MOUNTAIN SPARK GAPS

NPARC—The Radio Club for the Watchung Mountain Area

Website: http://www.nparc.org
Club Calls: N2XJ, W2FMI

VOLUME 49 NO. 2 February, 2014

UPCOMING EVENTS

Regular Meetings

Mon. 7:30
March 10 and 24
Salt Brook School Cafeteria

Meeting Schedule

Regular Meeting: 7:30—9:00 PM
2nd Monday of each month at the
Salt Brook School Cafeteria
Springfield Ave. and Maple St.
New Providence

Informal Project Meeting: 7:30—9:00 PM
4th Monday of each month 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.
When Schools are closed,
Meetings are held in the Recreation
Department Meeting Room in Borough Hall

Club Officers for 2013

President: K2MUN David Berkley
908-500-9740
Vice President:KC2WUF David Bean
973-747-6116
Secretary: KD2EKN Tim Farrell
908-244-6202
Treasure: K2YG Dave Barr
908-277-4283
Activities: W2PTP Paul Wolfmeyer
201-404-6914

On the Air Activities

Club Operating Frequency
145.750 MHz FM Simplex

Sunday Night Phone Net
Murray Hill Repeater (W2LI) at 9:00 PM
Transmit on 147.855 MHz
With PL tone of 141.3 Hz
Receive on 147.255 MHz
Net Control K2AL

Digital Net
First & Third Mondays 9 PM
Details as announced.

Club Internet Address

Website:http://www.nparc.org
Webmaster K2MUN David Berkley
Reflector: nparc@mailman.qth.net
Contact K2UI, Jim

MOUNTAIN SPARK GAPS

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The Watchung Mountain Area Radio Club
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Contributing Editors:
WB2QOQ Rick Anderson
WB2EDO Jim Brown

Climatological Data for New Providence for January 2014

The following information is provided by Rick, WB2QOQ, who has been recording daily weather events at his station for the past 33 years.

TEMPERATURE -

Maximum temperature this January, 59 deg. F (January 11)
Last January(2013) maximum was 63 deg. F.
Average Maximum temperature this January, 34.0 deg. F
Minimum temperature for this January, 0 deg. F (January 4)
Last January(2012) minimum was +6 deg. F.
Average Minimum temperature this January, 15.9 deg. F
Minimum diurnal temperature range, 8 deg. (9-1 deg.) 1/7;(46-38) 1/14;(41-33) 1/16
Maximum diurnal temperature range, 41 deg. (54-13 deg.) 1/6

Average temperature this January, 25.0 deg. F
Average temperature last January, 33.3 deg. F
Number of days this January with daily minimum temperatures of
20 deg. or lower - 21; last January - 7.
9 days this January saw temperatures in the single digits; last Jan., 4 days.
15 days this January saw maximum temperatures below 32 degs.; last Jan.,5 days.

PRECIPITATION -

Total precipitation this January - 16.3" snow; 2.85" rain/melted snow.
Total precipitation last January - 1.0" snow; 2.38" rain/melted snow.

Maximum one day precip. event this January; January 21, 10.0" snow.
Measurable rain fell on 6 days this January, 9 days last January.
Measurable snow/sleet fell on 6 days this January.

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Rick Anderson 2/8/14
243 Mountain Ave.New Providence, NJ
(908)464-8912
rick243@comcast.net

Lat = 40 degrees, 41.7 minutes North
Long = 74 degrees, 23.4 minutes West
Elevation: 380 ft.
CoCoRaHS Network Station #NJ-UN-10

PRESIDENTS COLUMN
By K2MUN

I will continue the discussion of my antennas, with focus on simulation, in the near future. For now, I suggest taking a look at this month's QST (March), which is the Antenna issue. There are a number of interesting articles with a lot of focus on vertical antennas, including verticals on top band (160m). However, this month I'd like to step aside to devote most of this column to discussion of what makes a radio club and, in particular, what makes NPARC unique.

I'm inspired to spend time on this topic, although it is always a worthwhile discussion, because of our very recent NPARC Auction. There are many things that an individual ham can do but there are some, like the Auction, that can only be carried out by a sizable group. NPARC does two big club events each year: the Auction and Field Day.

We also sponsor a number of other activities including a regular Sunday night net, which has existed for many years; a bi-monthly Digital net (which comes and goes); club participation in various contests; club trips (such as those we have made recently to ARRL Headquarters; to Battleship NJ and to HRO) and hope to organize a group trip down to InfoAge in Wall Township.

There are also activities that are affiliated in various ways with NPARC such as ARISS contacts, summer radio camp and the Emergency Response Team which has been available to help in times of local emergency. Finally, last but certainly not least, we meet regularly to share participation in various activities including talks about radio topics as well as great discussion over coffee. These activities can be by small or large groups but all illustrate what our radio club is about.

Our constitution defines NPARC this way: *"wishing to secure for ourselves the pleasures and benefits of the association of persons commonly interested in amateur radio…It shall be our purpose to facilitate the exchange of information and general cooperation between members; to promote radio technology, fraternalism, and individual operating efficiency; and to conduct the Club programs and activities so as to advance the interest and welfare of amateur radio in the general community."*

We do these things because the pleasure of ham radio is enhanced when we can share the experience, not just over the air, but in person, with others who share at least some basic aspects of the same interests. I phrase it this way because I don't think there is any simple picture of what hams do. There are dozens of different places where people can focus their interests and every one of them is represented in our club from designing and building equipment, participating in organizational activities (e.g. ARRL), contesting, to bouncing signals off the moon as a set of random examples. Not only that, each of us, from day-to-day, week-to-week, year-to-year and decade by decade change our focus. Again, the club provides a wonderful, ready-made, resource for learning new things and hearing about the details from others who have already dipped toe or entire being into the area.

The Auction has little to do with amateur radio operation but a lot to do with common interests. Working together towards a common goal is a fundamental human activity and it can be great fun! I encourage you to take any opportunity to join with your fellow hams and club members helping each other in whatever way you can; participating in events and activities and, very important, taking the lead in doing something new. If you have any ideas for things that might interest your fellow members, don't be shy. Let us know in whatever way possible: e-mail, the reflector, at meetings, etc. The more members who step up with ideas, the richer we are as a radio club!

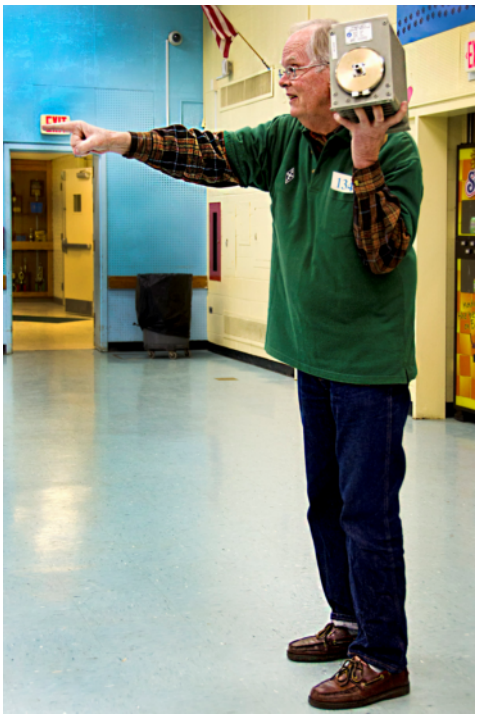
Next time I'll talk about simulation of the fan dipole arrangement, which illustrates some interesting features of EZNEC, and shows how well the results compare with the actual measurements. The object, of course, is to determine how to modify the antennas, so as to improve performance across the bands desired. In the meantime, I encourage you to think about how to better understand your antennas (as well as look at the QST issue mentioned above). A little insight can result in great on-air improvements.

As we head for the end of Winter, with little hints of Spring in the midst of the mounds of snow, the bands will shift and our thoughts will turn to Field Day — our next big event. In the meantime. Participate and enjoy!

Most everyone agrees that this years auction was a success even though attendance was down from previous years. Whether it was the change in location (NP High School Cafeteria) or the weather is a good question. Even if the location did make a difference in attendance, it made setup and cleanup much easier.

The Audience

The Food Table



Auctioneer at his best

A Real Boat Anchor

SCIENTIFIC TIDBITS

Clocks Set Stability Record

For most of us (time being relative and all that), owning a watch that is accurate to within a few seconds a day is good enough. However, there are some accuracy fanatics out there who are willing to pay big bucks to get super-high-precision timepieces. For example, for about $7,000 you can pick up a Breitling B-1 which is reported to be accurate to within about three seconds per year.

There are limitations to what you can get out of any quartz movement. If you want maximum precision, you need an atomic clock based on ytterbium atoms like the pair of chronometers recently built by the National Institute of Standards and Technology.

When you get to this level of accuracy, the terminology changes to "stability" which is basically a measure of how precisely the duration of each "tick" matches the others. The ytterbium ticks are stable to better than two parts in one quintillion (1,000,000,000,000,000,000), which is ten times as good as the crappy old cesium atomic clock the National Institute of Standards and Technology (NIST) currently uses as the U.S. civilian time standard. (One might logically wonder how NIST can actually verify the stability of the ytterbium clock, but maybe that is why they had to build two of them.)

According to Institute scientists, the new clock has the potential for significant impacts not only on timekeeping, but also on a broad range of sensors measuring quantities that have tiny effects on the ticking rate of atomic clocks, including gravity, magnetic fields, and temperature. Just don't expect to wear one on your wrist anytime soon.

Self-Driving Cars

Autonomous cars may seem pretty exotic at this point, but a new report from Navigant Research provides an examination of the emerging market for advanced driver assistance features leading to semi-autonomous and autonomous driving. The report includes a prediction that self-driving cars will be readily available in the next five years or so and that by 2035 sales figures will reach 95.4 million annually, representing 75% of all light-duty vehicles. General Motors is reportedly gearing up to sell a semiautomatic Cadillac in 2015.

Also cited in the report is the Google self-driving Lexus. It notes, "The Google cars use onboard cameras, lasers, radar, and other sensor equipment to monitor road conditions and operate themselves. Proponents say the use of computers and other equipment will make them safer than having humans drive, since people sometimes make errors, lose concentration, fall asleep, or drive drunk." So cheer up. Having one more for the road and texting on your cell phone may not be a problem soon.

Jim WB2EDO