

Mountain Spark Gaps

From the Prez:



Here are a few "NPARC Trivia" questions:

1. NPARC received a club call sign in 2001. What was the original club call assigned by the FCC on 10/09/01 before we received the N2XJ vanity club call?
2. What current club member wrote an article in the November 1954 QST titled "A Transistor Superregenerative Receiver for 10 and 6 Meters"? (Gee, I was 8 months old at the time!)

Answers in next month's Spark Gaps.

Obviously, we have a rich history within the club. And do not forget that we have a club member receiving a prestigious award from the ARRL Hudson Division. Barry Cohen, K2JV, will be honored as Hudson Division "Ham of the Year" on November 11. Tickets for the awards dinner are available at

www.hudson.arrl.org.



Obviously, it would be nice to have a big turnout. And mention that you are with NPARC so that club members can be seated

together.

We have had great turnouts at club meetings with over 24 members showing up to hear about antennas and antenna tuners and other home brewed items in September's meetings. Rich, N2AUG talked about the technical details and theory behind his

homebrewed tuner and talked about the pros and cons of various tuner designs.



Rich (Left), N2AUG, displays his homebrewed tuner. Andy, WA2DKJ, (right) strings an antenna at the September meeting.

So see you at the meetings on November 13 and 27.

73 es 88 de Al, K2AL

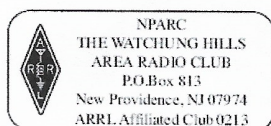
MEETINGS ON NOVEMBER 13TH & 27TH AT SALT BROOK SCHOOL

For the first meeting in November we will hear a report from the nominating committee about proposed officers for 2007. Nominations from the floor (or from anyone sitting or standing thereon) will also be accepted. The elections will be held at the meeting on the 27th.

Below is additional information about other upcoming activities: the Hudson Division dinner honoring Barry, K2JV, and the NPARC Holiday Luncheon in December. Also, Barry might give us a report of his trip to Malta as 9H3CB either in person or in an upcoming article. Another issue for club discussion in the near term is whether to hold a license class. (Note that Monday is the extended deadline for signing up for Barry's dinner.)

Although there are many things going on in the next few weeks, please come out to the meetings and explain and/or show off your recent projects. The ideas inspired by seeing and hearing of others' projects is what keeps the club fresh.

73, Andy, WA2DKJ



Club Call sign: N2XJ



Meeting Schedule

Regular Meeting: 7:30 - 10:00 PM

2nd Monday of each month at the Salt Brook School Cafeteria, Springfield Ave. and Maple St., New Providence, NJ

4th Monday each month: 7:30 - 9:00: Informal Project Meeting, at the Salt Brook School Cafeteria, Springfield Ave. and Maple St., New Providence, NJ

Everyone is Welcome

If a normal meeting night is a holiday we usually meet the following night. Call the contacts below.

Club Officers for 2006

President: Al Hanzl, K2AL
908-464-1323
Vice Pres: James Kern, KB2FCV
908-219-4016
Secretary: Ralph Milnes, KC2RLM
973-377-7061
Activities: Andy Stillinger, WA2DKJ
973-377-6992
Treasurer: Ralph Milnes, KC2RLM
973-377-7061

On the Air Activities

Club Operating Frequency

145.750 MHz FM Simplex

Sunday Night Phone Net

Whippany Repeater at 9:00 PM
Transmit on 147.63 MHz
Receive on 147.03 MHz
Net Control: KB2IKC

Club Internet Addresses

Website: <http://www.nparc.org>
Reflector: nparc@mailmain.qth.net
Webmaster: Ralph, KC2RLM

Mountain Spark Gaps

Published Monthly by NPARC, Inc.,
The Watchung Area Radio Club, PO
Box 813, New Providence, NJ 07974.

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KC2RLM, Rick WB2QQQ

**WB2QQQ CLIMATOLOGICAL DATA FOR NEW PROVIDENCE
FOR SEPTEMBER AND OCTOBER 2006**

The following information is provided by WB2QQQ, who has been recording daily weather events at his station for the past 25 years.

Maximum temperature for this September, 78°F (September 9, 24)

Last September (2005) maximum was 88°F.

Minimum temperature for this September, 44°F (September 30)

Last September (2005) minimum was 49°F.

Average temperature this September, 63.3°F

Average temperature last September, 69.3°F

Total precipitation this September - 5.72" rain

Total precipitation last September - 3.43" rain

Tropical Storm Ernesto dumped 2.34" of rain, Sept. 1-2.

Greatest precipitation day this September - September 2 = 2.19" rain

Measurable rain recorded on 9 days this September.

Maximum temperature for this October, 75°F (October 4)

Last October (2005) maximum was 74°F.

Minimum temperature for this October, 31°F (October 27)

Last October (2005) minimum was 35°F.

Average temperature this October, 52.4°F

Average temperature last October, 55.0°F

Total precipitation this October - 9.28" rain

Total precipitation last October - 14.7" rain

Greatest precipitation day this October - October 28 = 2.6" rain

Measurable rain recorded on 10 days this October.

RADIO WAVES? NO, THEY AIN'T!

If you would like some intellectual stimulation, I can recommend the (Richard) Feynman Lectures (Google will find them). He is my candidate for the best (and most entertaining) lecturer on science. He is the discoverer (inventor?) of quantum electrodynamics (QED). This got a Nobel prize (shared Schwinger and Tomonaga).

QED is the best way physics has to describe the behavior of everything we deal with daily except nuclear matters and gravity. Everything from light to lunch. Of course, quantum mechanics is not as intuitive as Newtonian mechanics--in the words of Niels Bohr "anybody who thinks they understand quantum physics is wrong."

The first (of four) lectures deals with the nature of electromagnetic radiation. This, of course, includes radiation from 60 Hz power lines thru AM broadcasts, 2 meters and X-rays and beyond.

A main point he makes is that electromagnetic radiation is particles (quanta) not waves. If you find that hard to believe (as I did), you will have to listen to the lecture. There is no easy way to show that this is true but Wikipedia is worth reading.

How good is the theory? Since its introduction in the 1940s, it has agreed with all experimental tests, some of very high numerical accuracy and made many correct predictions.

How might this concept be useful to us hams? I haven't a clue! We manage nicely thinking about wavelength but the fundamental measure of a particle is frequency since the wavelength depends on both the frequency and the refractive index of transmitting medium. If this was not true, there would be no reflection by the ionosphere and 10 meters would be no more useful than 2 meters.

I have been amusing myself by trying to calculate how many particles per second are emitted by a transmitter which manages to get 100 W at 30 MHz radiated from an antenna. (I am not completely comfortable with this analysis and if anyone can show the correct way, I would be grateful.)

I think that the calculation goes as follows:

$$h = \text{Planck's constant, } 6.63 \cdot 10^{-34} \text{ J Hz.}$$

(i) Energy per particle (Joules/particle) = frequency (Hz) · Planck's constant

$$E = f \cdot h \quad E = f \cdot 6.626 \cdot 10^{-34} \text{ Joules/Hz}$$

for 30 MHz, $f = 30 \cdot 10^6$

1 Joule is watts · seconds

The rig puts out 100 Joules (in 1 sec.)

$$\text{Subst. in (i)} \quad 100 / (\text{no. of particles}) = 30 \cdot 10^6 \cdot 6.626 \cdot 10^{-34}$$

$$1 / \text{no. of particles} = 30 \cdot 10^6 \cdot 6.626 \cdot 10^{-34} / 100$$

$$\text{no. of particles} = 100 / (30 \cdot 10^6 \cdot 6.626 \cdot 10^{-34})$$

$$= 5.03 \cdot 10^{39} \text{ per second}$$

(Notice that the wavelength is not involved.)

That's environmental pollution at a very rapid rate!

KB2IKC

As you've likely noticed, we are testing a new formatting program and new format for the Spark Gaps this month. Please send any comments to FC2FWX at salex@dsalex.org.

QRP AT THE JERSEY SHORE

Summer vacation is a great time to get on the air from a different location with portable or QRP gear. I set up a station at the Jersey shore last August with my Icom 703 qrp rig and a long wire antenna.

Although I did not have much luck making contacts in the short period of time I was set-up,



I read the mail on some DX stations on 20 meters and demonstrated ham radio for some friends and relatives.

K2AL

FRIDAY, 03 NOVEMBER 2006 - TRIP TO THE ARMSTRONG ANTENNA TOWER

On 11/3, a group from the club visited the Edwin Armstrong tower. Andy was able to arrange a short tour and visit to the museum with CSC Management, the company that now owns the tower and site.

The Armstrong tower and site are historically important. The first FM broadcast was made from there and the tower is still in use today.

For more related historical information, see the following websites: <http://www.fybush.com/sites/2005/site-050610.html> and <http://www.yonkershistory.org/arms.html>

Look for a trip report in an upcoming issue of the Spark Gaps.

2006 FIELD DAY SUMMARY INFORMATION TABULATED AND REPORTED BY LOU, WK2I

Category = 2A

1. W1NVT Score=13,858 QSOs=4,643
Club=Radio Am. of Northern VT

7. W2LV Score=10,700 QSOs=2802
Club=Sussex County ARC

47. N2XJ Score=6,266 QSOs=1,905
Club=NPARC

456. NoM Score=272 QSOs=130

Category = 1F

1. W3CF Score=3,532 QSOs=1,203
Club=Montgomery County ARC

2. W2EF Score=3,330 QSOs=690
Club=West Essex ARC

3. WK2I Score=3,032 QSOs=778
Club=NPARC

4. K2VOA Score=1,958 QSOs=829
Club=Piscataway ARC

8. NF3EMA Score=1,492 QSOs=621
Club=FEMA

14. W2TIN Score=818 QSOs=80
Club=Raritan Bay - Manalapan RACES

24. KD8CJQ Score=818 QSOs=14
Club=Allegan County ARC

Category = Overall Winner

1. W3AO Score=31,144 Category=22A
QSOs=9,504 Club=Potomac Valley RC

There were 2,184 stations in the Field Day database.

NPARC Summary:

N2XJ is #47 out of 456 stations in Class 2A which is very close to top 10%. WK2I is #3 out of 24 stations in Class 1F which is top 13%. Congratulations to all and thanks to everyone for their hard work!!!

73,

Lou, WK2I