



Potomac Valley Radio Club Newsletter

February 2006

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and www.pvrcnc.org

**PVRC extends its condolences to Bill Axelrod, K3WA, on the passing of his wife
Kathy on January 1**

Editor's Note

By **Pete Smith N4ZR**

Even if you normally only check for your own call in the 5M score results, be sure to take note of the great collective results PVRCers turned in during the fall season; and sharpen up your keyboards for the spring round of biggies! A couple of interesting technical pieces (I hope) with promise of more to come.

From the President

By **Jim Nitzberg, WX3B**

First, errata—It turns out I left out a MAJOR part of the awards that were presented at our holiday dinner when I summarized our activities, and that's the milestone of reaching the 5 Million point level! We presented the following individuals with 5 Million point awards: Eric Scace, K3NA; Tom Warren, K3TW; Glenn Biggerstaff, N3HUV; Ralph Fetty, N4EHJ; Chet Moore, N6ZO; Maury Perperl, W3EF; Bill Rogers, W3UL; Marty Johnson, W3YOZ; Don Lynch, W4ZYT; and Chad Kurszewski, WE9V.

Congratulations to everyone who has achieved this milestone, and I apologize for not including it in our newsletter. Also, the upcoming RTTY Round-Up *does* qualify for the PVRC 5m award program (I had erroneously called it the 10m program).

Best wishes to everyone in 2006 – I hope that the New Year brings health, happiness and new and renewed contesting enthusiasm to you and our club!

Your Officers, W3DQ, K4ZW, WM3T, WR3L and I met in downtown DC on Thursday January 19th to outline our club's goals and objectives for 2006.

We had a healthy agenda covering topics that included Station Building, PVRC's 5 Million Award program, Club Contests, a potential PVRC contesting seminar in 2006, reviving the PVRC store, and updating our web site.

There are several tangible results that have already started to take form as a result of the meeting.

I am delighted to announce that Anthony, WM3T has recently programmed an "experts" database and should be rolling it out for club review within several weeks. The purpose of this database is to match up contesters in need of information – with the folks most likely to have answers to their questions. In order for this database of 'experts' to function – we need you, our members to own up to the areas you're good at, and provide us with a list of items you are comfortable Elmering others on. More instructions on data entry and searching will be

provided soon.

Howie, N4AF has secured a substantial amount of new disk storage space for our Web site, and we plan to add additional content and make improvements to it.

Eric, W3DQ, has offered to take over the PVRC store. As many of you have seen, he's been asking our membership for suggestions of items we should carry. Expect to hear more from him in the near future.

Jack, K4VV contacted Tim Duffy, K3LR related to our potential Dayton, Ohio PVRC Contesting Seminar. Tim suggested that we use this year's Dayton Hamvention[®] as a chance to talk up the idea of the Contesting Seminar and, if there is enough interest, put it on the 2007 schedule. This provides us with an opportunity to present a second local contesting seminar this year – possibly in the summer – if there is enough club interest.

For those of you that work in the downtown Washington, D.C. area, please consider attending one of Eric (W3DQ) and Rich's (NN3W) downtown DC PVRC luncheons. The group's popularity has been growing and the format is quite casual and fun. Although they generally meet the second Wednesday of the month at Reeve's Restaurant, keep your eyes open for email from Eric and Rich with specific information on the upcoming luncheons.

We have some exciting presentations coming up in our Central Region meetings in the next few months. Rich, NN3W will be speaking about his low power contesting experiences at the Olive Garden in Vienna, VA at February's meeting. In May, John Evans, N3HBX will be speaking about the design and implementation of his new Super-Station in Poolesville, MD. We are in the process of lining this meeting up at the Capitol College. You can read excellent articles about John's new station in the last two months of the NCJ magazine.

I am pleased that Mark, KD4D has agreed to chair the Maryland Central Region meetings in Temple Hills this year, and Jack, K4VV is going to lead (some of) the Central meetings in Vienna. Jack and I are looking for someone to help us with the planning and leadership of the Central (Vienna area) VA meetings.

We also have some young blood in our leadership department – Michael Braun, N3CA has graciously accepted my newly created Membership Coordinator position. Mike's job is to make sure that our follow-through with prospective PVRC members and newly elected members is thorough and helpful.

And as announced on the PVRC reflector in January, we are putting together a short survey of our membership that will be posted on our web site. The goal of this survey is to get your input on the areas of the club you would like to see us focus on, change, improve, etc.

Best wishes to all in the upcoming contests – the CQ 160 contest is occurring during the weekend following this report, and of course the two big DX contests, ARRL DX CW and ARRL DX SSB occur in February and March.

73, Jim Nitzberg WX3B

PVRC Contest and Event Calendar

Courtesy of the [WA7BNM Contest Calendar](#)—PVRC Events in boldface — all dates and times are Zulu

North American Sprint, SSB 0000Z-0400Z, Feb 5

CQ WW RTTY WPX Contest 0000Z, Feb 11 to 2400Z, Feb 12

North American Sprint, CW 0000Z-0400Z, Feb 12

ARRL International DX Contest, CW 0000Z, Feb 18 to 2400Z, Feb 19

CQ 160-Meter Contest, SSB 0000Z, Feb 25 to 2359Z, Feb 26

North American QSO Party, RTTY 1800Z, Feb 25 to 0600Z, Feb 26

North Carolina QSO Party 1700Z, Feb 26 to 0300Z, Feb 27

ARRL International DX Contest, SSB 0000Z, Mar 4 to 2400Z, Mar 5

North American Sprint, RTTY 0000Z-0400Z, Mar 12

Russian DX Contest 1200Z, Mar 18 to 1200Z, Mar 19

CQ WW WPX Contest, SSB 0000Z, Mar 25 to 2359Z, Mar 26

JIDX CW Contest 0700Z, Apr 8 to 1300Z, Apr 9

Errata

From the Editor: In the January issue, I inadvertently identified Don Daso, K4ZA as K4ZW. Don also pointed out to me that I failed to identify the keying transistors in W3PP's interface article; I trust not too many people had trouble guessing them to be 2N2222As or equivalent.

Ammunition for Little Pistols

By [Bill Axelrod K3WA](#)

This month's column will be short and bittersweet. Mrs. Quasi Little Pistol, my XYL of 40 years and otherwise known as Kathy, passed away on New Years Day.

While she never did understand our hobby, and especially my fascination with contesting, she certainly was supportive and didn't even complain about the TVI I caused when on 160M. Although she didn't quite consider my tower and beam a work of art, she didn't make an issue of it. A great ham's XYL.

I'll be back next month. See ya in the 'tests... Bill K3WA

The Toolbox

By [Don Daso K4ZA](#)

Tape Tips — Recently, on one of my proverbial trips up the tower, my client, watching from the ground, asked me what I was doing while weatherproofing his cables. "What's that white stuff?" he asked. Thus, this column. If you've heard this lecture before, I apologize, but it seems the subject is cyclical—every few years, it comes back into rotation, showing up on reflectors and the local repeater, in print and conversation.

Weatherproofing (notice I did not say waterproofing) connectors is a foreign concept to some hams. I encounter unprotected connectors all the time, from simple screw terminals to RF connections. There are lots and lots of ways to protect and weatherproof connections which will be exposed to the elements.

Let's begin with tape. Vinyl electrical tape came into widespread use after WW-II. Before that, the primary sealing product was a rubbery, sticky substance called "friction tape." I remember using it as a boy on the farm. I also remember discovering the new, vinyl tape and being impressed. Today, we have a variety of vinyl tapes from which to choose. I believe 3M makes the best, so this article will focus on their products.

Among tape aficionados, you'll sometimes hear certain terms or characteristics: adhesion to backing, adhesive transfer, conformability, elastic memory, elongation, and flagging. But first, let's consider some applications or uses for tapes.

Vinyl tape is used to jacket (insulate), splice (low voltage connections) and mechanically protect (just what it says) joints or connections. Most of the commonly used tapes (Scotch 33 or 88) are rated up to 600V. The strapping or bundling or holding uses are often taken for granted. But for insulation purposes, always use a minimum of two half-lapped layers—meaning each layer of tape overlaps itself by half the tape width. The fi-

nal layer is wrapped in a more “relaxed” manner—without as much tension or stretch being put on the tape. We’ve all done this when we’ve wrapped connectors, but chances are, you’ve not thought much about this characteristic. This ability to fit snugly, making complete contact with the surface of an irregular object without creasing, is called conformability.

This ability to “stretch to fit” and then “stay in place” is called elastic memory and elongation by 3M, and the Super 88 is excellent in both regards. All manufacturers grade their tapes according to thickness. Super 33 (7 mil), Super 88 (8.5 mil) and Super 35 (color coding tapes, also 7 mil) are the more popular, and most used by hams, Scotch brands. Thinner tapes are very easy to apply and will conform readily; they also break or tear quite easily. Thicker tapes provide faster buildup, better dielectric and mechanical strength, and can be harder to cut through. Scotch 88 can be applied from 0-100 degrees F, extremes under which few of us would want to be working. But is it really and truly waterproof? And the answer is no, not always by itself.

There are solutions—additional products which move you from weatherproof to waterproof, however. Rubber tapes, which provide electrical insulation, and mechanical sealing, can also seal connections against the environment. They readily stretch to conform to irregular surfaces. Quite simply, they form a gasket around cables, connectors, or wires. Most of these rubber tapes are self-amalgamating, meaning that with only slight pressure (and over time), the layers of the tape will fuse together—adhering solidly to itself. These products (typically, either Scotch 130 or 2242, called Linerless Rubber tape) should be stretched to just before their breaking point at application. Experience will be your guide, but one good rule to follow is when the tape turns from black to gray, you should stop stretching! (Last year, I removed some 14-year old connectors, in dismantling N4ZC’s station; they were in perfect condition.)

In use, I like to wrap connectors with the Linerless Rubber first, followed by two layers of Scotch 88. Lately, however, I’ve added another product, under the 130. It’s a pipe thread sealing tape, 2-inches wide, of white Teflon, and .003 thick, available from McMaster-Carr. At \$10/roll, it’s pricey, but it will literally conform to anything! I now put this under the 130 and 88 layers.

As to technique, it’s old news, but the key is to make sure there are NO gaps or air cavities in your wraps. Where there is air, there will be water, plain and simple. The super-flexible Teflon will literally conform to anything, solving that problem. On that last wrap of tape, let the end relax, and then CUT it, don’t simply grab the tape, tug, stretch, and tear it. Over time, the elastic memory will cause the tape to become loose and flag (that’s what those nasty little flapping ends are called). Think about each joint being like the shingles on your roof—each overlapped layer is over the next layer, as you move the joint. Where practical, I also like to put a tie-wrap above each connection, where capillary action will pull the water away before it gets to the taped joint.

Finally, taping coax or wires to the tower itself probably isn’t a good idea. You can actually pull 88 tight enough to compress RG-8 series cables, as can cable ties, or even the old tried-and-true #12/14 wire ties. But not many of us take the time to obtain and utilize commercial cable hangers, so the operative word, of course, is to pay attention to detail and be careful in any and all your tape applications. The “cheap” tape is fine for securing cables. Just remember to follow the same rules for applying it. Before long, you won’t be taking this vinyl wonder for granted. What’s in your toolbox?

N3CA at N3HBX

Michael Braun, N3CA, operated at N3HBX’s Poolesville super-station during the recent NAQP SSB. Tyler, K3MM, was good enough to send in a picture of Michael warming up before the start. It gives an interesting op’s eye view of the station, and rather than shrink it to put it in the Newsletter you can see it in all its glory in the extended content section on the web page. [Click here to have a look.](#)

IARU Addendum — Congratulations to K3ZO for winning first in the U.S. in the high power/mixed mode category, joining N4AF and W3LL (reported last month) at the top of their respective categories.

A Different Approach to Tuning Force 12 Short Yagis

By Pete Smith, N4ZR

As we were approaching deadline for this month's Newsletter, I received an e-mail from Don Daso, K4ZA, looking for information on installing a Force 12 EF-240S yagi. I sent him the assembly drawing and instructions on setting up the linear loading wires, but realized that the tuning instructions in them are fairly inadequate. Rather than send what follows just to Don, I thought that this idea might be of more general interest.

The trouble with the Force 12 EF-series yagis is that the driven element and reflector are all exactly the same! The necessary lengthening and shortening is achieved solely by the placement of the shorting bars on the linear loading wires, and because the geometry of those wires and the shorting bars can vary considerably from one antenna to another, "cookbook" dimensions are only a very general guide. Over the years, Force 12 and others have published a variety of guidance, ranging from the venerable "point it up and tune it" to instructions for tuning while the antenna hangs from a tramline, adjusting for the height above ground compared to the final height. *None* of these has ever worked satisfactorily for me; the last time I used the tramline tuning method everything looked fine until I got the antenna in the final position, when I discovered that the pattern was backward at the bottom end of the CW band. Not good.

So here's what I finally worked out. First, I tuned the driven element for resonance and lowest SWR using a combination of the loading wire adjustments (for frequency) and the hairpin coil (for match). This adjustment is pretty easy, not that critical, and not affected very much by the tuning of the reflector (though the 2:1 bandwidth may be). Use your favorite method.

The hard part is tuning the length of the reflector, and not just because it is 9 feet out the boom from the mast. Here's what W2GD and I finally did (John did the on-tower work). I had a vertical about 300 feet from the tower, on my garage roof. Using its feedline, with a 3-foot length of wire as an antenna, I discovered that my MFJ-259B would deliver a nice S9 reference signal.

By a combination of turning the Yagi and tuning the MFJ, I was quickly able to verify that the pattern was indeed reversed at the low end of the 40-meter band, and that peak F/B was situated at about 7100 KHz. With that as a starting point, I had John move the shorting bars in about 6 inches each, equivalent to adding two feet to the length of the antenna. That moved the peak F/B down to about 6970. Too much! So John moved the shorting bars out about 3 inches. Since this involved tilting the antenna down each time to reach the adjustments, only a limited number of iterations were practical. Fortunately, this time was the charm—peak F/B fell neatly into place at about 7025. Incidentally, I don't know if this is characteristic of all 2-element Yagis, but the F/B holds up much better above the peak frequency than below, presumably because the reflector fairly quickly starts to look like a director.

And that was all there is to it; the antenna now works as it was designed to. While this technique is particularly useful for wire-loaded Yagis with identical elements, I don't see why it would not pay off with any Yagi that needs to be adjusted to put its best pattern in the right part of the band.

A PIC Amp Fan Controller

By Brian Alsop, K3KO

I recently stepped down from my ACOM-2000A to an SB-1000 amp. The huge increase in fan noise became an irritant. The following PIC (Programmable Interface Controller) project was my answer. The project uses the same complement of IC's as the "brake eliminator". It does add a DS1820 temperature sensor. The sensor, while it looks like a transistor, is a digital device which communicates the temperature via a 2 way digital link to the PIC. Not bad for a \$5 device. No analog voltages for RF to confuse. The idea was to use Pulse Width Modulation (PWM) to control the DC to a replacement fan.

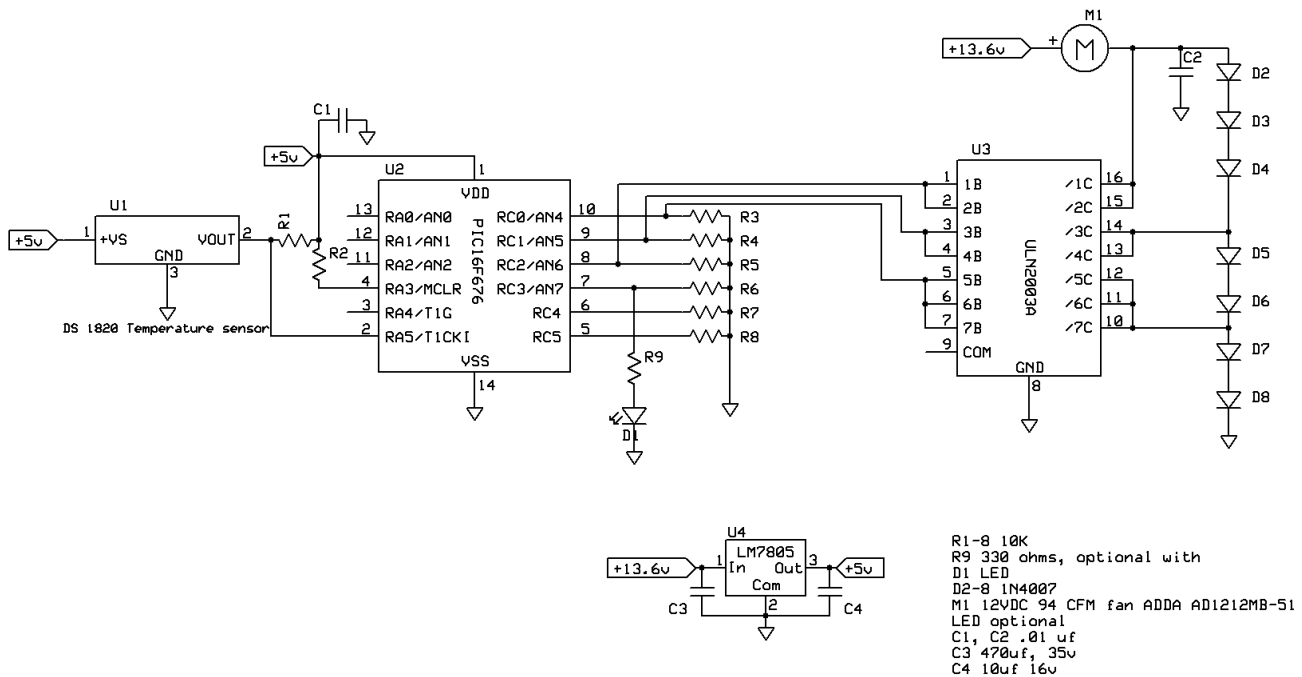
The project took an interesting turn. The original PWM design was scrapped. Why? I had re-invented the SCR

and its associated RFI. I couldn't quiet it down sufficiently. Instead of PWM, the revised circuit switches in or out diodes which provide measured amounts of DC voltage drop. The fan sees voltages from 8 to about 12.8 VDC. Four levels of fan speed proved sufficient--although several more could have been implemented. As an aid in setting the temperature breakpoints, an LED was added to flash the number of 1/2 degree C steps above 0 degrees C. No, not in CW. Instead two digits are flashed with a pause between them. The first digit is flashed Temp/10 times and the second is flashed the value of the units digit.

The unit now does the following:

- 1) Starts at the fan at medium speed. Speed drops almost immediately to idle speed (Confirms circuit is working.).
- 2) Varies the DC to the fan in four steps. A hysteresis of 2 degrees is implemented to prevent hunting of the fan speed.
- 3) Everything but the two leads to the fan are be external to the amp. Fan leads are routed through the ALC jack center hole. Sensor goes outside at the exit plenum air holes.
- 4) AC muffin fan in the amp is replaced by a 12VDC 94 CFM DC muffin fan. An external DC supply is now required. I use my 13.6V DC accessory buss for this.
- 5) To shut the fan off when the amp is turned off, a small 12VDC relay was wired to the SB-1000 +12VDC output jack. This relay (not shown in the schematic) switches on the +13.6 VDC line for the fan and LM7805 when the SB-1000 is turned on.

This fan control circuit plus mounting the main power transformer and power solenoid on rubber grommets has produced an amp which is much quieter and more pleasant to use. These PIC's are super beasts to control all sorts of stuff in the station. One is pretty much limited by his imagination. I'll be glad to provide more information, including the PIC programming details, if anyone is interested.



DXPedition Travel Tips

By Don Daso, K4ZA

As the 60s song has it, “the times they are a-changin,” and nowhere is this more apparent, perhaps, than in the world traveler’s arena. Yet, the inconveniences of traveling by airline in these post-9/11 times are, at bottom, relatively minor ones. As one who sometimes has to travel with expensive film and video gear, I’ve picked up a few pointers along the way. Here are some thoughts (to continue in the vernacular of those 60s times) on reducing the hassle.

Check out what the TSA wants you to know and do BEFORE you go! Their latest advisories are available on-line; simply check their website before departure ([ww.tsa.gov](http://www.tsa.gov)). A variety of methods and screenings will be used, all part of the TSA’s planned unpredictability to their methods. By eliminating low threat items, more focus and effort can be placed toward those who would do us harm—at least that’s the rhetoric behind the planning. What has not changed is the inspection of checked baggage. Problems arise when one of the 43,000 TSA screeners is forced to re-pack something.

You’ve purchased a heavy-duty Pelican case, lined with dense foam, checked and re-checked everything numerous times, and you’re sure the rig (or camera gear) will arrive safely. But what happens if the rig is dropped, or not put back exactly how you had it? These are all areas outside your view or direction. What can you do?

While I’m a firm believer in supporting the TSA’s efforts, I would hope the screeners would use some care, take some time, and not make mistakes. Yet I’m realistic enough to know that “stuff happens,” and that no matter how good my cases may be, one mistake is all it takes. So, here are some tips.

1) Once your case is packed, photograph it with the lid or top open or off. Then print out that photo and attach it to the top of the case cover. I like to include a brief description (less than half a page!), in large type, of how to pack that case, too. Then, hopefully, when the TSA screener has the case open, he or she will have a quick visual reference and directions of how to repack that case. The idea is to make everything as clear and simple as possible. Remember: they won’t have nearly as much time to spend figuring out the knobs must face forward or whatever. Make their work as easy as possible. The photo can also serve as an easy visual inventory, too—sometimes useful in foreign customs.

2) Damage claim forms are downloadable from the TSA website. I have heard plenty of horror stories regarding these claims—how filing one isn’t worth all the red tape you’ll end up enduring, and so forth. It is, however, an option. And one I submit because the airlines are not responsible for certain equipment (like photo or video gear), whether in checked or unchecked baggage areas. (Read the fine print on your baggage claim ticket sometime; there’s usually a line claiming they’re not responsible for anything!)

And again, I’m not knocking the airlines or trying to disparage the TSA. Security is important, vitally so. Just try to do everything you can (before you leave) to help ensure you and your gear get where you’re going, simply and safely.

2006 Hamfest Schedule

Date	Location	Date	Location
February 19	Richmond, VA	July 23	Howard County, MD
February 26	Vienna, VA	August 6	Berryville, VA
March 18	Charleston, WV		Mountaintop, PA
March 25-26	Timonium, MD	August ?	Lewistown, PA
April 23	York, PA	August 13	Westminster, MD
April ?	Howard County, MD	August ?	Hanover, PA
May 7	Hagerstown, MD	September ?	East Stroudsburg, PA
	Warminster, PA	September 9-10	Gaithersburg, MD
May 13	Fredericksburg, PA	September ?	Allentown, PA
May ?	Howard County, MD	September 25	Wrightstown, PA
June ?	Manassas, VA	October ?	Lancaster, PA
June ?	Bloomsburg, PA	October 15	Sellersville, PA
June ?	Frederick, MD	October 29	Westminster, MD
July 2	Wilkes-Barre, PA		
July 4	Harrisburg, PA	Need open dates!!	
July ?	Kimberton, PA	Updates/additions/corrections are appreciated!	
		de Glenn, K3SWZ	

Around the Club Meeting Minutes from the Regions

PVRC-NC East started off 2006 in grand style with a solid turnout from an excellent cross-section of our membership base. General discussion about the recently completed holidays, upcoming contests, antenna planning, new rigs, and such filled the air prior the official kick off when the burgers, ribs, pizzas, salads, soups, etc... starting showing up on the table.

The 14 in attendance were: W0UCE, Jack; K2AV, Guy; KA1ARB, Rob; N4CW, Bert; WA2JFK, Jim; K4CIA, Bill; NX9T, Jeff; K4HA, Bob; N4XD, Ron; N4TL, Tom; K4CZ, Barry; W4KAZ, Keith; AD4L, Pete; K4QPL, Jim. K4QPL thanked the group for being part of such a strong showing with great participation during the close of 2005 and encouraged all to maintain the enthusiasm as we head in to the 2006 contest season. Jim offered appreciation to all who help keep things running smoothly.

W0UCE conducted the regular Paper Contest. This months contest required some pretty strong knowledge of electronics test equipment. Do you know what a Megger measures? How about what a Galvanometer is used to measure? Bill, K4CIA, showed that he knows his stuff and took home the prize, a swivel headlamp. Bob, K4HA, was nipping at his heels in a very close second place. Jack requests that members make suggestions to him (W0UCE) about future programs and Paper Contest topics. Jack intends to conduct these contests each month and welcomes input on the topics/information involved. These contests are not only fun, but often quite educational!

K2AV presented a very interesting and informational demonstration on antenna modeling. We appreciate Guy's willingness to share his knowledge and insight on a topic which many of us have little or no experience. The program schedule for the next two months is as follows: February: W0UCE- Tips on Working the Weak Ones March: AD4L- Software Designed Radio Technology

Member Reports: KA1ARB: Rob operated SS SSB as a Multi-Op with long time buddy from New Hampshire, WB1ADR. They had a great time, piled up a strong score, and are ready to go at it again! Rob also participated in the CQWW CW and 10m contest and focused on polishing up his CW skills. AD4L: Pete worked hard in the SS SSB. The hours prior to the contest were filled with home-brewing ladder line feed which wound up playing very well. Pete was really impressed with how his antenna system played on 80m.

N4CW: After returning from Maine, Bert engaged his son-in law WA2JFK to play in the SS SSB. Bert also operated various contests in the late fall, played in the Stew Perry, and hopes to enter the RTTY contest this coming weekend. WA2JFK: Jim is the self-proclaimed SSB part of Bert. Being Bert's son-in-law, he has access to the N4CW shack and first dibs for operating multi-ops. (It was great to have Jim with us and hope he can be with us regularly). Jim will operate Kids Day this weekend with his daughter.

K4CIA: Bill operated in SS CW as a QRP warrior! He also worked some in the ARRL 160 and continues to chase DX. Bill is putting the finishing touches on his new K9AY loop. NX9T: Jeff operated in SS CW and SSB, ARRL 160, and the ARRL 10m contest. He spent more time than usual on CW during the 10m contest and had a blast. Jeff hopes to entice his sons to get on for Kids Day this weekend.

K4HA: Bob, while not operating much lately, has been keeping busy with doing tower work for himself and others. He (and friends) recently took down 180 feet of Rohn 55! That is a significant tower!

K4QPL: Jim operated both modes in SS along with a few others events late last fall. He is planning to travel to N4AF to operate the ARRL CW. N4XD: Ron has been focusing on 160m lately. He operated the ARRL 160 and the Stew Perry. Good DX catch of late was the VQ9 on 160m. Ron hopes to hit the 160m tests coming up in 2006. N4TL: Tom operated both modes in SS, the ARRL 160, has been chasing DX, and recently picked up new a new project...Heathkit twins, SB301/401. He was quite successful this year in getting his XYL and family members to come through as Tom received all five of his desired radio books provided on his annual Christmas list.

K4CZ: Barry has been very active operating contests such as SS, CQWW, etc...and hopes to get in on the RTTY test this weekend.. He is enjoying his TS930 and is planning to add computer control to it any day now. Barry is thinking about putting up a tower and is considering various options. W4KAZ: Keith had a great time racking up 300+ Qs in the SS SSB. He worked some in the SS CW and ARRL 160. Keith hopes to operate ARRL DX as a multi with NT4D and NT4Q. Big news from Keith was about an upcoming DXpedition to Sri Lanka in 2015. He handed out prototype QSL cards which might be used. The cards generated numerous comments and laughs.

W0UCE: Jack reported that his lightning damage estimate is now at \$15k. He encouraged all to make a detailed inventory list, with receipts, of their equipment in case they ever need it for insurance purposes. Jack operated in the ARRL 160, Stew Perry, and SS. He plans to play in the CQ 160 and ARRL CW.

K2AV: Guy indicated that he was pleasantly surprised by the good conditions during the SS. He discussed how the Multi-2 at N4AF wound up being a great success with around 4,500 Qs. Their score is holding up well and currently in first place in the U.S.

W4MY and KC4HDI: Marty and Chris, via email, indicated that they had a very nice Christmas, plan to operate many of the upcoming contests, as well as Kids Day this weekend. Marty is in a period of job transition and will likely be focusing some of his contest energy in that arena for the near future.

Our PVRNC brothers out West sent a reminder and invitation to attend the Forst A.R.C. FirstFest this Saturday, January 7th, in Winston-Salem. Contact Don, WS4NC for more information. We look forward to another great gathering in February! Until then, good luck in the contests and Happy New Year.
73, Jeff NX9T

The CVCC meeting was called to order at 7:00 PM by Marie Long, K4KML. All present introduced themselves. The president's New Year greetings were conveyed to the club and a list of upcoming contests. All were reminded that FrostFest is scheduled for February 19, 2006, at the Showplace. The cluster was reported as "under repair" as the TNC's are dead and replacements are scarce. Conversion to operation with sound cards is being pursued and some cards were volunteered from one of the members present.

In his role of QSL manager for 4W3ZZ Dr. Eschelmann presented Bob Morris his QSL card. He also reported he has a large number of current IRC's which expire at the end of 2006. He also reported on his acquiring a confirming QSL card for a 15-meter contact in 1967 with an operator in The People's Republic of Yemen. He reported further on his contacts with South Korea and Nepal on two contiguous days.

Bob Morris reported on the upcoming Virginia QSO Party on March 18 to 19th and he presented one of the plaques won by the club to Marie Long, K4KML and Jerry Long, K4KJL to reward them for time they put forth at the club station in 2005. Ralph Fetty, K4FEG was presented a 5 Million point award as recognition of his past work in contests as well.

Sterling Park Amateur Radio Club (SPARC) is seeking sponsors for award plaques for the VAQSO Party, which the club is exploring. SPARC is also encouraging clubs to ways to publicize the 2007 VAQSO Party in light of 2007 being the 400th anniversary of the founding of Jamestown.

Under new business Dr. Eschelmann requested all members to send in their 2005 DX reports.

Sejo Sudic, N3UA, presented Power Point and video of his Single Operator Single Band 80-meter entry as T97C from Bosnia. The presentation showed his Double Magnetic Slot antenna and the incredible beauty of the mountain location in Bosnia from which Sejo worked.

Respectfully submitted, Jerry Long. K4KJL

The **NW Region** met at the City Buffet in Frederick, MD on 17 January 2006. In attendance were N3HBX, NE3H, K3WC, K4FTO, K4VV, N4MM, K8OQL, W2YE, N3VOP, W3RAR, W3BDE, K4NNK, N3UM, WN3R, N3CA, W3LJ, W3IDT, K3ZO, W3ZZ, WD3A, W8ZA, K3MM, N3II AND W3LL.

Regrets: K2PLF, Marty is recuperating from a bout with pneumonia. W3KHZ, Art travels with Marty to the meeting. No Marty, no meeting. WF1L, Bill will be unable to attend due to a previous commitment. He worked a short time in the 10M and the ARRL RTTY RU contests with very modest results. Submitted both for PVRC. Bill anticipates putting in some time on the VHF contest this coming weekend and hopes to be up on 6, 2 & 70 cm SSB from FM18. He was fortunate enough to work both the Desecheo Island effort (20M) and, just recently, Senegal on 80M phone. He's still searching for the ever elusive Alaska on 80M for single band WAS. Bill is also exploring meteor scatter mode on 6 meters using the WSJT program. This mode is a kick! He's been able to receive a call (from a station in Michigan) but hasn't been able to transmit successfully yet. His attic mounted antennas are really cramping his style.

W3HVQ, John says it's interesting that we have monthly NW PVRC meetings on every third Tuesday at 7PM. He will try to remember this and is sorry that he has not attended any of these meetings in the past or even tonight. Once a PVRCer..... always one..... as they say. John just replaced the bandswitch and the tube socket in his 4-1000A homebrew linear over the last few weeks but hopes to be ready to go again in time for the ARRL DX CW contest in February. He'll try to make the February meeting. His daughter lives northeast of Frederick (about 20 miles). He thinks that she let her General license expire but will check. She used to do well even using CW in past Field Days in the Annapolis area (ARINC's FD). John is retired from the Joint Spectrum Center in Annapolis (32 years there) and a new resident of Fort Ashby, West Virginia. His phone number is 304-298-4908. Feel free to call or visit anytime. He's a PVRCer and an ARES/RACES member (WV District Six). John has only monoband wire dipoles and slopers held up by an aluminum mast (that is itself based on an insulator, has a capacity hat and is tuned to 160) but as you know.....Rome wasn't built in a day. He still don't have a tower as he did in Annapolis. So far John is really enjoying retirement in Wild and Wonderful West Virginia!

NW Business: W3LL - NW again recommends the addition of the Makrothen RTTY contest to the list of 5M contests. This WW contest has club competition. From Jim WX3B: We (PVRC Officers) agreed that there is a process in place for "voting in" new contests - someone (you) makes a suggestion, and providing it has club competition (it does) and/or PVRC support - we add it! The Makrothen RTTY contest will be our first proposed addition this year. PVRC Officers and Trustees will be polled for support and a majority in favor will cause the contest to be added. This decision is expected next week.

NW again recommends that any individual who works a 5M contest from home shall receive his percentage of those weighted 5M points and shall also receive his weighted 5M point contribution to PVRC's aggregate score from all subsequent locations. The proposal was brought to a vote and passed unanimously at the October NW Region meeting. From Jim WX3B: We (officers) will vote on a contest by contest basis, per club interest, to extend award points for operating from Multiple locations, and it will extend, most likely, to single-operators at Multiple locations only. For example, i.e. the Sweepstakes "Highly Motivated Operator" technique.

NW Region strongly recommends PVRC sponsor a plaque in the 2006 June VHF QSO Party in memory of W3IY. K3DNE and W3ZZ will be involved in the process of securing this plaque

John, N4MM passed around a 1972 edition of John's PVRC notebook. Included were the original rules for the 5M award. Included were the first award winners which included Frank Donovan, Fred Laun, Jack Reickert, Eric Scace and Lew Gordon among others. Jack, K4VV informed us that Jim WX3B and the other officers of PVRC are getting together later this week and are interested in input and feedback, including recommendations from members, on what the priorities should be and what the officer team should focus on for the next year. Input can be made via email to Jim.

Regarding PVRC at Dayton, feedback from Tim Duffy is that we plan for next year rather than this year to host

the Contest Seminar. More time is needed to resolve the logistics. This raises the question of doing a local PVRC version this year in the spring or summer.

K4MM, Ty provided some background on the KP5 DXpedition. The work there was for Customs who obtained permission from Wildlife for FCC approved communications. A lot of jamming occurred which was one of the reasons for the broad listening spread.

From Around the Table: K4NNK, Gary's first meeting. He's been licensed since 1961. Gary's home is in Atlanta but has been in Maryland for three years. He maintains a home in Atlanta and an apartment in Gaithersburg for the company he's started. He's not an electronics guy. It was the boy scouts which exposed Gary to ham radio. By affiliating with PVRC Gary hopes to expand on his contesting abilities. During Gary's recent visit to New Zealand he had the opportunity to operate at ZL6QH. The station exhibited zero noise and static levels with loud and clear signals at this level for the better part of the day. There are no telephones at the station and electrical power is buried one mile away. The antenna used during his stay was a V beam with 1,000 feet per leg 70 feet up. One leg pointed at the northern US and the other at the southern US. He worked K4TD in Alabama with 0.5W on 21.248 MHz.

N3HBX, John came in second in the CQWW 20M Phone contest. In the ARRL 10M Phone contest he was fourth. NE3H, Joe made 400 Q's in the 10M contest. Joe received his Orion II last month and expounded on a litany of issues he had with the radio. It quit transmitting until rebooted. Needed rebooting five times in RTTY RU. No audio from rtty jack, had to rig cables to get audio from headset jack to mic jack to get back on the air. Ten Tec said it's a known problem that running the sweep caused the no transmit issue but failed to inform Joe of this problem. The audio problem appears to be an intermittent software glitch. Joe made 900 Q's in the Roundup but was disappointed since he made 600 of them early in the contest before the Orion started to hiccup. Joe downloaded new software and got on the NAQP using binaural audio receive - but binaural didn't work. Turning on and off a few times then resulted in no audio from the main receiver or a high pitched squeal. Ten Tec's said this was another known but not communicated problem resolved with a RAM reset followed by a master reset. This second set of issues resulted in only 420 Q's in the NAQP. In RTTY the sub receiver needs to be set with a 2200 HZ offset but not in the main receiver. Joe maintains that Ten Tec has great service because they have to. A quirky radio with some of the finest receiving gear. The noise blanker is second to none.

K3WC, Dusty will be calling Ten Tec tomorrow morning canceling his order for the Orion II. Dusty had 374 Q's in CQWW CW. In Tara RTTY he had 185 Q's and 399 Q's in RTTY RU. In CQWW SSB he had 513 Q's. Dusty worked Palmyra Island RTTY for country number 339. (Applause) Writelog is now working on CW and the tower is still on the ground. K4FTO, Art doesn't get a lot of points in one contest. He got 1559 Q's in 16 contests last year. He got on 80M and 160M for the first time in 35 years using a 40M dipole with the coax shorted at the tuner with SWR at 9:1. Art plans to try an 80M loading coil on his 14AQV Hygain vertical. K4VV, Jack enjoyed his years in the officer team but is already enjoying the lack of deadlines. He's really upbeat about the great leadership team now in place. Sharon, daughter, and son-in-law with two children accompanied Jack to Australia right after our Holiday Dinner. During the three weeks they went to Melbourne, Adelaide, Great Barrier Reef, Sydney and home. The people there are just wonderful. Jack knew a lot of Aussies from Viet Nam in '65 -'66 and they haven't changed at all. Jack missed an opportunity to visit with Ian who has stacked rhombics, a three stack of 4 element 20M quads on a 200 foot tower. The logistics of the visit didn't work out.

Norm's team N3NRS got the four towers up prior to the Holiday Dinner. Antennas won't be installed until fully approved by the county and to let the neighbors digest the view. Jack made a few contacts in the 10M contest and is happy to report he didn't have to reboot his FT1000D. Jack will be at W3SO for the ARRL VHF contest. N4MM, John notes that there are two candidates running for Virginia section manager. It's the first time in many years that two candidates are running. John encourages all Virginians to read the bios and vote for the one who will do the best job. The ARRL Board meeting is starting this week. There will be a new League president since Mr. Haynie is retiring. Joel Harrison will be running for the job and maybe Dick Isley and Frank Fallon. John made about 100 Q's single band in the Canadian Winter contest.

K8OQL, Jerry worked Roy W3TEF and Bob W3BTX who are operating from Aruba as P4/W3TEF. W2YE, Dick says the Icom Pro III won the debate over the Orion and maybe the \$1,000 savings wasn't such a bad idea. Dick made 600+ Q's in the RTTY RU using N1MM with MMTTY for the first time. He observed that the Pro III built in RTTY decoder worked better than MMTTY. Dick was also in the 160M and 10M contests and plans to be on both the VHF and 160M contests. N3VOP, Mike was in the RTTY RU but not without computer problems. He couldn't get his USB to serial converter to work with the Rigblaster on the new Dell computer. He was able to key using the laptop and log on the Dell. He was happy with the 18 Q's and many mults. He and Clint will be in the VHF contest this weekend doing a 6 grid rover starting from FN10 east of Lancaster then to FN20, FM29, FM28, FM18, FM19 and home. They will have 6M, 2M 220 MHz, 440 MHz and 1200 MHz. Mike reminds us of the Odenton hamfest at the Odenton fire hall on 29 Jan. W3RAR, Bob has a 3 el 6m beam which will be replaced with a 7 element. He planed to be in the VHF contest this weekend.

N3II, Dave missed the fall contest season. He was in the hospital for surgery on 29 October and has since been recovering. The RTTY RU was Dave's first contest of this season. He made about 400Q's at his average pace of 30/hr. Dave also plans to be in the VHF contest this weekend. K3MM, Ty made about 1100 Q's in 12 hours with a high of 123 Q's/hr in the RTTY RU. Ty will be at N3HBX for the RTTY WPX contest. In NAQP CW he had 885 Q's with 239 mults and 211K points for claimed 12th place. The tailwister for the top beam was lost late in the contest and the 40M beam has been dead for a while.

W3BDE, Les after listening to the Orion horror story, will probably get on with very old equipment. The other alternative is to apprentice to Dick, WN3R who is setting up a MonstIR station in the Frederick mountains. N3UM, Ben was out of town for the ARRL 160M contest. He worked CW in the 10M contest, was in SS CW, SS SSB and in CQWW CW. Ben has been trying to improve his 80M and 160M antenna situation. He lengthened the 40M dipole to 80M and was shocked at how much better a 50' high dipole was in SS on 80M. In 2004 he had 150 Q's on 80M in SS SSB and 380 Q's this year. In 2004 CQWW on 80M he had 89 Q's with 41 countries and this year 159 Q's and 54 Countries. These results indicate the dipole is performing better than the 80M vertical with one elevated radial. On 160M he got his top loading wire 50 feet high and 40' long with the help of sling shots and saws. It's comprised of 50 feet of 300 ohm twin lead for a linear loaded vertical with a few elevated radials. He also plans to put a radial shield on the ground to reduce ground losses. This replaces the 160M inverted L with one elevated radial.

WN3R, Dick's house is still not ready. Ground was broken on March 7th. Anticipated completion date was September. Completion is now estimated for February or March. The tower is up, inspected and approved. Don, K4ZA will be doing the antenna and cable work. Tomorrow the trench will be inspected to insure all grounds are connected. N3CA, Michael worked the 10M contest at N3OC multi-single and is in a claimed 3rd place for multiop. He will be doing NAQP SSB from John's new Poolesville station N3HBX. He's formed two teams of young hams for this contest. (Applause)

W3LJ, Bruce is waiting for his Orion II and hopes all problems will be corrected by the time it arrives. W3IDT, Bob sends regrets from Miriam KA3UBJ who could not make the meeting. Both Bob and Miriam were in the 10M contest from home. It was mainly an exercise to get N1MM, wav files, radio and computer all talking to one another. It's amazing that when Miriam calls a DX station they come back to her and when Bob calls they call CQ again. Bob may be in the VHF contest if he can get one of his little beams up.

K3ZO, Fred was in CQWW from Thailand. He was amazed at how well the rotary dipole worked at that station. The Chinese now have an over the horizon radar on the air to track the next US plane that crash lands on their territory. The radar signal drops right out off the end of the rotary dipole. The Thailand trip is documented in the PVRC newsletter. As of the first of the year, Fred took over the 3rd call area QSL bureau for the NCDXA. Fred hand delivered to attending members their incoming cards. Dick, W2YE has been a great help because he's been running the W4 call area QSL bureau for the past 12 years.

W3ZZ, Gene says the Grid Pirates were going to do a small limited multi at Jim Algren's place to determine if

they liked Writelog. However, 6M was not working and discovered the 6M beam was assembled with the T arms up making it susceptible to turkey buzzard destruction. This Thursday the winds got hold of the 40M beam which turned the driven element vertically destroying the 432 MHz antenna. So with that plan abandoned, Gene plans to do a small lower power rover with Terry in the VHF contest this weekend. They will be using Roverlog, an untried software. If it doesn't work they'll come back with zero points but will have some fun.

WD3A, Tom had a good time working CQWW CW at W8ZA in a multi-2 operation. W8ZA Bob operated the CQWW CW in Multi-2 along with Jeff N8II, Jerry K8OQL and Tom WD3A. They managed over 2K Q's and 3M+ points. Bob had 1/2 inch radial ice on the antennas during the KP5 DXpedition. The RF from his calling did not melt the ice. Bob is always looking for cw operators. Anyone who wants to work the ARRL DX CW contest from Bobs station should contact him.

W3LL, Bud made up for not having a KP5 by working them on four bands. Bud was in the following contests, all SSB/RTTY LP (except for the 10M contest): SS 629 Q's 80 Sect, 100K+ points; Tara RTTY Melee 129 Q's 54 Mults 7K points; ARRL 10M 282 Q's 79 Mults 45K points; OK WW RTTY 179 Q's 300K points; ARRL RU 596 Q's 66K points. Thanks to the NCDXA for the nice membership certificate. We decisively won our tower hearing case. However, the other side chose to appeal so will be back at it in late spring/early summer. The meeting was adjourned at 8:30 PM

5M Award Scores
Compiled by Anthony Brooks, WM3T

CQWW CW

Call	Class/Status	Band	QSO's	Mults	Mults	Score
W3LPL	MM		6248	176	703	14,987,829
NY4A	M2		4656	155	553	9,250,728
W3PP	MM		3237	145	529	6,130,030
4XOG	MS		3609	107	353	4,727,880
K4ZW	SOHP		2827	129	454	4,684,405
WA4PGM	DX OP @ PJ2T					3,805,245
N2YO	SOHP W3BP HOST		2641	121	371	3,650,640
ND3F	DX OP C6AQQ		3495	101	309	3,270,570
W8ZA	M2					3,056,641
K3SV	SOA		1609	107	402	2,335,292
K3ZO	DX OP HS0ZAR		2305	116	312	2,213,616
W4RX	SOHP		1555	121	376	2,171,890
W4MYA	SOA		1200	121	463	1,948,224
N3AM	SOA		1465	97	330	1,797,670
K3DI	M2		1234	114	396	1,740,120
N4RV	SOA		1077	120	415	1,588,950

N3UM	SOHP		1260	82	281	1,305,348
N4YDU	SOLP		1015	95	331	1,165,110
K2YWE	SOLP OP OF K3AU		1004	92	306	1,080,968
K4MA	SOA		790	115	372	1,059,225
WX3B	M2		719	105	341	897,352
K3WA	SOA		801	88	299	884,295
N4MM	SOHP		736	102	322	870,048
W4RQ	SOHP		767	97	308	864,270
W8HC	SOA		741	89	299	794,624
W9GE	SOA		625	337	92	762,762
K3KO	SOA		600	342	91	726,574
K2PLF	DX OP TI5A		2255	33	100	697,186
N3UA	SOA		564	92	310	667,020
W0UCE	SOHP		600	84	296	639,540
N4VA	SOA		612	85	262	573,591
K2UOP	SOHP		581	89	267	572,804
W4YE	SOLP		626	82	248	561,000
N4BAA	SOA					529,944
K1KO	SOA		543	78	257	501,830
K7CMZ	SOLP		551	78	237	464,625
N3ST	SOHP		530	69	204	406,497
WK4Y	SOA	20	747	37	133	357,000
K4FPF	SOLP		470	66	202	354,564
K1SE	SOLP		401	64	202	284,354
K3TM	SOLP		360	63	184	251,940
N4MO	SOLP	20	573	34	114	243,164
NE3H	SOA		334	62	197	241,388
WA8WV	SOQRP		360	62	183	239,365
N4PD	SOHP		342	53	172	207,000
W3HVQ	SOHP		337	60	164	205,184
W3YY	SOA					201,144
W3DF	SOHP		291	69	180	199,200
KI3O	SOLP		311	62	175	197,895
W2YE	SOHP		282	63	158	172,601
N3CW	SOHP		263	55	169	162,176
N4TL	SOHP		276	54	149	153,468
K3WC	SOA	20	374	32	112	152,640
W6AAN	SOA		222	64	153	144,522
K3TW	SOQRP	20	380	28	100	136,448
N4NW	SOHP	40	302	33	121	130,900
K4QPL	SOA	20	314	30	105	121,635
K3CB	SOLP		222	135	51	113,088
WF3J	SOHP	40	311	29	99	110,592
W4ZYT	SOHP	20	265	26	90	87,232
WR3L	SOLP	15	255	23	93	83,056
W4EI	SOHP		195	44	104	76,960
K4GMH	SOA		188	40	100	73,360
K3STX	SOLP		163	46	117	70,253
K4CZ	SOA		181	39	101	63,840
W4ZV	SOA	160	260	21	80	63,024
W4EE	SOA		160	45	97	57,936
NN3W	SOA		151	104	46	57,000
K1EFI	SOLP	20	205	20	78	56,938
W3LJ	MS		139	42	90	47,916
N8II	SOHP		159	20	78	42,532
NX9T	SOA		115	41	87	39,808
AJ1M	SOA		101	43	76	30,226
N4TX	SOHP		116	25	62	24,273
N4JED	SOLP		84	57	31	18,392
K4FTO	SOLP		90	32	53	17,595
AE4EC	SOLP		72	29	54	15,272
WM3O	SOHP		37	21	30	4,335
K3OQ	SOQRP		33	14	30	3,696
W4DR	SOA		28	16	26	3,276
N4GU	SOLP		30	9	25	2,958
N3CA	SOA		22	12	16	1,344

Total Logs: 83 Total Club Score: 88,763,769
 2004Results:

	Logs	Score
CW	65	97,042,082

SSB 81 115,370,756
 Total 146 212,412,838

MultiOp Operators

W3LPL W3LPL, K1HTV, NI1N, ND3A, K3EST, N3KM, AI3M,
 K3MM, N3OC, K3RA, K3RV, WR3Z, KD4D
 W8ZA W8ZA, K8OQL, N8II, WD3A
 K3DI 4EE K3DI
 WX3B WX3B, ND3D
 W3LJ W3LJ, K3NCO
 W3PP W3PP N6ZO NW3Y N3HUV AJ3G KW3Z
 NY4A N4AF, K2AV, N4CW
 4X0G W3GG, WD3I

ARRL Call	10M Class	Mode	QSO's	Mults	Score
N8II	SOHP	Mixed	1677	167	797,592
N3OC	M1	Mixed	1359	167	657,312
W4MYA	M1	Mixed	1198	170	617,440
K4FJ	M1	Mixed	1036	154	494,648
N4RV	M1	Mixed	1079	146	480,340
K3DI	M1		1068	146	474,208
K3VOA	K4ZW op	Mixed	900	140	359,800
AJ3G	M1	Mixed	816	135	305,370
N4CW	M1	Mixed	515	135	225,990
W3BP	SOHP	CW	760	74	224,690
K3KO	M1		500	116	192,096
N3HBX	SOHP	SSB	1067	87	185,658
W6AAN	SOHP		488	125	170,750
N4BAA	M1	Mixed	512	78	160,368
NX9T	SOHP	Mixed	555	106	160,060
W4YE	SOHP	Mixed	405	115	156,860
N4VA	M1	Mixed	507	104	156,832
WX3B	M1	Mixed	614	104	156,416
N3UM	SOHP	CW	581	66	153,384
K7SV	SOLP	CW	502	74	148,888
KA1ARB	SOHP	Mixed	445	97	127,652
W4NF	M1	Mixed	480	106	124,444
K2UOP	SOHP	Mixed	405	95	121,220
W3LL	SOHP	SSB	714	80	114,240
N4NW	SOLP	Mixed	327	111	107,226
KI3O	SOLP	Mixed	362	97	100,104
K3JTM1			326	65	85,020
N4MM	SOHP	SSB	542	77	83,468
NS3T	SOLP	CW	318	63	80,136
W4RM	SOHP	Mixed	352	75	75,600
W4AU	SOHP	CW	300	63	75,348
W3PP	SOA				74,636
N6ZO	SOLP				74,328
WA8WV	SOLP	Mixed	268	58	72,576
WR3L	M1		254	66	67,320
W2YE	SOLP		230	84	61,152
W3CB	SOLP	CW	305	50	61,000
NE3H	SOLP	CW	290	52	60,320
4U1WB	M1		335	62	59,892
K4GMH	SOLP	CW	277	53	58,936
KZ1A	SOLP	Mixed	212	89	52,866
K4EU	SOLP	CW	258	49	50,568
NW4V	SOLP	Mixed	203	73	49,932
N4JED	SOLP		195	78	44,772
W3ADC	SOLP		376	58	43,616
K3OQ	M1 @ W3RFC				30,008
K1KO	M1	Mixed	152	48	29,184
W3ARS	SOLP	SSB	284	49	27,832
AD4L	SOHP	Mixed	202	57	27,246
K8OQL	SOHP	CW	164	41	26,896
K1SE	SOLP		136	48	26,112
K3STX	SOLP	CW	154	42	25,872
W3DQ	SOLP	Mixed	147	39	25,272
N3YIM	M1		196	60	23,280

N4PD	SOLP		129	53	22,896
W4EE	M1	Mixed	149	48	22,368
K3NCO	SOLP	Mixed	119	47	19,458
WA4PGM	SOQRP	Mixed	102	56	19,152
AA4KD	SOLP		127	38	18,012
K4FTO	SOLP	Mixed	109	46	16,652
N3AM	SOHP	CW	125	31	15,500
K4GM	SOLP	Mixed	107	39	15,288
N3FNE	SOLP	SSB	156	47	14,664
NORU	SOLP	Mixed	90		14,592
W3DAD	SOLP	CW	104	33	13,728
WK4Y	SOHP		96	46	13,064
W4RIM	SOLP	CW	102	28	11,424
K2PLF	SOHP	Mixed	84	40	10,480
N4ZR	SOHP	Mixed	82	34	10,336
W3GG	SOHP	CW	72	31	8,928
W2CDO	M1	CW	81	27	8,748
N3XL	SOLP	CW	74	29	8,584
NN3W	SOLP	Mixed	68	42	8,320
W4HJ	SOHP	CW	67	30	8,040
N3VOP	SOLP	SSB	91	41	7,462
WB2ZAB	SOHP	SSB	79	43	6,794
W2GG	SOLP	Mixed	70	34	6,634
W2BZR	SOHP	SSB	186	35	6,510
K3ASK	SOLP	Mixed	100	25	6,048
K3WA	M1	Mixed	58	29	5,684
W3IDT	SOLP		100	22	4,400
K3SWZ	SOLP	CW	50	22	4,400
K4CZ	SOLP	Mixed	70	30	4,260
K2PT	SOLP	SSB	63	28	3,528
KA3UBJ	SOLP		58	27	3,078
K3QX	SOHP		60	24	2,880
K4MIL	SOLP	SSB	41	23	1,886
WA3G	SOHP	SSB	44	21	1,848
AJ1M	SOHP	SSB	37	18	1,332
K4VV	SOHP		25	13	1,176
KC4ATU	SOQRP	SSB	22	18	792
N6WHB	SOLP	SSB	19	13	494

Total Logs: 93 Total Club Score: 8,876,352
 2004 Results: 81 logs, 7,002,838

MultiOp Operators

(Multis not listed below with operators were SO Assisted.)

K3OQ K3OQ, W3RFC, WA3OFF
 K4FJ K4FJ, K3KG
 4U1WB AJ3M, VK4VB
 W4MYA W4MYA
 N3OC WR3Z, N3CA, N3OC
 N4CW N4CW, WA2JFK
 K3DI WM3O K3DI

ARRL 160

Call	Class	Status	QSO's	Mults	Mults	Score
W4MYA	SOHP		1365	108		322,056
W0UCE	M1		1170	105		260,190
N4XD	SOHP		867	99		185,328
N4AF	SOHP		860	97		180,226
K3DI	M1		869	16	76	164,864
N4RV	M1		803	94		158,578
K3MM	M1		685	94		134,984
WK4Y	SOHP		802	81		131,625
N6ZO	M1		653	93		129,812
K3KO	M1		703	87		125,193
WA8WV	SOHP		749	76		114,000
NI1N	M1		600	88		109,560
N4BAA	M1		529	94		107,630
K7SV	SOLP		613	81		101,493

N8II	SOLP	570	83		96,104	W4NF	M1	207	49	21,012
W3BP	SOHP	AS KM4M	619	71	91,945	W3DAD	SOHP	203	49	20,188
K8OQL	SOHP		601	74	90,502	K1KO	M1	153	54	17,334
W3UR	SOHP		488	79	85,873	N4VA	M1	171	49	16,146
N3ST	SOLP		633	66	84,348	N0RU	M1	143	50	14,432
WF3J	SOHP		505	75	77,550	NN3W	SOLP	164	41	13,902
K4ZW	SOLP		463	80	76,480	W4DR	M1	80	54	10,422
K3SWZ	SOLP		447	76	69,312	W3DQ	SOHP	95	50	10,100
WX3B	SOHP		431	77	68,684	K2PLF	SOLP	120	43	10,080
K7CMZ	SOLP		504	65	66,300	N4TL	M1	115	39	9,087
K3SV	M1		432	72	64,368	W4HJ	SOLP	109	40	8,840
N3AM	SOHP		443	66	59,466	AE4EC	SOLP	100	39	7,917
K3WA	M1		400	71	59,143	W4JVN	M1	70	38	6,004
W4YE	SOLP		420	66	56,034	K4QPL	M1	84	31	5,394
N3HUV	SOHP		473	58	55,216	W3BW	SOLP	54	33	4,059
N4YDU	SOLP		410	60	49,442	K4FTO	SOLP	71	26	3,692
K4EU	SOLP		392	61	48,739	N3XL	SOLP	64	27	3,456
W9GE	SOHP		284	73	44,092	K3CB	SOLP	35	21	1,533
W2YE	SOHP		309	58	41,535	W4KAZ	SOLP	38	20	1,520
K2UOP	SOHP		276	71	41,322	K3STX	SOLP	35	15	910
AJ1M	M1		359	53	38,372	AJ3M	M1 OP 4U1WB	15	7	210
N4MM	SOHP		248	72	37,224	N4JED	SOLP	3	2	6
K1SE	SOLP		330	53	35,298					
K4MA	SOHP		330	51	33,966					
WB4MSG	SOLP			277	68	32,480				
W4AU	SOHP		317	50	31,850					
W6AAN	SOHP		223	69	31,809					
W3HVQ	SOHP		255	61	31,659					
NX9T	SOHP		241	66	30,134					
N4ZR	SOLP		200	63	26,145					
K3JT	SOLP		210	53	22,419					

Total Logs: 66 Total Club Score: 4,051,222
2004 Results: Total 46 logs 3,290,526

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PVRC REFERENCE PAGE Please send corrections to the editor. January 2006

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PVRC Dues PVRC has no annual dues. Donations are gratefully accepted by the Treasurer, Dave Baugher WR3L, 615 Rockaway Beach Ave., Baltimore MD 21221. Please make your checks payable to PVRC.

Autocall Column Editor is K3DI 410-757-6706

PVDXSN Packet Network

W3LPL	Glenwood MD	145.590, 441.250	w3lpl.net	W3IP	Crownsville MD	145.570	
WR3L	Baltimore MD	145.610, 440.950	wr3l.net	N3RR	Rockville MD	145.510, 441.325	
K3SKE	Frederick MD	144.930, 441.125	12.173.48.67 port 23	W3YOZ	West River MD	144.910	
W3TOM	Acokeek MD	145.770		N1WR	Lusby MD	145.690	
N4OHE	Mt. Weather VA	145.710, 446.025		NE3H*	Harrisburg PA	144.970	
W3BD	S. Mountain PA	145.630		N4SR*	Woodbridge VA	145.630	
W4XP	Bull Run Mtn. VA	144.990		K3NC*	Fredericksburg, VA	144.930	dxc.k3nc.net
				W4ML	Goochland, VA	145.09	dxc.w4ml.net

Most of the system is sponsored by the Potomac Valley DX Spotting Network. Nodes with * are independently funded by each SYSOP., The W4ML node is funded by CVCC.

PVRC Meetings

ANNAPOLIS: Dick Wilder, K3DI 410-757-6706

BWI: Weekly breakfast Wed at 7:00 AM at Basil's Deli Port on Elkridge Landing Rd 1/4 mile South of Winterson Road 410-850-4333. Director: Ike Lawton, W3IKE, 410-263-2830. Sec: Howard Leake, W6AXX, 410-465-7008, w6axx1@starpower.net

CENTRAL VA: Pres: Ed Moore - NW4V - nw4v@comcast.net, Secy: Marie Long - K4KML - long2624@netzero.net, Treas: Robert (Bob) Ladd - NK4H - rladd@comcast.net. Meetings are held on the second Tuesday of the month at 7:00 PM at the Henrico Doctor's Hospital, 7700 Paraham Rd., Richmond, VA. To the right of the main entrance is a second entrance. Go through that door, turn left through that door and the cafeteria is the first room on the right. Talk-in available on 145.430

CENTRAL: The Central Meeting is always the second Monday of the month at 6:30 PM (except June, July, and August). The central meeting generally alternates between MD and VA locations. Informal dinner about 6pm; meeting follows at 7pm; Unless announced otherwise, the Virginia meeting is at Anita's Restaurant, 521 E. Main Street, Vienna; the Maryland meeting is at Topolino's Restaurant, 6320 Old Branch Avenue in Temple Hills.

DOWNTOWN LUNCH GROUP (Eric Rosenberg, W3DQ [W3DQ@arrl.net]) Meetings are held monthly at Reeve's Resturant & Bakery, 1306 G Street NW. The closest Metro stop is METRO CENTER (Red, Blue and Orange lines).

EASTERN-SHORE (DEL-MAR-VA): Dallas Carter, W3PP 302-875-0550 ludal@dmv.com

LAUREL: Bill Smith, N3XL (n3xl@arrl.net) 301-935-4873 Laurel Region meets concurrently with the Laurel Amateur Radio Club at the first LARC meeting of each quarter.

NORTH CAROLINA -- EAST: Chair: Jim Jordan, K4QPL, k4qpl@nc.rr.com; Sec: Jeff Keller, NX9T, nx9t@aol.com. PVRC/NC meets at 6 pm the first Thursday of each month, plus an additional meeting in April at the Raleigh Hamfest. For details see <http://pvrcnc.org>

NORTH CAROLINA -- WEST (TRIAD): Meets the 4th Monday of the month at 7:00 PM at Cobalt's Elemental Eats and Drinks on Deacon Blvd. in Winston Salem. Ragchew at 6:30. Directions are available upon request. The chairman for the new PVRC/NC West chapter is Henry Heidtmann W2DZO, henry@summitschool.com and the secretary is Robert Whitaker KG4NEP, kg4nep@yahoo.com.

NORTHEAST: WR3L Dave Baugher 410-DX1-WR3L dave@wr3l.net

NORTHWEST: Chair: Bud Governale, W3LL, 410-666-9189. W3LL@arrl.net. Meets monthly the 3rd Tuesday. Informal dinner about 6pm; meeting at 7pm at the City Buffet, 1306 W Partick St, Frederick, MD 301-360-9666. Rear of shopping center, behind Mountain View Diner.

OCOQUAN: Jack O'Mara W4NF, H:703-791-3302 W:703-739-7636 w4nf@comcast.net and Cliff Deel W4CE, w4ce@aol.com 703-491-0841

OVER-THE-HILL LUNCH BUNCH (VA DC MD): Meetings are held monthly at two locations: Falls Church, VA (Parkview Marriot) and Beltsville, MD. Meetings are announced by E-mail. All members, their guests and non-members interested in membership are welcome. For information contact Roger Stephens K5VRX, rogerergo@netzero.net, 703-658-3991 for the VA meetings; or, Bill Leavitt W3AZ, 301-292-5797 for MD meetings.

PENNSYLVANIA: Steve Cutshall, K3TZV, k3tzv@paonline.com, 717-763-0462.

RAPPAHANNOCK: Steve Bookout, NR4M, nr4m@nr4m.com. Also, Larry Schimelpfenig, K7SV, k7sv@adelphia.net

SHENANDOAH: Bill Hinkle KV3R kb3aug@juno.com 304-567-3138

CARROLL COUNTY: Jim Nitzberg, WX3B.410-374-9233 nitz@selectsa.com

SOUTHERN MD: Chair: Wayne Rogers N1WR E-Mail: n1wr@chesapeake.net Phone: (H) (410) 394-0313 Meetings held at the home of N1WR.

SOUTHWEST VA: Coordinator: David Jones, N4JED, Vinton, VA 540-890-2034, N4JED@AOL.COM. Meetings begin at 6 pm at the Roanoker Restaurant, Roanoke, Virginia in a private room (ask at the desk if you have not joined us before).

TIDEWATER COLONY OF PVRC: This group now meets at the Golden Corral in the Pembroke section of Virginia Beach in conjunction with the VADXCC meeting. The restaurant is where the DX club members meet on Saturday mornings. The restaurant is on Independence Blvd. a block south of Interstate 264. The meeting is still the third Tuesday of every month. We gather for dinner around 1815-1830, with the meeting around 1915-1930. Contact W4ZYT at 757-457- 5181 or w4zyt@exis.net for additional info.

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