QRZ NEWS

A MONTHLY PUBLICATION OF
SOUTHERN PENNSYLVANIA AMATEUR RADIO CLUB, INC
PO BOX 1033 - LANCASTER, PA 17608-1033
(Founded June 1960)
AN AFFILIATED SPECIAL SERVICE CLUB OF THE ARRL, INC.
"Public Service through Communication"
Website: www. K3IR.org
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Repeaters: 145.230 - 449.975 - Packet 145.030 - ATV 923.250, FN10se

February 2010

President's Message

In July our Church received a new Pastor, Donald Walters WB3IQJ. In January Pastor Don accompanied our Youth Group on our annual winter retreat to a "cabin" owned in part by a church member. (A cabin with 2 full baths and 1 half bath!) The cabin is located on a dirt (or ice) road several miles off US route 6 near Galeton.

One thing about traveling with youth, a meal stop is not a stop unless it is at a Sheetz. We usually stop at the Maynard Street exit off route 15 in Williamsport on the way north. This exit has a Sheetz and also a Wendys, for those of us who would rather sit down to eat.

So anyway, we stopped and ate and some of the kids drank too much soda. Pastor Don and I decided it would be fun if we both monitored 146.52 for the rest of the trip to pass the time and give the kids a chance to see Ham Radio in action. We were the last two vehicles in a caravan of five. Soon after passing through Wellsboro PD called to say that the two boys he had on board needed to find either a restroom or a tree. Cell phone coverage in this region is spotty at best but we managed to get word to the lead vehicle of our situation. It was decided that since I knew the way to the cabin I would stop with the Pastor and the rest of the cars could continue on. As we continued on the situation got more frantic. We were nearly to the Junction with route 6 but all that would be open would be a bar. Shortly after turning onto route 6 the Pastor's turn signal comes on and his truck, complete with a Wesley Theological Seminary decal on the tailgate pulls into the parking lot of a small tavern. The Pastor and the two boys disappear into the front door, to emerge later looking much "relieved".

Later at the cabin Pastor Don related the sudden stop to us. As they entered the front door he spotted a rest room right by the door. He pushed the most pain stricken boy in and closed the door. He looked up to see a man setting at the bar who said, "you realize that is the ladies room" to which the pastor replies, "yeah, but at this point I don't think he much cares".

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Sometimes extreme circumstances cause us to take extreme measures, to "go" places we would not normally go. As Ham Radio in general and local clubs in particular look for ways to bring in new members we may also need to take extreme measures. Are there kids hanging around your neighborhood? Why not take the extreme measure of showing them your radios. Demonstrate how Ham Radio works, and be sure to explain that there is no monthly fee.

Here is a picture of my nieces and nephews (they aren't really but they call me Uncle Harry). I don't see just as a bunch of kids but potential Hams.

73s,
Harry Bauder, WA3FFK

MINUTES OF THE JANUARY 2010 MEETING OF THE SOUTHERN PENNSYLVANIA AMATEUR RADIO CLUB (SPARC)

Held Wednesday, January 20, 2010 at 7 PM at the Rapho Township Municipal Building

The following members and guests were present:

Dave Payne, N3LOM
Paul Herr, KD8WY
George Gadbois, W3FEY
Gerald Wilson, KB3GNB
Ted Freedman, K3KSA
Dave Sarraf, N3NDJ
Harry Bauder, WA3FFK
Steve Hass, KB3SJU
Mike Warner, N3XPD
Jim Silvius, KW3E
Jon Rudy, K3QF
Gerry Wagner, KB3SSJ
Conrad Nasatka, WB3DQD

The meeting was called to order at 7:00 PM by Harry Bauder, with a round robin introduction by name and call.

The meeting began with a technical session on satellite communication led by Harry Bauder and Dave Sarraf. Harry had a demonstration of a satellite tracking program; Dave discussed satellite cooling and showed some examples. He also had a set of slides that showed the imaging capability of a current satellite constellation. Harry then showed how the satellite tracking program had updated, and presented a series of slides from AMSAT on the types of ham satellites available and how to use them.

The technical session was followed by a short business meeting. Topics included

- Field Day – Jon Rudy is coordinating this event at SPARC's repeater site. Concerns include Operations, Logistics, and Equipment. Jon plans to write an article about field day and include pictures from prior field days. Food was discussed. We had far too much last time.
- Finances – Ted received paperwork on our liability policy. He noted that we need to appoint an audit committee. The committee should not include officers or

board members. Jon Rudy and Paul Herr volunteered.

Respectfully submitted,
Dave Sarraf, N3NDJ
SPARC Secretary

A Day in the Field

June 26 and 27 are the dates to mark on your calendar this year. That is the date of the annual American Radio Relay League (ARRL) Field Day. Hams from around the country will set up portable stations on mountain tops, city parks and corn fields to demonstrate the "when all else fails" concept. This year SPARC will again be up at the repeater site setting up our radios and operating for 24 hours. For any who have been to the repeater site, you know that it gives a new meaning to the FIELD in Field Day. The American Radio Relay League (ARRL) has this as the prime Field Day object:

> *To work as many stations as possible on any and all amateur bands (excluding the 60, 30, 17, and 12-meter bands) and in doing so to learn to operate in abnormal situations in less than optimal conditions. A premium is placed on developing skills to meet the challenges of emergency preparedness as well as to acquaint the general public with the capabilities of Amateur Radio.*

For SPARC this year I offer two additional club related objectives:

> 1. To strengthen the club by attracting new members and getting inactive members to become more active. To do this, I suggest inviting persons we know who are interested in radio to attend the field day site. In addition I propose we invite someone from Manheim Merchandiser to attend the FD site, take a few pictures and write a story.
>
> 2. I suggest that licensed amateurs who are part of the club enhance their operating skills and technical understanding of the hobby. To do this, I propose that we make a concerted effort to explain each facet of setup and station assembly to those new to the hobby and take every opportunity to encourage new hams to operate as many ands/modes as possible.

List of major areas that we need volunteers for:

A. Logistics; food, awnings/tents, outhouse supplies

B. Equipment/Antennas; power, radios, antennas, masts, cables/connectors, logging computers and interfaces

C. Operations; operator schedule, modes, satellite tracking schedule

D. Publicity: photographic documentation, writer for the newsletter, contact media, provide greeting/explanations for newcomers

This seems like a lot but already I have heard SPARC members coming forward to volunteer. Last year went well thanks to Ross's leadership and I hope this year will be equally successful. In the February meeting we can begin to fill in the volunteer blanks above and suggest things I have missed.

See the 2009 Field Day report in the August 2009 issue of QRZ News
http://www.k3ir.org/QRZ_News/QRZ_News_August_2009.pdf

FD photos from 2008 at
http://home.dejazzd.com/gadboisg/SPARC/sparc_field_day_photos.htm

Jon Rudy – K3QF
SPARC Field Day Coordinator

Recycle Update

Recycling is not restricted to club members. Help SPARC and help a green initiative.

Dave Payne has provided an update on the sorting requirements for our paper recycler. It saves Dave a lot of work if your recycle paper is presorted. Always remember that plastic and glue are recycling no, nos.

Newspapers, clean office paper, magazines and catalogs, with stapled bindings, can be grouped together. This is the highest grade of recycle paper that our recycler handles.

Publications with the flat back glued bindings such as phone books and QST must be kept separate as the bindings must be cut off before recycling. Use brown Kraft grocery bags or cardboard cartons to deliver these to Dave. Dave then gets to recycle both the contents and the container. If necessary, use plastic grocery bags to keep recycle types separate. This saves Dave a lot of work.

In addition to corrugated cardboard, cereal boxes, brown Kraft wrapping paper and bags, shoe boxes and similar paper products all go in the cardboard category.

Papier mache egg cartons are the end of the recycling road. Put them in the trash.

SPARC also recycles metals. Copper and copper alloys bring the highest prices. Dave collects all metals for recycling.

Please take recyclables to Dave Payne's mini recycling center at 1373 Malleable Rd, Columbia or to a SPARC club meeting.

The SPARC heavy duty pickup used for transporting recycled paper is now for sale. If you know anyone who might be interested, contact Dave Payne, N3LOM.

Coming Events

Wednesday, 17 February 2010, 7:00PM
SPARC monthly membership meeting at the Rapho Twp. Municipal Bldg., 971 N. Colebrook Rd. Rapho Twp.
Meeting cancelled. Meeting room not available. Reschedule pending.
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Saturday, 10 April 2010 York SPRINGFEST at Porter's Siding Fire Hall located between Hanover and York off Route 116. Duane KB3QLQ
***

Tuesday, 22 June 2010 Peach Bottom drill. Contact Walt, K3DQB for details. navmars@vfd.net
***

Tuesday, 6 July 2010 1100UT Earth at aphelion, 94,508,351 miles from the Sun. Approximate peak of the Summer Es season.
***

Saturday/Sunday, 24-25 June 2010 MS BIKE – Lancaster contact Dick, WA3USG wa3usg@verizon.net for details.
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Monday-Sunday 20-26 September 2010 Wide Vigilance III drill. No details available at this time. Expect the early part to be table top exercises with any Amateur participation probably at the end of the week.

See the November 2008 QRZ News for a report on Wide Vigilance II. http://www.k3ir.org/QRZ_News/QRZ_News_November_2008.pdf

Editor's Notes

Six Meter Surprises

The Winter Es season on 6 meters was rather normal up until Sunday, January 31st. There were scattered openings that favored the better equipped stations. At the end of January, that suddenly changed with an hours long summer like opening to Florida and the Bahamas. Randy, WA3HLP, reported several contacts with summer like signals from the Bahamas.

Monday, February 1st, I heard many S9+ signals on 6m. Many 9s and Øs were coming in. I was hearing many new calls from new grids in Iowa and Minnesota. This was just before the Monday night net at 9:00PM. Monday night is 1296 night in southeast PA, NJ, NY, and CT starting immediately after the EARS 2m net. I did not try to work any 6m stations at that time.

At 1030PM I finished my 1296 schedule with John, W3HMS, and turned my attention to 6m. The only really strong signal left on 6m was Vince, KØSIX in Big Lake, MN. I was about to call him when I heard W3HMS contact him. As soon as they completed their exchange, I called KØSIX who came right back to me. This turned into a 3 way with W3HMS joining in for a few minutes. We signed and Vince was soon called by a New England station.

Good quality 6m openings have continued almost every day since January 31st. By the 5th when this is being written, propagation seems to be more or less back to the Winter norm. Expect declining Es for the next three months. The Summer Es season usually starts in early May.

You may recall that several months ago I reported very poor performance on Chinese made LED light bulbs. Seems the Department of Energy is checking and reporting on LED lighting devices. If you plan to try LED lighting devices it would be good to check the DOE CALiPER program before you buy.

73,
George, W3FEY

Hams in Haiti

Low-tech often wins in a disaster--but it still needs operators

See
http://spectrum.ieee.org/telecom/wireless/hams-in-haiti for a detailed report.

Dave, N3NDJ

ARES/RACES

As part of the SPARC commitment to emergency communications, the SPARC repeater system is maintained as available for linking with other area repeaters.

Lancaster County RACES VHF Net is held on the first Tuesday of the month at 2030 hours local time. Presently being held on the 145.310 MHz repeater.

The Lancaster County primary ARES/RACES repeater is on 145.310 MHz with minus offset and 118.8 PL.

Combined York County Amateur and ARES/RACES NET convenes at 8:30 PM (2030) Mondays on 146.97.

Pennsylvania RACES HF Nets are held at 3993.5 kHz LSB on all Sundays except holidays.
The statewide net is on the first Sunday of the month at 0800 hours local time.

The Central Area (including Lancaster County) net is at 08:30 local time.

SPARC Nets

SPARC holds nets on the 2nd, 3rd, 4th, and 5th Tuesday (every Tuesday except the first) at 2030 local time on 145.230 MHz minus offset and a PL of 118.8.

Club Officers

President Harry Bauder – WA3FFK
Vice-President: George Gadbois – W3FEY
Secretary - Dave Sarraf. - N3NDJ
Treasurer - Ted Freedman - K3KSA
Repeater Trustee - Dave Payne - N3LOM
Past President - Mike Warner – N3XPD
Board of Directors - Jim Silvius – KW3E

Nearby Nets of Local Interest

York County Sponsored Nets:

Combined York County Amateur and ARES/RACES NET convenes at 8:30 PM (2030) Monday on 146.97.

Tuesday Nets (Note new schedule for Technical Net)
Elmer/DIGITAL NET -- Tuesday, 8 PM on the York 146.97 Repeater --
The first 15 minutes or so will be open to questions. DIGITAL Communications testing will continue after that.
Friday Digital Net
Friday evenings starting at 8 PM on the 146.610 (PL:131.8 Hz) EARS repeater on Ephrata Mountain.

This is an excellent Digital net called by Bob, AB3GF. Check in is by digital, BPSK125.
It is an informal, well run net with plenty of Digital transmissions along with discussion by voice.
***

Delaware Co. Mobile Sixers Net Schedule
Sunday 2000 50.550 MHz USB

PACKRAT MONDAY NIGHT NETS
TIME FREQUENCY NET CONTROL
7:30 PM 50.145 MHz K3EOD FM29ll
8:00 PM 144.150 MHz N3ITT FN20kl

8:30 PM 222.125 MHz K3TUF FN10we
8:30 PM 224.58R MHz W3GXB FN20jm
9:00 PM 432.110 MHz WA3EHD FN20kd
9:30 PM 1296.100 MHz W2SJ FM29LW
10:00 PM 903.125 MHz W2SJ FM29LW
Visit the Mt Airy VHF Radio Club at: www.packratvhf.com or www.w3ccx.com

2M Northeast SSB Net Mon – Fri, 0700 check on 144.200MHz for possible DX openings. 0730 – 0830 net on 144.176MHz. This is a very long running net that runs from NJ up the coast to CT and beyond.

QRZ News Publication

QRZ News is published monthly on the second Wednesday of each month, one week before the monthly meeting. Deadline for article submission is the second Tuesday of each month.

We operate on an exchange basis with other non-commercial publications. Articles printed in QRZ News may be reprinted in a not for profit publication provided proper credit is given. Reprinted articles require permission from the original source.

QRZ News is archived at http://www.k3ir.org/QRZ_News.html. Documents are in PDF format.

Dave Payne, N3LOM, recently found a paper copy of the first quarter 1999 issue of QRZ News. This is the oldest copy of QRZ News in the archive. The next oldest copies are from 2001.

Sunspots and HF Propagation

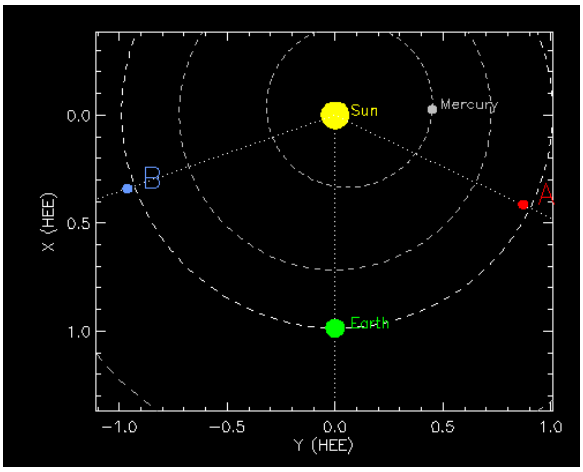
Cycle 24 spots are creeping up slowly. Here are some links to resources for understanding sunspots and HF propagation.

http://www.gqrp.com/SOLAR_HO.pdf The short version.
http://www.qrparci.org/mambo/pdf/FDIM81.pdf The long version for those interested in more science.

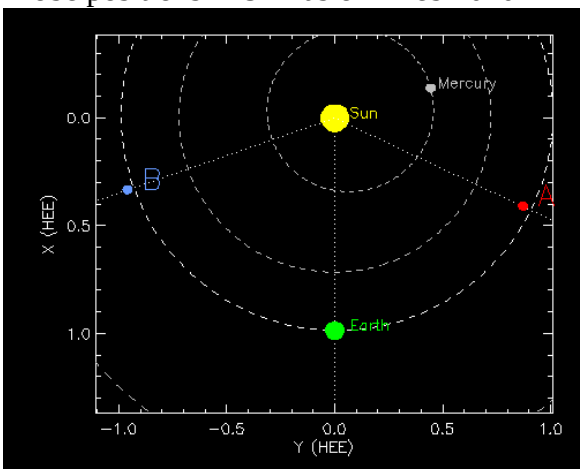
Dave, N3NDJ

The Stereo Mission

The stereo mission is a pair of space probes monitoring the Sun from positions ahead and behind the Earth in its' orbit around the Sun. These probes are proceeding to move apart providing for a nearly complete view of the Sun.



Probe positions A & B as of 2 Feb 2010



Probe positions A & B as of 10 Feb 2010

See http://stereo.gsfc.nasa.gov/ for a movie of the Sun as seen from the Earth and by the Stereo probes. As Ahead and Behind get further apart, the unseen gap will close. No sunspot shall pass unnoticed.

George, W3FEY

Lightning Protection for Antennas and Solar Panels – Part 2

Last month's installment became rather long because of the many definitions involved. This part will be shorter and will build on the information in Part 1. I will continue to keep the definitions light for the benefit of new hams. The physics being explained is intended to help you understand why things work or don't work as expected.

Our objective is to eliminate or at least minimize lightning damage by shunting as much of the discharge current to ground **outside** your house or other building used for your radio shack. To accomplish this, we need a grounding system that has a very low impedance to earth ground. The resistance of the ground itself is a consideration that we have not yet addressed. Inductive reactance in the path to ground must be minimized. To minimize lightning surge current entering your house, we may add inductive reactance to that path. Drip loops or loops of coax achieve this objective.

We naturally expect that our antennas are the highest objects around and will be the primary target of a lightning strike. This is often but not necessarily always true. Every wire that comes into your house can deliver a damaging surge. Power utility lines were addressed last month. Cable TV and the telephone wires coming to your house can also bring in large charges. The telephone company does not use heavy conductors and they do provide a ground lead but not usually an independent ground rod. Make sure their ground has a low resistance path to your overall ground system.

The coax jacket on the cable TV is a better path into your house. If the cable company has not provided a ground on the coax, bug them to do so. The standard method is to loop the cable down close to the ground and install a bulkhead type connector and ground rod.

Note the cable loops that increase inductive reactance to keep lightning surges away from your house. Tie the cable ground rod to your overall ground system with a buried connection as described previously.

You are gradually constructing a ground ring around the outside of your house. This is how you avoid having the lightning discharge pass through your house on the way to the primary strike point. All kinds of unpleasant things happen when a lightning discharge has to find its' own path of least impedance.

If you have an active lightning strike problem, accelerate the installation of the ring around the house. Install an 8' service entrance qualified rod at each corner as a minimum. Connect ALL the rods together with buried bare copper wire. This will provide a very low resistance path to earth ground as well as routing lightning ground currents around the outside of your house. This may be overkill in many locations.

If you're thinking this is way too expensive for your budget, there are ways to save money without losing all protection. My first ground rod in the early '50s was a piece of old galvanized pipe pounded flat at one end to make it driveable. I used old wire that I found around the farm and did the best I could. My equipment survived the ordeal.

The metal roofed silo was the prime target and it took many hits. We had a stanchion barn and the cows really didn't like it when there was a hit. There were induced voltages on everything not grounded.
I learned not to touch anything metal in the barn or milk house during a storm. It was a shocking experience.

Shop the hamfests for heavy bare copper wire. Don't go smaller than #8 and don't use stranded wire. Copper oxidizes in the ground and small wire will not only have higher resistance, it will fail sooner.

I promised not to make this too long so we'll leave more for later columns.

ARRL published two very good articles on lightning protection by Larry Scheff, W4QEJ, in the February and April 2008 issues of QST.

73, George, W3FEY

January VHF Contest Reports

Excerpts from the February issue of Cheesebits, newsletter of the Mt. Airy VHF Radio Club.

From Joe K1JT

The better-than-usual weather was nice for a change, and most equipment at K1JT behaved well. I lost my 1296 preamp late Saturday, but made quite a few QSOs without it. A sticky relay sometimes made band-switching slower than it should be. Otherwise things worked well. I heard no E-skip on 6m, too bad. Worked 8 grids on 6 and 8 on 2 by meteor scatter, all by pre-arranged skeds. Worked 44 grids on 2 by EME, without skeds. Normal tropo QSOs brought my 2m grid total to 76 -- a personal best, and possibly a record for this contest? Overall totals were 596 QSOs and 153 multipliers on 50 through 1296, for 130,356 points.

-- 73, Joe, K1JT

From Len N3NGE

N3NGE enjoyed a solid compliment of operators for the duration allowing all to get some sleep, fellowship with friends and take time to enjoy some real sit down meals, a requirement at this station.

Band conditions were average to good for mid-winter but not enhanced, apart from a very brief and weak 6M Es period. Activity was fairly good until Sunday afternoon and evening. When the football games came on in the afternoon and things really slowed; there was a short-lived up tick in activity after dinner and then the bands fell silent. To quote K1WHS "By Sunday night we had worked the bands out, and with no new propagation, there was no one left!"

In addition to the usual SSB (vast majority) and CW contacts (and several FM) we did operate Meteor scatter on 6 and 2 meters late Saturday night which produced some new grids out to 1200 miles.

All of the equipment worked as expected except for the main 24GHz system which was down and a flaky IPA

on 222 which was repaired and returned to service. Even the network of seven computers did not cause heartburn.

The score for JAN 2010 VHF will exceed any of our prior scores by a substantial margin. We worked more than 1600 contacts in 236 grids. My hat is off to the experts who coordinate and operate this station.

73, Len, N3NGE

Field Day 2008 operations tent.

K3IR club site, 1715 Breneman Road, Rapho Twp. Lat. 40.16700, Long. 76.45480, 600' ASL, FN10se