



Potomac Valley Radio Club Newsletter

June 2004

Visit us on the web at www.pvrc.org
and www.pvrcnc.org

PVRC welcomes K0BHC, Brad Hedges and Keith Zeringue, W4KAZ to NC-East; Paul Roche, K3STX and Mike Jeffrey, WQ2M, to NW

Editor's Note

By Pete Smith, N4ZR

With last month being the special Reunion Issue, we have a lot to catch up on. I'm hoping to get this out a couple of days before the WPX CW Contest. K4ZA's Toolbox column offers a rundown of everything you need to know about rope, and K3WA's second column has more good ideas for little pistols. K4GMH contributes his design for a hot-switch-proof controller for stackmatches, which he developed for NR4M. W4XP covers the basics of roving in VHF contests, plus we have all the regular chapter minutes and 5M results. Because of space constraints, we're a bit behind on both, but we'll get caught up in July, I hope. Happy reading.

PVRC Event Calendar (includes summer get-togethers)

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

PVRC Reunion June 5-7

ARRL June VHF QSO Party, 1800Z June 12 - 0300Z June 14

W3LPL Open House, June 19 at noon, rain or shine

ARRL Field Day 1800Z, Jun 26 to 2100Z, Jun 27

IARU HF World Championship 1200Z, Jul 10 to 1200Z, Jul 11

North American QSO Party, CW 1800Z, Aug 7 to 0600Z, Aug 8

WAE DX Contest, CW 0000Z, Aug 14 to 2359Z, Aug 15

Maryland-DC QSO Party 1600Z, Aug 14 to 0400Z, Aug 15 and 1600Z-2359Z, Aug 15

W3YOZ Fowlfest, August 21

North American QSO Party, SSB 1800Z, Aug 21 to 0600Z, Aug 22

NR4M Open House, September TBD

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

Directions to W3LPL Open House (June 19, noon)

Directions from I-95: Exit I-95 at Route 32 West (Exit 38B) towards Columbia. Follow Route 32 for 8 miles, where it becomes a two lane road. After two additional miles, you will pass thru two flashing traffic signals. After three additional miles, you will approach two close-spaced traffic signals. Turn left at the second signal onto Burntwoods Road. Follow Burntwoods Road for 1.7 miles. Turn right onto Hobbs Road. Park in front of the towers.

Directions from I-70: Exit I-70 at Route 97 south (Exit 76) towards Olney. Follow Route 97 for 1.5 miles. Turn left at the traffic signal onto McKendree Road. Follow McKendree Rd for 1/4 mile. Turn right onto Hobbs Rd. Follow Hobbs

Rd for one mile. Park in front of the towers.

Directions from Montgomery County: Follow Route 97 (Georgia Avenue) north into Howard County. 4.5 miles after crossing into Howard County, turn right onto Burntwoods Rd. Follow Burntwoods Rd for one mile. Turn left onto Hobbs Rd. Park in front of the towers.

Ammunition for Little Pistols

By Bill Axelrod K3WA

I just love life's little ironies. After my first article in the April Newsletter, I fully expected the PVRC Police to meet up with the neighborhood antenna police, come to my home, confiscate my computer and antennas, and maybe even burn my ticket. But that didn't happen. So I get to waste another slug of your bandwidth with this column.

This month's Newsletter puts the icing on the cake. Here we are in May and I'm writing the June article in a rush so that you can get to read it in May. You gotta just love that.

Actually, the goal as I understand it, is to get to newsletter out prior to the CW WPX. Good. Because for a Little Pistol, there's no more exciting contest than the WPX. It's a contest where those of us with low-power rigs and basic antennas have a chance to do well and sharply hone our contesting skills.

That is especially true for those of us with strange call signs. Any Little Pistol with a prefix such as WH4 or KZ3 is automatically a hot sought-after commodity in WPX. How cool is that!

But of course that doesn't do darn thing for someone with just a plain call sign like my K3 call. I still like the WPX, my favorite contest, because I get to work anyone anywhere. If I can find the patience and energy to keep my butt in the chair, I can rack up a pretty decent score even with low power and wire antennas. Of course, staying awake is my biggest challenge. And maybe staying focused. My dog does better at that than I do so he gets a shot at the rig while I'm zoned out or snoring away. Sure hope that doesn't make me a multi-op entry.

We Little Pistols get into contests for different reasons. Some of us just like to work a lot of people and have fun. Some of us like to improve our stations. Others like to achieve high scores. Some of us just want to work a new states or countries, to get closer to five band worked all states or DXCC.

The good news is that there's room for us all. My favorite contests are the DX 'tests and the Sweepstakes. My goal for the DX contests is to work new band-entities. And in Sweepstakes to work on my 5 band WAS and chase a clean sweep. In 40 some years of Sweepstakes I got a sweep just once, back in 1982 or so. But I still dream....

But I think there's something else we Little Pistols can gain from the WPX contest. The WPX contest gives me the opportunity to do some things that will make me that much more competitive in the contests to come later in the year. It provides an opportunity to measure my station's performance, figure out how to improve it, and to develop the beginnings of my strategies for the contests to come. The WPX is ideal for this purpose because of the opportunity to pick a band, concentrate on a geographical area, and see just what I can accomplish. And I can still have fun and usually enjoy a reasonably high QSO total.

So what do I do? Well, I concentrate on searching and pouncing specific regions and bands and take extra notes to go along with my log during the contest. I note the band conditions, what stations I hear, and in how effective I am in working them. After the contest I review these data, try to figure out where and when I was most effective or where and when I was the least effective, and what, if anything, I can do about it.

For example, during my reconstruction I might note that I heard a lot of West Coast stations on 10 meters on the opening evening of the contest but that I couldn't work very many of them. That's important to me because it tells me that something isn't right. So I spend time after the contest trying to figure out just what it was. Could be I have to do something about my antenna system for 10 meters. Perhaps it's an issue of not being able to punch through with low power. But, how did I do the next day on 10, assuming the band was open? Maybe I did pretty well, in which case it's probably not an actionable station shortcoming (other than not having a 5 element mono-bander). In that case I might want to ignore the conventional wisdom and not waste my time on 10 the first evening of the next contest but start on a lower frequency band. Either way, analysis such as this helps me make my little station better, bit by bit, as well as helping me derive my strategy for upcoming contests. And it doesn't take anything away for my enjoying the WPX.

I try to spend some time measuring my effectiveness to Europe and South America on the different bands by concentrating on pouncing on stations there. And, given the openings, I try to do the same for Asia. I try to measure my effectiveness to stations in the eastern half of the United States and later to the western half. I try on the high bands and I measure on the low bands. I spend some time in pileups for the more rare multipliers, not so much because I need them, but because I can see just how competitive my low-power and wire antennas are. That helps me decide whether or not I want to make pileups a part of my strategy in the upcoming contests. Or when I can.

I know it sounds like a lot of added work -- it probably is. But I have fun, and when I'm done, I have a pretty good idea of just what my station and I can do.

So, fellow Little Pistols, just what are you going to do during the CW WPX? Any answer is good, as long as doesn't include staying off the air. CU there!

The Toolbox

By Don Daso, K4ZA

A few words about ROPE — No, The Toolbox hasn't slid over to film reviewing (bonus points if you know I'm referring to Hitchcock's 1948 film), but that stuff we all take for granted. It's a simple fact that if you're going to be doing tower and antenna work, you're going to need and be using rope. Whether it's for temporary guys, tag lines, or haul ropes or tram lines, there are literally dozens of options and guidelines to consider.

You'll find rope made from natural materials today (manila, sisal and cotton are the most common), along with lots of synthetics (nylon, dacron, polypropylene, etc.). You'll find lots of sizes, prices, claims and comments, too, regarding each and every one of these.

Your first priority should be deciding exactly what task (or tasks), you want to DO with your rope, as the use should dictate what you buy. Size is the first factor, of course, and this includes not only length, but also diameter. Material selection should be next. Price probably shouldn't be a factor, as once you start searching, you may be stunned by what you find. The old saw, "you get what you pay for," is certainly true with rope, and thus, your budget for this item may require some re-thinking.

Thinking about size is easy when speaking of length—you'll need to go up your tower and then back down, with a comfortable "handling" margin (say 25% to be sure) left over. So, if you have a 100-foot tower, you'll need a 250-foot rope. Thinking about size is more difficult when speaking of diameter—you're into the arcane world of "working load" and "ultimate breaking strength," and almost no one understands these. If you plan on using your rope for lifting loads (tower sections, beams, etc.), then any rope having a working load between 100-300 lbs should handle almost anything a ham would commonly put up. Obviously, there are some nifty synthetic ropes out there of very small diameter strong enough to lift this load, but consider having (and using) something that will be comfortable in your grip. Smaller ropes hurt your hands more readily than larger ropes. Smaller lines (sometimes called cords) work great for "tag" lines, but once they're hauling a heavy load, they become difficult to hold. I'd say 3/8-inch line is the smallest size I would use for such work.

Thinking about material is also relatively easy, as the synthetic advantages outweigh the disadvantages. (All the natural fibers soak up water about as well as sponges do—they rot easily and must be stored properly at all times.) Nylon is the strongest rope. It stretches, but because of this, nylon can absorb sudden shock loads that would cause other fibers to break. It's extremely resistant to wear, and can easily out-last natural fiber ropes. It's essentially rot proof, unaffected by most common chemicals, and most importantly, it knots easily.

All rope is constructed from small fibers either twisted or braided together. This twist, called the lay of the rope, is usually a simple three-twist construction, very common in any hardware store in America. Rope construction has evolved over the years, becoming more task-specific, and concerns with safety and good engineering practices from today's manufacturers provide several great choices. Braiding techniques, developed in WW-II, should lead your rope selection. Choices are hollow braided, double braid, and kernmantle ropes.

Hollow braid means the fibers are laid around a hollow core in "maypole" fashion. As such, this rope is subject to flattening under strain. Double braid ropes are constructed with a "cover" over a "core," often of the same material. Kernmantle ropes (*kern* means core; *mantle* means sheath) are usually made with an inner nylon core, covered with a braided sheath.

The core provides the strength, while the sheath protects that core from abrasion. Double braided ropes will probably be the best overall value.

What about working load, or limits, or strength? Obviously, we now speaking of safety, so knowing the maximum safe working load for your rope can help keep you out of trouble. Never stress a rope (or line) anywhere near its breaking strength. As ropes age, or are spliced, stretched and subjected to sustained loads, or shock, exposed to ultraviolet light (in other words, *used*), they will also lose some of their strength.

The rated breaking strength of seemingly-identical rope from different suppliers can vary by 10 percent or more, and different suppliers also specify a rope's safe working load at anything from 1/5 to as little as 1/15 of its breaking strength, so be sure to check on these specifications before buying. This is another good argument for using rope of 3/8-inch or larger diameter—as such rope has a high-enough breaking strength that even conservative calculations of a safe working load provide some leeway when working with typical amateur antennas.

Remembering that ultraviolet comment, storage requirements can be critical, just as knowing what you're working with can prevent potential tragedy. That's why I store all my ropes in Rubbermaid tubs (simply laying them in, dry, when finished—they always come out easily), and why each tub is labeled with information concerning that particular rope (usually prompting a question or two from my clients!).

So, what should you do? What should you buy? Your decision will depend upon your ultimate use, the size of your tower, and how you intend to use that rope, of course. Obviously, having read this far, you'll realize you should probably have more than one rope, based on each of the previous points. For sheer strength, ease of use and working abilities, I'd recommend a braided nylon rope. I'd recommend a twisted poly cord or rope for tag line uses. I recommend buying the best you can, then caring for it properly—sometimes more easily said than done.

Using rope as a tram (to haul up beams, etc.) has recently generated considerable traffic on various reflectors, mostly all related to safety, the laws of physics, and the right and wrong way to do such work. My largest rope is a 5/8-inch double braided nylon; it's served me well, and the largest beam I've ever hauled with it was 200-lb 20M Telrex. If you're unsure of your needs, or the requirements for strength or safety reasons, simply ask—there are legions of guys willing to help and supply the answers.

Buying rope can be expensive, especially good rope. With the increasing popularity of climbing, some interesting synthetic ropes can be found (be prepared, however, since all their dimensions are metric, as many ropes are made in Europe). Gear Express is one good source for climbing rope and hardware at considerable savings. (Mention your call, or what you intend to do with the rope; one of the owners is a ham.) Sterling Rope and Gear Shop and New River Nets are also good sources.

I wouldn't buy used rope. I wouldn't buy rope on eBay. I wouldn't borrow rope. I wouldn't suggest a club pool resources to buy rope. I say this simply because the unknown variables increase exponentially, and it's not worth the risk. Why put yourself, anyone who's helping you, and/or the equipment you're working with, in any danger?

I consider my ropes an investment, and I have various sizes and diameters in my toolbox to allow me to work on towers up to 200 feet in height.

REFERENCES:

<http://www.gearexpress.com/>

<http://www.sterlingrope.com/>

<http://www.gearshop.com/acb/Category.cfm?&did=21&CATID=10>

<http://www.newrivernets.com/>

**The CQ WPX CW contest is May 29-30
(begins Friday May 28 at 8 PM EDT (in the
US). Will YOU be on the air?**

VHF and Above Radio Frequencies

Once thought of as useless, now one of the most sought after resources in the world ... use them or lose them!
By Chuck Watts, W4XP

This year the ARRL has made the June contest a Club Competition event. So it is a great incentive for all of our members to get something on the air, at least on 50 and 144 MHz. Here are ideas to stimulate the mind and get you thinking of alternative ways to participate in VHF and above contests.

Life seems to deal us the worst of hands just when we need a Royal Flush! If we take a look at the upcoming VHF and above contests and then review solar activity reports from WWV, the prospects of a “high energy” contest season, as expected, is in jeopardy. It’s no secret that we are well on the way to the end of this Solar cycle. This is not to say that there won’t be an E-skip [E_s] opening on 50 MHz during the upcoming June ARRL VHF QSO Party, but the prospect looms.

How can the points from a few hundred QSOs on 6-meters be made up? One possible answer in a word, Rovers. Rover operations may be the only way to account for the lack of a strong E_s opening on 50 MHz. That means that operations from fixed locations will be looking for Rovers to offset any deficit of 6-meter QSOs. And Rovers may have a better score because fixed stations will be paying closer attention to schedules and pointing their antennas in the right direction at the right time. If you will be operating from home or a fixed field site, there is no question you will need to work all the Rovers you can to bolster your score. If you’re interested in getting on the road and being that sought-after station, it may not be too difficult for you to get an effective Rover station on the air.

Given that the form of the June contest likely will change for 2005 [see www.arrl.org/news/features/2004/02/26/2/ for details on the proposed changes to the VHF and above contests], it is hard for me to suggest that you rush right out and put a lot of money into outfitting a Rover Mobile through 47 GHz. But if you already own one of the many varieties of “DC-to-Daylight” radios, such as the Icom IC-706 Mk IIG, you have what it takes to provide contacts on three of the four “low” bands 50, 144 and 432 MHz. And for not much more than the cost of a dual-band FM radio you can add a 25-Watt output transverter for 222 MHz. The only hardware elements [no pun intended] remaining to complete the Rover station are antennas and a simple switch box to accommodate putting the 222 MHz transverter in line when the radio is performing IF duties.



W3IY/R Intergalactic Rover Jitney, at the beach

Antennas can range from the simple Halo on 50 MHz to stacked Big Wheels or “short” Yagi-Uda antennas on 144 through 432 MHz. Even a 2-element Yagi on 50 MHz may be difficult to handle, but the Halo is a proven success on the band and most, but not all, Rovers prefer this antenna on that band. There are several companies that offer versions of horizontal loops or squares that have acceptable performance through 432 MHz. In his April 2004 *World Above 50 MHz* column in QST, Gene W3ZZ provides two tables of antenna manufacturers, one table for directional and one table for non-directional antennas. Although Gene’s article is aimed primarily at 6-and 2-meter band operations and antennas, some of the listed manufacturers make antennas for frequencies through at least 1300 MHz. [I am strongly biased when it comes to Yagi-style antenna manufacturers, but the products offered by our local manufacturer, C3i, are top notch, both in quality and performance.]

PVRC member Owen Wormser, K3CB (formerly K6LEW) is the owner.]

Okay, now you have the equipment and antennas, and you’ve solved the problem of mounting the antenna array to your vehicle. Where do you go from here, quite literally? Local “powerhouse” rovers ND3F and W3IY have put well over 1600 km on their respective Rover Mobiles in one weekend! And other Rovers from the local area KC3WD, N3UW, K9SP and W1RT have done every distance in between. If you are new to the Rover World, try local hilltops or maybe a high-rise garage. In Virginia Tysons Corner is a very high location, but the intermodulation distortion from paging and 900 MHz trunking systems is terrible!! You may be able to find a clear spot on top of Bull Run Mountain in Prince William County or Blue Mountain further to the West. Sugar Loaf is a possibility in Maryland. Get out your trusty topographical maps and just look for high terrain and an “easy” access by road, preferably paved.

The June ARRL VHF QSO Party will be from 1800 UTC June 12th through 0300 UTC June 14. Knock the cobwebs off that VHF and above equipment and heat up the airwaves during this contest and really give VHF contesting a “serious” effort this year.

I'll be operating at the 222 MHz position from K8GP atop Spruce Knob West Virginia. In recent years you will find us on or near 50.145, 144.182, 222.110 432.120 and at .100 on 903 and above.

Rappack Controller Design

By Mike Sims, K4GMH

The following is a description of a controller for stack matches, band switches, array direction selection, etc. that avoids (eliminates?) hot switching from occurring when inadvertently making a switch change during transmit. The design uses a single IC CD4042.

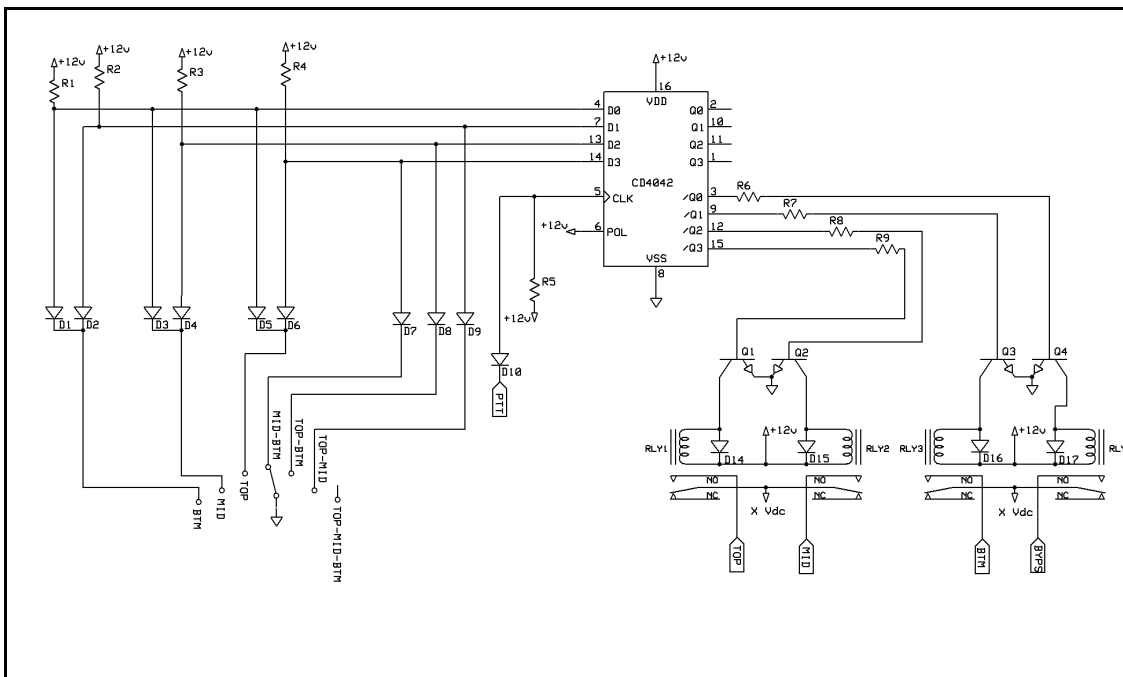
The controller is part of the stack matching and antenna switching that is being designed into Steve, NR4M's multi-multi station. We figured around 20 devices would be needed, and being on the frugal side (aka cheap), we decided to make rather than buy. Hot switching a stack or array (particularly at 1500 Watts RTTY) has been a fear in the back of my mind and I wanted to keep this from being a problem with the new tower/antennas at K4GMH as well as at NR4M.

The schematic below is for a controller for the type of stack match remote described by WX0B in the latest ARRL Antenna Handbook. Printed circuit board art work (single sided board) is available from me — just ask.

The resistors are 2.2 KOhm, 1/4 Watt (I have a lot of them and that is the reason for 2.2 KOhms), the diodes are 1N914, the relays are P&B RTD14012F and the transistors are PN2222 (also had a bunch of these). As you can tell, there aren't any critical parts. By the way, the relays are the same type used in my remote stack match unit, 80 meter array direction selection and ant./band selector. At less than \$1.50 each in quantities, it made sense (at least to me) to use this type of relay for as many applications as possible.

The IC CD4042 is a quad, clocked, D type latch. It is “told” that the PTT is on by grounding the PTT terminal. The latch then keeps the selected relay(s) that were energized when the PTT went "low" (on) remaining in this state until the PTT goes "high" (off). For example: with the rotary switch selecting the Top position (RLY1 and RLY4 energized) when you start to transmit, you can turn to any other switch position without any of the other relays being energized. Once you stop transmitting, the relay(s) will be energized corresponding to the switch position.

("Rappack" is a contraction of the Rappahannock Chapter of PVRC)



Around the Club

Meeting Minutes from the Regions [ran out of space this month; more in July]

The **Northwest Region** met at the City Buffet in Frederick, MD on 16 March 2004 . In attendance were W6NRJ, K3WC, K3TZV, K3PD, NC4S, W2YE, W4AU, K4VV, K3STX, W2CDO, N3VOP, N3FX, W3IDT, W3LJ, NE3H, W8ZA, WD3A and W3LL.

Announcements: W3LL, Bud: W3ARS, Clint was featured on the front page of World Radio (April 04) for his 6M DXpedition to FS. K3PD, Pete toured Newington. He interviewed Ed Hare, K1RFI, producing a 36 minute video regarding BPL. Ed said the most important thing for us to do is make careful baseline measurements of our station noise levels today to determine the impact of BPL when it arrives. Interviews and visits with Bill Moore, Wayne Mills, DX QSL Bureau, LoTW and The Big Project are included in another 46 minute video that Pete made during his visit. Both videos are suitable for presentation at club meetings. See Pete at the ARRL table at the Timonium Hamfest. K3SWZ will be checking cards at Timonium. Also the third call area QSL bureau will be there for cards, postage and envelope matters. W2CDO, Peter introduced K3STX Paul to his first meeting. Paul is a CW contester living a half mile from Peter.

From Around the Table: W6NRJ, Jim is going on his first DXpedition. He will be operating from Curacao with west coast friend Dennis, N6KD. They will be operating during the CQ WPX SSB contest thru 06 April. Operation will focus on the low bands 160M - 40M at CW speeds to entice new hams to contesting. Jim operated in both ARRL contests and reported favorable conditions. K3WC, Dusty reported his tower is still on the ground. Dusty showed photos of this very nice 72' crankup tower complete with work platform and chrome moly mast. He needs help installing this tower including fabricating the rebar cage. K3TZV, Steve is waiting for spring to start working on his plans. K3PD, Pete is putting up a 160M vertical and 30M loop to get on all bands.

NC4S, Gary operated in both the CW and SSB ARRL contests and will be in the Virginia QSO Party. W2YE, Dick had help mounting his 5 band 2 el quad on top of his Glen Martin tower but now has rotor problems. Feed lines got wrapped around the top of the tower which prevented lowering the Hazer. He managed to free the coax but the Hazer locked on a couple of bolts when lowered 1/3 the way down. Dick climbed the tower and freed the Hazer.

W4AU, John due to travel commitments only managed to work the Wisconsin QSO Party. He will be in the Virginia QSO Party. These QSO parties are used as training operations for Loudoun ARC club members.

K4VV, Jack is a new resident of Loudoun county. The Loudoun ARC has lots of contest activities for young people. Jack operated in both ARRL contests: At N4RM for CW weekend and at home for the SSB weekend. His tribander near the house at 50' is working well and future antennas on the ridge line should work even better. He will be doing baseline noise measurements to quantify any future BPL interference. Jack will be operating in both the WPX contest and VA QSO Party and at W3SO for the June VHF contest.

K3STX, Paul has been licensed since the mid 70's but dropped out after grad school. He recently reactivated his contesting urges. However, a new baby may slow down the contesting. W2CDO, Peter put in a substantial effort in the ARRL CW contest generating 680K points with wires and 100W. He hopes to have a better 80M receiving antenna for the WPX contest. N3VOP, Mike is installing a stealth 10m-40M Carolina Windham for the WPX contest. N3FX, Tony was in both ARRL contests part time at WX3B's multi-multi and will be there full time for the WPX contest. W3IDT, Bob was in both ARRL contests along with W3LJ and K3NCO using well disguised antennas. Scores were 500K in both contests. The CW contest started with no power to the remote coax switch - made 4 QSO's with an unknown antenna. Their low (25') horizontal 80M quad was an excellent 160M receiving antenna.

W3LJ, Bruce will be operating solo 15M single band for the WPX contest. NE3H, Joe was recently BX2/NE3H. He was part of the Taiwan staff at the IARU region 3 convention. He made about 450 CW Q's using the special event station (BV0IARU) antennas atop the 14 story building. Joe showed us his temporary Taiwan license. He will be back in Taiwan in the next few weeks. Joe was invited to the next Pratus DXpedition.

W8ZA, Bob noted that Joe's Taiwan license is official because our waitress can read it. Bob lost 5 hours Sunday morning during the ARRL contest with antennas pointing SW because Jerry fell asleep on the M2 rotor mode button. The rotor box has to be reprogrammed. During the summer all antennas are coming down for repair/revamp work. Tom, Jerry and Bob worked the ARRL CW contest M-2 scoring 1.8M points. On Saturday night 160M opened up with 88 Q's to 52 countries. During the phone weekend they were multi-multi joined by K3DNE and Ed K3IXD from SC. That contest

netted 2.34M points.

WD3A, Tom thinks he'll be having a scenic view of Harpers Ferry from atop Bob's towers this summer. He operated both ARRL contests at Bob's station. Tom just finished the ARRL Emergency EC Web class.

W3LL, Bud vacationing on Kauai with his family met John Martin WH6EY on the beach. John spotted Bud's Yaesu cap. John is the activities chairman of the Kauai Amateur Radio Club and invited Bud to a meeting. While exploring the Navy's Pacific Missile Range Facility, he found WWVH. Chief Engineer Dean and Edward, KH6EZ, gave Bud and his XYL Kayren a two hour tour of the station and antennas. Bud was in the CQ160M and ARRL SSB contests with about 450 Q's in each. K4VV, Jack gave a pitch for emergency communications. We all have skills which give us the capability to provide emergency communications at a time when needed. If we don't get connected with ARES and the people who run it we may not be called on to help when needed. We need to know procedures, processes, and have access to command centers or locations where our skills are needed. Hams get local government recognition when they contribute something useful to the welfare of the community.

The meeting was adjourned at 8:30PM. 73, Bud W3LL NW Region Chairman

NW Region April 2004

The NW Region met at the City Buffet in Frederick, MD on 20 April. In attendance were N4MM, K8OQL, K3WC, K3TZV, WQ2M, K3STX, N3VOP, WI2T, W3ZZ, N3YDT, W8ZA and W3LL.

Announcements: W3LL, Bud: K3STX and WQ2M were both voted into PVRC membership tonight. Welcome aboard to both Paul and Mike. FARfest at Gaithersburg Fairgrounds is scheduled for 11/12 September.

LoTW instructions can be found at http://aa5au.com/lotw_beta.htm in addition to the www.arrl.org site. LoTW confirmations are valid for DXCC credit. Joe, NE3H reports from Taiwan that he will be attending the CTARL (Chinese Taiwan Amateur Radio League) meeting on 1 May. He will also be at Dayton and asks the location of the PVRC sign in sheet. (After the meeting, Jeff, WI2T arranged with Joel, W3RFC to have a Dayton PVRC sign in sheet at the R.F. Connection booths - Thanks Jeff). MID ATLANTIC QSO Party is scheduled for 8/9 May. Visalia DX Convention is this coming weekend followed by Dayton on 14/16 May. Minutes for this meeting may be late in posting because my computer is misbehaving. (Fixed - found worn bearings in the CPU fan).

N4MM, John described the FCC Omnibus changes to Amateur Radio structure - refarming the novice band - elimination of linear amplifier 24/35 MHz lockout - legalize Kenwood sky eye - VHF/UHF spread spectrum - one application for vanity calls - ISF retransmission - bequeath in memoriam call sign to club - other housecleaning petitions. John passed out fliers for the Winchester-Berryville Hamfest scheduled for Sunday 1 August.

From Around the Table:

N4MM, John plans to get his VHF antennas up in preparation for the new VUCC Challenge. He plans to operate in the June VHF contest. John is going to Visalia next week along with Jerry K8OQL and then to Dayton. K8OQL, Jerry worked the contests at Bob's W8ZA station. He will be in the WPX CW contest. Jerry worked 3B8C on 160M and other bands. He's going to Visalia for a week. K3WC, Dusty plans to purchase the SteppIR MonstIR antenna - 40M to 6M. The tower is still on the ground but will have to go up for the new antenna. He plans to sell his 100MPH rated Force 12 antennas - N1012X; Nomad 1517XLD; new in the box 5BA; new 3040 2el; new C3I 7el 6M beam; old TM36 3el Telrex tribander; Cushcraft 402 2 el 40M. The old tower is coming down to make room for assembly of the MonstIR. K3TZV, Steve says spring came to central PA and it's time to think about antennas. He worked T33C on 80M. WQ2M, Mike found out he was number one in NA in the French REF contest with a record breaking NA score (a round of applause). Mike attended a number of FRC meetings and says we are a notch above them from a people standpoint. Our emails, phone calls, etc; are the right stuff. K3STX, Paul is purchasing his first new radio in 25 years - one of Bob's (W8ZA) TS850S to augment his TS520S. Paul is a CW only operator who favors the low bands and DXing. He looks forward to contributing points to the club.

N3VOP, Mike is still trying to get his "stealth" Carolina Windham up. His neighbor keeps watching his attempts. He almost worked Dave, T33LP, on 15M using his Shakespeare Bigstick vertical. WI2T, Jeff's first meeting with PVRC in about 3 years. Now that he finished his college degree he has time to play radio. Last October Jeff donated all his ham gear to Handihams and purchased an HW9 for QRP CW. Using Gene's W3ZZ station, Jeff accumulated 225 Q's and 76 countries in the ARRL DX CW contest on 15M. At home, because of antenna restrictions, he uses an MFJ tabletop verti-

cal with the HW9. He has accumulated some states on 20M and 40M with this setup. Jeff plans to operate in the WPX CW contest. W3ZZ, Gene says this Wednesday on 70 CM there's a 7 PM to 11 PM sprint contest. Gene is going to Atlanta for the SE Division Convention instead of Visalia. Next year it's back to Visalia. N3YDT, Jim not doing much because of broken antennas that will be repaired now that the good weather is back. Jim endorses the Alpha Spid as a good rotator. W8ZA, Bob will be taking all antennas down for refurbishing. He plans to set up as a multi-2 instead of his present multi-multi configuration due to a lack of operators. He purchased a TS2000X transceiver for VHF operation. Bob worked the 2M Sprint last week making about 28 Q's in 9 grids ranging from Canada to NC. Bob received an email from Ed, K3IXD in SC. Ed connects to Paul's K4JA node via telnet for those who would like to communicate with him using the "talk" mode. Ed has been involved in the 2M public service with the local (Charleston) radio club. Next week he'll help in the MS walk followed by a 2 day bicycle event. Ed worked a few new countries on 18 MHz and a few new ones on PSK31. He now has a SteppIR vertical hidden amongst the trees. W3LL, Bud was in the Russian DX and CQ WPX SSB contests. He attended the Timonium Hamfest. Since becoming active 2-1/2 years ago, Bud crossed the 1,000 count for both DXCC Challenge and 7 band DXCC last week - all on SSB, 100W, using a dipole at 45 feet and IC706. Maybe this summer the station will include an Alpha Spid rotator turning a SteppIR MonstIR at the top of an AN Wireless 90 foot self supporting tower powered by his Henry 4K which hasn't been turned on in 32 years. The Collins S Line has also been dormant for 32 years. The meeting was adjourned at 8:15 PM
73, Bud W3LL

The **NC-West** Chapter of the Potomac Valley Radio Club held its regular monthly meeting on March 22, 2004 at Cobalts Eats and Drinks. Attendees: W2DZO/Henry Heidtmann (Chairman) KG4NEP/Robert Whitaker (Secretary) N0KTY/John Kippe KD4VED/Melissa Hall N4IOZ/Tom Gallagher KG4CZU/Chris Plumbee WX1NCC/Raymond Tabor W4UW/Dick Genaille (visitor) KG4ECI/Dan O'Leary WS4NC/Don Edwards W5RQ/John McColly(special quest)

The meeting was brought to order at 7:20pm by W2DZO. The business part of the meeting was cut in order to have our special guest John McColly, W5RQ give his presentation on his DXpedition to Taongi Atoll. John and N5UR activated V73T for the first time ever during August 2003. John went into great detail about preparation and necessary requirements to receive permission for a venture of this magnitude. Taongi Atoll is part of the Marshall Islands which covers approximately 250,000 square miles in the Central Pacific, 34 deg. Lat. 168 deg. Lon. north of Hawaii. John's presentation was complete with a powerpoint presentation displayed on Cobalts big screen TV. (very cool) The V73T expedition required a flight from Hawaii to Kwajalein Atoll (The main island in the group) and a charter to Taongi's reef, plus a 3 mile ride across the bay in a 16' aluminum boat. The Charter only goes to Taongi every 3 years and only 10 people are allowed per charter. The primary reason most people go to the island is to recover very valuable hand blown glass fishing net floats, which John passed around for everyone to see! (John said the floats migrate to the island from fisherman's nets since Taongi is the northern most island of the group.)

Some of the equipment used on the dxpedition included the Yaesu FT100, Kenwood TS450, memory keyer, and a Stepper & Force 12 vertical. The operation was done field day style with a tent to operate in and another for sleeping quarters. The temperature was a constant 92 degrees and very humid. Both operators took 6 hour shifts to allow each other to rest and relax. The 2 man team was on the air from Noon Monday until 1:00pm Thursday except for a few severe lightning storms and a 6 hr. solar flare that completely closed down propagation on all bands. Frequent QSB and interference from a pirate RTTY station caused some problems, but nighttime propagation was excellent. In closing John wished to thank the sponsors V73GT, V73US, NT5C, IOTA and others for their help with planning and logistics. Preparation and planning took about 6 months from start to finish. Fortunately there were no bugs or mosquitos to contend with and support from the charter ship was excellent. Approximately 2700 contacts, all CW were made from this very rare IOTA OC-263. Only 100 or so persons have visited Taongi Atoll, and it may be some time before Taongi will be activated again.

For more info about IOTA go to: <http://www.islandradio.com> Meeting moved to questions and finishing remaining pitchers.

Robert L Whitaker Jr. KG4NEP

The Over-The-Hill Lunch Bunch met for lunch and discussion on Wednesday noon, March 31 in the Park Bistro restaurant in Falls Church, VA. Members attending were K3ZO Fred Laun, W4RW Floyd Martin, W3AZ Bill Leavitt, K6ETM George Sinclair, N3AM John Silva, K5VRX Roger Stephens, AA4XU Ben Shaver.

The next monthly meeting will be held in late April near College Park, MD, W3AZ Bill Leavitt, Host. All PVRC members and their guests are welcome. Contact Bill if you plan to attend: w3az@starpower.net.

PVRC/NC-East met April 1 at the Golden Corral, Dillard Drive, Cary. Members Present: Ed AE4EC, Jim WW4M, Jay NT4D, Bob K4HA, Chuck K4NYS, Jeff NX9T, Tom N4TL, Bert N4CW, Bill K4CIA, Guy K2AV. Visitors: Keith W4KAZ, Rob KA1ARB. Regrets: Jim K4QPL (No news other than the new garage/hamshack is consistent with normal construction reports--late and over budget! Still need electrical and building final inspections) and Wes K4WES — (did get some time to op in the CQ 160m SSB, ARRL DX SSB, and CQ WPX SSB contests I did work Germany and Morocco on my half sloper on 160m, so it is getting out. I just need to adjust it some more to lower the SWR with some minor tweaking. I can't hear the 3B9C on 160m or 80m though. I need to put up a beverage next)

Chapter Business

This was the second meeting for Keith W4KAZ. Someone moved that we accept Keith's application for membership and it was seconded and approved unanimously. Welcome Keith! We were also happy to meet Rob KA1ARB, who had heard about PVRC on the air from Guy K2AV.

Member News

Jim WW4M will be giving a presentation on ham radio to elementary school kids in Durham. He also reported that the NC State College of Engineering is making its relationship with W4ATC a little more formal, which means the club won't have to worry about losing its shack when the ECE moves to a new building in early 2005. Tom N4TL made 125 contacts in this past weekend's contest. He continues to chase DX and is up to 1750 worked for the ARRL's Challenge award. He needs to chase the QSL cards. Tom also purchased a used 5 element 6 meter beam and now needs a second tower to put under it. Jeff NX9T operated in the CQ 160mSSB (304 q's in 4 hours), ARRL DX contest (530 Q's in 8 hrs) and in the CQ WPX(1057 Q's in 16 hours). He reports that he has been focusing on being as productive as possible and getting on with as high rate as possible for the limited time allowed by family, work, and life in general. His own "contest within a contest".

Looking forward to going to Dayton again this year. Hopes to be improving 80 and 160m antennas(especially rx) soon. Bill K4CIA dabbled a bit in the 160m contest. He will be card checking at the ARRL booth at RARSfest. N1ND will also be in attendance. Bert N4CW's arm is doing better after having surgery on the rotator cuff. He operated in the Russian DX contest and got on for the WPX SSB contest for his son-in-law WA2JFK (who had a blast). Bert was surprised to work VQ9 recently and will be trying to operate digital with his TS-2000.

Bob K4HA started a new job 3-4 weeks ago with the Highway Patrol working on microwave paths, VoIP (JPS), etc. He also bought a 756-ProII at the Charlotte Hamfest. He is not happy about the mixed audio for crossband but likes its digital filters. Chuck pulled his Pegasus out of its box recently and will be bringing it to RARSfest. Jay NT4D will be trying to reorient his antennas towards Europe at 22 feet on his broken crankup. Keith W4KAZ worked 370 Qs in WPX this past weekend and was also on for NAQP-CW and tried his hand at ARRL DX CW. Guy K2AV has been very busy at work. He thought the joint meeting with the folks from the NC-West chapter was a lot of fun. Guy then started a group discussion about W0UCE's "broken triangle" 160m wire antenna, which is fed like two antennas with two match boxes. Rob KA1ARB has not been on the air for a while and often works weekends, but recently did work multi-op with WB1ADR in New Hampshire for the ARRL DX phone contest. He has an A3 on a telescoping mast (can't have a secondary structure in his neighborhood) but recently purchased a KT34XA and is looking for tower or roof mount options. Ed AE4EC stopped by to say hi but had to leave before dinner.

The meeting was adjourned at 7:40 pm

NC-East met at the RARSfest in Raleigh on April 4. attendance: Pete AD4L, Ed AE4EC, Willy K3VW, Bill K4CIA, Bob K4HA, Paul K4JA, Jim K4QPL, Henry K4TMC, Raja KB6MTH, Jeff N3NPQ, Bert N4CW, Tom N4TL, Ron N4XD, Nate N4YDU, Andy NI4S, Jay NT4D, Jeff NX9T, Jack W0UCE, Henry W2DZO, Joel W3RFC, David W4IDX, Keith W4KAZ, Don WS4NC, Jim WW4M.

The **CVCC** chapter's regular monthly meeting was held at the Henrico Doctors' Hospital on Parham Road on April 4. The meeting was called to order at 7:10 PM by President Roy Davis, WK4Y.

Congratulations to Paul, K4JA for being #1 in US in the WPX sideband contest with a score of 13,390,000. Congrats also to Dave, N4DVK for placing #2 in the PVRC for Low Power in the 160M SSB contest.

There was no treasurer's report. No dues have been collected since the last meeting. Dennis, N4DEN, reported that the Yaesu used for the packet cluster was now doing fine after he cranked up the voltage on the power supply. Dennis also reported that it will cost about \$95 a year to keep Buckmaster, and that AR cluster is current from the FCC database. Members voted not to continue Buckmaster.

Old Business –

Anyone interested in serving as a net control for the proposed contesting net on the MRA repeater should contact one of the club officers or Ralph, N4EHJ.

Election of officers was held by voice vote. Officers for the coming year are:

President – Ed Moore, NW4V

Secretary – Marie Long, K4KML,

Treasurer - Bob Ladd, NK4H

Contributions to the CVCC Newsletter can be sent to Marie, K4KML by the first of each month. The newsletter will be sent electronically each month prior to the meeting. W4DR will do the DX column, and W4TNX will maintain the DX totals.

The club picnic will be held on May 22 beginning at 3PM at the fine home of W4HJ, A.C.'s cousin on the James River. This will replace our regular meeting. The Club will furnish hamburgers and hotdogs plus condiments. Bring a side dish or dessert and your own drinks, plus chairs. See the email from Ed on April 18 for detailed information. Please RSVP to Ed as soon as possible. Contact information for Ed Moore, nw4v@comcast.net Phone 804.897.4954.

A question was raised as to where we would like to hold our meetings during June, July and August. Any suggestions?

Upcoming Events – CQWW WPX CW. Begins evening of May 28

Jonathan, W4HZ, expressed thanks to Roy, WK4Y, for a job well done as club president.

Program – Newly elected President Ed, NW4V, also expressed his thanks to Roy. Ed discussed the direction of the club for the coming year. Ed discussed an article in the PVRC newsletter by Brian McGuinness, N3OC, regarding BPL. This is a serious threat to amateur radio. Ed urged everyone to go online and file comments with the FCC and to contact legislators.

Ed would like suggestions for programs. Send your suggestions to Ed by email.

Please be sure you are current with your dues.

The meeting was adjourned at 8:25 PM by Ed, NW4V.

Respectfully submitted,
Marie Long, secretary

PVRC/NC East met May 6 at the Golden Corral, Dillard Drive, in Cary.

Members Present: Brian K3KO, Brad K0BHC, Jay NT4D, Keith W4KAZ, Chuck K4NYS, Bert N4CW, Bill K4CIA, Jeff NX9T, Tom N4TL, Guy K2AV, Ed AE4EC, Will AA4NC, Bob N2NFG, Jim WW4M. Regrets: Jim K4QPL, Will WJ9B, Wes K4WES

Chapter Business — This was the second meeting for Brad K0BHC. Bert moved that we accept Brad's application for membership and it was seconded and approved unanimously. Welcome Brad! Guy reminded everyone that WPX CW is coming up (not to mention Dayton). Also that K4VV is looking for volunteers to look read the BPL responses (contact K4VV for details).

Member News: Jim K4QPL (via email): "Major construction and inspections completed on new shack/garage last month. Limited spare time and lots of interior work needed before moving in and abandoning the present shack to the XYL. Looking forward to WPX-CW at NY4A and a world M/M repeat victory. Guess we'll have to work even harder with everyone gunning for us. Will WJ9B (via email): "It is official. I will start working at UF in August of 2004... I'm going down to look for housing next week; it will be a bit challenging but there is a good tower ordinance within the City of Gainesville, and the City limits are relatively small..." Per N4AF: "Will is going to try to make it up to NY4A for some of the DXTests but I am sure we all wish him well in (Univ of Fl) Gainesville (gotta be fun in stateside contests to have a

one hop into the NorthEast !!)."Wes K4WES (via email): "I will be around for Field Day this year, so I'm excited about that. :-) I hope the wx will be nice for it.

K2AV has been doing some plotting with N4AF for WPX. Howie keeps having to fix wires after strong winds. Before the ARRL contest the crew tried to tweak the 20m monster (introducing more problems) and plans to do without for WPX (using the monobander instead). The Monster will be restored in time for the fall. Howie's planning on changing all of the contesting computers to Win2K and WriteLog and says "I'd like to thank n3nd and n4cw for their advice on using Logger32 for general logging. Been pretty qrl getting ready for wpx cw but otherwise I have sunk into the summer doldrums ;-)". Jay said the Win2K/WriteLog combo has been working fine for him, and Bert says the key is to keep the patches current. K2AV has otherwise been buried with work. AE4EC is trying to get up a 160m transmission line antenna and hopes to be active on 160 for WPX. N2NFG is looking forward to WPX and had fun in the phone portion but realized he had forgotten to pay attention to working European stations for points. He still needs a backhoe to dig up the guy anchors that got whacked by the contractors. WW4M and N3NPQ gave a presentation on ham radio to several classes of Durham middle school students last month. A new crop of radio contesters? K3KO put up an 8-el 440 beam (antenna #17). He's been using N1MM logger on Win98 and has had no problems. He's working on a 160m antenna (that won't be ready in time for WPX).KOBHC is also using N1MM with Win98 and having no problems. He is working on 2 multiband phased half slopers (also not for WPX). He has also been acquiring more beams and is still working on his amp.

W4KAZ has been playing with a broadband 80m folded dipole with open sleeve feed. He'll be on the air for WPX. K4NYS announced the arrival of a new grandson. He (Chuck, not the grandson) has been cleaning his TH7 and put up a rocket launcher to help work on it (but doesn't want K4HA to know about it). He's also been playing with EZNEC.NT4D has been limping along for the past month. He has verified that his rotor is working, but his tower may have to be folded over in order to rewire and replace the hardware. This will be the last NC meeting for N4CW until December (he'll be on the air from Maine). He sold his 706 and bought a TS2000. He had a wonderful experience sending it in for service (no, really). It had been experiencing a delay in achieving full TX power level in digital mode. He dabbled in the FL and New England QSO parties and highly recommends the Russian DX contest (a 5M contest) because they have free software, provide a great opportunity for working DX, and have great writeups and certificates.

N4TL reminded everyone that Sunday is Mother's Day. He sent an envelope to the Bureau that will give him 100 band-countries on 30m -- that's now DXCC on 8 bands. He has plans to put up a second tower for VHF and will start with a 6m beam. Tom's going to Dayton. NX9T played around in several QSO parties this past month and played in WPX. He added a new antenna switch and control cable to his shack. He'll also be at Dayton and is excited about LotW. K4CIA said there was a good turnout at RARSfest for card checking. He'll be in Dayton this year (missed last year). His summer project will be a shunt-fed tower for 160m. AA4NC said he's operated 96 hours in contests during the past 6 months - HC8N for CQWW m/m and 8P9JA for ARRL CW. He'll try to get on for WPX.

73, Jim WW4M

This Just In... PVRC Wins 2003 ARRL 10M Contest — Unlimited Category.

Club	Score	(Entries)
Potomac Valley Radio Club	17,812,020	(79)
Florida Contest Group	16,988,204	(53)
Northern California Contest Club	9,832,036	(61)
Society of Midwest Contesters	7,343,450	(62)

Congrats to all who participated!

**PVRC 5M Award Scores
By Bob Dannals,W2GG**

ARRL CW DX FINAL

Call	Band	QSOs	Mults	Score	Call	Band	QSOs	Mults	Score
					WF3J		1551	380	1,768,140
					W0YR		1551	341	1,584,627
					N3JT		1424	340	1,452,480
					N3UM		1498	317	1,424,598
					K2UOP		1073	356	1,145,964
					K3JT		1150	331	1,140,957
Single Op High Power:					W4ZYT		886	301	800,058
K3ZO	3328	469	4,682,496		W3AZ		683	268	549,132
N4CW	2147	395	2,543,010		NY3A	15	1275	95	363,090

Call	Band	QSOs	Mults	Score
K4FJ	15	1082	104	337,584
N4MM		338	218	221,052

W3DF		142	96	40,896
K3SV	40	187	65	35,880
W3GNQ		137	84	34,524

Single Op Low Power

W3EF		1933	404	2,341,584
K2YWE		1522	370	1,687,308
W2CDO		770	295	681,450
K4FPF		800	280	672,000
W3IUU		811	262	637,446
WK3H		727	283	617,223
WA8WV		736	275	602,250
W4RQ		659	281	555,537
KC8FS		722	249	539,334
K3TW		708	175	371,700
KI3O		482	226	326,796
N4JED		320	175	168,000
AA4KD		257	154	118,734
K6ETM		217	133	86,583
WB4DNL		155	121	56,265
N3XL		162	114	55,404
K4HA		130	86	33,540
K4FTO		125	85	31,875
W4RIM		110	69	22,770
W6NRJ		65	45	8,640

Single Op QRP

WI2T	15	224	76	51,072
K3SWZ	10	87	38	9,918

Single Op Assisted

N3AM		1699	421	2,145,837
K3KO		735	420	926,100
KE3Q		650	293	571,350
WM3T		600	290	520,260
W3HVQ		591	291	515,943
K4YT		619	270	501,390
N3NT		488	296	433,344
K3WA		455	261	356,265
W9GE		###	###	216,000
K4VV		335	###	191,382
W4DR	160	135	67	27,135
N4XD	160	123	65	26,130

Multi-One

W3GG		1572	367	1,730,772
W3LJ		688	289	590,427

Multi-Two

K4JA		6789	631	12,836,433
N4RV		4432	575	7,634,850
W4RM		4125	555	6,858,135
K3DI		1483	424	1,885,104

Call	Band	QSOs	Mults	Score
W8ZA		1334	457	1,828,914

Multi-Multi

W3LPL		7892	687	16,248,924
NY4A		7239	637	13,749,645
WX3B		1130	378	1,281,420

Dxpeditions

FS5UQ (M/2)		7847	348	8,192,268
8P9JA (M/S)		5841	345	6,045,435

Logs: 59

Club Score: 107,067,945

Operators (non-PVRC in parentheses):

8P9JA: AA4NC K4MA
 FS5UQ: K3LP N3KS K4EU N8II W3ARS (N7DD)
 K3DI: W3UL W4EE K3DI
 K4JA: K4JA K7SV KE9I N4ZR W3BP WE9V (AJ9C)
 N4RV: K2PLF KT4W ND3A WR3Z N4RV
 NY4A: K2AV K4QPL K7GM N4AF W2CS
 WJ9B at N4AF
 W3GG: W3GG WD3I
 W3LJ: W3LJ W3IDT (K3NCO)
 W3LPL: K1HTV AI3M W3LPL N3OC KD4D K4ZW
 K3RA K4ZA K3MM K3RV W2GG
 W4RM: W4NF W4RM AC5RR K4VV K1SE (W7IY
 K5VG)
 W8ZA: K8OQL WD3A W8ZA
 WX3B: N3FX N3SB WX3B
 ### - missing data

ARRL PHONE DX FINAL

Call	Band	QSOs	Mults	Score
Single Op		High	Power:	
K4ZW		3185	429	4,095,234
K3ZO		2891	384	3,330,432
N8II		1028	251	774,084
N3UM		881	255	673,965
N3HBX	15	1319	121	478,071
N4MM		615	254	468,630
W3DQ		510	236	361,080
NX9T		530	209	329,802
K2UOP		465	223	311,085
W3GNQ		444	193	257,076
W4ZYT		450	189	255,150
KU4FP		400	188	225,600
W3UL		392	190	223,440
N4ZR		517	112	172,704
W9GE	15	557	94	155,403
K4TX	15	479	95	136,515
N4CW		263	161	127,029
W4YE		300	140	126,000
KO1N		257	134	103,314
W3OU		208	123	76,752
N3ZR		134	68	27,132

Call	Band	QSOs	Mults	Score
N8CH		105	69	21,735
W3DF		88	76	20,064
K3JT	40	61	38	6,954
W6NRJ		57	36	6,156

Single Op Low Power

KC8FS		796	266	635,208
W3LL		547	279	455,328
WK3H		462	211	292,446
WA8WV		427	210	269,010
W3ARS		454	191	260,142
KI3O		418	202	253,308
N4JED		360	185	199,800
N3FNE		211	115	72,795
K4FTO		140	82	34,440
N4DWK		125	88	33,000
K4WES		120	81	29,160
KB3KAQ		110	78	25,740
WA3G		103	77	23,793
K3ZE	###	##		25,410
N3XL		86	62	15,996
W0YR		88	51	13,311
K1SO		45	39	5,265
AE4EC		##	##	2,958
W4RQ		20	19	1,140

Single Op Assisted

N3OC		1717	396	2,034,645
W4MYA		1333	406	1,622,376
KE3Q		1005	359	1,082,385
K4YT		894	355	952,110
K4VV		904	343	929,187
K1RH		837	294	738,234
K3KO		706	332	703,176
N3AM		684	286	586,872
W3HVQ		529	284	449,856
W3BW		470	297	418,770
W3YY		441	250	330,750
W4JVN		507	210	319,410
N4RV		449	237	319,239
WM3T		503	184	277,104
K3SV		404	201	243,612
W4HJ		260	161	125,580
N4EL		289	127	110,109
K2YWE		215	154	97,482
N3ND		173	112	57,792
N3HS		121	100	36,300
NE3H		138	###	34,362

Multi-Single

W4WS		942	356	1,004,988
W3LJ		638	262	501,468

Multi-Two

K4JA		5015	557	8,336,697
W4RM		3040	413	3,763,321

Call	Band	QSOs	Mults	Score
K3DI		1455	409	1,780,377
Multi-Multi				
W3LPL		5782	599	10,190,787
W8ZA		1815	430	2,334,900
WX3B		883	307	811,401

Phone Logs:	70	Phone Score:	55,604,947
CW Logs:	59	CW Score:	107,093,067
Combined Logs:	129		
Total Score:			162,698,014

Operators (non-PVRC in parentheses):

K3DI: W4EE W3UL K3DI
 K4JA:AJ9C K4JA K4MA K7SV K9GY KE9I W3BP
 W3LJ: W3LJ W3IDT (K3NCO)
 W3LPL: W3LPL K1HTV K1RZ K3FT AI3M K3MM
 NK3R K3RA WR3Z KD4D K4ZA AC5RR W6AAN
 W4RM: W4NF W4RM K5OF W7IY K1SE
 W4WS: KG4NEP KG4ECI N0KTY
 W2DZO at KG4NEP
 W8ZA: K3DNE K3IXD WD3A K8OQL W8ZA
 WX3B: WX3B K3ZE N3MNM NY3A AK3Z N3FX

- missing data

CQ WPX SSB

Call	Band	QSOs	Mults	Score
Single-Op High Power				
KN1DX		2917	984	7,602,384
N3HBX	15	1350	647	1,859,478
KO1N		726	440	706,640
N3ZR		581	356	343,540
KU4FP		432	289	336,685
NR3X		298	225	159,300
N4MM		248	201	123,213
K3PN		236	178	88,644
W3UL		208	143	65,208
N4TL		142	113	37,742
W3HVQ		62	56	9,632

Single Op Low Power

KI3O		594	327	475,131
W3LL		521	309	435,381
N8II		504	332	424,960
N2NFG		607	335	409,370
N4MO	15	487	373	409,181
N4JED		290	196	124,068
K4EU		169	141	55,695
K3ZE		182	121	43,318
N3XL		160	125	43,125
AE4EC		###	###	39,762
N3FNE		142	103	27,398
K4WES		89	75	14,100
K4FTO		78	69	10,005
WA3G		31	30	1,590

Call	Band	QSOs	Mults	Score
KG4ECI		20	20	840
Single-Op Assisted				
W9GE		505	351	462,618
K4YT		405	292	295,650
K3KO		202	200	113,200
NE3H		103	##	24,158
TB-Wires				
NX9T		1057	523	1,150,077
N3UM		865	507	1,099,683
K3TW		862	507	1,019,070
N3HS		218	180	108,080
Band-Limited/Rookie				
KG4NEP		1295	617	1,873,829
Multi-One				
AC5RR		1825	765	2,939,130
N4CW		154	147	69,825
W4WS		56	53	6,466
Multi-Two				
KM4M		4484	1180	13,390,640

Call	Band	QSOs	Mults	Score
WR3Z		3175	1007	7,381,310
NG3U		2079	775	3,201,525
Multi-Multi				
WX3B		3311	1017	7,106,796
Dxpedition				
OM/W0YR		100	87	16,530
SSB Logs: 43 Club Score: 54,104,977				
Operators [non-PVRC in()]:				
AC5RR: AC5RR K4VV at K4VV				
KM4M: K4JA AJ3M K9GY KD4D NW4V W3BP				
WK4Y (RA3CO) at K4JA				
KN1DX: K4ZW KO1N: K1KO				
N4CW: N4CW (WA2JFK)				
NG3U: KB3KAQ K3DI (NH7C) at K3DI				
W4WS: W2DZO WB4MSG				
WR3Z: WR3Z K3FT N3OC at N3OC				
WX3B: WX3B W2DZO WB4MSG K1RH N3YIM				
W3ARS N3FX N3SB				

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PVRC REFERENCE PAGE Please send corrections to the editor. June 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
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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	k4ja.c.crosslink.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 three locations: Falls Church VA (Parkview Marriot), Oxon Hill MD, and Beltsville MD. Meetings are announced by E-mail or by telephone. All members and non-members interested in membership are welcome. For information contact Ben Shaver, AA4XU, 703-534-4740 or Bill Leavitt, W3AZ, 301-292-5797.

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: Barry Shapiro, WR3Z. H:301-862-2466 barry.shapiro@navy.mil 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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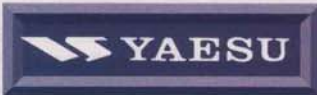
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