



# Potomac Valley Radio Club Newsletter

November 2004

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and [www.pvrcnc.org](http://www.pvrcnc.org)

## **PVRC Welcomes Bill McCourt, WF1L to the Northwest Chapter**

**PVRC regrets to report the passing in October of our friend and valued club member Chuck Reville, K3FT. Our sympathy goes out to his family and friends.**

**ARRL Sweepstakes Contest, CW 2100Z, Nov 6 to 0300Z, Nov 8**  
**WAE DX Contest, RTTY 0000Z, Nov 13 to 2359Z, Nov 14**  
**ARRL Sweepstakes Contest, SSB 2100Z, Nov 20 to 0300Z, Nov 22**  
**CQ Worldwide DX Contest, CW 0000Z, Nov 27 to 2400Z, Nov 28**

### **From the President** **By Jack Hammett, K4VV**

November is the month for PVRC elections. Please vote in your November meeting, or in whatever manner your Regional leader collects the votes. Nominations closed on October 15. The slate of nominees confirmed by the Nominating Committee (N4AF, W4ZYT, N4ZR, W4MYA, WR3L, and N3OC) are the following: 1) President--Jack, K4VV, 2) Vice Presidents--Jim, WX3B and Eric, W3DQ, 3) Secretary--Anthony, WM3T, 4) Treasurer--Dave, WR3L, and Trustees Brian, N3OC and Guy, K2AV. Trustees from 2004 who are standing for election again are Rich KE3Q, John K4IQ, Howie N4AF, Tyler K3MM, Dallas W3PP, Don W4ZYT, Pete N4ZR, Bob W4MYA, Rob ND3A, and Brian N1KC.

We had a super meeting in the Central Region to kick off the contest season in October, with 30 members and three guests attending. Bob Cox, K3EST, Fred Laun, K3ZO, and Bill O'Mara, W4RM were speakers. One guest, Bill McCourt-WF1L, is now a member. The meeting was very productive and drew an interesting audience.

As a Trustee next year, Brian N3OC will focus on leadership for contesting training in PVRC. Recently, Mike W0YR sent me a short write-up describing his ideas for a Contesting College approach, a one day session with experienced leaders for various topics for young candidates for contesting and members who want to sharpen their skills. The objective is to train, improve, and inspire operators. Brian and I have discussed this approach and believe it is feasible to achieve soon, maybe early in 2005 if talented faculty and support volunteers step forward. A Saturday session in Fredericksburg, VA, perhaps in the Holiday Inn Conference Room is one thought. Another approach is to link up with an event such as the FrostFest in Richmond. An effort such as this is central to our contesting objectives, and may be supported in part with PVRC Treasury. Mike's suggestion fits with one from Bob KI3O that we get tables at FrostFest with PVRC presence and leadership to promote contesting and provide an introduction to contesting program to interest young and new potential testers. See the article on this subject in the recent NCJ. We might do both a short Introduction to contesting session and a comprehensive program on how to do it that would both instruct and inspire. If you are interested in

helping with such an effort, please let contact Brian and me.

See my comments in the Northwest meeting minutes for further information on the officer slate and the dialogue about the potential of a Contesting College.

Mark your calendar for the PVRC Holiday Dinner on Monday, December 13 in Northern Virginia. Our focus will be Guest Speaker Bob Cox, K3EST, and the annual presentation of awards. The location is to be determined, perhaps an Olive Garden.

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## **PVRC Event Calendar**

**Note: All dates are Zulu. Boldface denotes contests that count toward the PVRC 5 Million Award**

**ARRL Sweepstakes Contest, CW 2100Z, Nov 6 to 0300Z, Nov 8**

**WAE DX Contest, RTTY 0000Z, Nov 13 to 2359Z, Nov 14**

**ARRL Sweepstakes Contest, SSB 2100Z, Nov 20 to 0300Z, Nov 22**

**CQ Worldwide DX Contest, CW 0000Z, Nov 27 to 2400Z, Nov 28**

**ARRL 160-Meter Contest 2200Z, Dec 3 to 1600Z, Dec 5**

**ARRL 10-Meter Contest 0000Z, Dec 11 to 2400Z, Dec 12**

PVRC Holiday Dinner. Dec 13, Northern Virginia (time and place TBD)

For schedule changes, rules and other info, go to <<http://www.hornucopia.com/contestcal/contestcal.html>>

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## **The Toolbox**

**By Don Daso, K4ZA**

Hams don't use lubricants often, but when they do, questions often arise. "Should I oil this bearing, or not?" "What's the difference between greasing or oiling?" "Can't I use one lubricant for everything?" Herewith, a few words on lubricants. (Along with a suggestion: Don't type that word into GOOGLE and expect to read more on what I'm about to discuss! On the Internet, the word has a wider interpretation, along with vastly different applications.)

When folks ask about one lubricant for everything, I always indicate that it's possible, but only for a finite amount of time, with varying results. Selecting lubricants means you must understand something about the properties of bearings, so let's begin there. Lubricants are designed to minimize friction at the points of contact in bearings; protect the polished surface in the bearing from becoming corroded; to dissipate heat; and to remove or prevent foreign particles from getting into the bearing.

There are two basic types of lubricants—oils and greases. Each has advantages and limitations. Being liquid, oil can lubricate all surfaces and dissipate heat more readily. It retains its characteristics over a broad range of temperatures—making it ideal for high speed and high temperature jobs. Oil levels can usually be carefully controlled and monitored. Being thicker, grease can seal a bearing better than oil, simplifying seal design. It can easily be confined inside a bearing, allowing you to "pre-lube" fittings, for instance, as it "clings" to surfaces better than oil. As such, it lasts longer than oil.

Since hams are more likely to use grease, let's look at it more closely. Grease is made up of three elements—a base oil, thickeners, and additives. About 95% of grease is oil, either mineral, synthetic or biodegradable. Thickeners are what give grease its density—its ability to stay in place, but also play a role in lubrication. The thickener allows the oil to "come out," as it's needed. Common thickeners include lithium, which is the most commonly used. Lithium is popular because it's very water resistant and holds up well over a broad temperature range. Aluminum complex greases are also common, because of their thixotropic properties, meaning they thin out under load, and harden when not being worked. They also pump readily, making them popular for hand use. Lubriplate is a typical example. Polyurea and calcium thickeners are used in hydraulic and for corro-

sion resistant protection, respectively.

Additives help meet specific problems in lubrication. Molybdenum disulfide (simply called moly) is the most common, used in extreme pressure applications. Graphite and zinc are also common. Tackifiers make grease sticky, meaning the grease will stay in place. Rust-inhibitors do exactly that.

Compatibility can be an issue in using lubricants, as not all greases agree with one another. Polyurea-thickened greases are incompatible with lithium or aluminum-thickened greases, for example. Some synthetic oils do not mix well with mineral oil. These are usually not critical issues, but something you should be aware of, meaning if you see your grease getting harder, or softer, than you expect it to be, you may have a compatibility issue. Simply putting enough of the new, different grease into the bearing, effectively flushing out the old, is usually the solution.

Even the best grease or lubricant won't do you any good if it's incorrectly applied. Some applications require more grease than others. You can over-grease anti-friction bearings, causing them to run hot. And extreme environments require your attention—any water or dirt in or on bearing surfaces can destroy the effectiveness of all your efforts.

Tower bearings are always a hot topic: should I grease my thrust bearing or not? The typical Rohn bearing is designed to run dry. The speed is so slow that not heat will be generated. However, let's consider some basic physics. When a ball in such a bearing is motionless, the load is distributed symmetrically on the ball and the race. When a tangential load is applied, causing the ball to roll, the material in the race will "bulge" in front of the ball, while "flattening out" behind it. Since not enough heat is generated from sliding friction in a typical thrust bearing, metal pickup or welding, does not occur. But, the race can show evidence of wear—since it's a softer metal than the ball bearings, it will deform first, often to the point of seizure. Lubrication will not solve that problem. Nor will it hurt.

What lubricants are in my toolbox? *Penetrox*—for dissimilar metals use. *Lubriplate*—for tool use. *White lithium grease*—for tower assembly and stainless connectors. And that old standby of homeowners, *WD-40*—for water displacement, which is exactly what the name means, it's formula #40 from an extensive series of tests. And *STUF*—for coax connectors. What's in your toolbox??

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## **Ammunition for Little Pistols**

**By Bill Axelrod K3WA**

Fair warning. Summer is over, contest season is here, and my column is back. Run while you still can. I hope Pete put this column in the back of the newsletter so you will have read all the stuff you like before finding this and throwing the newsletter down in disgust.

But, for those of you who still want to read this... here goes.

In my last column, way back in June, we (meaning contesters and not the "royal" use of we meaning me) had just finished the WPX contest. And I (meaning me this time) shared this little pistol's experiences in the WPX and laid out my strategy for future contests based on my station's performance. The next few contests will determine if, or how well, this strategy will work. And you will hear about it in future columns.

But success for a little pistol is not only dependent on the stations performance. It also depends on the operator. And that's the subject of this column – the ham in the chair. Or in my case, the dummy in the chair.

We've all read articles in QST and CQ that provide operating advice for contests and/or dx pile-ups. And mostly they are on target. But, however important they are to the big guns, or even the moderate stations, they are critical for us little pistols.

Why? Because with our lower power, smaller antennas, we need every advantage we can gain to do well. Let's

review some of the basics <snore>.

Phone contests. Yes, even little pistols can do well in phone contests, especially if we stick to the basics.

Start with basic phonetics. Remember – the goal is to COMMUNICATE, not to amuse listeners with your word power or demonstrate your inventiveness. The military learned over the years what works and what doesn't. Kilo Three Whisky Alfa gets through to the listener far more effectively than Kilowatt Three Washington American or Kentucky Three Wise A\*\*. Standard military phonetics are also shorter, taking up less transmit time, which makes the running station happier. Use the military phonetics – if you don't know them or can't find them on the internet drop me an email and I'll get them to you.

Use complete call signs in each call. OK, shoot me. I know there's a lot of controversy on this issue, especially from hams with lengthy or cumbersome (on phone) call signs. But unless the station running indicates a desire for "the last two", don't do it. It results in duplicative transmissions and lowers everyone's rate.

As in life, timing is important, especially for us little pistols. No big deal if the station you are calling is begging for QSOs. But, how often does that happen? When there's a crowd calling a running station, try to gauge the timing and call when the fewest others are. Sounds hard? Not really. Sometimes waiting for a 1-2-3 count gets your call out there after most of the aggressive big guys call. And sometimes not. But, hey, we don't often get through on the first call anyhow so why not listen for a cycle or two. Get the pattern fixed in your mind and then call. You may actually get a Q quicker.

But, how about if you are running? What then? Well, first, congratulations. Not easy for a little pistol. But, even a little pistol can get a run going on a Sunday afternoon in the sweepstakes if he/she hasn't been very active until then. Cool, ain't it? I wish I had the discipline to stay out of the Sweepstakes until Sunday afternoon just for that, but I just can't.

So, if you are running... Follow the basics. Use military phonetics, not just to say your call but to come back to the caller with his/her complete call sign. It's one way to make sure you got his call right and don't lose points for a busted call.

Give your call often. Don't make others wait a number of cycles to find out who you are and decide if they need you or not. More often than not they will just keep tuning.

And please remember that no matter how little a pistol you may be, there's always even smaller pistols out there. Make an effort to drag their signals out of the noise. Take the time to repeat the exchange and make the complete contest QSO. Gee, just like what we want when we're searching and pouncing. We're not -- at least most of us -- not involved in a political campaign, so we can make the maximum effort help fellow hams enjoy contests. And, for some strange reason, doing so helps our score as well.

So how about CW. Yeah, I'm a CW guy. I only get into phone contests because there's no CW contest the same days. Well, most of the foregoing is equally applicable (except using any phonetics, which would be pretty strange anyway).

If you're running, don't send any faster than you can copy. And every so often, SLOW DOWN. We can't all copy 45 wpm. Lots of our fellow testers are new hams, out there to have fun. The best way to welcome new hams into the wonderful world of contesting is to be friendly. So, slow down your CW speed and give these guys a chance. Unless you're looking for a contest title, what have you got to lose? And, if you're looking for a contest title, they why in the world are you reading this anyhow?

How's your fist? Do hear QLF? A lot? If so, spend some time improving your fist. Don't know what QLF means? Then you're at risk.

If you are a little pistol, the odds are that you are not going to push someone off a frequency. But you can interfere. So, how about listening before blowing out that CQ. A QRL? goes a long way. That doesn't mean I'm suggesting you let anyone else chase you off of a frequency you are already on. But being considerate often means helping out a fellow little pistol.

And how about them QRPers? If you can't find any new stations to work, try to find a successful QRP station

and listen to him/her for a while. There's someone who knows how to make a little pistol station sing.

So, enough blathering. Get out there and have fun in the contests. CU there!

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## **Key Click Modification for the FT-1000MP**

**By Robert Peterson, W3YY**

I think most are aware that the FT-1000MP series of transceivers have a reputation for generating key-clicks. If you have one of these rigs and are a casual operator, you probably won't receive any comments. If, however, you run high power, have big antennas, and spend long periods on a run frequency (typical PVRC'er), then you're likely to get complaints about your signal.

After receiving a few unsolicited comments about key-clicks on my signal, I decided I better look into doing something about it. The thought of tearing my FT-1000MP apart and working on the high-density PC boards wasn't a pleasant thought, but cluttering up the band with noise every time I operated was even less pleasant.

There is lots of information on the Internet regarding key-click modifications for FT-1000MP and MP Mark V. I found three suggested modifications, all of which involved adding some components to the RF and IF boards to slow the rise and fall times of the CW envelope.

Probably the best-known modifications are those presented by W8JI on his web site at <http://www.w8ji.com>. Although the rigs and associated modifications are similar, W8JI devotes different sections of his web site to the MP and MP Mark V. Modifications involving both fixed component values and experimentally determined values are presented. The modifications appear to be very effective. In the example presented for a FT-1000MP, W8JI experienced a 30dB reduction in noise at 1 kHz from the transmit frequency.

Another well-known modification is available from INRAD. A good article and information is available at <http://www.qth.com/inrad/about-key-clicks.pdf>. This modification adds just one component to the RF board, two to the IF board, and no experimentation with component values is required. In the particular example presented (an already pretty clean FT-1000MP) INRAD shows a further 10 to 11dB reduction in noise at 1kHz from the transmit frequency. This degree of improvement is enough to make any FT-1000MP quieter than most stock rigs.

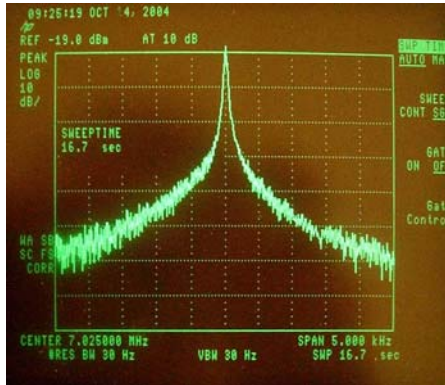
Finally N1EU presents a solution that is essentially the INRAD mod with a change in one of the component values. N1EU does not present any spectrum analysis to provide quantitative results, but does provide an interesting set of audio recordings that illustrate the effectiveness of the modification. See <http://n1eu.tripod.com/Yaesu/MPclicks.htm>. One gets the impression that he offers this as a recommended alternative to both the INRAD and W8JI modifications.

For my modification, I decided to try N1EU's suggested component values. A .1 $\mu$ F ceramic capacitor was added to the RF board and a .047 $\mu$ F and two 470K ohm resistors in parallel (235K ohms) were added to the IF board. The result of the modification was quite gratifying. The sideband noise 1 kHz from my transmit frequency was around -46 dB prior to the mod (about 4 dB worse than the FT-1000MP illustrated on the W8JI web site) and improved to about -60dB after the modification was installed.

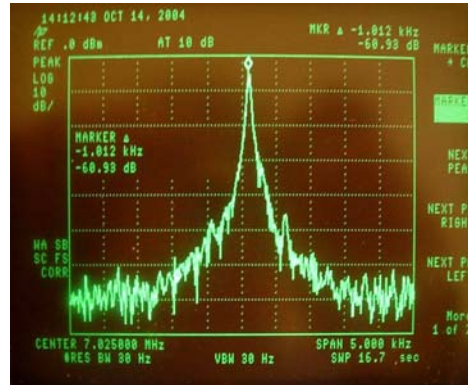
I found the actual modification to be difficult, but not as difficult as I feared. The FT-1000MP disassembles quite easily. Definitely plan on removing the RF board entirely. It might be possible to do the mod with the board still partially connected, but it's not worth the hassle. The black clips that hold the ribbon cables in place require some experience to remove. To remove them, first lift them slightly and then use a bent paper clip underneath the side tab to pull and release it. Then ribbon cable will pull out with zero force. Also, there is very little space for the additional components under the IF board. I put a couple layers of tape on the chassis at that point to prevent any accidental contact with the new components. Finally, be careful not to accidentally disturb the settings of the many alignment potentiometers that seem to be everywhere.

In summary, I believe this is a worthwhile modification that can be done in an afternoon by most hams that are reasonably proficient with mechanical assembly and soldering techniques.

Please note that this article is not intended as an endorsement of any particular key-click modification. I chose one approach and am happy with the results. Would I have done better with another approach? Perhaps. Please study the information on the different modifications before making your choice. Also, it should be noted that there is information to indicate that every stock FT-1000MP or MP Mark V may not be identical in key-click performance. Consequently, unless you compare the different modifications on the same rig, you may be comparing apples and oranges. Here are before and after spectrum pictures from my rig.



Unmodified FT-1000 MP



Modified FT-1000MP

Whatever modification you choose, however, please do it. Your signal will only be better as a result and you can't beat that.

## VHF and Above

By Chuck Watts, W4XP

**Once thought of as useless, now one of the most sought after resources in the world ... use them or lose them!**

The ARRL VHF Sweepstakes (SS) in January seems to get the attention of more participants than any of the other sponsored VHF and above contests. "Why," you might ask, "is this so?" Possibly it's the fact that Januarys are cold, people like to stay inside by a warm amplifier and keep themselves warm by pushing the F1 key [or some other key appropriate to the Contesting software used] a few hundred times over the course of 33 hours; not my idea of fun! What is a likely answer is that this is a good time of year to find out how effective your station is.

What about propagation in January? Generally speaking, in North America January is a cold month. Propagation is usually "flat," or at least there is very little enhancement to propagation. It is unlikely that you will experience any of the "usual" modes of propagation: Tropospheric (tropo), Thermal Inversion (inversion), E-skip (Es), F<sub>2</sub>, Aurora or Field Aligned Anomaly (FAI). Unless it is bitterly cold and dry, the atmospheric noise is low. So the prospects of working any DX on the 6-meter band are dismal at best, and DX on the higher bands is rare, if not non-existent. An obvious solution to staying at home and wearing out the function-key on your computer's keyboard is to be a Rover, a subject I've mentioned in several of my columns

Rover stations, such as Brian Skutt, ND3F, Bill Seabreeze, W3IY and Matt Butcher KC3WD give out lots of points during all the VHF contests they participate in, but they are especially welcome in the January SS. These guys are consistently in the top five! Brian, Bill and Matt have built some of the most impressive stations on wheels anyone has seen [K3CB has a great Rover-mobile too, but Owen is usually with the K8GP operation on Spruce Knob, except in January]. It is not unusual for any of the rovers to cover several hundred



KC3WD/R might be thinking "On the Road Again"

miles and operate from 10 to 15 Grid Squares, even in January, foul weather notwithstanding! Brian and Bill both have stations equipped with bands from 50 MHz through 47 GHz, and Matt is on through 10 GHz. All three have laser-light stations and W3IY's Rover station includes 76 GHz in the mix. Keeping my [home] station on the air is difficult at times, but these guys seem to be able, with a lot of in-between-contest maintenance, to keep their gear up and running. Giving, and getting one or two band QSOs from these stations can really add up for you and them, so when you hear them on from a new Grid Square, try hard to work 'em!

You can check out Bill's W3IY Rover [known affectionately as the "**Intergalactic Roving Battle Jitney**"], and get some insight into what he does to get and keep his Rover on the road, at <http://members.fcc.net/wseab/>. Another good source of Rover-related information can be found on the Rover Resource Web Site provided by Dan Evans, K9ZF -- <http://www.qsl.net/n9rla>.

Brian (ND3F) and Bill are the two most persistent "pushers" of general microwave activity in the area. Bill has established a summertime "Microwave Activity Night," one night per week, and "Microwave Activity Weekend," usually a Saturday morning, that has provided a time for "old hats" to test out their gear and encouraged microwave neophytes to get on the microwave bands. These efforts have resulted in a significant increase in the number of stations operating regularly above 432 MHz. The check-in and coordination frequency is 144.260 MHz.

Some particulars on the ARRL January VHF SS:

- 1. Object:** To work as many amateur stations in as many different 2 degrees X 1 degree grid squares as possible using authorized frequencies above 50 MHz. Foreign stations work W/VE amateurs only.
- 2. Date and Contest Period:** The second full weekend of September. Begins **1800 UTC Saturday and ends 0300 UTC Monday (January 22-24, 2005).**

**7.1.6. Top scoring club in each club competition category will be awarded a gavel.**

Complete rules may be found on the ARRL Web Site: <http://www.arrl.org>

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## **Around The Club**

### **News from the regional chapters**

#### **Central Chapter Meeting Schedule**

**November** - Temple Hills, Monday, Nov. 8 7:30 PM

Dinner around 6 PM at Topolino's for those interested

**December** - annual holiday dinner, Monday, Dec. 13, location and time to be announced

The **NC-West** Chapter of the Potomac Valley Radio Club held its regular monthly meeting on August 23 at Cobalts Eats and Drinks.

Attendees:

W2DZO/Henry Heidtmann (Chairman)

KG4NEP/Robert Whitaker (Secretary)

N0KTY/John Kippe



W4RXG/Melissa Hall  
N4IOZ/Tom Gallagher  
WX1NCC/Raymond Tabor  
KG4ECI/Dan O'Leary  
WS4NC/Don Edwards  
KC4WSK/Van Key

Meeting was called to order by KG4NEP. Discussion about the fall contest season began, including what is left to do at W4WS. WS4NC talked about his new building project in the yard, including his fully RF and AC wired test bench and radio shack. KG4NEP mentioned the 15 meter antennas and 20 meter rotator repairs. N4IOZ is working on the VHF packet link. N0KTY talked about the getting more WW operators. W2DZO ordered wings and listened intently. Official meeting adjourned at 8:35PM.

Respectfully submitted Robert Whitaker, KG4NEP Secretary, PVRCNC West

The **NC-West** Chapter of the Potomac Valley Radio Club held its regular monthly meeting on September 27 at Cobalts Eats and Drinks.

Attendees:

W2DZO/Henry Heidtmann (Chairman)  
KG4NEP/Robert Whitaker (Secretary)  
N0KTY/John Kippe  
N4IOZ/Tom Gallagher  
WX1NCC/Raymond Tabor  
KG4ECI/Dan O'Leary  
WS4NC/Don Edwards  
KC4WSK/Van Key  
KF4PLQ/Woody Kinney

Meeting was called to order by W2DZO. Announcement was made about our joint meeting with NC EAST in Burlington on October 13, 2004. Program will be a multimedia presentation by Guy K2AV on his new wire 80/160 antenna and its test results. W2DZO announced he will post an invitation for other operators to join in the CQWW SSB event. He is also working on his new FT-920. KG4NEP announced 3 workdays- the next 3 Saturdays- to get ready for WW. We'll have 3 920's for WW. WX1NCC announced that he will be moving to KL7 for a new job—congrats, Raymond. Plans have already ramped up for a future SS visit to Raymond's new shack. Raymond also announced he has a nice 50' crank up to sell. N0KTY announced his horses won 2nd and 3rd place in a horse show this weekend. WS4NC reported he bought Raymond's 920, and that the shack project is about done. There was discussion about attending the Rock Hill HF but that we'll forego that to finish up the tower work.

Respectfully submitted- Robert Whitaker, KG4NEP, Secretary, PVRCNC West

**PVRC/NC Joint Meeting** Minutes October 13, Golden Corral, Burlington, NC

WX: pouring rain. Members Present:

Guy K2AV; Wes, K4WES; Jim K4QPL; Jack W0UCE; Jeff, NX9T; Rob KA1ARB; Tom N4IOZ; Gene WB4MSG; Henry W2DZO; Bill K4CIA; Nate N4YDU; Robert KG4NEP; and Don WS4NC.

Club News: K2AV yelled to start the meeting around 7:15PM. Tom N4IOZ gave a reminder about the upcoming FARC Swap Meet in Winston-Salem on January 8, 2005. Tom also mentioned the passing of Chuck K3FT and that a card will be sent from PVRCNC.

Member News: Guy K2AV reports that they'll be doing a rebuild of fixed NE antennas and feedlines at N4AF



in time for CQWW CW. Jeff NX9T is happy that everything still works at his house. Gene WB4MSG is working mucho OT at work, so his operating time is limited, but did manage to get some more radials down. Henry W2DZO invited folks to help out at W4WS for CQWW SSB. He commented that they have ears on 80 now (new beverage) and that he entered the Yaesu world by picking up an FT920. Bill K4CIA was glad to be there and reported country #317 on 160 snagging VK9LA. Rob KA1ARB replaced his TS830 with a TS850, and he is thrilled. Now he has to get the KT34XA out of the driveway and into service. He was strong armed by Henry to come play in WW SSB in exchange for an antenna lifting party in Chapel Hill. Jim K4QPL is enjoying his new shack and new garage, but is sandwiched between CIA and UCE which causes QRM on his QRN. Jack W0UCE stated "160,160,160." His QTH was the guinea pig testing ground for K2AV's new 160 directional antenna design (called a Z-slope). So far beating out his other antennas to NE. Guy K2AV then took the floor and expounded the Z-slope design with a great Powerpoint presentation on the big screen. High points: Two driven elements, a sloper and a "Z". Directivity is from high point of sloper toward low point. Feedpoint for both elements is at the low end of the sloper. Does not use ground as a current sink for shield of feed coax. Six unconnected parallel wires 4' apart run on the ground underneath entire antenna. Uses one elevated folded radial. Footprint of the antenna is 250-300 feet by 20 feet. Can be supported by a single tree or single tower. Tower has to be behind the Z-slope, in the F/B null, to keep from detuning it. 70' tree can support same size Z-slope as 100' tower. Version up at Jack's place subject to tweaking, but already has 12-15 db front to back and obvious better performance than Jack's other antennas in the pattern. Clear and obvious advantage to Z-slope on weak NE signals.

Jim K4QPL then started new tradition of having a door prize at joint meetings (translation- a good way for all of us to give away stuff we don't want.) NX9T won the inaugural priz- a 12V power supply/wall wart replacer. N4YDU won second place- a key chain. K2AV won a free pass to the January 2005 swap meet in Winston-Salem, and W0UCE won a free ticket to the Winston-Salem Hamfest in June, 2005. Meeting concluded at 8:43PM. Agreement was reached to meet again in 6 months. WX: much drier, thank you.

Submitted by W2DZO

The following **Over The Hill Gang** members met for lunch at the Park Bistro in the Marriott Hotel in Falls Church September 29:

W3ZZ-Gene Zimmerman, N3JT-Jim Talens, W4DM-Dale Harris, W4RW-Floyd Martin, K3ZO-Fred Laun, W3AZ-Bill Leavitt, W3BE-John Johnston, AA4XU-Ben Shaver, K6ETM-George Sinclair, and K5VRX-Roger Stevens.

Numerous radio issues and rig problems were resolved but it seems no one can remember the details. The next gathering in Virginia will be on Thanksgiving Eve, 24 November, and all are welcome.

73, K5VRX - the rookie host

The **NW Region** met at the City Buffet in Frederick, MD on 19 October. In attendance were W8ZA, W3TEF, W3SF, KB3LGS, K4VV, K2PLF, K4ZA, W3KHZ, N3VOP, W6NRJ, WZ3AR, N3FX, WN3R, K3MM, W4AU, W0YR, W3YOZ, K3TZV, K3WC, W4RW, WF1L, WD3A, ND3F, KC3VO, and W3LL. Regrets: NE3H

Announcements: W4AU, John nominated WF1L for PVRC membership. Bill is a long time member of the Loudoun ARC where for the last three years he's been running the Technician and General class training sessions. He has a developing interest in contesting and wishes to join PVRC. Bill was unanimously voted into PVRC. Welcome aboard Bill!!!

From Around the Table: NE3H, Joe reports via email that he won't be at the meeting. He's visiting YB and VR6. W8ZA, Bob is getting ready for the contest season by installing three 40M phased quarter wave verticals

which can be switched in six directions using a two pole six position switch. However since these switches are not readily available, two RCS4 remote switches will be used to accommodate four directions: Europe, North Africa, Caribbean and Japan. One switch box controls both switches. Bob noted that the Central meeting increased its attendance significantly by having speakers and/or a program.

W3TEF, Roy and the W3SO local boys did very well with over 1450 Q's in the PA QSO Party last week. Ed, K3IXD is working on merging the logs for a final score because Murphy locked up the computers when switching to 40M. An alternate program had to be used for the balance of the contest. It's now up to Tom, W3SF to debug the computers. W3SO will be on next weekend for the 6M sprint.

W3SF, Tom was in the June and September VHF contests and PA QSO Party. He's been doing a lot of hardware installation work at W3SO - high speed internet to four new computers; cat-5 wire and networking router with high speed switch for internet access to all the computers; a print server for hourly stats and updates. Tom is also doing work on the local 61 Altoona repeater at W3SO - installing new power supply and amp for a power increase along with professional rack mounting of the equipment. A larger amp for the 82 repeater is also in the works to boost the 80W to 125W. Temperature sensors, user auto dial numbers and software configuration of the controllers round out Tom's activities.

KB3LGS, Justin the second newest member of PVRC, is also a member of the Horseshoe ARC. He works contests at W3SO along with his dad, W3SF. K4VV, Jack tips his hat to the gang from PA for opening up a new frontier of PVRC - and here they are attending our meeting in MD. There is a lot of creativity going on at W3SO. We need to remember where our frontiers are and PA is at one frontier that is growing and prospering. PVRC Business - The Central meeting last week was the biggest meeting in years other than the Holiday Dinner. The email replies indicated 24 people were coming and 34 showed up. Three speakers were invited and we were fortunate that all accepted. Bob Cox, K3EST spoke about the CQWW contest program, K3ZO Fred spoke about propagation, and Bill O'Meara spoke about building and operating his Multi-2 station. It was a fun meeting. The meeting was held in the new Holiday Inn in Sterling, Va.

Jack also announced the slate of nominees as officers for 2005 [see K4VV's column on page 1 - ed.] If the slate is elected, WX3B will focus on contesting activities, skills and competitiveness, and WD3Q will perform the traditional VP role including Central Region leadership, organizing events and speakers, and supporting the officer team with leadership and business matters. As Trustee nominees, N3OC will contribute a leadership role on training programs for contesting and K2AV will continue providing a leadership role in the expanding NC team of PVRC.

The notion of a contesting college has come up many times in the last five years, but nothing serious has been done about it. Two recent inputs help galvanize this issue. One comes from W0YR who can speak about it later [ see page - ed.] A second proposal was to get four tables at the Richmond Frostfest and staff them with PVRC leaders promoting contesting with the rest of the tables available to PVRCers to sell their wares. A third proposal is to sponsor a seminar to promote contesting and get young people involved in contesting. Do we have the time, interest and initiative to make this happen? The top leaders in the organization will be needed to speak and put together a one day program. How many would be willing to come?

Regarding Jack's tower project - the cables are still on the ground in open trenches while he figures out the control cable scheme. Lots of work remains to be done with connectors and fabrication of antenna mounts. Don, K4ZA is helping this week. There is a chance some antennas will be up by February or in the spring. K2PLF, Marty hasn't been doing much contesting since ARRL CW contest. He did get into the Sept VHF contest and worked W3SO on both 6M and 2M. Marty looks forward to the fall contest season.

K4ZA, Don is in town for K4VV and W3EF tower and antenna work. Using a YASME grant, he'll be filming action footage of the CQWW SSB and CW contests for his Contest Video Essay project at W3LPL, K4JA, K3ZO and K4ZW. W3KHZ, Art is glad to report that last week his wife was released from the nursing rehab home. She is doing in-home rehab 3 days a week... The tower brackets are attached to the house and a tower

raising is not far away. By next month VHF and UHF antennas may be on the tower.

N3VOP, Mike notes the Carroll County Hamfest will be held on 31 October. There may be a special event station working the WPX contest at the hamfest. Mike now has a TS2000 that he is learning to operate.

W6NRJ, Jim will be in C6 starting 18 December with N6KD. Last year they were at the PJ2 contest station without A/C. Jim reports the consortium has installed A/C on their recommendation. His 45' pole had to be reinforced and will be going up to support a horizontal loop. ND3F, Brian is on his way to Seattle to visit K3QII who was recently released from the hospital. KC3VO will be providing a radio for Brian to take to K3QII. Brian will be at W3LPL for CQWW SSB and at C6AAQ for CQWW CW - if the damage has been repaired.

WN3R, Dick is off the air and wants to be the first to sign up for the Contesting College. N3FX, Tony retired on 01 September. Retirement did not create a lot of free time. Tony is looking forward to the contesting season and will be putting up his first Beverage antenna next week. He will also be spending time to improve his CW contesting skills. WZ3AR, Nat is home from college on mid semester break. He had 670 Q's in the IARU contest from W9GE and 425 Q's in the IOTA contest from N3HBX.

K3MM, Ty stopped in on his way back from the track. His time has recently been spent racing his spec Miata. He'll be going for his racing license in a few weeks which happens to coincide with CQWW Phone. He will be at W3LPL for CQWW CW. Now it's time to connect the radios and get ready for Sweepstakes. W4AU, John had a busy summer with work related travel. Time and effort went into preparation for his daughter Hillary's (KG4RDI) marriage last week. John was in the September CW Sprint. John is really looking forward to Sweepstakes this year when his wife will be in Boston visiting her father.

W0YR, Mike wants to introduce Tyler to his wife because of her recent interest in BMW racing. Last week she qualified with 72 in a 45 as clocked by radar. Mike is happy to look around tonight and see Justin and Matt. It shows that this club is miles ahead of other clubs in attracting young men and women. It was brought home to him this past weekend when he worked the honorable JA RTTY contest where you have to give your age. It was pitiful where the kid on the block was 38 years old. It speaks volumes about what we need to do for our hobby and it's not going to happen *en masse*. It's going to happen by attracting one young person at a time. The idea for the Contesting College was not aimed at us older guys, it's aimed at getting young people excited. Maybe it will come thru the digital modes. It's a positive thing for us to be talking about it.

W3YOZ, Marty noted that this past year W3SO put up its sixth tower, moving at the rate of one a year since inception. As of April, W3SO completed a yearly cycle where it has been active in every VHF contest and VHF sprint and continues to this date. One focus of the Central meeting is to bring young people into the club and W3SO accomplished that objective thru Justin. Another was to have PVRC stations participate in public service. W3SO pursued this aggressively by being designated an official emergency station. Since it has to be a person, W3BTX Bob is going to get W3SO appointed by the League. Marty, W3BTX, W3SF and W3TEF were the Altoona contingent in the PA QSO party.

K3TZV, Steve is having a lot of fun especially on the low bands where he recently picked up a new one on 80M. He tried for TX9 but with no joy. Steve has been involved with PVRC for ten years and likes the concept of the College. At most functions there has been only talk of it but nothing coming to fruition. It should be for the young, but there are a lot of us old guys where technology has passed us up.

K3WC, Dusty as an old timer would like to know how to choose between using N1MM or Writelog and to learn how to use these contesting tools. This is one area where the College would be very beneficial. In jest, Dusty has one small complaint about PVRC. He hasn't heard from the club about erecting his tower in the back yard nor has Marty heard either. At last months meeting the President indicated there were funds to be used for practical purposes. Dusty looks every night at his email for a message saying "we're on our way to put up your tower". Contesting is difficult for Dusty because being an auctioneer, he works Saturdays. Sunday is for recuperating from talking all day and CW is no fun at 5 WPM. W4RW, Floyd says it's nice to see all you young

kids here tonight. He was licensed 67 years ago. Floyd will be moving to where he grew up in Kansas. This will be his last meeting here. His wife of 50 years died five years ago so he's going to marry the little girl he graduated with from high school. She's younger than Floyd at only 83. He'll be taking some equipment to get on the air... Floyd earned a 5M plaque a long time ago.

WF1L, Bill's last contest was the VA QSO Party. He's been chasing DX earning DXCC a few months ago using 100W with a stealth antenna. The SB1000 didn't arrive until the last DXCC card. Bill announced that the VA QSO Party will have a digital plaque this year. WD3A, Tom says with contest season starting, Bob W8ZA has him climbing towers. This will be a strange season for Tom because he is part way thru training for the National Ski Patrol. Between now and the end of February, one day every weekend will be spent on medical training or skiing. However, Bob offered Tom one of the cherished positions between 12AM and 6AM for contesting.

W3LL, Bud is still waiting for the MonstIR to arrive. The latest from Fluid Motion is delivery the 2nd week of November. The tower installer and crane are rescheduled for the 4th week of November. KC3VO, sometimes known as megawatt Bob, is an engineer at 5MW ERP channel 32. He hasn't quite got that much yet out of the all solid state HF rig but he's working on it. It can peg a 2KW Bird wattmeter on all hf bands into a dummy load. Bob likes modifying things that almost do what he wants into something that does what he wants. He had an interesting trip from Washington to our meeting because of numerous accidents and backups. It was like driving to Philadelphia to get to Frederick.

The meeting adjourned at 8:20 PM. The next NW Region meeting is Tuesday, 16 November.

The first **Central** meeting on Virginia side of the Potomac River in the new season was on October 11 at the (new) Olive Garden in Sterling, located west of Tysons Corner on Route 7. We had social time, a casual meal and a program. This was the best turnout for a Central meeting (except the Holiday Dinner or fly-in speaker meeting) in years. This meeting was a kickoff to help us get our mind tuned the competitive season. Three speakers contributed parts of the program to sharpen our contesting edge for the season.

Bob Cox, K3EST, described the CQWW organization to administer and score the results of these important contests, giving some insight that will be useful for us. Fred Laun, K3ZO, discussed propagation conditions for the coming season to help us think through our strategy and preparation to be most competitive in 2004-05. Bill O'Mara, W4RM, provided a briefing and discussion on (1) The current W4RM Multi-2 station, (2) Last year's contest results, (3) Planned future station enhancements, and (4) 2004-2005 Contest operating plans. Bill's brother, Jack, W4NF was in support.

The Olive Garden in Sterling is one candidate for the Holiday Dinner event on December 13, so we had a chance to check it out. The "back room" where we met had other diners and was open to the mail restaurant, so it was noisy and a QRM challenge for our speakers and the audience. This location may not be suitable for the Holiday Dinner due to limited size and noise.

The list of 33 attendees follows with a few notes: Bob-K3EST, Fred-K3ZO, Bill-W4RM, Brian-N3OC, Mike-W0YR, Jack-K4VV, Dick-W2YE, Rich-KE3Q, Barry-WR3Z, Eric-WD3Q, Brian-K9QQ/4, Mike-N4GU (moved here recently from SW VA), John-N3HBX, Rob-ND3A, Mark-AC5RR, Lloyd-W3IUU (first meeting in many years, used Metro), Frank-W3LPL, Bob-KI3O, Hal-W4RIM, Bill McCourt-WF1L (visitor from Leesburg), John-N4MM, Ace-N3AHA, Masa-AJ3M, Ed-K3PN, Jim-W3EE, Ken-K4ZW, Declon Lennen-EI9HQ (visitor doing many Lighthouse on the Air events in 2 weeks), Jack-W4NF, David-K3ZJ, Jeff-N8II, Bob-KC3VO, Roy-KT4W, Phil-WB4FDI (from Baltimore, operates at W3PP).

**Central Virginia Contest Club/PVRC, meeting October 12**

Present: W4MYA, NW4V, W4DR, N4CFL, K4KML, N4DEN, NK4H, W3BP and Laura, W4HZ, W4TNX, W4PRO, KC4UKS

The regular meeting of the CVCC was called to order at 7:15 pm by President Ed Moore, NW4V. Ed acknowledged the contribution to the Peter I DXpedition. We will add a link to them on our web site.

Dennis, N4DEN, is chair of our Christmas dinner. He is considering several locations and will try to secure one very soon.

Ed asked for program suggestions.

Ed asked if we wished to continue with the band entities competition. Jonathan, W4HZ, and Bob, W4MYA, both graciously offered to sponsor a plaque.

Dennis, N4DEN, said he is considering taking on the newsletter..

The program for the evening was a presentation by Jim Wise, W4PRO / A52PRO on his travels to and operation from Butan and Nepal. Wife Linda, KC4UKS, accompanied Jim, helping with the slide show. Linda also had a drawing for 2 door prizes - prayer beads and a prayer wheel.

Respectfully submitted,

Marie Long, K4KML, secretary

The **LARC** PVRC Chapter met on October 27 upon conclusion of the regular LARC meeting. There were two NEW LARC members who stayed for the PVRC meeting and are now 50% qualified for PVRC membership, which requires participation in at least 2 PVRC activities annually. Welcome to Rich AB3BQ and Rick N3PZQ and hpe to c u in the contest!

Other members signed in were: Bill N3XL, Ed K3QX, Joe N3TZA, Toby KB3BWR, Jim WI3N, Dennis KT3D, and Charles AA3WC.

During the meeting we discussed some of the basics of PVRC and contesting and answered a few good questions from Rich and Rick, who seemed very interested in the club. We then made some detailed plans for club participation in CQWW SSB this weekend. We plan to man the club shack for approximately 27 hours this weekend and hope to turn in a nice score for PVRC, and hopefully get some new (and some old) testers into the swing of things.

If any visiting PVRC members are interested in operating from our shack come join us. You're welcome, bring food — Hi Hi. The hours that the shack will be manned are published on the LARCMD Yahoo group and we have 2 meters on 147.54 simplex for talk in.

Bill N3XL and Ed K3QX are trying to make it to a regional PVRC meeting and get into a larger circle (250 miles) of friends.

73, Bill N3XL

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## **PVRC's CONTESTING COLLEGE**

**By Mike Lonneke, W0YR**

There are two frequently heard laments among testers today. One is, "This is becoming an old man's game. We have very few young testers and it's hard to attract them." The other lament comes from contesting club members who notice that a small number of contesting club members actually participate in

contests and that contesters who are marginally interested seem to march in place, if they march at all. It seems safe to say that fewer than 10% of PVRC members turn in a score to support club efforts.

I would like to propose an idea which I believe could address the two lamentations stated above and raise the participation and pride level among all PVRC'ers. The idea is for PVRC to assemble its wealth of knowledgeable veteran contesters as a faculty for a PVRC Contesting College.

This can be envisioned as an intense, one-day affair. If successful, it could become a mainstay of PVRC's contribution for contesting and it would most certainly contribute to the prestige of PVRC. It may be argued that the PVRCCC should be a two-day affair. Perhaps it should be, but requiring an overnight stay may cut down on attendance. If PVRCCC was a two-day affair, enough time would be provided for station tours and for social gatherings, which are an important part of our friendly club. Knowing other members is a great motivator.

I would suggest the PVRCCC be held as soon as practicable. The object is to train, improve and inspire operators, and waiting until next year, before the contest season starts will mean another year lost to us. Once the college is held, PVRC will see immediate increases in participation, operator skill level and most importantly, PVRC's aggregate scores in club competitions.

The Yankee Clipper Contest Club has in the past published a number of pre-contest guides. The instruction materials that would be prepared for PVRCCC would become a valuable guide for our members and college participants.

The Curriculum will have to be determined by those much more knowledgeable than I about contesting. However, I have taken a stab at the subjects or topics I personally could benefit from:

**CONTESTING SUCCESS – WHAT IT TAKES**

- Rigs
- Computers
- Software
- Keyers, Voice Keyers
- Switching
- Ergonomics

**RATE AND MULTIPLIERS and SCORING**

- Secrets of Effective Running
- How to Get Multipliers
- Peculiar Tricks in Certain Contests
- Mastering Cabrillo
- Group Contesting

Other possible activities:

**OPERATOR SKILL**

- Operating Skills, CW, Phone, RTTY
- Setting Personal Goals
- Knowledge of Propagation – Making a Band/Operating Plan
- Physical Stamina
- Teamwork (M/S, M/2, M/M)

- Q & A periods
- Pile-up contests
- Software demonstrations for WriteLog, N1MM, CT, etc.
- Station tours (including large and successful modest stations)
- Closing Dinner
- Post CC critique

**STATION**– the best you can make it.

- Antennas

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**This Just In**

**Thanks to Frank Donovan, W3LPL**

PVRC won the club competition in the June 2004 ARRL VHF QSO Party. Congrats!!!

The top three: Potomac Valley Radio Club 2,528,697 Society of Midwest Contesters 1,402,294  
Mt Airy VHF Radio Club 1,135,203

**PVRC 5M Contest Results**  
**By Bob Dannals, W2GG**

**WAE CW**

**Single Op—High Power**

CALL	QSOs	QTCs	MULTs	SCORE
NY4A	2472	2471	405	1,000,755
KT3Y	904	904	129	627,376
W3YY	827	823	312	514,800
KM4M	775	763	96	324,996
W4MYA	603	589	108	277,056
N4ZR	475	474	185	173,345
K2UOP	350	345	91	150,185
W3HVQ	245	237	175	83,475
N3AM	236	234	61	71,604
K4AF	211	207	152	63,536
N4MM	131	129	115	29,785
W3UL	103	99	97	19,594
AE4EC	36	4	15	465

**Single Op—Low Power**

K4GMH	421	416	94	184,093
WM3T	150	145	141	41,595
W0YR/4	251	251	68	34,136
K4QPL	150	149	44	31,501

**Multi-Op**

K3DI	658	612	259	328,930
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**Dxpeditions**

VY2/KD4D	1780	1754	180	1,675,116
N4CW/1	1105	1097	251	551,698

**Other scores to note:**

WJ9B/4	751	749	100	342,126
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Logs: 20

Club Score: 6,184,041

**Operators:**

K3DI: W3UL K3DI

K4AF: K9GY op.

KM4M: W3BP op.

NY4A: N4AF op.

**WAE PH**

**Single Op—High Power**

CALL	QSOs	QTCs	MULTs	SCORE
KD4D	1718	1694	421	1,436,452
W0YR	1097	1093	290	634,810
WX3B	839	835	96	397,936
N8II	645	568	92	249,878
K3SV	200	191	212	82,892
K2UOP	200	199	154	61,446
N4MM	133	126	128	33,152
W3DOS	127	127	47	26,924
KM4M	98	88	17	18,042

NX9T	114	113	36	17,479
W3UL	79	79	95	15,010
AE4EC	30	0	16	540
W3HVQ	12	8	7	280

**Single Op—Low Power**

K1HTV	278	274	160	88,160
W3LL	95	3	125	12,250

**Multi-Op**

K3DI	945	933	124	575,030
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Logs PH: 16

PH Score: 3,650,281

Logs CW: 20

CW Score: 6,184,041

Combined Logs: 36

Combined Score: 9,834,322

**Operators:**

K3DI: W3UL K3DI

KD4D: at N3HBX QTH

KM4M: W3BP op

W3DOS: K9GY op

**ARRL Sept VHF**

**Single Operator**

CALL	PWR	BANDS	QSOS	MULTS	TOTAL
W4RX	H	10	600	247	266,760
K1RZ	H	10	834	229	334,569
K3DNE	H	8	652	194	212,624
W3ZZ	H	5	300	89	38,448
K2UOP	H	7	182	73	22,192
KI3O	L	3	143	46	7,176
K4FTO	L	4	121	34	5,202
W3EKT	#	2	120	##	5,200
N3UM	L	2	112	34	3,808
N4MM	L	#	86	33	3,333
K2PLF	L	3	83	33	3,036
N3II	L	1	116	24	2,784
W6AXX	L	1	96	26	2,496
K3ZO	L	1	92	24	2,208
K3KO	#	#	28	17	476
W3CB	L	1	31	11	341
W2YE	L	1	21	11	231
N4JED	L	1	7	5	35

**Rover**

W3IY	H	10	1167	153	384,489
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**Multi-Op**

W3SO	H	4	1139	239	356,349
N3OC	H	8	417	119	81,277



Logs: 21  
Club Score: 1,733,034  
Operators (non-PVRC in parentheses):  
N3OC: N3OC K3FT

W3IY: W3IY (ON4IY)  
W3SO: W3BTX K3IXD AI3M W3SF W3TEF-  
W3YOZ K4VV KB3LGS

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**PVRC REFERENCE PAGE Please send corrections to the editor. November 2004**

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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		K4JA*	Callao VA		dxc.k4ja.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**

**CENTRAL:** The Central Meeting is always the second Monday (except June, July, and August) at 7:30 pm. The central meeting generally alternates between MD and VA locations. A pre-meeting dinner is usually held between 5:00 and 6:30 pm. Check via 147.000- repeater. VA LOCATION: The Patrick Henry (Public) Library, Route 123, Vienna, VA. MD LOCATION: Church of the Nativity (Episcopal), Route 5, Temple Hills, MD.

Pre-MD meeting dinner at Topoleno's Restaurant about 6:00 or 6:30 pm.

**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.

**NORTH CAROLINA -- EAST:** Chair: Guy Olinger, K2AV, k2av@contesting.com; Sec: Jim Price WW4M. POC's are K2AV and WW4M (h:919-362-4635, w:919-460-2991). PVRC/NC meets at 6 pm the first Thurs 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.

**TIDEWATER COLONY OF PVRC:** This group now meets in conjunction with the Virginia DX Century Club at Ryan's Steak House, which is on Battlefield Blvd in Chesapeake, at the Battlefield Blvd South (VA 168) exit off I-64. 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.

**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).

**BWI:** Weekly breakfast Wed at 7:00 AM at Basil's Deli Port on Elkrdige 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

**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 (ex-NJ4F) NJ4F@erols.com. Also, Larry Schimelpfenig, K7SV, k7sv@va.prestige.net

**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

**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. There

will be some who meet at Nick's Roman Terrace, Westlands Shopping Center, West Broad Street starting at 5:50 PM for dinner before the meeting. Talk-in available on 145.430

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

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

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

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

**LAUREL:** Pud Reaver W3YD preaver@earthlink.net Laurel Region meets concurrently with the Laurel Amateur Radio club at the first LARC meeting of each quarter.

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

**ANNAPOLIS:** Dick Wilder, K3DI 410-757-6706

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