



QRZ NEWS

A MONTHLY PUBLICATION OF
SOUTHERN PENNSYLVANIA AMATEUR RADIO CLUB, INC
PO BOX 1033 - LANCASTER, PA 17608-1033

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AN AFFILIATED SPECIAL SERVICE CLUB OF THE ARRL, INC.

"Public Service through Communication"

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December 2008

Happy Holidays to All

HIGHLIGHTS OF THE NOVEMBER 2008 MEETING OF THE SOUTHERN PENNSYLVANIA AMATEUR RADIO CLUB (SPARC)

Held Wednesday, November 19, 2008, at the
Rapho Township Municipal Building

Old Business:

- Ted Freedman is still looking for someone to take over as net coordinator.
- George Gadbois is always looking for articles to put in the club newsletter.
- George Gadbois reported on the Sable Island DXpedition presentation that took the place at the club's October membership meeting. More information on the DXpedition can be found on the [CY0X website](#).
- Mike Warner recently sold a piece of surplus club equipment on Ebay. He expected to receive \$4: he got \$43!
- Lancaster General Hospital is conducting a Technician license class the weekend of December 6 and 7. The class is open to anyone.

- SPARC is still working on a spring 2009 license upgrade class. This class will not be for beginners.

New Business:

- There was no report from the Nominating Committee. Election of officers will be held at the membership meeting on December 17, 2008.
- Dave Payne updated the membership on the status of paper collection. At this point in time, Dave is no longer picking up from Masonic Homes. He is picking up from the club site and he will take any paper brought to club meetings or delivered to his home. **(Editor's note: since the meeting the recycler has stopped accepting all paper. That means SPARC is out of the paper collecting business until further notice.)**
- A discussion of the proposal to hold BBQs to raise funds for the club was discussed. None of the members present were interested in supporting the project, so it was dropped.
- Gerald Wilson suggested the club could help sell refreshments at Barnstormers games to raise funds. Many groups are interested in this

activity, so reservations must be made soon.

- Harry Bauder noted that Hersheypark uses volunteers to help run rides in the off-season. This is another way to raise money for the club.
- Paul Herr reported on the recent Wide Vigilance exercise. Club members George Gadbois, Harry Bauder and Paul Herr participated.
- Paul Herr informed the membership of a South Central Task Force (SCTF) meeting Thursday evening, November 20, 2009.
- An impromptu, but very interesting, technical discussion of digital television took place. This was prompted by WGAL's test of digital TV two days earlier.

Upcoming Events:

- Saturday, December 13 – recycling at Rapho Township Municipal Building, starting at 7:30 AM. If there are enough members present, we will do an Adopt-a-Highway clean up on Brenneman Road. *(Editor's note: On the Dec. 9th SPARC net, N3LOM announced cancellation of the Dec. 13th paper collection at Rapho Township. The recycle market is overloaded with paper.)*
- Wednesday, December 17 – Membership meeting at 7 PM with election of officers.
- Sunday, April 26, 2009 – Tour de Ephrata Bike Race.

Editor's Notes

This is the season when we take some time to meet with old friends to reminisce and with the coming of a new

year, make some plans for the future. Do you have plans for a new antenna or perhaps a new mode of operation? I hope all your plans are successful.

Let's hope for more sunspots in the New Year. HF propagation can't get much worse with almost no sunspots for months.

Sporadic E Alert

Winter brings a secondary peak in Es (sporadic E layer) propagation on six meters. For those new to amateur radio, the ionospheric E layer is about 60 miles up and results in single hop propagation out to about 1200 miles. The name sporadic E propagation comes from the unpredictability of this type of VHF propagation.

The winter peak is much lower than the summer peak so don't expect signals to be as strong or as frequent. Es works for FM, but you'll be far more successful with SSB or CW. I have heard some weak propagation enhancement here on 6m this month, but nothing strong enough to make contacts with my limited station. I have an M² loop about 25' up with 120w output.

There is some local 6m SSB activity on 50.170 MHz in York County. There is not much local rag chewing on 6m SSB. There is no reason not to rag chew on any band. Please do move off the SSB calling frequency at 50.125 MHz. Rag chewing attracts activity and activity results in interesting contacts near and far.

DTV Update

This month we have an exclusive report on the WGAL digital TV readiness test. This test revealed that many viewers are not prepared for the DTV changeover in February. The last report that I heard is that the government \$40 rebate cards for DTV converters are still available. My guess is that when the present stocks of converters are sold out, there will be no more. If you need one, get it now. See the report later in this issue.

SPARC ATV Beacon

I will be working on getting the SPARC ATV beacon on the air as a repeater over the next few months. Anyone interested in helping please contact me. This is a secondary project for me so expect very slow progress. I hope to have the system active for the next big drill. I don't know of any plans for future drills. I expect something next Spring.

The first step is to relay the N3TWT repeater on White Rock to get an active picture on the air. After that we will make further plans depending on available help.

Harry, WA3FFK, reports that the TV monitor is in poor condition and needs to be replaced. Does anyone have a spare analog set they are going to retire after Christmas? Twenty inch or smaller is preferred. A color monitor would be good.

When I try to find screen photos of high resolution ATV pictures, they almost always display beat patterns or moiré. Do any of you photographers know how to prevent this problem? Would a frame capture program solve the problem?

I always need material to publish in this newsletter. If you have topics you can write about or suggestions for topics, please send them to me. Publication deadline is the second Wednesday of each month.

73,
George, W3FEY

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: Mike Warner - [N3XPD](#)

Vice-President: Rick Watson - [N3SWJ](#)

- Secretary: Position Open, VP Rick Watson, N3SWJ is presently acting as secretary.
 - Treasurer: Ted Freedman - [K3KSA](#)
 - Repeater Trustee: Dave Payne - [N3LOM](#)
 - Past President: Dave Payne - [N3LOM](#)
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ARES/RACES



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

Lancaster County VHF Net is held on the first Tuesday of the month at 2030 hours local time. Presently being held on the 145.230 and 147.015 MHz repeaters with minus offset and 118.8 PL.

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.

WGAL Digital TV Test

You probably saw or at least heard about the WGAL DTV test. Here are the details of just how that test was conducted from a technical point of view.

Test Schedule

On Monday, Nov. 17 at 6:25 p.m. WGAL switched its signal over to digital for one minute. If you were tuned in to News 8, you found out whether or not your TV is ready for the official switchover, which will happen Feb. 17, 2009, exactly three months from the day of our test.

Test Implementation

This was not really an apples to apples test. Our digital transmitter (Channel 58) ran with talent saying that you were fine and did not have to do anything. The analog transmitter (Channel 8) ran with other talent saying that you were not ready. The fact is that our Larcan (solid state) transmitter will be converted to digital operation in January and we will be operating on our old RCA analog transmitter during the conversion process. As the clock (and calendar) moves from February 17th to February 18th, we will turn off the Channel 8 RCA analog transmitter and turn on the Channel 8 Larcan digital transmitter. At that point, we will begin to know how the digital Channel 8 performs. We know that digital Channel 58 with a directional

antenna, side mounted on our tower was less than perfect.

Ed. Note: The channel 58 antenna favors the Harrisburg area. After the conversion in February, the present omni directional channel 8 antenna will be in use.

Observations on the test above

Normally, the WGAL UHF channel 58 DTV signal carries exactly the same programming on the main 8-1 channel as the analog broadcast on VHF channel 8. During the one minute test, Brian Roche was assuring viewers they were ready for DTV on channel 58 and Lori Burkholder was telling viewers they were not ready on analog channel 8.

WGAL had a phone bank set up to take viewer calls re the test results and tell them what they needed to do to be ready for DTV. It is my understanding that all the TV stations in Pennsylvania participated in this test.

Thanks to WGAL for supplying the technical details on the DTV test. George, W3FEY

DXCC the Hard Way

Most amateurs work DXCC by bouncing radio signals off the ionosphere. When sun spots cooperate, it is relatively easy to accomplish DXCC on the HF bands. Some people increase the level of challenge by using QRP or 160m only or some other impediment.

There is another much more difficult method to work DXCC that is independent of sunspots. That is EME (Earth Moon Earth) or as it is commonly called moonbounce. EME will challenge both your patience and unfortunately your wallet.

Early EME attempts were made using CW and required that you be able to hear your own echoes. There are enough big gun stations on the air that you no longer have to hear your own echoes, but it helps. CW requires that you can hear the signal a bit above the noise to work a station. How much above the noise depends a lot on personal skill.

Using computers and complex encoding schemes, it is possible to copy signals below the noise level. [Joe Taylor, K1JT](#) has created several computer protocols designed to facilitate very weak signal reception mostly for VHF and UHF DXers. For the EME community,

there is JT65. This makes working EME with lower power and smaller antennas much easier.

Getting on EME is a big project and many times not feasible from a residential location. If you can not see the moon, you can not work EME. To work large distances on EME, you need to see the moon as close to the horizon as possible. The high power levels and antenna gain required means that you really can not operate with your EME antenna pointed at your neighbor's house. Typically, this interferes with getting close to the horizon

If you don't have a suitable location, consider portable operation from the SPARC club site. The club site is very well situated with a near the horizon view of the sky and no immediate neighbors.

K1DS provides the following report on his portable 23 cm EME operations:

The antenna specs that I have (WIMO) show a 19.9 dBD gain for the model 2367 antenna. Perhaps the photo below did not have enough clarity or contrast to show the reflector. I used it with about 15' of LMR600, a 0.3dbnf 23 db gain preamp, N relay and 120W 1296 amp running JT65 from my TS2000. The QSO was with K2UYH who does run 500W and has a 28' Kennedy Dish. His best signal measured -18.

The ham from Germany, Bodo, has used virtually the same set-up doing portable operation in EU and he always works the big guns--those with large dishes and high power--Like OK1DFC, HB9Q, some of the G stations and RA stations. I used an az-el rotor system using a Yaesu 450 AZ and Kenpro 500 EL.

73,
Rick Rosen, K1DS



K1DS Portable antenna for EME

The 2008 ARRL EME Contest at K1JT and K2UYH

by Joe Taylor K1JT

Reprinted from Cheese Bits, Published by the Mount Airy VHF Radio Club

Rule 7.1 of the ARRL International EME Competition states:

“A Multi-Operator entry may be made up of neighboring amateurs within one state, province, or non-US/Canadian DXCC entity, but with EME facilities for different bands on different team members’ premises, as long as no two are more than 50 km (30 miles) apart.”

Under the provisions of this rule, the K1JT and K2UYH stations are once again combining resources to make a multi-op entry using the callsign K1JT. The EME contest runs for three weekends: one in September for the bands 2.3 GHz and up, and one each in October and November for the bands 50–1296 MHz. The September and October weekends are now behind us, so there is

one weekend still to go. Ours is a “Mixed Mode” entry, which means that at 1296 MHz and below we can work a station for contest credit once in an analog mode (e.g., CW) and once in a digital mode, per band. For scoring purposes contest multipliers are US states, Canadian Provinces, and DXCC entities, and they count once per band.

The 2008 ARRL EME Contest at K1JT and K2UYH (Part 2)

I promised an update to the interim report in last month’s Cheese Bits, on our combined multi-op, multi-band effort in the ARRL EME Contest. You’ll recall that the EME contest runs for three weekends: one in September for the bands 2.3 GHz and up, and one each in October and November for the bands 50–1296 MHz. We operated on 144 MHz at the K1JT station and 432, 1296, 2.3G, and 10G at the K2UYH station.

The third and final weekend of the contest is now history. Activity during the contest weekends was generally excellent, especially when the moon was up in Europe. Our final summary sheet looks like this:

Band	CW	JT65	Total	Mults
144	10	175	185	65
432	35	10	45	31
1296	81	13	94	37
2.3G	24	0	24	20
10G	8	0	8	7
Total	158	198	356	160

Claimed score: $356 \times 160 \times 100 = 5,696,000$ points.

When the dust settles, we hope to be at or near the top in the world-wide multi-multi category. Our claimed score would itself be a new all-time record for this contest... but we also know that at least one other station is close to our totals and may have beaten us. Time will tell! Either way, we had great fun operating together and hope to be back next year.

From team members K1JT/Joe, K2UYH/Al, K1DS/Rick, K2BMI/Jack, K2LNS/Herb, K2TXB/Russ, and W2KV/Dave.