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. 6 June 2017

UPCOMING EVENTS

Rest and Relax.
Work lots of DX.

Regular Meetings

7/10 & 7/24
Mondays at 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 Project 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 2017

President: W2PTP Paul Wolfmeyer
201-404-6914
Vice President:K2GLS Bob Willis
973-543-2454
Secretary: K2AL Al Hanzl
908-872-5021
Treasurer: K2YG Dave Barr
908-277-4283
Activities: AC2GL David Hartman
908-665-1419

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 and Third Mondays
28,084—28,086 kz
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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WB2QOQ Rick Anderson
W2PTP Paul Wolfmeyer
K2UI Jim Stekas

Climatological Data for New Providence for May 2017

The following information is provided by Rick, WB2QOQ, who has been recording daily weather events at his station for the past 35 years.

TEMPERATURE -
Maximum temperature this May, 92 deg. F (May 18)
Last May(2016) maximum was 93 deg. F.
Average Maximum temperature this May, 69.8 deg. F
Minimum temperature this May, 39 deg. F (May 8)
Last May(2016) minimum was 36 deg. F.
Average Minimum temperature this May, 51.1 deg. F
Minimum diurnal temperature range, 4 deg. (59-55 deg.) 5/30
Maximum diurnal temperature range, 34 deg. (89-55 deg.)5/17

Average temperature this May, 60.5 deg. F
Average temperature last May, 61.6 deg. F

Two days this May had maximum temperatures of 90 degs. or higher.
Four days last May of 90 degs. or higher temps., including a heat wave, May 26-29.

PRECIPITATION -
Total precipitation this May - 6.85" rain
Total precipitation last May - 3.89" rain

Maximum one day precip.event this May - May 5, 1.84" rain
Measurable rain fell on 13 days this May, 15 days last May.

YTD Precipitation - 21.83" (includes rain + melted snow; 22.25" snow as of 3/31/17)

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Rick Anderson
6/13/17
243 Mountain Ave.
New Providence, NJ
(908)464-8911
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 June 2017

Thanks to all participants for a great Field Day weekend!! Over 1200 Qs (about 775 phone, 225 cw and 160 digital)!! As usual, you all stepped up and did what you said you would—that's a hallmark of NPARC and makes it work!

We set out with several goals in mind:

Two HF stations: Richie's (N2AUG) "Near HF station" delivered many phone contacts and lots of overnight CW contacts (courtesy of Bill W2UDT). Richie, Bharat (M0OKB), Kevin (N2TO) were strong operators with George (WA2SQO) doing a yeoman's logging job.

A digital HF station: Bob's (K2GLS) "Far HF Station" worked well, getting over 160 Qs. Bob's preplanning and testing paid off well with Sam's IC7100. John (KC2MTN), Dave (K2YG), Bob (of course), Andy (N2FYE), Hillary (KC2HLA), and Phil (KC2ONL) among others made that happen. On Sunday morning, Dave and Joe Reid (K2JAO) put the rig on CW and picked up numerous cw Qs.

Have a GOTA station to enable our new members to get-on-the air: Barry (K2JV) coached Henry (K2HEN), Don (N2SLS), Phil (KC2ONL) and some prospective hams to success!

Continued success with VHF: completed thanks to Al (K2AL) and Rick (WB2QOQ)--that tower set up is always impressive!

Involve more operators and fill more time slots—which we did, with many mentioned above…

We also picked up bonus points with Al's solar qrp Qs, generator operation, a mayoral visit, attention to safety, etc.

And the food was good (thanks Sam), the grill worked great (thanks Jim KD2ITW), the photo documentation got completed (thanks Jon AE2JP), the publicity was great (the Secretary K2AL winds up with so much to do) and the logging network ran well (thanks David (K2MUN) and Dave (KC2WUF)….the food canopy provided good shade (K2YG), the table were great (KD2EKN), the antenna support (K2EFB) worked well and went up/down well, antenna stings were "shot" (Frank K2EXZ and Pat KD2MYD) …

And the weather—after having us wondering Friday evening and night—turned out outstanding!!

Well, many hands make the work go much easier—so thanks again to everyone. As usual in a big team operation, people get missed in the thanks—for that I apologize…everyone's help was appreciated…

Be thinking about (and stepping up to) improvements—like antenna supports…for next year

And, quickly, the HF Digital" net continues...for help, I'd suggest Dave K2YG, David KC2WUF, Al K2AL, or Bob K2GLS as possible mentors—talk to them or to me.

Finally—get your QSLS for "pooling" to Sam KC2OSR—last chance for first submission to ARRL….

73 for now

Wolf

W2PTP

201-404-6914 or W2PTP@arrl.net

Adopting a Shack Standard

Jim Stekas - K2UI

As a young novice I standardized on the 6AU6, 6U8 and 12AT7 tubes for all my projects. These we easily scrounged from discarded radios and TVs put out for the junk man and by standardizing on a few tubes I had plenty of inventory for spares and new projects.

As a grad student, the lab was loaded with custom electronics and lots of Tektronics and HP test equipment. All of this was connected with miles of RG-58 coax and thousands of BNC connectors. The trash was a treasure trove of questionable cables and discarded panels. Living in a BNC rich environment, I naturally adopted BNC connectors as my shack standard. Over the years I have acquired a wide assortment of adapters enabling me to connect a BNC to just about anything from banana plugs to N-connectors. Every SO-239 in the shack has an SO-239/BNC adapter on it.

The goal of this article is to get you thinking about whether it makes sense to adopt a standard to make it simple to interconnect the various pieces of equipment in your shack. Let's explore some of the different types of connector families out there.

PL-259 / SO-239 “UHF” Connectors

If you your only operating above HF is done with a hand-talkie, the PL-259 / SO-239 are all that you need. A few jumpers with PL-259s on each end may be all you need.

These are the standard connectors found on virtually all Ham and CB equipment for the last 50 years. These connectors were designed in the 1930's to work up to 300MHz, considered UHF at that time. Practically speaking these are “HF” connectors and are perfectly adequate for 160-6m and represented a big improvement over screw terminals and banana plugs. They are get a bit iffy above 2m, but carefully manufactured examples are available that will work up to 450MHz or so. Suffice it to say, the good ones don't ship from China for $0.50 each.

BNC Connectors

If you have any Tektronics or HP test equipment in the shack you won't find any place to plug in your PL-259. Test equipment manufactures have standardized on the BNC format, and for good reason: BNC connectors can be

Connected and disconnected quickly, and can work up to 1GHz and beyond at power levels of 100W. Almost all VHF/UHF handi-talkies use BNC antenna connectors, as does Elecraft for all their low power rigs. So BNC has become widely adopted by amateur radio vendors as well.

There was a time when QRP rigs (e.g. HW-7, HW-8, HW-9 used RCA phono plugs for antenna connections, I assume because they're cheap. BNC's aren't that much larger than RCA plugs, and a few seconds work with a reamer will allow you to replace a phono plug with a BNC. It may not be make much of an improvement in RF performance, but the BNC gives a reliable connection that won't come loose when the cable gets jiggled.

BNCs probably have the best price-performance of all the connector families, and the widest selection of adapters, all readily available at your local hamfest. If you run QRP and have some decent RF test equipment, BNC is a good way to go.

N-Connectors

If you are a serious VHF / UHF / Microwave operator N-connectors are the gold standard,

These connectors have the best RF performance and power handling capability of all the commonly available families. They are designed to operate up to 11GHz and precision manufactured examples are good up to 18GHz. That's why all high end test equipment capable of operation above 1GHz uses N-connectors.

In addition to having a perfectly flat impedance well into the GHz they are solid mechanically and can handle high power.
If you want to run a kilowatt on 440MHz for your moon bounce station your amplifier better have an N-connector at its output.

SMA Connectors

The higher the frequency, the smaller the circuit, and SMA connectors are designed to provide microwave connectivity with a small footprint. SMAs are small gold (plated) connectors about the width of RG-58 coax. Garden variety SMAs are good to 11GHz and fine tolerance examples spec-ed up to 40GHz are available up to 100W.

Most SMAs are used to interconnect microwave modules within a system. Open up an 20 year old HP spectrum analyzer and you'll find lots of short hardline coax with SMAs on each end routing signals between various internal modules.

SMA's are not designed for easy connect and disconnect (like BNC's) and can be easily damaged if not tightened properly. The proper procedure involves the use of a special torque wrench to tighten the cap and a second wrench to prevent the body attached to the coax from twisting. You can use your two hands to perform the function of the two wrenches and you (probably) won't damage the SMA, but the connector is not guaranteed to meet spec unless it is properly torqued.

Special cables with push-on SMAs are available for use with network analyzers to allow quick connect and disconnect. They can easily set you back over $1000

Conclusion

If you are the type of ham with a nice clean shack and an all-in-one rig with a single antenna connector you have nothing to do. But if your shack is piled high with junk and your always looking for a patch cable to connect two boxes with incompatible connectors together you might consider standardizing on one type of connector.

For me, BNC is the obvious choice. Over time I've assembled a considerable collection of BNC-to-X adapters that allow me to connect anything to anything. Need a patch cord with a ¼ in phone plug on one end and an N-connector on the other? CATV F-connector to RCA phone plug? PL-259 to SMA? Banana plugs to N-connector? No problem, I've got it covered.

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