



# Central States VHF Society E-Newsletter

Quarter ending Sept 30, 2002

## Milwaukee Conference: Success!

The 2002 Conference was a great time in Milwaukee back on 25-27 July. Host Club—the Badger Contesters—worked hard leading up to the event and it paid off. There were rave comments on the content and breadth of the presentations. The Prize table was overflowing. The Party Suites were fun for socializing for those who took part. Once again, the antenna range and noise figure table were successful helps for those who brought antennas or pre-amps for testing. The Banquet contained a humorous and motivating talk by ARRL President Jim Haynie, W5BJP in addition to good food.

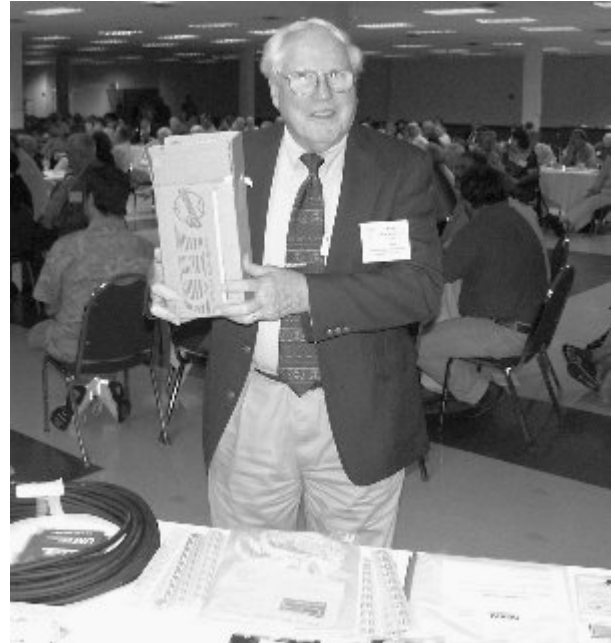
2002 Chambers Award winner is Mike Staal, K6MYC, for his many years of superior antenna design, development, and production benefiting VHF and above operators. 2002 Wilson Award winner is Bruce Richardson, W9FZ, for energy and effort to the society as Treasurer, Board Member, Conference Host, and Newsletter Editor.



Larry Henderson, W5NZS, presents Mike Staal, K6MYC the 2002 Chambers Award.

Conference President Ken Boston, W9GA, is thankful and proud of the efforts put forth by Badger Contesters to make this a success. Specifically, Stefanie Boston, Gary Bargholz, N9UUR, Jeananne Bargholz, N9VSV, Doug Bergeron, KO2R, Lesa Bergeron, KB9KCJ, Jerry Seefeld, WA9O, Jeff Berman, K9YR, Randy Clark, K9VHF, John Feltz, W9JN, John McDonald, KB9TLV, Marc Holdwick, N8KWV, and Bruce Richardson, W9FZ.

Attendance was far better than expected at 208 for the conference and 228 for the banquet. Thanks for coming to Milwaukee!



Bill Tynan, W3XO, picks CPI-Eimac tube as first choice at Prize Table

The Milwaukee Conference team appreciates Kent Britain, WA5VJB and Marc Thorson, WBØTEM operating the antenna range again this year. Similarly, the fine noise figure table would not have occurred if not for the efforts of Al Ward, W5LUA, and assistants Barry Malowanchuk, VE4MA, Tom whitted, WA8WZG, Tony Emanuele, WA8RJF, Ron Bergantzel, KAØRYT, Charlie Calhoun, K5TTT, and Joel Harrison, W5ZN  
More conference pics shortly at: <http://w9fz.com/milw2002/>

## 2003 Conference: Tulsa Time!

The 2003 Central States VHF Society conference will be held July 25-26 in Tulsa, OK. Conference President is Charlie Calhoun, K5TTT with Tommy Henderson, WD5AGO as Vice President. They are forming a team to accomplish the many tasks of hosting a conference.

Charlie is finalizing hotel arrangements and comments that the hotel will be VERY NICE and brand new. He suspects that room rates will be at 2002 rates or less. Charlie stresses that the location is loaded with shopping and dining in the area.

There will be a Hospitality Suite for after-hours socializing. Charlie and his team are working on a

diverse Family Program that will allow more options for the families and spouses accompanying conference attendees. By that he means that there will be some activities perfect for young families with children and other activities perfect for spouses interested in the art, culture, and history of the area.

There will be a website touting all the reasons you need to come to Tulsa—but it is not ready yet. You will be advised by email and on the major reflectors when it is ready! Two mailings will go out in 2003—one in February to prompt your schedule planning for the summer and then another in early May which will be the registration documents.

Mark July 25-26, 2003 in your calendars now!

## **2004 Conference Site—Potentially Toronto!**

Peter Shilton, VE3AX and Bob Morton, VE3BFM, represent a group of 10 VHF'ers in the Toronto area who are interested in hosting the CSVHFS Conference in 2004. They have made the preliminary assessments and are eager to show all that the Toronto area has to offer for tourism in conjunction with a conference. Further, they want to show off the VHF/UHF activity in their region.

Kent Britain, WA5VJB, and Chuck Clark, AF8Z, have offered to host the Conference in Dallas in 2004 or 2005 in the event the Society accepts the Toronto area offer for 2004.

Your Board of Directors has discussed site selection in depth and is continuing discussion. While no decision is required until conference 2003, your board will probably come to a decision within two months out of courtesy to the two hosting teams offers.

## **Call for Papers and Presentations: 2003**

Our conferences and proceedings would be shallow and thin if not for the generous contributions of presentations and papers that come from you—the membership. Now is the time to start pondering what content you can share with the rest of us. Projects, modes, operating events and even theory are all fair game. What is simple for you might be very helpful to newer VHF'ers in the coming years. Remember, proceedings are references for years to come. In the next e-newsletter you will be put in touch with the program chair of Conference 2003 on specifics for layout, format, and form. Conference 2003 is going to try and have concurrent presentations of beginning and advanced topics. Please contribute content!

## **States Above 50 MHz Award Program 2002 Wrap-Up**

Thanks to each of you for participating this year! 38 entries—Ten more than last year!

Participation was up this year because two groups—in Minnesota and Oklahoma—utilized the program as an impetus for increased activity in their local areas. Keep it up! Other areas of the country, consider using this program to spur activity in your areas. How about it Roadrunners, Mid-Iowa, and North Texas?

Please recall that this is a “program” for all participants in order to spur increased activity. This program only becomes a contest for our top finishers.

Our 3<sup>rd</sup> place finisher, Peter Shilton, VE3AX, is back again with a solid five band entry with 150 band points.

Last years 1<sup>st</sup> and 2<sup>nd</sup> place finishers, Mike King, KMØT and Bob Mathews, K8TQK, repeated in each position. However, each really used the program as a spur to their activity. Each far surpassed last year's record of 161 band-states. Both Mike and Bob worked each other many times throughout the year and gave each other a few unique band-states. So now there is a new record to best—193 band-states. Both Mike and Bob were aggressive about watching propagation conditions. Further, they made their family life fit around some short-notice band openings. Look at both of their numbers in the table and just marvel at each of their accomplishments on each of the bands. It's symbolic of some fine operating skill and of refining their stations to yield the best coverage their geographic locations will support. I'm awed by their numbers but rather than just repeat them in text, take a look at the table. Both of these guys practiced “being there”.

Several ops mentioned the wonderful fun and states-collecting benefit of WSJT. If you're not using it, maybe this is the year to include it in your operations. See how many new states it will net you.

Items of note: K9PW's entry was virtually all from one weekend during the June Contest and QRP at that! Similarly, WØZQ and NØUK have multi-op entries from just the June and September contests respectively. Eight of you worked all 50 states on 6m—including father and son Arliss, W7XU, and Nolan, NØLAN. I see that W2FCA worked 47 states on 6m from New York—takes persistence to fill in the holes or work the different types of propagation to get that many from an eastern location. Special mention must be made of Chris Vollero, KB2TGU, who returns as our only participant who has taken part each of the seven years of the programs existence.

Rule updates and clarifications:

Canadian provinces NOW count for the 2002-2003 program that is now in progress. Further, CYØ and CY9, Sable and St. Paul Islands, can be used to count for Nova Scotia. Concerning "location", while ARRL WAS allows 50 miles to still count as one location, we will borrow a VUCC rule of 300m/1000ft to count as one location. You may combine your states from multiple locations and submit your states as a "Rover" entry.

The 2002 Program is in progress. Please continue to take the program as a challenge to your day-to-day operating and encourage your friends to participate. Even if you are a single-band specialist—log your states each year and send them in. It's a great way to look at year-to-year variation in propagation, activity level, and station condition. Remember, all your contacts from July 1, 2002 through June 30, 2003 count for this award. It's not too tough to go back into your logs and see what you've worked.

Rules and forms are available on web-page [www.csvhfs.org](http://www.csvhfs.org) or by email from [w9fz@csvhfs.org](mailto:w9fz@csvhfs.org) or by snail mail from Bruce Richardson W9FZ, 2330 Lexington Ave. S. #312, Mendota Hts, MN 55120 . This year's results and the all-time records should be on the web-page shortly. Certificates will be mailed shortly.

Thanks for participating and go to it again!

## JØ/Series-Resonant Blocking Caps

I was recently reading the ARRL UHF/Microwave Experimenter's Manual. In Chapter 6 "Design Techniques" – authored by Bill Troetschel, K6UQH – he discusses JØ capacitors that are chosen to series-resonate the parasitic inductance of the capacitor leads and housing (at the frequency of interest). He states that in general, the inductance of 50-mil chip caps are .25nH and .50nH for 100-mil. He then presents equations to determine the inductive reactance and capacitance for the frequency of interest. The implication is that when selecting chip caps to act as DC blocks (but trying to achieve no other high-pass or low-pass filtering), the series-resonant chip cap will achieve DC blocking but attenuate your frequency of interest the least. Through the miracle of Excel, I had some fun playing with the equations by plugging in ham band frequencies from 160m to 24GHz. Then, courtesy of the prize table at a CSVHFS Conference, I referred to ATC chip cap graphs to plug in their stated frequency of series-resonance for several chip values. I chased the equations backwards and was able to confirm the general inherent inductance values offered in the ARRL book. In the graph below, I've left the cap values determined by Excel—you'd pick a common chip value that is "close enough". Ceramic, Silver Mica, or larger dimensioned chip caps have more inherent inductance and their series-resonant value would be generally

smaller than the ATC caps for which the table below is intended.

FREQ	50 Mil Cap	100 Mil Cap
7.1	2.0255	0.8994
14	0.5209	0.2313
21	0.2315	0.1028
28	0.1302	0.0578
50	0.0408	0.0181
144	0.0049	0.0022
222	0.0021	920
432	547	243
903	125	55.6
1296	60.2	27
2304	19.2	8.5
3456	8.5	3.8
5760	3.1	1.4
10368	0.9	0.4
24192	0.2	0.1

50mil .248nH uF and pF  
100mil .559nH

## 2002 Proceedings Still Available

2002 Proceedings are available for \$20.00, which includes shipping. A check or MO made out to Central States VHF Society and mailed to Bruce Richardson, W9FZ, 2330 Lexington Ave S. #312 Mendota Hts, MN 55120 will get a copy whisked to you in a padded envelope. The ARRL is selling these as well, but their cover price is \$20 and shipping is on top of that.

## Take CSVHFS Shirts—Please!

Twenty-three shirts remain: four Medium, eighteen Large, and one 2XL . Price is \$15.00 plus \$3.50 shipping for the M and L and \$17.50 plus \$3.50 for the 2XL. Help get these assets off the books! See address for W9FZ above.

## -- Tidbits --

From the "You can't please everybody" department: Many of us use the QRZ website for quick address info for hams we run into on the air or in our VHF community. Well, I came across an odd site from a guy who has problems with the distribution of information on the QRZ site. You can get a sense of his point of view by visiting: <http://www.stormbringer.tv/~privacynfreedom/>

CSVHFS Logos available for download:  
<http://www.csvhfs.org/filearea/logos/>

CSVHFS On-Line Manual and Schematic Search site:  
<http://www.csvhfs.org/CSMANUAL.HTML>

Name	Call	Location	Yr	SCORE	50	144	222	432	902	1.2	2.3	3.4	5.7	10	24	>24
Mike King	KMØT	Iowa	02	193	50	48	18	17	15	15	12	10	4	4		
Bob Mathews	K8TQK	Ohio	02	189	49	35	30	26	15	17	9	5	2	1		
Peter Shilton	VE3AX	Ontario	02	150	48	36	29	23		14						
Arliss Thompson	W7XU	South Dakota	02	142	50	41	22	16	5	8						
Gary Mohrlant	WØGHZ	Minnesota	02	127	48	29	11	12	8	6	4	4	3	2		
Jon Platt	WØZQ	Minnesota	02	127	50	26	16	14	8	8	4			1		
Frank Ayers	W2FCA	New York	02	102	47	22	13	13	7							
John Fridenstine	W8PAT	Ohio	02	101	30	33	18	12		8						
Bill Davis Jr	KØAWU	Minnesota	02	97	50	36		8		3						
Chuck Munce	KØSQ	Minnesota	02	92	50	17	7	11		7						
Charles Betz	NØAKC	Wisconsin	02	92	44	25	9	8	3	3						
John Feltz	W9JN	Wisconsin	02	87	50	23	8	6								
Chris Cox	NØUK	Minnesota	02	82	37	34	6	1	1	2				1		
Chris Cox (multi-op)	NØUK/Ø	Minnesota	02	81	41	14	8	8	2	4	2			1		1
Pete Walter	K9PW	Illinois	02	76	28	14	10	7	4	5	2	2	2	2		
Pierre Jolin	VE2PIJ	Quebec	02	74	41	11	10	9	1	2						
John Butrovich III	W5UWB	Texas	02	72	43	20	3	3		2	1					
Ed Fitch	WØOHU	Minnesota	02	70	23	25		14		8						
Nolan Thompson	NØLAN	South Dakota	02	68	50	10	3	3	1	1						
Matt Burt	KFØQ/Ø	Minnesota	02	67	31	9	8	7	3	4	3	2				
Marshall Pochay	W9RVG	Illinois	02	67	25	17	11	11		3						
Brian Derx	N5BA	Texas	02	67	28	31	4	4								
Dale Rohwer	WØDMR	Minnesota	02	65	47	10	5	2		1						
Jon Platt (Multi-Op)	WØZQ	Minnesota	02	60	22	8	7	7	6	5	3			1		1
Lenny Klosinski	KØSHF	Minnesota	02	60	38	6	4	5	1	3	1			1	1	
John McDonald	KB9TLV	Wisconsin	02	59	50	7		2								
Art Jackson	KA5DWI	Texas	02	55	36	14		5								
Ron Marosko	K5LLL	Texas	02	54	9	27	5	6	1	2	3	1				
Rich Westerberg	NØHJZ	Minnesota	02	53	29	10	7	7								
Russell Beech	VE3OIL	Ontario	02	49	31	9	3	3	1	1	1					
Jim Hermanek	KØKFC	Minnesota	02	49	37	7		3						1	1	
John Hill	KØPW	Minnesota	02	47		47										
Chris Vollero	KB2TGU	New Jersey	02	43	43											
Michael Wood	WO7GI	Oklahoma	02	42	27	9	4	2								
Terry VanBeschoten	WØVB	Minnesota	02	37		37										
Jim Fisk	KCØHEW	Minnesota	02	36	32	4										
Don Ross	NL7CO	Oklahoma	02	33		33										
Chris Cox (Portable)	NØUK/P	Minnesota	02	4		2								2		

## 10 GHz Contest: 2<sup>nd</sup> Weekend Travelogue in Michigan's UP

by W9FZ

I, along with KØSHF and WBØLJC, made the trek to the UP of Michigan for a big weekend of 10g activity. We drove on Friday about 8 hours from the Twin Cities to arrive in Copper Harbor, check in to the motel, and get a dinner. Just prior to sunset, we reviewed potential operating locations for Saturday (the following day). Much of Friday was drizzly and cold and made us wonder what the conditions would be like on Saturday.

After a breakfast at a local restaurant in Copper Harbor--which we had to encourage to open a few minutes early--we made it up the hill to atop Brockway Mtn (EN67a1) in order to be ready to go "right on time". Overnight, the rain and clouds moved out to be replaced by an incredible wind. I know, it's supposed to

be windy on mountaintops--this was 25 knots continuous gusting to 40. We set up with a good view to the west and used some parking barriers as wind supports for our tripods. We had 160watts and a 9-ele beam for liaison on 2 meters. The other two guys were ready to go right on-time. However, I discovered that in transiting so many miles, the power supply lead to my transverter had broken off right at the feed-thru cap with nothing to solder to. Thank goodness KØSHF and WBØLJC were there for their counsel and for their repair tools. LJC happened to bring a small inverter and a 100w soldering gun. As you know, soldering outdoors is tough and would have been impossible in the wind. I crouched in the front seat of the vehicle while carrying out my repairs consisting of opening the transverter and running wire to bypass the feed-thru.

In the meantime, the Twin Cities operators (consisting of WA2VOI, WØAUS, NØONAS, KØOKFC and WØLCP (observing) were in Duluth for their hippity-hop trek up the North Shore of Lake Superior. Disappointingly,

signals were VERY weak with either side only hearing the other occasionally. Recall, that our location on Brockway Mtn was about 700 feet above the lake. For the Minnesota crew's next four stops, signals were VERY weak with only one completion. I think both sides did a good job of putting RF in the right direction, but the sigs just weren't getting through. I think the decisions to "give up and move on" were just right. LJC and SHF noted that throughout the morning they saw a haze right above the water out near the horizon.

Near noon on our end, the Minnesota crew seemed delayed longer than normal before returning to the air. When they did return, they said that they had gotten off the beach and gone to a location several hundred feet above the water at a place called "Palisades". They were louder on 2m and "Boom" there they were—loud on 10 GHz! Either it was the altitude change or the haze layer seemed to disappear about this time. Four ops on the west end completed easily with LJC and SHF. I thought my equipment was operating just fine but the other side of the lake was not hearing me. LJC stuck an rf sniffer in front of my dish and sniffed "nothing". It was time for us to move--I'd work on this problem at the next location.

We drove 17 miles west to Great Sand Bay west of Eagle Harbor, MI (EN57vk). A very nice location with a nice parking area and parking barriers with which to prop up our tripods in the wind which had grown even more ferocious—even down on the water. Although we neglected to take pictures on Brockway, we did get some pictures of this location with the crashing waves in the background.



WBØLJC and KØSHF listen for contacts in the howl of the wind.

We got set up and again, contacts were easily completed with four on the west end and two on the east end. I continued to troubleshoot my problem. It seems that the relay power coming out of the xverter (which is supposed to spike high and then maintain 12v) was staying on 12v even after un-key. So the

relay was not releasing. The solution was to snip the wires and rig up smaller batteries as a 24v supply for the relay and then hand-key the relay with alligator clips. Bingo! I was "on the air".

The west end relocated repeatedly the remainder of the afternoon and contacts were EASY! The west end crew REALLY had their act together and often only needed 30-35 minutes to take down, travel 10+ miles, and set up again ready to go. AND, I note that every time I worked them, it took less than 3 minutes to work 4 operators!!! Good show! No fiddle factor required! Our goal was to be like them during our operations on Sunday.

Finally, at their last location at the Thompson Rest area, which is also several hundred feet above the water, signals were VERY weak and we only had one completion. I wonder if they would have heard my last transmission if I had remembered to key the relay in the heat of battle :-)

While it looked grim during the morning that the trip to Michigan's UP would be a bust, the mood improved a great deal by finally making some nice contacts. I note that the path lengths were 240, 262, 276, and 291 km with a couple even longer than that.

So we packed up and hit the road towards Manistique. We came south out of the Keweenaw and got some burgers in L'Anse. We blitzed through the night via Marquette and arrived in Manistique at 1230am. We got about 5.5 hours of sleep and then were up ready to go at it again. We got a breakfast at a cafe and then drove about 50 miles east to Naubinway (EN76gc) where we set up at an excellent location at the village marina. There is a good parking area and you can set up right next to the car.

Our goal was to work K2YAZ and a contingent of Michigan Microwavers consisting of NE8I, WW8M, WB8TGY, KB8VAO, WA8VPD, and W8HTB. We were on the air about 8:45am Eastern. The Michigan operators were setting up at their first location on the beach in EN64xv. After we got on each other, the contacts were easy. Basically, there were 7 ops on the Lower Peninsula end (LP) and three ops (us) on the UP end. Bob, K2YAZ was an excellent coordinator while acting as relay between WB9SPT and us who was setting up in Northern Illinois. We did hear Neil, but it was via rain scatter and not terribly strong. He is running 10watts while we were running between 500mw and 2w. This time and effort was frustrating because we spent an hour just trying to work WB9SPT. Had we completed, it would have been a seriously long distance qso. Thanks to both Neil and Bob for giving it a good shot.

Our next spot was the Gould city park (EN75dx). It is on the water, but you have to carry your equipment 100 yards right to the water to make sure you have a good angle towards Milwaukee and the LP. We completed

easily with all 7 ops. I got a little low on fuel and had to take valuable time to find a gas station during our transit to our next spot. In retrospect, I should have filled up first thing in the morning. As an experienced rover, I should have known better.

Our next spot was near the Seul Choix Lighthouse (EN75aw) (pronounced "sis shwa"). We intended to operate right at the lighthouse. I ran in and secured permission but it was going to require 150-200 yards of carrying to get down to the beach. Future operators will have to do that. Our solution, which probably won't work for others in the future was to track back to the west about 2miles and operate from a home construction site right on the water. Again, signals were easy with K2YAZ and the four remaining on the beach. We had some trouble getting hooked up with NE8I and WA8VPD. They had moved to near Northport, MI and set up at EN75ee. It was windy on our end but apparently even windier on their end. Completing the QSO's took quite a while. The Seul Choix Lighthouse is actually at EN75bw. They have a website at <http://www.reiters.net/lighthouse/> and future users may want to email [seulchoix@reiters.net](mailto:seulchoix@reiters.net) to smooth the works.

Finally, we moved to our last spot (EN65vw), which is a parking area on the east end of the "boardwalk" in Manistique. An excellent location. We completed easily with K2YAZ and the four on the beach ("the beach bums"). QSO's were eventually made with WA8VPD and NE8I. Several ops on the LP side and KØSHF and WBØLJC were understandably anxious to finish because all were looking at long drives to return to their homes.

I had the next day off so I operated from one more location SW of Manistique (EN65tu) and contacted K2YAZ, WB8TGY, and KB8VAO. I don't recommend operating from west or southwest of Manistique. Consider Manistique your westernmost location and pick 10-mile spots east from Manistique. I eventually asked an older couple coming out of a forest lane if they knew of any access points to the water in order for me to operate ham radio in a contest, they graciously let me use their land. I got right down to the beach to find that I was north of a point of land (Wiggins point) that blocked shots towards K2YAZ and "the beach bums". Well, I coordinated with YAZ on 2m and then heard him on 10g rain scatter. We completed, and then KB8VAO and WB8TGY completed with me on SSB over a 60-mile shot. What I find amazing is how loud the signals were considering how tall the trees were on Wiggins point and that the point was only 1/3 mile away. There must have been some enhancement over the water of Lake Michigan. We ended up ragchewing on 10Ghz for about 10 minutes. A great way to finish the day.

So, a great weekend of 10GHz RF. Many operators drove significant distances in order to make this happen, but I'd like to think it was generally rewarding for all. It sure was for me!



Obstructed path from EN65tu—Blasting thru Wiggins Pt

Great Lakes weather in mid-September is always iffy. In our case it was cold, sunny, and windy. It could have been cold and rainy. I'd like to think that if it had not been windy, perhaps 100% of the overwater shots would have been completed. And this means LONG shots down the lake towards Milw. and Chicago. I'm sure we'll have some good email conversations about Great Lakes propagation and the role that altitude plays.

I had a great time this year in the contest. I operated from the Illinois/Wisconsin border area on one day, Twin Cities area another day, and at two different parts of Michigan's UP on the 2nd weekend. I'm glad that KØSHF and WBØLJC made the trek to the UP as well. It was much more fun having friends there. Further, the west end contingent probably wouldn't have made the trip to the north shore just to work one operator on the east end. Similarly on Sunday, it was much more rewarding for the LP ops to have 3 q's each time instead of one. I'm glad that so many of them made the trek north. Thanks!

Here's my score recap:  
22 unique callsigns worked (2200) + 10993 distance points = 13193 total score. Best DX was 311 km from Northern Illinois to K2YAZ.

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## Belated Issue

Yes, this e-newsletter is late. I meant to have it out in early October. I blame severe post-conference-burnout as the cause. The plan is to have the next issue in the first week of January. But as you'll realize, that is a mere three weeks away. So, it will be just a one-pager about the current status of the Tulsa conference planning UNLESS you send me some material, appropriate for our membership, to beef up the next issue. Any meteor shower reports, new equipment, new modes, or other tid-bits to share with your fellow members? Send them along to your Newsletter Editor:

Bruce Richardson, W9FZ [w9fz@ix.netcom.com](mailto:w9fz@ix.netcom.com)  
2330 Lexington Ave S. #312  
Mendota Hts, MN 55120