Potomac Valley Radio Club Newsletter

February 2008 Edition

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Good Luck To All in the Spring Contest Season!
GO PVRC!

From The President
by Ken, K4ZW

The 2008 contest season is already in full swing and activity picks up as we head into February with the NCJ sponsored North American Sprints, CQ WPX RTTY, ARRL CW, and CQ 160 SSB to name a few. Those who took time to operate in the CQ 160 CW contest were rewarded with very good conditions. Our turnout was very good and PVRC members ran up some big scores. (As I type this, W4ZV just posted his score from VY2ZM. Wow!) Hopefully that will carry over to the SSB weekend although 160 SSB can challenge even the heartiest of operators.

I took opportunity of the ARRL's announcement of expanded Radiosport coverage to send those involved an e-mail voicing support for their initiative and asking how PVRC can help. You might see it as a letter in QST. I received a nice response from QST Managing Editor Joel Kleinman, N1BKE with guidance on what the league hopes to do. He writes "Our goal is to provide useful information and feature articles that appeal to all contesters, with an emphasis on material aimed at those who are new or relatively new to contesting. We welcome the chance to review radiosport-related articles for possible publication in QST (or on our Web site) – there's an author's guide at www.arrl.org/qst/aguide." So I'd like to take this opportunity to ask the writers amongst us for their help. We have a lot of talented people in this club and I'd like to see it showcased while helping to promote Radiosporting. For years the contest community has bemoaned the lack of contest coverage in QST. Now is our chance to fix that.

And finally a bit of last minute news. PVRC will again sponsor pizza for the Contest Super Suite (http://contestsupersuite.com) on Friday night at Dayton. Note - the web page has not been established yet. You will have to check back later. For those going to Dayton make sure to stop by, get your share of pizza, and show the club colors!

Editor's Prerogative
by Eric W3DQ

This time of year, we contesters are looking back at our participation in the fall contest season, using that knowledge – lessons learned – to plan and strategize for the upcoming spring season. Some amongst us have been busy operating in the smaller or more specialized contests, from single-band, single mode 'tests through sprints and RTTY contests.

This year has been little different. In addition to working at improving our stations and skills, there has been a tremendous amount of attention paid to the sport itself. Issues of ethics, fair play and cheating have come to the surface and debated as seemingly never before. Not that these issues have never been discussed. They certainly have. Jamie, NS3T, has been writing about this subject since he started his website, www.radio-sport.net. For the first time, however, the credibility of those making accusations without concrete evidence, including many well known and well-respected contesters, was questioned. It took a bold move by Tonno, ES5TV to present the evidence, naming names and callsigns. This was followed by the release of a fascinating study by Sylvan Katz, VE5ZX and José Nunes, CT1BOH, Two Radio Event Signatures. This report, sponsored by Radio Sport Canada analyzes logs from the CQ WW contests to discover the signatures stations and identify their mode of operation, with a particular look at SO2R.

Coincidence with these was the release of CW Skimmer by Alex, VE3NEA. This software, reviewed in this Newsletter by the PVRC's own Pete Smith, is an extremely powerful tool both for the active, on-air

community and, in the contest environment, the contest sponsor.

Add to this discussion the position taken by the RSGB Board on contesters and bandwidth (reprinted in this issue) and N0AX's commentary from *The ARRL Contester's RateSheet*, and you might agree that contesting and radio sport in general is going through a critical self-evaluation, the long-term ramifications unknown as we move into uncharted territory. That as a result of the investigation by Jamie NS3T and the information he posted on http://www.radio-sport.net and the discussions on the various email reflectors (notably Topband and CQ-Contest and information, well-known contesters have submitted their CQWW 160 CW logs as checklogs is, in this writer's opinion, a good thing.

On to other things... if the weather holds, I hope you'll be taking the opportunity to fix, enhance or replace antennas, clean up the shack and start planning for the upcoming contests.

Thanks to this month's contributors for the excellent material they submitted.   Don't forget to send in your contribution for upcoming Newsletters. The address to send is **pvrc @ his.com**

Good Luck to all in the CQ WPX RTTY, ARRL DX CW, CQ 160 SSB and whatever contest you participate in.

NCDXF/IARU International Beacon Project

Much has been written about the NCDXF Beacon project, so we won't repeat it here. Instead, this is an overview on how the system works and how you can use it. If you'd like additional, more detailed information, go to the Beacon website, http://www.ncdxf.org/beacons.html

The transmission cycle repeats every three minutes. Add 10 seconds to the beacon start time for each band. For example, at 2131Z, JA2IGY will transmit on 20 Meters; VK6RBP will be on 17; ZL6B will be on 15, and so on.

Beacon	Time	Beacon	Time
4U1UN	0:00	4S7B	1:30
VE8AT	0:10	ZS6DN	1:40
W6WX	0:20	5Z4B	1:50
KH6WO	0:30	4X6TU	2:00
ZL6B	0:40	OH2B	2:10
VK6RBP	0:50	CS3B	2:20
JA2IGY	1:00	LU4AA	2:30
RR9O	1:10	OA4B	2:40
VR2B	1:20	YV5B	2:50

Frequency	Add
14.100	0 sec
18.110	10 sec
21.150	20 sec
24.930	30 sec
28.200	40 sec
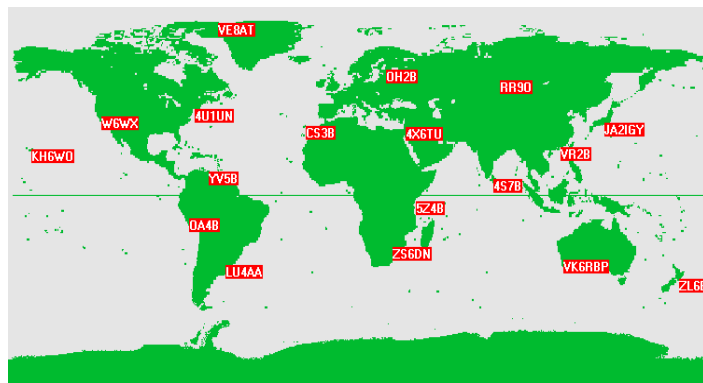
Faros — automatic monitoring of the NCDXF beacons

Alex Shovkoplay, VE3NEA, has created a software program that will automatically monitor the 18 NCDXF beacons on all five bands and present the results in graphical form. The software will control the rig to switch bands.

The program measures the signal- to-noise ratio, the QSB index and the propagation delay, automatically identifying long path and short path reception.

False reception reports are minimized by intelligent detection of the CW identification of each beacon.

The resulting graphics and reception statistics can be archived for analysis or uploaded to a webpage for sharing.

This is a great tool for keeping tabs on the propagation from your QTH to various parts of the world.

There are already five stations sharing their reception reports and it is hoped that more beacon monitors will come online soon. Active monitoring stations are listed on the NCDXF website at http://www.ncdxf.org/beacon/monitors.html

The Faros shareware program can be downloaded from http://www.dxatlas.com/faros

Tools for listeners

There are now more than 30 different programs and a number of hardware projects designed to assist the listener in identifying the beacon or automatically monitoring the signal. Links and reviews of these tools appear on the Beacon website
http://www.ncdxf.org/beacon/BeaconTools.htm

The Beacon Project is supported by Kenwood, HRO, Cushcraft, NCDXF and through individual donations

From The ARRL Contester's RateSheet/American Radio Relay League

Do You Really Think We Don't Know?

Oh no, and you thought you were past all the gnomic New Year's resolutions! Read on, I'll only torture you a tad. The title of this editorial should probably be "You Can Run, But It's Getting Harder to Hide". The target audience isn't those given to making resolutions, but those that don't - the small minority of obdurate operators that continue to pursue advantage in the wrong ways.

Do you REALLY think we don't know? Do you think an over-powered signal blasting through the pileups doesn't attract scrutiny? When we hear you seemingly everywhere at once - don't you think we'll figure out that there are more of you than one? Do you think your persistent packet poaching isn't leaving a trail in the sponsor's database that leads right back to you? And self-spotting...is it really worth the effort to try and obscure your posts from the detailed signature available to the Internet-savvy sleuths out there? Rest assured that contesters DO know what you're up to!

Why not spend that extra effort and time and money improving your station and operating technique in legitimate ways? Everybody has plenty of room for opportunity for improvement in all the legal and ethical ways. Take a step back and ask yourself if all the evasion and denial is really worth getting a reputation as a cheat?

For what? A piece of walnut on the wall? That's not exactly the right kind of bragging rights, friends. If there's something to be changed during 2008, how about your operating practices? You won't regret it!

If the leopard won't change spot-taneously, is there a solution for the rest of us? Contest sponsors can DQ an operator or change a log's category, but the horse is rather out of the barn by that point, isn't it? Except for the most egregious violations, the FCC is just too busy to respond. That, like many other things in life, leaves you and me, ladies and gentlemen.

Peer pressure can sometimes work wonders. Many of our bad apples got rotten because they think they are undetectable and/or nobody cares. When this turns out to be true, many stop to reconsider. Perhaps they think "everybody does it" and so may be surprised to find out that no, everybody doesn't do it. And maybe they just haven't been made aware that their tactics are offensive. After all, we have no referees tossing yellow flags on the spot for transgressions.

The flip side of all this is that one can't be too quick to jump to conclusions. A good operator can make a two-VFO radio sound way too nimble for a single, unassisted operator. Well-engineered antennas in a superior location can generate a tremendous signal. Consider carefully whether you're confusing good, aggressive operating with

foul play. Or maybe being just too darned finical. If you can pass the "red-faced test", then go ahead.

It does take a little gumption to take up the subject in person or by correspondence. After all, you're basically making an accusation, right? Well, not if you go about it the right way. Perhaps you can open the conversation with something less confrontational, such as, "Hey, N0AX, what a huge pile of multipliers last weekend - what's up with that?" Give them an opportunity to at least respond without invective. The conversation can proceed from there and you've taken the first step in letting them know they're NOT invisible.

Maybe reconsideration will follow. And maybe not, but you tried - a benefaction to your fellow contesters. And while we're on the subject, be sure to make sure that operator in the mirror takes the same advice. The easiest person to fool is one's self, of course!   73, Ward N0AX

Contests   from RadCom (RSGB)

At the November Board meeting a number of Board members expressed concern about the amount of bandwidth taken by some contests. While the Society has no influence over non-RSGB contests it was agreed that for RSGB Contests the Society should be seen to be following IARU recommendations in using the 'contest preferred segments' where applicable.

It was also agreed to support a paper tabled by HF Manager John Gould, G3WKL, outlining measures to help alleviate the reported problems of stations operating outside of the recommended segments. This includes the use of dedicated software which used in conjunction with contest adjudication software will assist the Contest Committee in identifying such stations so that appropriate action can be taken.

Ham Space Tourist Announces His Mission

On the NPR Kojo Nnamdi Show on Washington, DC's WAMU-FM, replayed on January 1, 2008),Richard Garriott, W5KWQ, announced to the audience that he will be traveling aboard a Russian Soyuz shuttle launch to the International Space Station (ISS) in October 2008.

If the last name sounds familiar, that's because Richard is the son of NASA Astronaut Owen Garriott, W5LFL, the First Ham in Space (No, Miss Piggy was not the first.) Owen's mission in 1983 aboard the Space Shuttle was heavily promoted by the ARRL and the subject of an early Roy Neal, K6DUE, videotape, no longer available from the ARRL Library.

Richard will be the "First Son in Space." Richard, born in 1961, is a man of many interests. He made a fortune creating and producing video games. He built a mansion in Austin, TX perfect for playing out Dungeons and Dragons. In addition to amateur radio, he is also an amateur

magician. His pot of gold will help him afford the ticket to ride the shuttle which will reportedly cost him $30 million.

Richard is also Vice Chairman of the Board of Space Adventures, Ltd. of Vienna, VA, a space experiences company which is dedicated to promoting private sector participation in space exploration as well as the arranging or brokering of suborbital and orbital flights for private citizens on privately owned and government space vehicles. So far, Russia is the only participating government, but Richard will be traveling as a private citizen.

Recently, Space Adventures announced an opportunity to train with Richard as official back-up crew member during Richard's nine month training program which will include a stint in Star City, the cosmonaut training center near Moscow, at the nominal cost of $3 million. See website http://www.SpaceAdventures.com/backup/ulnone for details.

Richard maintains his own website, http://www.RichardInSpace.com\ulnone that will permit you to follow his day-by-day training activities. He said on the Kojo show that he would be conducting commercially-adaptable scientific experiments, environmental research, and educational outreach programming on board the Space Station. We should also remind him to take along his handi-talkie because as a Technician Class ham Richard should be able to work the world on any VHF or UHF ham band.

Now we can look forward to Outer Space as the next frontier for DXpeditions and contesting locations.

In Iraq, Amateur Radio's Voice Is Muted
from the Los Angeles Times

Under Hussein, there was little freedom to 'ham.' Though the situation has improved, enthusiasts face suspicion from officials who fear insurgent activity.

By Ann M. Simmons, Los Angeles Times Staff Writer
January 14, 2008

BAGHDAD -- Whenever he gets a spare moment away from his electronics repair shop, Abdul Karim Hadi sneaks off to what he calls the "radio shack" in the corner of his bedroom, flips a switch and escapes to the outside world. Hadi could use the Internet or a cellphone to connect with friends near and far, but his choice is decidedly more retro.

"With ham radio, you can meet people around the world," said Hadi, 48, who has been "hamming" since 1978. "It's also a hobby you can do on your own. And once you have your own equipment, it's free."

More important, at a time when most movie theaters and nightclubs are closed because of security concerns, hamming" is a form of entertainment that can be pursued at home.

That wasn't always the case. Under Saddam Hussein's rule, ham radio enthusiasts had to report to government-sanctioned clubs, where minders listened in on their conversations. Since the dictator's ouster, they have faced suspicion from both U.S. troops and the Iraqi government that their transmissions are a tool of the insurgency.

Since the U.S.-led invasion in 2003, fewer than 50 of 150 or so ham radio enthusiasts who operated primarily in Baghdad have returned to their stations, Hadi said. He is among a small group of people who are trying to revive interest in the hobby and keep it alive.

"Many hams have not returned, even though they have a license," Hadi said. "Some have traveled outside Iraq; others are afraid to use their wireless. They think they will face problems from the American soldiers or the Iraqi police. I am trying to tell everyone that the situation is better now."

Ham radio, also known as amateur radio, has been used both as recreation and a public service provider across the globe since at least the early 1900s. Operators typically use a transmitter and receiver to communicate with other enthusiasts in their home countries and abroad. They use various modes of transmission, including voice, Morse code and now personal computers.

Voice transmissions continue to be the most common in Iraq, say local operators, who must be licensed by their government and receive a unique "call sign," to identify themselves on the air. Hadi's call sign is YI1AK.

During the Hussein years, ham radio operators could not use their wireless equipment at home.

"Saddam would hang you if you were found with a transmitter at home," recalled Hadi. "They thought you were a spy if you had an antenna."

As is the standard for ham radio operators worldwide, subjects such as politics, religion and business deals are off limits. But during the Hussein era, just hearing a voice coming over the airwaves from Europe, Asia, America and other countries in the Middle East made many Iraqi ham radio operators feel connected; and they considered themselves members of an exclusive club.

"We would talk about electronics, signal strengths, the weather forecast and personal details, such as your family," said Imad Yusef Dahi, 45, call sign YI1EYT, a ham radio operator since 1992. He has managed to connect with hams in Germany, France, Russia and Egypt.

"It's a beautiful hobby," Dahi said. "You can communicate with people from all over the world. And you can talk as long as you want, for free."

And regardless of modern technology, Dahi and other hams said there was something special about being able to send their own signal into the air.

"It's a great feeling when you're using equipment that you've put together yourself," said Azhar, 40, a ham radio operator for 15 years, whose call-sign is YI1FLY. He was reluctant to give his last name and was uneasy about giving details on his hobby for fear that he might say something that would get him into trouble.

Hadi understands why such concerns still exist, despite the supposed freedom since Hussein's ouster.

Some time after the 2003 invasion, U.S. soldiers came knocking at Hadi's door. They arrested him and confiscated his radio equipment, even though he had a valid license allowing him to own and use it.

He spent a week in jail while an investigation was conducted. He was freed "with an apology," he said, but it took more than a month to get his equipment back. Hadi suspects that someone keen "to take revenge" had fingered him as a possible militant, and had accused him of using the radio equipment for criminal purposes.

And for eight months last year, Iraqi officials suspended all amateur radio activity in the country, citing security concerns. They feared insurgents might be using ham radio, local operators said.

The irony was not lost on ham radio operators, who recalled that even though their transmissions were subject to eavesdropping by security agents under Hussein, it was rare for them to be taken off the air.

Hadi hopes that now that he is back on the air, he will be able to persuade others to follow. And the message of the electronics technician transmits loud and clear: "You can return to ham radio," he says. "I will even find a station for you."

ann.simmons@latimes.com Copyright 2008 Los Angeles Times
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*From Fred, **W3ICM** [note: Fred served in Baghdad in 2004, developing and implementing spectrum policy for the Coalition Provisional Authority and was involved in the re-establishment of the Iraqi Ministry of communcations – W3DQ]*

The LA Times article by Ann Simmons was interesting, but it didn't go far enough.

For example, I developed the national amateur radio regulatory policy whereby the amateurs would be largely self-regulating.

This is continuing, and the amateurs have a memorandum of understanding with the national regulatory agency.

Bottom line is that it's working out well, and the Iraqi amateurs are enjoying their new-found freedoms.

Upcoming Contests of Note

CQ WPX RTTY	February 9-10
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RSGB 1.8 MHz Contest	February 9-10
Dutch PACC Contest	February 9-10
NA Sprint SSB	February 10
ARRL DX CW Contest	February 16-17
CQ 160 SSB Contest	February 23-24
ARRL DX SSB	March 1-2

2008 Dayton Contest Dinner

The North Coast Contesters proudly announce the 16th Annual Dayton Contest Dinner

CQ Magazine's Contest Editor, John K1AR will again masterfully and ceremoniously run the show, featuring Riley Hollingsworth K4ZDH, Special Counsel in the FCC Spectrum Enforcement Division as the keynote speaker!

CQ WW Director Bob K3EST will announce the CQ Contest Hall of Fame Inductions, as well.

The dinner will be held on Saturday evening, May 17, at 6:30 PM in the Crowne Plaza Hotel.

Purchase your tickets on-line at:
http://www.contestdinner.com

Radio Liberty Tower Demolition

If you haven't seen it already, here is a link to a short video of the huge array of the Radio Liberty short wave broadcast towers being demolished by explosives.

http://tinyurl.com/pzwz7

The rest of the tower destruction story, including its installation on the 1960's can be found at these websites:

http://www.rwonline.com/dailynews/one.php?id=8693

http://www.rwonline.com/reference-room/special-report/01_Rwf_playa_3.shtml

You'll also see lots of videos on YouTube of towers coming down around the world!

Product Review – Tokyo Hy-Power HL1.5Kfx HF/50MHz Solid-State Amplifier

by Robert Peterson W3YY

The advantages of a solid-state amplifier, e.g., "instant-on" operation, essentially infinite "tube-life", and cool operation, have always appealed to me. When my current amplifier recently experienced a power supply failure, I decided it was time to make the move to solid-state and I purchased a Tokyo Hy-Power HL-1.5Kfx amplifier.

The HL-1.5Kfx is an incredibly small amplifier that is hardly larger than a shoebox. Despite its small size, it even includes a built-in 120/240 VAC power supply! Mine came configured for 240VAC. There are power supply taps that allow you to select line voltages of 100/110/115/120 VAC or 200/220/230/240 VAC.

The fit and finish of the cabinetry are first-class. All the controls have a solid high-quality feel to them.

HL-1.5Kfx in the Shack at W3YY

Pick the amplifier up and you know you're dealing with a serious piece of equipment. This little 0.5 cubic foot package weighs 45.5 lbs!

The amplifier provides 1kW output on all amateur bands, including the WARC bands, from 160 to 10 meters and 650 Watts output on 6-meters. Band switching can be performed manually or automatically if you have a Yaesu, Icom, Kenwood, or other rig with a compatible band decoder output. In my case, the band decoder output of my FT-2000 goes directly to the HL-1.5Kfx and whenever I change bands on the FT-2000, the HL-1.5Kfx automatically follows right along. This is all done silently without any clunky bandswitch or stepper motor noises. Very smooth. Very nice! The HL-1.5Kfx even provides front panel LED's showing which band has been selected, so it's easy to confirm that the band decoding is operating as expected.

In normal operation, the HL-1.5Kfx is a cool and relatively quiet amplifier. To keep the ST Micro SD2933 MOS-FETs and associated heat sink cool, the amplifier uses two fan speeds. Normally, the low speed is engaged. With this fan speed the fan noise is a bit louder than a

normal desktop or tower PC. I measured the fan noise with a sound pressure level meter and the amplifier was about 3 to 5 dB louder than my PC. Under these conditions, the air coming from the cooling exhaust vent is actually cool. If you are running stations or making extended RTTY transmissions, a higher fan speed will eventually kick in when the PA heat sink reaches 40 degrees C. This raises the fan noise significantly (about 7dB SPL), but the unit is still quieter than some other amplifiers I've owned. Under these conditions the exhaust temperature rises but I would still characterize it as only warm. [Note: I used the amplifier for the first time in a contest during the 2008 CQ 160 CW contest. During a 90-minute run at full output the amplifier performed perfectly without any problems. The high fan speed was engaged during most of the run.]

As mentioned earlier, this amplifier is free of noisy stepper motors or other mechanical tuning components. It uses a band-pass design that provides full output across each band without additional tuning. At an SWR of about 1.8 to 1 I begin to see some reduction of power due to the mismatch, so it's necessary to use a well-matched antenna or an external matching network. With my SteppIR and mostly well-matched wire antennas the amplifier operates flawlessly without any antenna tuner. I do use an antenna tuner on 160 where the intrinsic SWR of my antenna system is around 2:1.

One of my biggest concerns was the effectiveness of the protection circuits in the amplifier. Solid-state devices are not as tolerant to misuse as vacuum tubes and invariably one will occasionally fire up into the wrong antenna! I'm happy to report that the protection circuits appear very effective. On the occasions that I've changed bands and began operating without changing antennas, the HL-1.5Kfx quickly, quietly, and gracefully just took itself off line, illuminating the SWR warning LED. To resume operation all one has to do is switch to the right antenna and reset the fault circuit with the front panel power switch. The amplifier is protected against over-drive, over-heating, over-voltage, and excessive SWR.
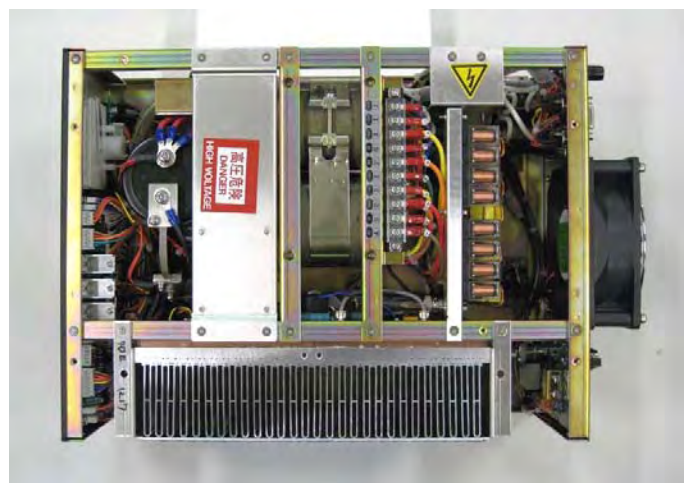
Inside View of HL-1.5Kfx – Photo Courtesy of Tokyo Hy-Power

Operating this amplifier is a joy. With automatic band switching, no tuning, and quiet operation, you almost forget you're using an amplifier. All one has to do is adjust the drive level from the exciter when changing bands. I suppose you could even avoid this if you hooked up the ALC circuit, but I haven't done that. I love the "instant-on" operation. When some rare DX suddenly appears you can turn on the amp and immediately begin calling while others are waiting 3 minutes for their tube amps to come to life. I used the amplifier on 6-meters in the recent VHF contest and it easily put out 650 Watts into my SteppIR. On HF, the 1 kW output seems to be as effective as the 1.5kW I'm used to. If you want full 1.5kW output, however, the good news is that Tokyo Hy-Power is bringing a full 1.5kW output amp (no 6-meters) to market soon. I'm awaiting delivery of mine. It will become my main amp. The HL 1.5Kfx will be used for 6-meters and as a second amp for SO2R.

Finally, I've heard nothing but glowing reports about customer service by Tokyo Hy-Power.

So give solid-state a thought when you buy your next amp. The technology has come a long way since the CK722!

The Toolbox   February 2008
by Don, K4ZA

I'm ratcheting like mad at 160 feet on an install down in Texas…when I notice that the teeth in the Craftsman are obviously worn—the wrench is skipping as I turn. So, I head over to the local Sears store when I get home, intending to make use of one of my very favorite business terms, the LIFETIME WARRANTY.

Having been an English major in a previous life, I often enjoy perusing stuff other folks ignore, to the consternation and sometimes annoyance of my beloved XYL—things like cereal boxes, ticket receipts, and warranties. I like reading the fine print. I love the language, and the casual "your mileage may vary" text that's sometimes impossible to see, let alone read, on packaged items and on the TV screen.

So, it was with some trepidation that I approached the counter in the store, where a pimply-faced teenager inquired if he could help me. I handed him the ratchet and said I would like a replacement. In a flash, he reached under the counter and handed me a "rebuilt" wrench. At this point, I was certain I was going to leave the store unhappy. I explained that I buy tools for their durability, performance, fit, feel, and balance. I consider the warranty secondary, as I neither want nor expect the tool to break in the first place. And that since I did not buy a "rebuilt" tool originally, I didn't want one then. I believe he was overwhelmed, as his response was "Okay," and he told me to get what I wanted from the wall of ratchets. From that point on, it was a "no questions asked" policy, sort of like the old days.

When I got home, I did a little Internet research. Here's what I found: The brand name "Craftsman" is owned by KCD IP, LLC (Kenmore, Craftsman, and DieHard are all Intellectual Property). Sears and K-Mart both sell Craftsman tools (K-Mart is owned by Sears Holdings Corporation). They can also be found at Fastenal and US military post exchanges. The Craftsman brand is surpassed only by Waterford crystal in terms of perceived quality. Craftsman was named "America's most trusted brand" last year. They are also the official tool of NASCAR.

Sears has been selling hand tools under the "Craftsman" name since 1927   In recent years, a line called "Craftsman Professional" tools has been introduced as the *highest quality* line under the Craftsman logo; they are billed as *Only The Best* in their marketing/advertising. In 2007, they introduced a new tagline "There's A Craftsman In All of Us," moving away from the previous slogan "Makes Anything Possible."

The warranty applies only to hand tools. It reads "unlimited lifetime warranty." The unlimited lifetime warranty is void if the tool is used in an industrial or commercial environment. A common consumer misconception is that the lifetime warranty covers anything and everything—such as power tools, precision hand tools, portable power tools, bench power tools, air compressors, lawn and garden products, and other powered items. In short, anything Craftsman. This is not the case. Sears does offer Replacement Agreements and Master Protection Agreements on most of their tools and appliances.

In 2003, Sears removed their lifetime warranty from Craftsman flashlights. Another limitation to the policy was introduced later that year, when the Craftsman tape measure lifetime warranty changed—covering all parts except the blade itself. Almost any hand tool may be brought to a Sears store and exchanged for a replacement item. But, some items are considered specialty tools. Is it worthwhile to consider the warranty—should that be a factor in one's decision to purchase a tool? I say probably not, because you want the tool to perform well and to last and not need repair or replacement anyway. But the Sears warranty plan, which worked well for so many years (indeed, it was the most liberal warranty policy ever), suffered from abuse by customers—so much so that the company was losing money.

And you can't fault a company for wanting to be profitable. And you can't fault the quality of the tools themselves. So, keep in mind the limitations, and keep in mind the standard store policy (which will be to offer you a repaired or rebuilt tool) if you bring something back.

What's Next.. A Review of VE3NEA's CW Skimmer

by Pete Smith N4ZR

Every decade or so, something comes along that can substantially change the way we approach DXing and contesting. The next such innovation has arrived. It comes (no surprise!) from Alex Shovkoplyas, VE3NEA. CW Skimmer, just publicly announced, is shareware available from www.DXAtlas.com. Combined with your current transceiver or simple, very inexpensive Software Defined Radio (SDR) hardware that is already available, CW Skimmer will enable CW operators to be aware of everything that is going on across large swaths of any band. It will copy literally hundreds of signals on the band simultaneously (limited only by CPU capacity), and decode, recognize and list callsigns with their associated frequency.

First, an apology to the people who are working on SDRs, for whom much of this will be old news. But what's different here is that the hardware and software are inexpensive, accessible without a lot of technical knowledge, and combine capabilities (notably the intelligent CW decoding) that have not been available in one place before.

How does this work? You feed audio from your receiver (SDR or otherwise) to your computer's soundcard. CW Skimmer looks at the entire swath of spectrum it can "hear", identifies CW signals, and decodes them all! Then it looks at the decoded text and works to identify stations newly arrived on the band, stations calling CQ, etc. It generates a time-stamped list of these stations and their frequencies. You can pick out individual signals and enhance their readability by putting them through a tight DSP filter, or click on a station and move your transceiver to its frequency, but what is truly different about Skimmer is its mega-multi-tasking decoders.

There are three basic modes of operation with CW Skimmer. Most people will start by simply listening on their current radios, with the widest available filter. Typically, that will let Skimmer hear 2-3 KHz of spectrum. Tune to a frequency with activity (a DX pileup, for example) and you'll see each of the stations represented by a horizontal line of dots and dashes on the waterfall display. As it identifies stations and other message content of interest it "flags" these for you.

The second mode is a little more complex, but more rewarding. For several years, now, simple, inexpensive, single-band software defined receivers have been available for less than $15 (in kit form) from Tony Parks, KB9YIG. For full details, see www.softrockradio.org. Essentially these receivers downconvert a portion of the band of interest to audio, which is then converted to digital information by the sound card in your computer (more on this later). The digital information is then available for processing by software, which can pick out individual signals from the passband, display the band on a "panadaptor" screen, demodulate any mode of

transmission and a zillion other things. Alex wrote the most popular "back end" software for these little radios, called "Rocky", so it should be no surprise that he has found a way to evolve the idea to the next level.

Below is a sample of CW Skimmer at work on 40 meters with a SoftRock. It was "listening" to a brief period of a recent CQWW CW and decoding what it saw. The first figure shows the main screen. The waterfall display only shows about 5 KHz from the center frequency of the principal decoder (the green zone at the bottom), but in fact, the SoftRock is receiving the entire slice of spectrum that the soundcard can handle.
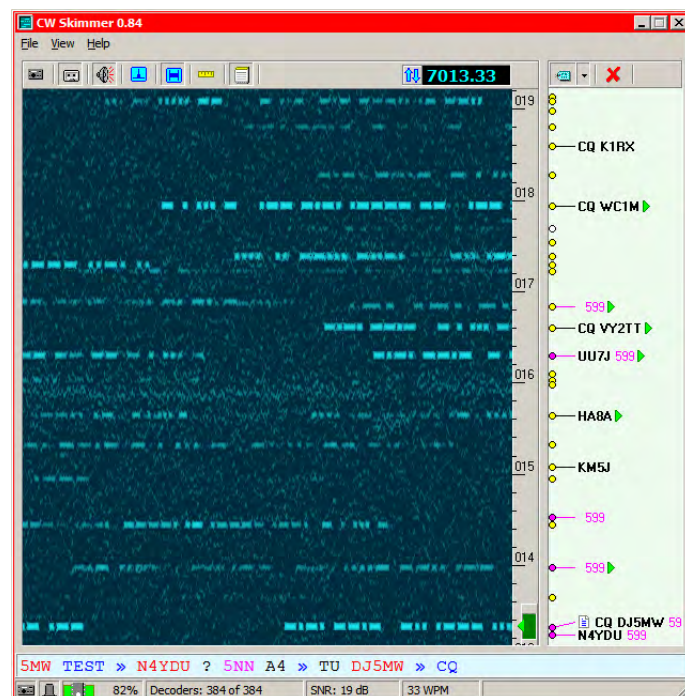
In this case, 326 different signals (or possible signals) were being copied across the band, and 154 calls were identified in less than 2 minutes figure 2). The callsign list is dynamic – stations are constantly being added or dropped when they are no longer there.

Alex believes that the third mode of operation may be the most useful to the most people, particularly DXers. It

involves configuring a Softrock to work off the first IF of a receiver, after the roofing filter, but before the usual selectivity-defining filters. Some surgery will generally be required, but more and more people are trying this, and detailed instructions for some transceivers are already on the web.

A good way to find out what's available is to join the SoftRock Yahoo group (softrock40@groups.yahoo.com). A big advantage is that you require only one SoftRock to monitor any band your transceiver covers .Of course,

the width of the passband will be limited by the width and sharpness of your roofing filter, so some radios, such as the Orion, will effectively preclude this approach.

As primarily a DXer, Alex reports using Skimmer to greatly improve his efficiency in pileups when the DX is operating split. Take another look at Figure 1, and imagine that DJ5MW was the rare DX, listening up. Skimmer identifies UU7J sending a typical exchange, at the same time it was decoding DJ5MW's transmission to him in the main decoder, so the Skimmer user now knows where the DX operator is listening, and can quickly move there. Not a big deal when the DX is using a narrow split, but imagine how useful it would have been trying to work some recent DXpeditions that listened across a 30-40 KHz window.

The SoftRock receiver is very inexpensive ($12 for the latest 20M version, in kit form), and is a single-band device. The receiving frequency band is also fixed by the frequency of the reference oscillator. Each of these limitations is readily worked around; at the price, it might make sense simply to switch single-band receivers in a contest application, particularly if you want to listen to more than one band at a time. I have connected my SoftRock to the "RX Antenna Out" jack on my transceiver, so that it is always listening with my main antenna for the band, and has the advantage of the bandpass filters in my SO2R setup.

The SoftRock requires only 12V DC, an antenna connection, and a stereo output to a sound card. For initial experiments, any sound card will work, including onboard audio chips such as the SoundMax or Realtek, but for best performance and the largest bandwidth, serious users will probably want to invest in a sound card that supports a 96 KHz sampling rate.

What about limitations – well, first of all, the SoftRock's sensitivity is probably somewhat less than a top-grade amateur transceiver, so you may be able to hear things on your main transceiver that it cannot. It's to be expected that this spec will improve in the next few years as better ICs become available. Dynamic range and blocking are also likely to be issues in some circumstances. After all, it's a $15 receiver, and Alex reports that on 40 meters it already hears as well as his TS-570!

As for the Skimmer software, it's very simple to operate and seems quite able to copy CW at or near the noise floor. The software automatically adjusts the number of decoders available, to keep your CPU utilization below 100 percent. Some contest experience suggests that it may be somewhat prone to multiple miscopies of a single callsign, dependent on QRM and signal strength. And don't forget, this is the first public release; there will doubtless be many improvements in coming months.

So what? Why should you care, if you're primarily a DXer or contester, and not a do-it-yourselfer, QRPer, or a computer specialist? Aside from pileup-busting, as described above, here are a few more possible applications to think about:

- You can monitor a whole band, and see a needed DX station appear on that band, or just see the band open. You can know quickly and easily what stations are coming in, all while continuing to listen and operate as usual, on the same band or another. This capability is potentially far superior to packet, because you won't have to wait for a packet spot, or tune to one, only to discover that while spotter has propagation, you don't.
- Contest sponsors could use strategically placed Skimmer/SoftRock combinations to record an entire band worth of activity for a 48-hour contest. The hard drive space required (roughly 95 Gigabytes) is no longer prohibitive, and the resulting record could be extremely useful in resolving accusations of two signals on the same band simultaneously, rubber-clocking and other rule violations. Total coverage would not be required; like radar in the control of speeding, the deterrent effect of not knowing whether he was being recorded could be an excellent deterrent to any prospective cheater.
- Skimmer could enable hearing-impaired operators to chase DX with much greater facility than ever before. At moderate speeds, the CW streams being copied could be read by eye from the waterfall display, or brought into the principal decoder for better copy. Meanwhile, other stations would be copied and added to the call list.
- Looking a little further ahead, Alex anticipates adding Telnet capability to Skimmer. Once Skimmer is able to talk to other programs, or be accessed via the Internet, then a whole range of new possibilities opens up. For example:
- SoftRock radios and CW Skimmer software can potentially enable a network of "reverse beacons." You might be able to query the Northern Europe 20-meter Skimmer station, for example, and get a list of stations it has recently received, or call CQ and see whether you turn up on the list. A still later evolution might even provide signal strengths, so that you could compare with your friend across town and see who has the better signal.
- A Skimmer could feed the packet network more efficiently than even the most energetic tuner and spotter, because it listens to all frequencies of a band at once. As always, miscopied callsigns will continue to be a problem, because Skimmer isn't as good as a human at inferring a callsign from incomplete information (in QRM or QRN). If this idea takes off, packet node operators will have much more incentive to filter out duplicate spots, at least until the Skimmers become more sophisticated and recognize when a spot is a dupe.
- With the same enhanced Skimmer software, contest logging software would be able to make use of "spots" from Skimmer, just like packet. One potential downside is that it would no longer be so easy to detect packet cheating by statistical analysis of the time lapse between packet spots and when the stations were worked. Indeed,

with Skimmer, operators might often be able to reach new stations on the band even before users of conventional packet spotting.

I'm sure this is just the beginning of the list. It isn't hard to imagine that before long, some enterprising programmer type will develop a true robot, capable of operating an entire contest without human intervention. I bounced this idea off Alex, and he responded, "Fortunately, it doesn't look like such a robot will become a possibility in the next few decades. Automatic decoders can be as sensitive as a human ear, because the same laws of physics apply to both, but the computer cannot fully understand the meaning of the message it has decoded and thus cannot use context information to fill the gaps. Humans are unbeatable in this area."

As always, technology seems to challenge our imaginations, as well as our entrenched ideas. Someone recently lamented that we were getting away from the original idea of "a boy and his radio." A waggish friend immediately commented that Skimmer is more like "a boy and his sound card." I hope we can all agree that change is inevitable, and exciting. In fact, isn't that a lot of the fun of amateur radio?

7X/N3JT Operation, February 2008
by Jim, N3JT

There was some question about safety when a one-week job in Algeria was offered to me some months ago by a federal agency in need of overseas specialized language and culture instruction. Recent blasts in Algiers made the security issue very real, but absent a decision by my employer to cancel the job I decided to engage what I figured was minimal risk. After all, I'd be limited to the hotel and workplace by my employer's request. There was no salary as such, only a stipend and expenses. But I'd never been to Algeria so it appealed to my sense of adventure. One only lives once, after all.

On the eve of departure it was clear I would not be able to do any operating, simply because the guys who offered the use of their stations were at least a hundred miles from Algiers and neither logistics nor time would allow that kind of travel. But I did know the secretary of the Algerian Radio Association so I could at least meet one of the hams there.

Once in Algiers and working, it seemed the safety issue was not nearly as serious as some had suggested. I never wander around alone in cities I do not know and Algiers was no different. 7X2RO, Afif, met me the 3rd night and took me to a very "local cuisine" restaurant in the downtown area. It was a memorable meal through the friendliness of the waiter, the emptiness of the restaurant that night (because it was the first day of the week, Saturday), the classic decor and the excellent food. He was also my guide and transportation to several ham-related events during my stay, as well as an evening tour of the city, which proved rather interesting.

On the following night we were invited to a ham's home in the city where there was a good HF station. This operator had expected to be out of town but in fact was home, which offered a ray of hope of operating. And that's exactly what unfolded. Starting around 10 pm, what band would be open to the East Coast? 30m proved nearly dead though I did manage a few contacts there. It was 40m that was the workhorse for those several hours. It had been a while since I'd operated Dxpedition mode but it didn't take long to get back into it. My host noted that I kept tilting my head sideways when copying. That turned out to be, oddly, because the transceiver audio tone control was on, which shifted my audio world up in frequency. Why that wasn't evident until near the end of my operation is not clear, nor do I understand why my posture reacted as it did. The station was running full legal power and a log periodic looking right at the Mediterranean. For those of you who did manage to hear me you know the signal from there is quite impressive.

The next night I operated from 7X2GX's place in Algiers Beach, about 20 miles from my hotel and west of the city. Sofiane's station consists of an FT897 with a matching mobile antenna, running 70 watts. The keyer did not work except as a straight key when held carefully with the non-keying hand. What a contrast to the night before, but a number of stations managed to copy and added to the overall fun. What was more fun was eating dinner with Sofiane's family and Afif, one of those events that only ham radio can provide.

Algiers is a coastal city that has some 4.5 million residents in an area limited by mountains behind it so that it is very long and narrow. Its essential architectural style is colonial French, with newer construction of non-descript concrete and residential streets invariably bumpy and challenging to negotiate. I was fortunate in having Afif so that I could walk around the downtown and attend an informal ARA meeting the night before departure.

Separately, the driver assigned to me by the Algerians took me shopping and to the several interesting museums in town. Our house is so overstocked with "chochkas" that I limited myself to a few small items, among them an Aladdin's lamp that will serve as my contest wish object. Afif and I also visited several hams who live in other parts of the city, so it was really quite a tour I got over the course of the week.

The only physical excitement I experienced was on the morning of departure when I noticed the furniture in my hotel room (an old one that Eisenhower stayed in) vibrating. I figured it was a blast of some kind, but it continued for about ten seconds. Then I heard what I thought was a truck rattling by, but there was no truck.

Yes, it was an earthquake, one that was centered in Algiers Beach and 4.5 on the Richter scale. It did not do any damage and the flight to Paris left on time.

I found the people everywhere in Algeria exceedingly cordial and refreshingly pro-American. One reason for this is that when all the Europeans were fleeing Algeria in the sixties at the time of its war with France, the Americans remained. They don't forget that. And I won't forget them.

Memories of my first sunspot peak as a contester

by Jim WX3B

Ah yes, the last sunspot peak…my memory is fuzzy at best – and here are some of the more interesting memories:

It's the start of the contest season, fall, 1999. I've just invited myself to operate at W4MYA for the first time. says "come on out to the country." During a pre-contest visit I sat with my warm brownie and ice cream desert while calling CQ on 15m with a stack of huge monobanders at pointed at 340 degrees. As Bob filmed my activities, I remember working JA after JA, followed by Delta Sierras, Hotel Limas, and others like they were going out of style. This continued for over 30 minutes until I got tired and gave up … long before the band was gone.

Undaunted, I come back to W4MYA for the CQWW SSB contest. After an evening on the low bands, I get lucky and open 10 meters and discover skew path to Europe (someone had to coach me to turn the beam further south!). The band opens and goes direct…

I sit through a (WX3B personal) record of 139 QSOs in one hour, thinking I'm hot stuff. (Note that the current SSB record is about 485 QSOs an hour held by K9PG). W4MYA's M/M QSO count is highest on….10 meters! How's that for a change?

December, 2000 rolls around and unbelievably, N3SB and I are able to dedicate the entire weekend to the 10

meter contest from my recently upgraded station in Manchester MD.

My new Force 12 C3S, with 2 elements, using 6 feet of boom length shines at 50 feet. By early Saturday afternoon, I am cold, tired, hungry, and have over 1,100 QSOs in my 10 meter log before N3SB relieves me and we work our way darn close to 2,000 QSOs. Now I'm HOOKED!

Throughout the next few years, I discover that a 10 meter quad at 30 feet often out-performs my 2 element Yagi (now at 55 feet), when located on a hilltop with a steep drop toward Europe. Those were the good old days.

I have fond memories of driving around with a mobile rig working occasional JAs on 10 & 15 meters – and this is a NORMAL occurrence - no big deal.

It seems like this couldn't possibly be true, and I can't wait to find out if it really was!

Bring On The Next Cycle!
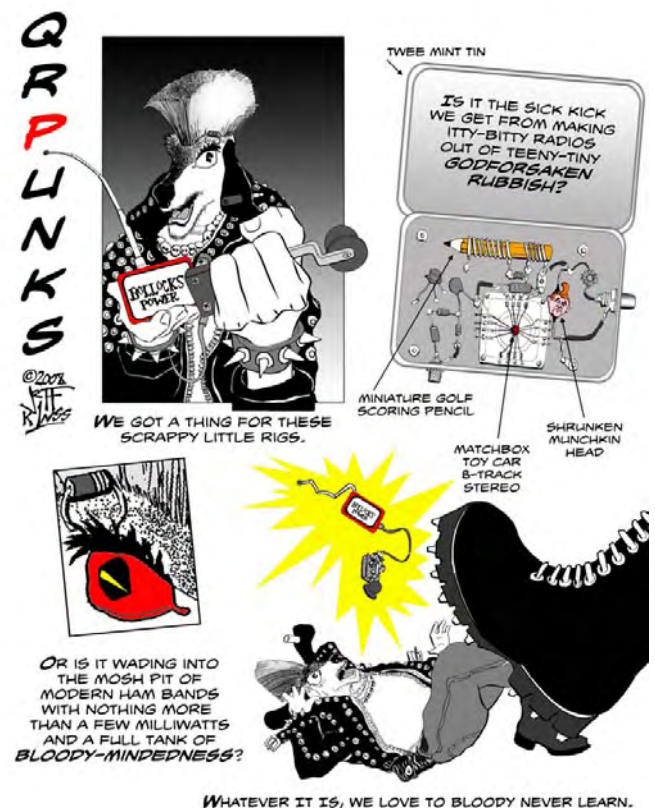
WHERE CAN YOU FIND PVRC MEMBERS?

- ### *The PVRC NW Region: Bud W3LL*
Meetings are held on the third Tuesday of each month at the City Buffet, 1306 W. Patrick Street, Frederick, MD. (301) 360-9666. It's in a small shopping center. Most arrive about 6 PM for dinner and informal discussions. The meeting begins at 7:00 PM.

>From W. Patrick Street, turn up McCain Dr. (the Mountain View Diner is on the corner), then turn right into the shopping center, then turn left and search for a parking place. The City Buffet is tucked back in the left corner of the shopping center behind the Mountain View Diner. You can't see the City Buffet from W. Patrick Street.

- ### *The Annapolis Crew : Bob W9GE*
Meetings are held on the 4th Wednesday of each month at West End Grill in Annapolis. We gather at about 5:30 PM and order dinner about 6. We break up usually before 8 PM. E-Mail W9GE to be put on the e-mail reminder list.

- ### *PVRCNC-East : Jim K4QPL*
Meets on the first Thursday of each month. Details are always available on the web site: http://www.pvrcnc.org

- ### *PVRC-NC/West: Tom N4IOZ*
"The Winston-Salem Courteous Operators Club" (W4WS) meets on the fourth Monday of each month at 7:00 PM in the "Pure Chrome" establishment, 505 Deacon Blvd. Winston-Salem, NC 27105. It's now a biker bar (we came with the building), so feel free to roar in on your Harley. Info at http://www.w4ws.org

- ### *Gaithersburg Area: Jeff K3OQ*
Several of us get together, much like the downtown lunch group, about every 4 to 6 weeks and visit various restaurants in the Gaithersburg area.

- ### *Central Virginia Contest Club: Ed NW4V*
Meets the second Tuesday of the month at The Henrico Doctors Hospital, Parham Campus, located at 7700 E. Parham Rd. Richmond VA.   The Hospital is approximately one mile north of the Parham Rd. and Broad St. intersection. The meeting begins at 7 PM in the Hospital cafeteria located on the first floor.

- ### *Over the Hill Bunch Bill W3AZ*
The group meets for lunch at noon alternately in Maryland at the College PARK Holiday Hotel Route 1 and the Beltway or in Virginia at the Parkview Marriot near route 50 and the Beltway. Meetings generally are held on the last Wednesday of the month and are subject to change. Meetings are announced by E-Mail.

All PVRC members, non-members interested in membership and guests are welcome. For information contact Roger Stephens, K5VRX, rogerergo(at)netzero.net 703-658-3991 for Virginia meetings; or Bill Leavitt, W3AZ (w3az at starpower.net) for Maryland meetings.

- ### *Downtown Lunch Group*
Meets on the 3rd Wednesday or Thursday of the month in the downtown area of Washington, DC.   Locations occasionally change, but are always Metro accessible. Details are sent out on the PVRC reflector. Feel free to contact Eric W3DQ (w3dq at arrl.net) or Brian WV4V (wv4v at arrl.net) for details and directions.

If you have a group that meets regularly or occasionally, please send details and contact information to W3DQ for inclusion in the Newsletter!

PVRC Spotting Network

WR3L:	telnet://dxc.wr3l.net
W3LPL:	telnet://dxc.w3lpl.net
W4ML:	telnet://dxc.w4ml.net
K3SKE:	telnet://dxc.k3ske.net
NE3H:	telnet://ne3h.no-ip.com
N3ME	telnet://dxc.n3me.net

From Brian, WC4J I just setup a new AR-Cluster for DX Spotting it can be found at telnet://dxc.wc4j.net
   It is linked into the same feed as the other nodes like W3LPL and K1TTT

W3LPL Glenwood MD	145.590	441.250
WR3L Baltimore MD	145.610	440.950
N3RR Rockville MD	145.510	441.325
W3TOM Accokeek MD	145.770	
N4OHE Mt. Weather VA	145.710	446.025
NE3H Harrisburg PA	145.630	
N4SR Woodbridge VA	145.630	
N2QT Lynchburg, VA	145.59, 144.97, 446.075	

Information regarding the PVRC reflector can be found at http://pvrc.org/pvrcfaq.htm Note that this is simply the REFLECTOR FAQ pull down under main-page REFERENCE).