

# MOUNTAIN SPARK GAPS

NPARC—The Radio Club for the  
Watchung Mountain Area



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

VOLUME 47 NO. 08 August 2012

## UPCOMING EVENTS

### Regular Meetings

**Mon. 9/10 & 9/24 7:30 PM  
Salt Brook School Cafeteria**

**At the 9/10 meeting James.  
KB2FCV will give a presentation  
on his EME activities.**

**At the 9/24 bill Hudzik, W2UDT,  
will talk about the Hudson Divi-  
sion. Joyce Birmingham,  
KA2ANF, the division director has  
been invited. Joyce is up for re-  
election so this should be inter-  
esting.**

## Meeting Schedule

**Regular Meeting:** 7:30—10:30 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 2012

President: N2KDK Paul Campano  
908-508-9595  
Vice Pres.: K2MUN David Berkley  
908-500-9740  
Secretary: K2JV Barry Cohen  
908-464-1730  
Treasurer: K2YG Dave Barr  
908-277-4283  
Activities: K2JV Acting

## 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

## Club Internet Address

Website: <http://www.nparc.org>  
Webmaster K2MUN David Berkley  
Reflector: [nparc@mailman.qth.net](mailto:nparc@mailman.qth.net)  
Contact K2UI, Jim

## MOUNTAIN SPARK GAPS

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Contributing Editors:  
WB2QOO Rick Anderson  
WB2EDO Jim Brown

## Climatological Data for New Providence for July 2012

The following information is provided by Rick, WB2QOO, who has been recording daily weather events at his station for the past 29 years.

### TEMPERATURE -

Maximum temperature this July, 102 deg. F  
(July 18)  
Last July(2011) maximum was 101 deg. F.  
Average Maximum temperature this July, 88.8 deg. F  
Minimum temperature for this July, 61 deg. F  
(July 20, 21, 22)  
Last July(2011) minimum was 56 deg. F.  
Average Minimum temperature this July, 67.2 deg. F  
Minimum diurnal temperature range, 10 deg.  
(78 - 68 deg.) 7/19  
Maximum diurnal temperature range, 29 deg.  
(97 - 68 deg.) 7/17  
(102 - 73 deg.) 7/18

Average temperature this July, 78.0 deg. F  
Average temperature last July, 77.7 deg. F

Number of days this July with daily maximum temperatures of  
90 deg. or higher - 16; last July - 11.

### PRECIPITATION -

Total precipitation this July - 2.29" rain.  
Total precipitation last July - 2.41" rain.

Maximum one day precip. event this July;  
July 20; 0.70" rain.  
Measurable rain fell on 13 days this July,  
10 days last July.

=====  
Rick Anderson

8/8/12

243 Mountain Ave.  
New Providence, NJ  
(908) 464-8911

[rick243@comcast.net](mailto: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

## Hurricane Irene—One Year Later.

ONE YEAR AGO TODAY - NEW PROVIDENCE DELUGED BY HURRICANE IRENE !

Looking back now, that was SOME WEEK !!!

Saturday, August 27 -

8 a.m. I had only 0.04" of rain in my rain gauge, but I knew Irene was on the way.

6 p.m. - 0.45" rain had fallen.

9 p.m. - 1.72" had fallen.

Midnight - total rainfall for Saturday was 2.47" !

Sunday, August 28 -

4 a.m. - An additional 3.05" rain had fallen overnight.

4:16 a.m. - Lost AC power. Fired up my small gas generator to power my sump pump and a portable pump, which were running like crazy!

6 a.m. - An additional 1.4" rain !

9:30 a.m. - An additional 1.75" rain !

In early afternoon the rain tapered off, and the sun was out by mid afternoon.

10 p.m. an additional 0.05" rain had fallen.

TOTAL RAIN RECEIVED FROM HURRICANE IRENE AT MY STATION - 8.72" !

The JCP&L supplied AC power would remain off at my Mountain Ave. home for 5 days, 9 hrs., 5 min. !

I don't ever recall an outage of that duration, prior to last August/September.

Rick WB2QOQ

The anniversary of the storm brings back some memories for me. As I had my duties with the Chatham Twp Fire Department, I wanted to monitor the status of our power since Kieran was staying with my folks. I too have a sump pump and getting water in the basement due to a power outage was not an option. I setup a ham radio 2 meter beacon so that I could keep a small HT with me and listen for the CW. Sure enough, sometime after midnight I no longer heard the V V V DE KB2FCV/B in morse code. After a number of detours I made it back to the house just in the nick of time to get my generator setup. Now of course I wanted to know that my generator was still running! I moved my mobile rig / beacon over to generator power so that I could monitor it while I was on duty with the Fire Dept. We were one of the lucky ones to get power restored back quickly (that is another amusing story involving a bunch of food donated to the emergency workers by Shoprite who had no choice but to get rid of perishable food due to no power & a very nice dinner we put on for JCPL!). Once power was restored, I got a call from my neighbor who shut my generator down and moved my sump back to house power. The little beacon went silent, performing the essential task of keeping my basement dry!

73, James KB2FCV

At the August 27 NPARC meeting Jim, K2UI, gave a short presentation on a front end for a software defined (SDF) radio. This gadget is about the size of a pack of chewing gum with a USB plug on one end and an antenna jack on the other. For additional information, check the following sites.

The SDR used a DVB-T (Euro Dig TV) USB board. The key components on the board are:

Realtek RTL2832  
Elonics E4000 tuner

To learn more, start by Googling "realtek sdr usb" for tech info and boards for sale (Amazon and Ebay). A list of working boards is at <http://sdr.osmocom.org/trac/wiki/rtl-sdr#SupportedHardware>

The other piece of the puzzle is the GNU Radio software (<http://gnuradio.org>) It is a HUGE collection of code.

A good summary of what can be done with the Realtek boards is at <http://superkuh.com/gnuradio.html>

Thanks to WB2QOQ, KB2FCV, and K2UI for their contributions. Articles need not be long or fancy, so you can see they are not hard to prepare. The only request is that pictures, if any, be sent as separate JPEG files, not embedded in word or Email files. Embedding pictures makes it difficult to format a page.

I hope this is the beginning of a trend. 73, K2EZR

# SCIENTIFIC TIDBITS

## Energy Scavenging

By scavenging energy in the air around us, a new antenna gathers energy that can be used to power wireless chips and other small devices. Georgia Tech researchers invented the device, which collects electromagnetic energy from radio, TV, cell phone and satellite waves. They say they have successfully operated a temperature sensor using energy captured from a nearby TV station's signal. If this system can be expanded, think of the possibilities for Field Day!

## More Power from the Sun

We continue to see more ingenious ways to generate power from the sun other than the solar panels now in use. A more efficient method for generating energy from the sun's heat has been developed by scientists at MIT. Current solar thermoelectric techniques involve using mirrors to focus sunlight on a tube and heating up fluid inside it to power a steam turbine. But the MIT researchers engineered a plate of metal to absorb the sun's heat without radiating it. The temperature difference between the sunlit side of the plate and the other side produces a charge that allows it to operate up to 8 times more efficiently than other thermoelectric systems. We keep making steps forward.

## Algae

Development of biofuels from algae has finally reached a point where it is estimated that they could replace 17% of U.S. fuel imports by the year 2020. The Energy Department's study concluded that algae can produce more than 80 times more oil per hectare per year than corn and would not interfere with our food supply as the current politically derived system now does. Algae can digest common water pollutants as well. All of our major oil companies as well as other large chemical and agricultural companies have been developing this energy source for a number of years. Yet the public has not heard much about these developments even though this is a more efficient and cheaper method of energy production than corn. Could it be that Washington has a vested interest in the production of corn and its price?

## Pinhead-Sized Camera

A pinhead-sized camera costing only a few cents has been developed that potentially will improve the imaging capabilities of medical instruments and miniature robots. The camera consists of a silicon chip, measures half a millimeter on each side and 100<sup>th</sup> of a millimeter in thickness, can produce images about 20 pixels across. Hopefully, this small camera will make colonoscopies more tolerable. J

Jim WB2EDO