



THE BEAVER VALLEY AMATEUR RADIO ASSOCIATION  
 WWW.W3SGJ.ORG  
 BEAVER COUNTYS ONLY 75 YEAR ARRL AFFILIATED CLUB!

# The eQRM Newsletter

Home of W3SGJ/R  
 145.310- 100 Hz PL

Volume 1, Issue 13  
 December 1, 2007



## COMMENTARY: MY NEW HEROES

*Editor's Note: The following article is a commentary and does not necessarily reflect the opinions of the ARRL or the Beaver Valley Amateur Radio Association*

I have some new heroes!

George Caffro, N3HOJ is now one of them. George has managed to resurrect two BVARA traditions: Field Day and our Annual Corn Roast both of which will be held in 2008 at Brady's Run Park!

About two months ago, George began his quest to return these time honored traditions to Shelter 6 (which is now Shelter 12) at the park. He began his arduous journey by securing documents given to the club by the County Commissioners many years ago. These documents recognized the club's dedication and commitment to both emergency and public services. These documents also included pro-



visions for the club to utilize, for free, Shelter 12 for its annual Field Day activities.

Now, you think that with such documents in hand, it would have been an easy task for George to secure the shelter- **NOT!**

After contacting the County Commissioners, George was directed from one office to another until he finally connected with the right person, Mr. Tom

King, Director of Recreation and Tourism for Beaver County. After reviewing past county records, Mr. King did not hesitate for a moment in issuing the club permission for use to Shelter 6 for Field Day and the Corn Roast. George complemented Mr. King's warm reception and positive attitude in helping the BVARA by telling me, "You know Bob, that Mr. King sure  
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### Newsletter & Information Exchange

- Have your club's latest news and happenings printed here for FREE!
- Is your club having a VE session or classes? Let me know and I'll help spread the word!
- Planning a Hamfest? Drop me a line and get some FREE PR in the eQRM!
- Having an ARRL night, special speaker or program? The eQRM can help by spreading the news within our region!

# DECEMBER 2007

The Beaver Valley Amateur Radio Association meets at the Beaver County Emergency Operations Center located at 250 East End Avenue, Beaver, PA on the second Thursday of every month at 7:30 PM. Everyone is welcome.

Don't forget to listen to the BVARA club nets every Wednesday Night! 2 Meter Net on 145.31MHz 100Hz PL at 8:30PM and the 10 Meter Net 28.370 QSY +/- 10 at 9:00PM. Also, don't forget the Rip Vanwinkle Net on 2 meters at 7:00AM daily.

Sun	Mon	Tue	Wed	Thu	Fri	Sat
						DINNER 1
2	3	4	NETS 5	LUNCH 6	7	DINNER 8
9	10	11	NETS 12	LUNCH 13	PARTY 14	DINNER 15
16	17	18	NETS 19	LUNCH 20	21	DINNER 22
23	24	25	NETS 26	LUNCH 27	28	DINNER 29
30	31					

The BVARA 10 Meter Net Lunch group will be meeting this Thursday at Eat & Park in Center Twp at 11:00 AM. The Saturday Dinner group will be meeting at Panera Bread in Monaca on Saturday, December 15 at 6:30 PM. All area amateurs are invited. **DON'T FORGET THE BVARA CHRISTMAS PARTY TO BE HELD AT FIRE MOUNTAIN ON FRIDAY DECEMBER 14 AT 7:00 pm. THERE WILL BE A \$5.00 GRAB BAG! ANY CLUB MEMBER THAT WOULD LIKE TO PARTICIPATE IN THE GRAB BAG EXCHANGE IS ASKED TO BRING A WRAPPED GIFT WITH A VALUE OF \$5.00.**

**FEBRUARY VE TEST SESSION:** The BVARA sponsors ARRL VE examinations at the Community College of Beaver County's Aviation Science building, 125 Cessna Drive, (Chippewa Twp.) Beaver Falls, PA. For more info on the test session, dates and times, contact Tony, KE3ED @ 724-774-4173 or by e-mail at KE3ED@arrrl.net.

## 2008 BVARA OFFICERS & DIRECTORS

- President:** Gary Hutchinson, KA3TYK
- First Vice President:** Robert DeMarco, WA3ZRM
- Second Vice President:** Debbie Mehutes, KB3EAQ
- Acting Secretary:** Phyliss Pander, N3KUG
- Secretary Elect:** Norm Trunick (Call Sign Pending)
- Treasurer:** Shawn Hastwell, KB8UDE
- Director:** Chris Moratis, W3OUF
- Director:** Jack Spencer, WB1BSU
- Trustee:** Tony Petrucci, KE3ED/W3SGJ
- Chief Engineer:** David Heim, KA3SMF

## CLUB NOTES

### SPECIAL THANKS TO THE FOLLOWING INDIVIDUALS AND CLUBS:

- Greg Babin, KQ3DX, editor of the Steel City Amateur Radio Club's newsletter for adding us to their mailing list.
- Robert Ferrey, N3DOK, for adding us to his mailing list that provides useful info and tips about our hobby.
- Pete Highlands, N3RLJ, ARRL WPA Affiliated Club Coordinator for his encouraging e-mail.
- Richard Thompson, K3BIE, editor of the Nittany Amateur Radio Club's newsletter for adding us to their mailing list.
- The members of the World Radio ARA, WR6WR, for adding us to their mailing list.

**LOOK FOR MORE INFO ABOUT THE ABOVE INDIVIDUALS & CLUB'S IN THE NEXT eQRM**



## COMMENTARY CONTINUED FROM PAGE 1

is one nice guy.”

Good work George. Now, just to show you that the road to hell is paved with good intentions, I will be nominating you to serve as the 2008 Field Day Committee Chairperson. Additionally, for your outstanding work, I will be sending e-mails to both you and John Rodgers, N3MSE asking for your appointment as the BVARA's ARRL Local Government Liaison. Click here: <http://www.arrl.org/FandES/field/org/lgl.html> to see what this position entails and your interest level in it..

My next new hero is Jack Spencer, WB1BSU. Jack was recently appointed to the club's executive board and has been instrumental in two noteworthy projects: 1. Along with KB8UDE is setting up a slave receiver for the repeater in the lower end of the valley; and, 2. Teaching a Technician Class for 14 Boy Scouts!

Jack recently upgraded his license to Extra and managed to get his XYL, Pam, to obtain her Technician License! Wow... this man needs to give me some lessons on how to get my YL her ticket! I'm also very envious that Jack got his Extra before me.

Well Jack, just like I told George, the road to hell is paved with good intentions.

During a recent phone conversation with George, the topic of how well you are doing with the Scouts came up. And George, being the wonderful person that he is, suggested that you, Gary, George and I talk to the Scoutmaster about holding a county

wide Scout Jamboree at the Field Day site. George is so excited about the idea that he has already begun working on the patch design. This patch will be issued to each Scout that attends our FD Jamboree. Well Jack, I guess that you, Gary, George and I talk about this at the Christmas Party. Or better yet, why don't you give ole George a phone call to get the ball rolling?



In addition to that, based on my envy and your now proven Extra Class technical proficiency, I will be sending e-mails to both you and John Rodgers, N3MSE asking for your appointment as the BVARA's ARRL Technical Specialist. Click here: <http://www.arrl.org/FandES/field/org/ts.html> to see what this position entails and your interest level in it.

My final new hero... at least for this month, is Shawn Hastwell, KB8UDE. Shawn was recently elected Treasurer for the BVARA and is involved in MARS. Shawn is a volunteer firefighter and has a keen interest in emergency services. He is also one of the youngest members of the club being in his early 30's.

In a way, Shawn reminds me of myself at his age— energetic and possessing a strong desire to see the BVARA grow and prosper.

Well Shawn, it's back to that same road that I've already mentioned

twice. I will be sending e-mails to both you and John Rodgers, N3MSE asking for your appointment as the BVARA's ARRL Official Emergency Station. Click here: <http://www.arrl.org/FandES/field/org/oes.html> to see what this position entails and your interest level in it.

Shawn. I'm speaking to you from my heart when I say that it has been far to long since the BVARA had an official liaison with the County's EOC. As the BVARA's Official ARRL Emergency Station, I am asking you to assume a club leadership role by carrying out the responsibilities for specific, predetermined liaison responsibilities as assigned by the presiding SM and or DEC. Examples include: Maintaining contact with assigned served



agencies; Maintaining liaison with specified nets; Maintaining liaison with ARES officials in adjacent jurisdictions; and, serving as club Liaison with mutual assistance or "jump" teams. I ask that you give serious consideration to this position not only for the sake of the BVARA, but for the health and welfare of all Beaver County residents.

Well... that's about it for this month's heroes. Rest assure; however, that more heroes are on their way and you'll be reading about them in upcoming issues of the eQRM.

And as a post script, just so it does  
*(Continued on Page 4)*

# THE HAM'S HOROSCOPE

BY MADAM ZELDA, ST1ARS

That's Gold	I'm Happy	Can't Complain	Not Happy	Turn down the heat	
Sign	Romance	Home & Family	Finances	Career	General
<b>Aries</b>					
<b>Taurus</b>					
<b>Gemini</b>					
<b>Cancer</b>					
<b>Leo</b>					
<b>Virgo</b>					
<b>Libra</b>					
<b>Scorpio</b>					
<b>Sagittarius</b>					
<b>Capricorn</b>					
<b>Aquarius</b>					
<b>Pisces</b>					

This week's New Moon has plenty of energy and the need for something a little different. There can be some rather grating energy that the more sensitive may find difficult to deal with. Try to keep things in perspective and not be too reactive to others. For **Sagittarius** this is especially so as the New Moon is in your sign. This is a time of renewal and energizing, a time to focus on personal goals. Creativity is also highlighted and you may find you need to put more of your energy into this area of life as well. **Aries**, for you the new moon highlights freedom and expansion of horizons. Time to expand your thinking. Outmoded ideas and ideals need to be discarded. Perfect for beginning new courses. for **Taurus**, finances are under scrutiny and it can be there is too much flowing outward and insufficient flowing back in. watch your spending and mind your budget. This new moon highlights relationships for **Gemini** and there can be some new developments or direction here for you also. Career can undergo a shift and this can be impacting on your primary relationships. **Cancer** for you the New Moon will highlight your habits and general health. Perfect for beginning a new fitness regime, preferably something you haven't tried before. It is also positive for a change in work situation. It also brings changes to **Leo** in the area of children and creativity, with self expression an important focus. If you have been working too hard, this is a wake up call to take some time out for pleasure. **Virgo**, for you there is emphasis on the home front with some unexpected developments in this area over coming months. There can be quite dramatic changes in this area. **Libra**, like your opposite Aries, this lunation is calling for you to open your mind to new possibilities. You will find what you need in close proximity, through partners and friends. Perhaps you just need to take a different perspective of what is around you. This should be overall a positive time for you. **Scorpio**, for you the new moon also highlights finances especially where creativity or leisure pursuits are concerned. You can find yourself being more self assertive and this is overall a very positive week for you, especially where relationships are concerned. **Capricorn**, this week could have you seeking sanctuary, looking for time alone. Problem can be that even alone, there is so much going through your mind, you still find it difficult to relax and unwind. Use some creative visualization or meditation techniques to help still the mind. This is a brief interlude to allow you to recharge your batteries for when the Sun moves into your sign later this month. **Aquarius**, an increase in social commitments is your area of highlight, so have the diary ready and be prepared to party. This is also very positive for career and work related matters. **Pisces**, your focus is career with new opportunities presenting. Utilizing your creativity can pay off in extra money, so be prepared to put your ideas 'out there'. The ball is firmly in your court and you are now in charge of the next move. Lucky numbers for all ham's this week: 1,6,19, 9, 32 and 11.

## COMMENTARY CONTINUED FROM PAGE 3

that I am trying to stick it to you guys by asking for your participation in ARRL club leadership positions, I will also be asking John, N3MSE, to appoint me as the BVARA's ARRL Public Information Officer. If you are interested in seeing what I am getting myself into, click here: <http://www.arrl.org/FandES/field/org/pio.html> to see what the position is all about.

This is an exciting time to be involved in Amateur Radio. The BVARA is undergoing a phenomenal resurgence. We are gaining more new members and the future looks bright. An example of what I am talking about can be seen just in this newsletter alone. What started out as a simple e-mail to 20 club members has grown into a publication with over 200 subscribers! Who says Amateur Radio is a dying hobby? See you next week. 73's de WA3ZRM



# HAM'S ARE UNSUNG HEROES

**PORTLAND, Ore. (AP)** — When parts of Oregon were overwhelmed by wind and water during the recent storm, vital communication often was lacking, with trees down and across phone lines and cell coverage limited.

Even the state police had difficulty in reaching some of their own troops.

But ham radio worked.

In fact, amateur radio operators were heralded by state emergency officials as heroes. Ham radio is more than just a hobby to some. It can set up networks for government and emergency officials to communicate when other communication services fail.

"One of the problems in this is always communication," Gov. Ted Kulongoski said after a visit Tuesday to Vernonia and a fly-over there and other affected areas. "I'm going to tell you who the heroes were from the very beginning of this...the ham radio operators. These people just came in and actually provided a tremendous communication link to us."

A network of at least 60 volunteer amateur radio operators working along the coast and inland helped from keep crucial systems such as 911 calls, American Red Cross and hospital services connected. They relayed information about patient care and relayed lists of supplies needed in areas cut off by water.

In addition to getting an FCC license to operate, certain groups of operators are cleared by the federal government to work as emergency responders.

"You are amateur in name only," said Steve Sanders, a spokesman for District One of the Amateur Radio Emergency Service, which helped in several key counties hit by the storm.

The Oregon Office of Emergency Management said the radio operators were tireless in their efforts to keep the systems connected.

It was ham radio that kept New York City agencies in touch with each other

after their command center was destroyed on 9-11, according to the National Association for Amateur Radio. When hurricanes like Katrina hit, amateur radio helped provide life-and-death communication services when everything else failed.

Amateur radio works on a set of radio frequencies known as "amateur bands" just above the AM broadcast band all thcies. Operators use their own equipment to communicate with other operators, using different equipment

and frequencies than emergency responders.

So when some services won't work, they can relay messages.

Sometimes it takes creativity and a lot of leg work, such as setting up a new link on the top of a mountain when no other options are available.

The only major limitation, Sanders said, is the number of volunteers.

"This was just the poster child storm for what we do," Sander said.



**BY BECOMING A MEMBER OF THE BVARA, YOU CAN HELP SECURE THE FUTURE OF AMATEUR RADIO IN BEAVER COUNTY. ADDITIONALLY, THE BVARA RECEIVES A PORTION OF EACH ARRL OR WORLD RADIO SUBSCRIPTION YOU PURCHASE!**

## Join the BVARA, ARRL and World Radio

Sign up for:	Price	Quantity
<input type="checkbox"/> BVARA FULL MEMBERSHIP	20.00	
<input type="checkbox"/> BVARA STUDENT MEMBERSHIP	15.00	
<input type="checkbox"/> BVARA ASSOCIATE MEMBERSHIP	10.00	
<input type="checkbox"/> BVARA SPOUSE/CHILD MEMBERSHIP	5.00	
<input type="checkbox"/> ONE YEAR ARRL MEMBERSHIP	39.00	
<input type="checkbox"/> WORLD RADIO SUBSCRIPTION	21.00	

Subtotal: \_\_\_\_\_  
 Donation: \_\_\_\_\_  
 Total: \_\_\_\_\_

ARRL MEMBER?  YES  No

Your License Class (if any):

- Novice
- Technician
- General
- Advanced
- Extra

Name \_\_\_\_\_

Address \_\_\_\_\_

Phone \_\_\_\_\_

Your Call Sign: \_\_\_\_\_ Exp. date \_\_\_\_\_

Signature \_\_\_\_\_

**Make Check or Money order payable to:  
 The Beaver Valley Amateur Radio Association  
 P.O. Box 424  
 South Heights, PA. 15081**

## DX NEWS VIA THE ARRL

This week's bulletin was made possible with information provided by F6AJA, K0OK, NC1L, QRZ DX, the OPDX Bulletin, DXNL, 425 DX News, The Daily DX, Contest Corral from QST and the ARRL Contest Calendar and WA7BNM web sites. Thanks to all.

ITU HQ, 4U\_ITU. Seppo, OH1VR will be QRV as 4U1ITU from the ITU Geneva station from December 10 to 12. Activity will generally be around 1600 and 1700z daily. QSL via operator's instructions.

JAMAICA, 6Y. Dave, KY1V will be QRV as 6Y1V in the ARRL 10 Meter contest. QSL via OH3RB.

OMAN, A4. To commemorate the 35th Anniversary of the Royal Omani Amateur Radio Society, all Omani stations will sign call signs/35 from December 12 to 14. The ROARS HQ station A47RS will also be QRV as A47RS/35. QSL HQ station via bureau.

PAKISTAN, AP. Tariq has been QRV using CW on 40 meters from around 1600 to 1900z. QSL via DJ9ZB.

URUGUAY, CX. Andrea, IK1PMR and Claudia, K2LEO are QRV as homecalls/CX from Montevideo until December 10. Activity is generally on 17 and 12 meters using low power. Andrea will be QRV as CW2C in the ARRL 10 Meter contest. QSL all calls via IK1PMR.

ETHIOPIA, ET. ET3JA has been active on 40 meters around 2200z.

JERSEY, GJ. Rob, MW0RLJ, Anthony, MW0JZE and Russell, G5XW are QRV as MJ0RLJ, MJ0JZE and GJ5XW, respectively, until December 10. Activity is on 160, 80 and 40 meters using mainly SSB with some CW. QSL all calls direct via G5XW.

DJIBOUTI, J2. Darko, J28OO has been QRV on 30 meters around 2000z and then at 2300z. QSL via K2PF.

JAPAN, JA. Look for operators JL1OVB/1, JO1LVZ/1, JJ2GAZ/1 and 7L3ATQ/1 to be QRV from Izu Oshima Island, IOTA AS-008, from December 8 to 10. Activity will be on all HF and VHF bands using CW, SSB and FM. QSL to home calls.

JORDAN, JY. Dr. Ali, JY4NE has been active using CW on 20 meters around 1430z. QSL via K3IRV.

MARIANA ISLANDS, KH0. Hiro, W1VX, Toshi, N3YS and Hide, AB2WE are QRV as KH0/homecalls and KH0D from Saipan, IOTA OC-086, until December 10. Activity is on 80 to 10 meters using CW, SSB, RTTY and FM. QSL KH0/W1VX and KH0D via JF1OCQ. QSL KH0/N3YS via JE1SYN and KH0/AB2WE via JI1JPJ.

ANTARCTICA. A group of 11 team members are QRV as

OJ1ABOA from the Aboa Scientific Base for about three months. Activity is on various HF bands. QSL to OH2FFP.

BONAIRE, CURACAO, PJ2. Larry, WO0Z will be QRV as PJ4/WO0Z from Bonaire, IOTA SA-006, from December 8 to 15. He will be active holiday style on various HF bands using CW, SSB and possibly RTTY. QSL to home call.

BRAZIL, PY. Bone, PP5VX is QRV from Sao Francisco do Sul, IOTA SA-027, in the Santa Catarina State North Group, until December 31, 2010. Activity is on all bands and modes. QSL to home call.

BANGLADESH, S2. Stig is QRV as S21ZDX and has been active on 80 meters using CW around 1440 and 1630z. QSL via HS0ZGD.

GABON, TR. Roland, F8EN is QRV as TR8CR from Libreville until January 12. Activity is mostly on 20 meters. He may try to take a short trip to an island in the AF-043 IOTA group. QSL via F6AJA.

ST. KITTS AND NEVIS, V4. Eric, W0XG is QRV as V4/W0XG until December 10 from St. Kitts and then from Nevis on December 10 to 13. Activity is on all bands operating holiday style. This includes an entry in the ARRL 10 Meter contest. QSL to home call.



*(Continued on Page 8)*

## Propagation de K7RA

More sunspots emerged this week, with every December day so far showing spots. In addition to the sunspot numbers listed through Wednesday at the end of this bulletin, Thursday, December 6 had a sunspot number of 29. The daily sunspot number has not been this high since mid-July. Two spots are now visible, 977 and 978, and the total coverage of the solar surface by sunspots on Thursday is four times Wednesday's coverage. Average daily sunspot number for this report is over twice last week's, rising from 5.4 to 11.1. Sunspots will probably continue until at least December 13.

Geomagnetic numbers have been extremely low, with average daily planetary A index dropping from 8.7 to 2, and average mid-latitude A index declining from 6.3 to 1.1 for the week. Check the quarterly geomagnetic indices since October 1 at,

[http://www.swpc.noaa.gov/ftpdir/indices/quar\\_DGD.txt](http://www.swpc.noaa.gov/ftpdir/indices/quar_DGD.txt), and note the incredibly stable numbers, especially at high and mid-latitudes, around December 2-6. You don't see strings of zeroes such as this during the higher portions of the solar cycle, and it seems perfectly timed with last week's ARRL 160 meter contest. Heightened or unsettled to active geomagnetic conditions are not expected until December 17.

Geophysical Institute Prague predicts quiet conditions December 7-9, quiet to unsettled December 10, unsettled December 11-12, and quiet to unsettled December 13.

This year we've been tracking a 3-month moving average of daily sunspot numbers to help spot trends that may indicate the bottom of the solar cycle. Here are the 3-month averages since December 2005.

Dec 05 40.6

Jan 06 32.4  
Feb 06 18.1  
Mar 06 27.7  
Apr 06 38.5  
May 06 39.7  
Jun 06 28.9  
Jul 06 23.3  
Aug 06 23.5  
Sep 06 21.2  
Oct 06 24.1  
Nov 06 23.1  
Dec 06 27.3  
Jan 07 22.7  
Feb 07 18.5  
Mar 07 11.2  
Apr 07 12.2  
May 07 15.8  
Jun 07 18.7  
Jul 07 15.4  
Aug 07 10.2  
Sep 07 5.4  
Oct 07 3

The average for September, October and November, centered on October, at 3 is the lowest yet for this side of Cycle 23. This number was derived by adding all daily sunspot numbers for those three months, then dividing the sum (270) by the number of days, which is 91. The result is approximately 2.967, very close to 3.

Monthly sunspot number averages for this year, January through November, are 28.2, 17.3, 9.8, 6.9, 19.8, 20.7, 15.6, 9.9, 4.8, 1.3 and 2.9. October's average of 1.3 is lower than September and October of 1996, during the minimum between Cycles 22 and 23. The monthly averages for August through November, 1996 were 20.7, 2.9, 2.3 and 25.6.

A new table of predicted sunspot and solar flux values for Cycle 24 is in this week's Preliminary Report and Forecast

of Geophysical Data at, <http://www.swpc.noaa.gov/weekly/> on pages 10-11, December 4 issue. For the past few years the prediction table showed no data beyond this month. The table now runs an additional eight years, through December 2015.

Note the two sets of predicted smoothed sunspot data, reflecting the split consensus among members of the Cycle 24 prediction panel at this year's Space Weather Workshop in Boulder, Colorado. The late decline in Cycle 23 led the group away from an earlier consensus for a strong Cycle 24, and now the panel is split. One faction predicts moderately strong sunspot activity for Cycle 24, the other, moderately weak. You can see from the table of values that the strong camp shows a peak centered near August-November 2011, while the weak cycle faction predicts their peak to occur in May-October 2012.

To get an idea of the relative intensity of these predictions, peruse a table of smoothed sunspot numbers at, <http://tinyurl.com/3yzcyz>, showing over 3,000 months of smoothed sunspot numbers back to July, 1749, nearly one-quarter millennia. I'm not suggesting comparison of the predicted values with anything further back than the past few cycles, but it is there if you need it.

Another view of predicted values for this ending cycle and the next one is at, <http://www.swpc.noaa.gov/ftpdir/weekly/Predict.txt>, updated monthly. Another prediction, this time from the Australian government is at, <http://www.ips.gov.au/Solar/1/6>.

Joe Reisert, W1JR of Amherst, New Hampshire sent an informative email concerning "great polar openings on 80 and 40 meters to Europe at our sunrise."

*(Continued on Page 8)*

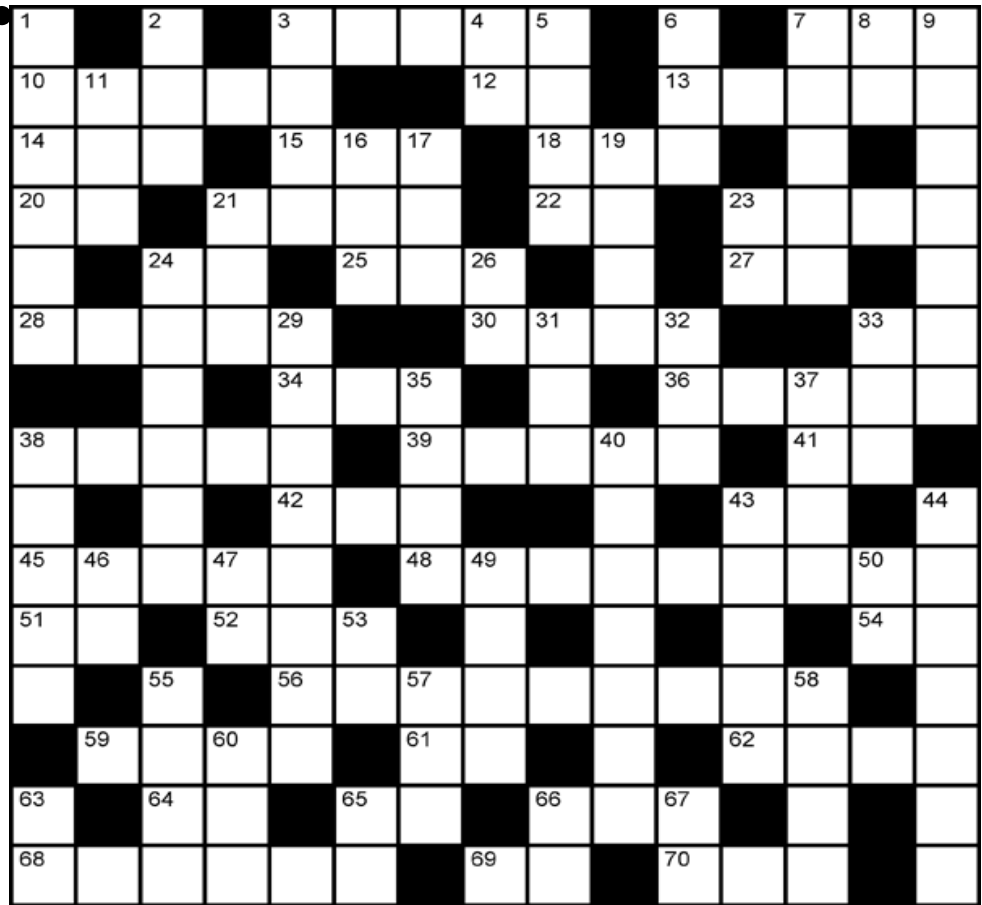




## A Ham's Pie in the Sky

### Across

3. Perpendicular to an axis of an antenna  
 7. Makes a signal louder  
 10. Where antennas are tested  
 12. Instead of hi, we now want this kind of fi  
 13. Unbalanced impedance match  
 14. Venerable antique  
 15. The ARRL's on-line technical reference (abbr.)  
 18. Flex under one's own weight  
 20. Safety lab (abbr.)  
 21. Forms an important ratio with front  
 22. Swiss prefix  
 23. Tube that holds up an antenna  
 24. Amateur satellite prefix  
 25. Bolt with a ring for a head  
 27. British abbreviation for high voltage  
 28. Triangular antenna  
 30. To apply energy  
 33. Opposite of 63 Down  
 34. Single layer of several  
 36. Keeps currents even  
 38. Amount of difference in bearing  
 39. Prize given for merit  
 41. Powered up  
 42. Slang for radio  
 43. The Show-Me State (abbr.)  
 45. Start again or go back to the beginning  
 48. Radiates the same everywhere  
 51. Oldest mode for voice  
 52. Terminal that attaches to a screw  
 54. Number (abbr.)  
 56. Energy given off by an antenna  
 59. Antennas have mains and sides  
 61. Towards the sky  
 62. Milli-micro (prefix)  
 64. Smallest of the 48 contiguous states (abbr.)  
 65. Diameter measured outside a tube (abbr.)  
 66. Radiated power taking into account line losses and antenna gain (abbr.)  
 68. A wire antenna of indeterminate length  
 69. The Granite State (abbr.)  
 70. Scares birds off antennas...maybe



### Down

1. An electrical imaging plane  
 2. Where a Zepp antenna is fed  
 3. Balanced match dubbed "hairpin"  
 4. Sigh of disappointment  
 5. Bowl-shaped antenna  
 6. Round insulator  
 7. Satellite organization  
 8. 25.4 of these in an inch (abbr.)  
 9. Graph showing antenna radiation by direction  
 11. Opposite of none  
 16. Builds up on antennas in winter time  
 17. Waves that bounce off the ionosphere  
 19. Can perform a task if willing  
 21. Slang for automaton  
 23. A giga-pico-henry (abbr.)  
 24. Brings together so that they fit  
 26. Type of transistor circuit with no voltage gain, but lots of current gain (abbr.)  
 29. A measure of an antenna's ability to capture signal power  
 31. Guess at an arrival time (abbr.)  
 32. Measure of gain with respect to a dipole (abbr.)  
 33. What makes the ionosphere  
 35. Type of beam antenna  
 37. Circular element  
 38. Antenna with multiple elements  
 40. What turns antennas  
 43. Inventor of a famous rectangle  
 44. Bah, humbug!  
 46. Electromagnetic (abbr.)  
 47. Complement to "az"  
 49. Bounce of a signal  
 50. Not out  
 53. Measure of wire thickness (abbr.)  
 55. Antenna that looks like a megaphone  
 57. Antenna that doesn't work well  
 58. What everything looks like when all you've got is a hammer  
 60. Placed during auctions  
 63. Indicates a smaller version of something  
 65. Affectionate term for husband (abbr.)  
 66. The two types of fields in a radio wave  
 67. Where the boxes are (abbr.)

## Ham's Love to Eat - Snow Pie with Raspberry Sauce

### Ingredients:

#### *Snow Pie:*

1 cup/250 mL water  
 1/2 cup/125 mL sugar  
 3-1/2 tbsp/50 mL **Watkins Vanilla**  
 3 egg whites, beaten until stiff  
 1 tsp/5 mL **Vanilla, D.S. Original Glass Trial Mark™ Bottle Original Double-Strength Vanilla**  
 1/2 tsp/2.5 mL **Watkins Almond Extract**  
 1 baked and cooled 9-inch/23-cm pastry pie shell  
 Whipped topping flavored with **Vanilla, D.S. Original Glass Trial Mark™ Bottle Original Double-Strength Vanilla**



#### *Raspberry Sauce:*

1/3 cup/80 mL sugar  
 3 tbsp/45 mL **Watkins Vanilla**  
 3/4 cup/180 mL water  
 1 package (10 oz/283 g) frozen raspberries  
 Few drops lemon juice

### Cooking Directions:

#### *Raspberry Sauce*

Combine all ingredients in medium saucepan. Cook and stir until mixture begins to boil and thicken. Chill until ready to use.

#### *Snow Pie*

Boil 1 cup water and sugar until clear. Mix dessert mix with a little cold water; add to sugar syrup. Stir and cook until clear and bubbly. Immediately pour syrup in a thin stream into beaten egg whites and beat until stiff peaks form. Beat in vanilla and almond extracts. Pile into pie shell. Top with sauce and whipped topping; garnish as desired. Makes 8 servings.

## Junk Food Fails Test!

from Brenda Koth, MS, RD  
 Watkins Health and Nutrition Advisor



A New York Film Director provided shockwaves at this year's Sundance Film Festival. The film crew for his movie, "Super Size Me: A Film of Epic Portions," followed Director Morgan Spurlock as he ate only McDonald's fast food for a month, recording his ballooning weight, leaping cholesterol and malfunctioning liver. Not to be outdone, Justin, a thirteen year-old from New Zealand, ate only sugar and junk food for two days, then put himself through a series of reading, typing and mathematics tests. He then switched to chicken, rice, bread and vegetables for two days, and went through the same series of tests. The results? He read 43 percent slower, typed at nearly half his usual speed and solved math problems up to 35 percent slower when on the junk food diet. His family also noticed negative behavior changes while on junk food. Watkins herbs and spices can help to bring the family back to "home plate," making mealtime fun for everyone, including the cook! Think of mealtime as "food for thought" for your entire family!

## AMATEUR RADIO

### For Sale

#### MFJ -949C Deluxe Versa Tuner II



It is designed to match virtually any transmitter to almost any antenna, including dipoles, inverted vees, verticals, mobiles antennas, beams, random wires, and others fed by coax lines, balanced lines, or a single wire. It has a 4:1 balun built in for connection to balanced lines. A built in dummy load for easy transmitter tuning or checking. It will handle up to 300 watts of RF power from a transmitter from 160 through 10 meters. It has a cross needle meter so forward power, reflected power, and SWR may be read simultaneously.

Jack, WB1BSU will donate the proceeds from the sale of his old antenna tuner to the BVARA. It works fine. He just replaced it with an LDG auto tuner. For more information on the tuner, contact Jack on the .31 repeater or by e-mail at:

[ajs322@comcast.net](mailto:ajs322@comcast.net)