



THE RARA E-RAG

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NO. 4

Propa-what???

By Frank Schramm, WB2PYD
Vice President, RaRa

"Why can't he hear me?" Why can't I ever work Hawaii?" "I can work Europe, but I can't log anyone in New Jersey. What's wrong?"

If you've ever uttered, or even thought, anything like that you're not alone. The biggest mystery of radio is called Propagation. Propagation is all those things that affect your radio signal and determine where it's going to be received and how strong it will be when it gets there. For some it's as incomprehensible as magic, for others it's a fundamental science that's studied with computers and charts. While none of us should live with our heads in the sand (or any other place the sun doesn't shine) few of us have the desire or time to master the science of propagation. So what do we do?

There are tools available that try to bridge the gap between the magic and the science, and provide the average Ham with a simple, understandable answer to the question: "Where should my signal be heard if I keyed up right now?"



One of those tools is called the "PropNet Project". In its most simplified form, PropNet is a powerful network of real-time data collection from around the world all reporting to a central database. You can access this database and it will display real-time actual propagation between various parts of the globe! No forecasting, no predictions, just real exchanges presented in an easy to understand full color map (courtesy of Google Maps).

On Friday December 4th Ev Tupis, W2EV, will demonstrate how easy it is to use this valuable resource. Then you'll know when, and on what frequency, you'll be able to have a QSO with Hawaii or any other location you're after.

Now you try it. Say: "Propa-gation"... There, I knew you could!

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The Prez Sez

By Duane Fregoe, K2SI
President, RaRa

I hope everyone enjoyed their November copy of the "e-RAG". As you could see from the November edition we listened to the comments that were received from our members. We changed the layout to a one column format to make it easier for those that like to read it on a computer screen. We also changed the font and made it a little larger for those of us with the tired eyes.

If you did not get a copy of the November e-RAG you missed some good reading. All we need is a valid email address to get you on the distribution list. Please send that email address to president@rochesterham.org.

The e-RAG is only as good as the content. Alan Masson, GM3PSP / K6PSP, sent in a wonderful bio on his past ham radio experiences and updated us on his recent move back to Scotland. There are other members in the club that have moved out of the area but maintained their membership in RARA. It would be great to hear from some of those members. All bio write-ups and photos (we like pictures) can be emailed to me at the address noted above.

The "Directory" has been part of the club for many years. Prior to the popularity of the internet it was a big benefit to being a member of the club. With web sites from the FCC, QRZ, and WM7D paper based directories have lost much of their popularity. The need to go green is also driving us to less printed material.

The "Directory" is an expense to the club. If our members do not need it or do not use it then why should the club continue on with this expense? To better gauge the clubs need for a printed directory we are going to ask members to sign up for a copy of the "2010 Directory". You will need to go to the www.rochesterham.org web site to reserve your copy of the "2010 Directory". For those that may not have internet access you may call (585) 210-8310 to leave your name and call sign.

Skywarn™ Appreciation Day is December 5, 2009 (0000 – 2400 UTC). For us locals that is Friday night December 4th at 7:00 PM until Saturday night at 7:00 PM. The National Weather Service in Buffalo will be monitoring the



146.110 repeater. As you are driving home from the RARA meeting Friday night turn on that 2M mobile and give them a contact. The exchange is nothing more than a call sign and a one or two word current weather condition such as wind speed, temperature, or precipitation.

I am looking forward to seeing everyone at our next meeting on December 4, 2009. As always the coffee will be hot, the soda will be cold, and the donuts will be fresh!

Calendar of Events

- Dec 4** RaRa meeting
7:30 PM, Henrietta FD #1
- Dec 9** RaRa Board of Directors
5:30 PM, RIT
Bldg-17, Room 2110
- Dec 15** RDXA Holiday Dinner
Nick's Sea Breeze, Inn.
4581 Culver Rd.
- Dec 18** RRRRA Holiday Dinner
MacGregor's
300 Jefferson Rd.
- Dec 19** VE Testing
10:00 AM, RIT
Bldg-9, Room 3139
- Dec 26-29** W2RDX Ham Radio Demo
"Holiday Science &
Technology Days" at the
Rochester Museum &
Science Center



RaRa Hotline
(585) 671-2424
24 Hours a Day

Public Service 2009

By Duane Fregoe, K2SI
RARA Public Service Coordinator

Another year of Amateur Radio Public Service has come to a close. Many thanks to all that captained an event for the hours spent in meetings, making phone calls, and sending emails. Many thanks to all the volunteers that gave of their time to participate and assist an organization that needed our talents.

I have put together a recap of the events that we participated in for 2009. It notes the number of hams that participated in the event and the total ham man hours expended for the event. If a ham worked an event over multiple days it count as one in the ham count but the man hours would be cumulative over the entire event for that person.

EVENT	# of HAMS	MAN-HOURS
WXXI Digital TV Phone-In	11	22
Special Olympics Winter Games	11	55
Tour de Cure	32	288
Walnut Hill Farm Driving Competition	20	245
Rochester Marathon	12	65
AIDS Rochester Red Ribbon Ride	16	176
Fairport Regatta	3	19.5
Barktoberfest	15	57
MS Bike Tour	18	198
America's Walk for Diabetes	4	24
Jamboree on the Air	11	100
Pumpkin Patrol	29	225
TOTAL	182	1474.5

For a comparison in 2008 we had 181 hams for a total of 1,407 man-hours.

VE NEWS

The October 17th test session was held at RIT with 6 candidates. The testing resulted in three new Technicians, two Generals and one Extra, Fred WA2BQA who promptly volunteered for the VE Team, thank you Fred.

William	Carey	K2BOT	T
Laura	Moulton	KC2VZL	T
Edward	Scott	KC2VZM	T
Robert	Svenson	KC2VXX	G
Norman	Moulton	KC2VZN	G
Fred	Shippey	WA2BQA	E



RaRa Amateur Radio License Testing is held on the 3rd Saturday of each Month, September through April.

Registration begins at 10:00AM in RIT Building 9, Room 3139
[\(click for map\)](#)

Contact Ken Hall, W2KRH for space reservations.



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Awards Thoughts

By Dan & Sue Waterstraat, W2DEW & KC2SUE

Come on out to the December RARA meeting and get a second chance to win a LaCrosse Atomic Clock. This was a very popular prize last year. This clock uses Time Signals from WWVB to display the correct time automatically. The clock display has 2" digits so you can see it from across the shack.

Other features include 13 time zones including UTC, 12 or 24 hour display, moon phase display, and indoor and outdoor temperature display using a remote wireless outdoor temperature sensor.



For the repair bench we have a Craftsman Battery Test Meter. This meter tests batteries form 1.5V to 22.5V and sizes from Button cells, AAA, AA, C, D, to lantern batteries.

For the work bench, we have an Irwin Unibit Step Drill (made in USA). This will make holes from 1/8" to 1/2". If you've never used one, these are great for making holes in metal and plastic panels without grabbing and ripping out of your hands. The holes also come out nice and round instead of jagged. So come on out to the meeting and win yourself a Christmas present!



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RaRa Rag 20 Years Ago: December, 1989

By Ed Gable, K2MP
RaRa Historian



This December meeting carried on a long tradition of RaRa being hosted by one of the Kodak Amateur Radio Clubs, this time by the Kodak Park group, WB2WXQ. Held at KP's building 28, the program consisted of Ed Gable, K2MP and Mark Thompson, N2JER, who was the lead engineer on the Harris/RF's program to supply W1AW with new solid state kilowatt transmitters for bulletin and code practice transmissions. Ed spoke on the history of the ARRL's W1AW club station while Mark revealed the technical aspects of the equipments. Ed, who was the Production Manager for Harris at the time, said there were a lot of volunteers who wanted to work on the W1AW transmitters. And now just a side bar, one of those funny "Where did that come?" from facts: Did you know that Hiram Percy Maxim W1AW, co-founder of the ARRL, was the youngest ever graduate of M.I.T. at the age of 16? OK, back to work.

From the ARRL letter, it was reported that the League Board of Directors voted 9 for, and 6 against, recommending to the FCC that a new codeless amateur license class be initiated.

As reported by Wayne King, N2WK, for the Rochester VHF Group, the *groupers* are going all out with a greatly expanded program called the *Rochester Cup*. The goal is to increase local activity in the VHF group's hotly contested January VHF contest while at the same time challenge other Rochester area clubs to compete for the *Rochester Cup*, won last year by RaRa.

Today we live for reports like this, but published in this issue was a report that the solar flux index hit a record 305 with the expected results of outstanding propagation through 50 MHz. With regret it was reported that Cosmo Centola W2ZDX, Charles Schifano KA2LCW and Gretchen Stewart K2ZCE were reported as silent keys.

From the Want Ads you could buy a Heath HW-101 with accessories for \$350.00 from Paul Altpeter N2BUL. Michael G. Rice, KB2SG, Attorney At Law, remained a long term advertiser.



HIRAM PERCY MAXIM
Photo courtesy of Hiram Percy Maxim II,

Snyder and Snyder, LLP, Attorneys

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RaRa Auction Review.

Photos by Len Crellin, KC2PCD

For those of you who missed, or could not get out to the annual RaRa Auction on Friday November 6th, you missed a lot of fun. As you can see well over 100 people showed up to buy and sell pre-loved treasures. Our Auctioneers Dick and Ed were not only very effective salesmen, they were educational and a highly entertaining comedy team!



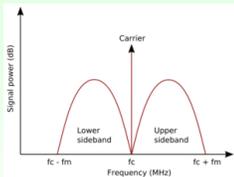
No, no really, you make a right when you exit the drive wav...



Our "Dynamic Duo" in action.



Where's Waldo?



Sidebands: Amateur Radio in the News

By Larry Wallnau, W2ZEY

DOT – FCC Partnership. U.S. Transportation Secretary Ray LaHood and Federal Communications Commission Chairman Julius Genachowski announced that their agencies are teaming up to address the problem of people driving while distracted. The joint program will evaluate new technology aimed at reducing this problem. “I welcome this collaborative effort to eliminate the increasingly deadly practice of distracted driving. Changing this ingrained behavior will require us to develop creative solutions using both technology and education. By combining the resources and expertise of the DOT and the FCC, I am confident that we can have a major impact on this problem,” according to Chairman Genachowski. Source: *Handiham World Weekly*

ComputerWorld Gives a Big Nod to Ham Radio. The article in *ComputerWorld* is entitled “Want to bone up on wireless tech? Try ham radio.” The article contains a number of examples of how amateur radio has been used as a testing ground for new technology in many fields, from telecommunications to power grid technology. For example, John Hays, K7VE, explains that his background in ham radio has provided tools with which to experiment in communications. Hays, an IT manager, has been interested in the integration of radios with global telecommunications networks. His early work with TCP/IP application to ham radio fueled his interest in wireless networks. In the article, the ARRL’s Allen Pitts, W1AGP, points out how amateur radio operators are testing the distance limits of Wi-Fi networking because we can legally amplify the signal. It is a “must read” article and is available in its entirety at <http://tinyurl.com/ycqv9k>.

New Cycle 24 Sunspot Group. The following was posted on the PSK31 Yahoo group (and elsewhere): “Greetings from chilly Rochester, VT where I’m still on vacation. Posted Saturday November 14, 2009 at <http://www.wcflunatall.com/nz4o4.htm>. Yesterday a new solar cycle 24 sunspot group emerged in the SW quadrant of the Sun near S27W53. It currently contains a beta magnetic signature capable of producing very small B class solar flares. It remains to be seen if NOAA/SWPC will assign it #11031 before it fades or sets around the west limb of the Sun. Solar cycle 24 continues to slowly but steadily become more active. 73 & GUD DX, Thomas F. Giella, NZ4O Lakeland, FL, USA nz4o@arrl.net”

What? Twitter and Ham Radio? “Tweet” from a hamfest convention? “Tweet” from Field Day. Get mug shots of club members on Facebook? Blog to keep in touch with members and to attract new ones? Grant Miller, KB3QFQ, describes the uses of social networking in amateur radio and opens the forum for discussion at <http://www.eham.net/articles/22681>. So far the comments reflect some strong opinions, both pro and con.

Atlantis Delivers. Besides taking spare parts to the International Space Station (ISS), the space shuttle Atlantis (STS-129) delivered the module antennas for Columbus – the laboratory built by the European Space Agency (ESA) and host of two Amateur Radio on the International Space Station (ARISS) antennas. “Lou McFadin, W5DID, a member of the AMSAT Board of Directors and a key volunteer for ARISS, showed the astronauts the best ways for them to safely unpack and assemble the antennas and associated cables once they and the hardware reach the ISS,” said According to ARRL ARISS Program Manager Rosalie White, K1STO.

RaRa Memorial Scholarship

**Application
Deadline
April 15, 2010**

New Directory Binders Available

(The Directory won't fit your old one)

**\$3.00 at Meetings
\$8.00 via Priority Mail**

For mail: Send check to
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Rochester, NY 14692

(Sidebands Continued)

“They reviewed how to maneuver and install the antennas during the spacewalk. Lou also oversaw the re-packing of the antennas and the onboard flight kit that accompanies shipments going to the ISS.” Source: *The ARRL Letter*

AA2EJ Shares Nobel. George Smith, AA2EJ, will share the Nobel Prize for Physics with Willard Boyle. Smith and Boyle invented the charge-coupled device, or CCD, when they were working at Bell Labs. The CCD, as you know, is the light sensitive chip that paved the way for modern digital imaging. Their work is being recognized 40 years after the fact – the CCD was invented in 1969. For a diagram of the CCD and an explanation of how it works, go to <http://tinyurl.com/ybeopcp>. (Local note: An important advance in CCD technology was developed by Kodak in 1975 – see previously mentioned website.) Source: *Gadget Lab, wired.com*

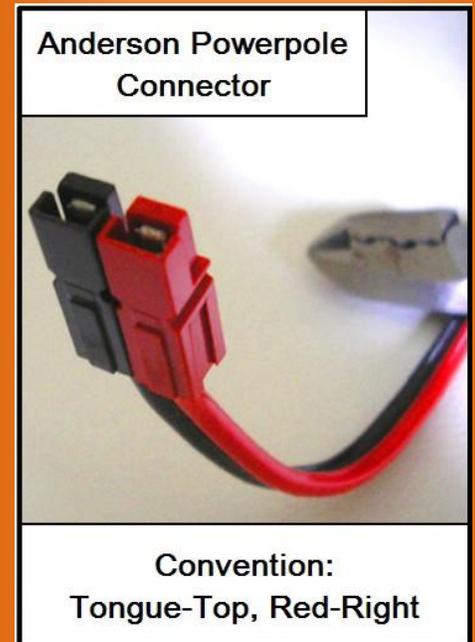
Waiver Issued for Government-Sponsored Drill. On October 27, the FCC’s Wireless Telecommunications Bureau (WTB) granted the first waiver that allows amateurs who participate in a government-sponsored emergency preparedness and disaster drill to communicate on behalf of their employers during the drill. The waiver request was made on behalf of the Commonwealth of Kentucky. That state conducted a full-scale exercise on Wednesday, October 28, 2009 from 8 AM – 5 PM (EDT) to test their emergency response to the possible release of chemical agents at Blue Grass Army Depot, located near Richmond, Kentucky. See <http://tinyurl.com/ygmg8z9>. Source: *The ARRL Letter*

Hams Assist during Wildfires. Almost 20 years to the day since the Loma Prieta Earthquake shook California’s Bay Area, a wildfire was burning through Santa Cruz County (approximately 75 miles south of San Francisco) just miles from the epicenter of the quake that caused part of the Bay Bridge to collapse. The October 17 trembler occurred during the third game of the 1989 World Series between the San Francisco Giants and Oakland Athletics, causing a delay of 10 days in the series. Just as Amateur Radio operators responded to calls for assistance during the earthquake, 20 years later on October 25, they responded when needed for a 485 acre wildfire. Go to <http://tinyurl.com/ykceodw> for details. Source: *The ARRL Letter* and *Major League Baseball*

ARRL President Will Not Seek Reelection. After serving two terms as ARRL President, Joel Harrison, W5ZN, has decided not to seek reelection when his current term expires January 16, 2010. Harrison began his ARRL career as a volunteer ARRL elected official in 1983 when he became the Section Manager in the League’s Arkansas Section. Subsequently, he has served as Delta Division Director and Vice President. In 2000, he was elected First Vice President; he was elected President in 2006. Source: *The ARRL Letter*

TECH-TIP of the Month:

Tongue-Top & Red-Right. Have you ever assembled a power cord using Anderson Powerpoles, only to discover that the red and black Powerpoles are positioned incorrectly? Yikes! The new assembly does not mate with the set of Powerpoles on the other cord. Here’s a trick to remember during assembly. With the plastic “tongues” positioned on top, the red Powerpole should be on the right side. Got that? Tongue on top, red on right.



	<p>W2KRH</p> <p>For information contact: ken@chairmkr.com</p> <p>Windsor Chairs handmade in the 18th Century manner by a craftsman trained at The Windsor Institute.</p>	
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Shorts & Sparks

By I. M. Zapped, FZZ1POP
Reporting From the Geek Isles

The Rack is Back. NovexComm provides custom rack mount kits for a variety of Icom and Kenwood radios, and the classic Collins "S" Line. According to the website, the company is continuing to add new panel kits for more radios. From the main page, click the "News" tab on top to learn about newly introduced products. The News page also comments on which Yaesu radios are a close fit on an existing Icom rack kit. See <http://www.novexcomm.com/> for details.

Digital Spots. Need spots for digital mode DX? If so, then check out the new spot page devoted to digital ops at <http://www.hamspots.net/home/>. The site received favorable ratings on eHam.

Power Supply Calculator. Building a basic power supply? First try doing it virtually. This web site has a calculator for a full-wave, center-tap power supply with different filtering parameters that the user assigns. It will compute RMS voltage, ripple for the RC filter, and do capacitor discharge calculations. Check it out at <http://tinyurl.com/yh623r>.

Latitude/Longitude Distance Calculator. The National Hurricane Center website has a calculator that measures the distance between any two points on Earth. Enter the Lat/Lon coordinates of the two locations and distance will be computed in nautical miles, kilometers, or statute miles. The calculator is at <http://www.nhc.noaa.gov/gccalc.shtml>. A similar calculator is available on the Northern Arizona University website at <http://tinyurl.com/6wnnx>.

Visit the RaRa photo gallery



Pictures of you and your
friends "Hamming it up".

If you have photos to share, send
them to KC2PCD; Len will add
them to the galleries.



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W1AW 2009/2010 Winter Operating Schedule

Morning Schedule:

Time	Mode	Days
1400 UTC (9 AM EST)	CWs	Wed, Fri
1400 UTC (9 AM EST)	CWf	Tue, Thu

Daily Visitor Operating Hours:

1500 UTC to 1700 UTC - (10 AM to 12 PM EST)
 1800 UTC to 2045 UTC - (1 PM to 3:45 PM EST)

(Station closed 1700 to 1800 UTC (12 PM to 1 PM EST))

Afternoon/Evening Schedule:

2100 UTC (4 PM EST)	CWf	Mon, Wed, Fri
2100 "	CWs	Tue, Thu
2200 " (5 PM EST)	CWb	Daily
2300 " (6 PM EST)	RTTY	Daily
0000 " (7 PM EST)	CWs	Mon, Wed, Fri
0000 "	CWf	Tue, Thu
0100 " (8 PM EST)	CWb	Daily
0200 " (9 PM EST)	RTTY	Daily
0245 " (9:45 PM EST)	VOICE	Daily
0300 " (10 PM EST)	CWf	Mon, Wed, Fri
0300 "	CWs	Tue, Thu
0400 " (11 PM EST)	CWb	Daily

Frequencies (MHz)

CW: 1.8025 3.5815 7.0475 14.0475 18.0975 21.0675 28.0675 147.555
 RTTY: - 3.5975 7.095 14.095 18.1025 21.095 28.095 147.555
 VOICE: 1.855 3.990 7.290 14.290 18.160 21.390 28.590 147.555

Notes:

CWs = Morse Code practice (slow) = 5, 7.5, 10, 13 and 15 WPM
 CWf = Morse Code practice (fast) = 35, 30, 25, 20, 15, 13 and 10 WPM
 CWb = Morse Code Bulletins = 18 WPM

CW frequencies include code practices, Qualifying Runs and CW bulletins.

RTTY = Teleprinter Bulletins = BAUDOT (45.45 baud), BPSK31 and MFSK16 sent only as time allows.

Code practice texts are from QST, and the source of each practice is given at the beginning of each practice and at the beginning of alternate speeds.

On Tuesdays and Fridays at 2330 UTC (6:30 PM EST), Keplerian Elements for active amateur satellites are sent on the regular teleprinter frequencies.

A DX bulletin replaces or is added to the regular bulletins between 0100 UTC (8 PM EST) Thursdays and 0100 UTC (8 PM EST) Fridays.

In a communications emergency, monitor W1AW for special bulletins as follows: Voice on the hour, Teleprinter at 15 minutes past the hour, and CW on the half hour.

All licensed amateurs may operate the station from 1500 UTC to 1700 UTC (10 AM to 12 PM EST), and then from 1800 UTC to 2045 UTC (1 PM to 3:45 PM EST) Monday through Friday. Be sure to bring your current FCC amateur radio license or a photocopy.



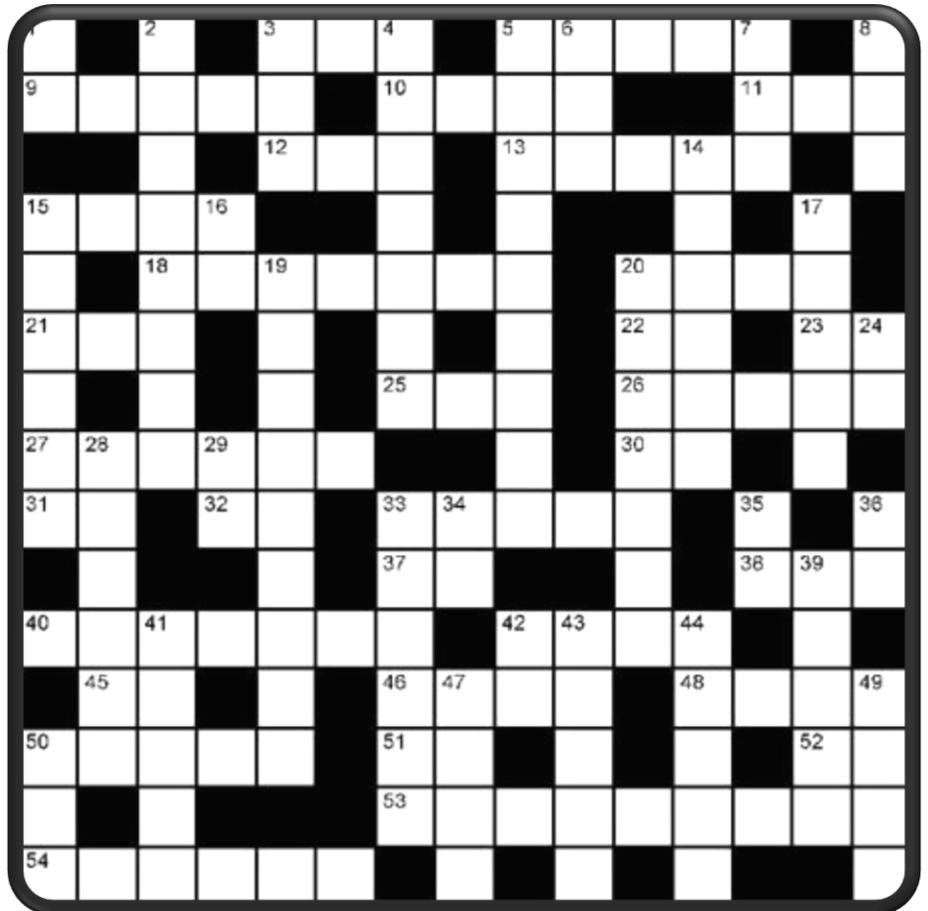
The Amateur Radio Crossword Puzzler (#104)

By H. Ward Silver, N0AX

Those little bits and pieces that make up so much of electronics are often taken for granted. This puzzle's theme is words associated with the various types of simple electronics components. How well do you know your little friends and neighbors?

Across

3. Batteries with liquid electrolyte are ... cells
5. Prevent flow of ac current
9. Unit of inductance
10. Translate symbols into information
11. Old abbreviation for pico
12. Ferrites prevent this type of interference (abbr.)
13. This moves on a variable capacitor
15. Designates "6" on resistor band
18. Material of disc capacitors
20. Resistors cause voltage to do this
21. Adjustable resistor
22. Common abbreviation for "that is"
23. Mixer signal (abbr.)
25. Receiver frequency fine tune (abbr.)
26. Legitimate
27. Hit
30. Indefinite article
31. A good job is done "just ..."
32. Light (abbr.)
33. Unit of capacitance
37. Abbreviation for chip
38. One in a million (abbr.)
40. Printed value of a component
42. Makes mistakes
45. Input-Output (abbr.)
46. Lift or carry
48. Smallest state in the tenth district
50. Confuse
51. Electric vehicle (abbr.)
52. CW abbreviation for "and"
53. Power dissipating components
54. These designate numbers and exponents of component values

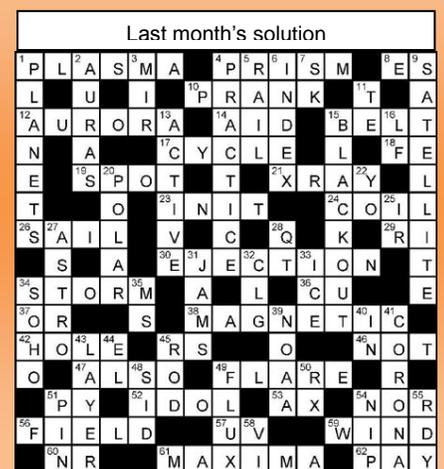


See next month's *RaRa e-RAG* for the solution.

Down

1. Thousands of microhenries (abbr.)
2. Stores magnetic energy
3. Opposite of delta connection
4. Small adjustable capacitor
5. Stores electric energy
6. Good kind of cholesterol (abbr.)
7. Longest possible path for a contact
8. Main frequency control
14. Imply hostile intent
15. Shunt ac signals around a component
16. Engineer that knows the most about electricity (abbr.)
17. Divided in two
19. Imaginary impedance

20. Two series resistors form a voltage
24. Rod dimension that must be less than a matching hole's ID
28. Round core with a hole in the middle
29. Safety lab (abbr.)
33. Remove a signal
34. Reversing current
35. A correctly adjusted circuit is "tuned ..."
36. Most popular mode on 2-meters
39. Volts times amps
41. Prototype or exhibit
42. Phoned home
43. One component of epoxy
44. Blue-black-black
47. Heats materials
49. Assistant (abbr.)
50. Keeps volume constant (abbr.)



THE RARA E-RAG

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w2zey@rochester.rr.com

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..... Sue Waterstraat, KC2SUE
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Club Station Trustee Jim DiTucci, N2IXD
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RaRa e-RAG Editor Frank Schramm, WB2PYD
Refreshments Coordinator Tom Austin, KA2GXX
Webmaster Frank Schramm, WB2PYD

RaRa meets on the first Friday of each month
from September through May. Come join us at:

**Henrietta Fire Company No.1
3129 East Henrietta Rd.
Henrietta, NY 14467**

[Get Directions](#)

Rochester Area Radio Club Contacts

Antique Wireless Association (AWA)

Lynn Bisha, W2BSN lbisha@rochester.rr.com

Drumlins Amateur Radio Club Ltd. (DARC)

Bob Taylor, N2MLD n2mld@juno.com

Monroe County ARES

Jim DiTucci, N2IXD n2ixd@arrl.net

Rochester Amateur Radio Association (RaRa)

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Rochester DX Association (RDXA)

Paul Mackanos, K2DB k2db@arrl.net

Rochester Radio Repeater Association (RRRA)

Brad Allen, KB2CHY kb2chy@frontiernet.net

Rochester VHF Group (RVHFG)

Andy Flowers, K0SM flowers@frontiernet.net

Squaw Island Amateur Radio Club (SIARC)

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XEROX Amateur Radio Club (XARC)

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**January e-Rag Deadline
December 18, 2009**



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Robert Brown — K8NLV
is a Partner at Boylan Brown and a Life Member of the RARA



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