

# **MOUNTAIN SPARK GAPS**

**NPARC—The Radio Club for the  
Watchung Mountain Area**



**Website: <http://www.nparc.org>  
Club Calls: N2XJ, W2FMI  
Facebook: New Providence Amateur Radio Club  
(NPARC)**

**VOLUME 52 NO. 9 September 2018**

## **UPCOMING EVENTS**

### **Holiday Luncheon**

**12/2**

**Chimney Rock Inn, Gillette, NJ**

### **Kids Day?**

**1/7/2018 2:00—5:00 PM**

**DeCorso Community Center**

### **Regular Meetings**

**10/9 & 10/23**

**Monday 7:30**

**DeCorso Community Center**

## Meeting Schedule

**Regular Meeting:** 7:30—9:00 PM  
**2nd Monday of each month** at the  
NP Senior & Adult Center  
15 East Forth Street  
New Providence

**Informal Meeting:** 7:30—9:00 PM  
**4th Monday of each month**  
**Same location**

**Everyone is Welcome**

If a normal meeting night is a holiday,  
we usually meet the following night.  
Call one of the contacts below  
or check the web site

## Club Officers for 2016

President: W2PTP Paul Wolfmeyer  
201-406-6914

Vice President: K2GLS Bob Willis  
973-543-2454

Secretary: K2AL: Al Hanzl  
908-872-5021

Treasurer: K2YG Dave Barr  
908-277-4283

Activities: Open

## —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  
28,084 — 28,086  
Will be using PSK and RTTY

## Club Internet Address

Website: <http://www.nparc.org>  
Webmaster KC2WUF david Bean  
Reflector: nparc@mailman.qth.net  
Contact K2UI, Jim

## MOUNTAIN SPARK GAPS

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Contributing Editors:

WB2QOO Rick Anderson

W2PTP Paul Wolfmeyer

K2UI Jim Stekas

Climatological Data for New Providence for  
August 2017

The following information is provided by  
Rick, WB2QOO, who has been recording  
daily weather events at his station for the  
past 36 years.

### **TEMPERATURE -**

Maximum temperature this August, 90 deg. F  
(August 1,22)

Last August (2016) maximum was 94 deg. F.

Average Maximum temperature this August,  
81.0 deg. F

Minimum temperature this August, 54 deg. F  
(August 27)

Last August (2016) minimum was 55 deg. F.

Average Minimum temperature this August,  
62.7 deg. F

Minimum diurnal temperature range, 4 deg.  
(66-62 deg.) 8/7

Maximum diurnal temperature range, 25 deg.  
(90-65 deg.) 8/1, (89-64 deg.) 8/3,

(83-58 deg.) 8/9

Average temperature this August, 71.9 deg. F

Average temperature last August, 77.4 deg. F

2 days this August had maximum temperatures  
of 90 degs. or higher.

9 days last August of 90 degs. or higher  
temps.

### **PRECIPITATION -**

Total precipitation this August - 4.77" rain

Total precipitation last August - 1.64" rain

Maximum one day precip. event this August -  
August 5, 1.30" rain

Measurable rain fell on 11 days this August,  
6 days last August.

YTD Precipitation - 34.26" (includes rain +  
melted snow; 22.25" snow as of 3/31/17)

=====  
Rick Anderson

9/1/17

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.

## President's Column September 2017

The eclipse was an exciting event for our country and our club members who saw it in total-ity-- K2AL (and his brother), K2UI, KC2ONL, and K2JV—presented an excellent review of their experiences at our first club meeting of the month. Thanks Al for coordinating the review and to the reviewers. Next chance to see it is 2024.

Congrats to Billy KD2JRI on passing the Amateur Extra exam.

Repeated from last month: We decided at the July 24 meeting to build the DIY mega 328 Transistor Tester, Capacitance, Inductance ESR Meter brought to the club by Jon Pawlik AE2JP. Since the kits are imported, it may take a few weeks to receive them. Individuals should order his/her own on ebay, according to the info posted by Jon on the reflector July 25 (and again last Monday nite)—I've received mine, as have at least three other club members—cost is under \$17 with free shipping.

We plan to tackle assembly the last meeting of October. We'll have help for the little bit of surface mount soldering. But read Jon's reflector post and get prepared for fun.

Keep this date on the calendar: participation with the TriCounty Club for the Fox Hunt—Sunday afternoon, May 20 next year. This date was picked because OUR club members had trouble with fall dates this year for various reasons and we weren't ready. So the new date allows for preparation time. Equipment needed will be a 2meter HT, a directional antenna, and an attenuator. A possible antenna is at [http://theleggios.net/wb2hol/projects/rdf/tape\\_bm.htm](http://theleggios.net/wb2hol/projects/rdf/tape_bm.htm). We'll get a suggestion for a step attenuator. A barbeque will likely follow the hunt. So start getting prepared.

The first Saturday of December is our Holiday Luncheon at Chimney Rock—it has been reserved, thanks to James KB2FCV.

And we have tentatively set our Auction for SATURDAY afternoon February 24.

Remember--the HF Digital" net continues—first and third Monday of the month at 9PM...for help, I'd suggest Dave K2YG, David KC2WUF, Al K2AL, or Bob K2GLS as possible mentors—talk to them or to me.

73 for now

Wolf

W2PTP

201-404-6914 or W2PTP@arrl.net

## **“They Want our Bands!”**

**Jim Stekas - K2UI**

In the early days of the 20<sup>th</sup> century the Marconi Corp. developed the “killer app” for wireless telegraphy: maritime communications. Ships communicated with each other and shore stations on frequencies in the 50-500kHz range using spark transmitters. By 1912, many radio amateurs had homebrew stations and shared the radio spectrum with maritime and Navy stations. When the Titanic sunk in April, many amateurs monitored the rescue communications and some passed the latest developments on to local newspapers.

By the end of WW1, radio had become a strategic necessity for the Navy and new regulations established how military, commercial, and amateurs would share the spectrum. Amateurs got access to “200 meters and down” (1.5MHz and up), undesirable wavelengths regarded as too short for long range communication.

Using superheterodyne receivers and CW transmitters, amateurs were able to make trans-Atlantic QSOs in the 1920's over “short waves”. In fact, hams found that going to shorter wavelengths actually seemed to improve DX performance. For their pioneering work hams were rewarded by losing access to large chunks of the shortwave spectrum which were reallocated for SW broadcast and commercial point-to-point communications for land, sea and air. Hams were left with the 160m, 80m, 40m, 20m and 10m bands which we retain to this day.

By the 1960's, the HF spectrum was prime real estate for broadcasting (VOA, Radio Moscow, BBC, Cuba, etc.) and long distance point-to-point communications. It seemed that every other issue of QST warned that powerful forces were aligned to take away huge chunks of our HF bands at the next ITU frequency allocation conference. As a newly licensed novice I wondered if the bands would be around for another two years so I could qualify to take the Extra exam.

The gloom-and-doom warnings continued for years but the bands are still with us. In fact, we added the WARC bands at 30m, 17m and 12m, and recently 60m was added as well as 630m and 2200m. (Those last two bands were prime real estate back in 1912!) So, how is it that we gained HF spectrum rather than losing it?

First, satellites have displaced HF for reliable long distance communications. For commercial applications the long range of HF propagation is actually a liability. High communication capacity is now achieved by dividing a region into many small cells that don't interfere with each other. Frequencies in the 1-3GHz region are ideal for this purpose because they have limited range and very short wavelengths suitable for building small high gain antennas. A typical cellular sector antenna is 6-foot stack of 5-6 dipoles separated by  $\frac{1}{2}$  wavelength having a vertical beamwidth of 7 degrees. If cellular was implemented in HF it would require cell towers about 50x larger than those we see today.

Second, our 3-4 MHz chunk of the 30MHz HF spectrum is a piddling drop in the bucket these days. The original 850 Cellular band has 50MHz of bandwidth, 25MHz for the downlinks and 25MHz for the uplinks. Cellular frequencies are auctioned by the FCC in 5 and 10MHz blocks. New LTE (4G) channels typically fill one or two 10MHz blocks, and next generation 5G allocations will likely be in 40MHz blocks.

So our HF bands are pretty safe, largely because they are of little commercial value. We are free to putter away on 40m CW and 75m AM for many years to come.