

MOUNTAIN SPARK GAPS

NPARC - The Radio Club for the Watchung Mountain Area

VOLUME 39

June 2004

NO. 6



N2XJ

Club Callsign

Field Day Planning Meeting Monday June 14th, at the Salt Brook School

From: The Prez

Having made my first trip to "Dayton", I guess I'm now an "official ham!" Although a cliché, it is true that every ham should go at least once. With its huge flea market outside and all the major distributors and manufacturers of ham radio gear inside, there was not anything missing.



I must admit the first day was slightly overwhelming. Just too much to see! The only downside was rainy weather on Saturday which created some problems for the flea market. Hopefully we can get more NPARC members to go along next year. You will not be disappointed.

By the way, an interesting observation at Dayton was how HF rigs are evolving. Several manufacturers have introduced these huge HF radios, one capable of 400 watts output! They are the size of a small suitcase (with a price tag to match!). Quite a far cry from the miniature radios being made the last several years. Maybe radio size is inversely proportional to the number of sunspots.

In other matters, several club officers were invited to talk to the Roseland Radio Club about our activities and to share ideas. They are a good bunch of active hams who face typical problems such as getting new members and keeping everyone involved. It was a good experience to visit another club. We should all make the effort once in a while to go to another local club's meeting.

(Continued in next column)

NPARC Honored by New Providence Board of Education

See the article on Page 3!

Meeting at Salt Brook School to discuss Field Day

The nearest thing to a "business meeting" will be held on Monday June 14th at the Salt Brook School. The Club's plans for Field Day will be the major topic. Right now it appears that there will be the regular Field Day station set up at Governor Livingston High School, and an additional Class F station set up at the New Providence Firehouse. These will both be the same locations as last year.

There will be plenty to discuss including the transmitter setup, food, schedules, and all the special requirements such as publicity, traffic handling and others.

Field Day is held this year on the weekend of June 26/27 so it's getting close. This is your big chance to put in your comments and requests, and to sign up for operating time.

From: The Prez continued

And don't forget "Kid's Day" on Saturday, June 19th. We will be setting up a station at The Gazebo in Centennial Park in New Providence. It is a fun event and a warm-up to Field Day. Hopefully we will get some good weather for a change.

The Club Auction took place on May 7th and was a success. We had a good turnout with a bunch of stuff being auctioned. Thanks again to Andy, WA2DKJ, who performed his usual great job as auctioneer. In fact, thanks to all who attended and who helped. At the request of several club members, I promise to set an earlier date for next year's auction.

73 es 88 de K2AL

Meeting Schedule

2nd and 4th Monday of each month
7:30 - 10:00 PM at the Salt Brook School Cafeteria, Springfield Ave. and Maple St. New Providence.

2nd Monday meeting will generally be a program or Guest Speaker on a Ham Radio subject.

4th Monday meeting will be an Informal Project Meeting, and for ARISS Planning and Preparation.

Everyone is Welcome

If a normal meeting night is a holiday we usually meet the following night. Call the contacts below.

Club Officers for 2004

President: K2AL Al Hanzl
908-464-1323

Vice Pres: K2GLS Bob Willis
973-543-2454

Secretary: KC2HLA Hillary Zaenchik
973-543-2454

Activities Mgr:

Past President: AB2CM Harry Schwill
908-322-8867

Treasurer: K2JV Barry Cohen
908-464-1730

On the Air Activities

Club Operating Frequency

145.750 MHz FM Simplex

Sunday Night Phone Net

Whippany Repeater at 9:00 PM

Transmit on 147.63 MHz

Receive on 147.03 MHz

Net Control: KB2IKC

RTTY Net

Sunday evenings 8:00 to 9:00 PM

60 WPM Baudot 145.75 MHz

Net Control: K2AGI

Club Internet Addresses

Website: <http://www.qls.net/nparc>

Reflector: nparc@mailman.qth.net

Webmaster: KC2RLM, Ralph

MOUNTAIN SPARK GAPS

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Climatological Data for the Watchung Mountain Area Provided by WB2QOO, Month of May



	2004	2003
Maximum Temp.. °F:	87	80
Minimum Temp. °F:	39	39
Average Temp. °F:	64.7	57.1
Total Precip Rain (in.):	5.38	5.44

The above information was provided by WB2QOO, who has been recording daily weather events at his station for the past 22 years.

Calendar of Coming Events

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.

July 20-21-22: **HAM RADIO SUMMER CAMP** in Berkeley Heights Watch for Program announcements and Flyers.

July 27-28-29: **HAM RADIO SUMMER CAMP** in New Providence Watch for Program announcements and Flyers.

Watch for notices of special summer meetings and other events. The next regular issue of Spark Gaps will be in September.

Final Meeting of *Salt Brook Statics* on Monday June 14th.

The final scheduled meeting for the Kids at the Salt Brook School will be held at 3 PM on Monday June 14th. We expect this meeting to be very well attended since it's the last chance for the kids to show off their new Morse Code oscillators, most of which are assembled and working by now.



As far as the Code Oscillator Kits are concerned, the ARRL has asked us to supply a small number of them for a summer instructional program at League Headquarters.

Bill Hudzik W2UDT is surrounded by (L to R) Brian Charatan, David Colby and Fabian Lucciola with their Completed Oscillator Kits.

We also hope (!!!) to be able to distribute the new Tee Shirts to all the kids, but the timing of this will be touch and go. The shirts were designed by the kids themselves, and the art work is at the printer as we write.

The next meeting of the *Salt Brook Statics* will probably be after school starts again in September. In order to keep at least some of the interest going, NPARC will be running many summer activities in cooperation with the Berkeley Heights and New Providence Recreation Commissions.

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.

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!!

Auction Results

Our annual auction was held last month on May 7th at the Salt Brook School. It was a great success. Andy WA2DKJ acted as our Auctioneer, and made the whole evening into an interesting and profitable party for everyone.

Some statistics are:

Number of tickets sold	36
Number of items sold	63
Gross Sales	\$849
Net Proceeds to Club	\$427

Although the Auction was a financial success, we can find fault with the very low turnout. We do a lot of advertising for the Auction, and expect more buyers and sellers than we had this year.

You may expect next years Auction to be scheduled much earlier in the year, perhaps as early as the end of March, before the main Hamfest season starts.

NPARC Receives "Certificate of Excellence"

On Thursday May 27th, the New Providence Board of Education bestowed a singular honor on NPARC by issuing us a "Certificate of Excellence" for our community service in mentoring the "Salt Brook Statics" Ham Radio Club. The Certificate was presented at a special ceremony before the regular Board Meeting.

The citation accompanying the presentation stated, among other things, that:

Members of NPARC have generously volunteered their time to share their interest and love of Ham Radio with the students at Salt Brook. Furthermore, they have united elementary students, high school students, members of the business community, and retired citizens together in a way that is both educational and fun. It is with sincere gratitude that we present NPARC with a "Certificate of Excellence" and thank them for their time, effort and dedication to this project.

Those of us who have been involved in this program know the great satisfaction we get from the association with these school Kids. This program will continue for at least two more years, so there is still lots of time for all NPARC members to get involved. The final official Statics Club Meeting will be on Monday June 14th at 3PM at the Salt Brook School.

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, as a 1st Lieutenant and Pilot in the US Army Air Corps, he looked like the photo on the left! Well -- I guess we're all getting a little older.

As promised, a current photo of our own Jerry Sevick W2FMI is presented on the right.



Jerry now (since Dayton) has a modern VHF/UHF station on the air from his apartment in Basking Ridge, so listen for him on 145.75 MHz. He'll probably join us on the Sunday night net.

73 de K2JV

This Months Article by Bob Willis K2GLS

PSK 31

Translated literally, it's an acronym for "Phase Shift Keying, 31 Baud". PSK31 is a form of modulation (or "mode") that offers a new and higher level of performance in conversational communications (keyboard-to-keyboard) that hams can enjoy. And it's been made instantly usable by all of us, due in part to the proliferation of the personal computer, and in part to the superb and generous efforts of some very talented ham/programmers, originated by Peter G3PLX, QEX July 1999, pp3-9.

In the short time that PSK31 has been in use, its popularity has grown by leaps and bounds. May QST reports hams using PSK31 has doubled since 2000 with 15% now using this mode. It may in time replace or at least greatly supplant RTTY and other modes for person-to-person communications. It's fun, easy, and well worth the effort to get set up, which is not very much at all.

PSK31 is the "picnic table" portable QRP station for the following reasons:

- * based on the RTTY mode of operation (John K2AGI got me into RTTY many many years ago)
- * useful for live keyboard to keyboard QSO, at 31.25 bauds, varicode character coding giving 50wpm,
- * easy to use and monitor,
- * gives very good copy under low signal to noise conditions and is thus suitable for QRP,
- * available for free for many platforms, including Windows (c) with SoundBlaster type Soundcard,
- * and uses advanced DSP and narrow band (31 Hz!!) techniques.

PSK31 is not a digital mode that

- * will make Pactor, Pactor-2, Clover-II or Gtor obsolete,
- * offers error free links,
- * can be used to transmit files or access mailboxes.

My station consists of the Elecraft K2 transceiver, a laptop, a Rascal interface, and a roll of wire antenna that works on both 20 and 15 meters. Most PSK operators run less than 50 watts, so if I can hear them they usually can hear me, a mode made for QRP operation.

The articles presented below are a good introduction to the features of PSK31, at the bits and bytes level. They also discuss the analog characteristics of what makes this mode so highly desirable.

"Official" PSK31 Web Site	http://aintel.bi.ehu.es/psk31.html
"Bux Bitz and Bytez" by K4ABT http://www.packetradio.com/bbb/b.htm	A newly written, original paper by "Buck" Rogers K4ABT. It's very informative, maybe all you'll need to get going.
"PSK31: A new radio-teletype mode with a traditional philosophy" http://psk31.com/G3PLXarticle.pdf	An informative 10-page article by Peter Martinez, G3PLX. Peter has been a leader in the definition of, programming for, and evangelizing about PSK31.
"Welcome To PSK31 de wm2u" http://www.qsl.net/wm2u/psk31.html	A helpful web page with lots of links.
"PSK31 Fundamentals" http://www.aintel.bi.ehu.es/psk31theory.html	Another good article by Peter Martinez, G3PLX with addendum by NB6Z.

DigiTales (continued)

There are many free and shareware programs for the digital modes available from the internet. I use Digipan as it is simple to use and provides easy signal tuning, built-in logging, and a complete set of programmable macros for the typing challenged. I also use Stream, and MixW for BPSK and other wide band digital modes.

The following list contains a wide variety of available software that include many other digital modes as well as PSK31. At this point in time PSK31 is the most popular with the general ham population. However, the other modes all have their followers and each has advantages and disadvantages compared to PSK31. Some advantages include error detection and correction, video transmission, file transmission. Disadvantages include critical tuning and wider bandwidths.

MixW http://www.mixw.net	CW, BPSK FSK31 RTTY PACKET(w/TNC), MFSK THROB MT63 HELLScriBER, FAX and SSTV transmit/receive for Windows. Also receives Pactor. Shareware.
RCKrtty http://www.rckrtty.de/	RCKRtty is a RTTY, PSK31, Amtor, Pactor and CW program for Windows 95/98, Windows NT, PSK31. Shareware.
PSK31SBW http://www.qsl.net/wm2u/	The original (updated) program by Peter Martinez, G3PLX. Currently lacks the spectrum display. Freeware.
WINpsk by AE4JY http://www.qsl.net/ae4jy	Quite popular, and really amazing. This one can turn a "cacophony" of noise into a mouse-selectable buffet of QSOs to copy and join. Very strong DSP, and (I'm told) a really professional job of programming. Freeware
DIGIPAN http://www.digipan.net	This software by KH6TY, Howard (Skip) Teller and Nick Fedoseev, UT2UZ, (the author of MIXW32) has really taken hold in the PSK31 crowd, mostly due to its ease of use. Freeware
Windows software by DXsoft Group http://www.dxsoft.com/en/products/	RTTY/PSK31/ ("TrueTTY") send and receive/decode software, uses the PC sound card.
MMTTY http://www.qsl.net/mmhamsoft	MMTTY is an excellent RTTY sound card program that requires Windows 95 or 98 and a Sound Blaster compatible sound card.
DX4win http://www.dx4win.com	A nice commercial logging program that now contains PSK31 capability.
Multimode for Macintosh http://www.blackcatsystems.com/software/multimode.html	MultiMode allows you to decode and transmit morse code, RTTY, FAX, SSTV, PACKET, ACARS, PSK31, ALE, and many other modes on your Macintosh, without any extra hardware!

FREQUENCIES

PSK31 frequencies: 3.582MHz lsb, 7.040MHz usb, 14.070MHz usb, 21.070MHz usb, 28.120MHz usb.

TIPS

Just a few tips I've learned to make operating easier and transmitting a clean signal. Since you will be transmitting a PSK signal that has 180 degree phase reversals and where the signal amplitude goes to zero, your transmitter must be linear. This means don't over drive the transmitter microphone input as this will generate a wide band signal and cause interference to others. Set the audio level from the computer so you are below the level where ALC starts to operate. This is about half the rated power for my rigs. See Ralph's web site for additional details (<http://www.qsl.net/soundcardpacket/>). Once the levels are set, there is a neat free program (Quick Mix, <http://www.ptpart.co.uk/quickmix/>) that will store the sound card settings in a file, so you don't have to set the levels every time you change modes or bands. I created a folder on my desktop containing the setting for both my rigs each band and mode, so they are readily available when changing bands, modes or rigs. Also listen on a "dead" band, you just might work a rare one. I have worked DX when the signal is just visible with 100% copy both ways.

73 es CU on PSK32 de K2GLS