

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 53 NO. 8 August 2018

Regular Meetings

9/10 & 9/24
Monday 7:30
DeCorso Community Center

Upcoming Events

Holiday Luncheon
12/8 Chimney Rock

Kids Day

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 2018

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: KA2MPG Brian Lynch
973-738-7322

—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
Net control K2YG

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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Editor: K2EZR Frank McAneny
Contributing Editors:
WB2QQQ Rick Anderson
W2PTP Paul Wolfmeyer
K2UI Jim Stekas

Climatological Data for New Providence for
July 2018

The following information is provided by
Rick, WB2QQQ, who has been recording
daily weather events at his station for the
past 36 years.

TEMPERATURE -

Maximum temperature this July, 99 deg. F
(July 2)
Last July(2017) maximum was 94 deg. F.
Average Maximum temperature this July, 87.5
deg. F
Minimum temperature this July, 59 deg. F
(July 8)
Last July(2017) minimum was 57 deg. F.
Average Minimum temperature this July, 68.9
deg. F
Minimum diurnal temperature range, 9 deg.
(82-73 deg.) 7/23
Maximum diurnal temperature range, 28 deg.
(87-59 deg.) 7/8, (91-63) 7/9

Average temperature this July, 78.2 deg. F
Average temperature last July, 75.3 deg. F

Maximum daily temperature of 90 degs. or
higher - 11 days this July;
6 days last July.

PRECIPITATION -

Total precipitation this July - 6.48" rain
Total precipitation last July - 4.41" rain

Maximum one day precip. event this July -

July 24, 1.68" rain
Measurable rain fell on 11 days this July,
12 days last July.

YTD Precipitation - 31.67"

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Rick Anderson
8/17/18
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

President's Column August 2018

Just a short note this month...

This month's meetings featured the candidates for Hudson Division Director.

Ria Jairam N2RJ was with us on August 13th and told us her background and key plans.

Mike Lisenco N2YBB, our current Hudson Division Director, was with us August 27th. He first shared ARRL information—we have a new ARRL CEO, just announced.

In my opinion, Mike has done excellent work with the ARRL, particularly supporting amateur radio in Washington—a very difficult place to get things done! His Hudson Division cabinet meetings have been informative and helpful...

Ballots will be mailed out soon...make your voice heard by voting!!

Although, thanks to Joel W2TQ for leading discussion about “contact cleaners” at the August 13 meeting.

73 for now

Wolf

W2PTP

201-404-6914 or W2PTP@arrl.net



NPARC member Ken Hanzl, W2IOC, received the Morris County Distinguished Service Award for his Army service in the Vietnam War in a formal outdoor ceremony in Morristown this past May.

Pictured

K2AL congratulates W2IOC on his receiving the award.

My Bogus Antenna Jim Stekas - K2UI

As a novice, my go-to antenna was a 40m dipole center fed with RG-58. My Eico 720 had no trouble “loading up” on the 40m and 15m novice bands. SWR was not a concern. I had no means to measure it, and whatever the SWR was it didn’t seem to stop me from making contacts. Trying to tune up on 20m or 10m resulted in some snap, crackle and pop from the finals. But a 6146 tube is a tough beast, and will stand up to a lot of abuse short of being dropped on the floor.

Back in the 1920s, Lauren Windom (W8GZ) came up with an antenna fed off-center (OCF) by a single wire 1/3 of the way from one end. In a 1929 QST article he described a version with a 2-wire feed which is what we today call a Windom antenna. (Purists insist that “Windom” should refer only to the original single wire fed version, but that horse left the barn long ago.)



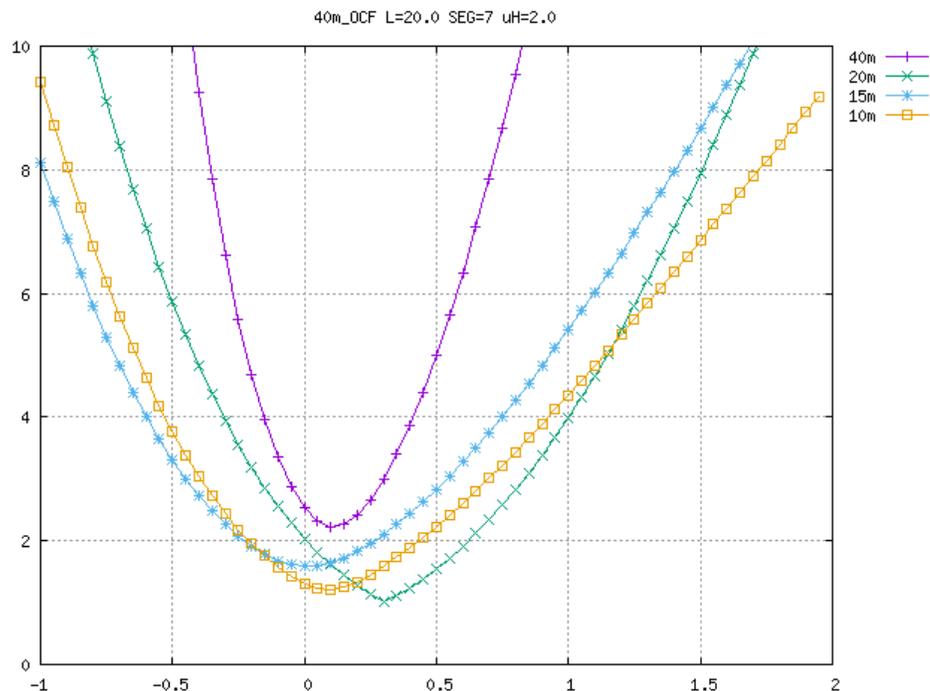
Two things to like about the Windom:

1. It will work on all even harmonics, so an 80m Windom should work on 40m, 20m and 10m bands.
2. The feed point is closer to one end, which tends to be a more convenient location for supporting a balun and coax.

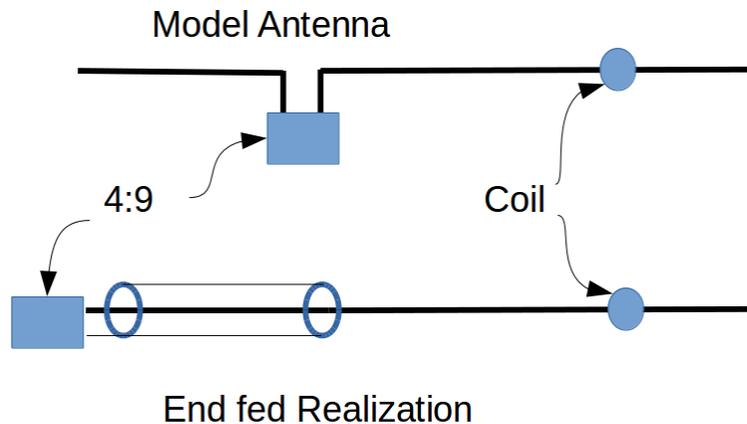
On the negative side:

1. The feed point for the 15m band is at a current node, and the SWR is too high to be useable.

There is no law that specifies where dipoles must be fed: in the center, 1/3 from one end, or whatever. Using NEC to model different configurations I found that 66ft long 40m dipole fed 11ft from the end would work well on 40m, 20m, 15m and 10m. A “magic” 2uH coil placed 9ft from the opposite end gave a beautiful match on all bands for a feed impedance of 125 Ohms. (Figure at right shows SWR relative to lower band edge.)



Even though the 50:125 matching transformer and coax feed would only need to be 11ft from the end support I thought I could do better. If I used an 11ft length of coax for the short end the outside of the braid would function as the short leg of the antenna and the inside of the coax could transport power to the feed point.



The end fed version (see above) is perfectly fine for QRP work, but I am allergic to RF burns and needed a better solution for 100w. (Note: the 4:9 transformer is close to 50:125 and is implemented with a 2:3 turns ratio.)

As it turns out, the 11ft of coax is a significant fraction of a wavelength on the higher bands. So I decided to extend the coax to so its total length (electrically) was $\frac{1}{2}$ wavelength on 40m. This would make the impedance seen at the input end exactly what is presented at the feed point. A ferrite choke replaced the 4:9 transformer to retain the 11ft length of the short antenna leg, and the 4:9 transformer was placed at the coax input. (Note: the choke has no effect on what goes on inside the coax.)

I expected the antenna as constructed to perform reasonably close to the NEC model, and it sorta does. But close, as they say, only counts in horseshoes. All the Smith charts in the world could not convince my AT-180 tuner to match this antenna. After several years of tweaking and general futzing I am forced to the conclusion that I have created a bogus antenna of unique design that will take it's place in the Pantheon. Bogosity score = 60.

Making an end fed antenna that covers two bands (40/20 or 40/15) is a piece of cake and would be very practical for portable operation. The original 4-band design as modeled in NEC (without the end fed coax / radiator) would have made a great backyard antenna. But I committed the sin of gold plating, over constraining the design with too many competing requirements, and ended up with a bogus monstrosity instead. It's time for me to accept defeat and put up something less ambitious that actually works before the snow starts falling.