

# POTOMAC VALLEY RADIO CLUB

est. 1947

## AUGUST 1991 NEWSLETTER

### OFFICERS

PRESIDENT - WA8MAZ DON DASO (301) 702-2059  
VICE PRESIDENT - N3JT JIM TALENS (301) 241-1144  
SECRETARY - AA4XU BEN SHAVER (703) 534-4740  
TREASURER - N3RR BILL HIDER (301) 424-2707

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The Potomac Valley Radio Club meets the second Monday of each month, from September through May. Regular business meetings alternate between College Park, MD and Temple Hills, MD. For directions to the next meeting, see below. Or call any club officer.

**PVRC CHARTER MEMBERS:** W3GRF, W3IKN, W4AAV (SK), W4KFC (SK), W4KFT, N0FFZ, W4LUE, W7YS, VP2VI (W0DX).

Charter Members are not required to pay dues.

**VHF Repeater (K3WX):** Output 147.00 MHz., Input 146.40 MHz.

**UHF Repeater (K3WX):** Output 443.15 MHz., Input 448.15 MHz.

### Packet Cluster Contest/DX System:

145.51 MHz. Connect to W0YVA  
145.57 MHz. Connect to N2FB  
145.59 MHz. Connect to W3LPL  
145.63 MHz. Connect to K3NA  
147.525 MHz. Connect to N4SR

### Next Meeting:

**Annual Joint NCDXA/PVRC Fowlfest**  
Date: 24 August 1991  
Place: K3ZO  
Time: 1300 Hours EDT

Check with the packet cluster or the repeater for last minute changes, if any.

**DIRECTIONS TO K3ZO:** [Fred Laun, 5801 Huntland Road, Temple Hills MD Tel: (301) 899-1235.]

Take the Capital Beltway to Beltway Exit 7-A (Maryland Route 5 - Branch Ave.) Head South towards Waldorf. You will find a stoplight immediately after entering Branch Ave. Take a right at this stoplight, which is Manchester Road. After about a half block, Manchester ends in a "T". At this point take a right on Old Branch Avenue and follow it around gently to the left where it becomes Henderson Road. Follow Henderson Road for about a mile until you encounter a slight rise at the top of which the road curves right. There you will see a "Hidden Entrance" sign. The "Hidden Entrance" is Huntland Road. Turn right on Huntland Road and the K3ZO antenna farm is the fifth house on the left. Note: Please park on the front lawns of 5801 and 5803 Huntland Road rather than on the street if at all possible.

Many thanks to Tony Faiola, K3WX, for use of his copier for publishing this Newsletter.

Editor: Fred Laun, K3ZO (301) 899-1235

Production and Circulation Manager: Howard Leake, W6AXX (301) 465-7008

Club Historian: Lawrence T. Fadner, W3GN (301) 725-1624

News Deadline: 20th each month.

## FROM THE PRESIDENT'S DESK...

It seems hard to believe that July is over as I write this...it must be that the work projects have been so much fun...time flies, you know?

Of late, I've worked on operatic vocal competitions, a promotional video for the Freewing Aircraft Company, a show about Holocaust survivors, an orientation for Japan-American relations, National Archives, a music video, well, you get the idea. Not much energy left for radio after a 12-14 hour day.

I hear lots of talk on 147.000 about the seriousness of work -- about the striving for what we call success. A marked contrast to chatter heard in 8-land and 4-land while on our recent "vacation." Indeed, many people spoke with me about the "fast-lane" lifestyle I surely have adopted by choosing to live near Washington. It was news to me....

I suppose the simplest thing to say is that it means I do take my work seriously. As I do my hobby. Which is how & why I find contesting so interesting.

I know other PVRC members feel the same way. That's what makes the whole process "fun" for us.

On a more lighter note...kudos are due K3ZO for his efforts with this newsletter. It's now truly "news" oriented, & better than before. I just finished reading "U. S. Radiosport," a bi-monthly newsletter about DXing & Contesting put out by KC9AL. The premier issue contains a long interview with Lew Gordon, K4VX. And yes, Lew has some good words about PVRC during his tenure in the area. It seems well worth the \$10.00 for a year's subscription. (US Radiosport, P. O. Box 190176, St. Louis MO 63119). Upcoming, of course, is this year's annual "fowlfest" at the Huntland Road ranch. And don't forget to reserve the 8th of September for the Gaithersburg hamfest. Call W3XE & arrange an hour of time to sit at the PVRC table. The next day, Monday, September 9, there will be a regular business meeting, the first of the season. CU there!

Very 73 de Don, WA8MAZ

## MUSINGS FROM THE EDITOR

As I write this I have the VHF SSB rig tuned to 144200 listening to the activity associated with the Perseids meteor shower. Things finally started to happen late Monday morning August 12. I heard Gene, W3ZZ, work a number of W5's, but so far a nice 20-over-9 burst from WB4AXQ in Alabama is all I have heard. The Perseids is the best shower of them all, so if you're going to do meteors, this is the one.

After some back-and-forth on whether there should be two meetings in September on back-to-back days, Don has decided that there is just too much pending business to avoid having a business meeting in September. So there will be two meetings in September, one at the Gaithersburg affair, now officially known as the FARFEST, on September 8, and another on September 9 at the regular evening hour.

Summertime is antenna maintenance time here and Len, W3GRF's, crew, including Mike, KO7V; Steve, K4FJ; and Mike Patterson have been busy. The 4-el quad has been down, all wires and phasing lines completely replaced, and it is now back up. Feedlines are in the process of being replaced and the ten-meter phasing line still needs a tweak or two. Before that the job was to bring the 80 meter beam a little further up into the band, a job already finished on the CW band but still pending on phone. The 2-meter M-Squared long Yagi has been moved up to the 145-foot level where it is really performing. Still awaited are replacement of the coaxes on the 40, 6 and other two meter beam and on the packet antenna, as well as maintenance of the rotator on the 91 foot tower, which has developed a little too much play lately.



Your editor was pleased to get a certificate from ARRL Director W3ABC and Vice-Director KC3LM in recognition of being a club newsletter editor. A note says that Larry, W3GN, also got one, which is good. He's the one who deserves it, not me. I haven't even started yet.

Howard reports that all PVRC Reunion logs have been received and that the final results will be published in a future Newsletter.

As many of you know, I enjoy QSLing. Judging from K1AR's column in August CQ, I am happy to find out I'm not alone in this regard.

Every now and then, I get a QSL which makes me especially happy. Such was the case with a recent QSL received through the Bureau from Angela Sitton, GØHGA. Here is what Angela wrote:

"Hello Fred! I was real chuffed (*British for proud - ed.*) to make it over to you with my QRP in the ARRL Contest, and I hope it was a good contest for you. I only got to work 2 other stations, on 40 m. also, K1ST and NQ2D, so must be your fine ears and antennas Fred! Congrats. for pulling in my QRP. I could not even get to W3LPL and K1AR hi! You had a very good signal here, by the way, stronger than W3LPL, about the same as K1ST.

"The reason for my QRP is that my rig has lost power, possibly the pre-driver: I sent 010 because it's easier to copy but I was running only 600 milliwatts out HI! My usual power is 22 watts max...."

I have to admit I didn't copy Angela perfectly if she was sending "599010," because my log showed I copied "599002". Probably from the sound of her signal I was guessing at how much power she was running! But anyway I did get her call right!

Those of you on the Packet Cluster have noted that the connection to the Frankford cluster is there most of the time now. That in turn brings in the NJDXA and YCCC clusters which in turn connect all the way up into the Canadian Maritimes and west through Western New York to Toronto. It would be possible to bring the Atlanta group in as well, which extends all the way from Northern Florida to Louisville and Memphis, once that group sets up a backbone on 430 MHz. Quite a development, this packet stuff!

For those who would like to have PVRC QSL cards, Rob Sterne, WK3W, is looking into the idea. The sign-in sheet at the Fowlfest and at Gaithersburg will contain a box which you can check if you're interested.

## A LINE NOISE "SNIFFER" THAT WORKS

an interview with Bill Leavitt, W3AZ

Q. Bill, what led you guys to try to find your line noises? What was happening?

A. It was really killing us. The line noise was running as high as S-7 on 20 meters and higher still on 10.

Q. What did you find when you started sniffing out some of these line noises?

A. Well it turns out that it's a multiple layer type of thing. There's a lot of different points

that in this case the line was old and there were a lot of different poles which were making noise and they were making noise at different times. We had to start out trying to find out which poles were making noise and kind of peel it off one at a time.

Q. About how far away was the average noise source from your QTH?

A. Probably about three-tenths to four-tenths of a mile.

Q. What was the procedure you used to zero in on a particular noise source?

A. What we first did was take a car and drive around listening on the auto radio. There was what we call a valley, a line which comes down and runs through a valley. There was solid noise all the way. In other words, there was no standing wave or anything. Of course that immediately means that there must be more than one pole that's making the noise.

Q. Do you have a particular frequency that you like to use on the broadcast band for getting near the noise?

A. We used 650 KHz. because there wasn't any local broadcast station on it. It seems to be pretty quiet. You can crank up the volume quite high on the receiver and get a good feel for what the noise looks like.

Q. Once you got down to the particular area where the noise was coming from then how did you continue to search for it from there?

A. We made a three-element yagi tuned to about 128 MHz. The reason we did that was to make use of this \$20 aircraft radio receiver that Radio Shack makes. Actually this was AM, an aircraft receiver, and was the only thing around that was available. We found that we had to take the antenna out of it and put it in a shielded box. If you're in real loud noise areas the receiver would pick up so much stuff directly that we couldn't get any idea of direction from the antenna, and then on top of that we had to put a variable attenuator between the antenna and the receiver because the AGC would saturate on loud signals and you could point it almost any direction and not see any directivity.

So you always have to keep it down to a fairly low level so you can determine the directivity. Using the 128 MHz. receiver you can pretty well find out what pole it's on.

Q. How many total db of attenuation can you switch in now?

A. We got it fixed so you can go in 20 db steps

up to 60 db.

Q. So once the noise gets so loud you can't seem to get any directivity from it on the normal settings, then you switch in 20 db of attenuation and then you can zero in more from there?

A. That's right unless less it gets so loud that you notice the 20 db isn't sufficient. The best thing to do is throw in enough attenuation so you can just barely hear the noise and try that first and then if you feel you need it a little louder then come back and take another 20 db. out.

Q. Has this helped the power company at all to zero in on the problem more than they would normally be able to do with their own equipment?

A. They seem to be quite satisfied with what we're doing and they have a gold plated job that they use that's got a Yagi on it with a bunch of different elements that they can adjust for frequencies and so forth, but I think that at the end they were more relying on what we were picking up. I know on a couple of the poles they didn't even bother to check it with their equipment. They just went ahead and fixed it.

Q. OK Bill, any other comments on this?

A. The company, Southern Maryland Electric Coop, seemed to be quite cooperative although they can't give immediate response because apparently it's a lower priority to get rid of line noise. But when they have line crews available they seem to be quite willing to take care of the problem.

Q. When they found the insulator causing the problem what did it look like Bill?

A. Well it's two bell-type insulators that are connected together with two metal pieces between the two insulators. When they brought them down the insulators would have a lot of streaks over the surface of the insulators where apparently they had had arcs at one time or another. The linemen said that



the marks are caused by lighting. They had a probe that they could put up to find exactly what piece of hardware the noise was coming from. As close as I could tell by watching them it seemed to be the metal part between the two insulators where you have almost like two U-bolts, one hooked to one insulator and one hooked to the other.

Q. This Radio Shack receiver, you have to put it in a shielded box?

A. Yeah you have to put it in a shielded box because the thing is all open and if you get to a strong noise area you get direct pickup with the receiver without the antenna even being connected.

## WHAT TO DO DURING RADIO STORMS

by Fred Laun, K3ZO

Sunspot group 6659's recent disastrous passage across the solar limb had many contesters and DX'ers beside themselves with frustration about lousy band conditions. What with the decent weather this time of year, most of them decided to use their time on outdoor projects since being on the bands was a waste of time anyway.

Or was it? Since I am a hopeless radioholic, I looked for ways to make 6659's presence useful, informative, and - not incidentally - fun for me. After all, severe radio storm activity can be a way to try things that you can't do during normal radio conditions.

The most obvious, of course, is to have fun working two and six meter aurora. It helps to have 800 watts and 72 elements on two, as I do, though some of the aurora openings during this period were skewed so far to the west that I had to use my single 15-el array to peak them up, since they were out of range of my monster array, which only rotates as far west as 315 degrees or so. Caught with the linear down one night, I still managed to work Arkansas with the ten watt exciter.

But how does one know when the aurora will occur? Though aurora openings were frequent during this period (frequent means openings four or five times a week), they were not predictable in the sense that you could say with certainty that the aurora would be on at a certain time of day. It is known that the aurora backscatter is more frequent in the late

afternoon and early evening hours than at other times of the day, but it CAN occur at any time of the day or night. It also pays to monitor WWV closely (if you can hear them - If you can't, call 1-303-497-3235 and you can have the same information for 15 or 20 cents.) A K-index of 6 or higher is an almost certain indicator of impending VHF auroral backscatter conditions.

The packet cluster certainly paid for itself during these disturbances. With several members active on six or two meters, at least one would usually be there when the "buzz" started. PVRC members among them included Bill, W3AZ and Gene, W3ZZ. We also had the benefit of K1HTV's solar storm warnings and analyses by solar investigators in Alberta.

What happens if you're not on the cluster? Ten meters is also a very sensitive indicator of aurora backscatter conditions. With the high amateur population in the Novice portion, it pays to tune across that part of the band with the beam north now and then. If you hear a lot of fluttery local ragchews going on among stations in W1, W2, W3, W8 or W9-land, you can almost be certain that VHF aurora conditions are occurring at the same time. Severe solar storms can also cause the outbreak of what is known as "Auroral E," or in other words sporadic E-type short skip on ten and six meters. The difference between "Auroral E" and normal sporadic E is that Auroral E favors northerly paths while conventional Sporadic E, though it can open up

to anywhere, tends to favor more southerly stations.

If you are in the car, you can check for indicators of possible aurora by utilizing the standard broadcast band. WQXR in New York on 1560 KHz. is a very sensitive aurora indicator because it is at the high end of the band and at night pumps most of its signal Northeast toward New England from its Brooklyn transmitter site. When you hear a lot of flutter on this station's signal, it pays to take a tune across six or two meters when you get home.

Speaking of the standard broadcast band, if you are into BCL'ing, interesting things occur there during solar storms as well. Often only north-south propagation occurs, particularly just after sundown, and you can pick up the elusive Latinos without QRM from closer U.S. stations. Having worked in a number of Latin American countries, I can attest to the fact that the frequency calibration of many Latin American broadcast stations leaves much to be desired. Thus the first indication you have that north-south skip is unusually good is the number of beat notes you encounter as you tune across the band.

Just for kicks, you can observe unusual auroral phenomena on the standard BC band as well. I have a Palomar Loop hooked up to my Denon tuner, and when the sun is acting up, during the evening hours I enjoy nulling out the ground wave and listening to WRC or WTOP fluttering

away on skywave even though their transmitters are only a few miles away.

Anyway, you say, this is all fine and good but you're an HF DX'er and don't plan to change. You should know that north-south conditions during solar storms are often vastly enhanced on the lower HF bands as well. One night during 6659's reign over the bands, there were two PY's doing a land office business on 160 meters, one of them running only ten watts. Too bad more South Americans didn't know that the band was open. Meanwhile, 80 CW was wall-to-wall LU's and 75 phone had PY's pinning the needle. When you tune through the 3600-3750 portion of the band and hear all the loud Spanish-speaking roundtables, you know something unusual is happening. Forty can also be wild to Africa, South America and the South Pacific at such times. So next time the sun cuts loose with one of its tantrums, don't despair. Just modify your operating practices to favor what is going on and you will be rewarded with plenty of interesting results. After all, one of the best things about amateur radio is that we can all do scientific investigations even though we don't have PH.D's in physics or engineering.

By the way, if you make any unusual observations during solar disturbances, there are people out there who would like to know about them. One such organization is Solar Terrestrial Dispatch, P. O. Box 357, Stirling, Alberta T0K 2E0, Canada.

## CONTEST NOTES

by Fred Laun, K3ZO

I was going to continue on from last month's column with a description of some editing techniques I use with WordPerfect in order to prepare logs of contests not specifically supported by K1EA's CT or K8CC's NA for submission. But now that I have upgraded to DOS 5.0 and have installed PCTools on my hard disk, there may be easier ways of doing this than using WordPerfect. I don't know yet,

so will just have to hold this for the future.

One brief comment about WordPerfect. I happen to like an honest-to-goodness Ø for the calls in my paper logs which I keep in three-ring binders following the contest. So while editing the logs in WordPerfect I go through the log, and each call which contains a 0 is corrected to read Ø. This is done by using the Overstrike



feature in WordPerfect to create a Ø by superimposing / on top of O. This is done by hitting Shift-F8 and then selecting "4" from the menu, then selecting "5" from the next menu, and "1" from the next menu. Then you type / and O and hit return (enter). Exit by hitting F7 and you have your Ø.

But who wants to go to all this trouble just to get a Ø? So I made a macro for my Ø like this: Hit Control-F10 and at the "define macro" prompt I hit Alt-X. At the "description" prompt just hit return (enter). Then "define macro" flashes at you, so perform the steps described in the paragraph above in order to get your Ø, and then hit Control-F10 when you're finished. From now on, all you have to do to get your Ø is hit Alt-X.

Maybe you like a more robust Ø like this. WordPerfect will give it to you if you press Ctrl-V and when asked for the key, type 1,80. You can make this into a macro, too, by following the procedure in the above paragraph.

Now for a few other contest comments, provoked by observations I made while checking in the logs to answer QSLs received in recent shipments from the Bureau.

It used to be that the FCC required you to sign the call of the station you were calling as well as your own call. Thanks to a petition for rulemaking made by PVRC several years ago, this is no longer required. In fact, it seems to have become conventional wisdom that you never send the call of the other station.

In my opinion, to make such a blanket generalization is unwise. Many newer DX

stations, and others who have returned to the air after many years of inactivity, are not sure you are calling them unless you use their call. On countless occasions I have heard W's fail to work a DX station they were calling simply because they failed to use the other station's call. Set procedures never cover all possibilities or situations. The best rule of thumb to use, always, is to adjust your operating procedures to fit the perceived realities.

In some cases it is always advisable to use the other station's call when you are calling him. On 40 meter phone during DX contests, all of the DX stations listening for W's must select from a maximum of about 5 listening frequencies in the American phone band because of BC QRM. If you dump your call in on one of these frequencies without making it clear who you are calling, you will likely be answered by the station you are calling plus about 4 others. When you later tune in one of the other stations and call him, you will be mystified by his remark that you are already in the log. Or you will receive QSLs later from stations who are not in your log, as I did recently.

Another time when I feel using the other station's call is a decent thing to do is when I am going along the 80-meter band at dawn calling JA's with my 3-el yagi. I know there are plenty of fellows listening whose antenna systems don't make it quite as easy for them to make out the calls of the stations I am working, so in this situation, just to be a good sport, I sign the JA's or VK's call as well as my own.

## THE SECRETARY'S PAGE

by Ben Shaver, AA4XU

There was no regular meeting in July, but the Over-the-Hill Division of the Potomac Valley Radio Club met for lunch and discussion at the Marriott Hotel in Greenbelt, Maryland, on July 24. Andy Anderson, W3XE, was host.

Attending: K3ZO, W6AXX, W3XE, K3WX, W3AZ, W3GN, W3GRF, AA4XU.

The next lunch meeting will be held in Oxon Hill, Maryland, in August. Len Chertok, W3GRF, will be host. Call Len at 301-297-4888 for reservations. All Welcome.

de AA4XU, Secretary

## BRING A DISH TO THE FOWLFEET

For the Fowlfeet, Somporn and I would appreciate it if each family or single person attending could bring either a salad or dessert dish with them if possible. All meats and drinks will be provided gratis. Let us know ahead at (301) 899-1235 what it is you're bringing, so that we can advise what might still be needed.

However, if it is difficult for you to do this, or if you find you can attend at the last minute, don't worry about bringing anything except yourself. We'd rather have you show up without a dish than not to show up at all.

73 and see you here de Fred



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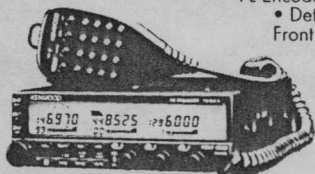
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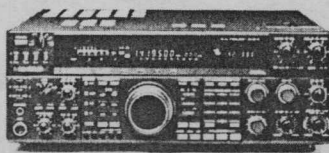
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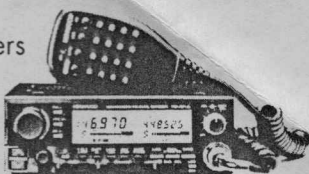
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