Events for May

For more information and directions to their locations, see the TCRA website at: www.w2li.org

May 8th "VE TEST SESSION"
8AM at the Union County College Cranford

May 17th: "STATE POLICE AND RACES" Bob Schroeder, N2HX the Communication Coordinator for the State Police of NJ and Dennis Dur, N2DCD will discuss the relationship of RACES with the State Police and also talk about the emergency communication program in NJ.
(8PM AT THE CHURCH)

May 24th: "ON THE AIR MEETING"
(9PM W2LI 2M)

Dayton Hamvention May 14-16 Last Chance to get a Ride

Every year a group of NPARC members make the trek to Dayton. 2004 will be no different. There will be at least three cars going, so we won't have any problem bringing back the necessary Boat Anchors.

Hotel rooms are apparently still available in the area of Fairborn Ohio, where we haved stayed for a number of years.

Come and join us for dinner at Frisco Freddies, Damon's, or one of the other good restaurants in the area. Enroute to or from Dayton, stop for lunch at Mehlman's cafeteria, unknown to anyone except Ohioans and a few of us who have discovered it. And be sure your HT batteries are charged as you disappear into the depths of the Flea Market. Without an HT we may never be able to find you and the treasures you have discovered.

For those who are interested enough to go this year. Contact K2JV.

Who is this Handsome Devil??

You all know him. He's a current member of NPARC. You've all heard him speak. And 60 years ago he looked like this!! Well -- I guess we're all getting a little older.

If you can't guess, I'll put an up to date photo in next months Spark Gaps.   73 de K2JV

DigiTales by Ralph Milnes KC2RLM

Packet

If you've been a ham for more than 5 years, there's a good chance you tinkered with packet somewhere along the line. In fact, 10 years ago, packet was the hams' internet. We used packet to exchange mail and files, talk in chat rooms, read and post notices on bulletin boards, and tell others about DX "spots" (distant stations) using a method very similar to today's email reflectors. Of course, the internet now does all that and does it faster, so it's not surprising that packet use is declining. But it hasn't disappeared just yet, so this month we will look at today's use of packet and, for our beginners, provide a brief overview of packet and how to get started using it.

What is Packet? Packet is a digital language based on the transmission of two tones. Different sequences of these two tones can be used to express letters, numbers and other ASCII characters. If you listen on a FM packet frequency, you can hear the high speed bursts of packet's "bee" tones (try 144.39 MHz).

The most attractive feature of packet is that it can send error-free copy. If an error is detected by the receiving station (using "check sums"), it automatically asks the sending station to re-send the packet. Because of this error correction feature, packet can be used for file transfers or any other application where data accuracy is important. Packet is usually used on VHF and UHF frequencies in FM mode. It can also be used on HF frequencies in SSB mode (at a slower speed), however, interference (QRM) and signal drifting can make packet transmissions very difficult and slow, since each tone/packet must be received perfectly or else there will be a retransmission of the packet.

How Do I Get Started? First, visit these sites to read more about packet and packet equipment:
1. Why Packet Radio? http://www.tapr.org/tapr/html/pktprm1.html
2. Introduction to Packet: http://www.choisser.com/packet/
To use packet, you'll need a radio (of course), a computer, and a packet program
(try WinPack http://www.peaksys.co.uk/). You'll also need a special hardware device called a TNC (Terminal Node Controller) and cables to connect the computer to the TNC and the TNC to the radio. The TNC is the key to packet. It takes computer data and converts it into small "packets" of tones which are transmitted by the radio. On the receiving end, another TNC converts the tones back into characters. In addition to this tone modulation and demodulation (or modem) function, the TNC has a smart chip that handles special packet processing functions, such as requesting repeats of packets that appear to have errors. You can find used TNCs for sale at hamfests — or perhaps a club member has one to loan or sell you.

Alternatively, you can use your computer's sound card instead of a TNC (see "DigiTales: Sound Card Interface" in the April 2004 Spark Gaps). Visit my web site at http://www.qsl.net/soundcardpacket/ for more details. Packet isn't the easiest thing to get running since you need several components — software, TNC, radio-specific cables — but there are several club members who can help you. Just post a note on the NPARC reflector.

What Can I Do With Packet?
APRS — short for Automatic Position Reporting System — is the most popular packet application today. You will find APRS activity on 144.39 MHz throughout the United States. APRS packets contain the latitude and longitude of the sending station. (The original purpose of APRS was to track vehicles, boats, and aircraft.) The packets can also contain other information, such as weather station readings or a short message. APRS programs can use these packets to plot station icons on a computer map. You can learn more about APRS at: http://web.usna.navy.mil/~bruninga/APRS-docs/APRS.TXT and http://nwaprs.org/. Bob Willis K2GLS and I both use APRS, and we'd be happy to answer your questions. We both recommend an APRS program called UI-View: http://www.ui-view.com/

DX Clusters – This may be the second most popular packet application. Think of DX clusters as a packet-based reflector for reporting DX "spots" (distant stations). Users first sign into a DX cluster node (a relay station). Then when any user reports a spot to the node, it sends a packet to all the other users. Here's what a DX "spot" looks like: D X de W9XT: 7005.4 EA8WH CQ 2231Z
In this packet, W9XT is telling everyone that station EA8WH (Canary Islands) was calling CQ on 7005.4 KHz at 22:13 Zulu time (UTC). Nowadays, DX cluster nodes from around the world can share 'spots' with each other using the internet. In fact, users can connect to a node using the internet instead of packet. But radio remains the preferred mode for hams who don't have DSL or cable, since it doesn't tie up a phone line.

The North Jersey DX Association (NJDXA) runs the W2JT DX cluster on 144.93 MHz. Tune there to watch the spots. To post spots, you'll need to "connect" to W2JT and register. For a bit more information about DX Clusters, visit http:// www.cestro.com/pcluster/logon.html . There's also info when you check into W2JT.

Bulletin Boards – Old timers will remember a bulletin board system (or BBS) as a place where you could drop off or pick-up mail and to post or read notices from around the county, such as items for sale. In fact, Tom Brown KA2UGQ, a former club member, ran a NPARC BBS for many years. You can still find a BBS at:

> W2LI-4 on 145.05 MHz
> N2QAE-4 or WB2SNN-4 on 145.51 MHz

NTS Messages – Most of us think of NTS (National Traffic System) messages as messages passed by voice or CW. But you can also send and receive NTS messages via packet using the WB2FTX-4 BBS in Butler, NJ on 145.01. If you can't reach it on 145.01, try connecting first to N2QAE or WB2SNN on 145.51 MHz and then send the "c WB2FTX-4" command. To learn more about packet-based NTS messages, see http://www.qsl.net/mcarv/Library/ntspacket.htm

Satellites – Although it has not been running consistently, the International Space Station (ISS) has a packet station. You can use its BBS to pick up or drop off packet mail with other earth stations, but not the astronauts – they don't check for packet mail. However, since passes are very short, BBS exchanges are long, and too many hams are trying to use the ISS station, BBS usage isn't encouraged. Instead, the preferred method is to use the ISS packet station solely to digipeat (instantly relay) a short packet to another earth-bound user. In fact, the January 2003 Spark Gaps had an article describing how to do this: http://www.qsl.net/nparc/newsletters/Jan03MSG.pdf The ISS's packet callsign is RS0ISS-1 and it listens on 145.99 MHz (uplink) and transmits on 145.800 MHz (downlink) – no tone/PL required.

WinLink Connections – WinLink is an HF network that uses a digital mode called PACTOR primarily. Campers and sailors use it to send and pick up email from WinLink relay stations around the world. But packet can also be used to connect to the WinLink network if you are within VHF range of a WinLink relay station that supports packet connections. WB2FTX in Butler does this. You can connect to WB2FTX by first connecting to N2QAE or WB2SNN on 145.51 MHz and then issuing the "c WB2FTX" command.

Other Uses – In its heyday, hams also used packet for:
   • Keyboard-to-keyboard QSOs - particularly via digipeaters (more distance than a voice connection)
   • Data file transfers – even though packet is relatively slow at 1200 baud
   • Internet Gateways – there were some packet nodes linked to the internet. That let node users send and receive email, get weather info, request callsign lookups, and chat in "real" time with other VHF packet users from around the world. (I remember joining a group chat one night with hams from England and Germany.) But these uses have become rare as internet availability has become common.

No doubt packet use will continue to decline. Still, where the internet isn't available, such as in emergencies or in remote or mobile situations, packet radio may still have value – at least for a little while longer.