

MOUNTAIN SPARK GAPS

NPARC - The Radio Club for the Watchung Mountain Area

VOLUME 39

April 2004

NO. 4



N2XJ
Club Callsign

Short Vertical Antennas

Monday April 12th, at the Lincoln Community Center

From: The Prez

If you do not think BPL (Broadband over Power Lines) is a major concern, you should view a video made by one of our club members. He and Bill Hudzik, W2UDT, made an excellent video recording of a trip they made to Pennsylvania. It graphically demonstrates the high level of interference to the HF bands where BPL is deployed. DVD copies of the tape are available and can be borrowed. Call me if you want to see it. It is a real eye-opener. Anyone who has taken this BPL threat lightly will have a different outlook after viewing this video.



In other, more upbeat matters, I recently dusted off my old Packet TNC and was able to interface to my Icom-746. Why packet? Well, other than wanting to monitor the DX Packet cluster, I will be attempting to "digipeat" through the International Space Station on 2 meters in order to QSO with other stations across the country. Several club members have successfully accomplished this, so I will keep you posted on my efforts.

Several club members have given their input on Field Day this year. It looks like we will most likely have a set-up similar to last year. As it is shaping up, we will have an F-station at the NP Firehouse again and our usual set-up at Governor Livingston. We will be discussing FD in more detail at an upcoming project meeting in order to get everyone's input and ideas. Best to start planning sooner than later.

(Continued in next column)

Jerry Sevick W2FMI will Present his Dayton Talk



On Monday April 12th, we are pleased to present one of the Members of NPARC, Jerry Sevick W2FMI, who will present his talk scheduled for presentation at the Dayton Hamvention, to the Club.

Jerry's talk is entitled "The Theory and Practice of Short Vertical Antennas and Ground Planes."

Jerry is the accepted "Guru" and expert on short antennas and has authored at least two books and many publications on these subjects. He is now living in Fellowship Village in Basking Ridge. After he picks up a new two meter FM rig at Dayton, he will be joining our Sunday night net on 145.75 MHz.

And another reminder that the Club Auction is on Friday, May 7, this year. Keep looking around the shack for items to auction! The last few auctions have been very successful despite E-bay, so circle it on your calendar.

There is lots going on in the club these days so come to the meetings and see what's happening. See you at the next meeting.

73 es 88,
Al 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.qsl.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 WB2QOQ, Month of March



	2004	2003
Maximum Temp.. °F:	71	73
Minimum Temp. °F:	18	10
Average Temp. °F:	42.2	41.6
Total Precip Rain/Snow (in.):.	1.9/7.0	4.95/2.4

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

April 12th: **REGULAR MEETING** at the N.P. Rec. Commission at 7:30PM
Presentation on Short Vertical Antennas by Jerry Sevick W2FMI.
Rehearsal for his Dayton Hamvention Presentation.

April 16th: **HOBBY DAY** at Mountain Park School Berkeley Heights
Friday afternoon, about 1200 hours.

April 26th: **PROJECT MEETING** at the Salt Brook School at 7:30 PM
Come and see the first of the 2 meter ARISS Yagi Antennas.

April 30th: **AUCTION** at the Salt Brook School. Get your stuff ready!!!

May 14 - 16: **DAYTON HAMVENTION**. It's coming soon. There may be rooms and rides available.

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

Code Oscillator Kits First Reports from *Salt Brook Statics*

At our last meeting in March, five lucky Kids received Code Oscillator Kits. This is our Beta Test group, and from their experiences we'll modify the instructions and the kit as necessary.

However as of this writing, there have been no complaints. Two of the Kids have completed the assembly and now have working Morse Code Oscillators. The other three should be along shortly.

This leaves it up to NPARC Members to assist in the packaging of the remaining 40 or so kits. We have essentially all the parts ready to go, What's left is to drill all the holes in the breadboards, to cut all the remaining lead wires, to count and package all the screws, washers, and small components, and to put it all together into a neat package with a label.

A group of us will get together within the next few days at K2JV's house, over pizza and beer, and get it all together. **Volunteers for this effort are definitely required.** Call Barry on 145.75 or 908-464-1730 and reserve your favorite topping!!

Hobby Day at Berkeley Heights Friday April 16th

We have been invited to take part in "Hobby Day" at the Mountain Park School in Berkeley Heights. Last year we set up an HF station at that school, and W5RRR (The NASA Houston Club Station) was one of our best QSOs. Hobby Day will start at noon on Friday April 16, and there will be further announcements in Spark Gaps, plus a flyer.



We will need operators for this event as well as some help in setting up a temporary antenna on the roof of the school. Antenna setup is scheduled for Wednesday April 14. Contact K2JV!!

TCRA Events for April

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

April 6th "VE TEST SESSION"

VE testing session sponsored by TCRA and the Union County O.E.M will be held on Tuesday April 6th at the Union County E.O.C building, 300 North Avenue East in Westfield. Testing will begin at 7:00PM. All license class tests will be given.

April 10th "VE TEST SESSION"

8AM at the Union County College Cranford

April 19th

"ARRL/HUDSON DIVISION UPDATE"

Rescheduled from March 15th
Frank Fallon, N2FF Director ARRL Hudson Division, will discuss the latest events going on at the ARRL. (8PM AT THE CHURCH)

Change of Location for NPARC April 12th Meeting

Because the Salt Brook School will be closed during the week of April 12th, our regularly scheduled meeting will be held at The New Providence Recreation Commission Meeting Room, in the Lincoln Community Center on Academy Street.

The Featured Speaker for this meeting will be Jerry Sevick W2FMI, who will give us a preview of the talk which he will present at Dayton in May. The subjects of this talk will be Short Vertical HF Antennas and Ground systems.

April Project Meeting on 2 Meter Yagis for ARISS

A test antenna is complete. Design parameters and test results will be presented at this Project Meeting. Since a pair of identical Yagis are required for each circularly polarized array, the phasing equipment built by K2GLS will also be described.

Dayton Hamvention May 14-16

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 and rides to Dayton may still be available, for those who are interested enough to go this year. Contact K2JV.

A Message About Ivan of Africa!!

Rec'd by e-mail on April 6th:

Tomorrow, April 7th, our beloved friend Ivan, F3AT will turn 90 years old after being a ham since 1931. Ivan is still active in CW and a very relentless hunter for the De Soto Challenge.



Ivan was in the past involved only in CW and mixed DXCC program. He discovered the new goal of the Challenge and at 86 began a new face of the traffic. He was the first French Ham recorded for the Challenge.

On his long ham career, we note that Ivan, in he forties-fifties, was a great African operator. Remember he held the FQ3AT callsign, which prefix is still the only one FQ3 ever issued and counting for the WPX program.

He attends to a lot of prestigious ham clubs such as FOC, A1, UFT. Ivan is also for a long time an ARRL member, and one of the oldest members of the REF Union.

He earned also more than a hundred of awards and medals for his contribution to develop the Ham traffic, for years.

You can send some friendly words to Ivan at : IvanF3AT@aol.com

73 de Maurice, F5NQL

Ed. Note: If you don't remember about Ivan, look up the April and May 2003 issues of Spark Gaps.



DigiTales by Ralph Milnes KC2RLM

Sound Card Interfaces

Lately it seems that **sound cards** have become the tool of choice for amateur digital modes. The primary reason: cost! Using the sound card found in almost every computer, authors can create – and hams can use – a variety of modulation schemes that previously would have required expensive modems. The only added cost in using sound card-based schemes is the one-time cost for an **interface** – a set of cables – to connect the sound card to your radio.

For many club members, the subject of interfaces is old hat. They already have an interface, perhaps because they built one at the club's kit-making meetings in early 2002. So, this article is mostly for club members who don't yet have an interface. I wanted to be sure everyone knows about this essential piece of hardware before we begin talking about specific digital sound card modes in future DigiTales articles.

How to Get an Interface – You have three choices:

1. Buy a commercial interface – Good quality devices are available from West Mountain Radio (RIGblasters and NoMics); Tigertronics (Signalink); MFJ (1275/1275M); BuxComm Co (RASCAL); and several others. Pre-assembled interfaces cost from \$40 to \$130. The more expensive models have a switch that lets you quickly change between your digital interface and your regular microphone. You can learn more about commercial choices by doing a web search on any of the names above or on “sound card interface”.
2. Build one from a kit – BuxComm sells its RASCAL in “kit” form for \$30. It takes 1-2 hours to assemble, and it's not hard to do. These were the kits the club opted to build at club meetings in 2002, and it's the interface that I generally use here. BuxComm recently improved their design by making quick-change radio connection cables – you can order different cables for each of your radios. I've learned that Eric N2VI recently built one of these GLKits, and I'm sure he'd be happy to tell you about his experience.
3. Build your own from scratch – You can build your own interface with components readily available at Radio Shack or elsewhere. That's what I did for my first interface. Diagrams and a part list are on my Sound Card Packet web site: www.qsl.net/soundcardpacket/cablestart.htm But, personally, I think the BuxComm kit (in #2) is a better choice and worth the few extra dollars. You'll get better quality components and save

What's In It? In its basic form, an interface is three lines (two wires in each), a few electronic components, and connectors suitable for your radio and sound card.

- The Receive (Rx) Audio Line – handles audio coming from the radio to the sound card's LINE IN jack. The only component inserted in this line is an audio **transformer**. The transformer provides electrical **isolation** from the radio and sound card/computer – they are no longer wired directly together. More on this later.
- The Transmit (Tx) Audio Line – handles audio going from the sound card's LINE OUT jack to the radio. In addition to an isolation transformer, this line needs some components to reduce the voltage of the sound card's audio signal, which is otherwise much higher than the voltage your radio was designed to receive. A **variable resistor** (potentiometer/pot) or a combination of resistors acting as a “voltage divider” will do the job.
- The Push To Transmit/Talk (PTT) Line – is used to open your radio's PTT circuit when TX audio needs to be sent. This line includes a circuit designed to activate whenever a DC signal is detected on a designated serial or parallel port pin, the signaling technique used by most sound card programs. This line's circuit should also provide isolation, and that can be done by using a **photo transistor** rather than an ordinary transistor.

Why the Concern over Isolation? The simple answer is “to protect your equipment”. If the computer and radio were directly wired, i.e. no isolation, then it's possible that a difference in voltage potential between the devices could result in potentially damaging electrical current flowing between them. This flow, called a **ground loop**, could also create some minor audio interference. So when you buy or build an interface, be sure isolation is included on all three interface lines. And to reduce the potential for other RFI (radio frequency interference), make sure the audio lines are either “**shielded**” or that they have a ferrite cores around them – or both!

If you don't have a sound card interface yet, get one. Using it with your computer's sound card will open a whole new world of exploration on the HF, VHF, and UHF bands – the world of digital operations!