

# 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](http://www.K3IR.org)

Email address: **\*\*pending\*\***

Repeaters: 145.230 - 146.715 - 449.975 - Packet 145.030 - ATV 902.145

**March 2007**

## Membership Meetings

### **Condensed Minutes of the February 2007 Meeting of the Southern Pennsylvania Amateur Radio Club (SPARC)**

## **Southern Pennsylvania Amateur Radio Club**

Minutes of the Regular Membership Meeting Held on 21 February 2007

The meeting was opened by President Mike Warner at 19:10. The following members and guests were present:

Mike Warner N3XPD  
Ross Kauffman W3ZKU

Harry Bauder, WA3FFK  
Jim Silvius KW3G

Frank Coleman KB3GMZ  
Paul Herr, KD8WY  
Dave Sarraf, N3NDJ

The meeting began with a welcome by Mike and a round robin by name and callsign.

### **Minutes**

Dave Sarraf read the minutes from the January membership meeting and discussed the minutes from the January BOD meeting. Upon a motion by Harry Bauder and a second by Ross Kauffman the membership meeting minutes were accepted as read.

Due to his proximity to a local facility and his background as an MD, Paul Herr expressed great interest in the HEARS program mentioned in the BOD meeting. He or any other interested member should contact Max Peters and Dave Payne for more information.

### Treasurer's Report

Ted Freedman provided a treasurer's report.

As part of the process of taking over as treasurer and changing accounting programs Ted is backfilling Quicken with transactions from the previous year. This should help with reporting and auditing later.

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Ted stated that he needs to pick a basis number to use for reporting balances. He will soon have the ability to get bank statements on line that will make synchronization of the SPARC and bank statements much easier and will provide a more accurate basis number. .

On a motion by Frank Coleman and a second by Ross Kauffman the minutes were approved as read pending review by the audit committee.

### **New Members**

No new member applications were received.

### **Old Business**

The underground tank insurance bill from the State has been paid.

The web name registration still needs to be completed. Dave Sarraf is investigating changing to a cheaper registrar. If this is not easy and quick we will just pay the bill to the existing registrar.

Copies of the current QRZ news were made available. Ted took a copy to give to Jim Ibaugh, who is currently without email or printer.

The newsletter content was discussed. It is well received and is useful to the membership. Harry wants to add a repeater update and the officers want to have an on-going tally of paper collection.

### **New Business**

In response to an email from Jim Watson, Harry stated that all batteries have been removed from portable equipment stored in the van. This will eliminate a past problem of damage due to cold-induced battery leakage.

Harry also covered the vents in the main building. The inside temperature was below freezing. The heat has been turned back on since it no longer leaks out as quickly with the vents covered.

### **Events**

- The MS walk is on April 22. It stages from the Clipper Stadium. Applications were distributed. They are to be mailed directly to the sponsor.
- VE testing will be held on Thursday February 22. This is a recurring event and is held every third Thursday of even-numbered months.
- New Ham Classes are starting soon. The notice has been published in the Lancaster paper and the Merchandiser. Ross and Harry asked for copies of the syllabus. Dave Sarraf will send them by email.
- The March of Dimes walk is held soon after the MS Walk. No details were available.

On a motion by Harry Bauder and a second by Ross Kauffman the business portion of the meeting was adjourned at 8:40 PM.

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### **Presentation**

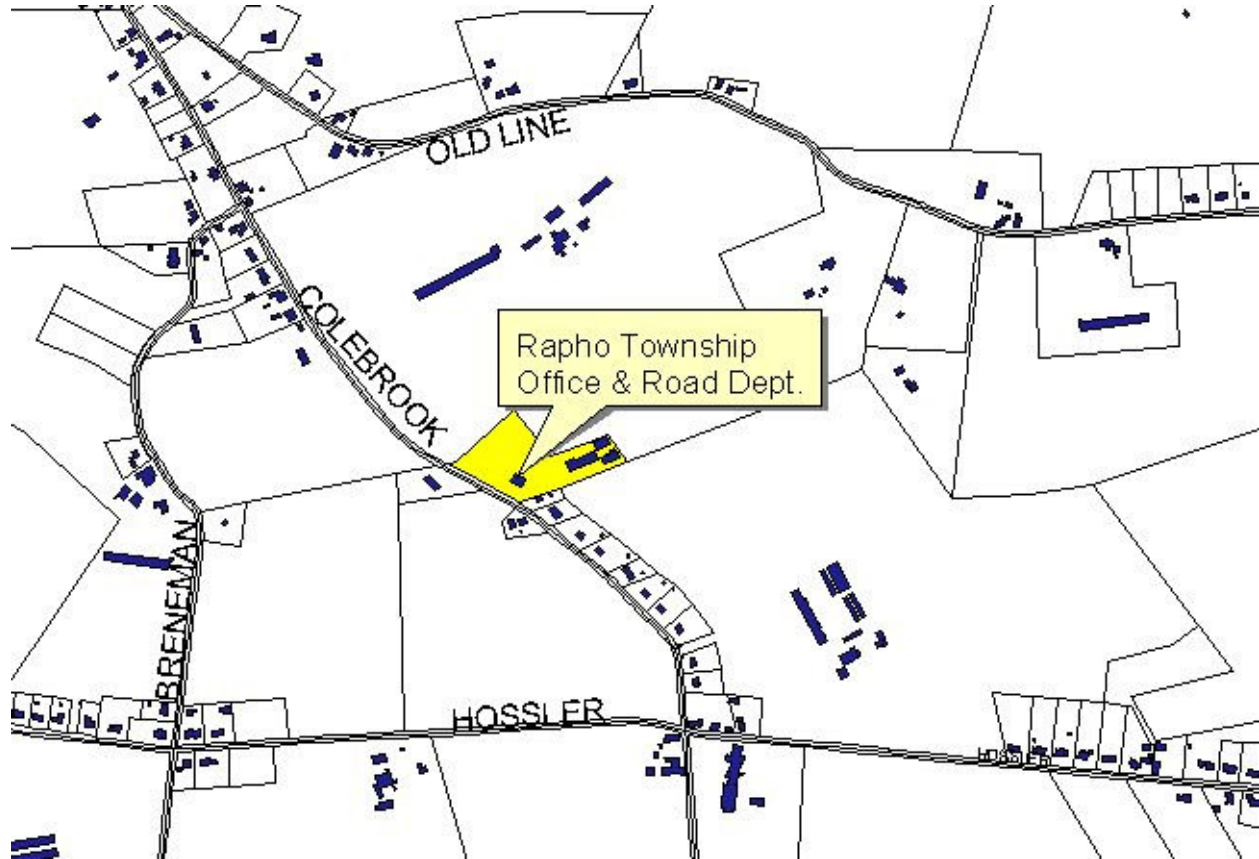
President Mike Warner presented his vision for SPARC. The major focus is a return to the art and science of radio, including technical discussions, contesting or special events, and operating. SPARC will support member participation in EmComm organizations such as RACES but will not attempt to take a leadership role.

At the conclusion of Mike's talk other topics were mentioned. Ross Kauffman has available a presentation about the installation of a DTV transmitter.

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Here is a map and directions to the meeting location at the Rapho Township Office Building.

Meeting location



### Directions to Township office

From Route 772 (Mount Joy-Manheim Road) turn north on Esbenshade Road to stop sign. Turn north on Fairview to intersection at Hossler Road. Cross Hossler onto North Colebrook Road. Township building is approximately 1/4 mile on right.

From Route 72 south, turn west on Elizabethtown Road. Turn south on North Colebrook Road. Township building is approximately 1-1/2 miles on left.

From Route 283 take the Manheim-Mount Joy (Route 772) exit and turn towards Manheim. Turn left onto Breneman road at the John Deere dealer. Stay on Breneman Road until reaching the T at North Colebrook Road. Turn Right onto North Colebrook Road and the Rapho Township building is on the left in about 1/2 mile.

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### ARES/RACES

#### RACES Nets



Lancaster County Net is held on the first Tuesday of the month at 2030 hours local time. Presently being held on the 147.015 MHz repeater 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.

- There will be a RACES meeting March 19<sup>th</sup> at 1900 hours at the County Emergency Training Center on Champ Blvd, adjacent to RT-283 at the Salunga exit. This meeting is in preparation for the TMI drill which will be held April 17 and 18.

**Tech Section:**

Information was clipped from a website at,  
[http://arts.ucsc.edu/EMS/Music/tech\\_background/TE-06/teces\\_06.html](http://arts.ucsc.edu/EMS/Music/tech_background/TE-06/teces_06.html)

**DECIBELS**  
**A tenth of a Bel?**

The decibel (abbreviated dB) must be the most misunderstood measurement since the cubit. Although the term decibel always means the same thing, decibels may be calculated in several ways, and there are many confusing explanations of what they are.

The decibel is not a unit in the sense that a foot or a dyne is. Dynes and feet are defined quantities of force and distance. (You can go to the National Bureau of Standards and look at a foot or a dyne if you want to. They never change.) A decibel is a RELATIONSHIP between two values of POWER.

Decibels are designed for talking about numbers of greatly different magnitude, such as 23 vs. 4,700,000,000,000. With such vast differences between the numbers, the most difficult problem is getting the number of zeros right. We could use scientific notation, but a comparison between  $2.3 \times 10$  and  $4.7 \times 10$  to the 12th is still awkward. For convenience, we find the RATIO between the two numbers and convert that into a logarithm. This gives a number like 11.3. As long as we are going for simplicity, we might as well get rid of the decimal, so we multiply the number times ten. If we measured one value as 23 hp and another as 4.7 trillion hp, we say that one is 113dB greater than the other.

$$\text{Power difference in dB} = 10 \log \frac{\text{power A}}{\text{power B}}$$

The usefulness of all this becomes apparent when we think about how the ear perceives loudness. First of all, the ear is very sensitive. The softest audible sound has a power of about 0.00000000001 watt/sq. meter and the threshold of pain is around 1 watt/sq. meter, giving a total range of 120dB. In the second place, our judgment of relative levels of loudness is somewhat logarithmic. If a sound has 10 times the power of a reference (10dB) we hear it as twice as loud. If we merely double the power (3dB), the difference will be just noticeable.

[The calculations for the dB relationships I just gave go like this; for a 10 to one relationship, the log of 10 is 1, and ten times 1 is 10. For the 2 to one relationship, the log of 2 is 0.3, and 10 times that is 3. Incidentally, if the ratio goes the other way, with the measured value less than the reference, we get a negative dB value, because the log of 1/10 is -1.]

**Converting voltage or pressure ratios to decibels**

Remember that the dB is used to describe relationships of POWER. Power is not often conveniently measured, especially in electronic devices. Most often we measure voltage and use the formula  $P=E$  squared over  $R$  to get power. Squaring a value doubles its logarithm, so our dB formula becomes:

$$\text{Power difference in dB} = 20 \log \frac{\text{Voltage A}}{\text{Voltage B}}$$

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Power of sound varies as the square of pressure, so this formula is also appropriate for SPL (sound pressure level) calculations.

### Reference Levels

The final confusion comes from the concept of RELATIVE power. The question "relative to what?" has no single answer. The standard level (0dB) is chosen to be some convenient value for the application. For acoustics, 0dB often means the threshold of hearing, 0.0002ubar (Microbars: a bar is the "normal" pressure of air). Acousticians deal with positive values and call their measurements dB SPL. Electrical engineers use several meanings for 0dB. They sometimes remember to add a letter to the dB symbol to indicate which is intended.

0 dBj = 1 millivolt

0 dBk = 1 kilowatt

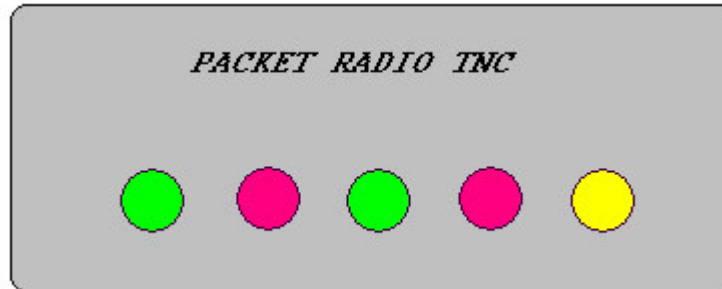
0 dBm = 1 milliwatt at 600 ohms

0 dBv = 1 volt

There are many more. The power calculations must also take spectrum into account: it is not valid to compare a noise signal to a sine wave without some correction factor. The simple rule is to always compare similar signals.

**Digital Modes:**

*A "bit" about Digital Radio*



- The SPARC packet radio mail-drop mailbox continues to operate as K3IR-1. On VHF 145.030 MHz, 1200bps FSK.

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### General News:

- VE TESTING 1900 HRS LANCO EMGC TRAIN CENTER.  
EXAMS ARE ON EVEN NUMBERED MONTHS THIRD THURSDAY AT 7 PM 1900 HRS.

- Note here is that the SPARC operating building is available to all club members for use. While it is still a work in progress, the building does have several operating positions with power supplies and a pretty good antenna farm. You will however have to supply your own radios. If you don't have a radio or other equipment for a particular use maybe you can work with another club member that does and make a team effort of it. A membership meeting would be a good place to make these types of arrangements.

Key to access the building will be available at club membership meetings.  
There is a \$5.00 donation to SPARC to cover the cost of the key making required.

The club is providing this as a benefit to its members in the hopes that it will encourage some to get on the air.  
It may even help some to proceed in the amateur radio license upgrade process.

So anyone who would like to work some DX or just get on the bands to rag chew, practice a mode, participate in a contest or whatever, here is a place you can operate without concern for antenna restrictions, space limitations or other obstacles to operating.

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### **Hamfests this month:**

The Timonium hamfest is on March 31 and April 1.

### *Welcome to SPARC's Newsletter Hamfest!*

**If you have anything for sale, trade, buy, donate, let me know and we can list it here.**

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Still for sale are the following items.

For Sale by [n3xpd@comcast.net](mailto:n3xpd@comcast.net)

MFJ Deluxe Electronic Keyer.

Model MFJ-407C

Price is \$40.00.

Electric Radio Antenna Tuning Meter

This device allows you to tune your HF rigs antenna at low power to prevent QRM.

For more info, See April 2002 QST review.

Price is \$40.00.

In case you haven't heard the news.

I am sponsoring a raffle of a brand new, still in the box, Vertex Standard (Yaesu) VX-150 Handie Talkie 2-meter FM transceiver.

There will only be 24 chances sold at \$10.00 each, so your odds of winning are 1 in 24 for each ticket you purchase, (compare that to powerball odds). At the present time I still have 5 chances available. The drawing will be held at the first membership meeting after all chances are sold.

NOTE that no SPARC money was used in funding this raffle and SPARC's only involvement is that the net proceeds of this drawing will be donated to SPARC's mortgage fund.

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### **2007 OFFICERS**

President: Mike Warner, N3XPD  
Vice President: Rick Watson, N3SWJ  
Secretary: Dave Sarraf, N3NDJ  
Treasurer: Ted Freedman, K3KSA  
Past President: Dave Payne, N3LOM  
Directors: Harry Bauder, WA3FFK

### **APPOINTMENTS**

#### **Repeater Trustee**

Dave Payne, N3LOM

#### **Web site**

Dave Sarraf N3NDJ; Rick Watson, N3SWJ; Mike Warner, N3XPD

#### **Training Committee**

Max Peters, KI6NJ; Dave Payne, N3LOM; Jim Ibaugh, AA3C.

#### **Tech Committee**

Harry Bauder, WA3FFK; Dave Payne, N3LOM; Mike Warner, N3XPD

#### **Newsletter:**

Mike Warner, N3XPD

Email: [n3xpd@comcast.net](mailto:n3xpd@comcast.net)

#### **SPARC Nets**

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

*Comments are most welcome.*

*I would also like to make note that if anyone has information that they would like to have added to the newsletter, all are welcome to make submissions to the editor.*

*This can include just about anything that could be related to club activities or about amateur radio, electronics or science in general.*

*So any of you would be authors out there can use this forum to get your word out!*

*That's all for now,*

*Hope to hear you all on the air and see you at a meeting or club event.*

*73,*

*Mike Warner, N3XPD*