



# THE WIRELESS HILL BEACON

The monthly newsletter of the  
Delaware Valley Radio Association  
P.O. Box 7024  
West Trenton, NJ, 08628-0024



**March 2008**

## OFFICERS

**President**  
M. Bepalko, N2KIV

**Vice President**  
OPEN

**Secretary**  
S. Antane, N8MQU

**Treasurer**  
S. Huston, KC2NYS

## DIRECTORS

**Membership**  
S. Huston, KC2NYS

**Radio Station**  
D. Marlow, K2QM

**Repeater Operations**  
R. Schroeder, N2HX

**Physical Plant**  
H. Gold, AB2VG

**Public Information**  
Unassigned

**Training & Examinations**  
D. Wright, AA2F

**Web Service**  
S. Huston, W2SRH

**Hamfests**  
Unassigned

**Publications**  
M. Bepalko, N2KIV

**Programs**  
Unassigned

**Immediate Past President**  
D. Wilmore, W0YMV

## DVRA's Next Meeting...

The regular monthly meeting will be held at **7:30 PM** on **Wednesday, March 12th**, at **Our Lady of Good Counsel Church**, on Upper Ferry Road at Wilburtha Road in West Trenton. The site is easy to reach from I-95 or NJ-29. Talk-in is available on the 146.67 (PL 131.8) and 442.65 repeaters.

*All are welcome!*

## This Month's Program:

### Home made Atomic Clock! (Well sort of)

Our very own Dan Marlow will detail the "clock" design that he recently built. This clock is actually a specialty receiver for the signal from the "Atomic Clock" in Colorado. This is the official standard from the National Institute of Standards and Technology (NIST). If you would like more information on the source signal, visit: <http://tf.nist.gov/cesium/fountain.htm>. The transmitter is operated under the call WWV... and you can find more information on that at: <http://tf.nist.gov/timefreq/stations/www.html>.

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# Association Calendar

## 2008 GENERAL MEMBERSHIP MEETINGS

January 9	April 9	July 9	October 8
February 13	May 14	August 13	November 12
March 12	June 11	September 10	December 10

**The Directors Meetings** are on the same date as the General Meetings above. However, the Directors Meetings begin at 6:30 pm at the club shack. Talk-in available on the 146.67 (PL 131.8) repeater.

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## TECHNICIAN LICENSE CLASSES

Don Wright, AA2F, periodically holds Technician classes. Classes are held at various locations. Call Don at 609-737-1723 to register.

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## VE TESTING SCHEDULE

### 2008 VE Testing Schedule:

January 12	July 19
March 15	September 13
May 17	November 15

All exams start at 12:15 PM sharp!  
Testing is at the Hopewell Township Branch of the Mercer County Library, 245 Pennington-Titusville Road, Pennington, except for the November 15th exams, which will be at a place to be announced.  
Contact Don Wright, AA2F, 609-737-1723 or aa2f@arrl.net for exam information.

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## 2-METER & 70-CM NETS

**2-Meter Nets:** All of the following are conducted on the club's 146.67 repeater.

The Pepper Net,	10:00 PM Daily,	
Mercer Co. Emergency Net,	7:30 PM Tuesdays,	KB2EGI, coordinator.
SKYWARN Operation	As Required	

**70-cm Nets:** All of the following are conducted on the club's 442.65 repeater.

The Pepper Net,	9:00 PM Daily,
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## 2008 FUND RAISERS

<b>DVRA Hamfest</b>	Sunday, April 20th, rain or shine at the Mercer County Ice Rink
<b>DVRA Craft Show</b>	TBD

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*The Wireless Hill Beacon* is the monthly newsletter of the Delaware Valley Radio Association. P.O. Box 7024, West Trenton, New Jersey 08628-0024.

Internet: <http://www.w2zq.com>

The editor is T. Mark Bospalko, N2KIV ([tmbospalko@aol.com](mailto:tmbospalko@aol.com)). Submissions are welcome from members and others, preferably by e-mail as a text or Word file. The deadline is midnight on the 20th of each month for the next month's issue; publication of items submitted after that date is not guaranteed.

## **February Minutes of the General Membership Meeting February 11,2008**

This general meeting of the Delaware Valley Radio Association (DVRA) was called to order by President T. Mark Bepalko, N2KIV at 1930.

### **NEW BUSINESS**

#### **PRESIDENT**

T. Mark Bepalko, N2KIV

Director of Hamfests is urgently needed as this event is the major fundraiser for DVRA. Funds will be needed to maintain shack operations. Other vacant directorships include Public Information, Publications, and Programs

#### **DIRECTOR OF REPEATER OPERATIONS**

Bob Schroeder, N2HX.

Now has a league appointment as assistant coordinator for emergency ARES. Bob reports the DVRA 2-meter repeater was purchased in 1976 and problems with its power output may require repair or replacement.

#### **DIRECTOR OF RADIO STATION**

Dan Marlow, K2QM.

A team was assembled for ARRL DX contest Feb 15-16

#### **ANNOUNCEMENTS**

Michael Moreken, AB2IO announced that Dayton Hamvention is May 16-20. Bergen's Hamfest (BARA) is set for May 31.

Andrew Lopatin's () membership was received to be voted on at next month's meeting.

The DVRA logo will appear on the Tour de Cure T-shirts this year.

#### **DIRECTOR OF PHYSICAL PLANT**

Hy Gold, AB2VG was newly appointed.

#### **POST MEETING PRESENTATION**

Dr. Allen Katz, K2UYH spoke about a communication mode known as EME (Earth-Moon-Earth or moon bounce). Dr. Katz shared with fellow DVRA members a power point presentation that included his own dish constructions and their installations

at interesting locations. He is a pioneer in this area of communication.

Submitted,  
Schuyler Antane, N8MQU  
Secretary, DVRA

## **February Minutes of the Director's Meeting February 11,2008**

The directors meeting of the Delaware Valley Radio Association (DVRA) was called to order by President T. Mark Bepalko, N2KIV at 1830.

Director of Physical Plant, Hy Gold, AB2VG paid for heating oil at the club's shack. Possibility of DVRA credit card or checking account was mentioned.

Treasurer was not present which led to some discussion of having an Associate Treasurer for business continuity.

Future post-meeting presentation ideas were discussed. These ideas included an AMSAT topic and an audio card – software modulation topic.

Repeater power output continues to be an issue. An idea to refurbish an old repeater was floated. It is not known if funds exist to enable the purchase of a new repeater. This further highlighted the need for a Director of Hamfests as a Hamfest is a major source of revenue for the year.

Director of Radio Station, Dan Marlow noted a problem with the South Tower Antenna.

A donation to Our Lady of Good Counsel Church for the use of their building was discussed.

Submitted,  
Schuyler Antane, N8MQU  
Secretary, DVRA

## DIRECTOR'S REPORTS

### **Membership,** S. Huston, KC2NYS

Just a reminder that dues is due. Dues for 2008 is \$35, seniors & student may take a \$10 discount if they choose.

### **Radio Station,** D. Marlow, K2QM

W2ZQ teams entered the two major ARRL DX contests in recent weeks: the CW contest on the weekend of Feb 16/17 and the phone version of the same contest on the weekend of March 1/2. Conditions for both contests were very poor. Ten meters was almost completely dead and 15 m offered only very short lived and weak openings to Europe. One long-time contester reported that conditions were the worst he remembers in 30 years of contesting. Nonetheless, we managed to eke out 1614 QSOs in the CW contest and 1061 QSOs during the phone weekend. AB2IO was a big help in preparing and tearing down for the CW weekend and joined KC2DLA in making major operating contributions during the phone weekend.

In terms of station work the following items need attention: i) the rotor on the north tower was blown off course by 35 degrees and needs to be adjusted; ii) the reflector on the A4 fell off and needs to be replaced; iii) there is a serious noise of line noise that affects all bands, but 80m and 160m in particular; iv) the SteppIR needs to be repaired.

Respectfully submitted,  
Dan Marlow, K2QM

### **Repeater Operations,** R. Schroeder, N2HX

I have the power amplifier deck from the GE repeater on my bench. I found a bad power transistor in the power control section of the board.

The problem is, all the components have proprietary numbers and can't be crossed to anything that is off the shelf. Because of its age, the board can't be repaired by GE service shops anymore.

Last week I submitted two price quotes, one from Ericsson/GE for a new Mastr III repeater, and one from Maggiore Electronic Labs for a new Hi Pro "E" repeater.

My recommendation is to purchase the Hi Pro for the following reasons:

1. Its barefoot power of 35 watts is adequate enough until such time as we decide to purchase the Henry power amplifier (like the one on 442.65).
2. The price includes a UHF control receiver which we have to have to be legal.
3. The price includes a CAT 1000 controller which Steve (and eventually the rest of the technical committee) knows how to use.
4. The price includes a wireline autopatch and wireline control.
5. Like GE, I also have experience with Maggiore Electronic Labs because my 220 repeater is also a Hi Pro E. Our existing CAT controller can be switched to the 440 repeater. This will eliminate the annoying ID that goes off every time you key the repeater up.

**Continued on Page 6**

## 2008 Activities & Events

### **2008 PUBLIC SERVICE EVENTS:**

Although some of these activities are still months out, put them on your calendar and plan on getting involved:



**March for the Babies,**

**Sunday, April 27th**  
Mercer County Park  
Leon, N0TAZ, Event Coordinator

:



**Tour de Cure**

**Saturday, June 16th**  
ETS Campus, Princeton, NJ  
Mark, N2KIV & Darryl, N2JVP Event Coordinators



**Memory Walk**

**Typically last Sunday in September**



**1DAY 1CAUSE 1GOAL**

**Step Out to Fight Diabetes**

**Typically first Sunday in October.**

## **Director's Reports, Continued from Page 4**

As for the repair of our existing GE repeater, I will query the authorized GE service shop and see how much they would charge to look at the PA deck.

Robert Schroeder

## **Physical Plant, H. Gold, AB2VG**

We are awaiting the electrician's arrival to do the necessary rehab work on the incoming electric service. Every time he thinks he can do it... it rains. He needs two consecutive clear dry days to do it. I'm optimistic that it will be done by next month, though.

Thanks to Dan, K2QM, the oil tank has been filled. With the new thermostat allowing us to lower the unoccupied temperature down to 45F, I'm hoping that one tank will last a full winter... but we won't really know until next winter.

Meanwhile, Scott Oil's price has risen from 305 to 325 in the last couple of weeks. It ain't gonna get better anytime soon. If you have an old oil burner in your house, think about buying a new gas heater, it should cut your winter heating bill by 40% to 50%.

## **Hy AB2VG**

## **Training & Examinations, D. Wright, AA2F**

We have a Technician class in progress on Friday nights at the Dempster Fire Training Center and have 8 students.

Al Katz has asked if the DVRA VE Team is willing to give exams at the Trenton Computer Fair again the weekend of April 26-27 at The College of NJ. The VE Team replied that we would do so, but based on the small number of examinees other years, that we should plan on doing it only on one day, probably Saturday.

## **Web Service, S. Huston, W2SRH**

The Web Master is seeking a couple of members who are willing to learn to use the software package in use for the website.

## **Hamfests, M. Bespalko, N2KIV—Temporary Director**

The tentative date of the DVRA Hamfest is Sunday, April 20th. Final confirmation has been received from the Mercer County Ice Rink.

## **Publications, M. Bespalko, N2KIV**

The DVRA Newsletter hand over begins with the February 2008 edition. Other files such as the Hamfest flyer has been resurrected and are being updated for 2008.

## **Programs, M. Bespalko, N2KIV**

Dan Marlow will speak this month on a WWV receiver project that he did.

## Balanced Lines March 2008

Bob Schroeder, N2HX ©2008

### MARS WINTER STORM EXERCISE A SUCCESS

On Saturday, February 10 there was a joint MARS (Military Affiliate Radio System) exercise in New York state. Ironically, the scenario was quite appropriate: it was a winter storm exercise called Exercise Deep Freeze. In the spirit of interoperability, the New Jersey MARS entities were also invited to play. The Amateur Radio station at the NJ Office of Emergency Management (NJ2EM) also holds an Army MARS callsign (AAN2ENJ), so I was invited to participate as well. When word of the exercise got around, the ARES coordinators for northern and southern NJ seized the opportunity to bring the county ARES organizations into play. I would like to thank all the ARES volunteer operators who worked that exercise.

### HD RADIO AND YOU. PERFECT TOGETHER.

If you don't have an HD capable radio yet, you're not alone. AM and FM radio listeners have been a bit slow on the uptake, but that hasn't stopped radio stations all over the country from adding HD to their broadcast plant. Until recently, WRTI (90.1) and WRAT (95.9) were about the only FM stations in the area that carried the HD format. More and more stations are coming on line every month. I first heard HD radio demonstrated while I was riding with Bill Clanton, N2JGZ, who is the chief engineer for WRAT and WJRZ. Bill had an after market Panasonic radio/CD player in his van and after a brief demonstration, I was hooked.

So what is HD anyway? First of all, contrary to rumor, *HD* does not stand for high definition radio. Video has definition, not audio. The term was adopted as a sort of slang comparison to high definition television. The technology, patented by iBiquity, uses something called *in-band, on-channel* or IBOC to layer compressed digital programming on top of the analog audio you're normally accustomed to listening to. This ingenious technique solves the issue of backward compatibility of being able to listen to an analog station with an HD receiver. Besides providing CD quality music, an HD equipped signal eliminates the effects of fading (called *multipath*) that is normally encountered while in a moving vehicle. How many times have you pulled up to a stop light and lost

the FM station you were listening to? With digital, there is no fading. The data is buffered in the receiver until it runs dry, then switches the receiver to the analog mode until the data stream is received again. In addition to the improved audio quality, some HD capable receivers have an alphanumeric display on the front which displays textual information provided by the individual stations, such as its callsign or the title and artist of the song that's being played. In the event of an emergency, participating EAS radio stations can stream emergency instructions in text form in addition to the customary voice announcements.

HD is not only available on FM broadcasts. There are numerous AM stations in the NJ listening area (such as WPEN 950) that broadcast in HD. When you hear CD quality sound coming across an AM station, you will be amazed and the clarity and total absence of static so common on conventional AM.

Critics of HD often claim that HD radios are only available in upper tier vehicles. That's not entirely true. These radios are often available as an option in the middle tier lines. As for home models, there are a plethora of manufacturers and resellers for base station units. Just beware that some makes and models require an external FM antenna, and not all models come equipped with the alphanumeric display. Of course the ultimate benefit of HD radio is that it is free. Participating radio stations will continue to simulcast in HD until the market matures, eventually discontinuing all analog broadcasting. You can find out more at [www.hdradio.com](http://www.hdradio.com)

### ONE FOR THE RECORD

If you're a Beatles fan or an audio recording aficionado, do I have the book for you. Curvebender Publishing has just done its second printing of what has become an instant hit. It's called *Recording the Beatles* and I just received my copy last week. I began dabbling with audio recording in the Sixties and began working in the broadcasting business in the Seventies. There wasn't a lot of digital audio processing in those days. Editing and post production special effects were done in the analog domain and were very laborious and

**Continued on Page 8**

## SKYWARN Update

Leon Grauer, K2GW



Please notice in the newsletter that the weekly emcomm net will be held on the N2GBK repeater (442.200 MHz, + offset, PL 141.3), until the W2ZQ 2 meter repeater is back on the air.

RSVP to 866 226 3362

April 12 @ 10 AM Regional State Fire Marshall's Office, 22705 Park Ave., Georgetown, DE (Basic Class)

April 26 @ 9 AM Christiana Hospital, Christiana, DE (Basic & Advanced Classes)

See you on the radio!

Also, here is a list of scheduled Skywarn classes:

April 9 @ 7 PM Camden County Boat House, 7050 North Park Drive, Pennsauken, NJ (Basic Class)

## OPEN DVRA LEADERSHIP POSITIONS

T. Mark Bepalko, N2KIV

If you have not participated in the club leadership for a while, please consider one of the following positions:

**VICE PRESIDENT**

**DIRECTOR of PUBLIC INFORMATION**

**DIRECTOR of HAMFESTS**

**DIRECTOR of PROGRAMS**

The Association really does need your support. Right now there are multiple people covering multiple positions. To be honest, some are over worked or have a much larger set of responsibilities than they should. With an association the size of the DVRA, you should consider at least a Directorship every 4 – 5 years. This would allow a regular turn over of responsibilities so as to not burn anyone out.

Please consider how you can help, and discuss options with the president.

## Balanced Lines, Continued from Page 7

time consuming. Some of the most mind boggling special effects were found on the Beatles recordings done at Abbey Road Studios. This book, *Recording the Beatles*, is the most complete technical anthology you'll ever find on how the Beatles accomplished those special effects.

At 540 glossy pages and weighing in at over ten pounds, this beautifully produced tome comes in a slip case which is cleverly designed to resemble a box of two inch audio recording tape. The authors provide detailed explanations of every aspect of the EMI recording studios. What makes the book particularly special is the priceless collection of black and white photographs of the studios, con-

soles, equipment and candid pictures of the Fab Four taken during their various recording sessions. Copies of the recording engineer's setup sheets and producer's notes show in great detail how each microphone was chosen and placed and how the recording levels and equalizers were set. The book carries a price tag of about \$100; however for a recording buff like me, it was well worth having all this history in my library.

All for now.  
Comments invited.

Bob Schroeder, N2HX  
Past President, DVRA



## ASSOCIATION SUPPORT NEEDED

The DVRA needs a high quality lawn mower for the shack. And, it appears that we just might have a donor, but, we need a storage shack for the lawn mower. If you know a manager in a large home / repair / construction retail outlet (like Home Depot, Rickel's and the like) please contact the president about approaching them for a donation. The DVRA is a valid nonprofit organization, so they do get the tax benefits for helping us.



## Dues Reminder

Stephanie Huston, KC2NYS

Just a reminder that dues is due. Dues for 2008 is \$35, seniors & student may take a \$10 discount if they choose.

Also, if you are interested in joining or renewing your ARRL membership, complete the attached application & submit the payment with your 2008 dues.

The DVRA gets a kick back when you renew/join through the club. Dues can be given to me at the Feb meeting or it can be mailed to the club.

## Supporting Sponsors

EAT. PARTY. SHOP. What's not to love?

Tastefully Simple offers over 30 easy-to-prepare gourmet foods you and your friends can taste before you buy. Contact me for more information.

**TASTEFULLY SIMPLE**  
The food you love. By time you deserve.

STEPHANIE HUSTON #43713  
Tastefully Simple Independent Consultant  
215-736-0934 ~ tastefully\_yours@hotmail.com  
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**MARY E. MOON, V.M.D.**  
**HAMILTON VETERINARY HOSPITAL**

OFFICE HOURS  
BY APPOINTMENT

18 EAST PARK AVENUE  
HAMILTON, NEW JERSEY 08610

**DELAWARE VALLEY RADIO ASSOCIATION  
PRESENTS**

***Hamfest - Computerfest - Fleamarket***

***Sunday, April 20, 2008***

**The Skating Center  
at Mercer County Park**



**Mercer County Park, West Windsor, NJ**

**Map & Directions: [http://nj.gov/counties/mercerc/commissions/park/mercerc\\_park.html](http://nj.gov/counties/mercerc/commissions/park/mercerc_park.html)**

***Opens to public at 8:00 AM and to sellers at 6:00 AM***

- ◆ Admission \$6.00
- ◆ Plenty of FREE Parking
- ◆ Children under 13 are FREE
- ◆ Commercial Vendors Welcome
- ◆ Refreshments will be available
- ◆ Door prizes and 50/50
- ◆ ARRL Table
- ◆ Indoor or Outdoor spaces \$10.00
- ◆ Electricity on 1st come basis
- ◆ Seller tickets include one admission
- ◆ Advance registration available
- ◆ More info... [hamfests@w2zq.com](mailto:hamfests@w2zq.com)
- ◆ <http://www.w2zq.com>

***Talk-in on 146.67(-), PL 131.8***

**Advance Covered Space Registration**

Name: \_\_\_\_\_ Call: \_\_\_\_\_

Address: \_\_\_\_\_

City: \_\_\_\_\_ State: \_\_\_\_\_ Zip: \_\_\_\_\_

Number of covered spaces: \_\_\_\_\_ @ \$10.00ea. Additional tickets: \_\_\_\_\_ @ \$6.00ea.

Electricity needed:

Total Enclosed: \$\_\_\_\_\_ Make checks payable to: **DVRA**

**Mail to: Delaware Valley Radio Association  
P.O. Box 7024  
West Trenton, NJ 08628  
Attn: Hamfest**

**Please Submit  
by April 11th!**