Potomac Valley Radio Club Newsletter

November 2003

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

PVRC welcomes John Unger, W4AU, elected at the NW Region's October Meeting, and Chris Plumbee, KG4CZU, elected at PVRCNC's September 29 meeting

Sweepstakes begins 4 PM local time (2100Z) on Saturday, November 1
Phone Sweepstakes begins 4 PM local time (2100Z) on Saturday, November 15
CQ World Wide CW begins Friday, November 28 at 7 PM local (0000Z Nov. 29)

Editor's Note

This month's issue of the Newsletter focuses on upcoming contests, particularly SS. There was a lot more material this month than I could use. Thanks everyone, and keep it coming! Because of e-mail distribution, most readers will actually be receiving it in advance of November 1, hopefully in time to be helpful in SS CW. See you there!

If you haven't done so already, please take a look at the "PVRC Store" ad near the back of the Newsletter. Brian, N1KC, has done a great job of pulling together a fine selection of PVRC items and holding the line at year 2000 prices.

From the President

by Jack Hammett, K4VV

As I write this on October 20, the serious contest season is upon us! Please use your personal leadership to reach out to other PVRC members to encourage everyone to operate to contribute to the total effort. Every score counts to build our competitive standing.

Jim Talens, N3JT led the second phase of our input to the FCC on the CW testing issue, providing Reply Comments, now posted on the PVRC web site. The authors were Rich-KE3Q, Pete-N4ZR, Glenn-N3HUV, Mike-W3MC, Pete-W2CDO, and Jim-N3JT. Many officers and trustees supported with review and comment.

Nat Heatwole, WZ3AR has been named in the news as the "Man who hid box cutters." I called Nat and his dad Tony, N3FX to pass on what the press was asking. I've had calls from reporters from a Charlotte newspaper, the AP, the Baltimore Sun, and today from the Washington Post and the New York Times. I stayed to the facts: good student, many activities, scholarship winner, active radio operator, participant in intense contests, serious person, fine young man. I explained the nature of our sport (when asked), and mentioned the potential for public service that these skills enable. In an email yesterday to Tony I said " We all hope that the situation unfolds in a way that there is no long term damage for Nat. We stand by you both as friends and PVRC associates, whatever the outcome. There may be various opinions about the reported actions. Many will appreciate the initiative and willingness to risk to make an important statement, even if the method was out of the boundaries. One has to admire such boldness, even if misguided. Hope it works out for the best. If some of the reports are true, that the Government had email warning of intent and timing of the actions, then there is some serious lack of followup which puts egg on a lot of DHS and TSA faces. Something positive may come out of this situation. All the best to you and your family."

Contest Season Is here -- Even if you only have an hour or two, get in there and work a few. It's the most fun per minute you can have on your radio!

Contesting as the Solar Indices Plummet (Part III)
By Fred Laun, K3ZO

Well, I hope you all enjoyed the CQWW Phone Contest. Though I am writing this almost two weeks before the contest took place, it appeared that my predictions may have been a bit on the pessimistic side. While working the Oceania CW DX Contest in mid-October I heard a number of loud JA's on 10 meters. This was not really expected to happen; furthermore, predictions were that the solar flux would rise toward the end of the month. I hope this prediction panned out.

Now we have to look forward to SS and the CQWW CW Contest. I have been limbering up my trusty old TS-830-S for the fall contest season because my FT-1000-MP died on October 8 and is currently finding its way to the Vertex-Standard California repair shop. Strange how much more difficult it is to remember how an old rig used to work for me now than it would have been 20 years ago. But I finally got the TS- 830-S working on CW and enjoyed the VK/ZL/Oceania CW DX Contest. And just now I worked BQ9P on 40 meter long path in the late afternoon so I guess the 830 is hearing OK.

And thanks to W2YR for making up a couple of cables for me so I can get my old TS-830-S audio system going again like I had it years ago when people used to tell me what great audio I had.

But getting back to propagation conditions, KT4W told me: "Remember to tell the gang how 40 meters drops out during the wee hours of the morning during low sunspot years."

Good point Ray! We blithely assume that as 10 and 15 and even 20 begin to take a nosedive, conditions on 40, 80 and 160 can only get better. Well, yes and no...

It probably won't happen this fall, but as we get closer to the solar minimum we will begin to notice that on certain paths the MUF even drops below 7 MHz. The two situations where this has always been most obvious to me are the following:

Case #1: You start off at the beginning of the CQWW CW DX contest on 40 meters working Europe. Signals are tremendous and you have a great rate going. Suddenly you begin to notice that the number of loud European signals drops off until only a few EA's, I's and F's remain. Then even they drop out. If you have a 40m beam you can scratch through a fair rate by beaming dog-leg over Africa, but it's not much fun. Suddenly as the sun begins to come up in Europe the loud signals are back again; generally speaking those in Eastern Europe begin to come in first, and then finally the Western Europeans are there.

Case #2: You're running lots of loud W9's and W0's on 40 meters in SS, and then suddenly all you hear are W5's, W6's, W7's and Colorado zeros. Then even most of those drop out, and you're left with California, Oregon and Washington stations only. Eighty meters becomes the only "rate band" in town for several hours in the wee morning.

CQWW CW has one interesting characteristic which affects 40m no matter whether we are in high sunspot years or low: It is the major DX contest closest to the shortest day of the year, less than a month away from it. Therefore you have some interesting openings around sunrise and sunset. In the late afternoon you have the JA's coming in long path from the Southeast; at sunrise you can still work Northern Scandinavians as they are close enough to the zone of permanent darkness so that they continue to have a 40m path to us even at noon their time. Or at the same time you can go long path and feast on a steady diet of UA9's and UA0's, and even UA4's and UA6's. Sometimes both short and long paths are open to the same OH or UA9 stations at this time of day, and if you or they have a beam you can select the path you'd rather use. On other days you find one set of UA9's and UA0's when beaming long path and a completely different set of UA9's and UA0's when beaming short path. As my old housemate Bob, K3EST used to say: "It all depends on the oblast." This is why 40 meters has always been my favorite DX band; so much happens to it through the years.

So now let's get down to concrete predictions for the CW and Phone SS. November 1993 actually provides a pretty good fit for November 2003 as can be seen from Jan Alvestad's web site at http://www.dxlc.com/solar/history/hist1993.html

So what did I do in November 1993 SS? Well on the CW weekend I started on 40, but didn't find the first hour to be that rewarding, though by the second hour 40 was humming. I made a brief excursion to 20 just prior to 0000Z but there wasn't enough volume there and by 0030Z I was on 80. At 0600Z I was back on 40 and at that time the skip was pretty much limited to South Florida, Texas, the mountain states and the West Coast. After that I alternated between 40 and 80 and never made it to 20 until 1600Z. During all of CWSS I only made 26 QSOs on 15 meters and none on 10, and ended up with 1214 QSOs, which for me in a CWSS is pretty good. However I hasten to add that I have never been a good CWSS strategist, so take it for what it's worth. At any rate, I would predict that this year CWSS will be a largely 80, 40 and 20

meter event. I will probably give 20 a try at the beginning and go to 40 as soon as the volume on 20 goes below my comfort level.

How about phone SS? In 1993, I started on 20 and it was good for a couple of hours. After that I tried 40 but could not find a good run spot so after a few QSOs I went right to 75 meters. However 2300Z proved a bit too early for 75 and I was quick to return to 40. Several moves between 40 and 75 proved unsatisfying for me and by 0200Z I was back on 20. From my log I deduce that we had a lot of Sporadic E short skip propagation that year during the Saturday evening of phone SS. This can happen and does not depend on sunspot intensity. Sporadic E propagation seems to operate completely independent of the sunspot cycle. It occurs most prominently during the summer months, but the so-called "minor Sporadic E season" takes place during November, December and January each year. So 20 was unexpectedly useful in Phone SS in 1993. I stayed on 20 until 0420Z and then went right back to 75. Seventy-five carried me along until 0700Z when I was back on 40. At that time the short skip was still affecting 40 and I could QSO Southern Virginia and the West Coast at the same time. I see that I worked a few 10 meter QSOs during the day, but daytime was largely a 20 meter event for me that year. After 1600Z the short skip seems to have disappeared. By 2200Z I was back on 40 and I finished Phone SS with 1833 QSOs, so 1993 was a good SS year for me. That may augur well for what's to come this year.

Let's briefly discuss Sporadic E propagation. What clues tell you that it might be a good idea to give the higher bands more attention on the Saturday night of an SS than you would normally expect? Sporadic E propagation affects all bands including 80 and 40, but since the skip on these latter two bands is usually very short anyway, you don't notice it. When Sporadic E propagation is present, close-in 40 and 80 meter signals have somewhat more rapid QSB than normal, and the close-in signals can be abnormally strong. For example, if from my QTH in Southern MD at 9 o'clock on Saturday night of SS, WX3B in Northern MD on 40 meters has a very loud signal with considerable variation in strength -- a QSB which is fairly fast but not so fast that it could be called "flutter" -- and on signal peaks he is briefly "pinning the meter", that's Sporadic E. When such conditions are observed, a look at 20 meters is definitely warranted.

Now for a look into the 2003 CQWW CW crystal ball. In 1993, I started on 40 meters with the beam on Europe and had a 107 hour, which is a very good start to any contest. What was unusual about that year was that W6's in Zone 3 were already calling me off the back of my beam from the very beginning of the contest. Since the contest begins at 4 PM in California, that is notable. At 0130Z I went to 20 and in one pass across the band put some South Americans in the log, but almost immediately went to 80. Conditions on 80 were OK and I stayed there until 0410Z when I went to 160. I knocked off 30 stations, mostly Europeans, during a one-hour excursion on 160, but that was probably to some extent a waste of time. One-sixty does that to me if it sounds good, and I have to remind myself not to get stuck on the tar baby that 160 can become. Nevertheless, since a couple of those QSOs were SM's, it can be deduced that conditions that year on 160 were better than usual.

I stayed on 80 until 0700Z, when I finally went back to 40. Up to that time I had put 542 stations in the log. I expected to work mainly the European sunrise opening on 40, but I found that a lot of JA's were calling me already even though it was only 4 PM in Japan, so I ended up running mostly JA's and UA0's until 0813Z when I went to bed. In hindsight I should have realized that with W6's calling me right at the beginning of the contest on 40, that probably meant that conditions over the North Pacific would be good later on. Back on the air at 1010Z I put a VS6 and three JA's into the 80 meter log along with some South Americans, and then after working HS and other Asians on 40 I finally hit 20 at 1115Z where I began a long run of Europeans.

Twenty held my attention until 1320Z at which point I went to 15. Running Europeans there occupied me for an hour until I went to 10. After only six contacts on 10 I was back on 15, which leads me to believe that conditions on 10 were stinko. Three of my 10 meter contacts were Europeans, but I am assuming they were worked over Africa on the bent path. Fifteen kept my attention until 1620Z when I moved to 20. I stayed on 20 until 1840Z when I went to 10 to get multipliers. Only South Americans and Caribbean stations were available there and before long I was on 15 where I chased multipliers there, alternating back and forth to 10 and 20 on the multiplier hunt. Finally at 2145Z 15 opened to Japan but only two of the louder JA's were worked before I went to 40 to run Europe. Forty provided a good run until 2245Z at which time another look at 15 revealed that the band was now more open to Japan than it had been and I was able to knock off 24 JA's there before beginning a JA run on 20 at 2320Z which netted 50 JA's and other Asians. At 0055Z I was S&P'ing South Americans on 40 and then was able to run Europeans until 0150Z. I took a nap about then and when I got back up at 0330Z, 40 was mostly Southern Europeans along with a few Africans.

From then on conditions more or less mirrored those of a day earlier. I never did work a JA on 10 the whole weekend though I did manage a ZL, and conditions to Europe on 10 were spotty when they were open at all. I finished out the contest with a rousing two-hour European run on 40 and ended up with a total of 2750 QSOs.

Next month I will touch on conditions to be expected in the ARRL Ten Meter Contest, and delve into matters of propagation theory vs. on-the-air observations. Hint: Theory doesn't explain everything that we observe on the bands.

Book Review
by Don Lynch W4ZYT

Up Two: Adventures of a DXpeditioner
Roger Western G3SXW

Idiom Press
PO Box 1025
Geyserville, California 95441
ISBN 0-9617577-3-6
238 Pages, Trade Paperback

Roger Western, G3SXW, is a DXer's DXer, and his book is a DX chaser's delight. It will be appreciated by seasoned DXpeditioners (who've been there), by aspiring DXpeditioners (for the extensive practical information it imparts), by experienced DXers (who will recall with pleasure working many of the expeditions Roger describes), and by DXers new to the fold (for the wealth of good tips on how it's done). In addition, the book is a rich and welcome addition to the growing number of contemporary histories of post-World War II amateur radio.

Up Two: Adventures of a DXpeditioner briefly chronicles Roger's SWL and ham radio career and then focuses on his DX and contesting activities. While these began with trips to The Isle of Man and to Tunisia in 1968 and 1969 respectively, his DX saga commenced in earnest, when he was assigned by his company to a post in Iran in 1970. He operated from there as EP2IA, with side trips to Afghanistan (YA1R) and 4U1ITU in Geneva. Back in England after the 1979 Iranian revolution, Roger began radio forays to the Channel Islands. These trips were usually associated with major radio contests (particularly the CQ World Wide DX Contests), and Roger was often accompanied by Nigel, G3TXF, who has become a frequent partner in many of G3SXW's DXing activities. Over the years, Roger, Nigel, and various colleagues either won outright or acquitted themselves with distinction in many radio contest events.

Beginning in the late 1980's, G3SXW, with various friends, began to travel to West Africa and other exotic DX locations – Cyprus, Tristan de Cunha, Macau, Nepal, the Seychelles, Mayotte, Wallis and Futuna Islands, Cocos-Keeling, and Chatham Island. The West African visits, usually done in conjunction with some major contest effort, included The Gambia, Swaziland, Ghana, Benin, Ivory Coast, Togo, and Burkina Faso. The core group of contesters who traveled with Roger evolved over the years into the Voodoo Contest Group. The histories of the various expeditions are not presented in straight chronological order, a device which actually adds interest to the way the book unfolds. Although Roger provides statistics, he doesn't dwell on them. He shares anecdotes and local color from the various DX QTHs which adds dimension to each story without detracting from the basic ham radio mission of each visit.

Most of us who have been involved in pursuing DX counters in the past two decades have Roger to thank for at least some of our more exotic countries, particularly if those QSOs have been on CW. In those operations, Roger has consistently been an example of the best in DXpedition operating – from the quality of his CW keying and pile-up work to the integrity and efficiency of his QSLing. There is an excellent chapter in the book dealing with operating pile-ups, which contains invaluable tips for both novice operator and seasoned hand, for both the station pursuing the DX as well as the DX station itself. This information on its own is well worth the price of the book. The chapter on QSLing goes far beyond the basic business of exchanging written confirmations, and discusses the ethics of DXing and the challenges involved in keeping the hobby fair and above-board as we move into the 21st century. Also included is a thoughtful chapter on failed projects with analyses of how certain projects might be achieved in the future.

As an exemplar of doing things the right way, G3SXW is as good as they come. This book will be of special value to aspiring DXpeditioners, to neophyte DXers, to the experienced ham whether he pursues DX with a vengeance or simply dabbles, and to the radio historian, as a chronicle of several of the most important DX operations of the past two decades. I expect it will be read by hams with almost as much pleasure as they might find in cracking the pileup and connecting with G3SXW himself.

DX Contesting
by Ken Claerbout, K4ZW

I don't know about the rest of you but I just love this time of year. Maybe it's my Wisconsin roots but there's something about a chill in the fall air that signals for me the start of the NFL season, fall colors, and of course the contest season. It doesn't get any better than the kickoff with CQWW.

In the past two newsletters, Fred, K3ZO, has been sharing his thoughts about solar conditions for the upcoming season. There is no substitute for experience and if anyone knows the propagation ropes and how to apply them to contesting, he's the guy. Thanks Fred for sharing your knowledge.

When N4ZR asked about doing a follow-up to previous articles on DX contesting, I thought I would share some of my thoughts about contest operating and strategy. Hopefully this will tie in with Fred's articles and help to produce some big PVRC scores!

Probably the single most important step to successful contesting involves knowing the strengths and weakness of both you and your station. This is going to dictate your operating strategy as well as the category to enter. What band(s) have you had success with in the past? Can you squeeze some extra time out of them to take advantage of this strength? For example, I feel like I'm a little more competitive on 80 meters with my 4-square than I am on 40 with a small 2 element yagi. There have been situations where I have spent a little extra time on 80 in order to leverage that advantage. If you are particularly loud on a given band, you may want to consider a single band effort. In some cases this is a good way to pick up a nice certificate or plaque.

As an operator, how many hours during the weekend do you have to operate or how many hours of sleep do you need during a contest? If you know you are going to take X number of hours off during the weekend, naturally you want that to coincide with slow periods. One of the best ways to establish a game plan is to review rate sheets from the previous year. A good place to look is the 3830 archive on www.contesting.com . Naturally I like to see what my competition and some of the local guys did but I also tend to focus on a big multi-multi such as W3LPL. Frank's crew will capitalize on every band opening so it's a good way to get a feel for everything that happened during the 48 hours. You can even go back two years and see if any trends develop.

As I mentioned last time, I like to sit down prior to a contest and map out an operating plan based on some of the aforementioned ideas. I use an Excel spreadsheet to list all 48 hours of the contest in one column. Additional columns are used for choice one and choice two of the bands I want to target during these periods. A forth column is added for comments. Many of the choices are no-brainers but I find it useful to think through an operating plan before the contest and also, I have something to refer to later in the contest when fatigue becomes an issue.

When developing an operating plan, maximizing your operating efforts into Europe is job 1. The next priority is grabbing as many multipliers outside of Europe as possible. The Caribbean and Central/South America offer a host of mults. In fact I often go on Search & Pounce (S&P) missions late Saturday and Sunday afternoon with my beams to the south. Along with a plethora of multipliers, it's not uncommon to produce a rate of 80/90 per hour just by sweeping up all the LU's, PY's, etc. on 10 and 15 meters during this period. Depending on conditions, a good number of multipliers in Asia and the Pacific can be had on 10 & 15 meters in the early evening. Unless you have the muscle power, I would caution against doing this at the very beginning on Friday night. There is no sense in battling the heavyweights for a KH6 or DU when they will likely be around 30 minutes later or the following evening. This falls under the heading of know your station. While it may be tempting, it's counterproductive to spend minutes in a pile-up for multipliers especially at the beginning of a contest. Remember this is a contest so try to stay out of the DXing mode.

Many of the same Asia/Pacific multipliers can be had on the lowbands during the early morning hours before our sunrise. In CQWW many of these stations will be double multipliers (country & zone) so don't get caught sleeping (literally). Some of the Caribbean stations will hit 160 meters at the top of the hour so it's a good idea to do a few sweeps of the band around that time. Even 5 QSO's on Topband will likely produce 8 – 10 multipliers in CQWW.

Here are a few additional thoughts. I often find that one of the slowest periods in a DX contest is Saturday night starting around 7 PM. If you need to get some sleep, this could be a good time. I often spend the last hour or two of a contest S&Ping for multipliers. At this point in a contest the rates are typically low so I feel like I do more for my score by jumping around the bands and vacuuming up whatever mults and new QSO's I can find. Check some of the web sites such as http://www.ng3k.com/Misc/adxo.html for contest operation announcements. For example, if you see a group is planning

a multi-multi operation from 6Y, make a note to yourself and ensure you work them on at least 5 bands. Also keep an eye on your logging program's multiplier list for some of the easy stuff you may be missing.

While pre-contest planning is a good thing, you have to be willing and able to modify or abandon your plan as conditions or situations warrant. Set goals whether it is beating last years score or someone who finished ahead of you. Remember, even the most successful operators run into periods of boredom and fatigue. It's not uncommon to ask yourself at 4 AM Sunday morning, why am I doing this? Understand that it happens and try to push through it. Part of improving in any endeavor is to push a little further than last time. Everyone has their limits so push yourself only to the point that you still have fun and want to come back for more next time. Lastly, be sure to share your contest stories. Tell the rest of us what worked and what didn't. Good luck this fall!

Preparing for SS 2003

By Howie Hoyt, N4AF

There is a nip in the air, the leaves are turning, and the bands are lighting up. Must be contest season ! So are you ready for SS ? Here are a couple of tips that might help:

1) **SO2R** -- For SS a second rig is a huge help.This allows for CQ on one band while S&P on another. This is very significant with the long exchange in the Sweepstakes. Especially on CW, SO2R also allows for Sunday boredom relief ! The actual setup can be fairly simple. By keeping the run rig on a higher band than the S&P rig it is possible to not even require bandpass filters.

If SO2R is new for you, set a run rig up on 40M and leave it there. If one of the two rigs is a boat anchor, use it as the run rig. If your logging program does not support SO2R I would suggest you try either TRLOG for DOS or N1MM logger for Windows. If listening to two receivers on one pair of headphones is intimidating, try (or build) a SO2R box that allows you to gate the audio such that on CQ the headphones are only listening to the S&P rig.

2) **Sending --** Allow your logging program (or DVK) to do the sending for you. In a long contest it is too fatiguing to CQ thousands of times and detracts from what you REALLY need to be doing (S&P).

3) **Starting out** -- Some folks are faster starters than others, do not be discouraged ! Generally speaking, you DO NOT want to use SO2R at the start, it is more useful once you have initially 'drained' the bands. Try starting out in S&P mode (after all, every station is a new one). Start on the highest usable band but keep an eye on 20M or lower- this is where your volume will be. Quickly work thru the highest band (10?) then move down to the next lower one and S&P again. By the time you reach 20, it is time to TRY Cqing. Typically, I try to make it to the lower bands when thinking volume and the higher bands when thinking multipliers. While on the subject of multipliers, I have personally always held to the W4KFC maxim that if you make enough contacts, the multipliers will follow. If SO2R, you will have plenty of time for hunting for that VE8 ! Better yet, you can be calling him while S&P'n on another band.

4) **Time On/Off**. -- A lot of this is personal preference. However a rule of thumb is that the first day (Saturday) you want to operate as continuously as possible with minimal time off. Ditto on bedtime- stay up as late as you can. Things never seem as good on Sunday !

5) **Preparatio**n -- It is very important that BEFORE the contest the station is checked out. Ensure that logging program really works, check the rig on all bands. There is nothing more demoralizing than starting a contest and realizing the antenna is not tuning right or the PC is logging QSOs wrong ! Likewise try to have a good week beforehand -- lots of sleep and moderate exercise. If at all possible a nap after lunch on Saturday can pay dividends late that night. Part of preparation includes notifying the family *well ahead of time* that you will be QRL the SS weekend !

6) **Antennas** -- Try to get some gain to the west on 40M. How about a two element wire beam in the trees or a sloper facing West ?

7) **And most importantly** -- Enjoy- this is our hobby and Sweepstakes gives us an excellent chance to check the station out, test new strategies, work that new multiplier, or exceed that goal. Many of us view SS as one of the big 3: CQWW, ARRLDX, SS. I look forward to working *you* in the SS !

This Just In … more great SS info

With excitement building toward the CW Sweepstakes, it's not surprising that there's some good stuff out on the Internet right now. Two excellent links for your surfing pleasure:

N6TR and K5TR have arranged for the excellent NCCC SS recordings from the 1970's to be put on the web at <http://www.kkn.net/~k5tr/nccc-tapes.html>. Tree has also posted an excellent series of messages on CQ-Contest with great advice on primo SS techniques. Check the CQ-Contest archives at <www.contesting.com> or go direct to <http://lists.contesting.com/archives//html/CQ-Contest/2003-10/msg00147.htmlfor the first one. For the three subsequent installments (so far) , substitute msg00169.html, msg00209.html, and msg00222.html for the last part of the URL above.

[These messages and resources are great stuff. I've been doing CW SS for 40 years now, and some of this was brand new to me. The "tapes" are also pretty funny- editor]

The Toolbox
by Don Daso, K4ZA

A local mentioned to me that he'd drilled some holes in aluminum, only to find they were not round. He wondered how this was possible—he was convinced he had held his drill "steady," but I pointed out several other variables. So, a few words on drilling holes:

- Ensure your drillbit is sharp.
- Make sure the work is firmly clamped or otherwise held immobile.
- Don't try and run the bit too fast for the drill size and work material.
- Don't force the feed rate. In other words, let the cutter do the cutting.
- Put as much of the drillbit in the chuck as possible. Flexibility in the bit itself can cause problems.
- When drilling thin material, it's often helpful to provide some backing clamped to the work, which will help keep burrs to a minimum.
- The drill tip may need to be ground to a different angle, depending on the material being worked.
- An undersize pilot hole is often a good idea. If you're drilling using a mark made with a center punch and the tip of the drill is larger than the mark, you are asking for trouble.
- And, finally, DO use a cutting lubricant. (Kerosene is an excellent lube for machining/working aluminum!)

As a final comment, if you really want a round, as well as accurately sized hole, you are unlikely to get it with a twist drill. Drill undersize, then use a reamer if accuracy is truly important.

I'm often asked how come a white collar worker has picked up so much about metal-working (my career has been decidedly toward the "artistic" side, in film & television). Glib remarks like, "Just lucky, I guess," don't work. The questioner usually really wants to know, thinking he or she can also learn something by following the same path. So, some of the Internet resources found in MY toolbox:

http://www.thomasregister.com/ -- Also check your local library for the printed collection, a source of suppliers, vendors, for literally everything industrial, and beyond.
http://www.metalwebnews.com/ -- There's an amazing amount of information here to sift through.
http://www.machinedesign.com/ -- Penton publication about, amazingly enough, just what the title says. Free subscriptions available (to qualified folks, get creative) and are a source of ideas/solutions, and so forth.
http://www.gardnerweb.com/ -- Publishers of *Modern Machine Shop* (along with other magazines), a data source as well as books & other info.
http://grn.com/grn/ -- Home of the Global Recycling Network, which is an even "more relevant" concept today. Lots of

shop equipment available.
http://www.industrialpress.com/sites.htm -- *Machinery's Handbook* list of resources, etc. If you can't find an answer here….
http://metals.about.com/cs/metalworking/ -- Vast list of links "about metalworking," period.
http://www.bosunsupplies.com/ -- Stainless steel rigging, fittings, & hardware—marine oriented, but useful if you don't like rust, & like to use the best!
http://www.mcmaster.com/ -- Lots of us use & love McMaster-Carr, supplier of over 400,000 items, most of which are in-stock. You can get lost looking at their catalog; the CD-ROM version is on-line, and their service/delivery is without peer.

One of the SC locals was complaining about the high cost of new coax. I suggested using CATV ¾-inch hardline, the short-ends of which are often available simply for the asking from local cable companies. I told him about making connectors, often the hitch in using such low-loss cable. I provided the bibliographic reference to the best solution I've ever seen—N4LI's clever connector, described in *ham radio* for May 1981. (There are also some photographic illustrations of the connector-making process on the Web, at: http://www.hamstuff.com/Hardline/hardlineprep.html if you need visual references). The only potential flaw in using these connectors is the plumbing adapter being threaded on to the hardline. Some folks agree with the idea of threading the coax, using a die. Others believe the copper plumbing fitting is strong enough to "cut its own" threads. I use the die, and we had nearly 30 of these in use at N4ZC's station at various times. In over 12 years, we experienced only one failure, from dissimilar metals corrosion.)

So … what's in **your** toolbox?

VHF and Above Radio Frequencies
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!

Contesting in the digital modes isn't a new concept. Lots of us like RTTY, PSK31 and other digital modes, primarily on the HF bands. Digital-modes contesting is as much a challenge, and sometimes more so, than CW [the 'other' digital mode!] or SSB. Until recently, about the only thing coming close to the HF digital-mode contests on VHF has been High-Speed CW (HSCW) for meteor scatter (MS), both routine and contesting contacts. With the advent of a new software program developed by Nobel Laureate and Radio Amateur Joe Taylor, K1JT, this is no longer the case!

HSCW was originally developed as a meteor scatter communications mode in Europe, where the mode has been in use since the early 1980s. U.S. Radio Amateurs, with a possible few exceptions, became active on this mode in the very late 1980s and early 1990s. The mode became known as the "VHF DX anytime" mode for operation on frequencies 50 MHz and above.

A quest for achieving VHF DX anytime should probably begin with a brief understanding of meteor physics. On any day over 12 billion meteors impact the atmosphere; that's a lot of "rocks!" Meteor velocities range from 10 to 100 km (6 to 60 miles) per second (MPS) depending on whether the earth's velocity in space is adding to or subtracting from the meteor's velocity as it travels around the Sun. Meteors ionize in the atmosphere about 100 km (60 miles) above the Earth's surface, which is at or near the E-layer of the ionosphere. Meteors come in two major forms, "sporadic" and "shower." This discussion focuses primarily on the sporadic type, because these occur nearly continuously, day and night, every day. Meteors have two trail-types, which result from the incineration of the rocks as they come into the Earth's atmosphere, "under-dense" and "over-dense." There is an abundance of under-dense meteors daily, whereas the over-dense is more likely to be the exception, except, of course, during shower periods. The under-dense meteor trail typically provides a very short reflection from the meteor head as it burns, with the trail re-radiating RF rather than reflecting it. The over-dense meteor trail provides good reflectivity sometimes for long enough duration to complete a contact using the SSB mode. There is much more to meteor physics (see, for example Walter F. Bain, W4LTU, "VHF Propagation by Meteor-Trail Ionization," Beyond Line of Sight, published by ARRL) but this is enough for now.

HSCW simply put is the sending and receiving of CW at very high rates of speed, in the 4,000 to 6,000 letters per second (equivalent to about 800 to 1200 words per minute!). Originally recording the signals on a tape and then playing the tape back through a computer sound-card interface was the method utilized to decode the meteor pings. This process was tedi-

ous and took way too long. So, as with many other repetitive process, some crafty Amateurs developed software programs, which could essentially encode and decode several minutes of sent and received messages. This was the method of choice for most serious, non-traditional, MS operators. Enter on the scene one very smart guy, K1JT and that all change almost overnight.

In Joe Taylor's own words, "WSJT is the name of a computer program. It stands for "Weak Signal communication, by K1JT." The program currently supports four principal modes for amateur radio VHF/UHF communication: **FSK441**, designed to use the very brief "pings" of signal reflected from meteor trails in the ionosphere; **JT6M**, also designed for meteor scatter, but especially optimized for the 6-meter band; **JT44**, intended for extremely weak but slowly varying signals such as those found on troposcatter and Earth-Moon-Earth (EME) paths; and the **EME Echo** mode for detecting and measuring your own echoes from the moon. The program also offers a **Measure** mode for testing Sun noise, etc., and an **EME Calculator** to help you estimate the strength of your own and other stations' echoes from the moon.

Looking for a new contest challenge? In my first article, where I encouraged readers to get active and participate, even if only for a few hours, in the September ARRL VHF QSO Party, I gave some examples of what a moderate-size station could contribute to the overall contest and club effort. Well here's another opportunity to dust off that "little" station and try something new, and hopefully exciting! The weekend of October 18/19 was the first "leg" of the ARRL International EME Contest. The second "leg" is the weekend of November 15/16.

The use of WSJT software has made it possible for stations with Yagi antennas of only 2-wavelengths, and power levels as low as 100 Watts, to successfully complete two-way EME contacts! This is in stark contrast to the usually gargantuan antenna arrays and (we can only hope!) maximum legal power of 1500 Watts. Dozens of stations, with configurations or equipment and antennas as outlined above, reported many QSOs with the JT44 mode. Most confirmed contacts were made on the 144 MHz band, several contacts were reported on the 50 and 432 MHz bands.

If you'd like a new contesting challenge, and have a "modest" 2-meter or 70-cm station, I believe one could easily download the WSJT software package from the Internet (http://pulsar.princeton.edu/~joe/K1JT/) and have sufficient time to test it out and become proficient enough to give the EME contest a try.

As always, this has been the BRIEFEST presentation of some pretty exciting advances in Amateur Radio, and I hope readers will take the time to look further into this new facet of the hobby. If you have suggestions or comments, w4xp@arrl.net is where you can reach me.

Crankups Without Climbing
by Bob Biss, W8ZA

A couple of contest seasons ago I decided to change my 2 element 40M beams into 3 element antennas. One of the antennas was on my crank-up tower and the other is on the big tower fixed on Europe. On the crank-up tower the 2 element 40 was above a 5 element tribander, and I wanted to swap them around once the 40 became 3 elements. No small chore working from a ladder nor would it be easy to swap around if I tilted the Tri-Ex tower over, given the length of the boom.

My solution was to borrow some scaffolding from my son, the brick layer. These guys have this stuff stashed away everywhere, and I still have what I borrowed. This is standard stuff in the industry and it is 6 ½ feet high per section. As can be seen in the photos, I have it stacked 4 sections high (26 feet) with a safety rail around the top.

The Tri-Ex cranks down to about 22 feet, so with the top of the safety rail at about 29 feet I am able to crank the tower down, rest the boom of the bottom antenna across the safety rail, remove the antenna, and mount if necessary, and crank down some more and almost rest the next antenna on the top of the scaffolding. By removing the rotator, and antenna mounts, I can continue to lower the mast (using a come-along) and remove antennas on up to the top of the mast if necessary.
Because the scaffolding is free standing it is a little scary when you first get on it. It took me a week to get to the top. I finally tied the four corners of the scaffolding to the fixed portion of the tower and that took a lot of the shake out of the scaffolding and then I virtually became a monkey. I could go up and down with the greatest of ease.

Next time you want to work on a crank-up ("NEVER CLIMB A CRANK-UP TOWER" – W3NRS) get some scaffolding and give this a try, I think that you'll be satisfied with the results.

Photo at left shows W8ZA's crank-up with scaffolding in place below the 3-element 40-meter Yagi.

PVRC DC Area VHF/UHF/HF Activity Night

Every Thursday evening at 0100Z Friday (8:00PM EST) 144.235 Mhz SSB
This is an informal get together, re: contesting, equipment, antennas etc. for all our contest frequencies.

All are welcome, so please check in.

Around the Club

Meeting minutes from the regions

Occoquan Valley Regional Meeting -- August 19, 2003

Our monthly meeting was held at Bill's (W4RM) house. In attendance:

Bill, W4RM, Jack, W4NF, Cliff, W4CE, Mike, KA4RRU, Dean, WA4TK, Ed, K5OF, as well as rospective members Alex, KE4BUS, Dave, W4DAV, and Bob, K4RG

For all 3 of our prospective members it was their second meeting and they were voted into PVRC by unanimous decision.

After initial hellos we went around the table and each person discussed their present plans.

W4NF – Jack operated during the IOTA contest from NA 067, Hatteras Island, at the Salvo Inn Motor lodge. Jack went to Hatteras a few days early to operate the contest, prior to meeting up with the rest of the whole family in Nags Head for a family reunion. He had his new IC746 and laptop and an R7000 vertical borrowed from KA4RRU. Jack's son, Sean, W4MFM, also came with him. He only made about 125 Qs though as there was an intermittent coil in the R7000 that caused the antenna to detune in the slightest breeze. But it was fun, he mentioned that he would never leave home without a dipole again.

From the home scene, Jack had his Dad, W4AD, repair his DX Doubler by replacing all the blown chips. Top Ten Devices said it was irreparable but just $3 worth of chips and the unit is back running. The old chips were removed from the board and sockets were installed in case it blows again. On the tower, Jack, Bill and Sean removed the C3E that was side mounted towards EU on the tower and the A3 below it toward SA. A Sidewinder side mount was then mounted at 50' with a Ham 2 rotor and the C3E was reinstalled. Jack found a deal on a third C3 and converted it to a C3E and that will go on the tower at about 26' towards EU. So that will complete his C3E 3 stack on the tower at 86'/50'/26'.

W4RM – Bill added a third radio, an FT920, to his already impressive station. This will be used in the Occoquan Valley Region's first attempt at a M2 in CQWW SSB. The two run stations will be FT1000MPs with Alpha 99s and the third station will use the FT990 and Jack's Alpha 374A. Bill is finishing up his tower stack in the next month with the installation of a ring rotor at 105' for the top C31XR. K5OF and Bill will be installing that over the next few weekends. The last

antennas to go up prior to contest season will be the full wave 160 Meter Loop, the 580' NE Beverage, and the Rocket Launcher (AB577) with an A4 temporary for the contest.

W4CE – Cliff has been really busy with work and with the twins at home. He is scheduled to operate with the W4IY VHF Contest Team during the September VHF contest from Flag Pole Knob, FM08jm. Also, Cliff does plan on getting back on the air from home with a new coaxial collinear antenna in his back yard. Cliff did make it out to FD this year and helped out the W4IY CW tent as 10 Meter Band Captain (someone had to do it) and on the other CW bands.

KA4RRU – During the meeting we made Mike volunteer to write an article on RTTY contesting for the PVRC newsletter. Mike has been adding new capabilities to his shack to support the RTTY Multi-Multis that he has been hosting. The day of the meeting Mike and Ed, K5OF, had just added an electrical sub panel in Mike's basement to support all the amps needed for the contest. Mike mentioned that he might also be able to come up on the mountain for the VHF contest in September.

WA4TK – Dean talked about adding some new capabilities on the low bands from his small lot by using some of his neighbors' trees (he already received permission) to run an Inverted L on 160 and a shortened vertical on 80 meters. Dean will be making the trip with the W4IY gang up the hill in September for the VHF contest.

K5OF – Ed said he is enjoying married life and has been helping out everyone with their tower and wiring projects. He is saving up those favors for when he retires to NC in a couple years and starts building his multi-tower station. Ed will be operating mostly 2 meter from W4IY in September.

KE4BUS – Alex discussed the facelift he is going to give his present 40' 45G tower. He is going to take it to 80' with a 40 meter beam and possibly stacked C31XRs. The group was providing all kinds of expensive options for him to consider. Alex will be operating with W4IY during the September VHF contest and also with the W4RM Team at CQWW SSB. Alex will be used to run the LUs and other SA stations in Spanish on 10 Meters.

W4DAV – Dave bought a new Coleman Popup Camper that he will use during the September VHF contest on Flag Pole Knob. Additionally he has been using his new Force 12 Sigma 5 antenna at home and having fun.

K4RG – Bob has been using his roof mounted TH3 to work the slowly diminishing number of DX stations on the bands. Bob will be back up on the mountain after missing the past several VHF contests.

Following the roundtable discussion the prospective members were voted in and then talk started on our planned M2 efforts for CQWW and how we may help PVRC overall in our chase of the Gavel and SMC in Sweepstakes.

Occoquan Valley Regional Meeting -- October 15, 2003

Our monthly meeting was held at Bill's (W4RM) house. In attendance:

Bill	W4RM
Jack	W4NF
Dean	WA4TK
Ed	K5OF
Denis	W4DC

This month's meeting focused on CQWW planning for the M2 effort being hosted at W4RM's QTH. This will be the biggest and most focused effort to date with all antenna projects completed and three complete stations operational.

The contest schedule was reviewed and operator and time slots filled based on each person's capabilities and desired operating times. We did have to make concessions for Denis W4DC and Mike KA4RRU as they are now in a rock and roll band and it seems they are in high demand, not only for gigs but by the groupies. They are actually getting paid to play. Check out their website at www.mojorock.com

Next, past contest scores were reviewed and goals were established. A Top Five score was decided on as the goal for the effort and W4NF wrote his 2002 SO(A) score up on the whiteboard in the shack as incentive during the contest to "at least beat this score".

The group anticipated approximately 10 operators available through various times during the contest to man the 2 run stations and the 1 mult station. The W4RM station breakdown for CQWW Phone is as follows:

Run Stations (2 identical stations)

FT-1000MP
Alpha 99 amp
Top Ten Device Band Decoders
Dune Star Bandpass filters
MFJ 434 DVK
Heil Proset Mics

Mult Station (not a true mult station but this radio will make the allotted number of Qs on different bands from the run radio each hour)

FT 920
Alpha 374A
Top Ten Device Band Decoder
Ice 419 Bandpass filter
Heil Proset Mic

Computers and logging
WriteLog and 3 networked computers
Comcast High Speed Internet for Telnet to K4JA

Antennas

160 Meters – Fullwave loop
80 Meters - Force 12 Rotatable Dipole @118'
40 Meters - Force 12 Mag 340N Meter Element beam @ 112'
20-10 Meters - Force 12 C31XRs at 105' and 72', and 4 Element 15-4CD monobander @40'

Mult station antenna – A4S on AB577 @ 40'

Receive antenna – 580' Terminated Beverage to NE

Antenna Switching

Array Solutions SixPack
Array Solutions StackMatch
Array Solutions Second Feedline Option Relay (allows the C31XR stack to be split between the 2 run stations).

Southwest Virginia Chapter - October Meeting Minutes

The Southwest Virginia Chapter PVRC held its October meeting Friday the 3rd. at the Roanoker Restaurant. Present were found Jerry-K1SO, John-K4IQ and his children Cory and Amanda, Nat-N4EL, David-N4JED and his son Robert, Buddy-W4YE and his wife Sarah, and Randy-KC9LC. Our honorary waitress Kim was also back with us for another month.

Discussions of the various QSO parties and contests to date were held throughout the meals. Almost everyone had been on for one or the other with K1SO and N4JED competing against each other in some of the smaller events. With the CQP test that weekend, everyone was reminded there is a club category in the application form. Many of us know hams locally going to PA in the following weeks for the PA QSO Party. A lot of the rover stations in that big gathering are Virginia stations. We will all be looking for them when that party rolls around.

Upcoming PVRC 5-mil contests were discussed and everyone was preparing equipment and antennas to participate. We were fortunate at this end of the state to have very little storm damage from Isabel.

A further discussion of membership followed. We need to pull in some of the active contesters further out on the fringes

to add to our scores. Also need to get our less active members up and running. N4JED will look into a special invitation for those we have missed at recent meetings.

A vote was held to elect a new Secretary to replace N4JED who moved up to Chapter Coordinator. All members not present were nominated and discussed in detail - sorry guys, your fault for not being there. After due consideration, Randy-KC9LC stepped forward at beam point and volunteered to take a crack at the position. Watch for his ramblings and creative dialogue in the next minutes.

Next meeting of the Southwest Virginia Chapter will be Friday, November 7th. around 6pm at the Roanoker Restaurant, Roanoke, VA. Everyone is encouraged to attend and bring their latest scores. Meeting was adjourned to the parking lot.

The **Over the Hill Group** met at the College Park Holiday Inn at noon on October 1, 2003. There was a small number in attendance.. Two regulars were out of town and two more including this writer were side tracked by doctor appointments. Many were not heard from and still may be recovering from Isabel. Those in attendance were K3ZO, K3RO, W2BZR, K3WX, N30C AND W3CB. It was reported that all had good food and there was discussions on many subjects.

Northwest Region Meeting -- October 21, 2003
by Bud Governale, W3LL, Chairman

In attendance were N3HBX, AC5RR, W3TEF, W3BTX, W3BTX's XYL Sandy, KD3SA, K3WC, NE3H, K3TZV, W2CDO, W0YR, W4AU, N3VOP, W2YE, K3DNE, K8OQL, N4MM, K3ZO, W3ZZ, K3LP, K2PLF, N6WHB, W3KHZ and W3LL. Lots of good informal discussion for this impressive turnout took place both before and after the meeting.

Announcements:
W3LL, Bud reminded everyone that we are getting into the thick of the contest season. Every point contribution to PVRC is needed to keep us competitive. We need the participation of all NW members!!! W8ZA provided his regrets for tonight's meeting (Bob sounded well under the weather). His antennas are repaired and everything will be ready for this weekend's CQWWSSB contest. Bud mentioned that the OCT issue of QST had a good article on W3BTX's tower permit process in Altoona PA. Newsletter articles by Fred, K3ZO and others continue to be very timely and informative.

N3HBX, John learned that Loudoun County was planning to restrict tower height to 75' with a one for one set back. A meeting on this proposal is scheduled for 05 November at 6:30PM. N4MM, John has ARRL logbooks available at discount pricing. W3TEF, Roy learned that Marty, W3YOZ suffered a lot of damage from Isabel at the Fowlfest site with 4' of water in his bedroom and a wrecked pier. K3ZO, Fred informed us that W2YE, Dick is the new NCDXA president. W0YR, Mike announced that this was W4AU, John's second PVRC meeting. After describing John's many accomplishments, Mike as sponsor, nominated John for membership. W3LL seconded the nomination followed by a unanimous aye vote. Congratulations John!

From around the table:
N3HBX, John noted that KD4D was the operator at his station for the last few contests. AC5RR - This was Mike's first PVRC meeting. Mike relocated to Germantown from Arkansas. W3TEF, Roy commented that the VHF sprints were lackluster - nobody is on VHF anymore. September produced the best ever contest for W3SO - Tom, KD3SA did a remarkable 3 hour repair on the amp. Roy had 835 Q's logged in the PA QSO PTY. He passed around photos of the fully equipped W3SO mountain top site. W3BTX, Bob has a new tower and antenna and plans to work the Sprint this weekend. He had fun at W3SO. KD3SA, Tom helped out at W3SO getting the Amp working in last week's contest. Tom has a 2M repeater at the W3SO site (~2500'ASL) running 100W on 146.2282 Mhz. K3WC, Dusty's tower is still on the round. He didn't lose any towers that are in the vertical position during the storms.

NE3H, Joe was at K3EAR on South Mountain 2 weeks ago. Capabilities run from 160M to 24 Gigs - 10M & 6M antennas with 50' booms etc. We need to get this group into PVRC. K3TZV, Steve's C4SS Force 12 will soon be going up. W2CDO, Peter asked about the benefits of raising his 40M 1/2 SQ another 5'. He bought an Icom 706 and can now do VHF using a 13 EL 2M antenna. He has a 19 EL 420 MHz antenna coming. Suggestions for 6M antenna and 80M EWE ensued. W0YR, Mike was in the RTTY sprint last week. A contest rule allows working same station again if separated by 3 other QSO's. He gave up keeping track with a score of 3. W4AU, John is our newest member. He participated in the PA QSO PTY accumulating 400 Q's and a sweep for the 2nd time. John got his ticket in 1956 in 3 land. He started contesting in 1995. He's a member of the Loudoun ARC.

N3VOP, Mike announced this weekend is the Carroll County ARC hamfest. A demo contest station will be set up. He plans to be in SS (the club got a sweep last year). W2YE, Dick converted his SB200 to 6M and made 60-70 6M contacts. He logged 300 Q's in the RTTY contest. K3DNE, Ed's first meeting in the last 8-9 months. He took a close proximity lightning strike which wiped out his equipment. Ed is relocating his tower out of sight of the XYL and is installing a 60' AN Wireless self supporting tower for HF wires and VHF antennas. W3MC did the tower work. Ed will be at W8ZA for the CQWWSSB contest. K4OQL, Jerry will be at W8ZA this weekend for the CQWWSSB contest. N4MM, John noted that W3AO had 27K points in 51A class for Field Day. He also commented on 73 magazine being gone and Autocall suspended.

The ARRL BPL issue and a book on Wayne Green was discussed. John worked the WAE contest. In the CQVHF contest he had 350 Q's on 6M. K3ZO, Fred's FT1000MP failed on 08 October. He'll be using his TS830S for the upcoming contest(s). Fred had about 100 Q's in the VKZL contest and 200 plus Q's in the German contest. W3ZZ, Gene did not do much in the VHF contest. He did roving with Owen at the WVA/VA line and made 100 Q's from home the next morning. Last weekend Gene went to K2UYH for moon bounce experience with Al's 28' diameter dish. He made 75 Q's on 432 MHz and 1296 MHz. Al uses an IMSAI 8080 keyboard to send CW. Gene will not be in SS this fall because no HF antennas are up. Gene commented on Software Defined Radio sounding good.

K3LP, Dave travels extensively on business and enjoys reading our NW newsletter. Dave met with Nat, WZ3AR and dad, N3FX and reports both are doing fine. Last February Dave was at VP5 which took 1st place in Multi-2 and 13 Q's short of a NA record. The record would have been broken if a network card had not failed. Dave did an assessment of W1UQ, Mort's St. Martin residences and determined the 1500'ASL location would be excellent for a Multi-2 contest station. Antennas will be going up there for NOV CQWWCW and ARRL CW contests. During the 23 March to 22 April period, Dave will be 3D2 in Fiji, then T30 (West Kiribati) for CQWWWPX and finally T33 (Banaba Island) for another 12 day's of DXpedition. WOW!!! K2PLF, Marty just flew in from California and came directly to the meeting - thanks for the dedication. His Quadra is back to Yeaaesu for repairs. Marty was at the W3SO operation and will be on for the upcoming contests. W3KHZ, Art is working on two towers and is looking for a source to sandblast them prior to regalvanizing.

N6WHB - Somehow we missed Patty, Marty's XYL when we went around the table. Since she signed in as non member, we may have overlooked an opportunity to vote in a new member. W3LL, Bud's computer was down for much of the summer. He entered his paper logs for FD, IARU, CQWWVHF, MDQSOPTY, NAQP and WAE into the computer and uploaded the balance of 10K QSO's to LoTW. About 400 confirmations were recorded. Dipoles in trees were re-strung.

The meeting adjourned at 8:35PM and reverted to informal discussions. The next NW Region meeting is Tuesday, 18 November.

PVRC/NC Meeting Minutes:
September 29 2003 (Burlington, NC) and
October 2 2003 (Cary, NC)

Meeting with Western brethren 29 Sept 2003 at Golden Corral in
Burlington, NC
K2AV, KG4ECI, N0KTY, KG4CZU, W2DZO.
First meeting for KG4ECI and N0KTY. Second meeting for KG4CZU, and voted into membership. Topics mostly about preparing for new chapter, but also had an extended discussion on usefulness of wire antennas and tailoring them for individual situations. There has been a great deal of recent tower work and they are rip-roaring for the WW SSB.
73, K2AV
---
2 October 2003, Golden Corral, Dillard Drive, Cary
Note: Ryan's Steakhouse is no longer, so until we decide otherwise we'll
be meeting a few blocks down Walnut Street at the Golden Corral.
Directions on http://pvrcnc.org

Members Present: WW4M, K3KO, NX9T, N4TL, K4QPL, K4WES, K2AV Regrets: AE4EC, K4HA
Pre-meeting topics of discussion: Rush Limbaugh, LOTW, running cables underground, DX
WW4M - has been working with the NC State student club again this year. He also reported he has renewed the pvrcnc.org domain for $29. K4WES - hopes to get his rotor this week and be on the air for CQWW phone. K4QPL - has been having fun w/ NAQP-CW and the recent CW Sprint (for which he noted it's easier to find a freq on CW than in a phone Sprint). His 40m wire beam came down in the January ice storm, but he'll have it back up in time for SS. N4TL - took

both antennas off his tower for the hurricane, and used this as an opportunity to recheck all of the hardware on his beams. Lately he's been chasing band-countries. K3KO - said he got off light in Isabel. He's been rebuilding some Hygain traps before he puts his TH2 back up. NX9T - no major antenna problems. Plans to be on the air for CQP. K2AV - his C31 was just spinning around the mast during the hurricane, but luckily there was no cable damage. N4AF/NY4A (relayed by K2AV) - was on the western side of Isabel's path. Howie brought down all of his beams except the shorty-forty at 135 feet (at which point it was too breezy), as well as the mast supporting The Monster Quad © (http://www.qsl.net/n4af/Dsc01471-01.jpg). Afterwards he took two days to rebuild the XA before putting it back up. The 2003-04 season also marks a switch at NY4A from TR to WriteLog (pause for cheers, moans).

AE4EC - couldn't make it tonight, but writes that he plans to be on for CQWW SSB.

Club Business:
K2AV reported on the tweaking of the circle so it now extends well beyond Winston Salem and High Point. He said before the move was officially endorsed it was considered very carefully so we would not lose anyone. In addition to benefiting the folks to our west (which Guy likes to point out is the largest population center in NC), it will also help out the club by including hams in the Charleston, WV area. The gain in the west was accomplished by minimizing maritime mobile coverage east of Delaware. Adjusting the circle now makes possible additional growth in the Winston-Salem area (which gained a few new members at their most recent meeting), and as such a mitosis-like division of the NC chapter into NC-East and NC-West. The people to our west say they would like to maintain a relationship that is at least as close as it has been until now, and perhaps we could hold joint meetings for our annual May awards dinner and continue to share a website. K2AV plans to announce a joint East/West meeting during the next month, perhaps in Burlington, so everyone can vote on this.

K4QPL officially moved that, in the event the Triad group forms its own chapter called PVRC/NC-West, that group centered in Raleigh shall change its name to PVRC/NC-East. The motion was seconded by WW4M. We'll vote on the split at the next (joint) meeting. K4QPL also reminded people that QTH.NET is an important resource, and he encouraged members to give their support. We closed w/ talk about the nature of K4JA's tower failure during Hurricane Isabel and the role that twisting may have played, and its implications for engineering towers to survive future storms.

5M Scores
Compiled by W2GG

WAE CW 2003 FINAL
October 16, 2003
Single Op - High Power

CALL	QSOs	QTCs	MULTs	SCORE
N4AF	1589	1582	158	1,303,281
KD4D	1499	1483	163	1,237,530
K4JA	1395	1393	164	1,156,605
W3BP	1105	1070	124	627,130
N4CW/1	750	748	114	404,190
K3DI	559	554	121	320,544
K4GMH	603	601	110	318,795
N4ZR	445	444	###	157,353
W3HVQ	311	308	87	137,814
K2UOP	182	180	72	60,287

Single Op - Low Power

CALL	QSOs	QTCs	MULTS	SCORE
WJ9B	834	832	124	510,234
K7SV	584	575	115	326,838
N8II	568	541	109	280,324
W3CP	139	136	125	34,375
K3SV	102	97	43	20,497
N4MM	32	20	21	2,184
N4JED	5	0	5	50

Logs: 17
Club Score: 6,898,031
Operators:
K4JA - K9GY at K4JA , KD4D - at N3HBX

WAE Phone Final
October 16, 2003
Single Op - High Power

CALL	QSOs	QTCs	MULTs	SCORE
KD4D	1912	1710	163	1,517,618
W4MYA	1886	1668	151	1,371,141
K3DI	640	638	118	374,161
W3HVQ	304	303	82	122,614
NX9T	366	362	68	110,200
K3SV	262	257	83	104,319
K2UOP	153	150	65	44,541
N4MM	135	132	114	31,773
N3FNE	30	10	16	1,280
K3GV	26	0	16	832

Single Op - Low Power

W0YR/4	904	903	113	466,206

W3LL	201	153	###	78,234	Logs PH: 15 PH Score: 6,611,626
N4JED	70	57	61	7,747	CW: 17 CW Score: 6,898,031
					Combined Logs: 32 Combined Score: 13,509,657
Multi-Op					
K4JA	2230	2088	174	1,986,280	Operators:
WX3B	641	626	121	394,680	K4JA - K4JA K9GY KE9I W3BP
					KD4D - at N3HBX
					WX3B - W3JJH K1RH KB3GHE WX3B
					### - missing data

ARRL September VHF Contest
October 16, 2003

Call	Power	Bands	QSOs	Mults	Total
Single Op					
W4RX	H	11	650	259	318,311
N3OC	H	6	472	148	106,708
K2UOP	H	7	370	142	80,798
K3ZO	H	2	375	84	31,500
W3ARS	#	#	###	##	9,487
N3II	L	2	181	48	8,688
N3UM	L	2	126	37	4,662
N3AM	L	3	82	32	2,752
K3DSP	L	3	64	33	2,145
N4MM	#	#	54	27	1,458
W2YE	H	1	67	19	1,273
WM3T	L	2	38	23	874
W3CB	L	1	37	16	592
N3FNE	L	1	24	12	288
N4JED	L	#	19	6	114
Rover					
W3IY	H	11	968	153	307,683
Multi-Op					
W3SO	H	4	1208	239	375,947

Logs: 17
Club Score: 1,253,280
Operators (non-PVRC in parentheses):
W3SO: WR3Z W3BTX K4VV K2PLF AI3M K3IXD
K3RUQ W3PAW KD3SA W3TEF W3YOZ
- missing data

The PVRC Store

The **PVRC Store** is reopened for business with a selection of apparel and accessories for **PVRC Members**, which we hope will please and will enable us to "show the colors" of our fine organization and proudly display the logo of an esteemed and accomplished group of amateur radio contesters. We hope you will consider placing an order.

We have, with no small effort, been able to hold the line on prices from our last order in early 2000. In addition to the basics being offered, we are working on a long sleeve, light blue or white dress shirt with an embroidered PVRC logo for about $30.00, in sizes up to 4X. Please let me know if you are interested and I will include it in next month's advertisement.

Item No. 1 - PVRC Tee shirt, white color, with a pocket and a large, 3 color, silk-screened PVRC logo on the back and a small, 3 color, silk-screened PVRC logo over the left breast.
Circle Size M, L, XL _____@ $14 each; XXL _____@ $16 each = $_____

Item No. 2 - PVRC Golf shirt, white color, with a small, 3 color, silk-screened PVRC logo on the right breast and a pocket on the left. Call sign and name (in blue) to be embroidered over the pocket.
Circle size M, L, XL _____@ $26 each; XXL_____@ $28 each = $_____
Name and Call sign (Print clearly) _____

Item No. 3 - PVRC cap, blue with silk-screened PVRC logo. One size fits all.
Quantity _____@ $8 each = $ _____

Item No. 4 - PVRC Coffee Mug , white, with three color PVRC logo and call sign (set in red Helvetica , bold type) on both sides of the mug. The mug is microwave and dishwasher safe. (We must order a minimum of 24 mugs, so we don't order them very often. Don't miss this chance!) Can be ordered without callsign.
W/callsign _____@ $13 each; w/o call sign_____@$10 $_____
Call sign (Print clearly) _____

Item No. 5 - PVRC Lapel Pin. One inch diameter with PVRC logo in three colors. Silver back and pin clasp.
Quantity_____@ $5.00 each = $_____

Delivery/ Shipping and Handling
All items can be picked up at my home or, with advance notice, at a regular club meeting, at no cost. If you want items shipped to you, the charges for UPS delivery are as follows:

Mugs: $4 each x _____quantity = $_____
Lapel Pins: $ 2.50 each x _____quantity = $_____
All Other Items: $5 for one item, $8 for two or more items, including pins = $_____

TOTAL FOR ITEMS ORDERED $_____
TOTAL SHIPPING AND HANDLING $_____
GRAND TOTAL (Check for this amount enclosed) $_____

Make checks payable to Brian E. Bayus, and mail along with your order form to:
Brian E. Bayus, N1KC, 2521 Heathcliff Lane, Reston, Virginia 20191-4225
Any questions: call me at 703-264-1180, or send an email to: n1kc@arrl.net.

Deadline for PVRC Shirts, Mugs, etc.orders is Nov.15th. Haven't had the response we expected, so please consider placing an order right away. May be some time before we order again. (Please print)

NAME:_____ CALL:_____

ADDRESS:_____

CITY_____ STATE_____ ZIP_____

PVRC REFERENCE PAGE Please send corrections to the editor. November 2003

PVRC OFFICERS:

President	K4VV	Jack Hammett	540-882-3188	k4vv@aol.com
VP-North	N3OC	Brian McGinness	301-924-1712	n3oc@wirelessinc.com
VP-South	K2AV	Guy Olinger	919-362-9461	k2av@contesting.com
Secretary	W2GG	Bob Dannals	410-472-2004	rfd@jhu.edu
Treasurer	WR3L	Dave Baugher	410-DX1-WR3L	wr3l@arrl.net

Trustees: K3MM KE3Q N3RR N4ZR W4MYA W4ZYT N4AF K4IQ ND3A W3PP N1KC

PVRC Charter Members (* =SK) W3GRF*, W4AAV*, W4KFC*, N0FFZ*, W4LUE*, W7YS, VP2VI/W0DX*, W3IKN, W4KFT

PVDXSN Packet Network

PVRC Reflector administered by N4AF http://mailman.qth.net/listinfo/pvrc, postings to pvrc@mailman.qth.net (Members only, if your callsign is not part of your email address, send an email to n4af@qsl.net to subscribe.)**PVRC Dues**

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, k3di@arrl.net. Send your inputs to him.

W3LPL	Glenwood MD	145.590, 441.250	W3IP	Crownsville MD	145.570
WR3L	Baltimore MD	145.610, 440.950	N3RR	Rockville MD	145.510, 441.325
K3SKE	Frederick MD	144.930, 441.125	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	145.090

The system is sponsored by the Potomac Valley DX Spotting network except those marked with an asterisk are independently funded by each SYSOP.

PVRC MEETINGS

Central Region -- Regional Coordinator Brian McGinness N3OC 301-924-1712 n3oc@wirelessinc.com
Meetings are always the second Monday of each month, except June, July and August. Meetings alternate between MD and VA locations. January, March, May, September and November are in Temple Hills, MD at the Church of the Nativity. February, April, October and December are at the Patrick Henry Library on Route 123 (Main St.) in Vienna, VA. Pre-meeting dinner get-togethers are held at Topolino's Italian restaurant on Old Branch Ave. before the MD meetings, and at the Outback Steakhouse on Route 123 before the VA meetings, usually around 6pm. Talk in is usually available on the 147.00 repeater.
Northwest Region -- Regional Coordinator Bud Governale W3LL 410-666-9189 w3ll@arrl.net
Meets monthly on the third Tuesday. Dinner around 6pm, meeting at 7pm at the City Buffet, 1306 W. Partick St., Frederick MD, located to the rear of the shopping center behind Mountain View Diner.
North Carolina Region -- Regional Coordinator Jim Price WW4M See http://www.pvrcnc.org .PVRC/NC meets the first Thursday of each month, September through May, with an additional meeting in April at the Raleigh hamfest.
Tidewater Colony -- Contact W4ZYT 757-457-5181 or email w4zyt@exis.net for additional info.
Meeting concurrent with the Virginia DX Century Club at Ryan's Steakhouse, on Battlefield Blvd. In Chesapeake, VA. Take the Battlefield Blvd South (VA 168) exit off I-64. Meetings are the third Tuesday of the month around 6:15-6:30pm.
Northeast Region -- Regional Coordinator Dave Baugher WR3L 410-DX1-WR3L wr3l@arrl.net
Eastern Shore DELMARVA Region -- Dallas Carter W3PP 302-875-0550 Ludal@dmv.com
Southwest VA Region -- Regional coordinator Mike Barts N4GU 540-641-1626 n4gu@vt.edu
Meets Sept-June. Meetings are at the Roanoker Restaurant in Roanoke, VA dates vary, contact N4GU for latest info.
BWI Region -- Contact Ike Lawton W3IKE 410-263-2830 or Howard Leake W6AXX 410-465-7008 w6axx1@starpower.net
Weekly breakfast Weds. 7am at Basil's Deli Port (410-850-4333) on Elkridge Landing Rd 1/4 mile south of Wintergreen Rd.
Over-the-hill Lunch -- For info contact Ben Shaver AA4XU 703-534-4740 or Bill Leavitt W3AZ 301-292-5797.
Meetings are held monthly at three locations: Falls Church VA at the Parkview Marriott, Oxon Hill MD, and Beltsville MD. Meeting schedules are available by telephone or email. All are welcome.
Pennsylvania Region -- Steve Gutshall K3TZV 717-763-0462 k3tzv@paonline.com
Rappahannock Region -- Steve Bookout NR4M nj4f@erols.com or Larry Schimelpfenig K7SV k7sv@va.prestige.net
Occoquan Valley Region -- Jack O'Mara W4NF 703-791-3302 (h) or 703-739-7636 w4nf@comcast.net and Cliff Deel W4CE 703-491-0841 W4ce@aol.com
Central Virginia Contest Club -- CVCC Pres. Roy Davis WK4Y 804-741-9315 rdd@i2020.net Monthly meetings 2nd Tuesday each month 6pm at the River City Diner on Hugenot Rd (dinner) and 7:30pm at the First Mennonite Church on Staples Mill Rd, Richmond VA (meeting). Talk-in on 145.43, PVRC regional coordinator W4ML.
Southern MD Region -- Barry Shapiro WR3Z 301-862-2466 shapirobj@navair.navy.mil meets at N1WR's home.

Shenandoah Region
Bill Hinkle KV3R 304-567-3138 kb3aug@juno.com

Carroll County Region
Jim Nitzberg WX3B 410-374-9233 Nitz@selectsa.com

Laurel Region
Pud Reaver W3YD@arrl.net Laurel Region meets concurrently with the Laurel Amater Radio club at the first LARC meeting of each quarter.

December 8 PVRC annual holiday dinner, Olive Garden, Tyson's Corner VA 6pm.

5 Million Club Competition Events
January ARRL VHF Sweepstakes
January CQ 160m CW
February ARRL DX CW
March ARRL DX SSB
March CQWW WPX SSB
May CQWW WPX CW
August 9-10 DARC WAEDC CW
September 13-14 DARC WAEDC SSB
September 13-15 ARRL VHF QSO Party
October 25-26CQWW SSB
Nov 2-3ARRL Sweepstakes CW
Nov 15-16 ARRL Sweepstakes SSB
November 29-30 CQWW CW
December 5-7 ARRL 160m
December 13-14 ARRL 10m Contest

Hamfests (thanks to Glenn, K3SWZ)

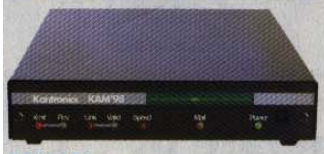
September 20	Allentown, PA
October 4	Lancaster, PA
October 11	Carlisle, PA
October 12	Wrightstown, PA
October 19	Sellersville, PA
October 26	Westminster, MD

12 STORE BUYING POWER

HAM RADIO OUTLET

WORLDWIDE DISTRIBUTION

KANTRONICS



KAM '98

- Single port VHF or HF
- RTTY, CW, Packet, GTOR, AMTOR, WEFAX
- GPS, NMEA-0183 compatible
- 6-16 VDC, DB-9 connector port

Call Now For Your Low Price!

KAM XL

- DSP modem offers great performance on Packet 300/1200,G-tor,Pactor, Amtor,PSK-31
- RTTY, Navtex, ASCII, Wefax, CW, GPS NMEA-0183 and more!

Call Now For Special Pricing!

KPC-3 Plus/KPC-9612 Plus

High-performance, low power TNC. Great for packet, and APRS compatible.

Call For Special Low Price!

Detailed illuminated map shows time, time zone, sun position and day of the week at a glance for any place in the world.Continuously moving – areas of day and night change as you watch.
• Mounts easily on wall. Size: 34 1/2" x 22 1/2".

Reg $1295. SALE $999.95

ICOM

IC-R8500 Wide Band Receiver

- 100 kHz - 2.0 GHz*
- Commercial Grade • All Mode
- IF Shift • Noise Blanker
- Audio Peak Filter (APF)
- Selectable AGC Time Constant
- Digital Direct Synthesis (DDS)
- 1000 Alphanumeric Memories
- PC Controllable w/Optional Equipment

Call For ICOM Receiver Specials

FREE IC-UT106 DSP thru 12/31

IC-R75 Wide Band Receiver

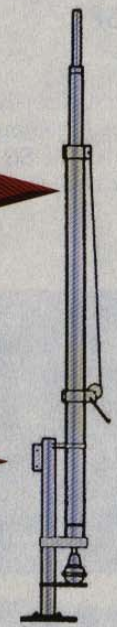
- 100 kHz - 60 MHz*
- Commercial Grade • All Mode
- Synchronous AM Detection (S-AM)
- Optional DSP w/Auto Notch Filter
- Triple Conversion
- Twin Passband Tuning (PBT)
- 1000 Alphanumeric Memories
- Up to Two Optional Filters
- PC Controllable w/Opt. Equipment

IC-R3 Wide Band Receiver

- 500 kHz - 2.45 GHz*
- 450 Alphanumeric Memories
- CTCSS w/Tone Scan
- 4 Level Attenuator
- Telescoping Antenna w/BNC Connector
- Lithium Ion Battery
- 2" Color TFT Display
- Audio/Video Output
- Four Way Action Joystick
- PC Programmable w/Optional Cable & Software

*816-901.995 MHz blocked; unblocked versions available to FCC approved users. FM video range for the IC-R3 is 900-1300 MHz & 2250-2450 MHz

US TOWER



Shown with Optional Rotor Base

MA-40

40' Tubular Tower

REG. $1007
SALE $849.00

MA-550

55' Tubular Tower

Handles 10 sq.ft. at 50mph
Pleases neighbors with tubular streamlined look

Reg.$1704
SALE $1399.00

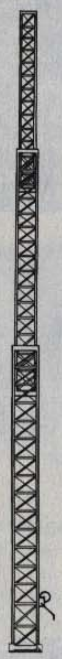
TX-455

55' Freestanding Crank-Up
Handles 18 sq. ft. @ 50 mph
No guying required
Extra-strength const.
Can add raising and motor drive acces.

Towers Rated to EIA Specifications
Other Models at Great Prices!

Reg.$1915
SALE $1579.00

Buy From HRO, World's Largest U.S. Tower Dealer



All US Towers shipped by truck; freight charges additional

CALL TOLL FREE

Phone Hours: 9:30 AM – 5:30 PM
Store Hours: 10:00 AM – 5:30 PM Closed Sun.

Toll free, incl. Hawaii, Alaska, Canada; call routes to nearest store; all HRO 800-lines can assist you. If the first line you call is busy, you may call another.

West	800-854-6046
Mountain	800-444-9476
Southeast	800-444-7927
Mid-Atlantic	800-444-4799
Northeast	800-644-4476
New England	800-444-0047

Look for the HRO Home Page on the World Wide Web
http://www.hamradio.com

AZ, CA, CO, GA, VA residents add sales tax. Prices, specifications, descriptions, subject to change without notice

ANAHEIM, CA
(Near Disneyland)
933 N. Euclid St., 92801
(714) 533-7373
(800) 854-6046
Janet, KL7MF, Mgr.
anaheim@hamradio.com

BURBANK, CA
2416 W. Victory Bl., 91506
(818) 842-1786
(800) 854-6046
Eric, KA6IHT, Mgr.
Victory Blvd. at Buena Vista
1 mi. west I-5
burbank@hamradio.com

OAKLAND, CA
2210 Livingston St., 94606
(510) 534-5757
(800) 854-6046
Mark, WI7YN, Mgr.
I-880 at 23rd Ave. ramp
oakland@hamradio.com

SAN DIEGO, CA
5375 Kearny Villa Rd., 92123
(858) 560-4900
(800) 854-6046
Tom, KM6K, Mgr.
Hwy. 163 & Clairemont Mesa
sandiego@hamradio.com

SUNNYVALE, CA
510 Lawrence Exp. #102
94085
(408) 736-9496
(800) 854-6046
Howard, KE6PWH, Mgr.
So. from Hwy. 101
sunnyvale@hamradio.com

NEW CASTLE, DE
(Near Philadelphia)
1509 N. Dupont Hwy., 19720
(302) 322-7092
(800) 644-4476
Rick, K3TL, Mgr.
RT.13 1/4 mi., So. I-295
newcastle@hamradio.com

PORTLAND, OR
11705 S.W. Pacific Hwy.
97223
(503) 598-0555
(800) 854-6046
Leon, N7IXX, Mgr.
Tigard-99W exit
from Hwy. 5 & 217
portland@hamradio.com

DENVER, CO
8400 E. Iliff Ave. #9, 80231
(303) 745-7373
(800) 444-9476
Joe, KDØGA, Mgr.
John, N5EHP, Mgr.
denver@hamradio.com

PHOENIX, AZ
1939 W. Dunlap Ave., 85021
(602) 242-3515
(800) 444-9476
Gary, N7GJ, Mgr.
1 mi. east of I-17
phoenix@hamradio.com

ATLANTA, GA
6071 Buford Hwy., 30340
(770) 263-0700
(800) 444-7927
Mark, KJ4VO, Mgr.
Doraville, 1 mi. no. of I-285
atlanta@hamradio.com

WOODBRIDGE, VA
(Near Washington D.C.)
14803 Build America Dr. 22191
(703) 643-1063
(800) 444-4799
Steve, N4SR, Mgr.
Exit 161, I-95, So. to US 1
woodbridge@hamradio.com

SALEM, NH
(Near Boston)
224 N. Broadway, 03079
(603) 898-3750
(800) 444-0047
Chuck, N1UC, Mgr.
sales@hamradio.com
Exit 1, I-93;
28 mi. No. of Boston
salem@hamradio.com