

# MTAIN SPARK GAPS

N2XJ  
Club Callsign

NPARC - The Radio Club for the Watchung Mountain Area

VOLUME 43      February, 2008      NO. 2

Meeting on Monday the 11th, 7:30 pm at the Salt Brook School featuring a presentation on batteries by K2JV and a talk about a trip to WOR by KB2FCV.



President's Column by James, KB2FCV



February is now here and we've been very fortunate with the weather so far. While winter isn't quite over, I can think of maybe once this winter when I have had to break out the shovel and sand. Kids Day 2008 was a big success with at least 25 kids and parents coming out. QSO's were made on 20 Meters as well as 2 meters with kids lined up to take their turn at the microphone. It was nice to see a big turnout this year. Barry did a wonderful job organizing this event and my thanks to all the club members who turned up to help out. It was exciting to watch my wife Kieran demonstrate Morse code to two girls! There were also displays on Morse Code, digital communications, and a nice big map where we had thumbtacks displaying the location of each QSO we made. While we're on the subject of kids, the Kids Net has gotten off to a great start! Nick, KC2ONP, came up with the idea and has run two nets so far. Each net runs about one half hour. It is a great event to get kids on the air. I am glad to see that NPARC's younger members are taking part in this net. I hope it extends to kids all over NJ and beyond.

The Annual NPARC auction is just around the corner. It's always an event to which I look forward. You just never know what is going to show up there. Each year seems to bring more and more people and more stuff! I've gotten a lot of inquiries over the past month about the auction from people who have seen the flyers, which is a good thing. Next to Field Day, this is one of my favorite events to attend and help out. The auction stirs up many fond memories from auctions past. I can still remember Bay Rowan, W2GKF (SK), wearing his Chef's hat as he auctioned off many items for sale. I've filled parts drawers and come home with a few boat-anchors from there, including a Hammarlund Super-Pro for 9 dollars. I'm looking forward to seeing everyone there on the 22nd.

# WORLD'S SMALLEST RADIO

A radio recently developed at the University of California, Berkeley is said to be the smallest radio ever built. The nanoradio, which presently operates as a receiver but could work as a transmitter as well, is a single carbon nanotube that operates as a combined antenna, tuner, amplifier, and AM/FM demodulator. (For those unfamiliar with the world of nano technology, a nanotube is a rolled sheet of interlocked carbon atoms that form a tube that is extremely strong and also exhibits some peculiar electronic properties. This particular tube is about 10 nm in diameter and less than 1,000 nm long, making it about 1/5,000 as thick as a human hair.)

The operation is fairly straightforward. When radio waves strike the nanotube, it begins to vibrate. You then apply an electric field, which forces electrons to be emitted from its tip. This current is used to detect the vibrations and thus turn the radio waves back into sound.

In one of the early experiments, team leader Alex Zettl, UC Berkeley professor of physics, and his team successfully transmitted such works as "Layla" (Derek & the Dominos), "Good Vibrations" (Beach Boys), and "Largo" (from the Handel opera "Xerxes") across a room.

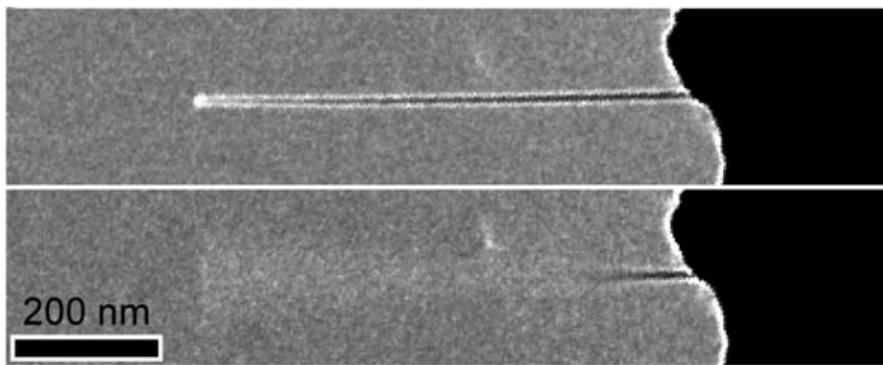
According to professor Zettl, the nanoradio may prove useful in a variety of applications "from cell phones to microscopic devices that sense the environment and relay information via radio signals. The nanotube radio may lead to radical new applications, such as radio controlled devices small enough to exist in a human's bloodstream."

If you want to learn more and listen to the actual transmissions, bring up the Berkeley web site ([www.berkeley.edu](http://www.berkeley.edu)). Once on their web page go to "Search the Berkeley Web" and enter the labs address ([socrates.berkeley.edu/~argon/nanoradio/radio.html](http://socrates.berkeley.edu/~argon/nanoradio/radio.html)). Listen to the audio at: <http://physics.berkeley.edu/research/zettl/projects/nanoradio/Media/nanoradio-layla.wav>.

This is fascinating stuff and combined with SDR we can put implants in everyone's brains and send thought waves to each other instead of speaking. Actually the possibilities are almost endless.

If anyone in the Club happens to have an electron microscope, this would make a dandy club project.

James M. Brown  
WB2EDO



## Meeting Schedule

Regular Meeting: 7:30 - 9:15 PM

2nd Monday of each month at the  
Salt Brook School Cafeteria  
Springfield Ave. and Maple St.  
New Providence.

4th Monday each month: 7:30 - 9:15  
Informal Project Meeting, at the  
Salt Brook School Cafeteria  
Springfield Ave. and Maple St.  
New Providence.

### Everyone is Welcome

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

## Club Officers for 2008

President: KB2FCV James Kern  
908-219-4016

Vice Pres: KQ2E Bruce Havourd  
908-277-2861

Secretary: WB2EDO Jim Brown  
973-829-1892

Treasurer: K2YG Dave Barr  
908-277-4283

Activities: KC2IZK Vince Lobosco  
908-464-1323

Past President: K2AL Al Hanzl  
908-464-1323

## On the Air Activities

Club Operating Frequency  
145.750 MHz FM Simplex

### Sunday Night Phone Net

Murray Hill Repeater at 9:00 PM  
Transmit on 147.855 MHz  
with PL tone of 141.3 Hz  
Receive on 147.255 MHz  
Net Control: K2AL

### K2AGI Memorial Digital Net

Various evenings 8:00 to 9:00 PM  
Various Modes 145.75 MHz  
Info Contact: AB2WF Scott

## Club Internet Addresses

Website: <http://www.nparc.org>

Reflector: nparc@mailman.qth.net

Webmaster: KC2RLM, Ralph

## MOUNTAIN SPARK GAPS

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WB2QOQ, Rick Anderson



## Regular Meeting Dates for the Next Few Months

Courtesy of Al, K2AL

The following dates are approved for use of the Salt Brook School Cafeteria for NPARC meetings:

February 11 & 25

March 10 & 24

April 14 & 28

May 12 & 27 (Tuesday)

June 9 & No second meeting location scheduled so far

## Climatological Data for New Providence for January 2008

The following information is provided by Rick, WB2QOQ, who has been recording daily weather events at his station for the past 26 years.

### TEMPERATURE -

Maximum temperature this January, 63 deg. F on January 9

Last January (2007) maximum was 64 deg. F.

Average Maximum temperature this January, 39.7 deg. F

Minimum temperature for this January, 11 deg. F

(on January 3 & 21)

Last January(2007) minimum was 6 deg. F.

Average Minimum temperature this January, 25.7 deg. F

Minimum diurnal temperature range, 6 deg. F

(39-33 deg.) 1/14

Maximum diurnal temperature range, 22 deg. F

(34-12 deg.) 1/4

Average temperature this January, 32.7 deg. F

Average temperature last January, 34.3 deg. F

Number of days, this January, with temperatures 32 deg. F or above – 27

Number of days, last January, with temperatures 32 deg. F or above – 26

Number of days, this January, with temperatures of 32 degs. F or lower – 23

Number of days, last January, with temperatures of 32 degs. F or lower – 21

### PRECIPITATION:

Total precipitation this January – 2.31" rain/melted snow, 1.5" snow

Total precipitation last January – 3.57" rain, 2.0" snow

Maximum one day precip. event this January – January 11, 0.8" rain; Jan.17, 1.5" snow

Measurable rain fell on 7 days this January.

Days with Precip. 1.00" + = 1(1.5" snow)

A tremendous amount of effort has gone into the production of our longest running single column in the Spark Gaps, the weather column. Richard Anderson, WB2QOQ, maintains our reputation of "all the news which is available to print." Sometimes it is the most important news we have in the gaps after a record snowfall or flood! Thank you Rick for the wonderful job you've done.

•Bruce Havourd, NPARC SG editor.